Ashford Road, Maidstone

Transport Assessment

Client: Wates Developments

i-Transport Ref: JCB/DF/RW/ITB15323-009C R

Date: 31 January 2023

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Report No.	Comments	Date	Author	Authorised
ITB15323-009C R	Issue	31/01/2023	Ronan Wilson / Duncan Findlay	Duncan Findlay / James Bevis

File Ref: T:\Projects\15000 Series\15323ITB Ashford Road, Maidstone\Admin\Report and Tech Notes\ITB15323-009C R Transport Assessment.docx

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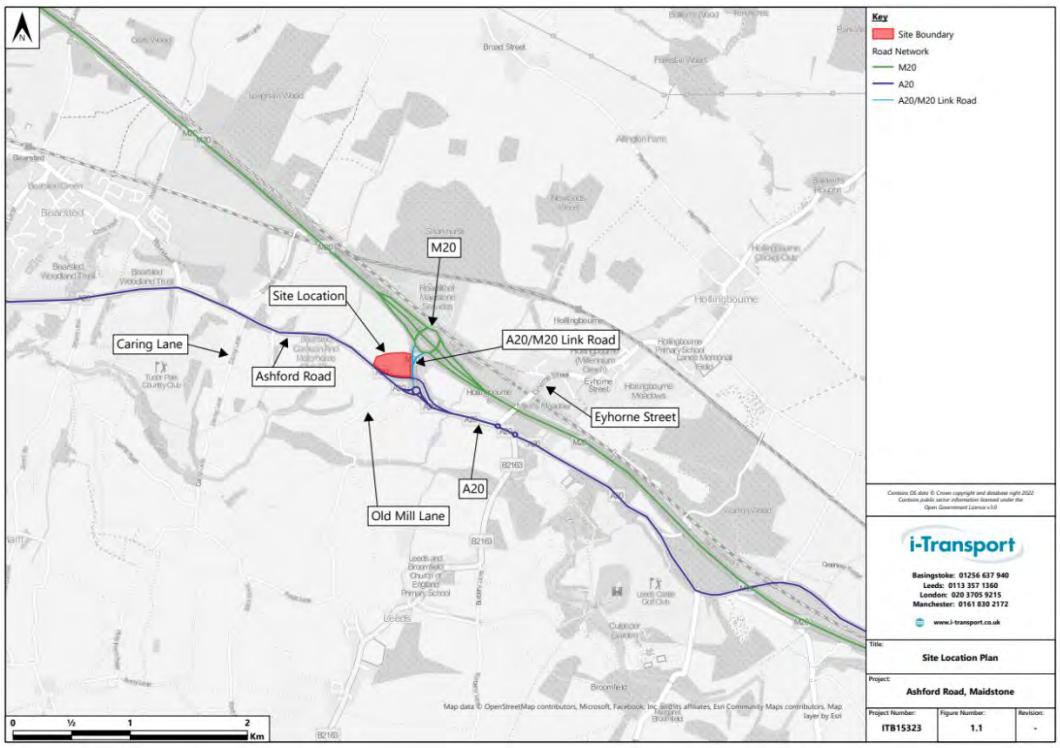
SECTION 1 Introduction

1.1 Overview

1.1.1 Wates Developments proposes to develop land to the north of A20 Ashford Road, Maidstone, to provide 11,368sqm of B8 warehousing/distribution space. i-Transport LLP has been appointed to assess the proposal in transport/highways terms and to prepare a Transport Assessment (TA) to accompany the planning application.

1.1.2 The site is located to the north of A20 Ashford Road, on a parcel of land southeast of Musket Lane. It is bordered to the north by arable land known as Woodcut Farm (which has planning consent for commercial development[1] and is currently under construction), to the east by vegetation and the A20 / M20 Link Road, to the south by the A20 Ashford Road and to the west by Musket Lane. A site location plan is included as **Figure 1.1** with an extract reproduced below.

Image 1.1: Site Location



1.1.3 Maidstone Borough Council (MBC) are the local planning authority and Kent County Council (KCC) are the local highway authority.

[1] Application ref: 17/502331/OUT

1.2 Background and Scope

1.2.1 The scope and structure of this TA has been agreed with KCC following the submission of a Transport Assessment Scoping Note (TASN) (*report reference: ITB15323-006B TN*) issued in December 2021 and a subsequent transport/highways pre-application meeting on 4 February 2022. A copy of the TASN is provided at **Appendix A** and a record of the pre-application discussions with KCC is provided at **Appendix B** (including email correspondence).

1.2.2 As part of these discussions, KCC requested:

- Further clarification on the access arrangements (including a Stage 1 RSA[2]); and
- A sensitivity test traffic impact exercise allowing for the site to come forward as a parcel distribution centre.

1.2.3 This information was provided in a subsequent Access and Sensitivity Test Technical Note submitted to KCC on 25 February 2022 (*report reference: ITB15323-008A*). A copy of this note is provided at **Appendix C**.

1.2.4 As a result of the submission of this pre-application information, the following technical matters have been agreed with KCC:

- The principle of access to sustainable transport (it has been agreed that a Framework Travel Plan will be prepared and this also accompanies the planning application (*report reference: ITB15323-010 R)*);
- The site access arrangements; and
- The traffic impact assessment parameters (e.g. trip rates, trip distribution/assignment, study area, future year assessment and the parcel distribution centre sensitivity test).

1.3 Structure

1.3.1 The remainder of this TA is structured as follows:

- Section 2 – Transport Policy Context;
- Section 3 – Existing Transport Conditions;
- Section 4 – Development Proposal;
- Section 5 – Sustainable Transport Strategy;

[2] Road Safety Audit

- Section 6 – Traffic Impact Assessment;
- Section 7 – Sensitivity Test – Parcel Distribution Warehouse; and
- Section 7 – Summary and Conclusions.

SECTION 2 Transport Policy Context

2.1 National Policy

National Planning Policy Framework – July 2021 (NPPF)

2.1.1 This TA assesses the proposed development in transport terms against the four key 'tests' identified in paragraph 110 of the National Planning Policy Framework (NPPF), which states:

> ***"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, given the type of development and its location;***
> - ***safe and suitable access to the site can be achieved for all users;***
> - ***the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code; 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."***

2.1.2 Paragraph 111 of the NPPF goes on to state:

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

2.1.3 This is the critical test when determining a planning application. Only when transport impacts are 'severe', or where safety impacts are 'unacceptable' should an application be refused, and development prevented. This is an intentionally high bar for preventing development from coming forward for transport reasons.

2.1.4 Paragraph 113 confirms that:

> ***"All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed."***

2.2 Local Policy

KCC Local Transport Plan 4: Delivering Growth without Gridlock 2016 - 2031

2.2.1 The Kent County Council Local Transport Plan sets out the relevance of Kent's transport system across a wide range of services and identifies required schemes and infrastructure that are necessary to address current and future capacity issues whilst maintaining sustainable growth. Priorities are focussed towards 5 overarching policies:

1. **Economic growth and minimised congestion** – Deliver resilient transport infrastructure and schemes that reduce congestion and improve journey time and reliability to enable economic growth;
2. **Affordable and accessible door-to-door journeys** – Promote affordable, accessible and connected transport to enable access for all;
3. **Safer Travel** – Provide a safer road, footway and cycle network to reduce the likelihood of casualties;
4. **Enhanced environment** – Deliver schemes to help reduce the environmental footprint of transport; and
5. **Better health and wellbeing** – Provide and promote active travel choices for all members of the community to encourage good health and wellbeing and implement measures to improve local air quality.

Kent and Medway Structure Plan 2006: SPG4 Vehicle Parking Standards

2.2.2 The Kent and Medway Structure Plan 2006 outlines parking standards for class B8: Storage and Distribution developments. The Kent standard for storage and distribution is a single maximum value of 1 space per 110 m^2 but should be applied with discretion to premises that can demonstrate a high employee density. Parking standards set by this document are summarised below in **Table 2.1.**

Table 2.1: KCC Vehicle Parking Standards

	Goods Vehicles	Car Parking
Storage and Distribution	1 space per 300m^2	1 space per 110m^2
Wholesale Trade Distribution	1 space per 300m^2	1 space per 35m^2
	Parking provision for associated office space to be determined using standards set out under Lane Use Class B1.	

Source: SPG4 Vehicle Parking Standards (2006)

	Cycle Parking Short to Medium Term (collection/deliver/shopping)	Cycle Parking Medium to Long Term (meetings/workplace)
All developments	1 space	1 space per 200m^2
	Minimum of 2 spaces to be provided	

Source: SPG4 Vehicle Parking Standards (2006)

Maidstone Borough Council Local Plan 2011 - 2031 (October 2017)

2.2.3 The Maidstone Borough Local Plan is the key document that sets the framework to guide the future development of the borough. It plans for homes, jobs, shopping, leisure, and the environment, as well as the associated infrastructure to support new development.

2.2.4 There is a provision of strategic and local infrastructure which includes the delivery of an Integrated Transport Strategy. The plan outlines that:

- Maidstone plan to provide more choices of transport to encourage people to make more journeys by public transport, walking and cycling.
- The transport network will have sufficient people and goods moving capacity to support the growth projected by the local plan to 2031.
- Strategic links to locations outside of the borough will be improved, and destinations such as London will be more accessible.

2.2.5 The Local plan also outlines that a development must be delivered at the most sustainable towns and villages where employment, key services, and facilities together with a range of transport choices are available.

2.2.6 The key transport policy is detailed at **Policy DM 21 Assessing the Transport Impacts of Development**. **Policy DM21** details that development proposals must provide a TA and Travel Plan (TP) which meet KCC policy/standards and demonstrate that the proposal will not result in a severe residual impact. **Policy DM21** also details that the site layout must provide adequate pedestrian and cycle access and be accessible to disabled users.

2.2.7 **Policy DM23 Parking Standards** states that vehicle parking for non-residential uses should be provided to take into account the type of development, accessibility to public transport and not exacerbate on-street parking. Appropriately designed cycle parking should also be provided as well as appropriate electric vehicle charging infrastructure.

Maidstone Borough Council Local Plan Review – Draft Plan for Submission (Regulation 19)

2.2.8 The Maidstone Borough Council Local Plan Review will update and supersede the 2017 Local Plan when adopted. It was submitted to the Secretary of State for independent examination on Thursday 31 March 2022.

2.2.9 Principal transport policy is detailed at **Policy LPRSP12: Sustainable Transport** which notes that the council and partners will:

- ***"Ensure the transport system supports the growth projected by Maidstone's Local Plan and facilitates economic prosperity;***
- ***Deliver modal shift through managing demand on the transport network through enhanced public transport and the continued Park and Ride services and walking and cycling improvements;***
- ***Improve transport choice across the borough and seek to influence travel behaviour;***
- ***Protect and enhance public rights of way;***
- ***Deliver strategic and public transport links to and from Maidstone, including increased bus service frequency along the radial routes into the town centre and its railway stations, particularly in the morning and evening peak travel times;***
- ***Work with service providers to improve bus links to the rural service centres and larger villages, and other villages including route options and frequency."***

2.2.10 This policy focuses on ensuring that the site is accessible to non-car users, by improving bus services, transport choice and public rights of way.

2.3 Summary

2.3.1 The NPPF identifies four key transport tests, which are summarised as follows:

- Will the opportunities for sustainable travel be taken up appropriately?;
- Will safe and suitable access be provided?
- Will the design comply with guidance in transport terms?
- Will the traffic impacts be acceptable?

2.3.2 Paragraph 111 of the NPPF sets the 'high bar' for preventing new development on highways grounds.

2.3.3 These criteria are reflected in local policy. The remainder of this report assesses the development proposal against the key criteria summarised above.

SECTION 3 Existing Transport Conditions

3.1 Overview

3.1.1 This section provides an audit of existing transport conditions including the provision for walking, cycling and public transport and the existing characteristics of the local highway network including traffic volumes, speeds and accident data.

3.2 Site Location

3.2.1 The site is located on existing farmland to the north of the A20 Ashford Road, approximately 6.3km east of Maidstone town centre. The site is bordered to the north by Musket Lane, to the west by the A20 Ashford Road, to the south by A20 Ashford Road Bypass, and to the west by the A20/M20 Link Road. **Figure 1.1** illustrates the site location.

3.3 Active Travel

Walking

3.3.1 An existing footway approximately 1.5m wide runs along the northern side of the A20 Ashford Road on the southern site frontage, separated from the carriageway by a grass verge. This footway continues west along the A20 Ashford Road providing walking routes towards Maidstone and Bearsted (via Roundwell).

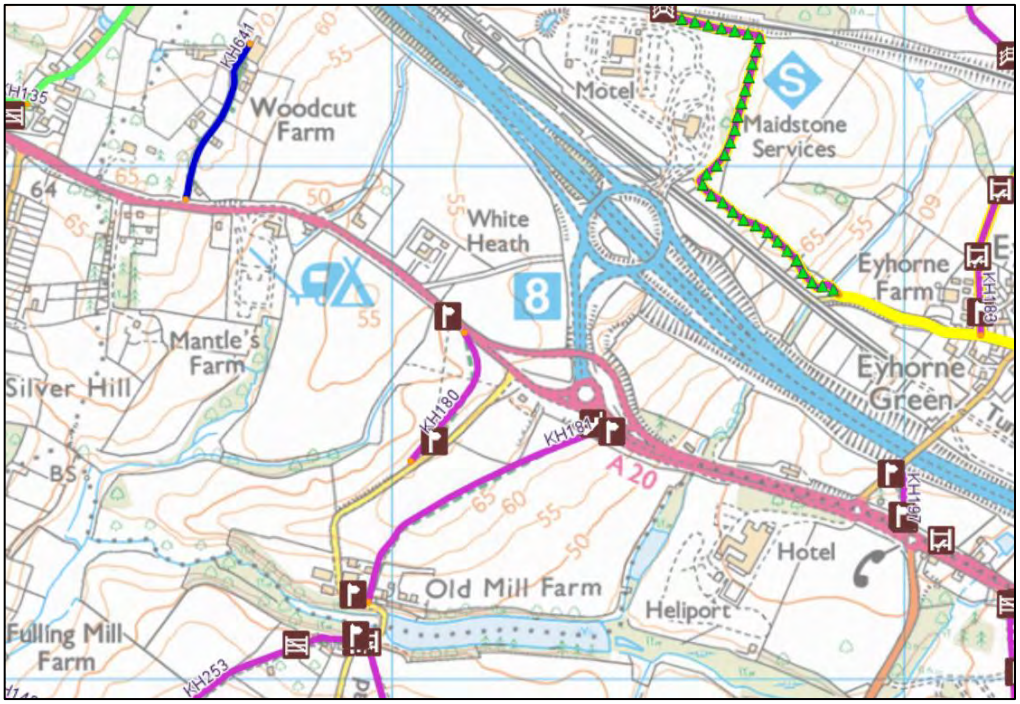
3.3.2 To the east of the site this footway routes along the northern side of the carriageway of the A20 Ashford Road slip-road and bypass, providing a connection to a further footway on the northern side of the A20 Ashford Road to the east of the M20 Junction 8.

3.3.3 There is also an uncontrolled pedestrian crossing located to the east of the site at the A20 Ashford Road By-pass with dropped kerbs to facilitate crossing of the A20 Ashford Road and walking routes to Old Mill Road to the south.

Public Rights of Way

3.3.4 A network of Public Rights of Way (PRoW) exists within and around the site. These are summarised below and illustrated at **Image 3.1.**

Image 3.1: Public Rights of Way



3.3.5 Footpath KH180 is located opposite the site frontage on the A20 Ashford Road and continues southwards across a field connecting to Old Mill Lane.

3.3.6 Footpath KH181 is located to the east of the M20 Junction 8 and provides a further route from the A20 Ashford Road southwards to Old Mill Lane where it connects to public footpaths KH243 and KH253.

Cycling

3.3.7 There is currently limited dedicated existing provision for cyclists near the proposed site.

3.3.8 There are footway and cycleway improvements proposed on A20 Ashford Road to the west of the site as part of the consented Woodcut Farm scheme which comprise the provision of a new footway/cycleway on the northern side of the A20 Ashford Road between the Woodcut Farm access and the A20 Ashford Road / Roundwell junction. Details of these improvements are not available at the time of submission of this application, but it is known that they will be secured via a pre-occupation planning condition for the Woodcut Farm development. This footway/cycleway will improve cycle connectivity to the west.

3.4 Public Transport

Bus

3.4.1 The site is well located to local bus stops within a reasonable walking distance, located circa 500m to 600m northwest of the site on the A20 Ashford Road. The stops feature a flagpole and timetable information These stops are served by the 10X bus route between Ashford and Maidstone. Details of the 10X bus route are summarised in **Table 3.1** below and the route is shown on **Figure 3.1**.

Table 3.1: Bus Stop Services

Service	Route	Weekday Frequency	Saturday Frequency	Sunday Frequency
10X	Ashford - Ashford Rail Station - The Warren - Repton Park – Hothfield – Charing – Lenham - Harrietsham - Hollingbourne - Bested - Maidstone	First service at 06:44 Every 60 mins from 09:43 – 14:43. Last service at 18:31.	First service at 07:52. Every 60 mins from 09:43 – 14:43. Last service at 18:31.	Services at 08:46, 10:56, 13:06, 15:56, 18:06

Source: Bustimes.org (Updated: November 2022)

3.4.2 As part of the adjacent Woodcut Farm scheme, two additional 10X bus services were secured by Section 106 agreement, to be provided in each direction the morning and afternoon peak periods between 7am-9:30am and 4pm-6pm. These will be provided from the first occupation of the Woodcut Farm scheme. The Woodcut Farm scheme will also bring forward new bus stops (secured by Condition).

Rail

3.4.3 The nearest railway station is Hollingbourne, located circa 2.5km northeast of the site and provides connections to destinations including London, Ashford International, Canterbury West, and Maidstone East. The railway station is within a reasonable cycling distance from the site and provides 8 cycle spaces. The station also has a car park providing a total of ten spaces and there is on street parking available. The services available from this station are summarised in **Table 3.2** below.

Table 3.2: Hollingbourne Train Station Services

Service	Destinations on Route	Peak Frequency	Off-peak Frequency	Journey time
London Victoria	Bearsted – Maidstone East – Barming – East Malling – Wrotham – Kemsing – Otford – Swanley – St Mary Cray – Bromley South	1 per hour	2 per hour	1hr 14m
Ramsgate	Harrietsham – Lenham – Charing – Ashford International – Wye – Chilham – Chartham – Canterbury West – Sturry - Minster	1 per hour	2 per hour	1hr 11m

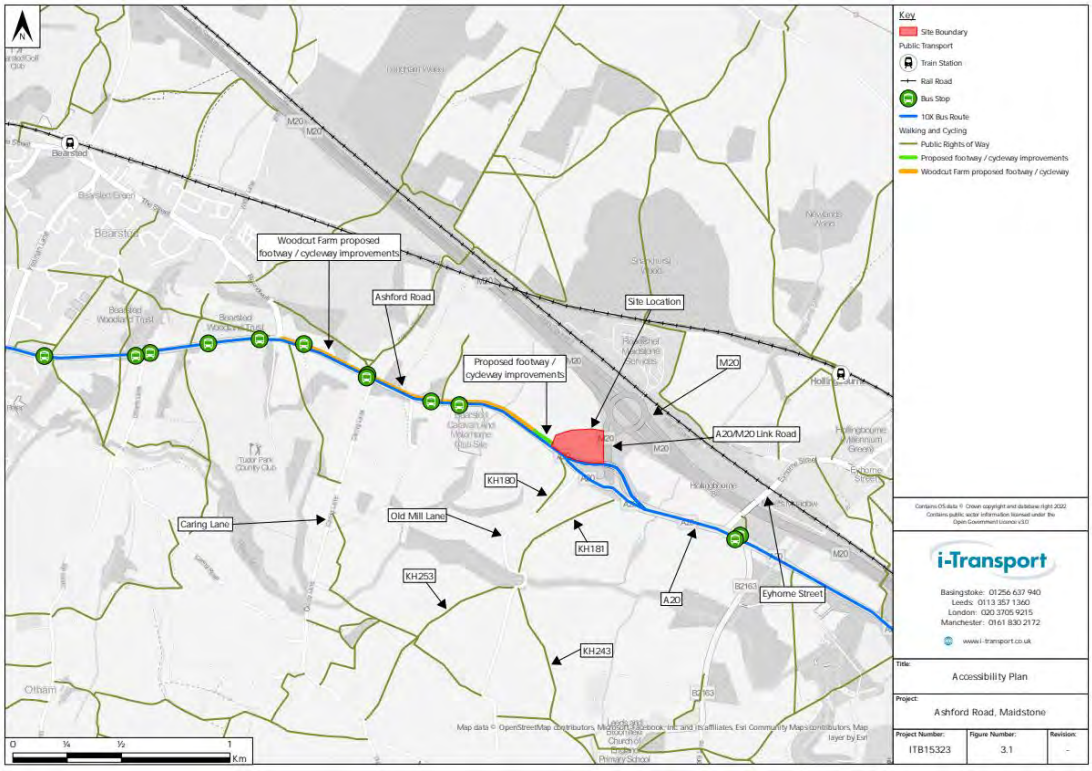
Source: Trainline (Updated: November 2022)

3.4.4 Additionally, Bearsted railway station is located circa 2.5km northwest of the site and provides 22 cycle spaces and a further 49 car parking spaces.

3.4.5 Both railway stations are within a comfortable cycling distance from the site.

3.4.6 The local railway stations are shown on **Figure 3.1**, with an extract reproduced at **Image 3.3** below.

Image 3.3: Accessibility Plan



3.5 BREEAM Accessibility Index

3.5.1 The above section demonstrates that the proposed development site benefits from some public transport options, particularly local bus services. To quantify public transport accessibility for input into an accompanying BREEAM assessment, the BREEAM 'Accessibility Index' tool has been used.

3.5.2 The BREEAM tool defines a 'compliant transport node' as a bus service within 650m or a rail station within 1000m. Given the rail stations fall outside of this distance, the 10X Bus services have been included with the assumption that users would be within 600m from a bus stop.

3.5.3 The site therefore has an accessibility level of **0.76**.

Accessibility to Local Facilities

3.5.4 Currently there are no facilities or services within 500m of the site.

3.6 Local Highway Network

3.6.1 The A20 Ashford Road is a single carriageway two-way road and approximately 9.2m wide along the site frontage. It is street-lit, subject to the national speed limit and runs in a general northwest to southeast direction from Maidstone towards Ashford. The A20 Ashford Road meets the A20/M20 Link Roundabout some 250m southeast of the site.

3.6.2 A20 Ashford Road splits to direct flows either towards the A20/M20 Link Roundabout or via an eastbound-only bypass lane to the north of the roundabout. The bypass begins some 240m west of the roundabout on the A20 Ashford Road. It routes over the north side of the roundabout using a bridge over the link road, then re-joins the A20 Ashford Road circa 200m east of the roundabout. Both the bypass lane and the continuing A20 Ashford Road are street-lit and subject to the national speed limit.

3.6.3 The A20 / M20 Link Roundabout is a three-arm roundabout, providing access from the A20 Ashford Road to the M20 Junction 8 (also known as the Hollingbourne Interchange roundabout). The A20 Ashford Road forms the western arms, the eastern arm where it is dual carriageway, and a link road to the M20 Junction 8 forms the northern arm. The A20/M20 Link Road is dual carriageway, separated by a hard barrier and runs in a north, south direction.

3.6.4 The M20 Junction 8 is a large 4-arm roundabout. The slip road from the A20 roundabout forms the south-western arm, the M20 slip roads form the north-western and south-eastern arms, and the access road to Maidstone Services forms the northern arm. The M20 forms part of the Strategic Road Network (SRN) and provides the principal route between London and Dover.

3.7 Traffic Surveys

3.7.1 A suite of traffic surveys was undertaken at key local junctions in proximity to the site in October 2022 by an independent traffic survey company:

- Automatic Traffic Counts (ATCs) to collect classified speed and volume date over a 7-day period between 3 October and 10 October 2022 at:
  - A20 Ashford Road east of Musket Lane; and
  - A20 Ashford Road east of Ashford Road bypass lane
- Classified Turning Counts (CTC) on Thursday 6 October 2022 (a neutral weekday) during the morning and evening weekday periods at:
  - M20 Junction 8 (excluding mainline M20 flows);
  - A20 / M20 link roundabout; and
  - A20 Ashford Road / Ashford Road Bypass.

3.7.2 The study area has been agreed with officers at KCC through the pre-application process.

3.7.3 The existing traffic flows have been used to determine the network peak hours across the entire study area. The peak hours have been identified as follows:

- Morning Peak Hour: 0730 – 0830
- Evening Peak Hour: 1645 - 1745

Traffic Flows

3.7.4 The observed peak hour traffic flows are shown on the following traffic figures:

- **Figure TF1** – 2022 Observed Traffic Flows – AM Peak Hour (0730 – 0830)
- **Figure TF2** – 2022 Observed Traffic Flows – PM Peak Hour (1645 – 1745)

Traffic Speeds

3.7.5 The ATC surveys recorded the vehicle speeds on A20 Ashford Road at locations east and west to the proposed site access to establish baseline traffic speeds. In accordance with guidance set out in DMRB CA 185, **Table 3.3** sets out the 85th percentile dry weather speeds for eastbound and westbound vehicles on A20 Ashford Road.

Table 3.3: Observed Dry Weather Traffic Speeds and Stopping Sight Distances

Direction	85%ile dry weather speed	Desirable Stopping Sight Distance	Absolute Minimum Stopping Sight Distance
Eastbound	47.1mph	132m	102m
Westbound	48.0mph	135m	105m

Source: ATC Surveys (October 2022). Stopping sight distances derived from DMRB[3] and MfS[4]

3.7.6 The above traffic speeds have been used to inform the site access designs presented in Section 4 of this report.

3.8 Operational Assessments

3.8.1 The following junctions have been modelled to produce calibrated / validated traffic models of the following junctions on the local highway network:

- A20 / M20 link roundabout; and
- M20 Junction 8.

3.8.2 The junctions have been assessed using the TRL Junctions 10 software (the industry standard tool used for non-signalised junctions). The principal outputs derived from Junctions 10 are the Ratio of Flow to Capacity (RFC), queue lengths (in PCUs[5]) and delay (in seconds per vehicle).

3.8.3 The junction models have been calibrated to observed queue lengths where appropriate. A copy of all the junction assessment outputs can be provided upon request.

3.8.4 The modelling results are categorised as follows:

- **GREEN** – Operating within operational capacity.
- **LIGHT GREEN** – Operating within maximum capacity.
- **RED** – Operating over maximum capacity.

3.8.5 Operational capacity is equivalent to 90% of the maximum capacity for signalised junctions and 85% of the maximum capacity for roundabouts/priority junctions. Operational capacity is theoretical and desirable for newly constructed junctions. Maximum capacity is the correct threshold for existing junctions including where mitigation / improvements are proposed.

[3] Design Manual for Roads and Bridges

[4] Manual for Streets 2

[5] Passenger Car Units

3.8.6 The existing/observed operation of the junctions is summarised below. The full operational assessment outputs are included in **Appendix L**.

A20 / M20 Link Roundabout

3.8.7 The existing operational capacity of the A20/M20 Link Roundabout has been assessed using the 2022 Observed Flows.

3.8.8 The A20 / M20 Link Roundabout has been modelled and calibrated using the Lane Simulation tool in Junctions 10 to provide a representative model of the junction operation.

3.8.9 The geometries of the roundabout are shown on Drawing ITB15323-GEOM-005 in **Appendix D**. **Table 3.4** summarises the results of the assessment.

Table 3.4: A20/M20 Roundabout Operational Capacity Results

	AM Peak Hour (0730 – 0830)			PM Peak Hour (1645 – 1745)		
	Queue	Delay (s/veh)	RFC	Queue	Delay (s/veh)	RFC
2022 Observed Traffic Flows						
M20 Link Road	4	9	0.62	9	14	0.82
A20 (E)	6	15	0.88	4	8	0.71
A20 (W)	1	7	0.38	1	6	0.34

Source: Junctions 10

3.8.10 The A20 / M20 Roundabout currently operates within capacity on all arms.

M20 Junction 8

3.8.11 The existing operational capacity of the M20 Junction 8 (Hollingbourne Interchange) has been assessed using the 2022 Observed Flows. The geometries of the roundabout are shown on Drawing ITB15323-GEOM-006 in **Appendix D**. **Table 3.5** summarises the results of the assessment.

Table 3.5: M20 Junction 8 Roundabout Operational Capacity Results

	AM Peak Hour (0730 – 0830)			PM Peak Hour (1645 – 1745)		
	Queue	Delay (s/veh)	RFC	Queue	Delay (s/veh)	RFC
2022 Base Year Traffic Flows						
Maidstone Services	<1	3	0.22	<1	4	0.22
M20 Westbound off-slip	<1	5	0.27	<1	6	0.29
A20 Link Road	1	3	0.54	1	2	0.44
M20 Eastbound off-slip	2	5	0.64	3	6	0.74

Source: Junctions 10

3.8.12 The M20 Junction 8 Roundabout is currently operating within capacity on all arms.

3.9 Road Safety - Personal Injury Accident Data

3.9.1 Personal Injury Accident (PIA) data has been obtained from KCC for the local highway network in the vicinity of the site for the most recent five-year period available at the time of request between 1 July 2017 and 30 June 2022. The study area has been agreed with officers at KCC.

3.9.2 A copy of the PIA data reports including plans that show the location each accident is included at **Appendix E**.

3.9.3 **Table 3.6** provides a summary of the locations, severity and number of recorded injury accidents at the key links and junctions within the study area over the assessed period.

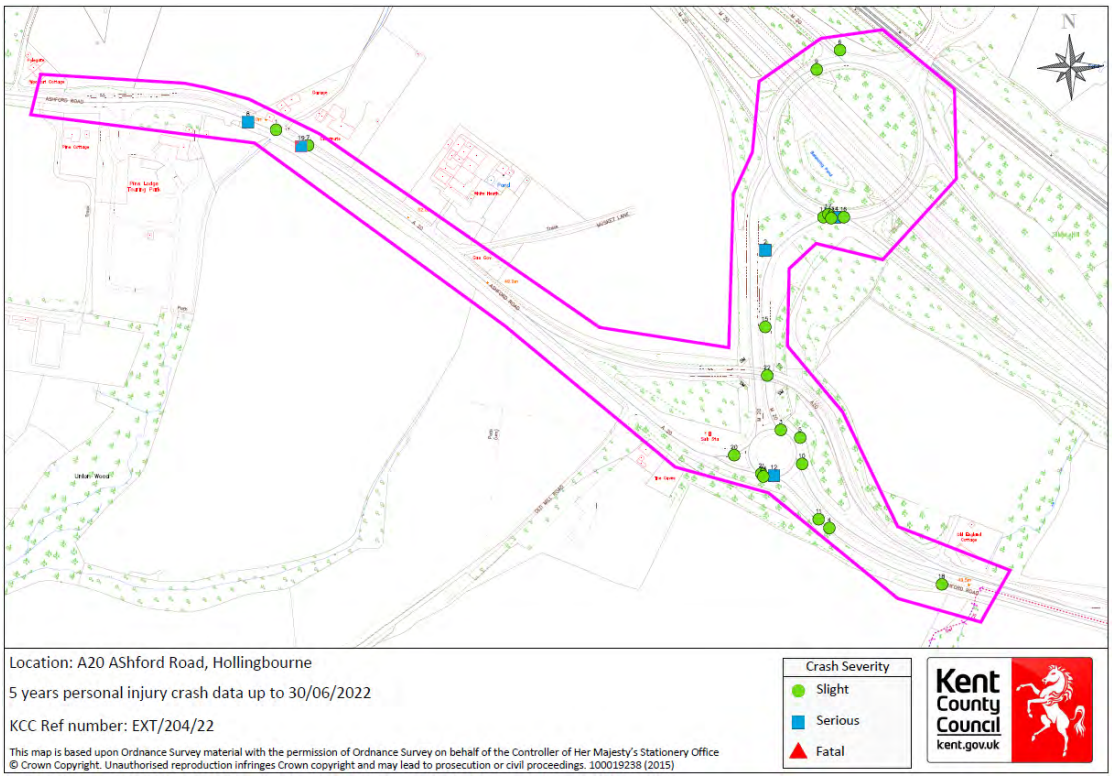
Table 3.6: Personal Injury Accidents Summary

Location	Vehicles			Pedestrian / Cyclist			Total
	Fatal	Serious	Slight	Fatal	Serious	Slight	
A20 Ashford Road (West of M20 Junction 8)	-	2	1	-	-	1	**4**
A20 Ashford Road (East of M20 Junction 8)	-	-	3	-	-	-	**3**
A20 / M20 3-arm Roundabout	-	1	6	-	-	-	**7**
Ashford Road by-pass	-	-	1	-	-	-	**1**
A20 / M20 Link Road	-	1	1	-	-	-	**2**
M20 Junction 8 Roundabout	-	1	6	-	-	-	**7**
Total	**0**	**5**	**18**	**0**	**0**	**1**	**24**

Source: Kent County Council

3.9.4 The plot of the accidents is provided at **Image 3.4** below and is also included at **Appendix E**.

Image 3.4: PIA Data



Source: KCC

3.9.5 In total there were 24 accidents recorded in the study area over the assessed five-year period - none were fatal, five were serious and the remaining 19 were slight. The nature, cause and location of each PIA within the vicinity of the site is outlined in more detail in the following paragraphs.

A20 Ashford Road (West of M20 Junction 8)

3.9.6 Over the assessed five-year period four accidents were recorded on the A20 Ashford Road (West) (two serious and two slight):

- One serious accident occurred when a vehicle failed to give way when exiting from the nearby garage;
- One serious accident involved a vehicle colliding with a pedestrian in the carriageway; and
- The two slight accidents were as a result of a failure to give way.

A20 Ashford Road (East of M20 Junction 8)

3.9.7 Three slight accidents occurred on the A20 Ashford Road (East):

- Two accidents were rear end shunts; and
- One was because of a loss of control causing a collision into street furniture.

A20 / M20 Link Roundabout

3.9.8 A total of seven accidents occurred at this junction within the 5-year period (six slight and one serious). These are summarised as follows:

- The serious accident was as a result of a motor vehicle failing to give way to a cyclist;
- Four slight accidents were due to a failure to give way; and
- Two accidents were due to a loss of control (noted that one was due to a medical episode).

A20 Ashford Road Bypass Road

3.9.9 One slight accident occurred on the A20 Ashford Road Bypass where a car overtaking a motorcycle failed to give way causing a collision.

A20 / M20 Link Road

3.9.10 Two accidents (one slight and one serious) occurred on the A20 / M20 Link Road within the study period.

- The serious accident occurred when a HGV rolled onto its offside when going round a bend onto an LGV.
- The slight accident involved a motor vehicle colliding with debris on the carriageway, losing control and swerving onto the hard shoulder.

M20 Junction 8 Roundabout (Hollingbourne Interchange)

3.9.11 A total of seven accidents occurred at the M20 Junction 8 roundabout, of which six were slight and one was serious. Two occurred at the M20 eastbound off-slip arm with the remaining five occurring between the M20 westbound off-slip. The accidents are summarised below.

- The two slight accidents at the M20 eastbound off-slip road exit arm involved a rear end shunt and a failure to give way.
- The four slight accidents at the M20 westbound off-slip were all as a result of a failure to give way.

- The serious accident involved a vehicle in the course of a crime and a police pursuit. The vehicle exited the M20 westbound off-slip at high speed and collided with another vehicle as it entered the roundabout.

Summary

3.9.12 Whilst any accident is regrettable, the overall number and cause of accidents within the study area does not suggest a specific highway safety issue at any location nor is there a pattern that suggests a problem with any particular turning manoeuvre.

3.9.13 Whilst there is a small cluster of accidents at the M20 westbound off-slip / A20 link road arm, this junction accommodates a high volume of daily traffic and the number of accidents in this location is typical of this scale of junction with high traffic demands.

3.10 Existing Travel Patterns

3.10.1 Travel to Work data has been obtained from the 2011 Census for the Workplace Population (WP703EW) for the Mid-Output area Maidstone 011 within which the site is situated. **Table 3.1** summarises the modal split data for Maidstone 011.

Table 3.1: Method of Travel to Work - MSOA Maidstone 011

Mode	Mode Share
Car Driver	79.5%
Car Passenger	7.3%
Foot	7.0%
Train	2.5%
Bus	1.3%
Motorcycle	0.9%
Bicycle	0.8%
Other	0.7%
TOTAL	**100.0%**

Source: 2011 Census WP703EW – Method of Travel to Work – Maidstone 011

3.10.2 The data shows that the majority of workers are likely to drive to work (79.5%), with a further 7.3% travel as a car/van passenger, 7% walk and 2.5% likely to take the train, and 1.3% to travel by bus. Approximately, 0.9% will travel by motorcycle and 0.8% by bicycle.

3.11 Summary

3.11.1 The site is located at the A20 Ashford Road, circa 6.3km east of Maidstone Town Centre and circa 350m due west of the M20 Junction 8. A footway is located on the northern side of the A20 Ashford Road along the site frontage which extends westwards providing walking routes to Maidstone and eastwards providing walking routes to Hollingbourne. The 10X bus route provides an hourly service to Ashford and Maidstone and is easily accessible on foot from the site. Hollingbourne and Bearsted railway stations are located within a comfortable cycling distance and provide access to key destinations further afield.

3.11.2 A suite of traffic surveys was undertaken at key local junctions in proximity to the site in October 2022 to ascertain existing traffic flows, the results of which have been used in the traffic impact assessment provided later in this report. A review of the local PIA data obtained from KCC indicates that there are no particular highway safety problems on the local highway network.

SECTION 4 Development Proposal

4.1 Overview

4.1.1 This section of the TA provides details of the proposed development, including the site access arrangements. Whilst the application is in outline, further detail is also provided on the illustrative site layout, including parking and servicing provision.

4.2 Development Proposal

4.2.1 The site is proposed to be developed to provide 11,368sqm of B8 warehousing/distribution space. Illustrative site plans are included as **Appendix F** with an extract of the site layout reproduced below.

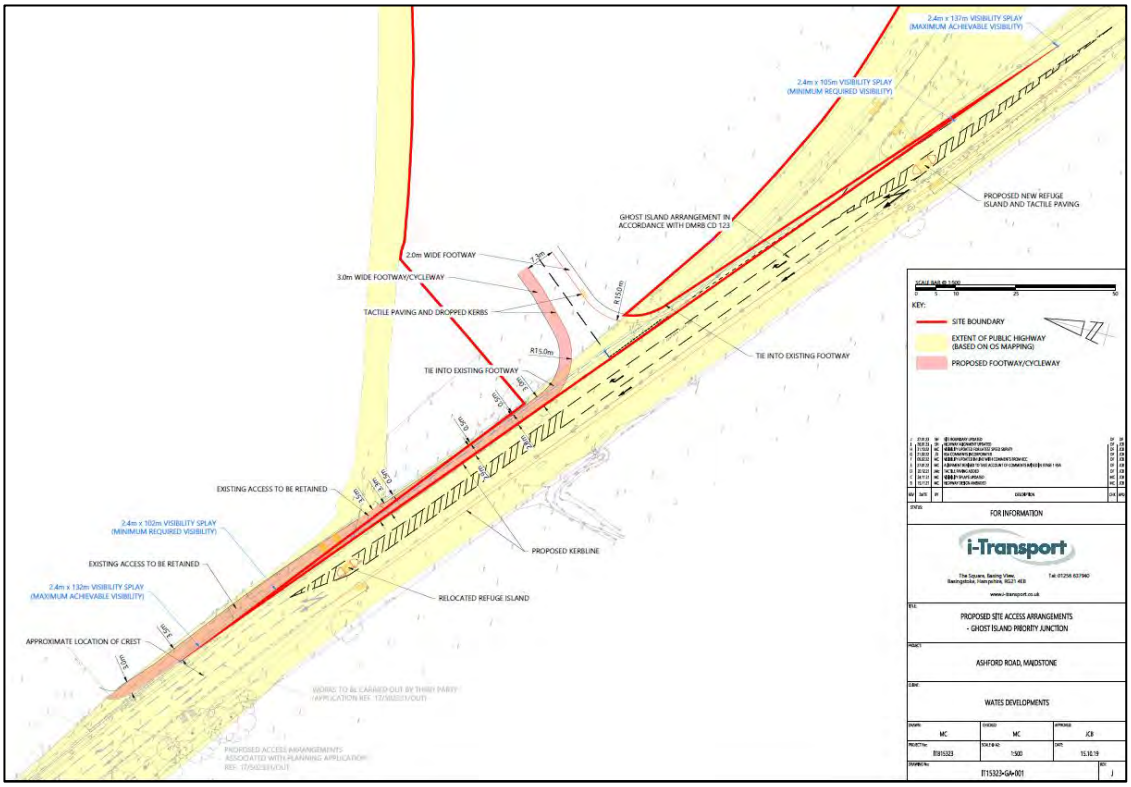
Image 4.1: Illustrative Site Layout

4.3 Vehicular Access

4.3.1 The development proposes to provide a ghost island right turn junction from A20 Ashford Road. **Drawing ITB15323-GA-001J** shows the proposed access arrangements, an extract of which is shown in **Image 4.2**. The access arrangements tie into the permitted ghost island right turn site access arrangement associated with the Woodcut Farm scheme, as well as a new footway/cycleway along the northern side of the A20 Ashford Road.

4.3.2 The access design is based on a 100kph design speed, with 15m kerb radii and a 7.3m access road.

Image 4.2: Proposed Site Access Arrangement



4.3.3 The access arrangements were agreed with KCC through the pre-application discussions and have been subject to an independent Stage 1 Road Safety Audit (RSA), albeit the visibility splays have been updated with the latest speed survey data (see below). The Stage 1 RSA and associated Designer's Response are included as **Appendix G**.

4.3.4 Swept path analysis included as **Appendix H** shows that vehicles can enter/exit using the site access junction safely.

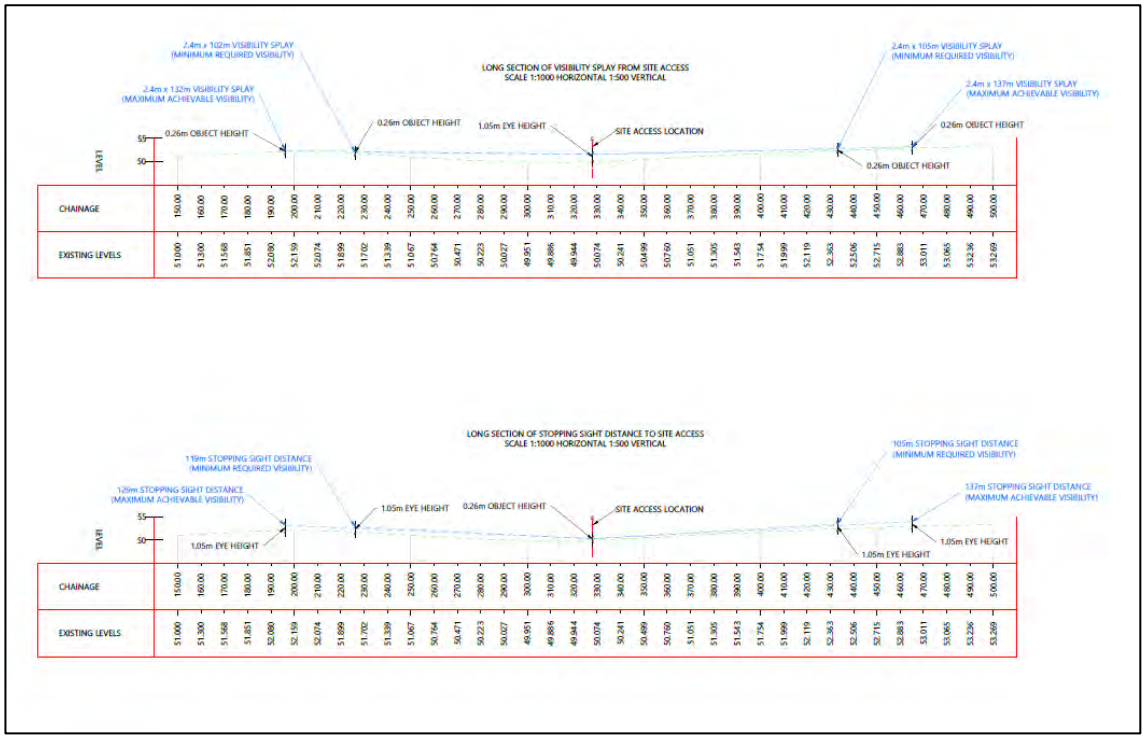
Visibility

4.3.5 Horizontal absolute minimum visibility splays of 2.4m x 105m to the east and 2.4m x 102m to the west can be achieved in line with the recorded 85th percentile speeds as detailed at **Table 3.3**. These visibility splays are shown on **Drawing ITB15323-GA-001J.**

4.3.6 The access arrangements along with visibility in the vertical plane (also based on absolute minimum parameters) are shown in **Drawing ITB15323-GA-007D** and demonstrates that visibility can be achieved to and from the junction in both directions from an eye height of 1.05m to an object height of 0.26m.

4.3.7 **Image 4.3** provides an extract from **Drawing ITB15323-GA-007D** of the vertical visibility of the revised access arrangements on A20 Ashford Road.

Image 4.3: Site Access Arrangements – Vertical Alignment



Approaches to Junction

4.3.8 From the east, a Stopping Sight Distance (SSD) forward visibility of 105m can be achieved from an eye height of 1.05m to an object height of 0.26m for a distance of 157.5m (1.5 x SSD in line with DMRB). The updated access and revised SSD forward is shown on **Drawing ITB15323-GA-010C**.

4.3.1 From the west, an SSD forward visibility of 102m can be achieved from an eye height of 1.05m to an object height of 0.26m for 153m. This is also shown on **Drawing ITB15323-GA-010C**.

4.4 Internal Layout

4.4.1 Details of the internal layout are a reserved matter, however the illustrative layout has been designed in line with current guidance and shows:

- The principal access route from the A20 Ashford Road;
- Pedestrian and cycle connections;
- Car and cycle parking; and
- HGV bays/parking.

4.4.2 Swept path analysis included at **Appendix H** demonstrates that all required vehicles can be safely accommodated within the site layout.

Parking

4.4.3 Car and cycle parking has been provided in accordance with KCC's standards as follows:

- 100 car parking spaces (including six disabled spaces);
- 58 covered and secure cycle parking spaces (showers and changing facilities will also be provided); and
- Areas for motorcycle parking.

4.4.4 10 parking spaces will also be provided with active electric vehicle charging points (7kW) and a further 10 parking spaces will be provided with passive electric vehicle charging points.

Servicing

4.4.5 40 HGV parking/loading bays are provided in line with KCC's standards. Swept path analysis demonstrates that HGVs can access these spaces safely.

SECTION 5 Sustainable Transport Strategy

5.1 Introduction

5.1.1 This section of the TA considers the promotion of sustainable transport to and from the development proposal. The Sustainable Transport Strategy includes:

- A robust Travel Plan; and
- Local footway / cycleway improvements

5.2 Framework Travel Plan

5.2.1 A Framework Travel Plan (FTP) has been prepared and sits alongside this Transport Assessment. The FTP provides a framework within which a Travel Plan will be prepared and agreed prior to occupation to encourage and facilitate non-car travel to/from the proposed scheme. The FTP will be secured via an appropriately worded planning condition.

5.2.2 The principal objective of the FTP is as follows:

"To reduce the number of single-occupancy vehicle movements to and from the site."

5.2.3 Initial targets have been identified as follows:

- Reduce the total number of single-occupancy vehicle trips to and from the site by 10 percentage points over a five-year period (based on 2011 Census mode share);
- Increase the number of shared car trips to the site by 3.5 percentage points over five years; and
- Increase the number of cycling and bus trips to the site by 2.5 percentage points each.

5.2.4 The traffic impact analysis set out in the TA is not contingent on the above targets being met, i.e. the estimated traffic generation assumes that existing mode share will continue and is therefore a 'worst case'.

5.2.5 The Travel Plan will be implemented and monitored by a Travel Plan Co-ordinator (TPC) who will be appointed by the eventual occupiers of the site. The TPC will also liaise with KCC Highways to report the results of monitoring, the success (or otherwise) of the Travel Plan and any amendments that are proposed, e.g. in the event that a particular measure or initiative is particularly successful (or unsuccessful).

5.2.6 An action plan has been produced. This summarises the measures that will be implemented as well as how the Travel Plan will be monitored and reviewed. It is reproduced as **Table 5.1** below.

Table 5.1: Action Plan

Measures	Summary of Measures	Responsibility	Timescale
Travel Plan Co-Ordinator	Nominate and appoint Travel Plan Co-Ordinator	Developer	Three months prior to first occupation
Establish Baseline	Undertake initial TRICS monitoring surveys and staff questionnaires	TPC	Within 12 months of first occupation or within one month of operation
Travel Plan Promotion	Information pack about the Travel Plan and local and national transport events and options available	Developer / TPC	Prior to first occupation
Cycle Facilities	Provision of secure and covered cycle parking on site, along with shower and changing facilities.	Developer	Prior to first occupation
Promoting Public Transport	Information on public transport routes, timetables, and discount travel cards to be made available within the Travel Plan Information Pack and Information Board	Developer / TPC	Prior to first occupation
	Provide season ticket loans to employees.	TPC	Within six months of first occupation
Promoting Cycling	Promotion of cycle training courses for staff with dates and contact details to book sessions	Developer / TPC	Within six months of first occupation
	Obtain up to date cycle maps and provide information on local cycle routes to staff	TPC	Within 3 months of operational start date and update as appropriate
	Promotion of cycle training courses for staff with dates and contact details to book sessions. Arrange annual 'bike doctor' visits.	TPC	Within 3 months of operational start date and annually thereafter
	Provide cycle route information to a new staff	Developer / TPC	Prior to first occupation
Promoting Car Sharing	Information on car sharing and Liftshare website to be made available within the Travel Plan Information Pack and Information Point.	Developer / TPC	Within 3 months of operational start date and update as appropriate
	Set up a site-specific car share scheme for employees.	Developer / TPC	Within 3 months of operational start date and update as appropriate
Electric Vehicle Charging Points	Provide 10% 'active' and 10% 'passive' electric vehicle charging points on-site. These are to be promoted to employees.	Developer	Prior to occupation
Travel Plan Monitoring and Review	Undertake future TRICS SAM surveys	TPC	Years 1, 3 and 5

Measures	Summary of Measures	Responsibility	Timescale
	Monitor staff modal split and review the Travel Plan measures in line with results of SAM Surveys	Developer / TPC	The baseline staff travel survey will be undertaken either within six months of first occupation or at 75 per cent occupancy. Follow up surveys in Years 3 and 5.
	Prepare a monitoring report in light of survey results	TPC	Within 2 months of receipt of survey results
	Report the results of the surveys and the review of the Travel Plan to KCC as appropriate	TPC	Within 3 months of receipt of survey results
Promotion of National and Local Events	Information to be made available about upcoming national and local events such as 'Bike Week' and 'Walk to Work' week	Developer / TPC	Introduced within three months of occupation and updated regularly (at least every three months)

5.2.7 The implementation of the Travel Plan will be monitored on an annual basis to determine whether the targets are being met. The TPC will manage the monitoring process which will predominantly comprise staff surveys and questionnaires to determine travel attitudes and patterns. Results will be reported to KCC and will be set out against the targets detailed in the FTP. Full details of the monitoring process are set out in the FTP.

5.2.8 Should the modal shift targets set out in the FTP not be met, various remedial measures can be implemented to further encourage modal shift. Examples of these are set out in the FTP which could include:

- Increasing the level of personalised travel planning on offer.
- Increasing the number of cycle parking spaces provided.
- Providing additional changing facilities.
- Increasing the number of electric vehicle charging points on site.

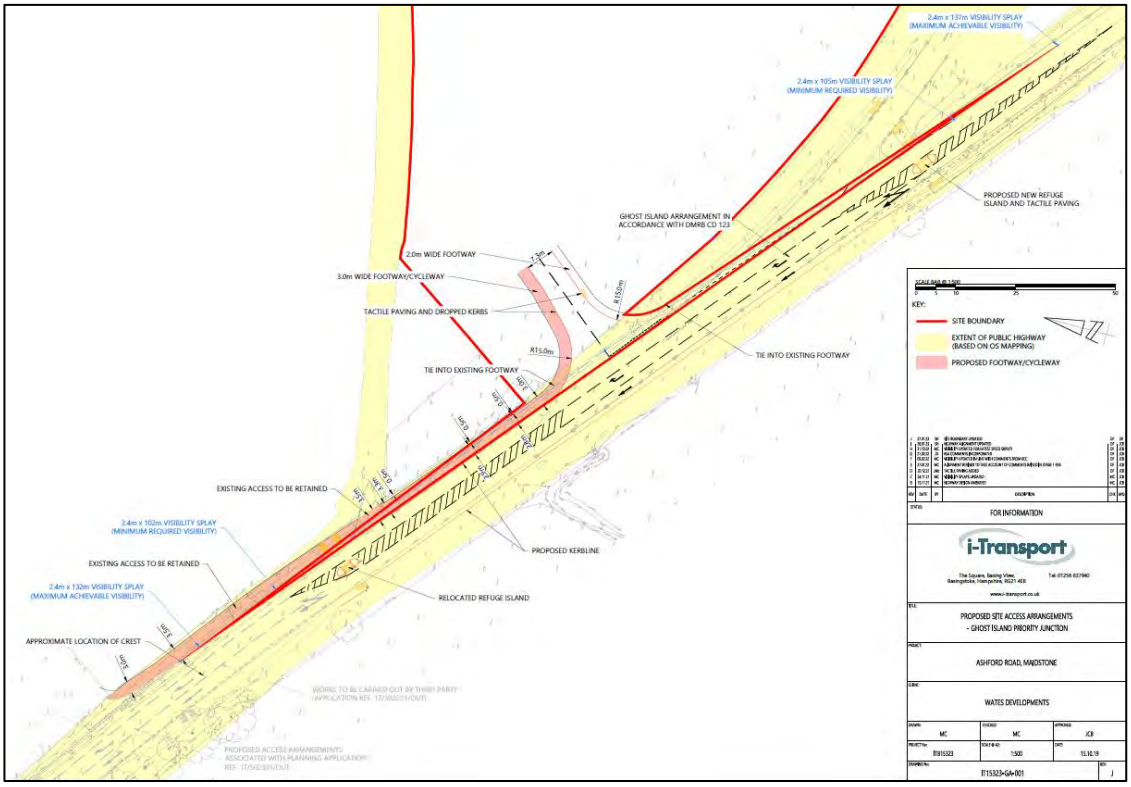
5.3 Local Footway / Cycleway Improvements

5.3.1 There are footway and cycleway improvements proposed on A20 Ashford Road to the west of the site as part of the consented Woodcut Farm scheme which comprise the provision of a new footway/cycleway on the northern side of the A20 Ashford Road between the Woodcut Farm access and the A20 Ashford Road / Roundwell junction.

5.3.2 Details of these improvements are not available at the time of submission of this application, but they have been secured via a pre-occupation planning condition for the Woodcut Farm development. This footway/cycleway will improve cycle connectivity to the west

5.3.3 As part of the proposed development, it is proposed to provide a further shared footway/cycleway connection at the site access on the A20 Ashford Road to connect into the proposed footway/cycleway secured via the Woodcut Farm site. The proposed shared footway/cycleway will be between 2.8m and 3.0m in width with dropped kerbs and corduroy paving where appropriate. **Image 5.1** illustrates the proposed footway/cycleway provision as part of the site access arrangements (also shown on **Drawing ITB15323-GA-001J**).

Image 5.1: Proposed Pedestrian and Cycle Provision



Source: i-Transport Drawing ITB15323-GA-001

5.3.4 The accessibility plan at **Figure 3.1** shows the proposed footway/cycleway connecting into the wider network.

5.4 Public Transport

5.4.1 As detailed at Section 3, the site is well located to the existing 10X bus service and is within cycling distance to nearby railway stations.

5.5 Summary

5.5.1 A Sustainable Transport Strategy is proposed for the proposed development, which includes:

- A comprehensive Travel Plan designed to implement measures to encourage sustainable travel to and from the site; and
- Local footway and cycleway improvements that will link into existing and proposed provisions along Ashford Road.

SECTION 6 Traffic Impact Assessment Methodology and Flows

6.1 Introduction

6.1.1 This section of the TA details the methodology used to assess the potential traffic impact of the proposed development.

6.2 Pre-application Discussions / Agreement of Scope

6.2.1 The traffic assessment parameters been subject to pre-application discussions with KCC and have been agreed. The following traffic parameters have been agreed:

- Background traffic growth (TEMPRO) and committed development;
- Vehicular trip rates;
- Traffic distribution and assignment methodology;
- Assessment years; and
- The extent of the study area that will be subject to detailed junction capacity testing.

6.3 Baseline Conditions

6.3.1 As set out in Section 3, baseline traffic surveys were undertaken at key junctions and links within the agreed traffic impact study area in October 2022.

6.3.2 The study area comprises:

- A20 Ashford Road;
- A20 / M20 Link Roundabout; and
- M20 Junction 8.

6.3.3 **Tables 3.4** and **3.5** in Section 3 of the TA summarise the existing operation of these junctions.

6.4 Future Year Traffic Flows Without Development

TEMPRO Traffic Growth

6.4.1 In accordance with the National Planning Practice Guidance, (DfT, March 2014), it was agreed with KCC that the following future year assessments should be undertaken for:

- 2027 – to ensure a robust assessment[6]; and
- 2037 – in line with National Highways (NH) guidance.

6.4.2 Factors to allow for traffic growth to 2027 and 2037 have been derived from the National Transport Model (NTM) with adjustments made for local factors derived from the TEMPRO database (NTS v.7.2 dataset). TEMPRO provides the planning assumptions in terms of the number of households and jobs within the identified locations.

6.4.3 For the purposes of this exercise, the Maidstone 011 Middle Super Output Area (MSOA) layer has been assessed. The TEMPRO growth factors between 2022 to 2027, and 2022 to 2037 are summarised in **Table 6.1**.

Table 6.1: TEMPRO Traffic Growth Factors

Data Range	Morning Peak	Evening Peak
2022-2027	1.0299	1.0325
2022-2037	1.0953	1.1024

Source: TEMPro (v.7.2) Maidstone 011 MSOA

6.4.4 The above growth factors have been applied to the surveyed traffic flows and the 2027 and 2037 growthed traffic flows for the study area are shown on the following figures:

- **Figure TF3** – 2027 AM Peak Hour (0730 – 0830)
- **Figure TF4** – 2027 PM Peak Hour (1645 – 1745)
- **Figure TF5** – 2037 AM Peak Hour (0730 – 0830)
- **Figure TF6** – 2037 PM Peak Hour (1645 – 1745)

[6] Although it is envisaged that the proposed development will come forward in 2024.

Committed Development

6.4.5 It has been agreed with KCC that the only committed development site to include is the adjacent Woodcut Farm scheme to the west (*application reference: 17/502331/OUT*). This site is allowed for in the wider Maidstone Local Plan assessments and is therefore accounted for in the TEMPRO traffic growth factors detailed above (i.e. it is included in **Figures TF3 – TF6**).

Without Development Traffic Flows

6.4.6 Future year 'without development' traffic flows are therefore shown on the following figures:

- **Figure TF7** – 2027 'without development' AM Peak Hour (0730 – 0830)
- **Figure TF8** – 2027 'without development' PM Peak Hour (1645 – 1745)
- **Figure TF9** – 2037 'without development' AM Peak Hour (0730 – 0830)
- **Figure TF10** – 2037 'without development' PM Peak Hour (1645 – 1745)

6.5 Proposed Development Traffic Generation

6.5.1 The TRICS database has been used to calculate the traffic generation of the proposed B8 warehouse unit. Trip rates have been obtained from the TRICS database using the following selection criteria (which yielded six sites):

- Land Use – Employment (Commercial Warehousing);
- Region – England (excluding Greater London);
- Size Relevance – 300 to 20,000sqm;
- Time Period – 01/01/2013 to 31/01/20; and
- Location Relevance – Suburban Area and Edge of Town.

6.5.2 The vehicular trip rates and resultant peak hour trips from the B8 Commercial Warehouse are presented in **Table 6.2** with the full TRICS output provided at **Appendix I**. These trip rates have been agreed with KCC through the pre-application discussions.

Table 6.2: Development Proposal Total Traffic Generation – B8 Warehouse (11,368sqm)

	Arrivals	Departures	Two-way
Morning Peak (0730-0830)			
Vehicle Trip Rate	0.280	0.189	0.469
Vehicle Trip Generation	32	21	53
Evening Peak (1645-1745)[7]			
Vehicle Trip Rate	0.154	0.290	0.444
Vehicle Trip Generation	18	33	51

Source: TRICS & Consultant's Estimates

6.5.3 The analysis indicates that the total development proposal is likely to generate just under an additional vehicle per minute in the peak hours. This is a modest level of traffic generation.

6.5.4 In addition to the total vehicle trip generation, HGV trip rates for B8 Warehouse have also been obtained, and the HGV trip generation is presented in **Table 6.3.**

Table 6.3: Development Proposal HGV Generation – B8 Warehouse (11,368sqm)

	Arrivals	Departures	Two-way
Morning Peak (0730-0830)			
Vehicle Trip Rate	0.044	0.094	0.138
Vehicle Trip Generation	5	11	16
Evening Peak (1645-1745)[8]			
Vehicle Trip Rate	0.092	0.058	0.150
Vehicle Trip Generation	10	7	17

Source: TRICS & Consultant's Estimates

6.5.5 The analysis indicates that the HGV generation in the peak hours will be just less than circa one HGV every three minutes.

6.5.6 **Table 6.4** summarises the light vehicle trip generation of the proposed development (i.e. **Table 6.2** minus **Table 6.3**).

[7] The TRICs outputs only present trip rates in 30 minute periods from 1630 – 1700, 1700 – 1730 and 1730 – 1800. In order to ensure a robust assessment the trip rates from 1700 – 1800 are presented as these are higher than trip rates from 1630 – 1730.

[8] Again, trip rates presented from 1700 – 1800 to ensure a robust assessment.

Table 6.4: Development Proposal Light Vehicle Generation – B8 Warehouse (11,368sqm)

	Arrivals	Departures	Two-way
Morning Peak (0730-0830)			
Vehicle Trip Generation	27	10	37
Evening Peak (1645-1745)			
Vehicle Trip Generation	7	26	33

Source: TRICS & Consultant's Estimates

6.6 Distribution of Development Traffic

6.6.1 To provide an accurate assessment of the likely distribution of development traffic, traffic generation has been assigned to the local highway network and strategic highway network using a distribution derived as follows:

- 2011 Census Journey to Work data for workers within the Maidstone 011 Middle layer Super Output Area (MSOA) has been used to distribute staff trips to/from work. It is directly comparable to the development in terms of location and therefore provides a suitable proxy for employment trips; and
- It has been assumed that all HGVs will be distributed onto the strategic highway network at the M20 Junction 8.

6.6.2 **Table 6.5** sets out the Development Trip Distribution to and from the site for employee trips. The full census analysis is available at **Appendix J** (including vehicle routing).

Table 6.5: Summary of Development Trip Distribution – Employee Trips

Destination	Percentage of Employment Trips
Ashford	18.7%
Canterbury	3.4%
Chatham	5.4%
Cranbrook	0.7%
Dartford	0.6%
Dover	1.3%
Eccles	0.5%
Faversham	2.9%
Gillingham	2.5%
Gravesham	1.1%
Harrietsham	9.2%
Headcorn	1.6%

Destination	Percentage of Employment Trips
Hempstead	0.5%
Isle of Sheppey	2.1%
Larkfield	1.6%
Maidstone	16.0%
Marden	0.0%
North/East London	0.7%
Other	2.6%
Parkwood	4.8%
Rochester	2.3%
Shepway	4.0%
Sittingbourne	6.6%
Snodland	0.7%
South/West London	0.1%
Staplehurst	0.5%
Tonbridge	1.4%
West Malling	0.3%
Total	**100.0%**

Source: Census Data 2011

6.6.3 This distribution methodology was agreed with KCC during pre-application scoping.

6.6.4 The distribution of light vehicles and HGVs associated with the proposed development is shown on the following figure:

- **Figure TF11** – Proposed Development Traffic Distribution (AM and PM Peak Hours)

6.7 Assignment of Development Traffic

6.7.1 The estimated traffic generation from the site detailed in **Tables 6.3** and **6.4** has been assigned onto the local and strategic road network based on the distribution detailed at **Figure TF11**. The assigned traffic flows are shown on the following figures:

- **Figure TF12** – Development Traffic Assignment AM Peak Hour (0730 – 0830)
- **Figure TF13** – Development Traffic Assignment PM Peak Hour (1645 – 1745)

6.7.2 KCC have also agreed the methodology for assigning the development traffic onto the local highway network.

6.8 Future Year 'With Development' Traffic Flows

6.8.1 The assigned development traffic flows shown on **Figures TF12** and **TF13** have been added to the 2027 and 2037 'without development' traffic flows shown on Figures TF7 – TF10 to derive 'with development' traffic scenarios. 'With development' traffic flows are shown on the following figures**:**

- **Figure TF14** – 2027 'with development' AM Peak Hour (0730 – 0830)
- **Figure TF15** – 2027 'with development' PM Peak Hour (1645 – 1745)
- **Figure TF16** – 2037 'with development' AM Peak Hour (0730 – 0830)
- **Figure TF17** – 2037 'with development' PM Peak Hour (1645 – 1745)

SECTION 7 Traffic Impact Assessment

7.1 Introduction

7.1.1 This section of the TA presents the results of the traffic impact assessment of the proposed development, providing the results of detailed junction assessments.

7.2 Capacity Assessments

7.2.1 The following sub-sections present the results of the junction assessments, using the methodology and parameter agreed with KCC during the pre-application scoping process.

Extent of Study Area

7.2.2 The traffic impact assessment study area was agreed during the pre-application discussions with KCC. The following junctions have been assessed using individual junction modelling to understand the traffic impact of the proposed development on the local highway network:

- A20 Ashford Road / Site Access junction;
- A20 / M20 link roundabout; and
- M20 Junction 8.

Assessment Years

7.2.3 The following scenarios to be assessed were agreed with KCC during pre-application scoping:

- 2027 'without development' (shown on **Figures TF7** and **TF8**);
- 2027 'with development' (shown on **Figures TF14** and **TF15**);
- 2037 'without development' (shown on **Figures TF9** and **TF10**); and
- 2037 'with development' (shown on **Figures TF16** and **TF17**).

Modelling Tools

7.2.4 The junctions have been assessed using the TRL Junctions 10 software (the industry standard tool used for non-signalised junctions). The principal outputs derived from Junctions 10 are the Ratio of Flow to Capacity (RFC), queue lengths (in PCUs[9]) and delay (in seconds per vehicle).

[9] Passenger Car Units

7.2.5 The junction models have been calibrated to observed queue lengths where appropriate. A copy of all the junction assessment outputs can be provided upon request.

7.2.6 The modelling results are categorised as follows:

- **GREEN** – Operating within operational capacity.
- **LIGHT GREEN** – Operating within maximum capacity.
- **RED** – Operating over maximum capacity.

7.2.7 Operational capacity is equivalent to 90% of the maximum capacity for signalised junctions and 85% of the maximum capacity for roundabouts/priority junctions. Operational capacity is theoretical and desirable for newly constructed junctions. Maximum capacity is the correct threshold for existing junctions including where mitigation / improvements are proposed.

7.2.8 The full set of junction modelling outputs are provided at **Appendix L**.

7.3 Assessment Results

A20 Ashford Road / Site Access Priority Junction

7.3.1 **Table 7.1** summarises the results of the operational assessments. The junction geometries are included in **Appendix D**.

Table 7.1: A20 Ashford Road / Site Access Priority Junction Assessment Results

	Morning Peak Hour			Evening Peak Hour		
	Queue	Delay (s/veh)	RFC	Queue	Delay (s/veh)	RFC
2027 with Development						
Site Access	<1	9	0.05	<1	9	0.08
A20 Ashford Road right turn	<1	8	0.06	<1	9	0.04
2037 with Development						
Site Access	<1	9	0.05	<1	10	0.09
A20 Ashford Road right turn	<1	8	0.06	<1	10	0.05

Source: Junctions 10

7.3.2 The site access priority junction is expected to operate well within capacity.

7.4 A20 / M20 Link Roundabout

7.4.1 **Table 7.2** summarises the results of the operational assessments.

Table 7.2: A20 / M20 Link Roundabout Junction Assessment Results

	Morning Peak Hour			Evening Peak Hour		
	Queue	Delay (s/veh)	RFC	Queue	Delay (s/veh)	RFC
2027 without Development						
M20 Link Road	4	9	0.63	10	17	0.87
A20 (E)	10	18	0.89	4	9	0.76
A20 (W)	1	9	0.39	1	6	0.36
2027 with Development						
M20 Link Road	5	10	0.64	12	21	0.89
A20 (E)	8	17	0.90	4	9	0.76
A20 (W)	1	9	0.45	1	6	0.39
2037 without Development						
M20 Link Road	5	10	0.68	20	31	0.92
A20 (E)	15	26	0.96	6	11	0.81
A20 (W)	1	10	0.46	1	6	0.41
2037 with Development						
M20 Link Road	6	11	0.69	17	29	0.92
A20 (E)	21	36	0.97	5	11	0.81
A20 (W)	1	11	0.50	1	7	0.43

Source: Junctions 10

7.4.2 **Table 7.2** demonstrates that the junction will continue to operate within capacity with the addition of the proposed development (there are minor increases in queuing and delay that will not be noticeable).

7.5 M20 Junction 8 Roundabout

7.5.1 **Table 7.3** summarises the results of the operational assessments.

Table 7.3: M20 Junction 8 Roundabout

	Morning Peak Hour			Evening Peak Hour		
	Queue	Delay (s/veh)	RFC	Queue	Delay (s/veh)	RFC
2027 without Development						
Maidstone Services	<1	3	0.22	<1	4	0.24
M20 (E)	<1	5	0.28	<1	6	0.31
A20 Link Road	1	3	0.56	1	2	0.45
M20 (W)	2	5	0.66	3	6	0.77
2027 with Development						
Maidstone Services	<1	3	0.22	<1	4	0.24
M20 (E)	<1	5	0.30	1	7	0.32
A20 Link Road	1	3	0.57	1	2	0.46
M20 (W)	2	5	0.67	3	6	0.78
2037 without Development						
Maidstone Services	<1	3	0.25	<1	4	0.27
M20 (E)	1	5	0.32	1	8	0.36
A20 Link Road	2	3	0.60	1	2	0.48
M20 (W)	2	6	0.71	5	8	0.83
2037 with Development						
Maidstone Services	<1	3	0.25	<1	4	0.27
M20 (E)	1	6	0.34	1	8	0.37
A20 Link Road	2	3	0.61	1	2	0.50
M20 (W)	3	6	0.72	5	9	0.83

Source: Junctions 10

7.5.2 **Table 7.3** demonstrates that the junction will continue to operate well within capacity with the addition of the proposed development (there are minor increases in queuing and delay that will not be noticeable).

7.6 Summary

7.6.1 **Table 7.4** provides a summary of the operational assessment results of the Proposed Development in combination with planned and committed development within the study area.

Table 7.4: Operational Assessment Results Summary

Junction	2022 Base Year	2027 without Development	2027 with Development	2037 without Development	2037 with Development
A20 Ashford Road / Site Access					
A20 / M20 On/Off-Slip Roundabout					
M20 Junction 8					

Source: Junction Assessments

RFC < 0.85
RFC ≥ 0.85
RFC > 1.00

7.6.2 The traffic impact assessment demonstrates that the local highway network will continue to operate acceptably and that the proposed development has a minimal impact on the operation of local junctions.

SECTION 8 Sensitivity Test – Parcel Distribution Warehouse

8.1 Overview

8.1.1 This section of the TA provides a sensitivity test traffic impact assessment of the site should it come forward as a Parcel Distribution Warehouse. This sensitivity test was requested by KCC during pre-application scoping discussions.

8.2 Parcel Distribution Warehouse Trip Generation

8.2.1 The TRICS database has once again been examined for relevant parcel distribution sites located within England (excluding Greater London). This has yielded a total of three parcel distribution sites:

- Parcel Worldwide, Lincolnshire – 1,496sqm;
- City Link, Nottinghamshire – 3,000sqm; and
- DHL, Slough – 15,583sqm.

8.2.2 Based on the above sites, the derived vehicle trip rate and vehicle trip generation of the proposed development as a parcel distribution centre are shown in **Table 8.1**. The TRICS output for the parcel distribution warehouse is included at **Appendix K**.

Table 8.1: Development Proposal Traffic Generation – B8 Parcel Distribution Warehouse (11,368sqm)

	Arrivals	Departures	Two-way
Morning Peak (0730-0830)			
Vehicle Trip Rate	0.413	0.533	0.946
Vehicle Trip Generation	47	61	108
Evening Peak (1645-1745)[10]			
Vehicle Trip Rate	0.418	0.648	1.066
Vehicle Trip Generation	48	74	121

Source: TRICS & Consultant's Estimates

[10] The TRICs outputs only present trip rates in 30 minute periods from 1630 – 1700, 1700 – 1730 and 1730 – 1800. In order to ensure a robust assessment the trip rates from 1700 – 1800 are presented as these are higher than trip rates from 1630 – 1730.

8.2.3 The analysis indicates that the total development proposal for a parcel distribution warehouse is likely to generate just under two additional vehicles per minute in the morning peak hour, and just over two additional vehicles per minute in the evening peak hour.

8.2.4 In addition to the total vehicle trip generation, HGV trip rates for B8 Parcel Distribution Warehouse have also been obtained, and the likely HGV trip generation is presented in **Table 8.2.**

Table 8.2: Development Proposal HGV Generation – B8 Parcel Distribution Warehouse (11,368sqm)

	Arrivals	Departures	Two-way
Morning Peak (0730-0830)			
Vehicle Trip Rate	0.080	0.150	0.230
Vehicle Trip Generation	9	17	26
Evening Peak (1645-1745)[11]			
Vehicle Trip Rate	0.045	0.080	0.125
Vehicle Trip Generation	5	9	14

Source: TRICS & Consultant's Estimates

8.2.5 The analysis indicates that the HGV generation will be circa one HGV every two to three minutes in the morning peak hour and one HGV every four minutes in the evening peak hour associated with a parcel distribution warehouse.

8.2.6 **Table 8.3** summarises the light vehicle trip generation of the proposed development (i.e. **Table 8.1** minus **Table 8.2**).

Table 8.3: Development Proposal Light Vehicle Generation – B8 Parcel Distribution Warehouse (11,368sqm)

	Arrivals	Departures	Two-way
Morning Peak (0730-0830)			
Vehicle Trip Generation	38	44	82
Evening Peak (1645-1745)			
Vehicle Trip Generation	43	63	106

Source: TRICS & Consultant's Estimates

[11] Again, trip rates presented from 1700 – 1800 to ensure a robust assessment.

8.2.7 This trip generation methodology and subsequent proposed trip rates for a parcel distribution warehouse were agreed with KCC during pre-application scoping discussions.

8.3 Parcel Distribution Centre Distribution and Assignment

8.3.1 The parcel distribution trip generation has been distributed and assigned to the local highway network in line with the same agreed parameters detailed in Section 6 for the B8 Warehouse use.

8.3.2 The development traffic flows for a parcel distribution warehouse in the morning and evening peak hours are shown the following traffic figures:

- **Figure TF18** – Sensitivity Test Development Traffic Assignment AM Peak Hour (0730 – 0830)
- **Figure TF19** – Sensitivity Test Development Traffic Assignment PM Peak Hour (1645 – 1745)

8.4 Sensitivity Test 'With Development' Traffic Flows

8.4.1 The assigned development traffic flows shown on **Figures TF18** and **TF19** have been added to the 2027 and 2037 'without development' traffic flows shown on Figures TF7 – TF10 to derive Sensitivity Test 'with development' traffic scenarios. Sensitivity Test 'with development' traffic flows are shown on the following figures**:**

- **Figure TF20** – Sensitivity Test 2027 'with development' AM Peak Hour (0730 – 0830)
- **Figure TF21** – Sensitivity Test 2027 'with development' PM Peak Hour (1645 – 1745)
- **Figure TF22** – Sensitivity Test 2037 'with development' AM Peak Hour (0730 – 0830)
- **Figure TF23** – Sensitivity Test 2037 'with development' PM Peak Hour (1645 – 1745)

8.5 Parcel Distribution Warehouse Capacity Assessments

8.5.1 Following the same methodology and using the same baseline traffic data and study area as set out in Section 7 for the B8 Warehouse use, further capacity assessments have been undertaken to understand the traffic impact of the B8 Parcel Distribution Warehouse on the local highway network. This has been agreed with KCC.

8.5.2 The following scenarios to be assessed were agreed with KCC during pre-application scoping:

- 2027 with Development; and
- 2037 with Development.

8.5.3 The full set of junction modelling outputs are provided at **Appendix L**.

A20 Ashford Road / Site Access priority junction – Sensitivity Test

8.5.4 **Table 8.1** summarises the results of the Sensitivity Test assessment.

Table 8.1: A20 Ashford Road / Site Access Priority Junction Sensitivity Test Assessment Results

	Morning Peak Hour			Evening Peak Hour		
	Queue	Delay (s/veh)	RFC	Queue	Delay (s/veh)	RFC
2027 with Development (Sensitivity Test)						
Site Access	<1	10	0.15	<1	10	0.18
A20 Ashford Road right turn	<1	8	0.09	<1	8	0.08
2037 with Development (Sensitivity Test)						
Site Access	<1	10	0.16	<1	11	0.19
A20 Ashford Road right turn	<1	9	0.09	<1	8	0.09

Source: Junctions 10

8.5.5 **Table 8.1** demonstrates that the site access priority junction is expected to operate well within capacity using the Sensitivity Test parameters.

A20 / M20 Link Roundabout

8.5.6 **Table 8.2** summarises the results of the Sensitivity Test assessments.

Table 8.2: A20 / M20 Link Roundabout Junction Assessment Results

	Morning Peak Hour			Evening Peak Hour		
	Queue	Delay (s/veh)	RFC	Queue	Delay (s/veh)	RFC
2027 without Development						
M20 Link Road	4	9	0.63	10	17	0.87
A20 (E)	10	18	0.89	4	9	0.76
A20 (W)	1	9	0.39	1	6	0.36
2027 with Development (Sensitivity Test)						
M20 Link Road	4	10	0.64	10	20	0.88
A20 (E)	9	18	0.90	4	9	0.76
A20 (W)	1	10	0.50	1	7	0.42
2037 without Development						
M20 Link Road	5	10	0.68	20	31	0.92
A20 (E)	15	26	0.96	6	11	0.81
A20 (W)	1	10	0.46	1	6	0.41
2037 with Development (Sensitivity Test)						
M20 Link Road	6	11	0.68	19	29	0.92
A20 (E)	19	33	0.97	6	11	0.81
A20 (W)	2	12	0.56	1	8	0.47

Source: Junctions 10

8.5.7 **Table 8.2** demonstrates that the junction will continue to operate acceptably and within capacity under the Sensitivity Test assessment parameters.

M20 Junction 8 Roundabout

8.5.8 **Table 8.3** summarises the results of the Sensitivity Test assessment.

Table 8.3: M20 Junction 8 Roundabout

	Morning Peak Hour			Evening Peak Hour		
	Queue	Delay (s/veh)	RFC	Queue	Delay (s/veh)	RFC
2027 without Development						
Maidstone Services	<1	3	0.22	<1	4	0.24
M20 (E)	<1	5	0.28	<1	6	0.31
A20 Link Road	1	3	0.56	1	2	0.45
M20 (W)	2	5	0.66	3	6	0.77
2027 with Development (Sensitivity Test)						
Maidstone Services	<1	3	0.22	<1	4	0.24
M20 WB off-slip	<1	5	0.30	1	7	0.33
A20 Link Road	1	3	0.58	1	2	0.48
M20 EB off-slip	2	5	0.67	4	7	0.78
2037 without Development						
Maidstone Services	<1	3	0.25	<1	4	0.27
M20 (E)	1	5	0.32	1	8	0.36
A20 Link Road	2	3	0.60	1	2	0.48
M20 (W)	2	6	0.71	5	8	0.83
2037 with Development (Sensitivity Test)						
Maidstone Services	<1	3	0.25	<1	4	0.27
M20 (EB)	1	6	0.34	1	8	0.38
A20 Link Road	2	3	0.62	1	2	0.51
M20 (WB)	3	6	0.73	5	9	0.84

Source: Junctions 10

8.5.9 **Table 8.3** demonstrates that the junction will continue to operate acceptably and within capacity under the Sensitivity Test assessment parameters.

8.6 Summary

8.6.1 The Sensitivity Test assessments demonstrate that the local highway network will continue to operate acceptably and well within capacity should the site come forward as a parcel distribution centre. The results of the traffic impact assessment at Section 7 therefore remain valid.

SECTION 9 Summary & Conclusions

9.1 Summary

9.1.1 Wates Developments propose to develop land to the north of A20 Ashford Road to provide 11,368sqm of B8 Warehouse/Distribution space. i-Transport LLP has been appointed by to provide highways/transport advice for the proposal and this Transport Assessment (TA) has been prepared to assess the development.

9.1.2 The site is situated on existing farmland to the north of Ashford Road circa 6.3km east of Maidstone town centre, and is bordered to the north by Musket Lane, to the west by the A20 Ashford Road, to the south by Ashford Road By-pass, and to the west by A20 / M20 link road.

9.1.3 The site benefits from a footway that routes westbound towards Maidstone town centre. There is also existing public transport within walking distance of the site, with hourly bus services accessible. Hollingbourne and Bearsted railway stations provide access to key destinations further afield.

9.1.4 The proposed development will also bring forward a comprehensive Travel Plan to further promote the use of sustainable travel modes.

9.1.5 A review of the local PIA data obtained from KCC indicates that there are no intrinsic highway safety problems on the local highway network.

9.1.6 Access to the development is proposed via a new ghost island junction with A20 Ashford Road, which will also deliver a new footway/cycleway connection to the west of the site. The junction has been designed in line with the prevailing guidance and the required visibility splays for the recorded vehicle speeds on the A20 Ashford Road can be achieved. The access junction has been agreed with officers at KCC through pre-application discussions and has been subject to an independent Stage 1 Road Safety Audit (RSA).

9.1.7 The detail of the internal site layout is a reserved matter, however the illustrative site layout demonstrates that this will come forward in line with local policy and design guidance. Car, HGV and cycle parking will be provided in line with the local standards and swept path analysis demonstrates that vehicles can access the site safely. Electric vehicle charging points will also be provided.

9.1.8 A trip generation assessment has been undertaken, with the site expected up to 54 vehicles in both morning and evening peak hours, split into around 16 HGVs and 38 light vehicles.

9.1.9 A traffic impact assessment of the proposed development of the local highway network has been undertaken based on a suite of traffic surveys collected in October 2022. The assessment tested the impact of the development on the local highway network for future years of 2027 and 2037 and demonstrated that the network will continue to operate acceptably and well within capacity.

9.1.10 At the request of KCC a Sensitivity Test has also been undertaken to assess the proposal should it come forward as a parcel distribution warehouse. This assessment demonstrates that the network will continue to operate acceptably and well within capacity should the development come forward as a parcel distribution centre.

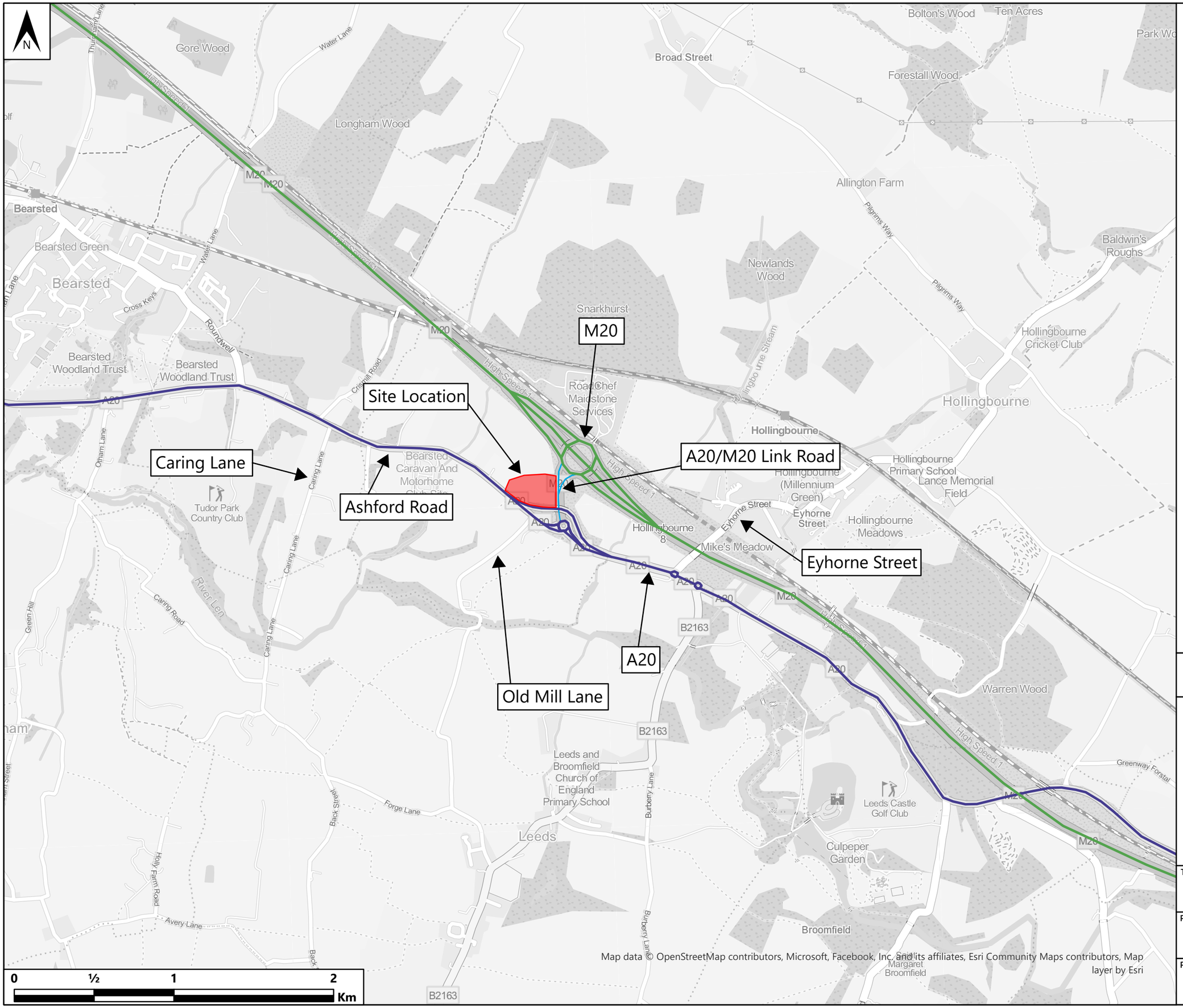
9.2 Conclusion

9.2.1 The proposed development therefore accords with national/local transport policy and meetings the four NPPF 'tests':

- The site will take up the opportunities for sustainable travel modes including a Travel Plan;
- Safe and suitable access can be achieved from the A20 Ashford Road;
- The site layout will come forward in line with design guidance and local policy; and
- The local highway network will continue to operate acceptably and within capacity with the proposed development.

9.2.2 The proposed development is therefore acceptable in transport/highways terms.

FIGURES



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Key

- Site Boundary

Road Network

- M20
- A20
- A20/M20 Link Road

i-Transport

Basingstoke: 01256 637 940
Leeds: 0113 357 1360
London: 020 3705 9215
Manchester: 0161 830 2172

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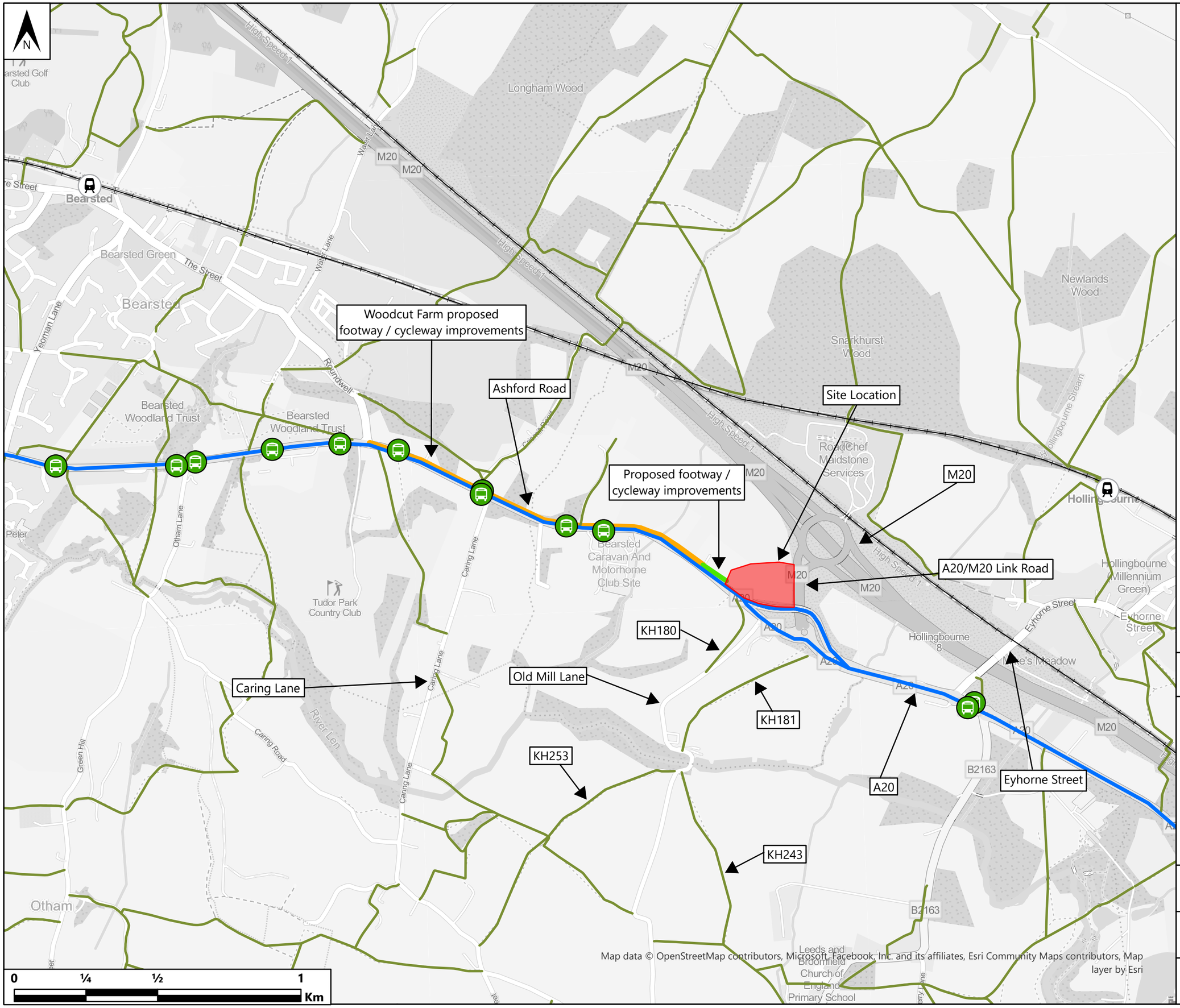
Title:

Site Location Plan

Project:

Ashford Road, Maidstone

Project Number:	Figure Number:	Revision:
ITB15323	**1.1**	**-**



Key

- Site Boundary

Public Transport

- Train Station
- Rail Road
- Bus Stop
- 10X Bus Route

Walking and Cycling

- Public Rights of Way
- Proposed footway / cycleway improvements
- Woodcut Farm proposed footway / cycleway

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London: 020 3705 9215
Manchester: 0161 830 2172

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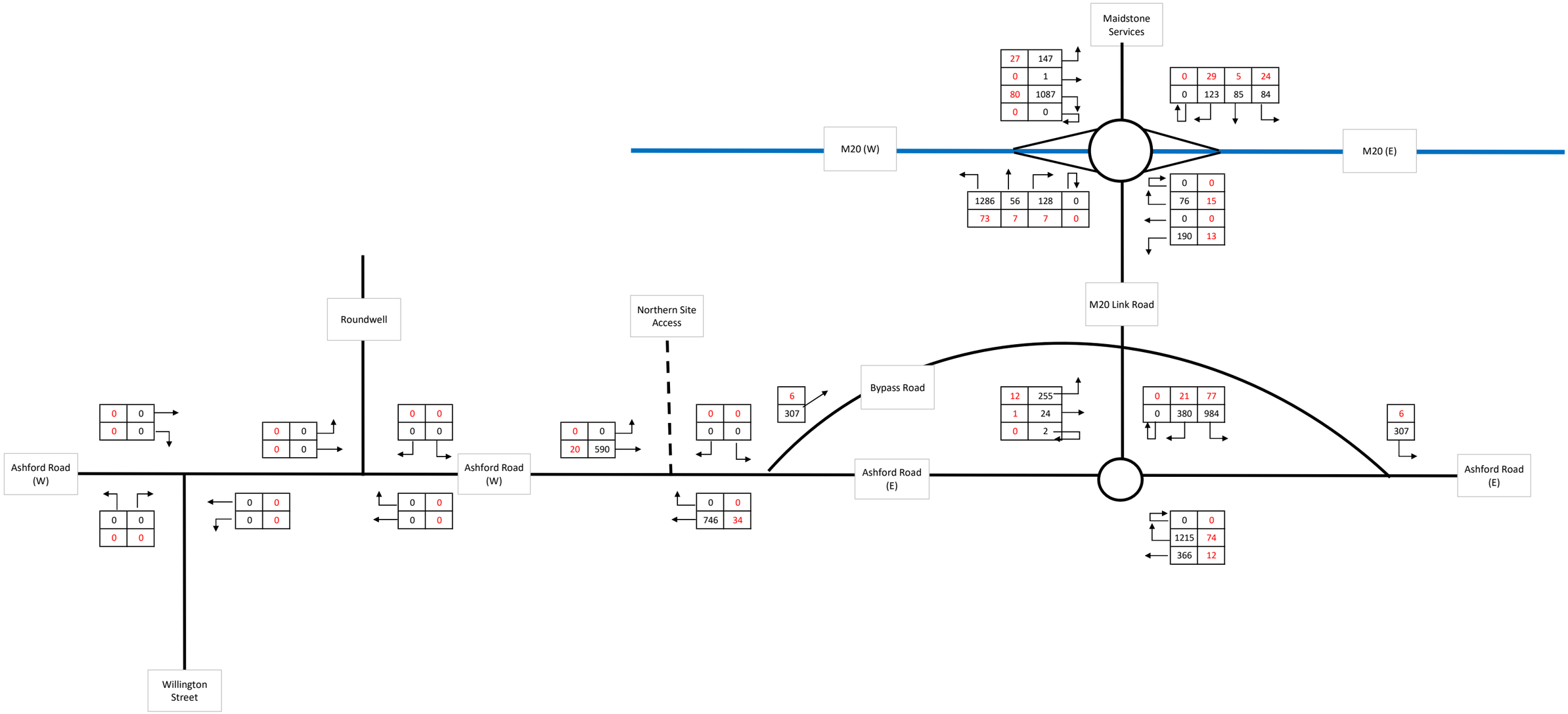
Title:

Accessibility Plan

Project:

Ashford Road, Maidstone

Project Number:	Figure Number:	Revision:
ITB15323	**3.1**	**-**



KEY		
500	=	TOTAL VEH
25	=	HGVs

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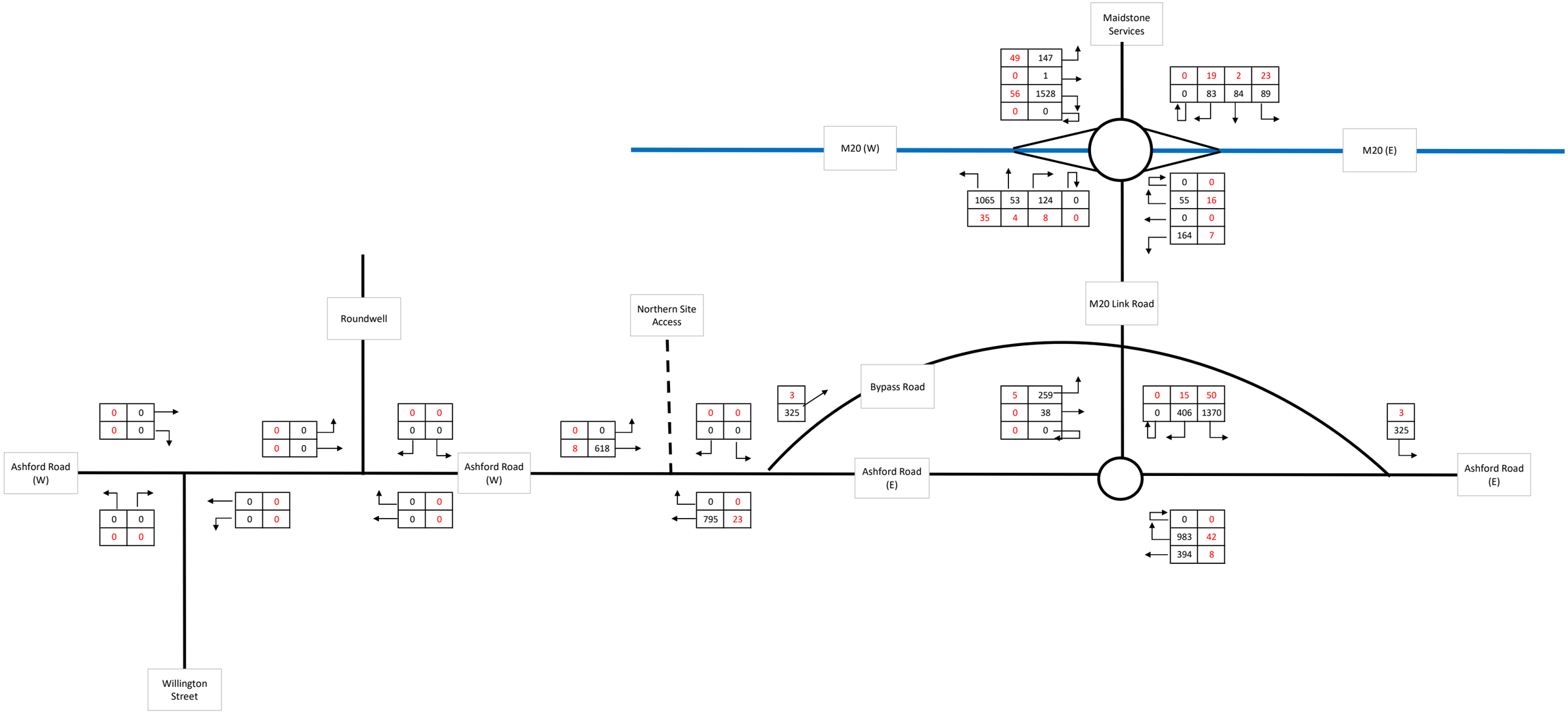
TF1

2022 Observed Traffic Flows - AM Peak Hour (0730-0830)



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500 = TOTAL VEH

25 = HGVs

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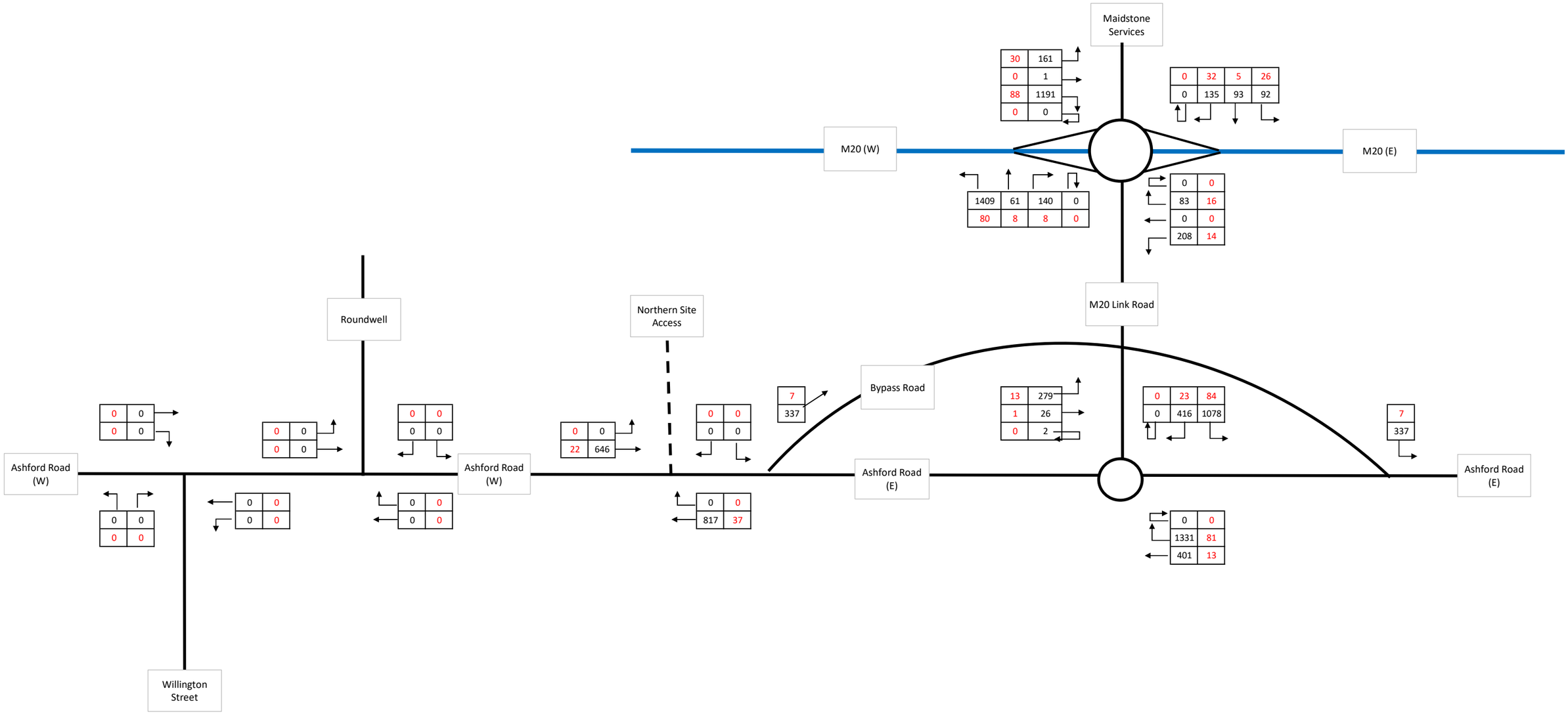
TF2

2022 Observed Traffic Flows - PM Peak Hour (1645-1745)



KEY

500 = TOTAL VEH

25 = HGVs

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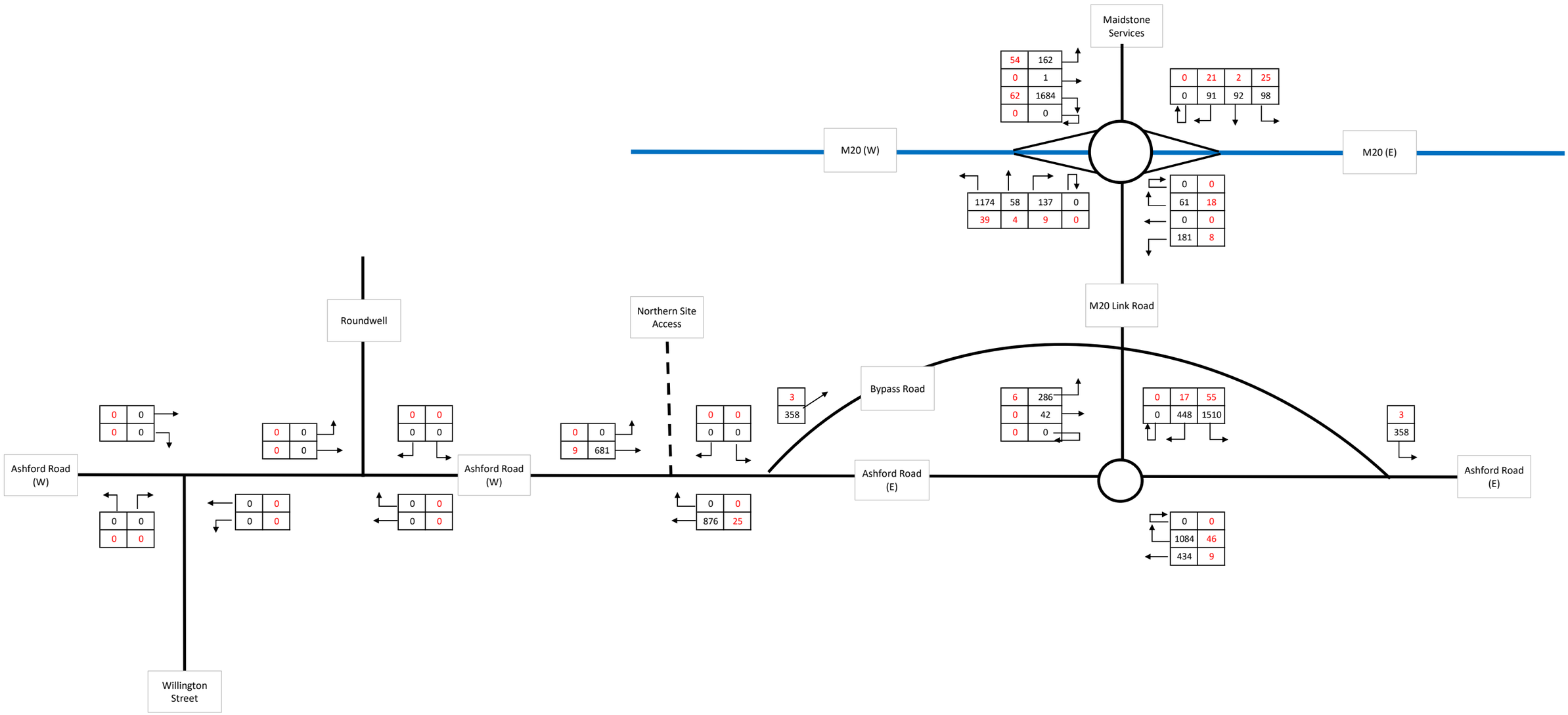
TF3

2027 Projected Traffic Flows - AM Peak Hour (0730-0830)



KEY

500 = TOTAL VEH

25 = HGVs

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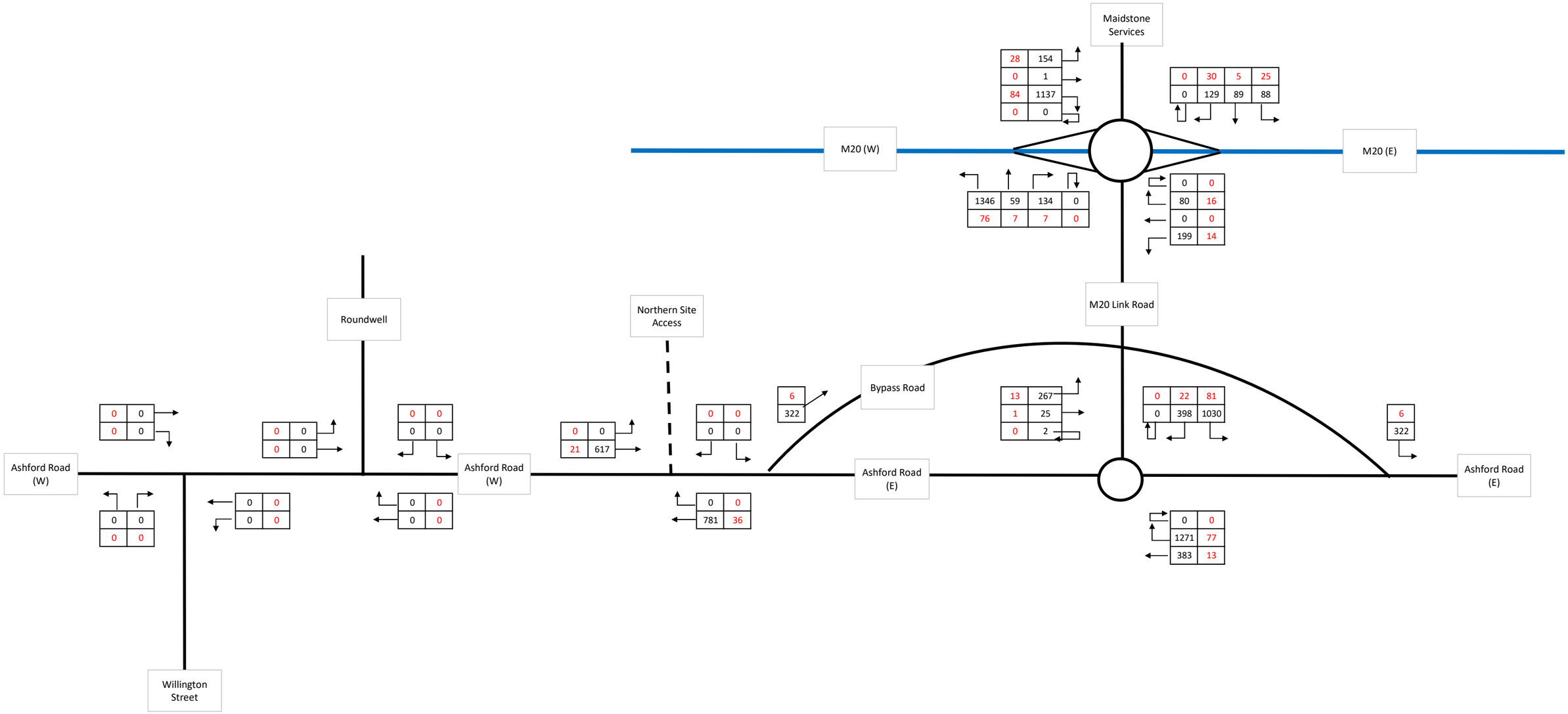
TF4

2027 Projected Traffic Flows - PM Peak Hour (1645-1745)



KEY

500 = TOTAL VEH

25 = HGVs

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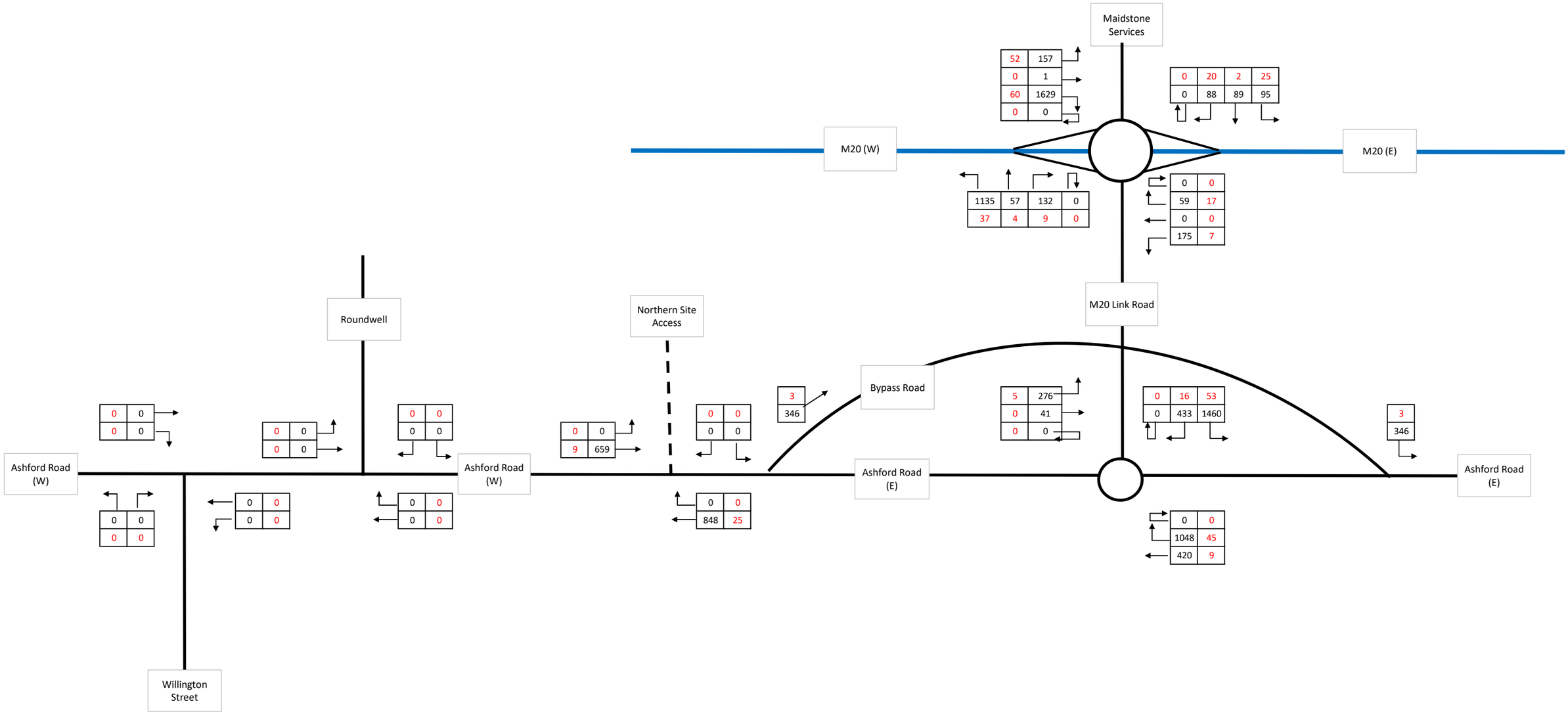
TF5

2037 Projected Traffic Flows - AM Peak Hour (0730-0830)



KEY

500 = TOTAL VEH

25 = HGVs

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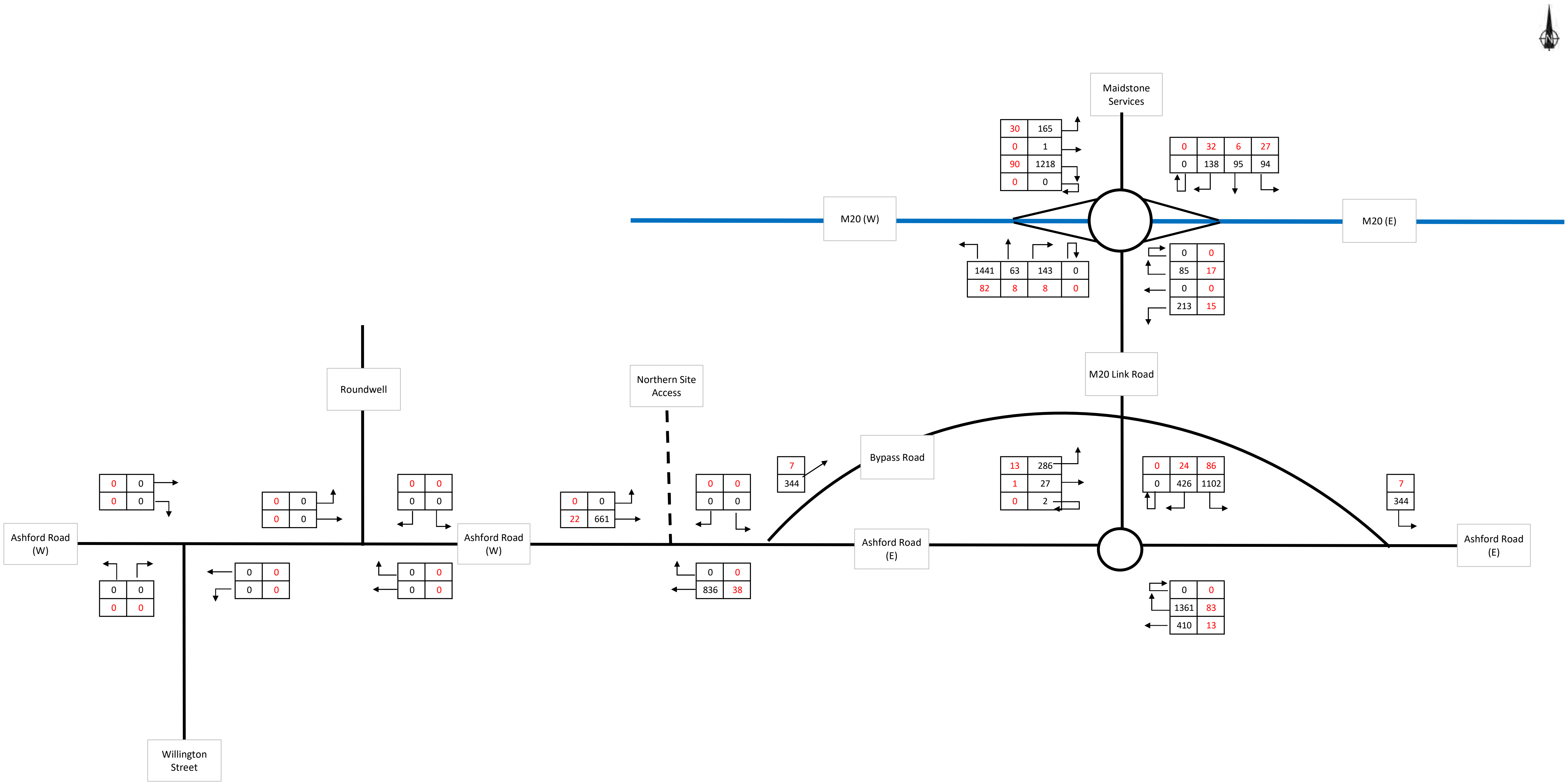
TF6

2037 Projected Traffic Flows - PM Peak Hour (1645-1745)



KEY

500	=	TOTAL VEH
25	=	HGVs

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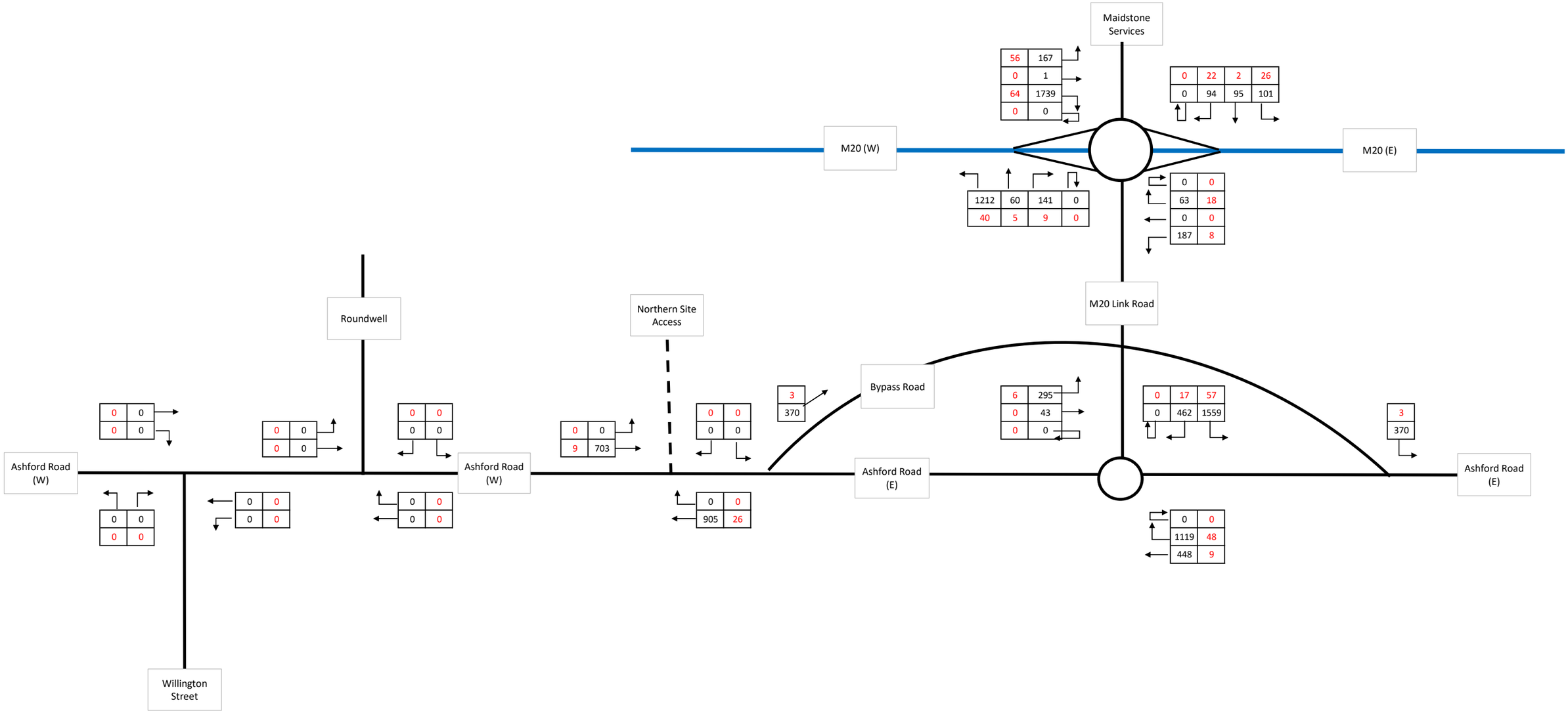
TF7

2027 ‘without development’ AM Peak Hour (0730-0830)



KEY

500 = TOTAL VEH

25 = HGVs

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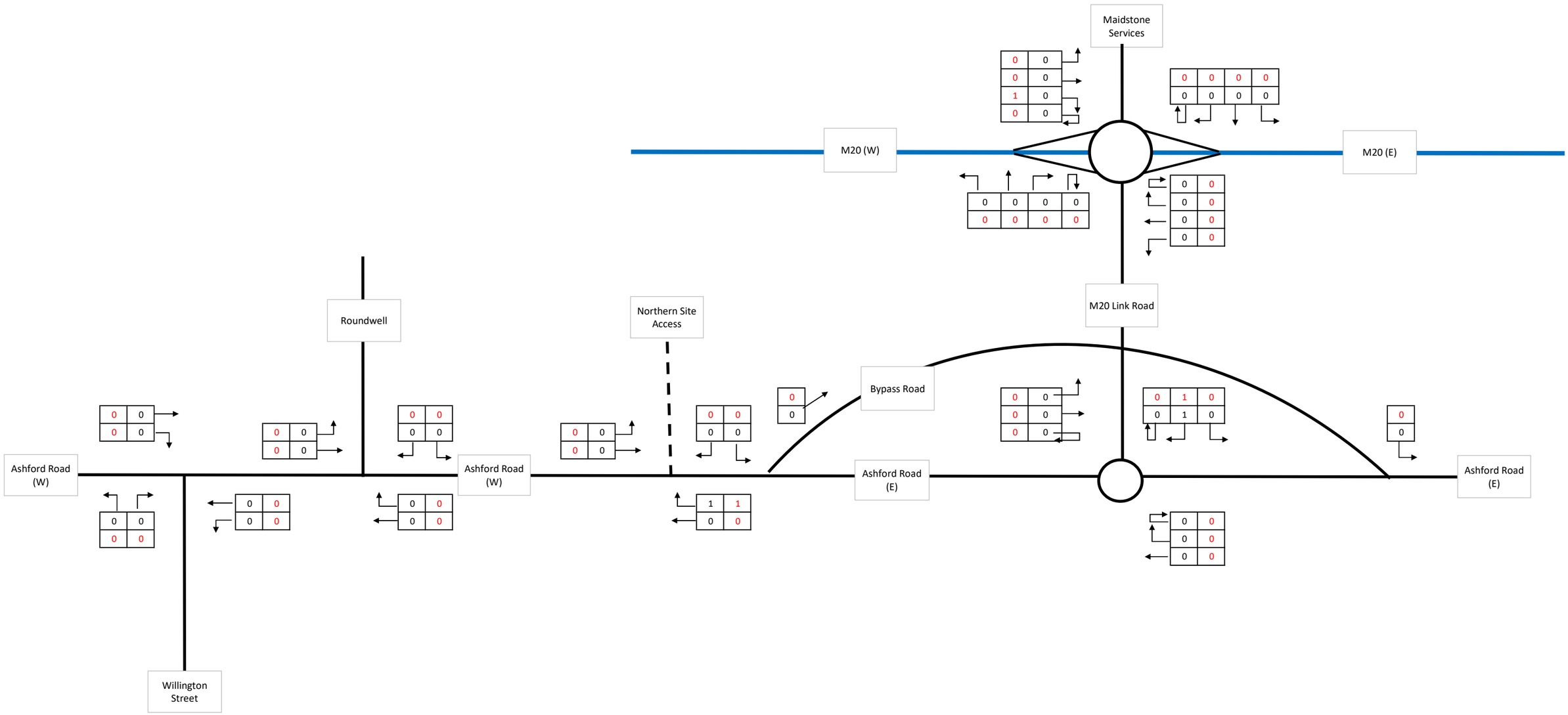
TF8

2027 'without development' PM Peak Hour (1645-1745)



KEY

500 = TOTAL VEH

25 = HGVs

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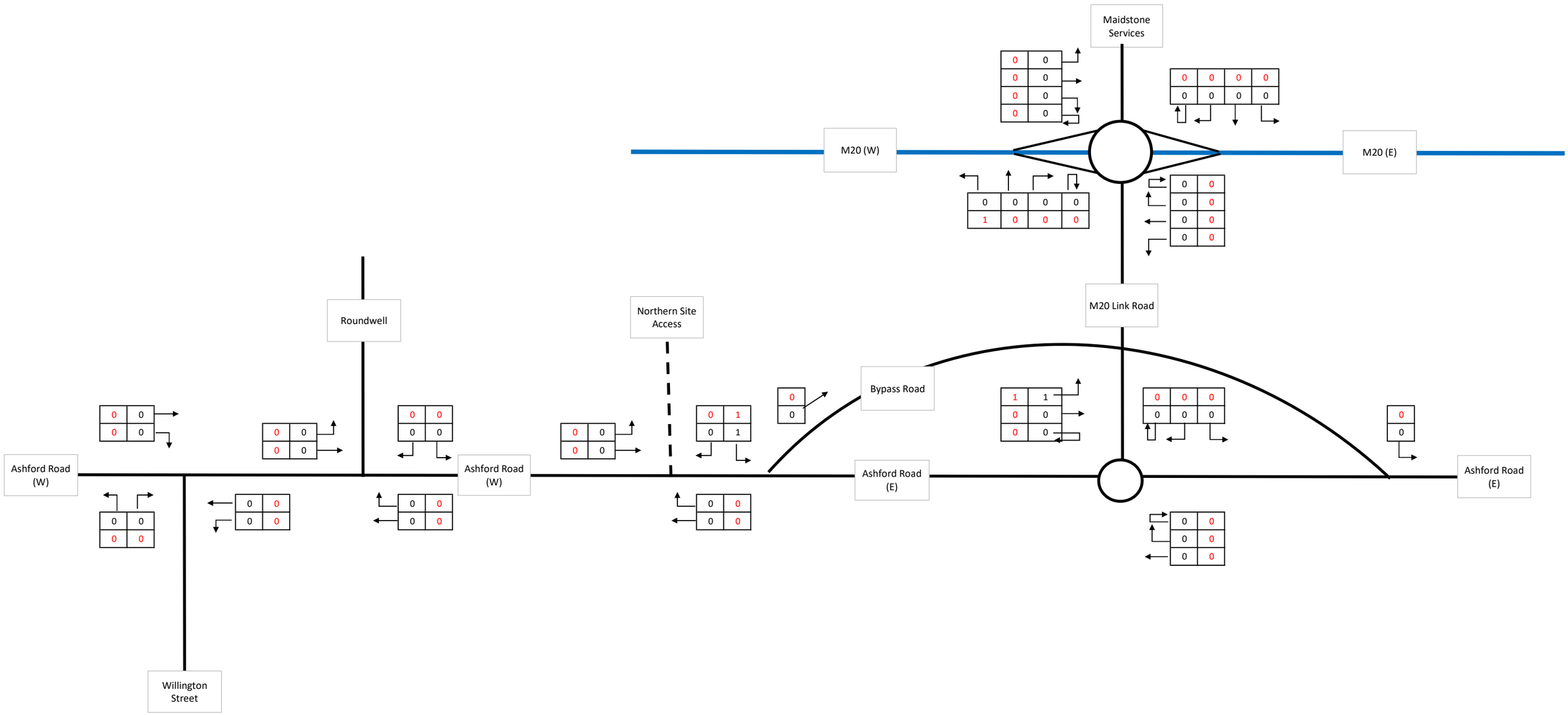
TF9

2037 'without development' AM Peak Hour (0730-0830)



KEY

500 = TOTAL VEH

25 = HGVs

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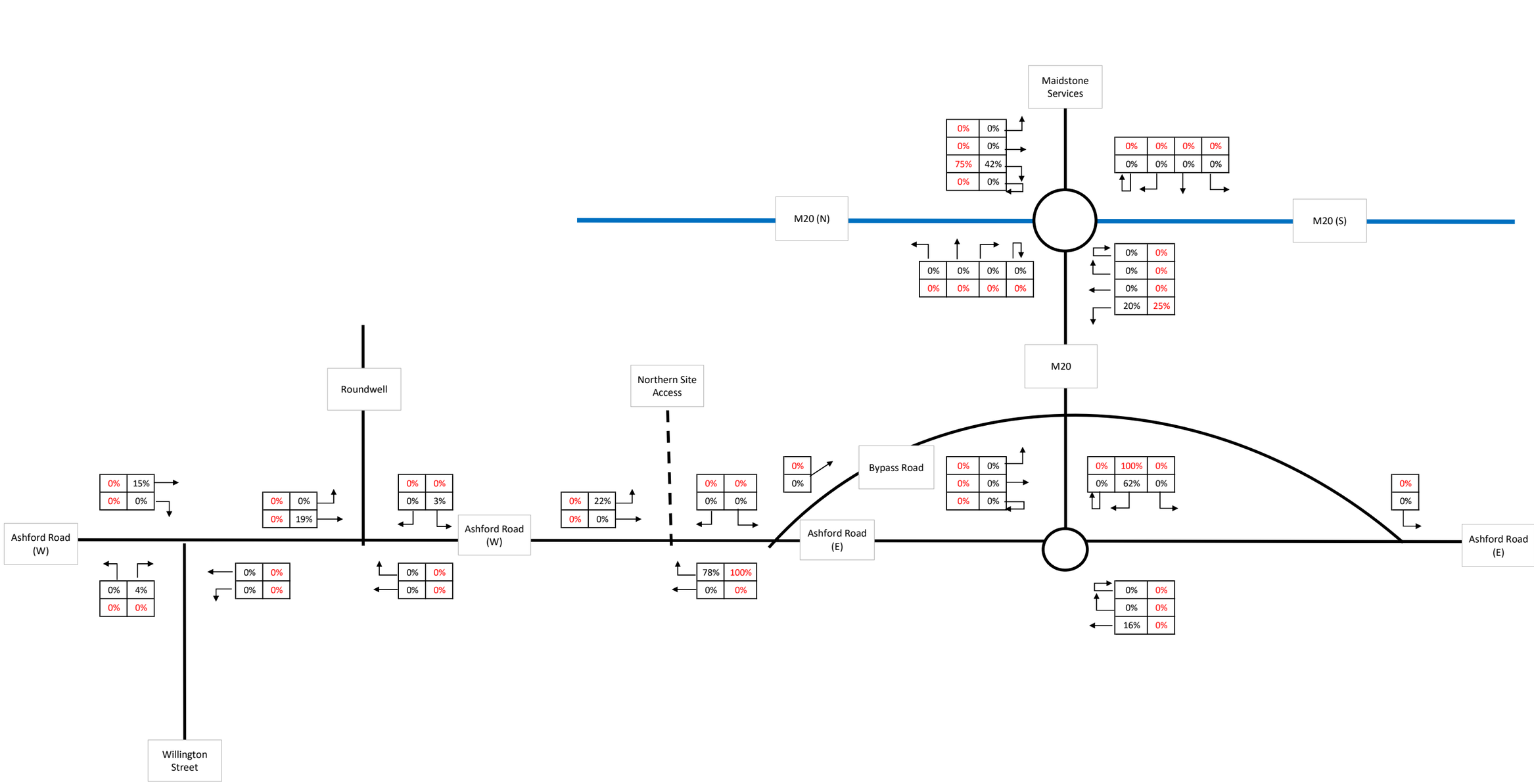
TF10

2037 'without development' PM Peak Hour (1645-1745)



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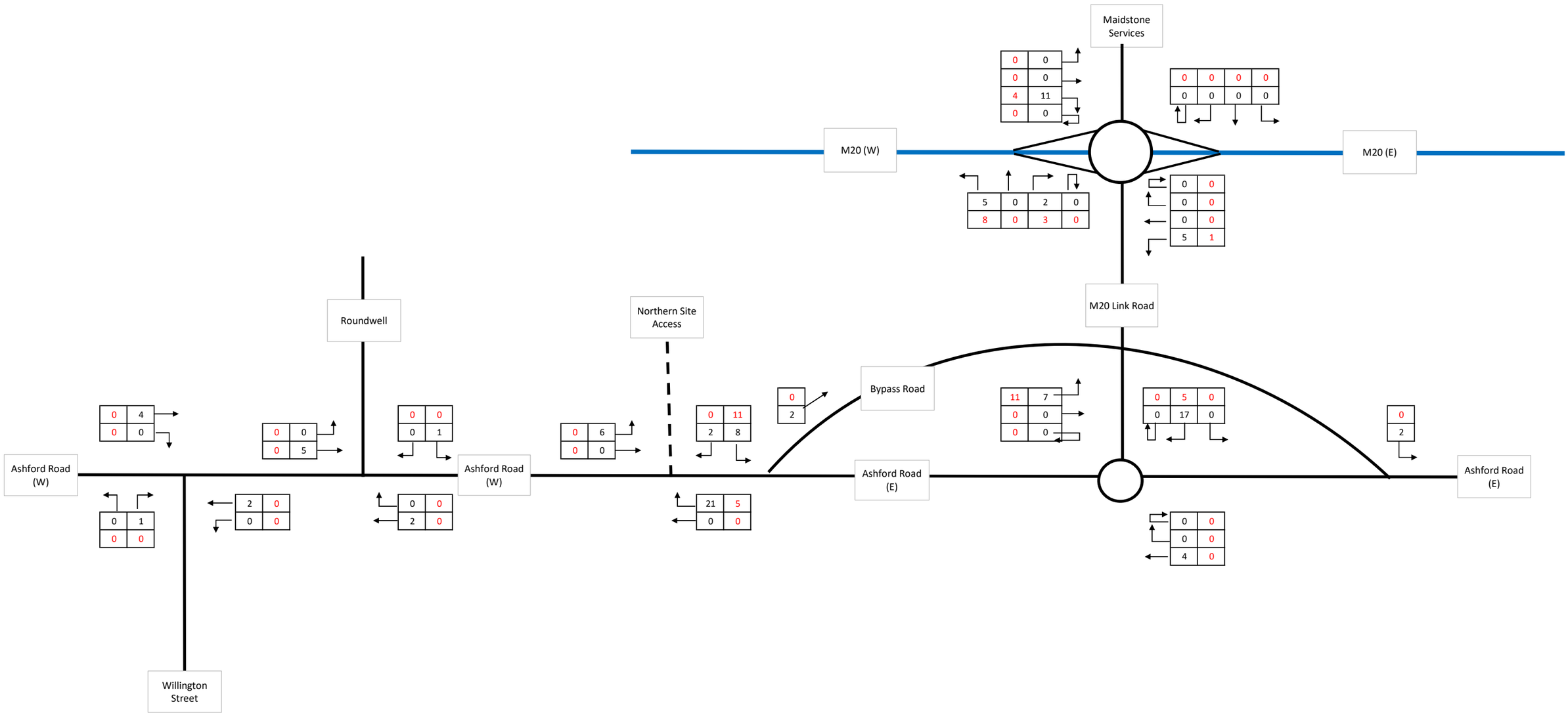
25 = HGVs	TF11	
	Development Distribution Two-Way (%)	



KEY

500 = TOTAL VEH

25 = HGVs

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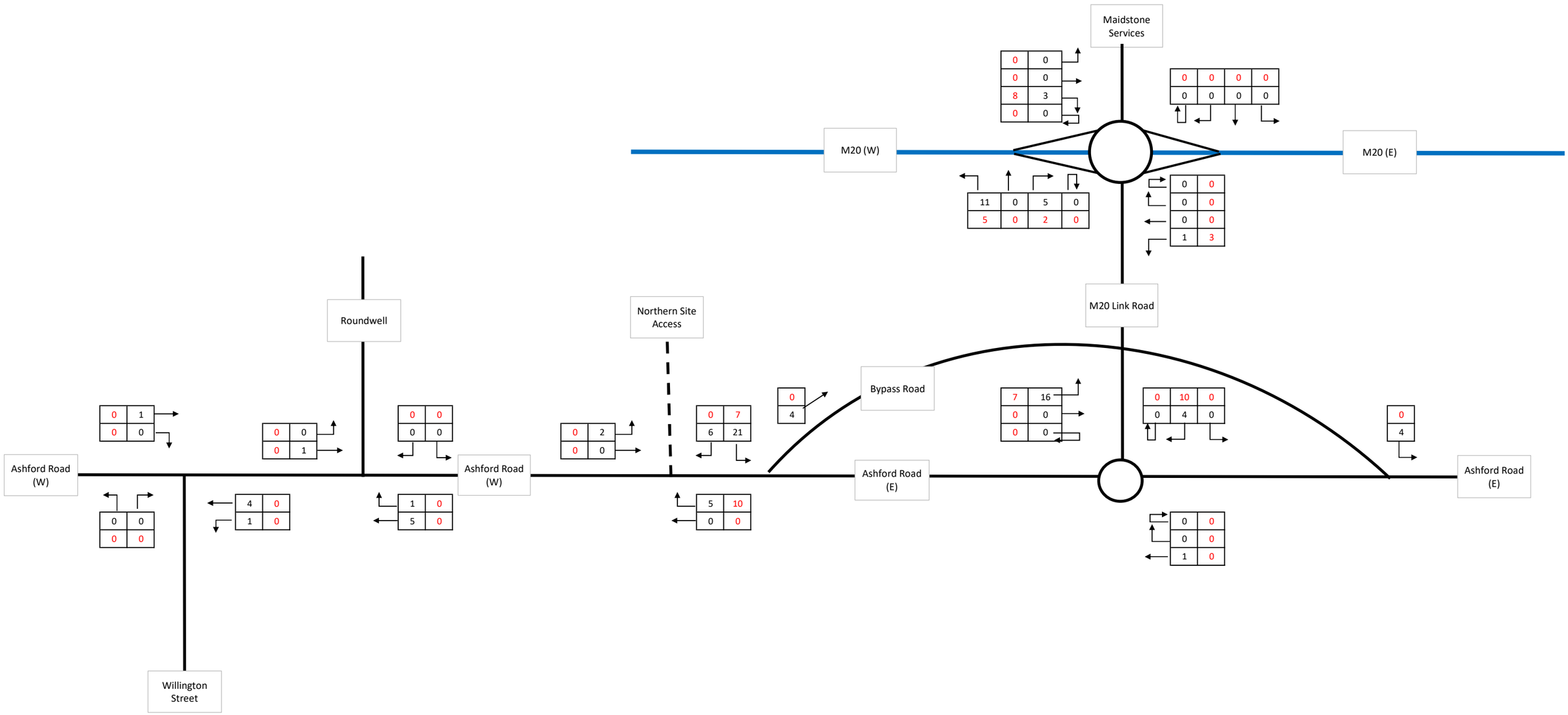
TF12

Development Traffic Assignment AM Peak Hour (Tot Veh)



KEY

500 = TOTAL VEH

25 = HGVs

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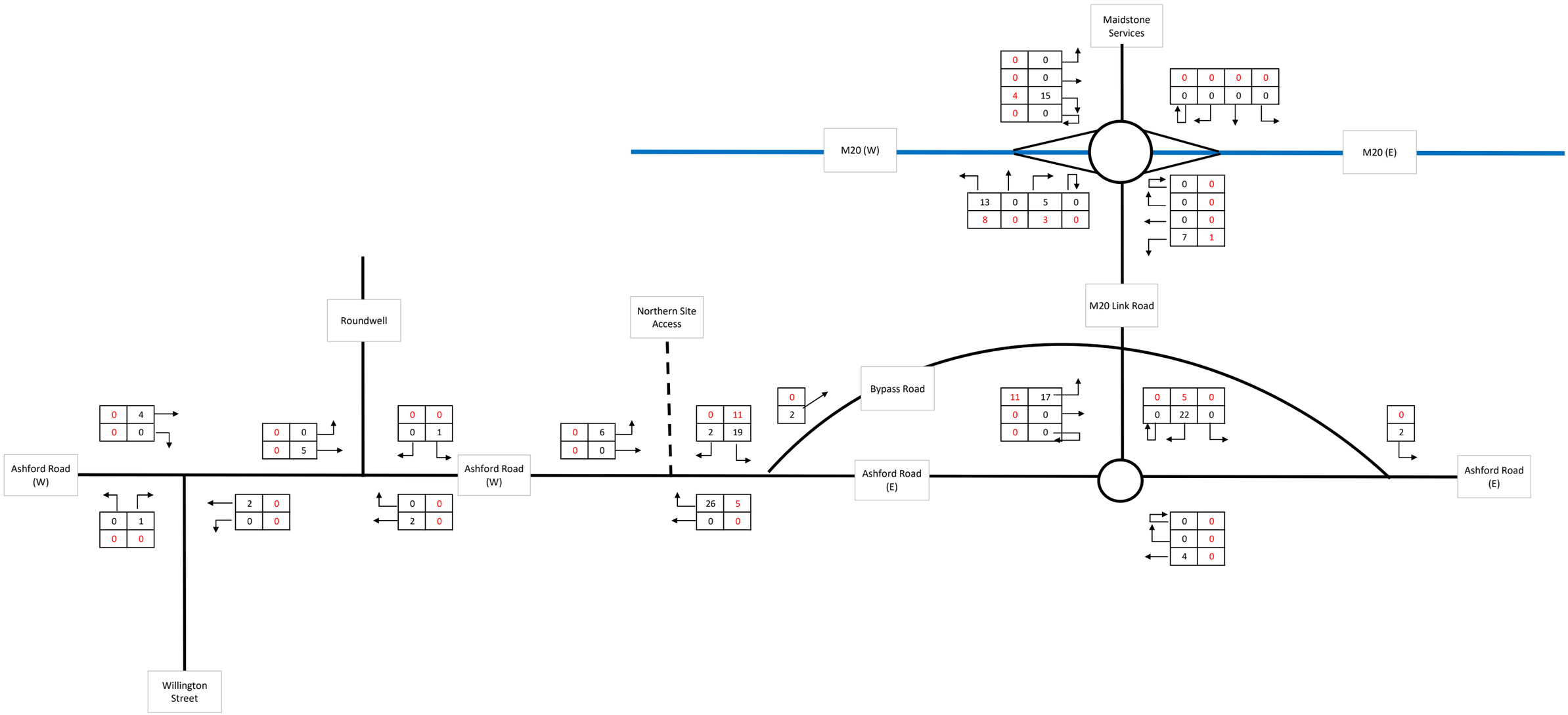
TF13

Development Traffic Assignment PM Peak Hour (Tot Veh)



KEY

500 = TOTAL VEH

25 = HGVs

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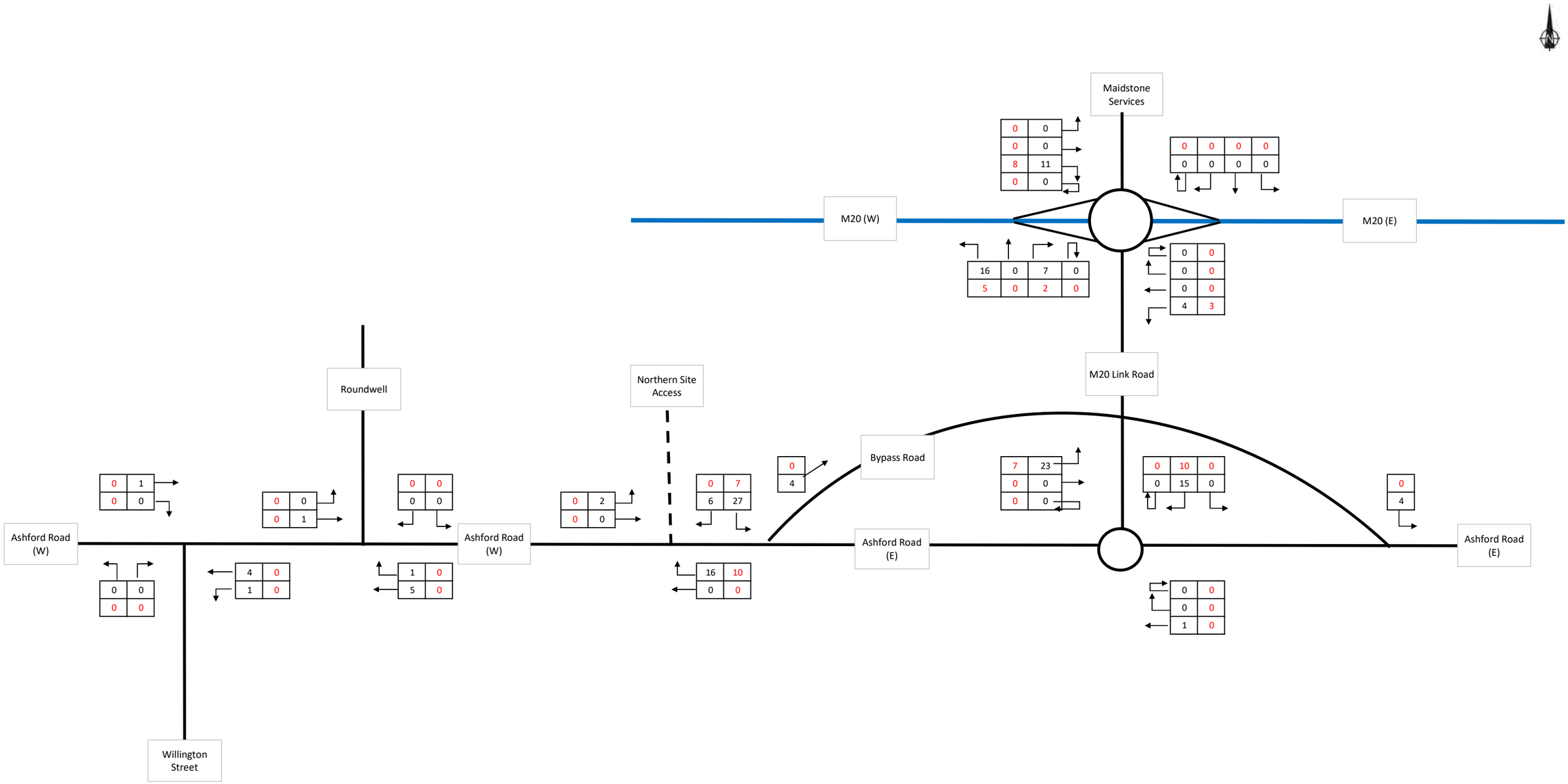
TF14

2027 'with development' AM Peak Hour (0730-0830)



KEY

500 = TOTAL VEH

25 = HGVs

i-Transport

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RG24 8AG
Tel: 01256 338640
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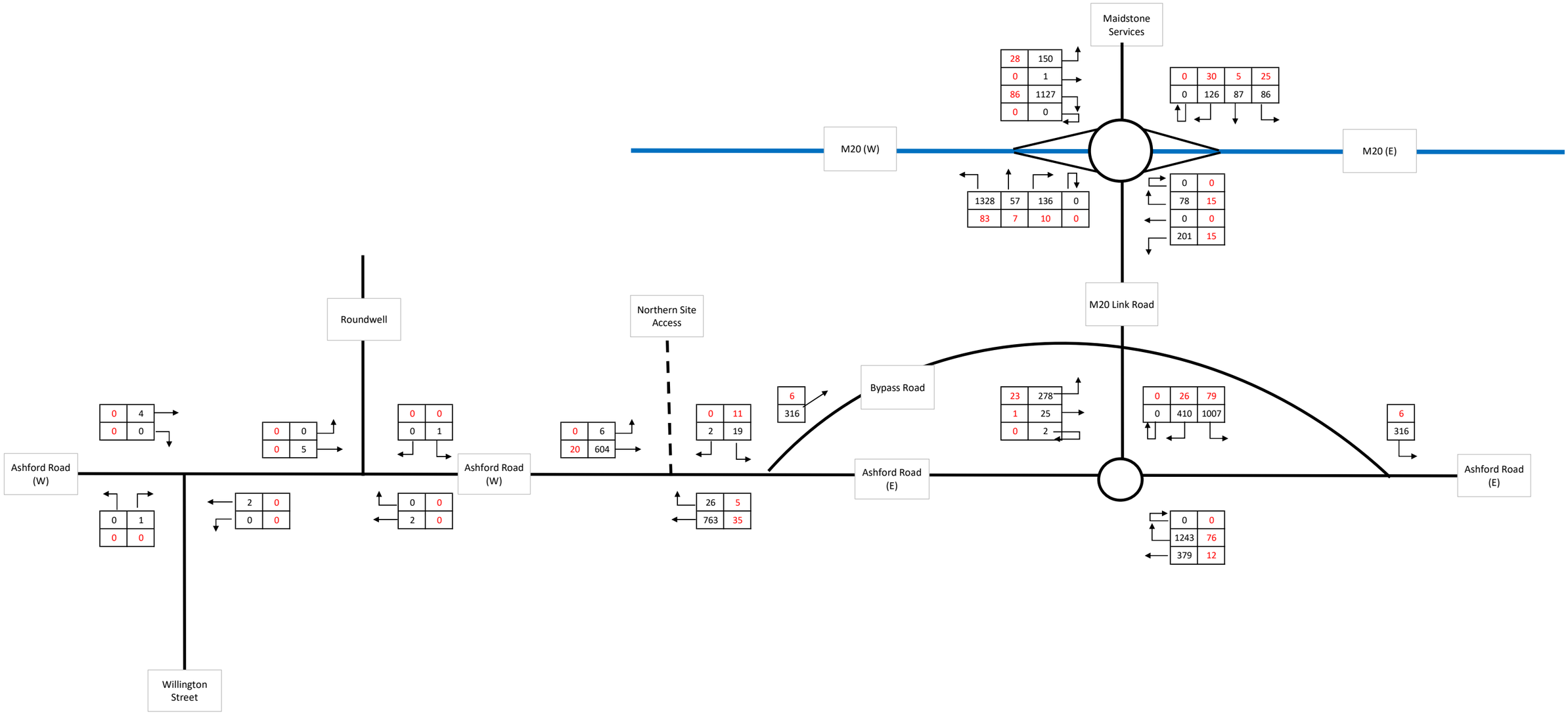
TF15

2027 'with development' PM Peak Hour (1645-1745)



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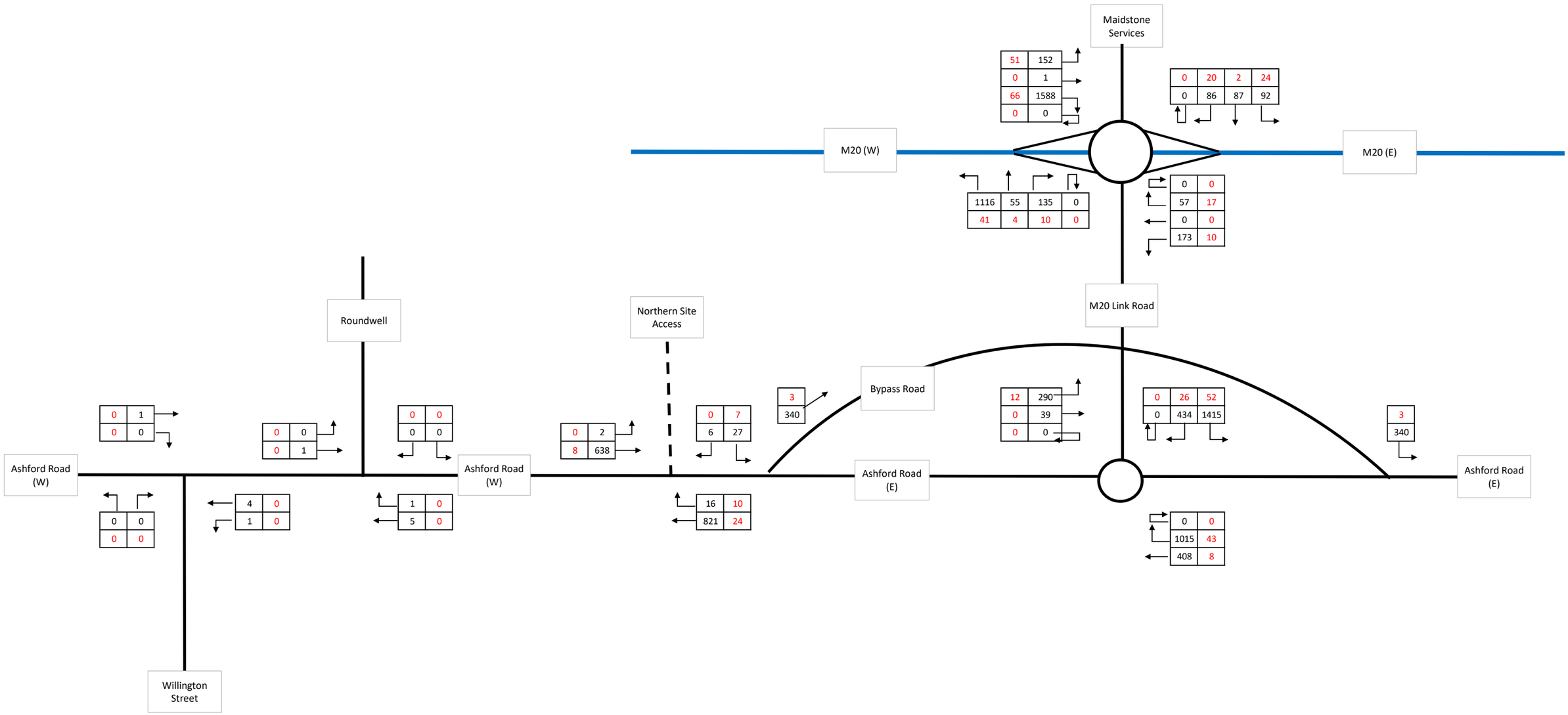
500 = TOTAL VEH	Ashford Road, Maidstone	
25 = HGVs	TF16	
	2037 'with development' AM Peak Hour (0730-0830)	



KEY

500 = TOTAL VEH

25 = HGVs

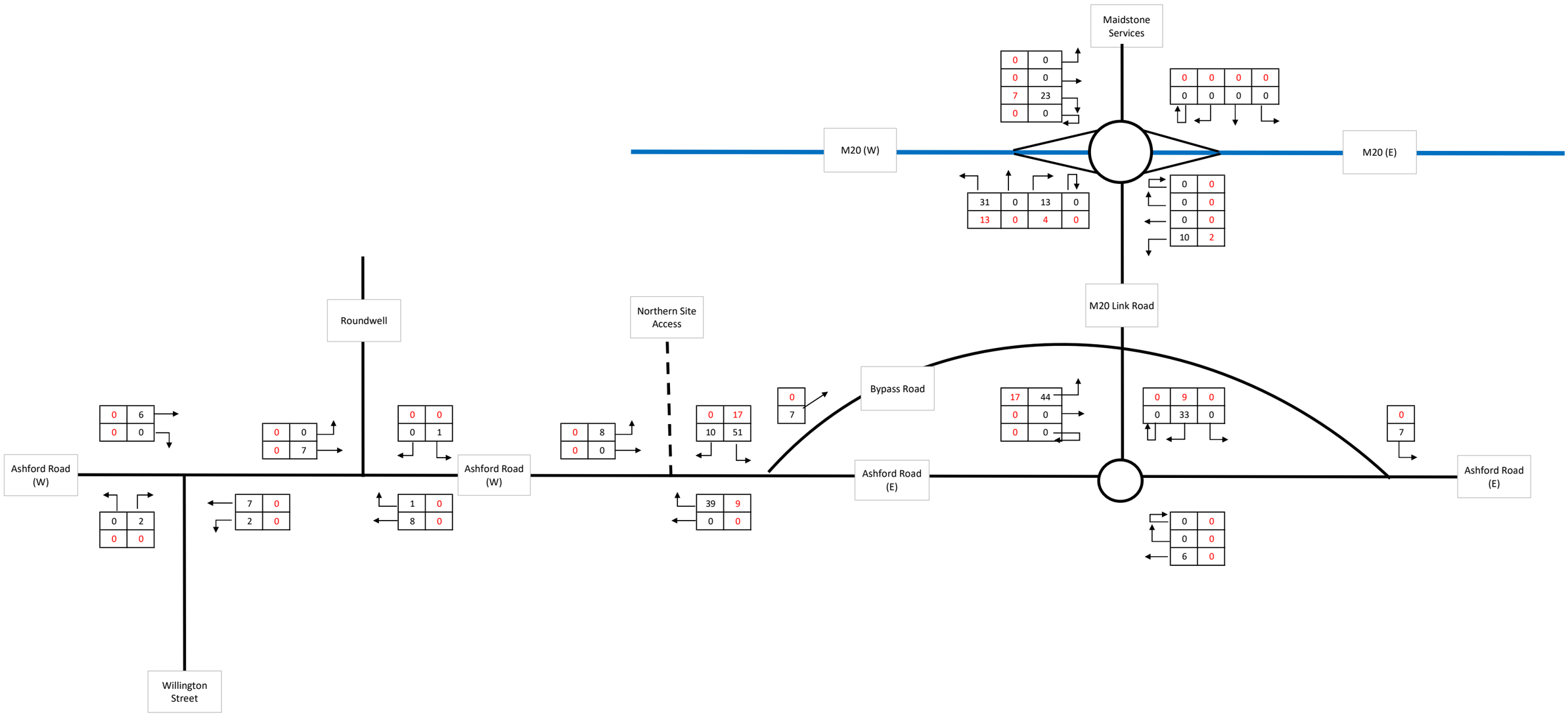
i-Transport

Grove House, Lutyens Close,
Chineham Court, Basingstoke,
RG24 8AG
Tel: 01256 338640
www.i-transport.co.uk

Ashford Road, Maidstone

TF17

2037 'with development' PM Peak Hour (1645-1745)



KEY

500 = TOTAL VEH

25 = HGVs

i-Transport

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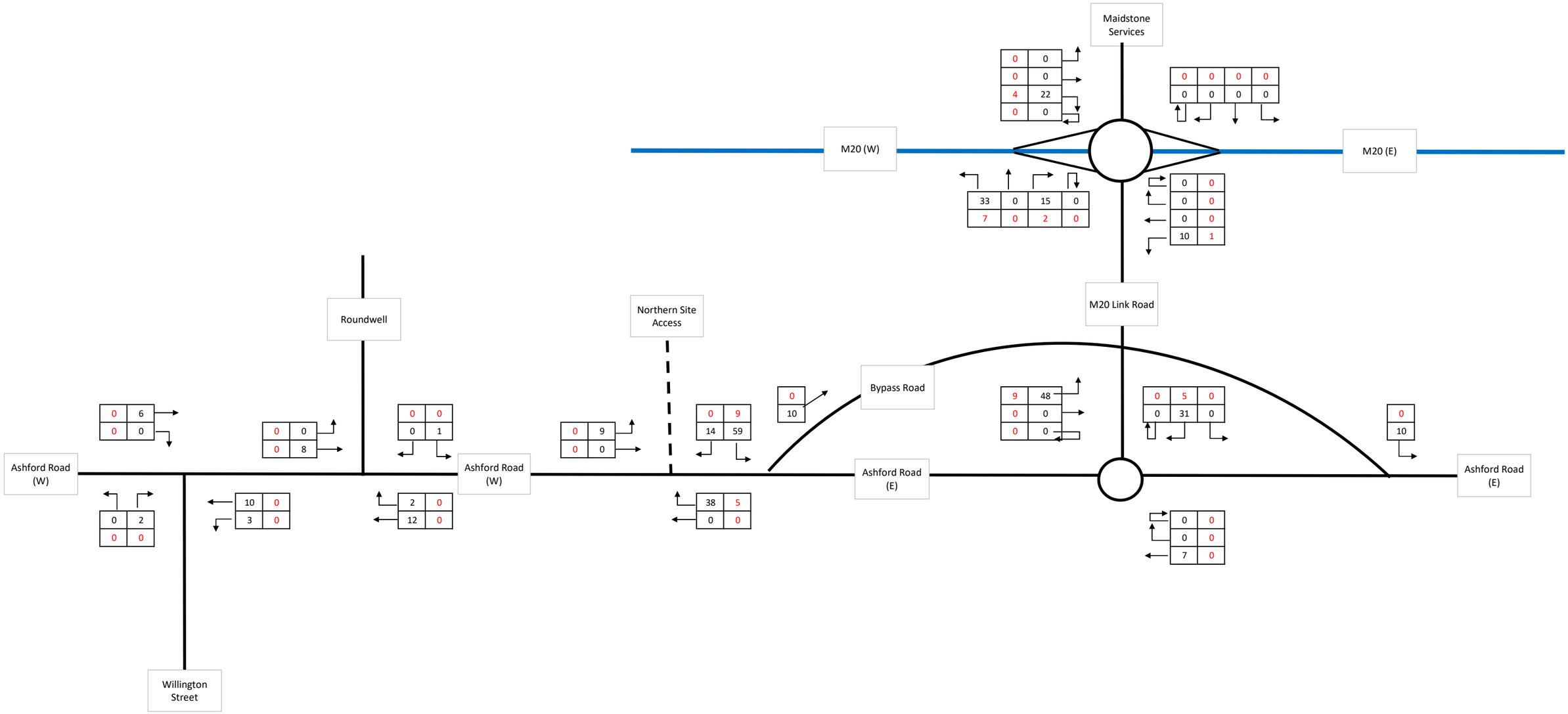
TF18

Sensitivity Test Development Traffic Assignment AM Peak Hour (Tot Veh)



KEY

500 = TOTAL VEH

25 = HGVs

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RG24 8AG
Tel: 01256 338640
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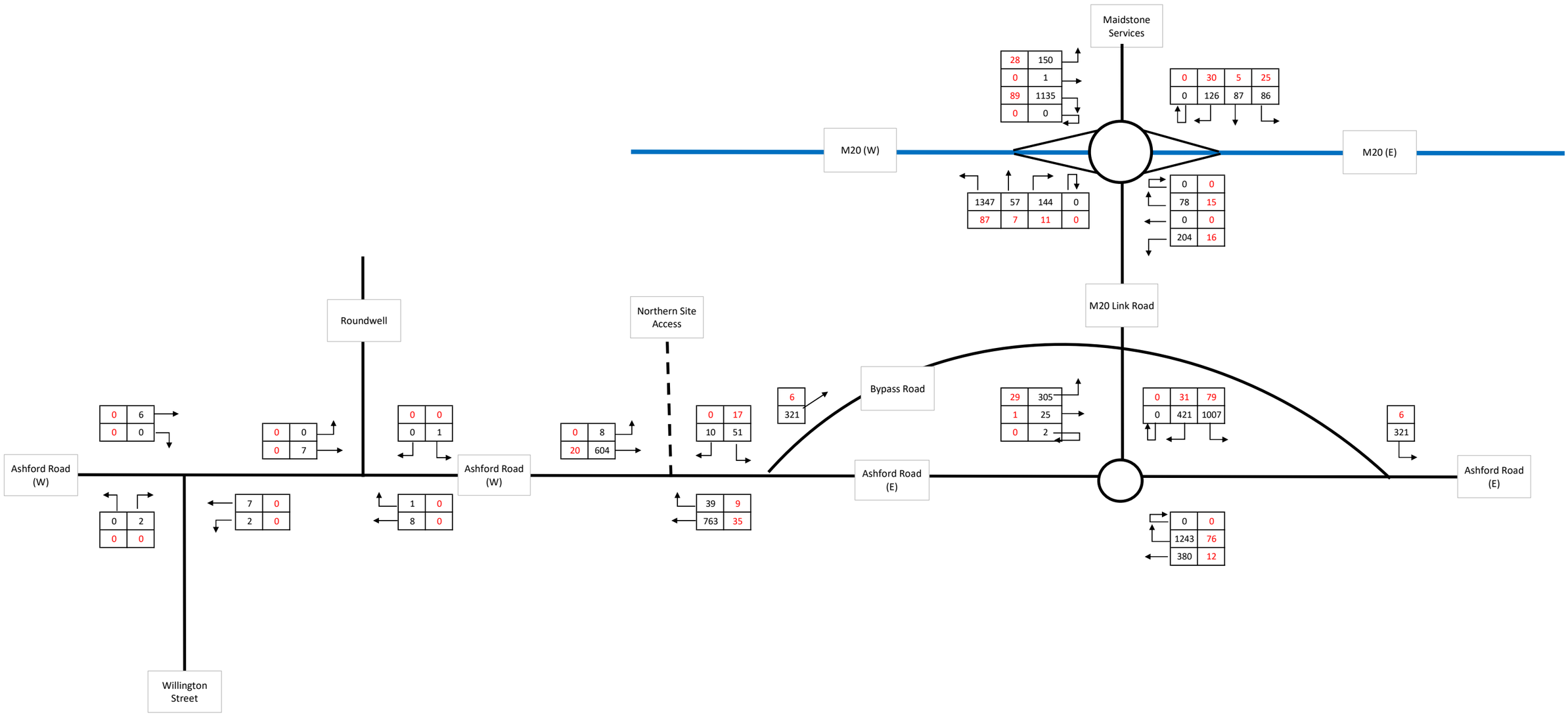
Ashford Road, Maidstone

TF19

Sensitivity Test Development Traffic Assignment PM Peak Hour (Tot Veh)



KEY

500 = TOTAL VEH

25 = HGVs

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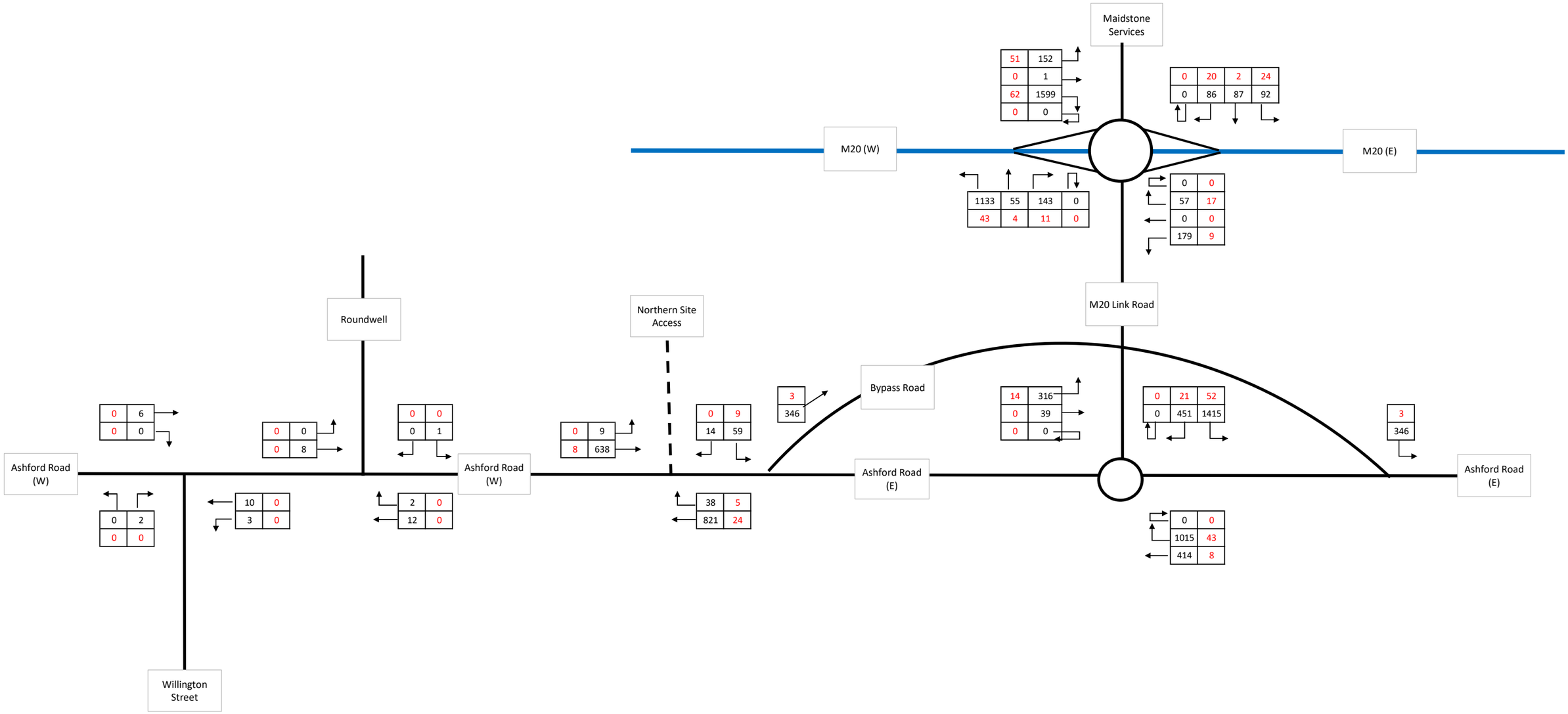
TF20

Sensitivity Test 2027 ‘with development’ AM Peak Hour (0730-0830)



KEY

500 = TOTAL VEH

25 = HGVs

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RG24 8AG
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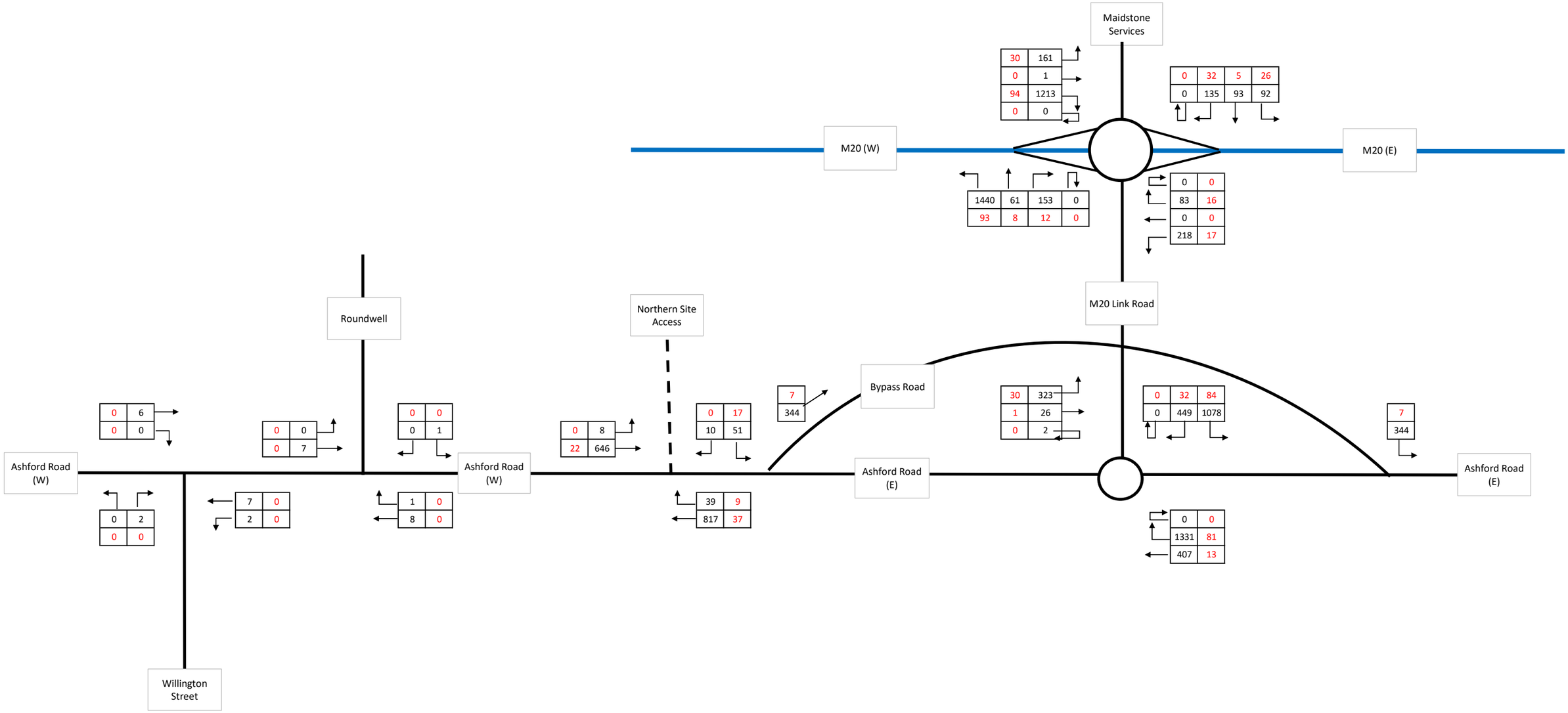
Ashford Road, Maidstone

TF21

Sensitivity Test 2027 'with development' PM Peak Hour (1645-1745)



KEY

500 = TOTAL VEH

25 = HGVs

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RG24 8AG
Tel: 01256 338640
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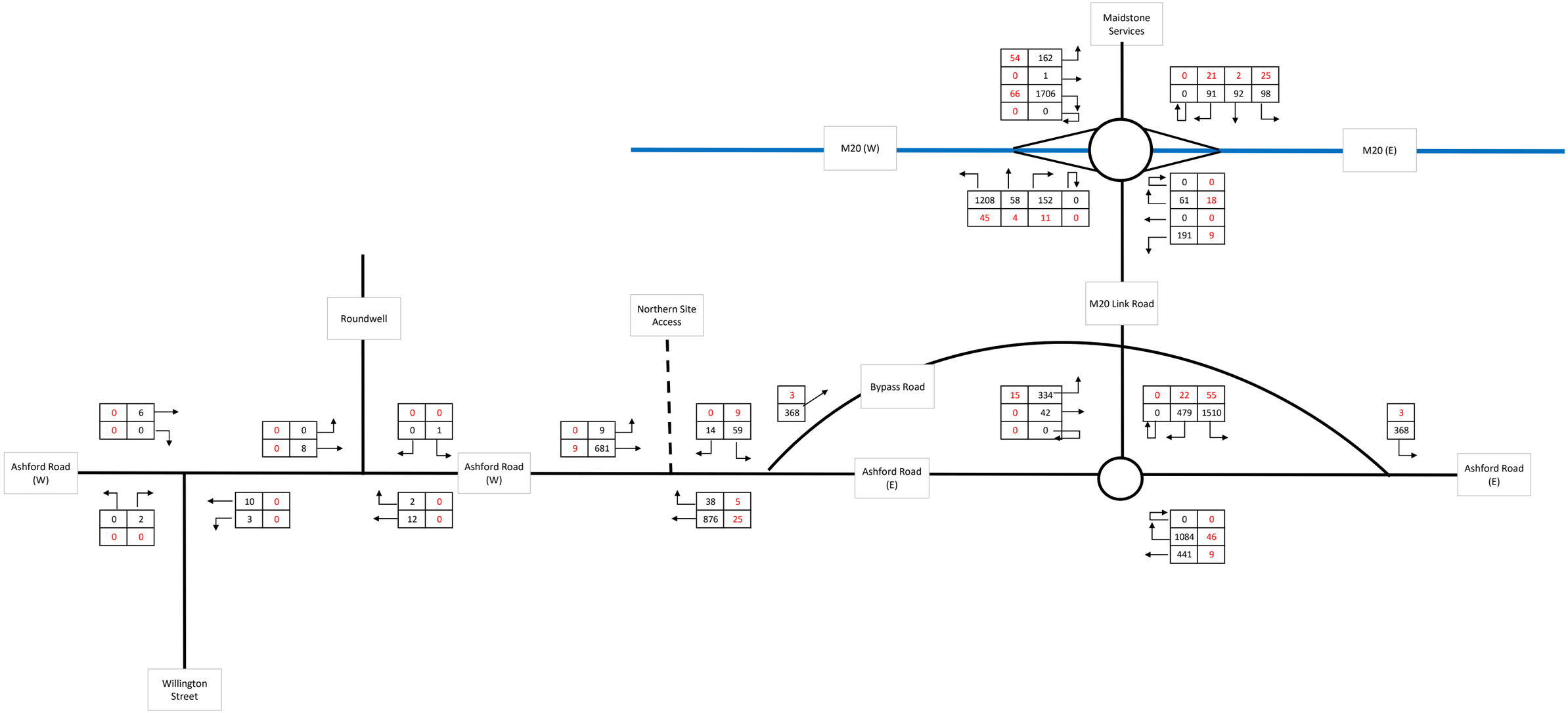
Ashford Road, Maidstone

TF22

Sensitivity Test 2037 'with development' AM Peak Hour (0730-0830)



KEY

500 = TOTAL VEH

25 = HGVs

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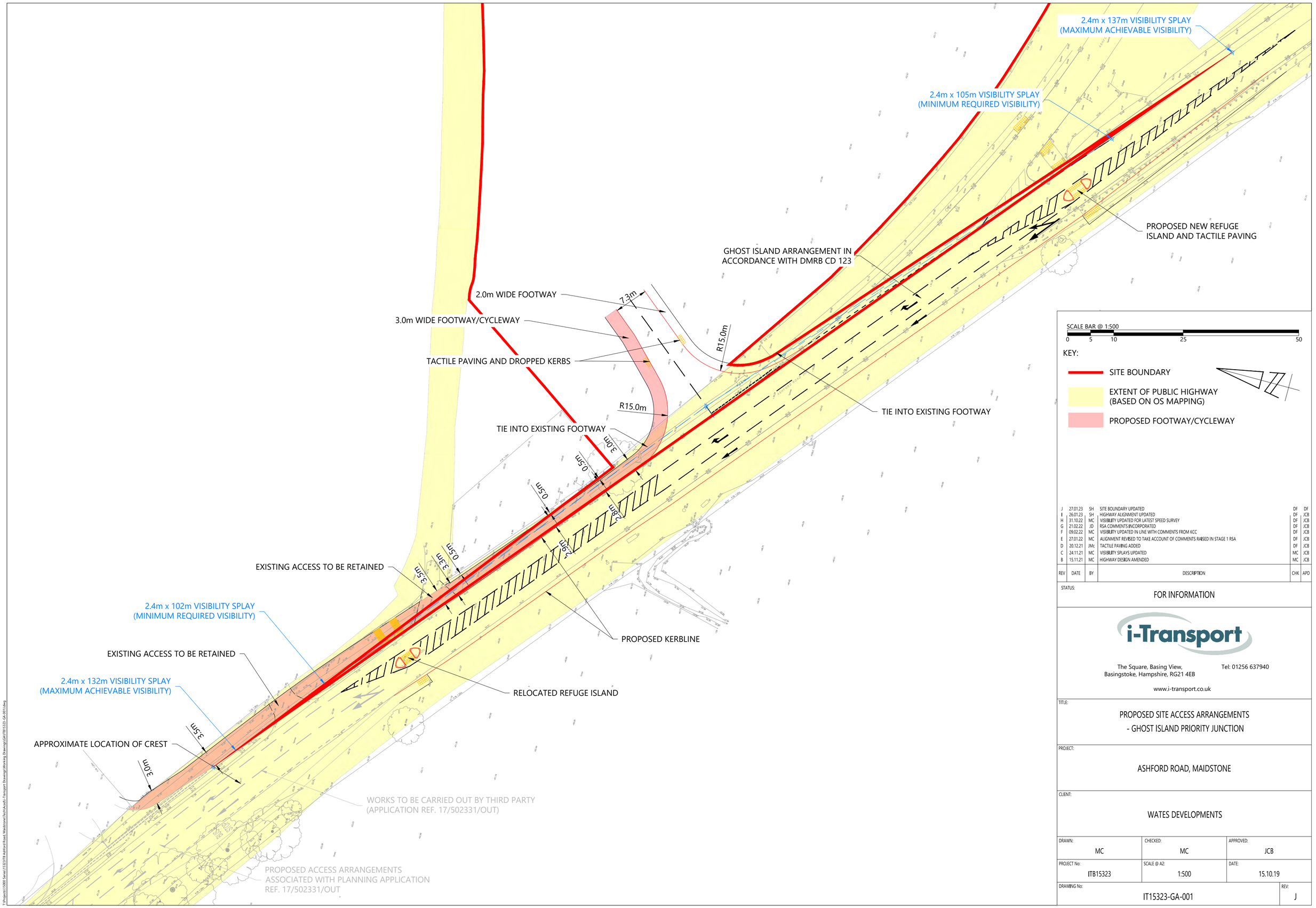
Ashford Road, Maidstone

TF23

Sensitivity Test 2037 'with development' PM Peak Hour (1645-1745)

DRAWINGS



REV	DATE	BY	DESCRIPTION	CHK	APD
J	27.01.23	SH	SITE BOUNDARY UPDATED	DF	DF
I	26.01.23	SH	HIGHWAY ALIGNMENT UPDATED	DF	JCB
H	31.10.22	MC	VISIBILITY UPDATED FOR LATEST SPEED SURVEY	DF	JCB
G	21.02.22	JD	RSA COMMENTS INCORPORATED	DF	JCB
F	09.02.22	MC	VISIBILITY UPDATED IN LINE WITH COMMENTS FROM KCC	DF	JCB
E	27.01.22	MC	ALIGNMENT REVISED TO TAKE ACCOUNT OF COMMENTS RAISED IN STAGE 1 RSA	DF	JCB
D	20.12.21	JMc	TACTILE PAVING ADDED	DF	JCB
C	24.11.21	MC	VISIBILITY SPLAYS UPDATED	MC	JCB
B	15.11.21	MC	HIGHWAY DESIGN AMENDED	MC	JCB

STATUS:

FOR INFORMATION

i-Transport

The Square, Basing View,
Basingstoke, Hampshire, RG21 4EB

Tel: 01256 637940

www.i-transport.co.uk

TITLE:

PROPOSED SITE ACCESS ARRANGEMENTS
- GHOST ISLAND PRIORITY JUNCTION

PROJECT:

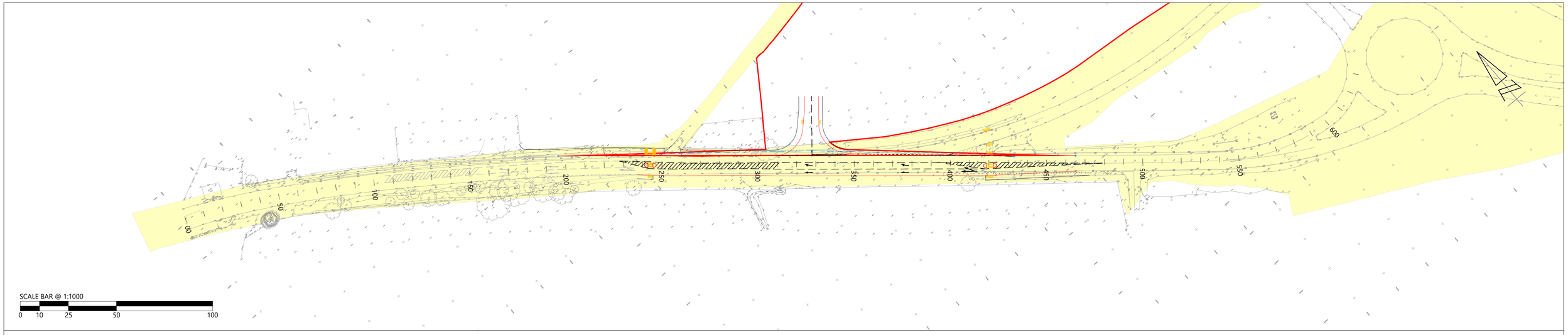
ASHFORD ROAD, MAIDSTONE

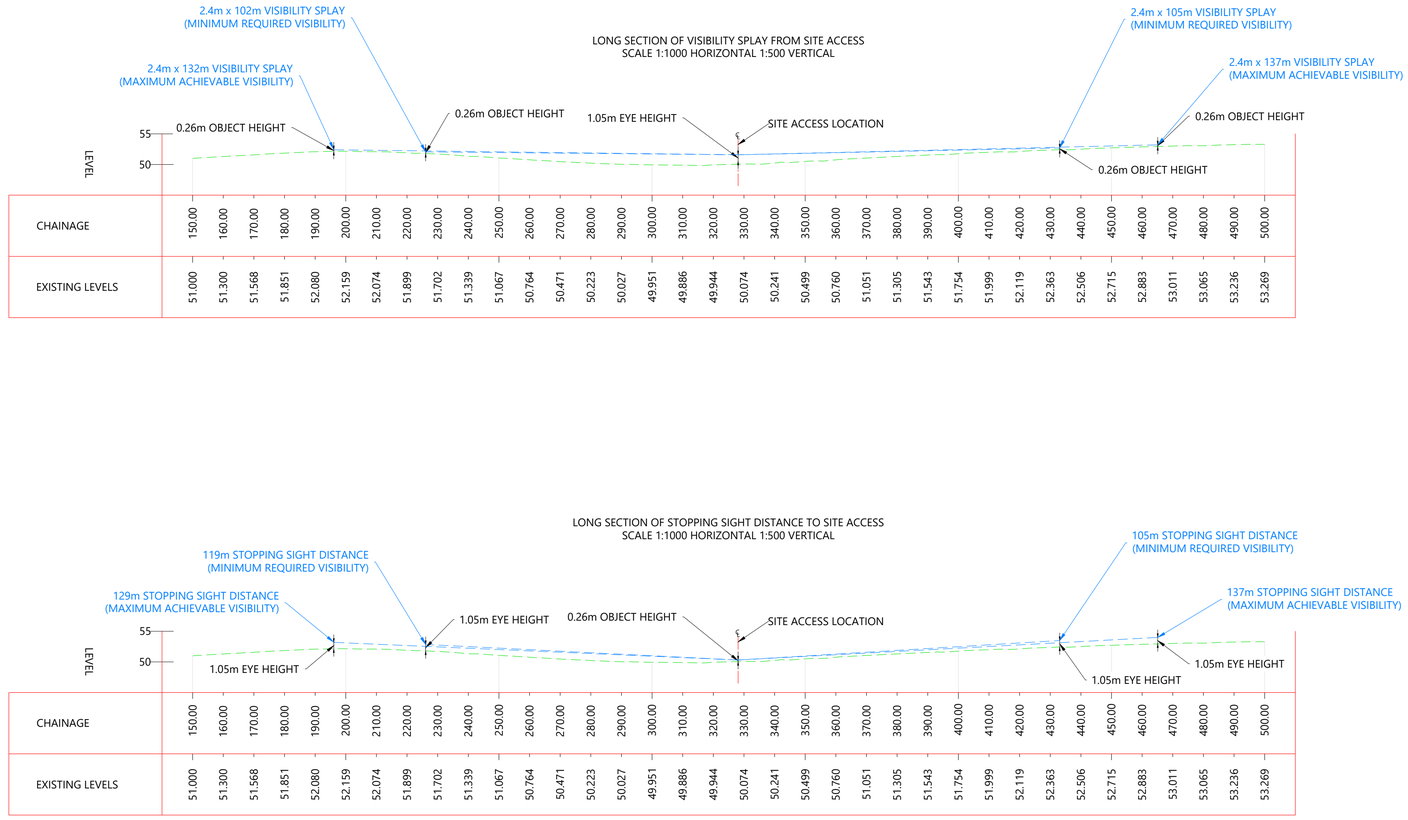
CLIENT:

WATES DEVELOPMENTS

DRAWN:	CHECKED:	APPROVED:
MC	MC	JCB
PROJECT No:	**SCALE @ A2:**	**DATE:**
ITB15323	1:500	15.10.19

DRAWING No: IT15323-GA-001 REV: J





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Basingstoke, Hampshire, RG21 4EB
Tel: 01256 637940
www.i-transport.co.uk

KEY:

SITE BOUNDARY

EXTENT OF PUBLIC HIGHWAY (BASED ON OS MAPPING)

REV	DATE	BY	DESCRIPTION	CHK	APD
D	30.01.23	SH	SITE BOUNDARY UPDATED	DF	DF
C	31.10.22	MC	VISIBILITY UPDATED FOR LATEST SPEED SURVEY	MC	JCB
B	21.02.22	JD	RSA COMMENTS INCORPORATED	MC	JCB
A	09.02.22	MC	VISIBILITY UPDATED IN LINE WITH COMMENTS FROM KCC	MC	JCB

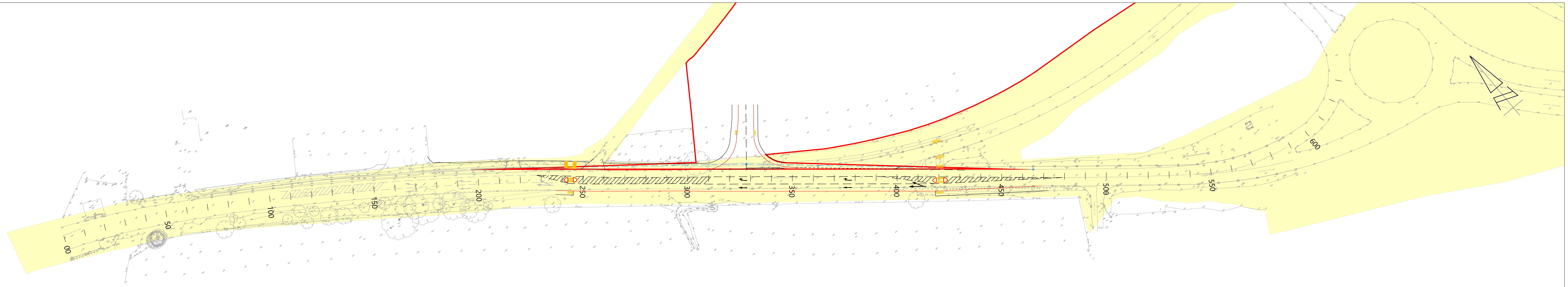
STATUS: FOR INFORMATION

TITLE: PROPOSED SITE ACCESS ARRANGEMENTS - VERTICAL ALIGNMENT

PROJECT: ASHFORD ROAD, MAIDSTONE

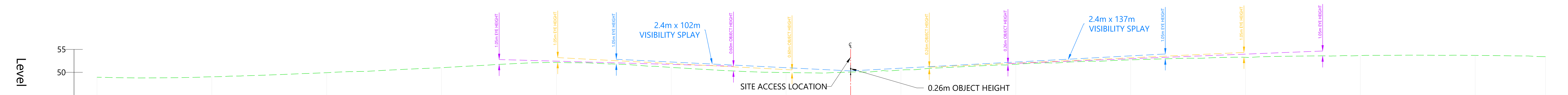
CLIENT: WATES DEVELOPMENTS

DRAWN:	CHECKED:	APPROVED:
MC	MC	JCB
PROJECT No:	SCALE @ A1:	DATE:
AS SHOWN	1:500	01.12.21
DRAWING No:		REV:
ITB15323-GA-007		D



SCALE BAR @ 1:500
0 5 10 25 50

LONG SECTION OF STOPPING SIGHT DISTANCE (1.5 x SSD) TO SITE ACCESS
SCALE 1:1000 HORIZONTAL 1:500 VERTICAL



CHAINAGE	0.00	10.00	20.00	30.00	40.00	50.00	60.00	70.00	80.00	90.00	100.00
EXISTING LEVELS	48.934	48.821	48.778	48.809	48.882	49.023	49.181	49.335	49.516	49.732	49.920

CHAINAGE	110.00	120.00	130.00	140.00	150.00	160.00	170.00	180.00	190.00	200.00	210.00
EXISTING LEVELS	50.157	50.290	50.554	50.794	51.000	51.300	51.568	51.851	52.080	52.159	52.074

CHAINAGE	220.00	230.00	240.00	250.00	260.00	270.00	280.00	290.00	300.00	310.00	320.00
EXISTING LEVELS	51.899	51.702	51.339	51.067	50.764	50.471	50.223	50.027	49.951	49.886	49.944

CHAINAGE	330.00	340.00	350.00	360.00	370.00	380.00	390.00	400.00	410.00	420.00	430.00
EXISTING LEVELS	50.074	50.241	50.499	50.760	51.051	51.305	51.543	51.754	51.999	52.119	52.363

CHAINAGE	440.00	450.00	460.00	470.00	480.00	490.00	500.00	510.00	520.00	530.00	540.00
EXISTING LEVELS	52.506	52.715	52.883	53.011	53.065	53.236	53.269	53.428	53.514	53.574	53.586

CHAINAGE	550.00	560.00	570.00	580.00	590.00	600.00	610.00	620.00	630.00 630.99
EXISTING LEVELS	53.655	53.694	53.730	53.721	53.721	53.688	53.637	53.575	53.419 53.413

SCALE BAR @ 1:500
0 5 10 25 50

SCALE BAR @ 1:1000
0 10 25 50 100

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KEY:

SITE BOUNDARY

EXTENT OF PUBLIC HIGHWAY (BASED ON OS MAPPING)

REV	DATE	BY	DESCRIPTION	CHK	APD
C	30.01.23	SH	SITE BOUNDARY UPDATED	DF	DF
B	31.10.22	MC	VISIBILITY UPDATED FOR LATEST SPEED SURVEY	DF	JCB
A	21.02.22	JD	RSA COMMENTS INCORPORATED	DF	JCB

STATUS: FOR INFORMATION

TITLE: PROPOSED SITE ACCESS ARRANGEMENTS - LONG SECTION 1.5 x SSD

PROJECT: ASHFORD ROAD, MAIDSTONE

CLIENT: WATES DEVELOPMENTS

DRAWN:	CHECKED:	APPROVED:
MC	MC	JCB
PROJECT No: AS SHOWN	SCALE @ A1: AS SHOWN	DATE: 09.02.22

DRAWING No: ITB15323-GA-010 | REV: C

APPENDIX A. Transport Assessment Scoping Note

i-Transport LLP
85 Gresham Street, London, EC2V 7NQ

Tel: 020 3705 9215

Ashford Road, Maidstone: Transport Assessment Scoping Note

Project No: ITB15323
Project Title: Ashford Road, Maidstone
Title: Transport Assessment Scoping Note [ISSUE]
Ref: ITB15323-006B TN
Date: 16 December 2021

SECTION 1 Introduction

1.1 Overview

1.1.1 Wates Developments has appointed i-Transport LLP to provide highways and transport advice regarding the potential commercial development of land to the north of Ashford Road, Maidstone. A site location plan is provided at **Appendix A** and an extract reproduced below.

Image 1.1: Site Location

Source: Consultant

1.1.2 This note sets out the proposed scope and parameters of a Transport Assessment (TA) to accompany a potential planning application in due course. The TA will test the development proposal against the 'key transport tests' set out in paragraph 110 of the National Planning Policy Framework (NPPF), i.e.:

- Can the opportunities for sustainable travel modes be appropriately taken up?
- Can safe and suitable access be provided?
- Will the transport elements of the proposal reflect current national guidance?
- Will the traffic impacts be acceptable?

1.1.3 It is noted that the adjacent Woodcut Farm site received planning permission in July 2018 for a large commercial scheme (*application ref: 17/502331/OUT*). That scheme provides a precedent and, in principle, all of the above tests should be capable of resolution for a commercial scheme in this location.

1.2 Scope and Structure

1.2.1 The content of this note is for discussion and agreement with Kent County Council (KCC) (as the local highway authority) and Maidstone Borough Council (MBC) (as the local planning authority) to enable a forthcoming Transport Assessment (TA) to be progressed on an agreed basis.

1.2.2 In particular, KCC's view on the proposed access arrangements is sought. This note therefore includes detailed information about the design of the proposed access, its compliance with design standards and operational analysis of the proposed junction.

1.2.3 The remainder of this report is structured as follows:

- **Section 2 –** Proposed Development;
- **Section 3 –** Policy Context;
- **Section 4 –** Existing Conditions;
- **Section 5 –** Site Access, Parking and Servicing Arrangements;
- **Section 6 –** Promoting Sustainable Transport;
- **Section 7 –** Traffic Impact; and
- **Section 8 –** Summary and Conclusion.

SECTION 2 Proposed Development

2.1 At this stage it is proposed to develop land to the north of A20 Ashford Road, Maidstone to provide 13,000sqm of B8 warehousing/distribution space.

2.2 The final development will be subject to pre-application discussions and will be confirmed in the Transport Assessment, along with details of the proposed site layout, car parking, internal access arrangements, etc. The internal site layout will be designed in line with national and local design standards.

SECTION 3 Policy Context

3.1 National Policy

1.1.1 Section 9 of the National Planning Policy Framework (NPPF - July 2021) discusses promoting sustainable transport. Paragraphs 110 – 113 sets out the transport matters that need to be considered when assessing development proposals.

1.1.2 Importantly, paragraph 110 states that:

> ***"In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:***
>
> ***a) Appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;***
>
> ***b) Safe and suitable access can be achieved for all users;***
>
> ***c) The design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code; and***
>
> ***d) Any significant impacts from the development on transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.***

3.1.1 These are the 'four tests' set out in the introduction of this Scoping Note.

3.1.2 Paragraph 111 of the NPPF states that:

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

3.1.3 This is a very high bar for preventing development from coming forward for transport reasons – it is only where there are severe traffic impacts or demonstrably highway safety impacts (i.e. very significant consequences) that development should be refused on transport grounds.

3.1.4 In terms if site layout matters, Paragraph 112 of the NPPF states::

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

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

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

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

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

3.1.5 In terms of the need for a Transport Assessment for the development proposal, Paragraph 113 states:

"All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed."

3.1.6 The Transport Assessment will assess the development proposal in the context of the policy requirements of the NPPF. Reference will also be made to Planning Practice Guidance, which sets out how the government expects the NPPF to be applied.

3.2 Other Policy Documents

1.1.3 The policy set out in the NPPF cascades down to local policy and guidance. The TA will also include an overview assessment of the proposal against these transport policies, including those set out in:

- Maidstone Borough Council Local Plan 2011-2031 (October 2017)
- Maidstone Borough Council Local Plan Review – Draft Plan for Submission (Regulation 19) (October 2021)
- Kent County Council Transport Plan 4 2016-2031 (August 2017)
- Kent and Medway Structure Plan 2006: SPG4 Vehicle Parking Standards

3.2.1 i-Transport would welcome confirmation that these are the relevant planning policy documents, and KCC's advice on any other documents that should be reviewed.

SECTION 4 Existing Conditions

4.1 Introduction

4.1.1 The TA will include an audit of existing transport conditions including the provision for walking, cycling and public transport and the existing characteristics of the local highway network including vehicle volumes, speeds and accident data. A brief overview is set out below.

4.2 Walking and Cycling

4.2.1 There is a footway along the northern side of Ashford Road, and the carriageway is street lit in the vicinity of the site. An additional footway is provided on the southern side of Ashford Road to the east of the site, providing a connection to Maidstone to the northwest and to Hollingbourne to the southeast.

4.2.2 There is also a number of Public Rights of Way located in the vicinity of the proposed development and these will be detailed in the TA.

4.3 Public Transport

Bus

4.3.1 The site is well located to local bus stops within a reasonable walking distance, located circa 450m northeast of the site on the A20. These stops are served by 10X buses between Ashford and Maidstone, which offer the following level of service:

- Monday to Friday - hourly service;
- Saturday - hourly service; and
- Sunday - 5 services a day.

Rail

4.3.2 The nearest railway station is Hollingbourne, located circa 2.5km northeast of the site and provides connections to destinations including London, Ashford International, Canterbury West, and Maidstone East. The railway station is within a reasonable cycling distance from the site and provides 8 cycle spaces. The station also has a car park providing a total of ten spaces and there is on street parking available.

4.3.3 Additionally, Bearsted railway station is located circa 2.5km northwest of the site, and provides 22 cycle spaces and a further 49 car parking spaces.

4.4 Local Highway Network

4.4.1 The A20 Ashford Road is circa 9.2m wide along the site frontage. The A20 Ashford Road is subject to a 60mph speed limit in this area.

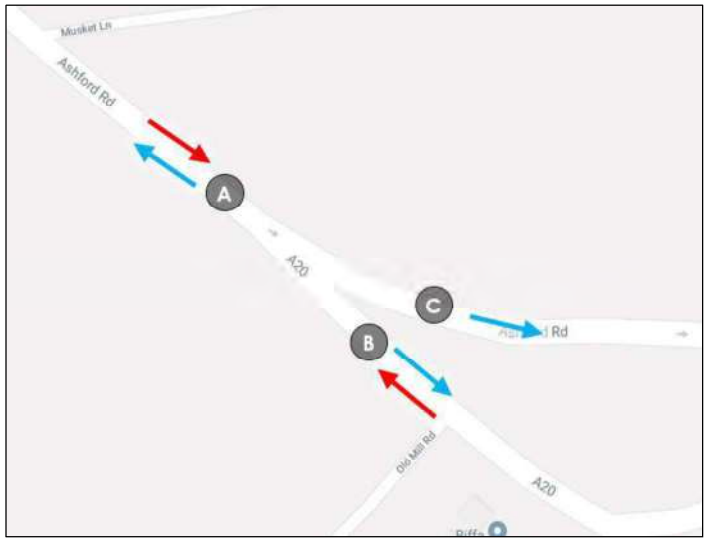
4.4.2 There is a diverge to the east of the site, which provides access to a one-way eastbound link that bypasses the A20 / M20 Junction 8 link road roundabout, and the A20 / M20 link road roundabout.

4.4.3 As part of the Transport Assessment, the existing local highway network surrounding the site will be reviewed in full.

Traffic Flows

4.4.4 Manual Classified Count (MCC) surveys were undertaken at the A20 Ashford Road / Ashford Road Bypass junction to the east of the proposed access to establish the baseline traffic flows in September 2019. **Image 4.1** shows the location of the MCC survey.

Image 4.1: Manual Count Survey



4.4.5 The MCC data can be made available in request, and the flow data is summarised in **Table 4.1**.

Table 4.1: A20 Ashford Road Peak Hour Flows - 2019 Observed

		Eastbound		Westbound		Two – Way	
		Total Vehicles	HGVs	Total Vehicles	HGVs	Total Vehicles	HGVs
A20 Ashford Road (west of slip)	Morning Peak Hour (0730 – 0830)	504	28	648	27	1,152	55
	Evening Peak Hour (1700 – 1800)	750	12	773	19	1,523	31
A20 Ashford Road (east of slip)	Morning Peak Hour (0730 – 0830)	299	18	648	27	947	45
	Evening Peak Hour (1700 – 1800)	317	5	773	19	1,090	24
Slip	Morning Peak Hour (0730 – 0830)	205	10	-	-	205	10
	Evening Peak Hour (1700 – 1800)	433	7	-	-	433	7

Source: MCC Surveys – September 2019

Traffic Speeds

4.4.6 In addition, two Automatic Traffic Counter (ATC) surveys were undertaken on Ashford Road either side of the proposed access to establish baseline traffic speeds in the vicinity of the proposed access. In accordance with guidance set out in DMRB CA 185, **Table 4.2** sets out the 85th percentile dry weather speeds for eastbound and west bound vehicles on A20 Ashford Road.

Table 4.2: Observed Traffic Speeds and Stopping Sight Distances

Direction	85%ile dry weather speed	Desirable Stopping Sight Distance	Absolute Minimum Stopping Sight Distance
Eastbound	51.8mph	156m	119m
Westbound	46.4mph	129m	100m

Source: ATC Survey (September 2019). Stopping site distances derived from DMRB[1] and MfS2[2]

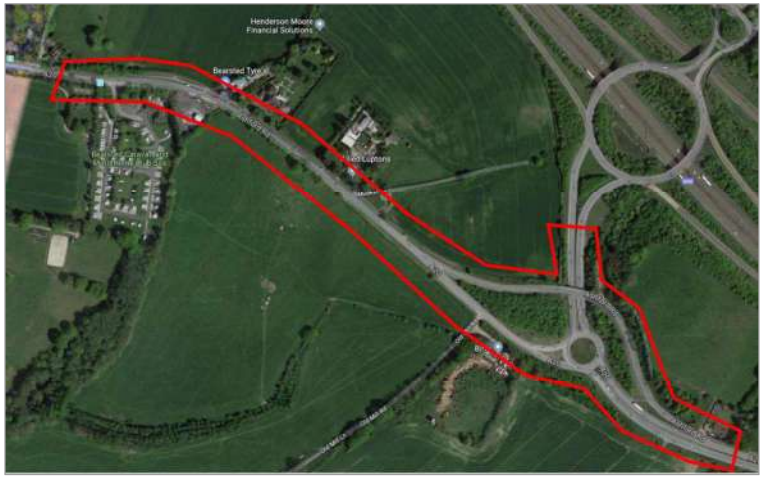
[1] Design Manual for Roads and Bridges

[2] Manual for Streets 2

Personal Injury Accident Data

4.4.7 Personal Injury Accident (PIA) data will be obtained from Kent County Council for the most recent five-year period and will be assessed in the Transport Statement. The proposed study area is set out in **Image 4.2**.

Image 4.2: Proposed Scope of Accident Data



4.4.8 An initial review of the Crash Map data for the most recent five-year period identifies that there have been three slight accidents in the vicinity of the site access, although they are all in different locations and this suggests that there is no particular existing safety issue on the local highway network in the vicinity of the site access.

SECTION 5 Site Access, Parking, and Servicing Arrangements

5.1 Introduction

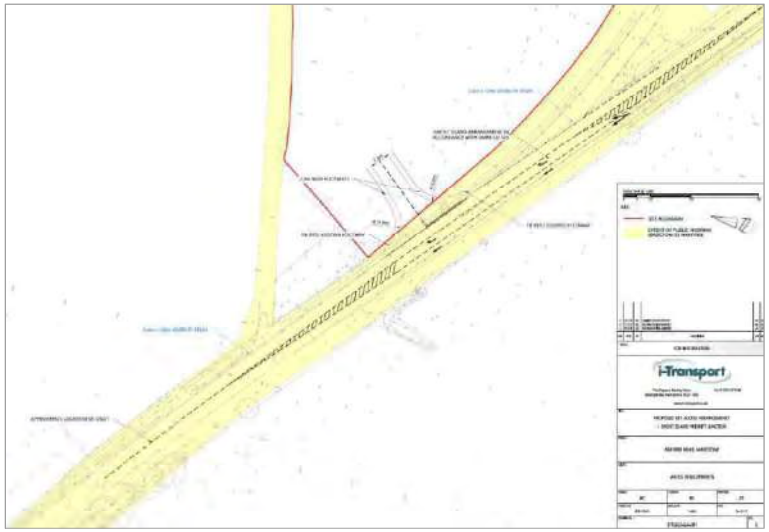
5.1.1 The TA will include full details of the proposed access arrangements, as well as the internal layout of the proposal which will be designed in line with the prevailing national and local design standards. The remainder of this section of the scoping note focuses on the proposed site access from Ashford Road.

5.2 Proposed Access

Arrangement

5.2.1 Access to the development is proposed via a ghost island junction from A20 Ashford Road, to be designed in accordance with Design Manual for Roads and Bridges CD123. **Drawing ITB15323-GA-001C** shows the proposed access arrangements, an extract of which is shown in **Image 5.1** below.

Image 5.1: Proposed Site Access Arrangement



5.2.2 The ghost island design has been based on 100kph design speed as shown in **Drawing ITB15323-GA-001C** with kerb radii of 15m and 2.0m footway on both sides of the access connecting with the existing footway network along A20 Ashford Road. A 7.3m access road is provided to allow articulated HGVs to enter/exit the site and pass one another with ease.

Visibility

To/From Junction

5.2.3 Horizontal visibility splays of 2.4m x 129m to the east and 2.4m x 156m to the west can be achieved in line with the recorded 85th percentile speeds as detailed at **Table 4.2**. These visibility splays are shown on **Drawing ITB15323-GA-001C**.

5.2.4 Adequate vertical splays of 129m can be achieved to the east in line with the recorded speeds and these are shown on **Drawing ITB15323-GA-007**. These are achievable for vehicles approaching the junction and for those exiting the junction (from an eye height of 1.05m to an object height of 0.26m in both directions).

5.2.5 Adequate vertical splays of 156m can be achieved to the west with some minor reprofiling to the A20 Ashford Road (the visibility splays and reprofiling are shown on **Drawing ITB15323-GA-007**). These are achievable for vehicles approaching the junction and for those exiting the junction (from an eye height of 1.05m to an object height of 0.26m in both directions).

5.2.6 **Image 5.2** provides an extract of the vertical visibility and reprofiling.

Image 5.2: Site Access – Vertical Visibility and A20 Ashford Road Reprofiling

Approaches to Junction

5.2.7 From the east, a Stopping Sight Distance (SSD) forward visibility of 129m can be achieved from an eye height of 1.05m to an object height of 0.26m for a distance of 194m (1.5 x SSD in line with DMRB) which is shown on **Drawing ITB15323-GA-003B**.

5.2.8 From the west, whilst the reprofiling of the A20 Ashford Road, an SSD forward visibility of 156m cannot be achieved from an eye height of 1.05m to an object height of 0.26m for 234m, although the proposed access will deliver an improvement on the existing sub-standard visibility. It is recognised that a Departure from Standard (DfS) may be required for this issue, but the arrangement is acceptable as:

- It is not an issue created by the new access;
- It improves the existing issue with the alignment of the A20 Ashford Road;
- An obstacle at the junction can be seen clearly by oncoming vehicles from the west in any event (as detailed above);
- Visibility from the west is not critical as queuing traffic at the junction is also unlikely on the approach to the west as vehicles can turn unobstructed into the access;
- The existing sub-standard visibility has not resulted in a safety issue; and
- The permitted access for Woodcut Farm to the north (*application ref: 17/502331/OUT*) was approved with this substandard feature in place.

5.2.9 A Stage 1 Road Safety Audit (RSA) will be undertaken of the proposed site access junction and submitted to KCC in due course.

5.2.10 KCC's view and agreement in principle on the proposed access is sought.

5.3 Swept Path Analysis

5.3.1 Swept path analysis (included at **Appendix B**) demonstrates that an articulated HGV can enter and exit the site safely. This is expected to be the largest vehicle to access the site on a regular basis.

5.4 Proposed Land Safeguarding for Residential Development

5.4.1 Wates Developments have a longer-term ambition to deliver residential development on land to the south of the A20 Ashford Road in this location (i.e. directly opposite the site) as supported by policy LPRSP5(A) within the Reg 19 Maidstone Borough Council Draft Submission Plan

5.4.2 To that end, it is proposed to safeguard land at the access junction to safeguard the future delivery of a new roundabout junction, which would serve as an access to both the warehousing site as well as residential development to the south. Drawing ITB15323-SK-005B shows the indicative proposals for a roundabout junction, and hence the extent of land to be safeguarded. An extract is provided as **Image 5.3**. The proposed roundabout also incorporates the A20/M20 link road bypass arm to the east.

Image 5.3: Proposed Roundabout (Land Safeguarding)

5.4.3 The proposed roundabout has been designed in line with DMRB with appropriate pedestrian/cycle facilities provided in line with LTN 1/20[3] to connect into the wider network. As with the access arrangements described at Section 5.2, the A20 Ashford Road will require minor reprofiling to achieve the required vertical visibility splays.

5.4.4 KCC's views on the roundabout and land safeguarding are also sought.

[3] DfT Local Transport Note 1/20 – Cycle Infrastructure Design

SECTION 6 Promoting Sustainable Transport

6.1.1 This section of the TA will set out the accessibility of the site by modes of sustainable travel including walking, cycling and the use of public transport. The TA will also identify a strategy to encourage and facilitate use of these modes. A Framework Travel Plan will be prepared to accompany any future planning submission.

SECTION 7 Traffic Impact

7.1 Introduction

7.1.1 This section of the Technical Note establishes the likely traffic generation of the proposed development and assessed the vehicular traffic impact on the local highway network. The analysis has been undertaken under the following sub-headings:

- Trip Generation;
- Development Distribution and Assignment;
- Study Area;
- Traffic Growth and Committed Development; and
- Capacity Testing.

7.2 Trip Generation

7.2.1 It is proposed to calculate the trip generation of the proposal using data derived from the TRICS trip generation database. The traffic generation of the development proposal will be discussed with KCC as part of the pre-application discussions.

7.2.2 The preliminary vehicular trip rates and resultant peak hour trips from the proposed development as identified in **Section 2** are presented in **Table 7.1** with the full TRICS output provided at **Appendix C**.

Table 7.1: Development Proposal Traffic Generation – B8 Warehouse (13,000sqm)

	Arrivals	Departures	Two-way
Morning Peak (0730-0830)			
Vehicle Trip Rate	0.262	0.177	0.439
Vehicle Trip Generation	34	23	57
Evening Peak (1700-1800)			
Vehicle Trip Rate	0.154	0.29	0.444
Vehicle Trip Generation	20	38	58

Source: TRICS & Consultant's Estimates

7.2.3 The analysis indicates that the total development proposal is likely to just under an additional vehicle per minute in the peak hours. This is a modest level of traffic generation.

7.2.4 In addition to the total vehicle trip generation, HGV trip rates for B8 Warehouse have also been obtained, and the likely HGV trip generation is presented in **Table 7.2.**

Table 7.2: Development Proposal HGV Generation – B8 Warehouse (13,000sqm)

	Arrivals	Departures	Two-way
Morning Peak (0730-0830)			
Vehicle Trip Rate	0.050	0.088	0.138
Vehicle Trip Generation	7	11	18
Evening Peak (1700-1800)			
Vehicle Trip Rate	0.092	0.058	0.150
Vehicle Trip Generation	12	8	20

Source: TRICS & Consultant's Estimates

7.2.5 The analysis indicates that the HGV generation in the peak hours will be circa one HGV every three minutes.

7.2.6 **Table 7.3** summarises the light vehicle trip generation of the proposed development (i.e. **Table 7.1** minus **Table 7.2**).

Table 7.3: Development Proposal Light Vehicle Generation – B8 Warehouse (13,000sqm)

	Arrivals	Departures	Two-way
Morning Peak (0730-0830)			
Vehicle Trip Generation	28	12	39
Evening Peak (1700-1800)			
Vehicle Trip Generation	8	30	38

Source: TRICS & Consultant's Estimates

7.2.7 Agreement is sought from officers that the trip rates and trip generation are acceptable.

7.3 Development Distribution and Assignment

7.3.1 To provide an accurate assessment of the likely distribution of development traffic, traffic generation has been assigned to the local highway network and strategic highway network using a distribution derived as follows:

- 2011 Census Journey to Work data for workers within the Maidstone 011 Middle layer Super Output Area (MSOA) has been used to distribute staff trips to/from work. It is directly comparable to the development in terms of location and therefore provides a suitable proxy for employment trips; and
- It has been assumed that all HGVs will be distributed onto the strategic highway network at the M20.

7.3.2 **Table 7.4** sets out the Development Trip Distribution to and from the site for staff trips. The full census analysis is included as **Appendix D** (including vehicle routing).

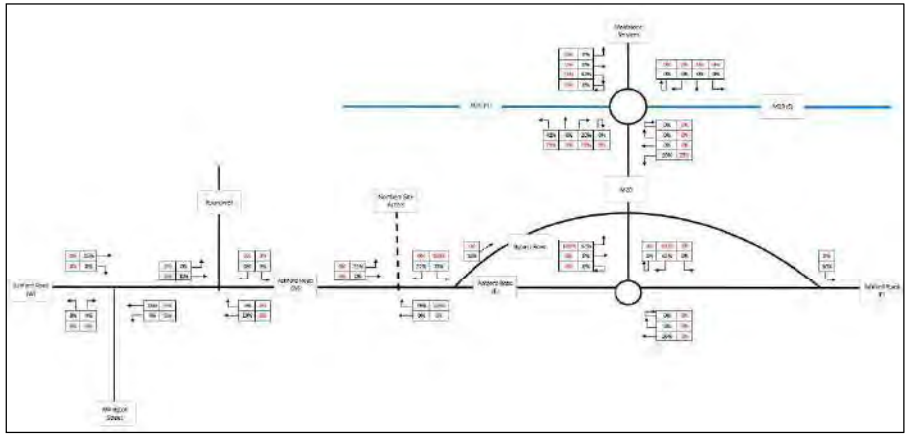
Table 7.4: Summary of Development Trip Distribution – Staff Trips

Destination	Percentage of Employment Trips
Ashford	18.7%
Canterbury	3.4%
Chatham	5.4%
Cranbrook	0.7%
Dartford	0.6%
Dover	1.3%
Eccles	0.5%
Faversham	2.9%
Gillingham	2.5%
Gravesham	1.1%
Harrietsham	9.2%
Headcorn	1.6%
Hempstead	0.5%
Isle of Sheppey	2.1%
Larkfield	1.6%
Maidstone	16.0%
Marden	0.0%
North/East London	0.7%
Other	2.6%
Parkwood	4.8%
Rochester	2.3%
Shepway	4.0%
Sittingbourne	6.6%
Snodland	0.7%
South/West London	0.1%
Staplehurst	0.5%
Tonbridge	1.4%
West Malling	0.3%
Total	**100.0%**

Source: Census Data 2011

7.3.3 The distribution of light vehicles and HGVs associated with the proposed development on the local and strategic highway network is illustrated at **Image 7.1** overleaf.

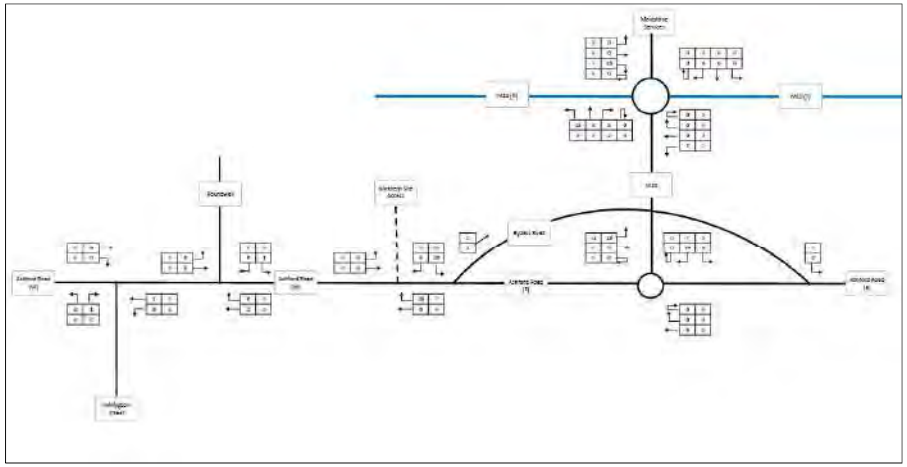
Image 7.1: Development Distribution



Note: Black = Light vehicles, Red = HGVs

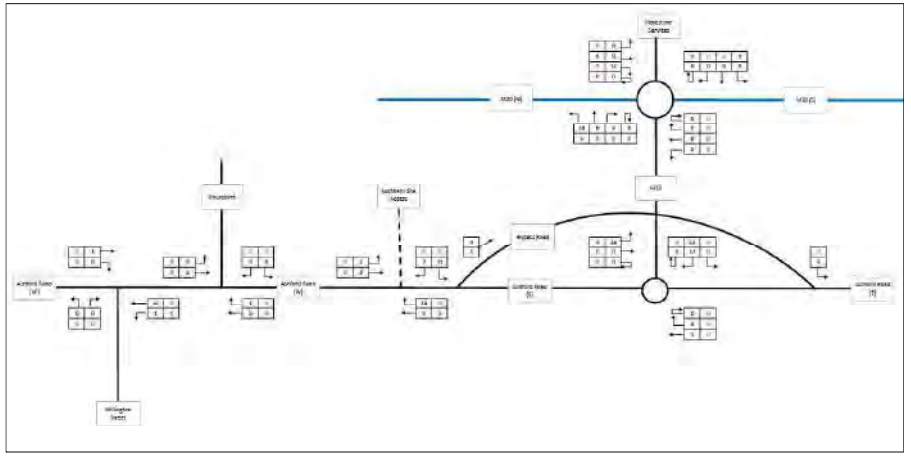
7.3.4 Using the distribution set out above, the morning and evening peak hour light vehicle and HGV traffic flows associated with the development have been assigned to the local highway network, and are produced in **Figures 7.2** and **7.3**, extracts of which are provided at **Images 7.2** and **7.3** overleaf.

Image 7.2: Development Traffic Flows – Morning Peak Hour



Note: Black = Total vehicles, Red = HGVs

Image 7.3: Development Traffic Flows – Evening Peak Hour



Note: Black = Total vehicles, Red = HGVs

7.3.5 Agreement is sought from officers that the proposed trip distribution and assignment is acceptable.

7.4 Study Area

7.4.1 Based on the traffic distribution/assignment set out above, the study area for the TA is proposed to comprise:

- The proposed site access junction; and
- The M20 Junction 8 (including the roundabout junction with the A20 Ashford Road).

7.4.2 As detailed on **Figures 7.2** and **7.3**, traffic increases at all other junctions are expected to be minimal and therefore will not form part of the study area.

7.4.3 Agreement is sought from officers that the study area is acceptable.

7.5 Traffic Growth and Committed Development

7.5.1 Wates Developments have advised that the proposed development is likely to come forward in 2024, however, to ensure a robust assessment it is proposed to assess the development for a future year of 2027 as a 'worst case'.

7.5.2 Preliminary factors to derive traffic growth to 2027 have been obtained using TEMPro V.7.2c dataset. Using this methodology, **Table 7.4** below summarises the growth factors which will be applied to the 2019 observed traffic flows to derive the 2027 peak hour traffic flows.

Table 7.4: Traffic Growth Factors

Growth Period	Time Period	Growth Rate
2019 - 2027	AM Peak	1.0555
	PM Peak	1.0687

Source: TEMPRO (version 7.2) Maidstone 011 MSOA

7.5.3 The growth rates presented in Table 7.4 above will be applied to all turning movements at junctions on the local highway network within the study area to determine the increase in traffic flows between 2019 and 2027.

7.5.4 To calculate the growth impact on the existing traffic flows on A20 Ashford Road, the 2027 growth factors have been applied to the observed traffic flows set out in Section 4. **Table 7.4** below shows the 2027 projected peak hour traffic flows without development on A20 Ashford Road.

Table 7.4 A20 Ashford Road Peak Hour Flows – 2027 Baseline

		Eastbound		Westbound		Two – Way	
		Total Vehicles	HGVs	Total Vehicles	HGVs	Total Vehicles	HGVs
A20 Ashford Road (west of slip)	Morning Peak Hour (0730 – 0830)	532	30	684	28	1,216	58
	Evening Peak Hour (1700 – 1800)	815	13	840	21	1,655	34
A20 Ashford Road (east of slip)	Morning Peak Hour (0730 – 0830)	316	19	684	28	1,000	47
	Evening Peak Hour (1700 – 1800)	344	5	840	21	1,185	26
Slip	Morning Peak Hour (0730 – 0830)	216	11	-	-	216	11
	Evening Peak Hour (1700 – 1800)	471	8	-	-	471	8

Source: Survey Data and TEMPRO

7.5.5 In terms of allowing for committed development, it is noted that the principal committed development site (the adjacent commercial site to the west - application ref: 17/502331/OUT) is allowed for in the wider Maidstone Local Plan assessments and will therefore be accounted for in the TEMPRO traffic growth factors. Officers are asked to confirm whether any other committed developments are to be included.

7.5.6 Agreement is sought from officers that the methodology for traffic growth is acceptable.

7.6 Capacity Testing

7.6.1 For the purpose of an initial capacity test of the site access, the above parameters have been used to derive the '2027 with development' traffic flows for the site access (the development flows set out on **Figures 7.2** and **7.3** have been added to the 2027 background flows presented in **Table 7.4**).

7.6.2 The site access has been tested using 'Junctions 10' software. The results of the assessment are summarised in **Table 7.5** (the full operational assessment outputs can be provided upon request).

Table 7.5: Site Access / A20 Ashford Road Priority Junction Assessment Results

	Morning Peak (0730-0830)			Evening Peak (1700-1800		
	Queue	Delay (s)	Max RFC	Queue	Delay (s)	Max RFC
2027 plus Committed Development plus Development						
Site Access	<1	11	0.07	<1	12	0.12
A20 Ashford Road right turn	<1	8	0.06	<1	11	0.06

Source: Junctions 10

7.6.3 The results demonstrate that the proposed access will operate well within capacity with minimal queuing or delay in both 2027 with development scenario.

7.6.4 The TA will also include operational assessments of the M20 Junction 8 (including the roundabout junction with the A20 Ashford Road).

SECTION 8 Summary and Conclusions

8.1.1 This Transport Assessment Scoping Note sets out the proposed methodology and parameters for a Transport Assessment to assess the highway and transport implications a commercial warehouse development of 13,000sqm to the north of A20 Ashford Road.

8.1.2 Agreement is sought from Kent County Council that the parameters and suggested approach set out in this note are acceptable.

FIGURES

M20 (
Ash
Northern Site Access
Ashford Road (W)
Roundwall
Willington Street
Ashford Road (W)
0%
18%
0%
100%
0%
78%
78%
100%
0%
0%
0%
22%
0%
0%
0%
3%
0%
0%
3%
0%
0%
19%
0%
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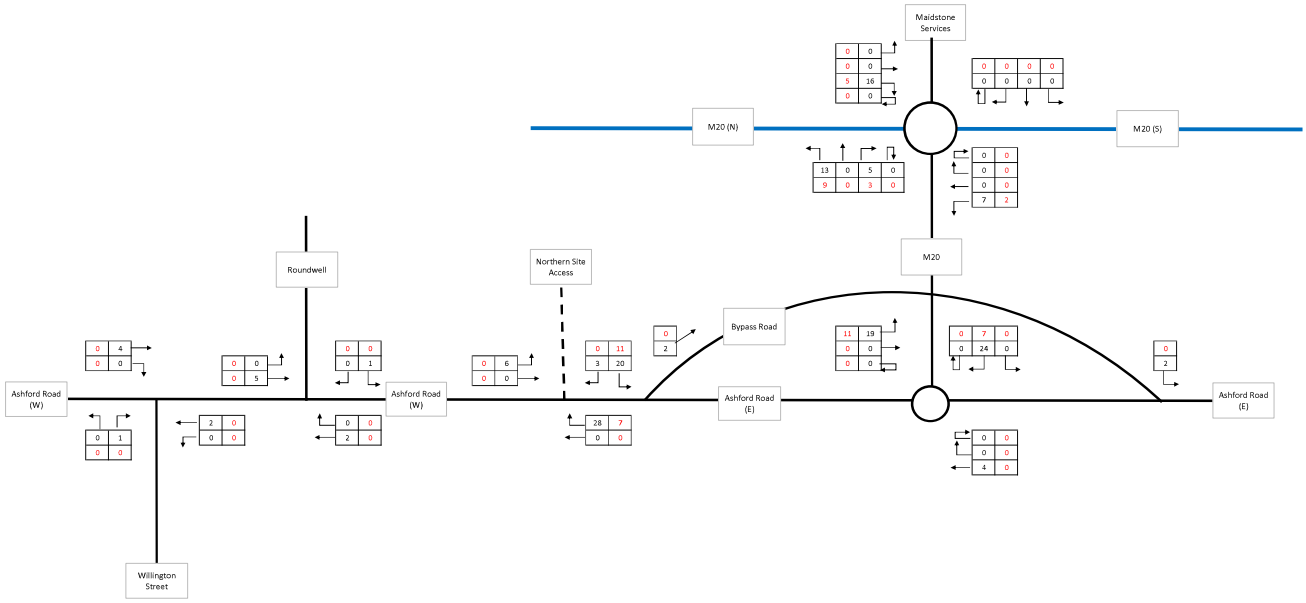
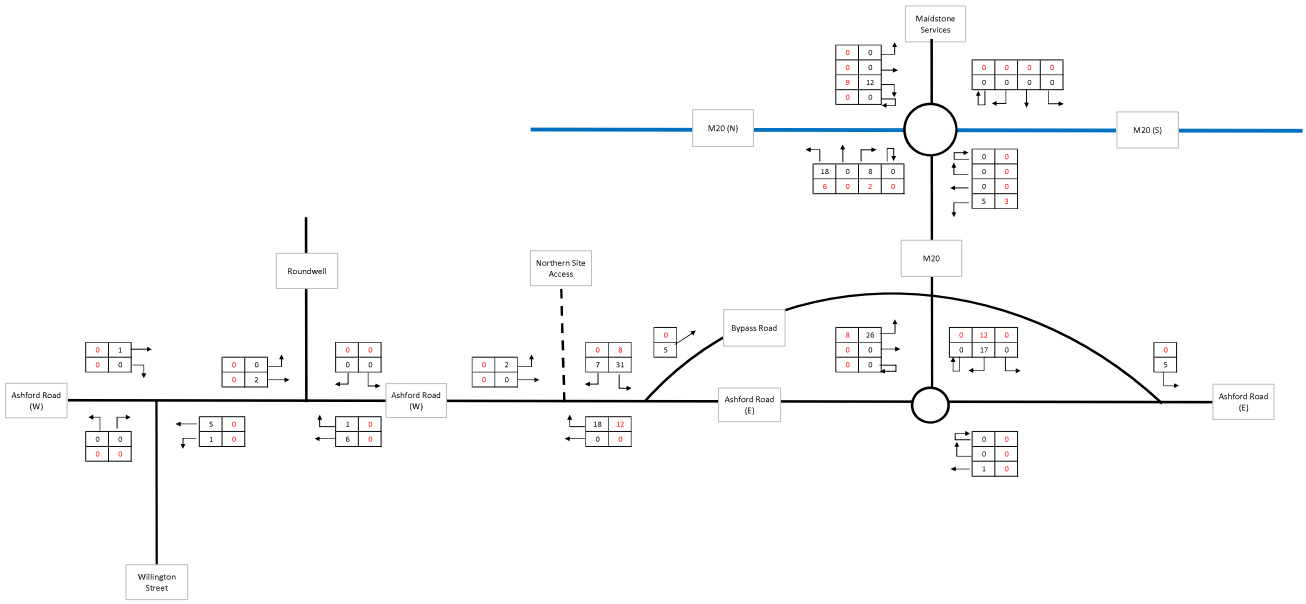
0%
4%
0%
0%

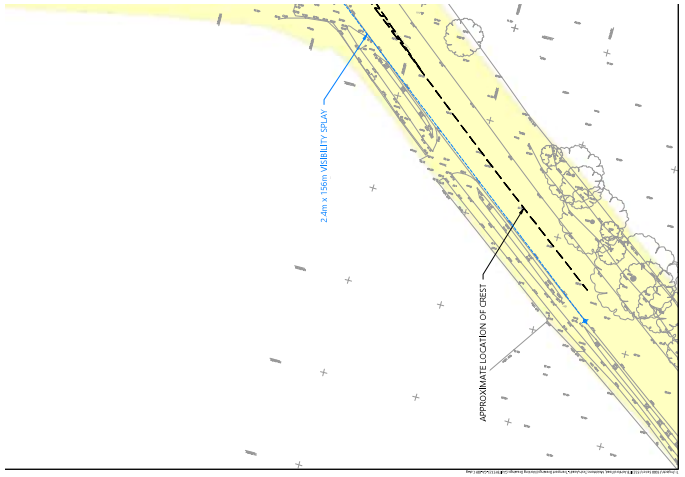


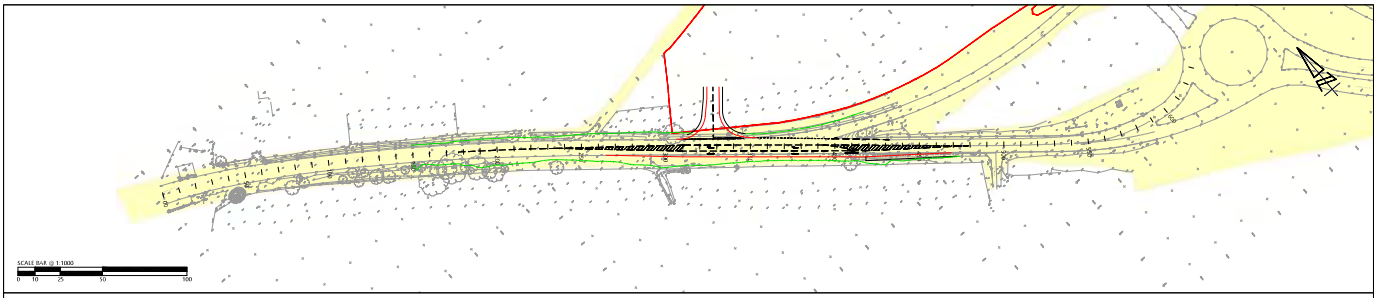
KEY		
500 = TOTAL VEH	i-Transport	Grove House, Lutyens Close, Chineham Court, Basingstoke, RG24 8AG Tel: 01256 338640 www.i-transport.co.uk
25 = HGVs	Ashford Road, Maidstone	
	Figure 7.2	
	Total Development (Tot Veh) AM Peak	



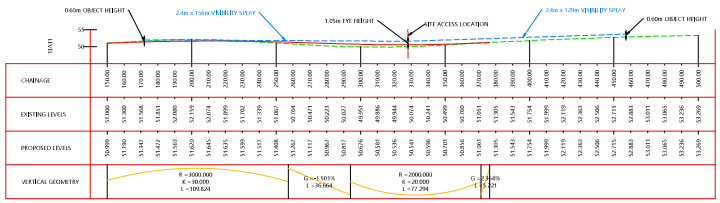
KEY		
500 = TOTAL VEH	i-Transport	Grove House, Lutyens Close, Chineham Court, Basingstoke, RG24 8AG Tel: 01256 338640 www.i-transport.co.uk
25 = HGVs	Ashford Road, Maidstone	
	Figure 7.3	
	Total Development (Tot Veh) PM Peak	

DRAWINGS

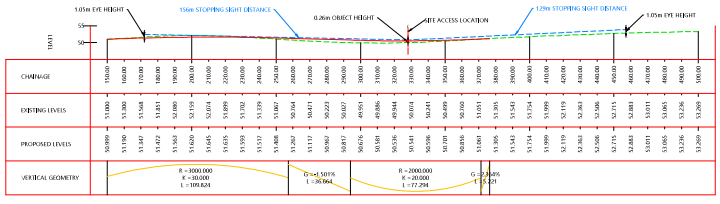




LONG SECTION OF VISIBILITY SPLAY FROM SITE ACCESS
SCALE 1:1000 HORIZONTAL 1:500 VERTICAL



LONG SECTION OF STOPPING SIGHT DISTANCE TO SITE ACCESS
SCALE 1:1000 HORIZONTAL 1:500 VERTICAL



i-Transport
Grove House, Lutyens Close, Chineham Business Park, Basingstoke, Hampshire, RG24 8AG
Tel: 01256 338640
www.i-transport.co.uk

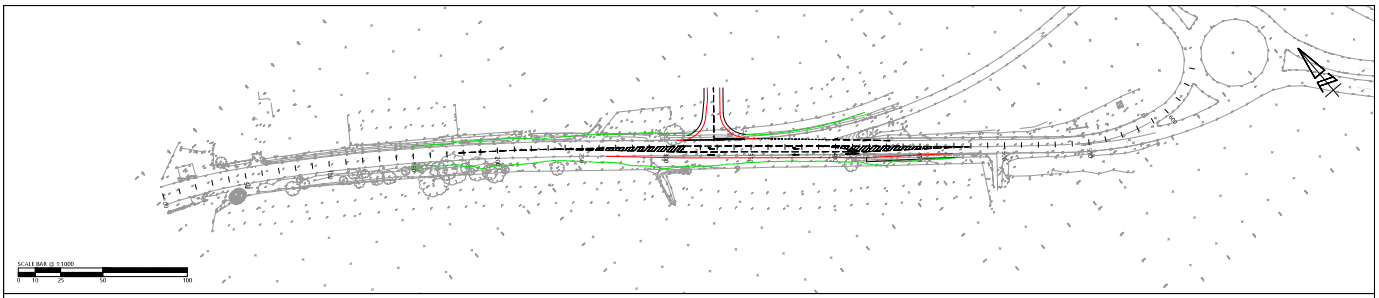
REV	DESCRIPTION	DRAWN	CHECKED
-	FOR INFORMATION	MC	JCD

PROPOSED SITE ACCESS ARRANGEMENTS - VERTICAL ALIGNMENT

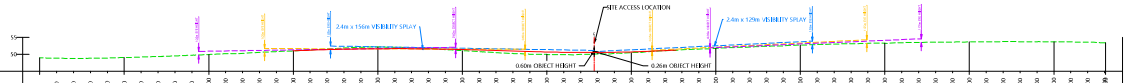
ASHFORD ROAD, MAIDSTONE | WATES DEVELOPMENTS

DRAWN	CHECKED	APPROVED
MC	MC	JCD
PAPER SIZE	SCALE	DATE
A3 SHOWN	1:500	01.12.21

DRAWING No. T19153ZZ-SA-007 | REV -



LONG SECTION OF STOPPING SIGHT DISTANCE (1.5 x SSD) TO SITE ACCESS
SCALE 1:1000 HORIZONTAL 1:500 VERTICAL



i-Transport
Grove House, Lutyens Close, Chineham Business Park, Basingstoke, Hampshire, RG24 8AG
Tel: 01256 338640
www.i-transport.co.uk

REV	DESCRIPTION	DRAWN	CHECKED
-	FOR INFORMATION	MC	JCD

PROPOSED SITE ACCESS ARRANGEMENTS - LONG SECTION 1.5 x SSD

ASHFORD ROAD, MAIDSTONE | WATES DEVELOPMENTS

DRAWN	CHECKED	APPROVED
MC	MC	JCD
PAPER SIZE	SCALE	DATE
A3 SHOWN	1:500	15.10.19

DRAWING No. T19153ZZ-SA-008 | REV B

APPENDIX A. SITE LOCATION PLAN

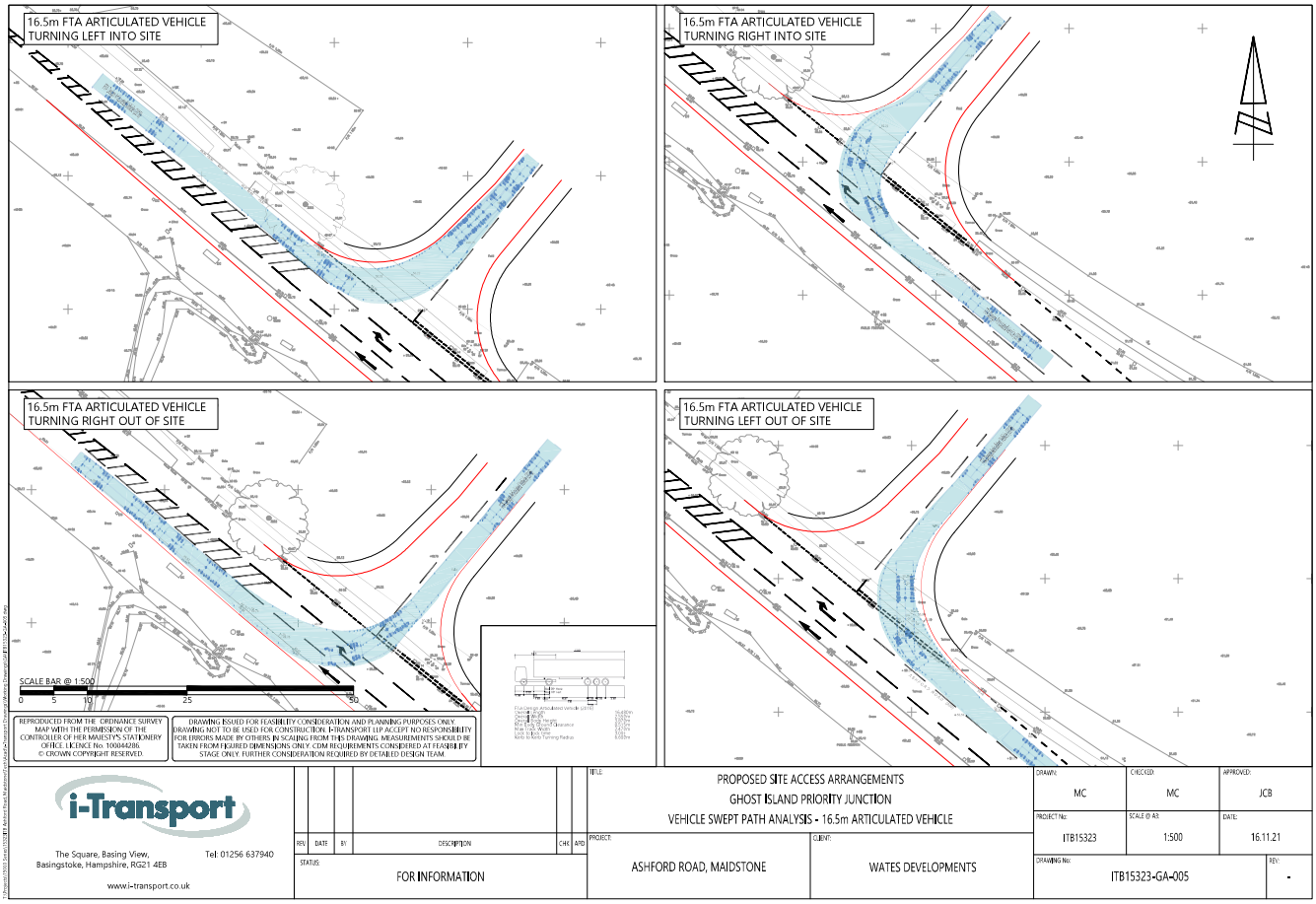
i-Transport

Grove House, Lutyens Close, Chineham Court, Basingstoke, RG24 8AG
Tel: 01256 338 640
Fax: 01256 338 644
www.i-transport.co.uk

TITLE:
ASHFORD ROAD, MAIDSTONE
SITE LOCATION PLAN

FILE REF: ITB15323
REV: -
FIGURE No: FIGURE 1

APPENDIX B. SWEPT PATH ANALYSIS



APPENDIX C. TRICS DATA

Calculation Reference: AUDIT-236603-211108-1145

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

TOTAL VEHICLES

Selected regions and areas:

02	**SOUTH EAST**		
	EX	ESSEX	1 days
	HC	HAMPSHIRE	1 days
	KC	KENT	1 days
04	**EAST ANGLIA**		
	SF	SUFFOLK	1 days
06	**WEST MIDLANDS**		
	WM	WEST MIDLANDS	1 days
07	**YORKSHIRE & NORTH LINCOLNSHIRE**		
	WY	WEST YORKSHIRE	1 days

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

Primary Filtering selection:

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

Parameter: Gross floor area
Actual Range: 3625 to 13200 (units: sqm)
Range Selected by User: 300 to 20000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/13 to 31/01/20

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

Selected survey days:

Monday	1 days
Thursday	2 days
Friday	3 days

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

Selected survey types:

Manual count	6 days
Directional ATC Count	0 days

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

Selected Locations:

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

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

Selected Location Sub Categories:

Industrial Zone	4
Commercial Zone	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:

n/a	1 days
B8	5 days

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

Filter by Site Operations Breakdown:
All Surveys Included

Population within 500m Range:
All Surveys Included

Population within 1 mile:

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

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

Population within 5 miles:

5,001 to 25,000	1 days
125,001 to 250,000	3 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	2 days
1.1 to 1.5	4 days

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

Travel Plan:

No	6 days

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

PTAL Rating:

No PTAL Present	6 days

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

LIST OF SITES relevant to selection parameters

1 **EX-02-F-01** **SPORTS SUPPLEMENTS** **ESSEX**
BRUNEL WAY
COLCHESTER
SEVERALLS INDUSTRIAL PK
Edge of Town
Industrial Zone
Total Gross floor area: 6560 sqm
Survey date: FRIDAY *18/05/18* *Survey Type: MANUAL*

2 **HC-02-F-02** **LOGISTICS** **HAMPSHIRE**
RUTHERFORD ROAD
BASINGSTOKE

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

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

4 **SF-02-F-03** **ROAD HAULAGE** **SUFFOLK**
CENTRAL AVENUE
IPSWICH
WARREN HEATH
Edge of Town
Industrial Zone
Total Gross floor area: 4700 sqm
Survey date: FRIDAY *18/09/15* *Survey Type: MANUAL*

5 **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*

6 **WY-02-F-02** **DISTRIBUTION COMPANY** **WEST YORKSHIRE**
STAITHGATE LANE
BRADFORD
NEWHALL
Edge of Town
Industrial Zone
Total Gross floor area: 10446 sqm
Survey date: THURSDAY *14/03/19* *Survey Type: MANUAL*

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	1	10446	0.105	1	10446	0.057	1	10446	0.162
05:30 - 06:00	1	10446	0.249	1	10446	0.115	1	10446	0.364
06:00 - 06:30	1	10446	0.182	1	10446	0.153	1	10446	0.335
06:30 - 07:00	**1**	**10446**	**0.383**	1	10446	0.096	**1**	**10446**	**0.479**
07:00 - 07:30	6	8289	0.133	6	8289	0.082	6	8289	0.215
07:30 - 08:00	6	8289	0.165	6	8289	0.082	6	8289	0.247
08:00 - 08:30	6	8289	0.115	6	8289	0.107	6	8289	0.222
08:30 - 09:00	6	8289	0.147	6	8289	0.070	6	8289	0.217
09:00 - 09:30	6	8289	0.121	6	8289	0.060	6	8289	0.181
09:30 - 10:00	6	8289	0.113	6	8289	0.066	6	8289	0.179
10:00 - 10:30	6	8289	0.078	6	8289	0.076	6	8289	0.154
10:30 - 11:00	6	8289	0.090	6	8289	0.080	6	8289	0.170
11:00 - 11:30	6	8289	0.080	6	8289	0.092	6	8289	0.172
11:30 - 12:00	6	8289	0.092	6	8289	0.092	6	8289	0.184
12:00 - 12:30	6	8289	0.084	6	8289	0.078	6	8289	0.162
12:30 - 13:00	6	8289	0.088	6	8289	0.062	6	8289	0.150
13:00 - 13:30	6	8289	0.070	6	8289	0.095	6	8289	0.165
13:30 - 14:00	6	8289	0.113	6	8289	0.125	6	8289	0.238
14:00 - 14:30	6	8289	0.070	6	8289	0.109	6	8289	0.179
14:30 - 15:00	6	8289	0.090	6	8289	0.099	6	8289	0.189
15:00 - 15:30	6	8289	0.090	6	8289	0.123	6	8289	0.213
15:30 - 16:00	6	8289	0.064	6	8289	0.086	6	8289	0.150
16:00 - 16:30	6	8289	0.088	6	8289	0.149	6	8289	0.237
16:30 - 17:00	6	8289	0.056	6	8289	0.117	6	8289	0.173
17:00 - 17:30	6	8289	0.092	6	8289	0.167	6	8289	0.259
17:30 - 18:00	6	8289	0.062	6	8289	0.123	6	8289	0.185
18:00 - 18:30	6	8289	0.040	6	8289	0.125	6	8289	0.165
18:30 - 19:00	6	8289	0.032	6	8289	0.064	6	8289	0.096
19:00 - 19:30	1	10446	0.057	**1**	**10446**	**0.182**	1	10446	0.239
19:30 - 20:00	1	10446	0.038	1	10446	0.067	1	10446	0.105
20:00 - 20:30	1	10446	0.019	1	10446	0.048	1	10446	0.067
20:30 - 21:00	1	10446	0.086	1	10446	0.038	1	10446	0.124
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			3.292			3.085			6.377

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

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

Parameter summary

Trip rate parameter range selected:	3625 - 13200 (units: sqm)
Survey date date range:	01/01/13 - 31/01/20
Number of weekdays (Monday-Friday):	6
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	1	10446	0.000	1	10446	0.000	1	10446	0.000
05:30 - 06:00	1	10446	0.000	1	10446	0.000	1	10446	0.000
06:00 - 06:30	**1**	**10446**	**0.010**	**1**	**10446**	**0.010**	**1**	**10446**	**0.020**
06:30 - 07:00	1	10446	0.000	1	10446	0.000	1	10446	0.000
07:00 - 07:30	6	8289	0.006	6	8289	0.004	6	8289	0.010
07:30 - 08:00	6	8289	0.002	6	8289	0.004	6	8289	0.006
08:00 - 08:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
08:30 - 09:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
09:00 - 09:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
09:30 - 10:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
10:00 - 10:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
10:30 - 11:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
11:00 - 11:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
11:30 - 12:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
12:00 - 12:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
12:30 - 13:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
13:00 - 13:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
13:30 - 14:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
14:00 - 14:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
14:30 - 15:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
15:00 - 15:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
15:30 - 16:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
16:00 - 16:30	6	8289	0.004	6	8289	0.004	6	8289	0.008
16:30 - 17:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
17:00 - 17:30	6	8289	0.002	6	8289	0.002	6	8289	0.004
17:30 - 18:00	6	8289	0.002	6	8289	0.002	6	8289	0.004
18:00 - 18:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
18:30 - 19:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
19:00 - 19:30	1	10446	0.000	1	10446	0.000	1	10446	0.000
19:30 - 20:00	1	10446	0.000	1	10446	0.000	1	10446	0.000
20:00 - 20:30	1	10446	0.000	1	10446	0.000	1	10446	0.000
20:30 - 21:00	1	10446	0.000	1	10446	0.000	1	10446	0.000
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.026			0.026			0.052

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

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	1	10446	0.019	1	10446	0.029	1	10446	0.048
05:30 - 06:00	**1**	**10446**	**0.057**	1	10446	0.086	**1**	**10446**	**0.143**
06:00 - 06:30	1	10446	0.038	**1**	**10446**	**0.096**	1	10446	0.134
06:30 - 07:00	1	10446	0.048	1	10446	0.067	1	10446	0.115
07:00 - 07:30	6	8289	0.034	6	8289	0.046	6	8289	0.080
07:30 - 08:00	6	8289	0.020	6	8289	0.042	6	8289	0.062
08:00 - 08:30	6	8289	0.024	6	8289	0.052	6	8289	0.076
08:30 - 09:00	6	8289	0.026	6	8289	0.036	6	8289	0.062
09:00 - 09:30	6	8289	0.028	6	8289	0.026	6	8289	0.054
09:30 - 10:00	6	8289	0.040	6	8289	0.012	6	8289	0.052
10:00 - 10:30	6	8289	0.044	6	8289	0.034	6	8289	0.078
10:30 - 11:00	6	8289	0.044	6	8289	0.026	6	8289	0.070
11:00 - 11:30	6	8289	0.050	6	8289	0.046	6	8289	0.096
11:30 - 12:00	6	8289	0.030	6	8289	0.030	6	8289	0.060
12:00 - 12:30	6	8289	0.044	6	8289	0.026	6	8289	0.070
12:30 - 13:00	6	8289	0.032	6	8289	0.012	6	8289	0.044
13:00 - 13:30	6	8289	0.024	6	8289	0.032	6	8289	0.056
13:30 - 14:00	6	8289	0.030	6	8289	0.046	6	8289	0.076
14:00 - 14:30	6	8289	0.030	6	8289	0.026	6	8289	0.056
14:30 - 15:00	6	8289	0.032	6	8289	0.034	6	8289	0.066
15:00 - 15:30	6	8289	0.038	6	8289	0.044	6	8289	0.082
15:30 - 16:00	6	8289	0.034	6	8289	0.020	6	8289	0.054
16:00 - 16:30	6	8289	0.044	6	8289	0.040	6	8289	0.084
16:30 - 17:00	6	8289	0.034	6	8289	0.024	6	8289	0.058
17:00 - 17:30	6	8289	0.048	6	8289	0.016	6	8289	0.064
17:30 - 18:00	6	8289	0.044	6	8289	0.042	6	8289	0.086
18:00 - 18:30	6	8289	0.020	6	8289	0.024	6	8289	0.044
18:30 - 19:00	6	8289	0.028	6	8289	0.010	6	8289	0.038
19:00 - 19:30	1	10446	0.010	1	10446	0.048	1	10446	0.058
19:30 - 20:00	1	10446	0.010	1	10446	0.010	1	10446	0.020
20:00 - 20:30	1	10446	0.019	1	10446	0.029	1	10446	0.048
20:30 - 21:00	1	10446	0.010	1	10446	0.019	1	10446	0.029
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			1.033			1.130			2.163

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

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	1	10446	0.000	1	10446	0.000	1	10446	0.000
05:30 - 06:00	1	10446	0.000	1	10446	0.000	1	10446	0.000
06:00 - 06:30	1	10446	0.000	1	10446	0.000	1	10446	0.000
06:30 - 07:00	1	10446	0.000	1	10446	0.000	1	10446	0.000
07:00 - 07:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
07:30 - 08:00	6	8289	0.002	6	8289	0.000	6	8289	0.002
08:00 - 08:30	6	8289	0.002	6	8289	0.000	6	8289	0.002
08:30 - 09:00	**6**	**8289**	**0.012**	6	8289	0.000	**6**	**8289**	**0.012**
09:00 - 09:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
09:30 - 10:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
10:00 - 10:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
10:30 - 11:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
11:00 - 11:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
11:30 - 12:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
12:00 - 12:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
12:30 - 13:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
13:00 - 13:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
13:30 - 14:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
14:00 - 14:30	6	8289	0.000	6	8289	0.002	6	8289	0.002
14:30 - 15:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
15:00 - 15:30	6	8289	0.000	6	8289	0.002	6	8289	0.002
15:30 - 16:00	6	8289	0.000	6	8289	0.002	6	8289	0.002
16:00 - 16:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
16:30 - 17:00	6	8289	0.000	6	8289	0.002	6	8289	0.002
17:00 - 17:30	6	8289	0.000	6	8289	0.004	6	8289	0.004
17:30 - 18:00	6	8289	0.000	**6**	**8289**	**0.006**	6	8289	0.006
18:00 - 18:30	6	8289	0.000	6	8289	0.002	6	8289	0.002
18:30 - 19:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
19:00 - 19:30	1	10446	0.000	1	10446	0.000	1	10446	0.000
19:30 - 20:00	1	10446	0.000	1	10446	0.000	1	10446	0.000
20:00 - 20:30	1	10446	0.000	1	10446	0.000	1	10446	0.000
20:30 - 21:00	1	10446	0.000	1	10446	0.000	1	10446	0.000
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.016			0.020			0.036

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

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	1	10446	0.077	1	10446	0.019	1	10446	0.096
05:30 - 06:00	1	10446	0.191	1	10446	0.029	1	10446	0.220
06:00 - 06:30	1	10446	0.124	1	10446	0.038	1	10446	0.162
06:30 - 07:00	**1**	**10446**	**0.316**	1	10446	0.019	**1**	**10446**	**0.335**
07:00 - 07:30	6	8289	0.068	6	8289	0.016	6	8289	0.084
07:30 - 08:00	6	8289	0.123	6	8289	0.020	6	8289	0.143
08:00 - 08:30	6	8289	0.074	6	8289	0.022	6	8289	0.096
08:30 - 09:00	6	8289	0.099	6	8289	0.018	6	8289	0.117
09:00 - 09:30	6	8289	0.058	6	8289	0.022	6	8289	0.080
09:30 - 10:00	6	8289	0.042	6	8289	0.018	6	8289	0.060
10:00 - 10:30	6	8289	0.010	6	8289	0.020	6	8289	0.030
10:30 - 11:00	6	8289	0.028	6	8289	0.030	6	8289	0.058
11:00 - 11:30	6	8289	0.018	6	8289	0.036	6	8289	0.054
11:30 - 12:00	6	8289	0.028	6	8289	0.034	6	8289	0.062
12:00 - 12:30	6	8289	0.022	6	8289	0.038	6	8289	0.060
12:30 - 13:00	6	8289	0.030	6	8289	0.026	6	8289	0.056
13:00 - 13:30	6	8289	0.030	6	8289	0.042	6	8289	0.072
13:30 - 14:00	6	8289	0.062	6	8289	0.060	6	8289	0.122
14:00 - 14:30	6	8289	0.024	6	8289	0.060	6	8289	0.084
14:30 - 15:00	6	8289	0.044	6	8289	0.056	6	8289	0.100
15:00 - 15:30	6	8289	0.028	6	8289	0.056	6	8289	0.084
15:30 - 16:00	6	8289	0.024	6	8289	0.054	6	8289	0.078
16:00 - 16:30	6	8289	0.018	6	8289	0.080	6	8289	0.098
16:30 - 17:00	6	8289	0.022	6	8289	0.086	6	8289	0.108
17:00 - 17:30	6	8289	0.028	6	8289	0.129	6	8289	0.157
17:30 - 18:00	6	8289	0.010	6	8289	0.068	6	8289	0.078
18:00 - 18:30	6	8289	0.018	6	8289	0.092	6	8289	0.110
18:30 - 19:00	6	8289	0.002	6	8289	0.050	6	8289	0.052
19:00 - 19:30	1	10446	0.048	**1**	**10446**	**0.134**	1	10446	0.182
19:30 - 20:00	1	10446	0.019	1	10446	0.048	1	10446	0.067
20:00 - 20:30	1	10446	0.000	1	10446	0.019	1	10446	0.019
20:30 - 21:00	1	10446	0.057	1	10446	0.010	1	10446	0.067
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			1.742			1.449			3.191

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

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	1	10446	0.000	1	10446	0.010	1	10446	0.010
05:30 - 06:00	1	10446	0.000	1	10446	0.000	1	10446	0.000
06:00 - 06:30	1	10446	0.010	1	10446	0.010	1	10446	0.020
06:30 - 07:00	1	10446	0.019	1	10446	0.010	1	10446	0.029
07:00 - 07:30	6	8289	0.024	6	8289	0.016	6	8289	0.040
07:30 - 08:00	6	8289	0.018	6	8289	0.016	6	8289	0.034
08:00 - 08:30	6	8289	0.016	6	8289	0.032	6	8289	0.048
08:30 - 09:00	6	8289	0.020	6	8289	0.016	6	8289	0.036
09:00 - 09:30	**6**	**8289**	**0.034**	6	8289	0.012	6	8289	0.046
09:30 - 10:00	6	8289	0.030	**6**	**8289**	**0.036**	**6**	**8289**	**0.066**
10:00 - 10:30	6	8289	0.024	6	8289	0.022	6	8289	0.046
10:30 - 11:00	6	8289	0.018	6	8289	0.024	6	8289	0.042
11:00 - 11:30	6	8289	0.012	6	8289	0.010	6	8289	0.022
11:30 - 12:00	6	8289	0.034	6	8289	0.028	6	8289	0.062
12:00 - 12:30	6	8289	0.018	6	8289	0.014	6	8289	0.032
12:30 - 13:00	6	8289	0.022	6	8289	0.024	6	8289	0.046
13:00 - 13:30	6	8289	0.016	6	8289	0.020	6	8289	0.036
13:30 - 14:00	6	8289	0.018	6	8289	0.018	6	8289	0.036
14:00 - 14:30	6	8289	0.016	6	8289	0.020	6	8289	0.036
14:30 - 15:00	6	8289	0.014	6	8289	0.004	6	8289	0.018
15:00 - 15:30	6	8289	0.024	6	8289	0.022	6	8289	0.046
15:30 - 16:00	6	8289	0.006	6	8289	0.012	6	8289	0.018
16:00 - 16:30	6	8289	0.022	6	8289	0.024	6	8289	0.046
16:30 - 17:00	6	8289	0.000	6	8289	0.006	6	8289	0.006
17:00 - 17:30	6	8289	0.014	6	8289	0.016	6	8289	0.030
17:30 - 18:00	6	8289	0.006	6	8289	0.010	6	8289	0.016
18:00 - 18:30	6	8289	0.002	6	8289	0.008	6	8289	0.010
18:30 - 19:00	6	8289	0.002	6	8289	0.004	6	8289	0.006
19:00 - 19:30	1	10446	0.000	1	10446	0.000	1	10446	0.000
19:30 - 20:00	1	10446	0.010	1	10446	0.010	1	10446	0.020
20:00 - 20:30	1	10446	0.000	1	10446	0.000	1	10446	0.000
20:30 - 21:00	1	10446	0.019	1	10446	0.010	1	10446	0.029
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.468			0.464			0.932

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

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	**1**	**10446**	**0.010**	1	10446	0.000	**1**	**10446**	**0.010**
05:30 - 06:00	1	10446	0.000	1	10446	0.000	1	10446	0.000
06:00 - 06:30	1	10446	0.000	1	10446	0.000	1	10446	0.000
06:30 - 07:00	1	10446	0.000	1	10446	0.000	1	10446	0.000
07:00 - 07:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
07:30 - 08:00	6	8289	0.002	6	8289	0.000	6	8289	0.002
08:00 - 08:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
08:30 - 09:00	6	8289	0.002	6	8289	0.000	6	8289	0.002
09:00 - 09:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
09:30 - 10:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
10:00 - 10:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
10:30 - 11:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
11:00 - 11:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
11:30 - 12:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
12:00 - 12:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
12:30 - 13:00	6	8289	0.004	6	8289	0.000	6	8289	0.004
13:00 - 13:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
13:30 - 14:00	6	8289	0.002	6	8289	0.000	6	8289	0.002
14:00 - 14:30	6	8289	0.000	6	8289	0.002	6	8289	0.002
14:30 - 15:00	6	8289	0.000	**6**	**8289**	**0.004**	6	8289	0.004
15:00 - 15:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
15:30 - 16:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
16:00 - 16:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
16:30 - 17:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
17:00 - 17:30	6	8289	0.000	6	8289	0.004	6	8289	0.004
17:30 - 18:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
18:00 - 18:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
18:30 - 19:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
19:00 - 19:30	1	10446	0.000	1	10446	0.000	1	10446	0.000
19:30 - 20:00	1	10446	0.000	1	10446	0.000	1	10446	0.000
20:00 - 20:30	1	10446	0.000	1	10446	0.000	1	10446	0.000
20:30 - 21:00	1	10446	0.000	1	10446	0.000	1	10446	0.000
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.020			0.010			0.030

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

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APPENDIX D. 2011 CENSUS JOURNEY TO WORK ANALYSIS

i-Transport Project No: ITB15323
i-Transport Project Title: Ashford Road, Maidstone
2011 Census Analysis - Mid-output Maidstone 011 **Staff Journey to Work Distribution**

Broad Destination	% Car by Destination	Proportion by all modes	Proportion by car	All	WfH	Underg	Train	Bus	Taxi	P2W	Car D	Car Pass	Bike	Foot	Other
Ashford	94%	3.9%	5.6%	32	0	0	2	0	0	0	30	0	0	0	0
Canterbury	100%	0.1%	0.2%	1	0	0	0	0	0	0	1	0	0	0	0
Chatham	80%	0.6%	0.8%	5	0	0	0	0	0	0	4	1	0	0	0
Cranbrook	100%	0.2%	0.4%	2	0	0	0	0	0	0	2	0	0	0	0
Dartford	100%	0.1%	0.2%	1	0	0	0	0	0	0	1	0	0	0	0
Dover	100%	0.4%	0.6%	3	0	0	0	0	0	0	3	0	0	0	0
Eccles	76%	2.1%	2.4%	17	0	0	0	1	0	1	13	1	1	0	0
Faversham	86%	2.7%	3.6%	22	0	0	0	0	0	1	19	2	0	0	0
Gillingham	100%	1.3%	2.1%	11	0	0	0	0	0	0	11	0	0	0	0
Gravesham	100%	0.4%	0.6%	3	0	0	0	0	0	0	3	0	0	0	0
Harrietsham	49%	55.6%	42.0%	456	0	0	12	1	1	5	224	29	12	172	0
Headcorn	82%	6.0%	7.5%	49	0	0	1	0	0	1	40	6	1	0	0
Hempstead	64%	1.3%	1.3%	11	0	0	0	0	0	1	7	3	0	0	0
Isle of Sheppey	91%	1.3%	1.9%	11	0	0	0	0	0	0	10	1	0	0	0
Larkfield	83%	2.8%	3.6%	23	0	0	1	0	0	0	19	2	0	1	0
Maidstone	85%	4.9%	6.4%	40	0	0	3	0	0	0	34	0	0	3	0
Marden	80%	2.4%	3.0%	20	0	0	1	0	0	0	16	2	0	1	0
North/East London	100%	0.1%	0.2%	1	0	0	0	0	0	0	1	0	0	0	0
Other East	50%	0.2%	0.2%	2	0	0	1	0	0	0	1	0	0	0	0
Other North	100%	0.1%	0.2%	1	0	0	0	0	0	0	1	0	0	0	0
Other North East	100%	0.1%	0.2%	1	0	0	0	0	0	0	1	0	0	0	0
Other North West	100%	0.1%	0.2%	1	0	0	0	0	0	0	1	0	0	0	0
Other South	100%	0.1%	0.2%	1	0	0	0	0	0	0	1	0	0	0	0
Other South West	100%	0.1%	0.2%	1	0	0	0	0	0	0	1	0	0	0	0
Other West	100%	0.1%	0.2%	1	0	0	0	0	0	0	1	0	0	0	0
Parkwood	67%	1.1%	1.1%	9	0	0	0	0	0	1	6	1	1	0	0
Rochester	100%	0.4%	0.6%	3	0	0	0	0	0	0	3	0	0	0	0
Shepway	50%	0.5%	0.4%	4	0	0	0	0	0	0	2	2	0	0	0
Sittingbourne	94%	3.8%	5.4%	31	0	0	0	0	0	1	29	1	0	0	0
Snodland	86%	2.6%	3.4%	21	0	0	0	1	0	0	18	2	0	0	0
South/West London	0%	0.1%	0.0%	1	0	0	1	0	0	0	0	0	0	0	0
Staplehurst	93%	1.7%	2.4%	14	0	0	0	0	0	0	13	1	0	0	0
Tonbridge	100%	1.1%	1.7%	9	0	0	0	0	0	0	9	0	0	0	0
West Malling	67%	1.5%	1.5%	12	0	0	0	0	0	0	8	3	1	0	0
TOTAL		**100%**	**100%**	**820**	**0**	**0**	**22**	**3**	**1**	**11**	**533**	**57**	**16**	**177**	**0**

i-Transport Project No: ITB15323
i-Transport Project Title: Ashford Road, Maidstone
2011 Census Analysis - Staff Journey to Work Distribution

Traffic Routing

Journey to Work - Employment	Proportion by Route	Proportion car by route	Route 1	Route 2	Route 3	Route 4	Route 5	Route 6
Ashford	100%	17.6%	Ashford Road E	A20 N	M20 E	A20 S	LIN	LIN
Canterbury	100%	3.4%	Ashford Road E	A20 N	M20 W	Sittingbourne Road N	M2 E	LIN
Chatham	100%	5.4%	Ashford Road E	A20 N	M20 W	A229 N	LIN	LIN
Cranbrook	100%	0.7%	Ashford Road E	Ashford Road E	B2163 S	Upper Street S	Leeds Road S	LIN
Dartford	100%	0.6%	Ashford Road E	A20 N	M20 W	LIN	LIN	LIN
Dover	100%	3.3%	Ashford Road E	A20 N	M20 E	LIN	LIN	LIN
Eccles	100%	0.5%	Ashford Road E	A20 N	M20 W	A229 N	Rochester Road W	LIN
Faversham	100%	3.0%	Ashford Road E	A20 N	M20 W	Sittingbourne Road N	M2 E	LIN
Gillingham	100%	2.5%	Ashford Road E	A20 N	M20 W	A229 N	LIN	LIN
Gravesham	100%	1.1%	Ashford Road E	A20 N	M20 W	A229 N	LIN	LIN
Harrietsham	100%	9.3%	Ashford Road E	Ashford Road E	LIN	LIN	LIN	LIN
Headcorn	100%	1.7%	Ashford Road E	Ashford Road E	B2163 S	Upper Street S	Leeds Road S	LIN
Hempstead	100%	0.5%	Ashford Road E	A20 N	M20 W	A429 S	Bearsted Road W	LIN
Isle of Sheppey	100%	2.2%	Ashford Road E	A20 N	M20 W	Sittingbourne Road N	A249 N	LIN
Larkfield	100%	1.6%	Ashford Road E	A20 N	M20 W	Coldharbour Lane S	A20 W	LIN
Maidstone	80%	12.9%	Ashford Road W	LIN	LIN	LIN	LIN	LIN
	20%	3.2%	Ashford Road W	Roundwell	LIN	LIN	LIN	LIN
Marden	100%	0.7%	Ashford Road E	Ashford Road E	B2163 S	Upper Street S	Leeds Road S	LIN
North/East London	100%	2.6%	Ashford Road E	A20 N	M20 W	LIN	LIN	LIN
Other East	100%	0.9%	Ashford Road E	A20 N	M20 W	Sittingbourne Road N	M2 E	LIN
Other North	100%	1.6%	Ashford Road E	A20 N	M20 W	LIN	LIN	LIN
Other North East	100%	0.5%	Ashford Road E	A20 N	M20 W	LIN	LIN	LIN
Other North West	100%	0.2%	Ashford Road E	A20 N	M20 W	M26 W	LIN	LIN
Other South	100%	0.6%	Ashford Road E	Ashford Road E	B2163 S	Upper Street S	Leeds Road S	LIN
Other South West	100%	0.7%	Ashford Road E	A20 N	M20 W	A228 S	Ashton Way S	LIN
Other West	100%	1.6%	Ashford Road E	A20 N	M20 W	M26 W	LIN	LIN
Parkwood	50%	2.4%	Ashford Road E	Ashford Road E	B2163 S	Upper Street S	Leeds Road S	LIN
	50%	2.4%	Ashford Road W	Otham Lane S	Green Hill S	Otham Street S	LIN	LIN
Rochester	100%	2.3%	Ashford Road E	A20 N	M20 W	A229 N	LIN	LIN
Shepway	100%	4.0%	Ashford Road W	Willington Street S	School Lane W	Oxford Road S	LIN	LIN
Sittingbourne	100%	6.7%	Ashford Road E	A20 N	M20 W	A229 N	LIN	LIN
Snodland	100%	0.7%	Ashford Road E	A20 N	M20 W	Castle Way N	Malling Road N	LIN
South/West London	100%	0.1%	Ashford Road E	A20 N	M20 W	M26 W	LIN	LIN
Staplehurst	100%	0.5%	Ashford Road E	Ashford Road E	B2163 S	Upper Street S	Leeds Road S	LIN
Tonbridge	100%	1.8%	Ashford Road E	A20 N	M20 W	A228 S	Ashton Way S	LIN
West Malling	50%	0.2%	Ashford Road E	A20 N	M20 W	Castle Way S	A20 W	LIN
	50%	0.2%	Ashford Road E	A20 N	M20 W	Coldharbour Lane S	A20 W	LIN

Route 1	Proportion of Cars
Ashford Road E	77.4%
Ashford Road W	22.6%
	100.0%

Route 2	Proportion of Cars
Ashford Road E	16.0%
LIN	12.9%
Roundwell	3.7%
A20 N	61.4%
Otham Lane S	2.4%
Willington Street S	4.0%
	100.0%

Route 3	Proportion of Cars
Green Hill S	2.4%
LIN	25.5%
M20 E	18.9%
M20 W	42.5%
School Lane W	4.8%
B2163 S	6.6%
	100.0%

Route 4	Proportion of Cars
A20 S	17.6%
A228 S	2.1%
A229 N	18.6%
A429 S	0.5%
Castle Way N	0.7%
Castle Way S	0.2%
Coldharbour Lane S	1.8%
Upper Street S	6.6%
LIN	34.1%
M26 W	1.8%
Otham Street S	2.4%
Oxford Road S	4.0%
Sittingbourne Road N	9.4%
	100.0%

Route 5	Proportion of Cars
A20 W	7.8%
A249 N	2.2%
Ashton Way S	2.1%
Bearsted Road W	0.5%
Leeds Road S	6.6%
LIN	78.1%
M2 E	7.2%
Malling Road N	0.7%
Rochester Road W	0.5%
	100.0%

Route 6	Proportion of Cars
LIN	100.0%

APPENDIX B. KCC Pre-Application Response and Correspondence

Highways and Transportation
Ashford Highway Depot
4 Javelin Way
Ashford
TN24 8AD
Tel: 03000 418181
Date: 31 January 2022
Our Ref:

i-Transport LLP
85 Gresham Street
London
EC2V 7NQ

Application - PAP/2021/165
Location - Ashford Road, Maidstone
Proposal - 13,000sqm B8 distribution Centre and associated vehicular access from Ashford Road

Thank you for seeking Pre-Application advice from Kent County Council Highways.

Introduction

This advice is given based on approximately 13,000 of B8 warehousing/distribution space, to develop land to the north of A20 Ashford Road, Maidstone. The exact site layout is unknown at this time. Scoping Note dated December 2021 and subsequent Access and Sensitivty Test Technical Note dated February 2022, following initial meeting, have been provided, and forms the foundation of this review.

A Transport Assessment will be required due to the expectant size of development, this will need to consider opening year for finishing the build.

Policy Documents

Section 3 of Transport Assessment Scoping Note lists the various policies that will considered during any planning application, and this is conclusive from Kent County Council's perspective.

Site Access

The site layout will need to adhere to Kent Design Guide, this will give detail of expected carriageway widths, kerb radii, footway widths, target speed, and internal visibility.

The site will either need to have two points of access or a loop with a short connection to a single point of access and a secondary emergency access link. Ensuring contingency within the internal development layout is achieved

Appendix B shows predicted swept path analysis complies with the anticipated site access layout. Any internal junction layouts will need to have swept path analysis undertaken.

Visibility splays will be required with any application, with a drawing detailing the achieved sightline. KCC would look for this to comply with Manual for Streets, ensuring safety for the potential development. 85th percentile speed can supersede the speed limit, we would expect

the raw data to be provided with any submission so that this information can be checked. KCC accepts absolute minimum distances, which will help with information provided within any planning applications.

Stage 1 Road Safety Audit and Designers Response will be required as part of planning application for both the proposed site access and the safeguarded roundabout junction, which has been identified for future needs. Designer response addressing the auditor comments will assist within the technical review as part of S38 or S278 Agreements.

Safeguarded junction being compliant with LTN 1/20 is important, although active travel connections to a wider network along A20 is currently limited, additionally, more detail on crossing facilities round the junction. That said, the general principle is acceptable, pending further detail like junction modelling and safety audit.

Trip Generation

Detail of B8 warehouse use based on parcel delivery has been supplied within the Sensitivity Test, this will provide the most robust trip generation to understand the potential impact on the wider highway network.

Traffic Distribution

Figure 3.1 and 3.2 from Sensitivity Test exercise show the expected traffic distribution based on parcel delivery

Traffic modelling

Site access junction, M20 Jct 8, and A20 roundabout to south will need to be modelled to understand the affect on highway network.

Sustainable Travel

Rail and bus services will need to be referenced in any TA submission.

Parking

Kent Vehicle Parking Standards – Supplementary Planning Guidance SPG 4 will need to be used to determine vehicular parking provision. Electric Vehicle Charging Points will need to be provided for all allocated parking, if unallocated then 10% spaces should have an active supply, with a further 10% passive infrastructure to cater for future demand. Mobility Impaired parking should be considered as part of any application.

Cycle storage that is covered and secure will need to be provided as part of any assessment.

Travel Plan

Due to the size of development, a Travel Plan and an ongoing monitoring fee will be required as part of any planning condition.

Personal Injury Collisions

Collision data should be obtained from Kent County Council for the last five years, to understand whether there are common causes for collisions, which may be due to existing highway, which could be intensified by an increase of trip generation. It is imperative that any

data takes account of any possible skew, as a result of Covid. Image 4.2 extents are sufficient, however, M20 Junction 8 should be included to understand how this junction may be impacted. SE corner of junction 8 appears to have an accident cluster, when viewing CrashMap.

Arboriculture

If any trees or shrubs need to be removed from the highway, as part of this planning application, then contact will need to be made with Kent County Council's Arboriculture Team, via Contact Centre on 03000 418181, with details within the following link. There is likely to be charges imposed on any removal - Capital Asset Valuation for Amenity Trees (CAVAT).
https://www.kent.gov.uk/roads-and-travel/highway-permits-and-licences/apply-for-a-highways-permit-or-licence/highways-fees#tab-12

Public Rights of Way

Any Public Rights of Way within the site, or which might provide connectivity to the wider network will need to be considered. KCC PROW team should be consulted prior to any application to ensure that they are satisfied with any proposals. Although, on initial review of PROW website, there does not appear to be any existing routes on the site.

Important Notes

Any advice given by Council officers for pre-application enquiries does not indicate a formal decision by the Council as the Highway Authority. Any views or opinions are given in good faith, and to the best of ability, without prejudice to the formal consideration of any planning application.

The final decision on any application that you may then make can only be taken after the Planning Authority has consulted local people, statutory consultees and any other interested parties. The final decision on an application will then be made by senior officers or by the respective Local Planning Authority and will be based on all of the information available at that time.

You should therefore be aware that officers cannot guarantee the final formal decision that will be made on your application(s).

Any pre-application advice that has been provided will be carefully considered in reaching a decision or recommendation on an application; subject to the proviso that circumstances and information may change or come to light that could alter that position.

It should be noted that the weight given to pre-application advice will decline over time.

Informative: It is important to note that planning permission does not convey any approval to carry out works on or affecting the public highway.

Any changes to or affecting the public highway in Kent require the formal agreement of the Highway Authority, Kent County Council (KCC), and it should not be assumed that this will be a given because planning permission has been granted. For this reason, anyone considering works which may affect the public highway, including any highway-owned street furniture, is advised to engage with KCC Highways and Transportation at an early stage in the design process.

Across the county there are pieces of land next to private homes and gardens that do not look like roads or pavements but are actually part of the public highway. Some of this highway land

is owned by Kent County Council whilst some is owned by third party owners. Irrespective of the ownership, this land may have highway rights over the topsoil.

Works on private land may also affect the public highway. These include works to cellars, to retaining walls which support the highway or land above the highway, and to balconies, signs or other structures which project over the highway. Such works also require the approval of the Highway Authority.

Kent County Council has now introduced a formal technical approval process for new or altered highway assets, with the aim of improving future maintainability. This process applies to all development works affecting the public highway other than applications for vehicle crossings, which are covered by a separate approval process.

Should the development be approved by the Planning Authority, it is the responsibility of the applicant to ensure, before the development is commenced, that all necessary highway approvals and consents have been obtained and that the limits of the highway boundary have been clearly established, since failure to do so may result in enforcement action being taken by the Highway Authority. The applicant must also ensure that the details shown on the approved plans agree in every aspect with those approved under the relevant legislation and common law. It is therefore important for the applicant to contact KCC Highways and Transportation to progress this aspect of the works prior to commencement on site.

Guidance for applicants, including information about how to clarify the highway boundary and links to application forms for vehicular crossings and other highway matters, may be found on Kent County Council's website: https://www.kent.gov.uk/roads-and-travel/highway-permits-and-licences/highways-permissions-and-technical-guidance. Alternatively, KCC Highways and Transportation may be contacted by telephone: 03000 418181

Yours Faithfully

Director of Highways & Transportation

*This is a statutory technical response on behalf of KCC as Highway Authority. If you wish to make representations in relation to highways matters associated with the planning application under consideration, please make these directly to the Planning Authority.

i-Transport LLP
85 Gresham Street, London, EC2V 7NQ

Tel: 020 3705 9215

Meeting Record

Project No: ITB15323
Project Title: Ashford Road, Maidstone
Date: 4 February 2022
Venue: MS Teams

Attendees

Steven Timson	—	Kent County Council (KCC) (ST)
Adam Clegg	—	Wates Developments (AC)
Asher Ross	—	Wates Developments (AR)
James Bevis	—	i-Transport (i-T) (JCB)
Duncan Findlay	—	i-Transport (i-T) (DF)

Item		Actions
1.0	**Introductions**	
1.1	ST noted that, whilst he is predominantly involved with projects in Tonbridge and Malling, he will continue to be involved on Ashford Road going forward.	NB
2.0	**Project Overview and Background**	
2.1	AC provided an overview of the site and outlined that Wates have been involved in the site since 2019, controlling land to the north and south of the A20 Ashford Road. Wates are in the process of making representations for the wider site to the south for a proposed Garden Community, but note that the northern site has the potential to be delivered for distribution/warehousing employment.	
2.2	AC noted that a separate pre-app has been submitted to MBC.	NB
3.0	**Sustainability**	
3.1	DF outlined the opportunities for sustainable travel and noted that adjacent site that has a planning permission for a similar use.	
3.2	ST confirmed that the principle of developing the site to provide distribution/warehousing is acceptable and that access to sustainable modes can be appropriately made available to be taken up.	NB
4.0	**Site Access**	
4.1	ST set out that the proposed access arrangements are acceptable in principle, although the information would be passed to KCC's highway engineers for comment.	NB
4.2	DF set out that the site access has been subject to a Stage 1 Road Safety Audit (RSA) which raised no 'showstoppers'. i-T are in the process of finalising a Designer's Response which will be passed to KCC in due course.	i-T

Item		Actions
4.3	ST confirmed that the use of the absolute minimum visibility splays is acceptable within KCC. In addition, the Manual for Streets should be the starting point for design guidance and 0.6m object heights are acceptable for forward visibility envelopes. JCB/DF agreed to review the access based this, which should help to avoid/minimise the need for reprofiling the road. JCB/DF agreed to provide this information alongside the RSA Designer's Response.	NB i-T
4.4	ST confirmed that the proposed roundabout to access potential residential development to the south is acceptable in principle.	NB
	Leeds Langley Relief Road (LLRR)	
4.5	AC/JCB/DF requested an update on the LLRR. ST set out that this is still desired by KCC, but that it is a long-term ambition. ST agreed to provide an update on the latest status of the LLRR. **[Post meeting note: ST confirmed that here is no preferred route or timetable associated with the Leeds Langley Relief Road, but the Local Plan Review does include a safeguarded area to ensure future development does not prejudice the provision of a route. The current adopted Local Plan runs to 2031 and the emerging Local Plan review will extend this to 2037]**	ST
5.0	**Traffic Impact**	
5.1	ST noted that the trip rates and trip generation are acceptable but requested that a comparison trip generation exercise is undertaken, assuming that the site comes forward as a parcel delivery centre. DF/JCB confirmed that this will be undertaken.	i-T
5.2	ST confirmed that the remainder of the traffic impact assessment parameters (study area, TEMPRO, trip distribution/assignment etc.) are acceptable subject to the outcome of the parcel delivery centre trip generation exercise.	NB
5.3	ST noted that MBC will confirm the extent of any committed developments required but set out that the adjacent site will need to be included. JCB/DF agreed.	i-T
5.4	All agreed that the TA would assess two future years – 2027 and 2037 – in line with National Highways guidance.	NB
6.0	**TA Structure**	
6.1	ST confirmed agreement to the TA structure set out in the TA scoping note, including the list of policies to review.	NB
6.2	ST requested that the area of accident analysis is expanded slightly to cover the M20 Junction 8. JCB/DF confirmed that this would be actioned.	i-T
6.3	ST confirmed KCC's EV charging point requirements – 10% active points and 10% passive points.	NB
6.4	ST confirmed that a Travel Plan will be required to be prepared in line with KCC guidance.	NB

Circulation

- Attendees

Author

Duncan Findlay

Duncan Findlay

From: Steven.Timson@kent.gov.uk
Sent: 01 April 2022 14:06
To: Duncan Findlay
Subject: RE: Leeds Langley and LP information / Ashford Road

Hi Duncan,

Yes. I agree with your summary below.

Steve

From: Duncan Findlay <duncan.findlay@i-transport.co.uk>
Sent: 01 April 2022 12:26
To: Steven Timson - GT TRA <Steven.Timson@kent.gov.uk>
Subject: RE: Leeds Langley and LP information / Ashford Road

Hi Steve,

Thanks for sending this across – it is much appreciated.

Just for clarification, based on the attached it is my understanding that:

- The access arrangements (including RSA) are agreed in principle – noted on the emergency access point;
- The principle of the larger roundabout to be safeguarded is agreed in principle;
- The parameters and study area for the traffic assessment are agreed; and
- Trip rates are agreed (including the need for supplying the parcel delivery assessment as a sensitivity test).

Please could you confirm that the above is the case?

Noted on your other comments regarding parking, Travel Plan, EV charging and accident data – these are all fine.

Thanks

Kind regards
Duncan

Duncan Findlay BEng (Hons) MCIHT MILT
Associate
for i-Transport LLP

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London Office: 85 Gresham Street, London, EC2V 7NQ
T: 020 3705 9215 **M:** 07832 873542

From: Steven.Timson@kent.gov.uk <Steven.Timson@kent.gov.uk>
Sent: 31 March 2022 14:05
To: Duncan Findlay <duncan.findlay@i-transport.co.uk>
Subject: RE: Leeds Langley and LP information / Ashford Road

Hi Duncan,

Thanks for sending those through, it helped a lot. Please find attached the updated response. There is a slight increase with Parcel Delivery and provides more robust results. Let me know if there is anything else you require?

Steve

From: Duncan Findlay <duncan.findlay@i-transport.co.uk>
Sent: 30 March 2022 15:13
To: Steven Timson - GT TRA <Steven.Timson@kent.gov.uk>
Subject: RE: Leeds Langley and LP information / Ashford Road

Hi Steve,

No problem – please see attached all figures, appendices and drawings split out individually which I trust assists.

Thanks.

Kind regards
Duncan

Duncan Findlay BEng (Hons) MCIHT MILT
Associate
for i-Transport LLP

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London Office: 85 Gresham Street, London, EC2V 7NQ
T: 020 3705 9215 **M:** 07832 873542

From: Steven.Timson@kent.gov.uk <Steven.Timson@kent.gov.uk>
Sent: 30 March 2022 15:01
To: Duncan Findlay <duncan.findlay@i-transport.co.uk>
Subject: RE: Leeds Langley and LP information / Ashford Road

I'm conscious that you have been waiting long enough for a full response. If you can separate out the figures and documents at the end of the PDF that would be extremely helpful. It seems to be the different page alignments that causes the issue.

Thanks

Steve

From: Duncan Findlay <duncan.findlay@i-transport.co.uk>
Sent: 30 March 2022 14:58
To: Steven Timson - GT TRA <Steven.Timson@kent.gov.uk>
Subject: Re: Leeds Langley and LP information / Ashford Road

Hi Steve,

Thanks - that's hugely appreciated. Sorry that the PDF keeps freezing - if you need this split out into separate files I can send you individual drawings etc. as needed. Let me know.

Thanks

Kind regards
Duncan

Sent from my iPhone

> On 30 Mar 2022, at 14:46, Steven.Timson@kent.gov.uk wrote:
>
> **CAUTION:** This message originated outside of i-Transport. Use caution when opening attachments, clicking links or responding to requests for information.
>
> Hi Duncan,
>
> Our S278 people are under pressure, so I'm going to read through my response, the technical note one last time and issue to you. Agreements will be able to work with you as part of the technical review. PDF document keeps freezing and crashing throughout today, but hopefully it starts to play ball.
>
> Steve
>
> ---
>
> **From:** Duncan Findlay <duncan.findlay@i-transport.co.uk>
> **Sent:** 25 February 2022 09:12
> **To:** Steven Timson - GT TRA <Steven.Timson@kent.gov.uk>; James Bevis <James.Bevis@i-transport.co.uk>; Adam.Clegg@wates.co.uk
> **Cc:** Asher.Ross@wates.co.uk
> **Subject:** RE: Leeds Langley and LP information / Ashford Road
>
> Hi Steve,
>
> I hope you're well.
>
> Further to our emails below and our meeting a few weeks ago, please see attached a short note that sets out:

- The site access arrangements based on minimum visibility splays (and taking account of the Stage 1 RSA); and
- A sensitivity test assuming that the site could come forward as a parcel distribution centre – as detailed in the Note this will also be included in the TA.

I trust the attached gives you what you need to finalise KCC's pre-app response, but if you have any queries please let me know.

Have a good weekend.

Kind regards
Duncan

<image001.png>

Duncan Findlay BEng (Hons) MCIHT MILT
Associate
for i-Transport LLP

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London Office: 85 Gresham Street, London, EC2V 7NQ
T: 020 3705 9215 **M:** 07832 873542

<image002.png>

From: Steven.Timson@kent.gov.uk <Steven.Timson@kent.gov.uk>
Sent: 11 February 2022 14:25
To: Duncan Findlay <duncan.findlay@i-transport.co.uk>; James Bevis <James.Bevis@i-transport.co.uk>; Adam.Clegg@wates.co.uk
Cc: Asher.Ross@wates.co.uk
Subject: RE: Leeds Langley and LP information

Hi Duncan,

Just to confirm the meeting notes reflect the conversation from my and KCC's perspective.

Thanks and have a good weekend all.

Steve

From: Duncan Findlay <duncan.findlay@i-transport.co.uk>
Sent: 07 February 2022 15:23
To: Steven Timson - GT TRA <Steven.Timson@kent.gov.uk>; James Bevis <James.Bevis@i-transport.co.uk>; Adam.Clegg@wates.co.uk
Cc: Asher Ross <Asher.Ross@wates.co.uk>
Subject: RE: Leeds Langley and LP information

Hi All,

Further to last week's productive meeting, please see attached a short meeting note. I trust all's in order, but please let me know if you need to discuss anything.

Kind regards
Duncan

<image001.png>

Duncan Findlay BEng (Hons) MCIHT MILT
Associate
for i-Transport LLP

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T: 020 3705 9215 **M:** 07832 873542

<image002.png>

From: Duncan Findlay
Sent: 04 February 2022 14:24
To: Steven.Timson@kent.gov.uk; James Bevis <James.Bevis@i-transport.co.uk>; Adam.Clegg@wates.co.uk
Subject: RE: Leeds Langley and LP information

Hi Steve,

Good to speak this morning and thank you for your very helpful advice at the meeting.

Thanks also for sending this info over on the LLRR and the Local Plan – again very helpful.

Kind regards
Duncan

<image001.png>

Duncan Findlay BEng (Hons) MCIHT MILT
Associate
for i-Transport LLP

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London Office: 85 Gresham Street, London, EC2V 7NQ
T: 020 3705 9215 **M:** 07832 873542

<image002.png>

From: Steven.Timson@kent.gov.uk <Steven.Timson@kent.gov.uk>
Sent: 04 February 2022 13:56
To: James Bevis <James.Bevis@i-transport.co.uk>; Duncan Findlay <duncan.findlay@i-

transport.co.uk>; Adam.Clegg@wates.co.uk
Subject: Leeds Langley and LP information

Hi All,

Further to our meeting this morning - There is no preferred route or timetable associated with the Leeds Langley Relief Road. The Local Plan Review does include a safeguarded area to ensure future development does not prejudice the provision of a route.
The current adopted Local Plan runs to 2031 and the emerging Local Plan review will extend this to 2037.

I hope that helps?

Steve

Steven Timson
Principal Development & Transport Planner – Tonbridge & Malling
Kent County Council Highways, Transportation & Waste
Tel: 0300 041 8670

APPENDIX C. Access and Sensitivity Test Technical Note

i-Transport LLP
85 Gresham Street, London, EC2V 7NQ

Tel: 020 3705 9215

Technical Note: KCC – Access and Sensitivity Test

Project No: ITB15323
Project Title: Ashford Road, Maidstone
Title: KCC – Access and Sensitivity Test [ISSUE]
Ref: JCB/DF/RW/ITB15323-008A TN
Date: 25 February 2022

SECTION 1 INTRODUCTION

1.1 Wates Developments (Wates) are proposing to develop land to the north of Ashford Road, Maidstone to provide circa 13,000sqm of warehousing/distribution space. Access is proposed to be taken from the A20 Ashford Road via a ghost island junction.

1.2 A Transport Assessment Scoping Note (TASN) was issued to Kent County Council (KCC) in December 2021 (*report reference: ITB15323-006B TN*) to set out the scope/structure of a forthcoming Transport Assessment (TA) and to inform pre-application discussions on transport/highways matters. Pre-application discussions took place at a meeting on 4 February 2022 (meeting minutes are included as **Appendix A**) where it was agreed that:

- The access arrangements are acceptable principle, but a Stage 1 Road Safety Audit (RSA) and associated Designer's Response are to be provided. KCC also confirmed that the use of absolute minimum visibility splays is acceptable with regards to the access design; and
- A sensitivity test comparison trip generation is exercise is to be undertaken, assuming the site might come forward as a parcel delivery centre.

1.3 The note provides this information and is structured as follows:

- Section 2 provides details of the Stage 1 RSA and associated Designer's Response, as well as setting out the site access arrangements with amended visibility splays;
- Section 3 details a sensitivity test trip generation assessment of the development should it come forward as a Parcel Distribution centre (this is compared to trip generation assessment presented in the TASN); and
- Section 4 provides a summary and conclusion.

SECTION 2 SITE ACCESS ARRANGEMENTS

2.1 Stage 1 Road Safety Audit (RSA) and Designer's Response

2.1.1 The proposed access arrangements detailed in the TASN were subject to a Stage 1 RSA which was undertaken by Fenley. No material issues were raised with a number of matters to be addressed at detailed design, but it was requested that:

- The access to the adjacent consented Woodcut Farm site (*application ref: 17/502331/OUT*) is shown; and
- A shared footway/cycleway connection to the west is shown to tie in with the Woodcut Farm access.

2.1.2 The site access arrangements were revised to take account of the above comments and are shown on Drawing ITB15323-GA-001E, included in **Appendix B**. The full Stage 1 RSA and Designer's Response are also included in **Appendix B**.

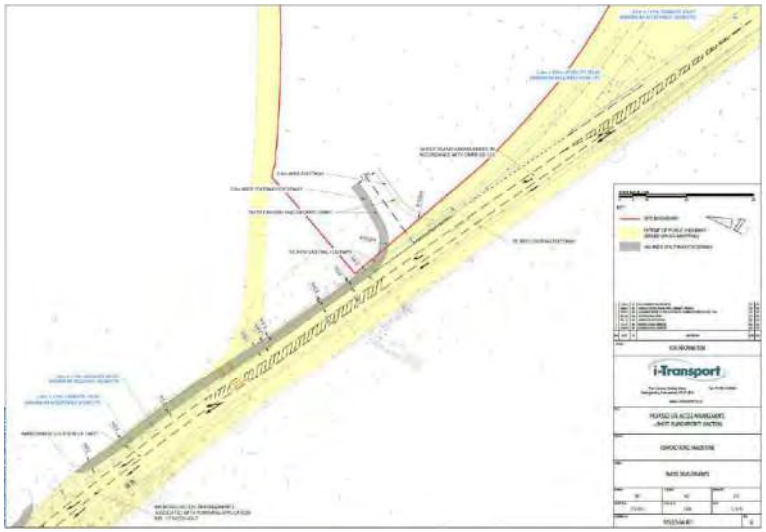
2.2 Revised Access Proposal – Amended Visibility Splays

Arrangement

2.2.1 As agreed with KCC the access arrangements have been revised to show the absolute minimum visibility splays. These are shown on **Drawing ITB15323-GA-001G** (reproduced as **Image 2.1** overleaf). The revised access arrangements also include a footway/cycleway (as detailed in the Stage 1 RSA) and the proposed ghost island right turn site access arrangement associated with the Woodcut Farm site.

2.2.2 The remainder of the access is unchanged and is based on a 100kph design speed, with 15m kerb radii and a 7.3m wide access road.

Image 2.1: Revised Site Access Arrangement



Visibility

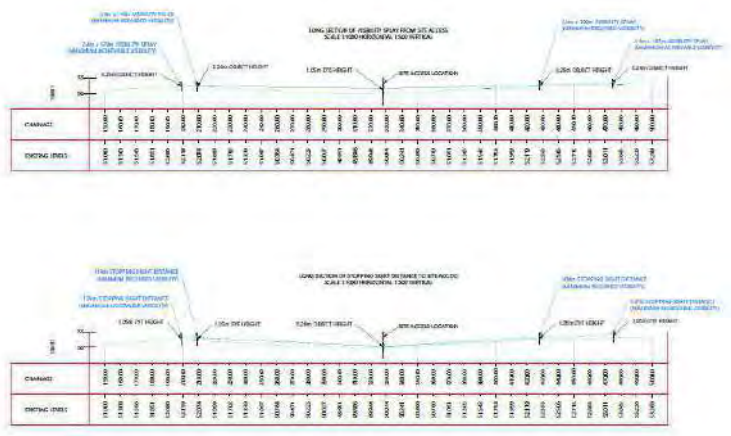
2.2.3 Horizontal absolute minimum visibility splays of 2.4m x 100m to the east and 2.4m x 119m to the west can be achieved in line with the recorded 85th percentile speeds as detailed at Table 4.2 of the TASN. These visibility splays are shown on **Drawing ITB15323-GA-001G.**

2.2.4 The revised access arrangements along with visibility in the vertical plane (also based on absolute minimum) is shown in **Drawing ITB15323-GA-007B** and demonstrates that visibility can be achieved to and from the junction in both directions from an eye height of 1.05m to an object height of 0.26m.

2.2.5 The use of the absolute minimum visibility means that the road will not require reprofiling.

2.2.6 **Image 2.2** provides an extract from **Drawing ITB15323-GA-007B** of the vertical visibility of the revised access arrangements on A20 Ashford Road.

Image 2.2: Revised Site Access Arrangements – Vertical Alignment



2.2.7 Additional comments from the safety auditor (see **Appendix C**) confirm that the use of absolute minimum visibility splays are acceptable, subject to the inclusion of maximum achievable visibility splays. The maximum achievable visibility splays are shown on **Drawings ITB15323-GA-001G** and **ITB15323-GA-007B**.

Approaches to Junction

2.2.8 From the east, a Stopping Sight Distance (SSD) forward visibility of 100m can be achieved from an eye height of 1.05m to an object height of 0.26m for a distance of 150m (1.5 x SSD in line with DMRB). The updated access and revised SSD forward is shown on **Drawing ITB15323-GA-010**.

2.2.9 From the west, whilst an SSD forward visibility of 119m cannot be achieved from an eye height of 1.05m to an object height of 0.26m for 178.5m, comments from the safety auditor (see **Appendix C**) confirms that a forward visibility envelope of 155.3m[1] is achievable and acceptable as the lowest level fog lamps of an egressing vehicle will be visible to an approaching driver. Furthermore, visibility from the west is not critical as queuing traffic at the junction is also unlikely on the approach to the west as vehicles can turn unobstructed into the access.

[1] From an eye height of 1.05m to an object height of 0.26m

SECTION 3 SENSITIVITY TEST – PARCEL DISTRIBUTION WAREHOUSE

3.1 Overview

3.1.1 This section of the Technical Note provides a sensitivity test trip generation assessment of the site should it come forward as a Parcel Distribution Warehouse. This is then compared to initial assessment set out in the TASN.

3.2 Parcel Distribution Centre Trip Generation

3.2.1 The TRICS database has been examined for relevant parcel distribution sites located within England (excluding Greater London). This has yielded a total of three parcel distribution sites:

- Parcelforce Worldwide, Lincolnshire – 1,496sqm;
- City Link, Nottinghamshire – 3,000sqm; and
- DHL, Slough – 15,583sqm.

3.2.2 Based on the above sites, the derived vehicle trip rate and vehicle trip generation of the proposed development as a parcel distribution centre are shown in **Table 3.1**. The TRICS outputs are provided in **Appendix D**.

Table 3.1: Development Proposal Traffic Generation – B8 Parcel Distribution Warehouse (13,000sqm)

	Arrivals	Departures	Two-way
Morning Peak (0730-0830)			
Vehicle Trip Rate	0.438	0.369	0.807
Vehicle Trip Generation	57	48	105
Evening Peak (1700-1800)			
Vehicle Trip Rate	0.418	0.648	1.066
Vehicle Trip Generation	54	84	139

Source: TRICS & Consultant's Estimates

3.2.3 The analysis indicates that the total development proposal is likely to generate just under two additional vehicles per minute in the morning peak hour, and just over two additional vehicles per minute in the evening peak hour.

3.2.4 In addition to the total vehicle trip generation, HGV trip rates for B8 Parcel Distribution Warehouse have also been obtained, and the likely HGV trip generation is presented in **Table 3.2.**

Table 3.2: Development Proposal HGV Generation – B8 Parcel Distribution Warehouse (13,000sqm)

	Arrivals	Departures	Two-way
Morning Peak (0730-0830)			
Vehicle Trip Rate	0.095	0.065	0.160
Vehicle Trip Generation	12	8	21
Evening Peak (1700-1800)			
Vehicle Trip Rate	0.045	0.080	0.125
Vehicle Trip Generation	6	10	16

Source: TRICS & Consultant's Estimates

3.2.5 The analysis indicates that the HGV generation will be circa one HGV every three minutes in the morning peak hour and one HGV every four minutes in the evening peak hour.

3.2.6 **Table 3.3** summarises the light vehicle trip generation of the proposed development (i.e. **Table 3.1** minus **Table 3.2**).

Table 7.3: Development Proposal Light Vehicle Generation – B8 Parcel Distribution Warehouse (13,000sqm)

	Arrivals	Departures	Two-way
Morning Peak (0730-0830)			
Vehicle Trip Generation	45	40	84
Evening Peak (1700-1800)			
Vehicle Trip Generation	48	74	123

Source: TRICS & Consultant's Estimates

Net Change vs TASN Analysis (Standard Distribution Centre/Warehouse)

3.2.7 **Tables 3.4** and **3.5** summarise the net change in trip generation if the site came forward as a parcel distribution centre rather than a standard distribution centre/warehouse (i.e. the analysis presented in the TASN).

Table 3.4: Vehicle Trip Generation Net Change (B8 Warehouse v Parcel Distribution Warehouse)

Total Vehicles	Arrivals	Departures	Two-way
Morning Peak (0730-0830)			
Trip Generation (Standard Distribution/Warehouse)	34	23	57
Sensitivity Test Trip Generation (Parcel Distribution Warehouse)	57	48	105
Net Change	**+23**	**+25**	**+48**
Evening Peak (1700-1800)			
Trip Generation (Standard Distribution/Warehouse)	20	38	58
Sensitivity Test Trip Generation (Parcel Distribution Warehouse)	54	84	139
Net Change	**+34**	**+46**	**+81**

Source: Consultants Calculations. Note: Number may not sum due to rounding

Table 3.5: HGV Trip Generation Net Change (B8 Warehouse v Parcel Distribution Warehouse)

HGV	Arrivals	Departures	Two-way
Morning Peak (0730-0830)			
Trip Generation (Standard Distribution/Warehouse)	7	11	18
Sensitivity Test Trip Generation (Parcel Distribution Warehouse)	12	8	21
Net Change	**+5**	**-3**	**+3**
Evening Peak (1700-1800)			
Trip Generation (Standard Distribution/Warehouse)	12	8	20
Sensitivity Test Trip Generation (Parcel Distribution Warehouse)	6	10	16
Net Change	**-6**	**+2**	**-4**

Source: Consultants Calculations. Note: Number may not sum due to rounding

3.2.8 Tables 3.4 and 3.5 demonstrate that a parcel distribution centre has the potential to generate around an additional 1 – 1.5 trips per minute in the peak hours, although minimal changes to HGV trips are predicted.

3.3 Parcel Distribution Centre Distribution and Assignment

3.3.1 The parcel distribution trip generation has been distributed and assigned to the local highway network in line with the same parameters detailed in the TASN and is shown on **Figures 3.1** and **3.2** (replicated on Images 3.1 and 3.2 below).

Image 3.1: Parcel Distribution Centre – AM Peak Assignment

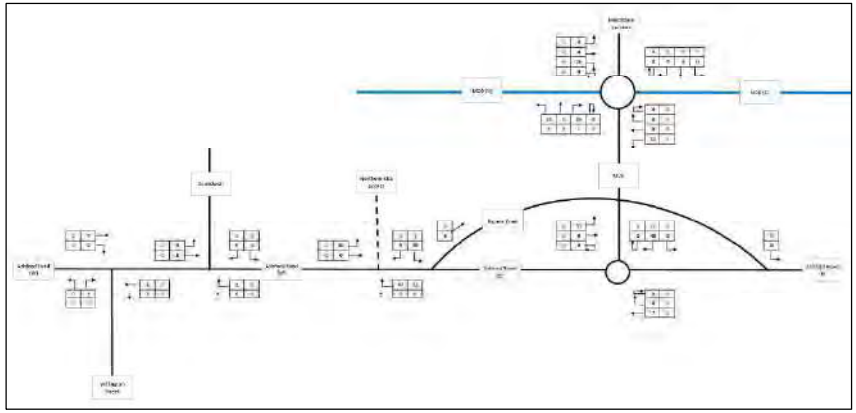
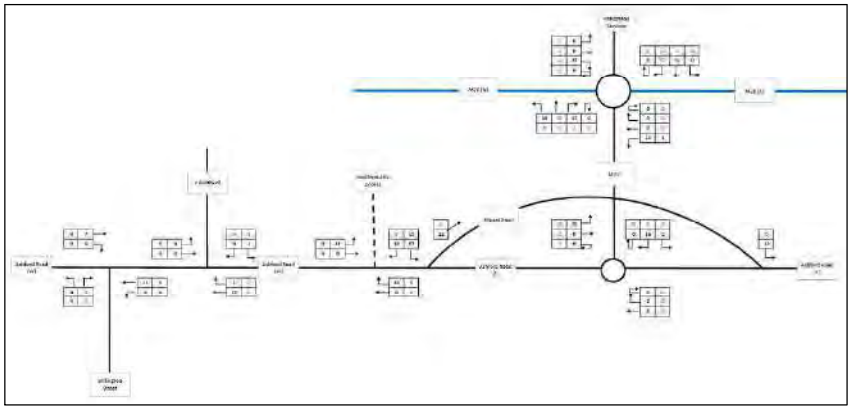


Image 3.2: Parcel Distribution Centre – PM Peak Assignment



Net Change vs TASN Analysis (Standard Distribution Centre/Warehouse)

3.3.2 **Figures 3.3** and **3.4** set out the net change in trip generation once the trips have been distributed and assigned to the highway network against the previous analysis presented in TASN (replicated as Images 3.3 and 3.4 overleaf).

3.3.3 **Figures 3.3** and **3.4** (replicated at Images 3.3 and 3.4 below) demonstrate that a parcel distribution centre will result in additional increases in traffic on the local highway network. These increases are modest but not material and are unlikely to result in an adverse impact on the capacity of the network. Nevertheless, the TA will present operational assessments of the following junctions as a sensitivity test scenario assuming the site comes forward as a parcel distribution centre:

- The proposed site access junction; and
- The M20 Junction 8 (including the roundabout junction with the A20 Ashford Road).

Image 3.3: Parcel Distribution Centre – AM Peak Net Change

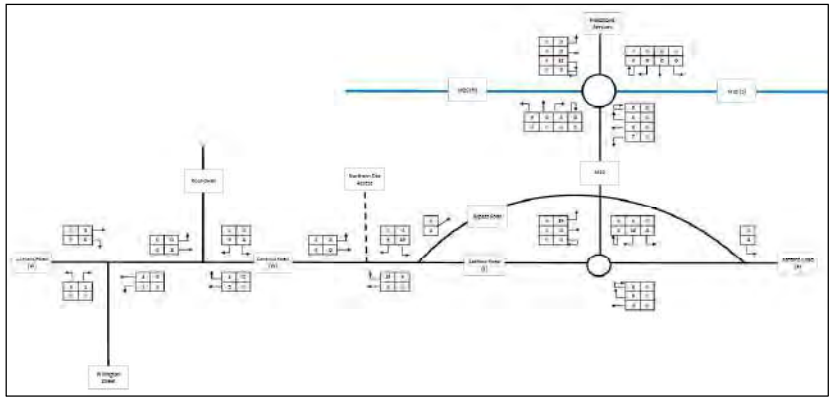
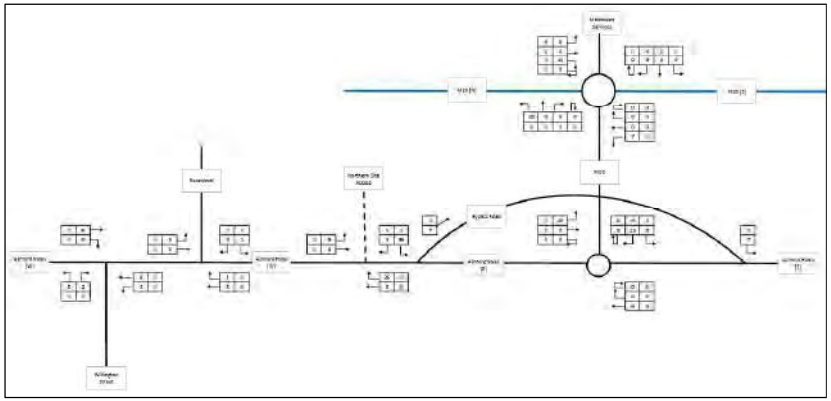


Image 3.4: Parcel Distribution Centre – PM Peak Net Change



SECTION 4 SUMMARY

4.1 Following initial pre-application discussions with KCC regarding the development of the site at Ashford Road, Maidstone, this note presents:

- An amended site access arrangement taking account of a Stage 1 RSA and applying absolute minimum visibility splays (as agreed with KCC); and
- A sensitivity test of the site coming forward as a Parcel Distribution Warehouse is provided to determine the increase in vehicle generation compared to the initial development plans.

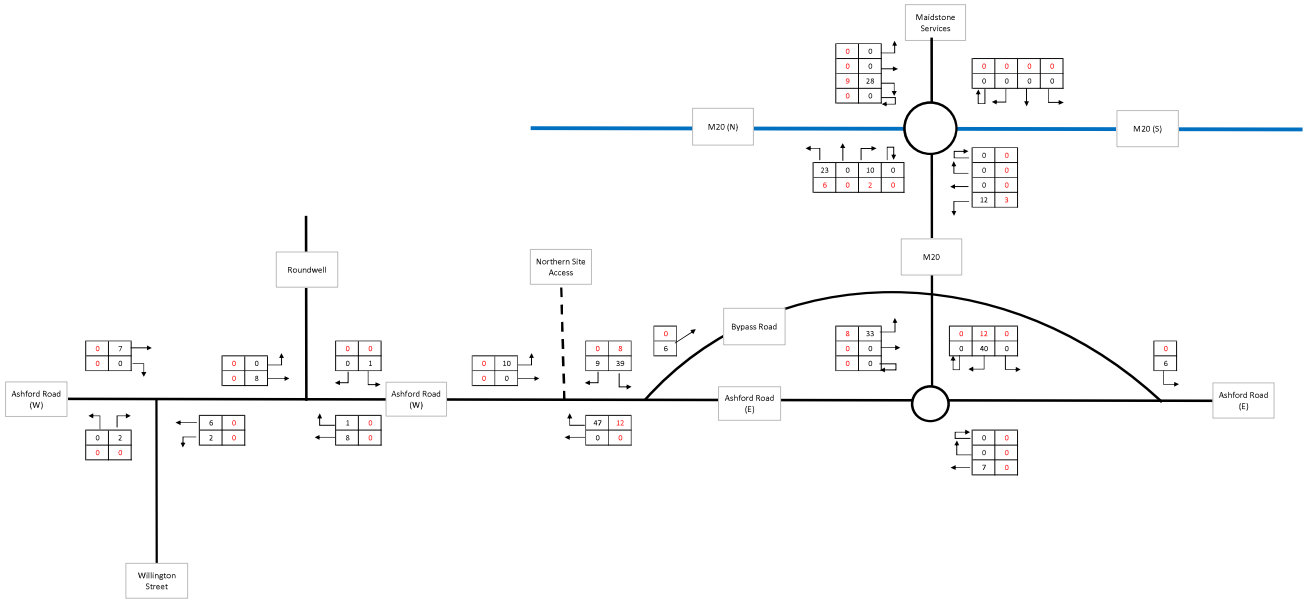
4.2 The revised site access arrangements show the inclusion of a shared footway/cycleway connecting into the consented adjacent Woodcut Farm site (*application ref: 17/502331/OUT*). The absolute minimum visibility splays are also achievable without the need to reprofile the A20 Ashford Road. Comments from the RSA confirm that the forward visibility is acceptable.

4.3 The sensitivity test trip generation assessment demonstrates that a parcel distribution centre will generate an additional 48 and 81 trips in the morning and evening peak hours respectively over a 'standard' distribution warehouse (an additional 1 to 1.5 vehicle trips per minute). Once distributed across the highway network these increases are modest but not material and are unlikely to result in an adverse impact on the capacity of the network.

4.4 The TA will include operational assessments of the following junctions as a sensitivity test scenario, assuming the site comes forward as a parcel distribution centre:

- The proposed site access junction; and
- The M20 Junction 8 (including the roundabout junction with the A20 Ashford Road).

FIGURES



KEY

500 = TOTAL VEH

25 = HGVs

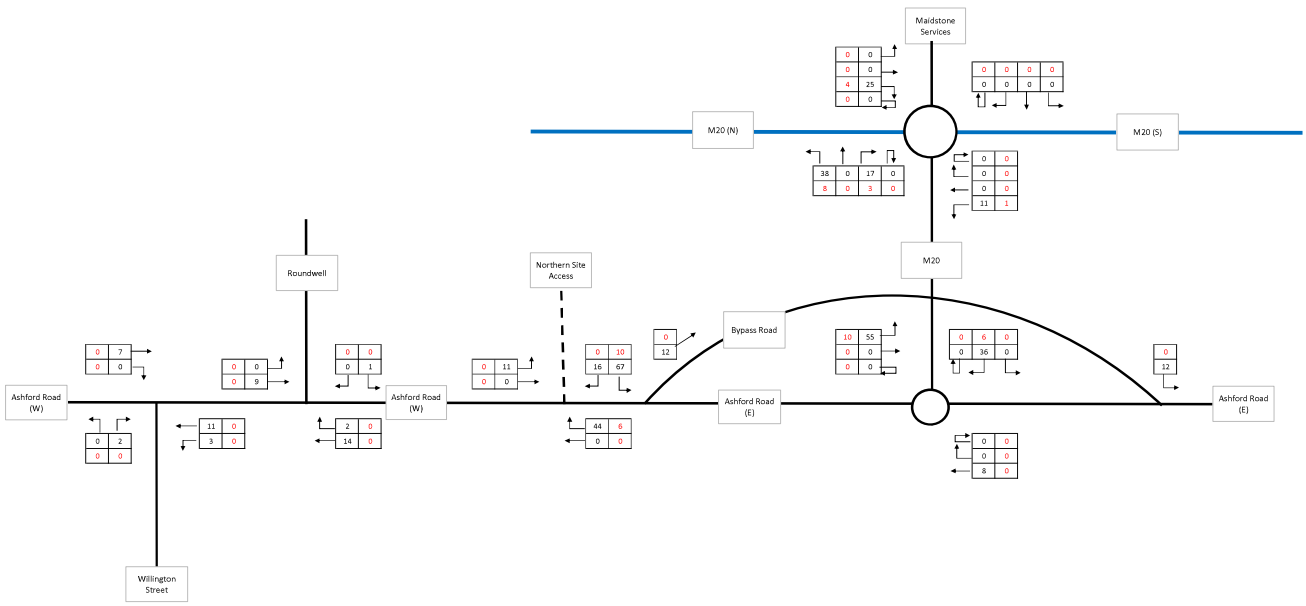
i-Transport

Grove House, Lutyens Close, Chineham Court, Basingstoke, RG24 8AG
Tel: 01256 338640
www.i-transport.co.uk

Ashford Road, Maidstone

Figure 3.1

Total Development (Tot Veh) AM Peak



KEY

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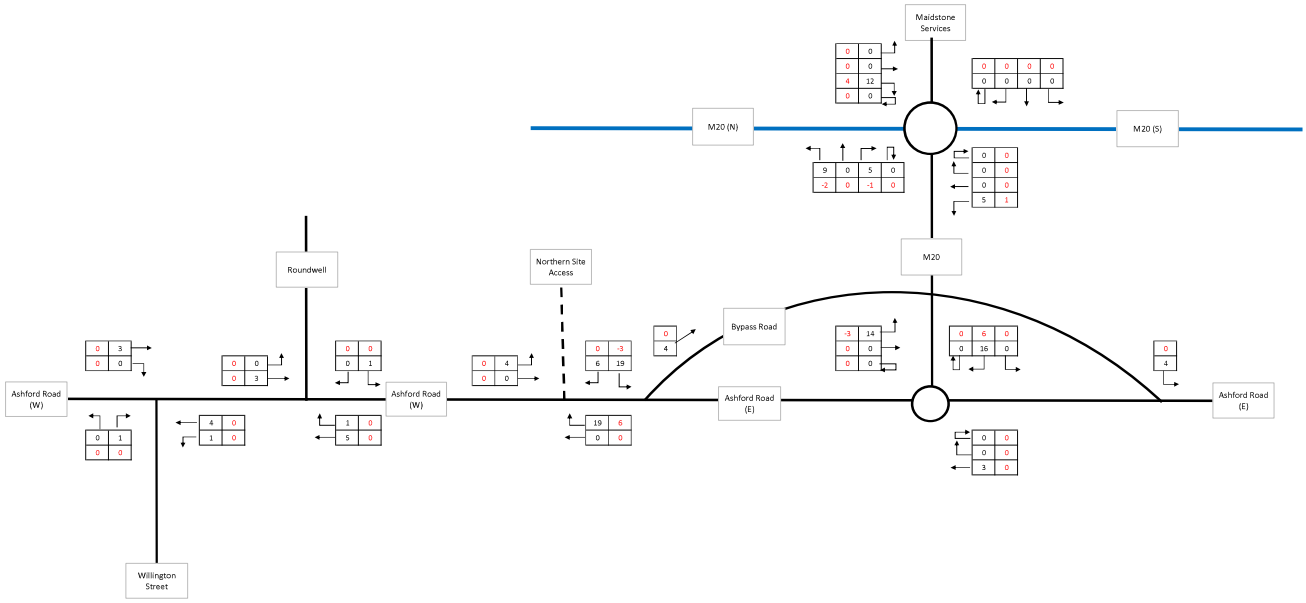
i-Transport

Grove House, Lutyens Close, Chineham Court, Basingstoke, RG24 8AG
Tel: 01256 338640
www.i-transport.co.uk

Ashford Road, Maidstone

Figure 3.2

Total Development (Tot Veh) PM Peak



KEY

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25 = HGVs

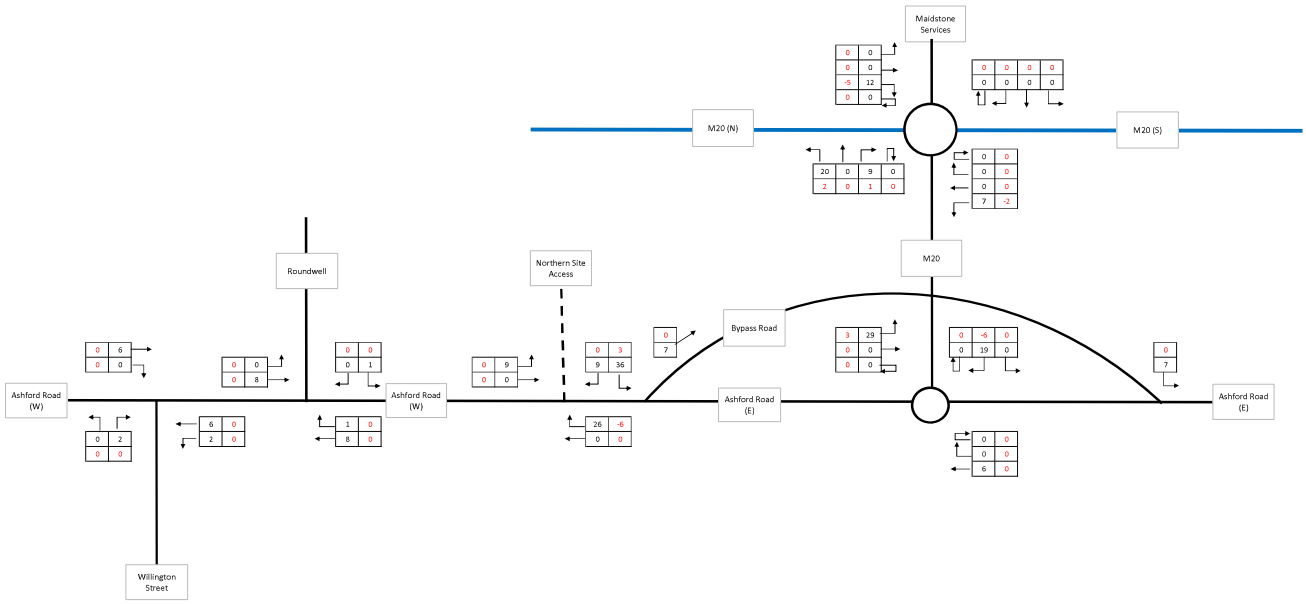
i-Transport

Grove House, Lutyens Close, Chineham Court, Basingstoke, RG24 8AG
Tel: 01256 338640
www.i-transport.co.uk

Ashford Road, Maidstone

Figure 3.3

Net Change (Tot Veh) AM Peak



KEY

500 = TOTAL VEH

25 = HGVs

i-Transport

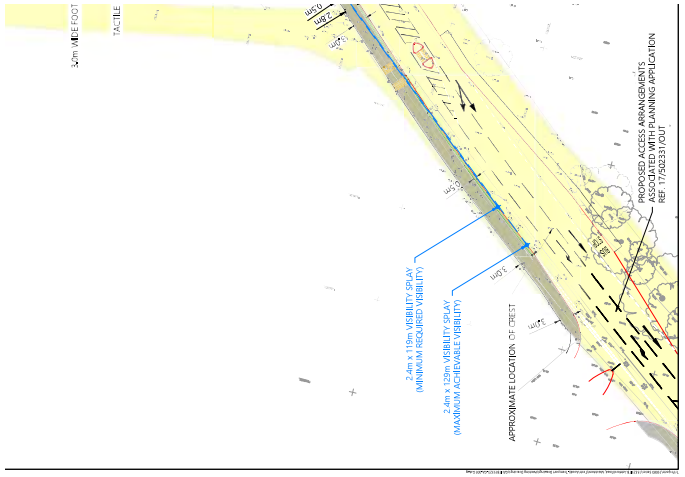
Grove House, Lutyens Close, Chineham Court, Basingstoke, RG24 8AG
Tel: 01256 338640
www.i-transport.co.uk

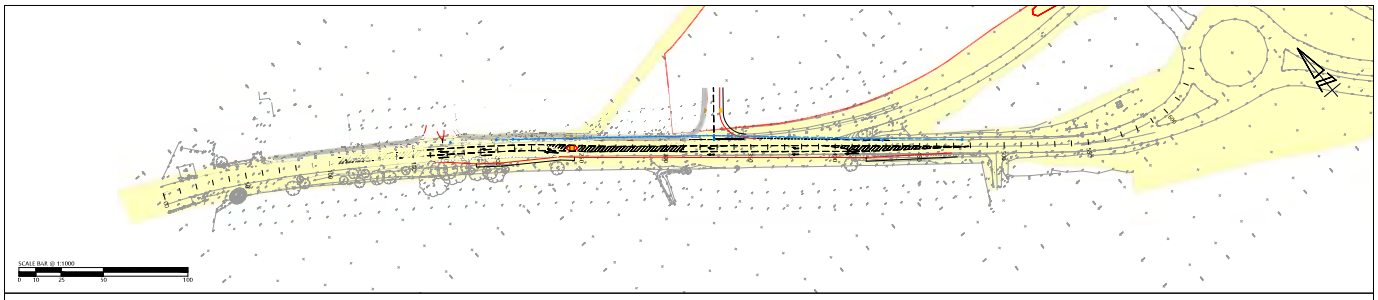
Ashford Road, Maidstone

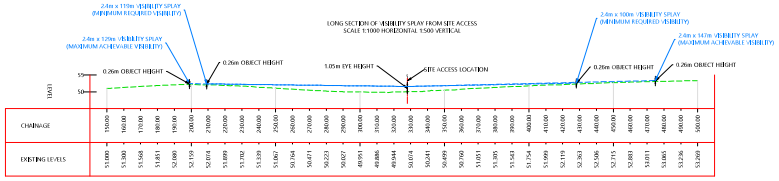
Figure 3.4

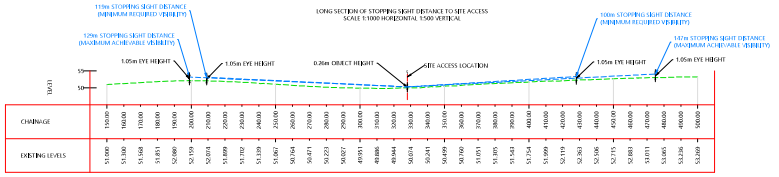
Net Change (Tot Veh) PM Peak

DRAWINGS


1.8m WIDE FOOT
TACTILE
0.5m
2.4m x 115m VISIBILITY SPLAY
(MINIMUM REQUIRED VISIBILITY)
2.4m x 129m VISIBILITY SPLAY
(MAXIMUM ACHIEVABLE VISIBILITY)
APPROXIMATE LOCATION OF CREST
PROPOSED ACCESS ARRANGEMENTS
ASSOCIATED WITH PLANNING APPLICATION
REF: 17/502337/OUT







i-Transport
The Square, Basing View, Basingstoke, Hampshire, RG21 4EB
Tel: 01256 637948
www.i-transport.co.uk

KEY:
SITE BOUNDARY
EXTENT OF PUBLIC HIGHWAY (BASED ON OS MAPPING)

FOR INFORMATION

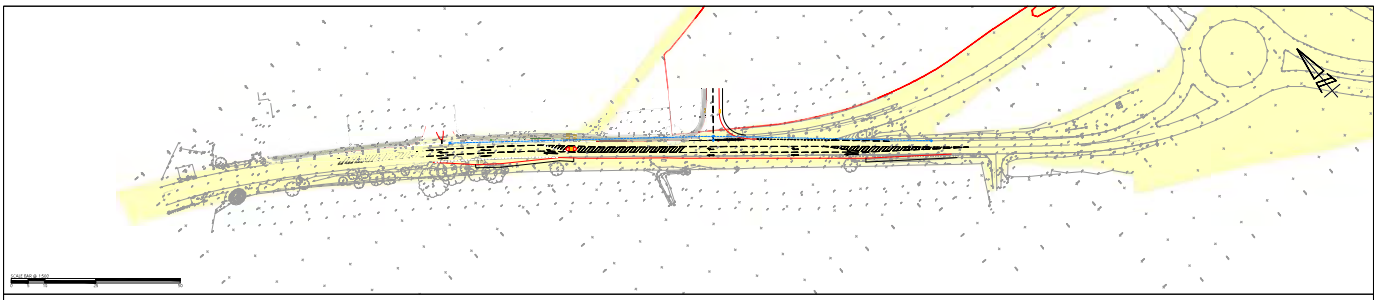
PROPOSED SITE ACCESS ARRANGEMENTS - VERTICAL ALIGNMENT

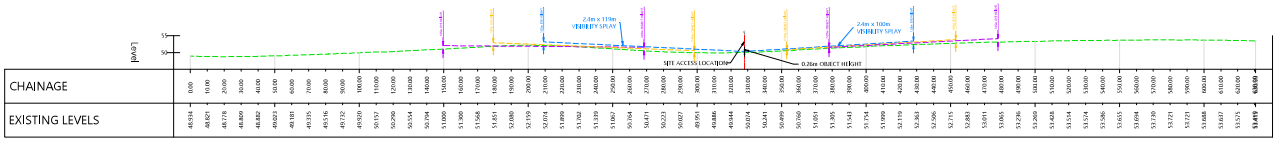
ASHFORD ROAD, MAIDSTONE

WATES DEVELOPMENTS

DRAWN	CHECKED	APPROVED
MC	NC	JCO
PROJECT No	SCALE @ A3	DATE
AS SHOWN	1:500	01.12.21

DRAWING No: IT191522-GA-007 REV: B





i-Transport
The Square, Basing View, Basingstoke, Hampshire, RG21 4EB
Tel: 01256 637948
www.i-transport.co.uk

KEY:
SITE BOUNDARY
EXTENT OF PUBLIC HIGHWAY (BASED ON OS MAPPING)

FOR INFORMATION

PROPOSED SITE ACCESS ARRANGEMENTS - LONG SECTION 1.5 x SSD

ASHFORD ROAD, MAIDSTONE

WATES DEVELOPMENTS

DRAWN	CHECKED	APPROVED
MC	NC	JCO
PROJECT No	SCALE @ A3	DATE
AS SHOWN	AS SHOWN	09.02.22

DRAWING No: IT191522-GA-010 REV: -

APPENDIX A. MEETING MINUTES

i-Transport LLP
85 Gresham Street, London, EC2V 7NQ

Tel: 020 3705 9215

Meeting Record

Project No: ITB15323
Project Title: Ashford Road, Maidstone
Date: 4 February 2022
Venue: MS Teams

Attendees

Steven Timson	—	Kent County Council (KCC) (ST)
Adam Clegg	—	Wates Developments (AC)
Asher Ross	—	Wates Developments (AR)
James Bevis	—	i-Transport (i-T) (JCB)
Duncan Findlay	—	i-Transport (i-T) (DF)

Item		Actions
1.0	**Introductions**	
1.1	ST noted that, whilst he is predominantly involved with projects in Tonbridge and Malling, he will continue to be involved on Ashford Road going forward.	NB
2.0	**Project Overview and Background**	
2.1	AC provided an overview of the site and outlined that Wates have been involved in the site since 2019, controlling land to the north and south of the A20 Ashford Road. Wates are in the process of making representations for the wider site to the south for a proposed Garden Community, but note that the northern site has the potential to be delivered for distribution/warehousing employment.	
2.2	AC noted that a separate pre-app has been submitted to MBC.	NB
3.0	**Sustainability**	
3.1	DF outlined the opportunities for sustainable travel and noted that adjacent site that has a planning permission for a similar use.	
3.2	ST confirmed that the principle of developing the site to provide distribution/warehousing is acceptable and that access to sustainable modes can be appropriately made available to be taken up.	NB
4.0	**Site Access**	
4.1	ST set out that the proposed access arrangements are acceptable in principle, although the information would be passed to KCC's highway engineers for comment.	NB
4.2	DF set out that the site access has been subject to a Stage 1 Road Safety Audit (RSA) which raised no 'showstoppers'. i-T are in the process of finalising a Designer's Response which will be passed to KCC in due course.	i-T

Item		Actions
4.3	ST confirmed that the use of the absolute minimum visibility splays is acceptable within KCC. In addition, the Manual for Streets should be the starting point for design guidance and 0.6m object heights are acceptable for forward visibility envelopes. JCB/DF agreed to review the access based this, which should help to avoid/minimise the need for reprofiling the road. JCB/DF agreed to provide this information alongside the RSA Designer's Response.	NB i-T
4.4	ST confirmed that the proposed roundabout to access potential residential development to the south is acceptable in principle.	NB
	Leeds Langley Relief Road (LLRR)	
4.5	AC/JCB/DF requested an update on the LLRR. ST set out that this is still desired by KCC, but that it is a long-term ambition. ST agreed to provide an update on the latest status of the LLRR. **[Post meeting note: ST confirmed that here is no preferred route or timetable associated with the Leeds Langley Relief Road, but the Local Plan Review does include a safeguarded area to ensure future development does not prejudice the provision of a route. The current adopted Local Plan runs to 2031 and the emerging Local Plan review will extend this to 2037]**	ST
5.0	**Traffic Impact**	
5.1	ST noted that the trip rates and trip generation are acceptable but requested that a comparison trip generation exercise is undertaken, assuming that the site comes forward as a parcel delivery centre. DF/JCB confirmed that this will be undertaken.	i-T
5.2	ST confirmed that the remainder of the traffic impact assessment parameters (study area, TEMPRO, trip distribution/assignment etc.) are acceptable subject to the outcome of the parcel delivery centre trip generation exercise.	NB
5.3	ST noted that MBC will confirm the extent of any committed developments required but set out that the adjacent site will need to be included. JCB/DF agreed.	i-T
5.4	All agreed that the TA would assess two future years – 2027 and 2037 – in line with National Highways guidance.	NB
6.0	**TA Structure**	
6.1	ST confirmed agreement to the TA structure set out in the TA scoping note, including the list of policies to review.	NB
6.2	ST requested that the area of accident analysis is expanded slightly to cover the M20 Junction 8. JCB/DF confirmed that this would be actioned.	i-T
6.3	ST confirmed KCC's EV charging point requirements – 10% active points and 10% passive points.	NB
6.4	ST confirmed that a Travel Plan will be required to be prepared in line with KCC guidance.	NB

Circulation

- Attendees

Author

Duncan Findlay

APPENDIX B. STAGE 1 RSA AND DESIGNER'S RESPONSE

Road Safety Audit Report

Incorporating
Stage 1 Completion of Preliminary Design;
Design Organisation Response to items raised.

Proposed Access off and associated Highway Works along the A20 Ashford Road Maidstone

Client:
Wates Developments

Client reference:
ITB15323

Fenley
2 Blaenant
Emmer Green
READING
RG4 8PH

E: office@fenley.co.uk
www.fenley.co.uk

Report Status 3

Job no	RSA-21-169	**Issue no**	3	**Date**	February 2022
Prepared by	FB	**Verified by**	JJF	**Approved by**	JJF
Filename and Path	Fenley/Road Safety Audits/RSA-21/RSA-21-169-3				

1.0 PROJECT DETAILS

Report Title:	Stage 1 Road Safety Audit
Date:	February 2022
Document reference and revision:	RSA-21-169-3
Prepared by:	Fenley Road Safety Limited
Design Organisation:	i-Transport
Project Sponsor:	Wates Development
Overseeing Organisation:	Kent County Council

REV	ISSUE PURPOSE	AUTHOR	CHECKED	APPROVED	DATE
0	Stage 1 Road Safety Audit drafted for Audit Team discussions	JJF			4th January 2022
1	Stage 1 Road Safety Audit finalised and issued to the Design Organisation	JJF	FB	JJF	20th January 2022
2	Stage 1 Road Safety Audit Report format amended to incorporate a row for inclusion of a Design Organisation Response in order to maintain a concise record of items raised	JJF			20th January 2022
3	Design Organisation Response incorporated	Duncan Findlay on behalf of i-Transport			1st February 2022

Contents:

Appendices:

2.0 INTRODUCTION

2.1 This report has been prepared by Fenley Road Safety Limited and results from a Stage 1 Road Safety Audit of a proposed access off and associated highway works along the A20, Ashford Road in Maidstone. The priority access is formed with 15 metre corner radii tapering to the existing kerbline to the east (exit) and to the proposed 7.3 metre wide access road to the west (entry). The highway works consist of the widening along the southern side of the A20, opposite the proposed access, in order to allow for the provision of a right turn lane that has been designed in accordance the requirements set out in CD123 of the Design Manual for Roads and Bridges. The scheme is proposed in order to facilitate a Distribution Centre on a circa 3 acre parcel of land the lies to the west of the Hollingborune Interchange Link Road which connects to the M20, east of the A20 and south of a large commercial development that is currently under construction.

2.2 The Audit Team have been made aware that the proposals accommodate one Departure from Standard that relates to forward visibility to the proposed access from the west, which is yet to be approved by the County Highway Authority. The 156 metre visibility envelope can be achieved from an eye height of 1.05 metres to a height of 0.6 metres rather than the 0.26 metre height as set out in national standards.

2.3 It is understood that the 0.26 metre height stated within National Standards relates to the minimum height of a fog lamp and is a requirement on approach to a junction covering a distance of 1.5 times the SSD in order to allow for the driver of vehicle to become aware of a vehicle in front that could brake heavily; due to a hazard ahead such as a vehicle pulling out in front of them, a non-motorised user attempting to cross the carriageway ahead, a vehicle undertaking a turn ahead or allowing traffic to cross their path, amongst other thing. This Stage 1 Road Safety Audit includes an assessment of the Departure from Standard and raises a road safety concern if applicable.

2.4 The Road Safety Audit was undertaken during January 2022 in accordance with the Road Safety Audit Brief provided, on the 12th January 2022 by the Design Organisation, i-Transport, on behalf of the Project Sponsor, Wates Development. The Road Safety Audit comprised of a site visit as well as an examination of the documents provided which are identified in **Appendix A1**. The Audit Team were satisfied that that the Audit Brief was sufficient for the purpose of the Audit instructed.

2.5 The Road Safety Audit has been undertaken by an Audit Team whose qualifications and experience accord with the requirements of GG119. The Audit Team consists of the following members:

Audit Team Leader
Jamie Fenning *BSc (Hons), MIHE, MCIHT, MSoRSA, HE RSA Certificate of Competency*
Road Safety / Highway Engineer
Audit Team Member
Farouk Bhatti *MCIHT*
Road Safety Auditor

2.6 The site visit associated with this Road Safety Audit was undertaken by the Audit Team Leader and Audit Team Member, during the afternoon of Wednesday 16th October 2019 between the hours of 14:30 and 15:15 and revisited on the 19th January 2022 between the hours of 15:30 and 16:00. The site visit involved walking and driving around the local highway network for a 75-minute period whilst observing local infrastructure and current traffic conditions. The weather during the site visit was overcast, the road surface was observed both dry and damp and visibility was good. No pedestrians but a single cyclists was observed during the site visit. Vehicular traffic to include motorcycles, cars, passenger service vehicles, agricultural, light and heavy goods vehicles were also observed, the traffic flow was moderate. Vehicular speeds were not recorded by the Audit Team.

2.7 The terms of reference of this Road Safety Audit are as described in GG119. The scheme has been examined and this report compiled, only with regard to the safety implications for road users of the scheme as presented. It has not been examined or verified for compliance with any other standards or criteria. However, in order to clearly explain a safety problem or the recommendation to resolve a problem, the Audit Team may on occasion have referred to a design standard for information only. All comments and recommendations are referenced to the design drawings supplied with the Audit Brief and the location of road safety concerns raised have been illustrated adjacent to the items along with relevant photographs for clarity, where appropriate, as well as on the Location Plan attached at **Appendix A2**.

Design Organisation Response

2.8 In accordance with national standards, this Road Safety Audit was finalised and issued to the Design Organisation as per the Road Safety Audit Report Template within Appendix D of GG119, which can be provided upon request from either the Audit Team or Design Organisation. The format of the Audit Report was subsequently revised to incorporate these paragraphs under the sub-heading as well as sufficient space beneath the items and recommendation, within Section 4, for the inclusion of a Design Organisation Response. This is generally contained within a separate Design Organisation Response Report but is included

within this document in order to maintain a single record of all problems, recommendations and responses for the benefit of a concise Road Safety Audit trail to be held on file for Quality Assurance purposes.

2.9 The Design Organisation Response has been prepared by:
Name: Duncan Findlay
Position / Organisation: Associate, i-Transport LLP

2.10 Any drawings or documents associated with the Design Organisation Response are listed at **Appendix A3,** if applicable.

3.0 ITEMS RAISED IN ANY PREVIOUS ROAD SAFETY AUDITS

3.1 Fenley Road Safety Limited undertook a Stage 1 Road Safety Audits of the proposal to form a priority access off and right turn lane along the A20 Ashford Road at this location, previously ref: RSA-19-085. That document raised a number of road safety concerns. The current proposals increase the width of the proposed access road from 6 metres to 7.3 metres, introduces tapers alongside the 15 metre radii and identifies that an increased level of visibility is achievable. The current proposals are fully assessed within this Stage 1 Road Safety Audit and any road safety concerns that are applicable, raised whether or not addressed within the previous Stage 1 Road Safety Audit / Design Organisation Response report.

4.0 ITEMS RAISED AT THIS STAGE 1 ROAD SAFETY AUDIT

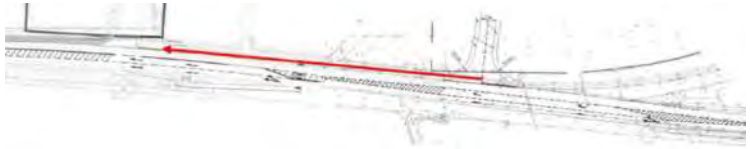
A.1	**LOCAL ALIGNMENT**
A.1.1	**PROBLEM**
Location:	A20 / Ashford Road
Summary:	Horizontal alignment of the eastern kerbline which is to be formed by the adjacent development could limit the level of visibility to and from the proposed access
Acc Type:	Side impact collisions, rear end shunts

To the north of the proposed access, the A20, Ashford Road is relatively straight and passes over a crest where overtaking restrictions are present due to the lack of forward visibility. The land to the west of the application site is understood to have an extant permission for a commercial development that is under construction and is to be accessed via a priority access that benefits from a right turn lane formed by widening the existing carriageway to the east. The current proposals that are subject to this Stage 1 Road Safety Audit, include the provision of a priority junction that benefits from a ghost island right turn lane formed by widening of the existing carriageway to the west. The scheme drawings provided with the Audit Brief, illustrates that a visibility splay of 2.4x156 metres is achievable to the north (right) and that a visibility envelope of 156 metres is achievable from an eye height of 1.05 metres to an object height of 0.6 metres, along the carriageway for a distance of 1.5x the SSD (234 metres). However, the scheme drawing is based upon a topographical survey and does not include the widening along on the eastern side of the A20 Ashford Road to the northwest that is to be provided as part of the adjacent development. That widening will result in a southbound vehicle approaching along a path that is circa 2 metres further east than existing. The Audit Team are concerned that the level of visibility illustrated and provided in accordance with 85th percentile observed approach speeds, will not be achievable following implementation of the adjacent highway works, particularly due to the trunk of the mature tree just to the north of the proposed access which was measured 2.8 metres from the existing channel line. The driver / rider of southbound vehicles may not therefore become aware of the proposed access or a vehicle turning in / out, at a safe distance and the driver / rider of a vehicle attempting to egress may not become aware of approaching southbound vehicles which could lead to side or rear impact collisions.

RECOMMENDATION:

It is recommended that the adjacent highway works are included on the scheme drawing and that sufficient visibility is achievable.

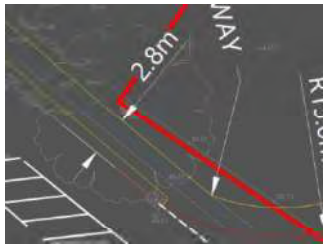
Location Plan:



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 1st February 2022 following formal issue of this Stage 1 Road Safety Audit on the 20th January 2022

Agreed – Drawing ITB15323-GA-001E has been revised to show the adjacent highway works as part of planning application 17/502331/OUT with the visibility splay adjusted accordingly.

From review of the topographical survey, it would appear that the existing tree to the north of the proposed access arrangements, has been plotted slightly incorrectly. Below illustrates 2.8m from the existing channel line and it is clear that the revised visibility splay would still continue to be in front of the tree.



A.2	**GENERAL**
A.2.1	**PROBLEM**
Location:	A20 Ashford Road
Summary:	Existing road gullies will be within the path of vehicles
Acc Type:	Loss of control

The A20, Ashford Road accommodates a network of road gullies that drain the surface water which accumulates on the carriageway. The scheme drawing provided with the Audit Brief does not identify that the existing surface water drainage network is to be modified. Whilst the removal of road gullies without the re-provision of sufficient drainage is likely to result in surface water ponding, road gullies within the path of a vehicle, particularly a two wheeled vehicle, could destabilise the rider / driver and lead to loss of control type collisions.

RECOMMENDATION:

It is recommended that an adequate surface water drainage network is provided.

Location Plan: (Illustration below provided as an example, not all locations may be identified)

DESIGN ORGANISATION RESPONSE provided by i-Transport on the 1st February 2022 following formal issue of this Stage 1 Road Safety Audit on the 20th January 2022

Agreed – surface water drainage to be re-provided accordingly. Details in relation to the relocation will be provided at detailed design stage.

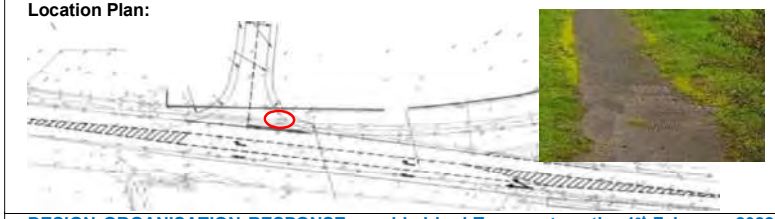
A.2.2	PROBLEM
Location:	Proposed access
Summary:	Existing utility covers within the footway / verge will be situated within the access carriageway
Acc Type:	Loss of control

The A20 Ashford Road accommodates a number of utility covers that are situated within the existing verge / footway as well as carriageway. The scheme drawings identify that a number of the covers that are currently within the footway / verge, will be situated within the proposed access. Those utility covers will become an obstruction unless adjusted adequately and could even fail due to not being sufficient to accommodate the expected traffic flow leading to loss of control type collisions or junction overshoots should their frictional surface properties be insufficient, particularly for two-wheeled vehicles.

RECOMMENDATION:

It is recommended that existing utility covers are relocated / adjusted appropriately

Location Plan:



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 1st February 2022 following formal issue of this Stage 1 Road Safety Audit on the 20th January 2022

Agreed – existing utility covers to be relocated / adjusted accordingly. Details in relation to the relocation and adjustment to be agreed at detailed design stage

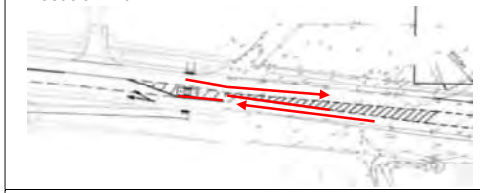
A.3	JUNCTIONS
A.3.1	PROBLEM
Location:	A20 / Ashford Road
Summary:	Proposed centreline taper to the northwest does not generate a smooth alignment
Acc Type:	Kerb strikes and loss of control

To the north of the proposed access, the A20, Ashford Road is relatively straight in alignment. The current proposals provide a priority junction off the eastern side of the carriageway that benefits from a ghost island right turn lane formed by widening the existing carriageway to the west. The scheme drawings provided with the Audit Brief illustrates that the ghost island is to accommodate tapers in accordance with CD123, however, the approved right turn lane associated with the adjacent development that is to be provided imminently and accommodates a pedestrian refuge, is not illustrated. The scheme drawing associated with the third-party scheme identifies a taper that does not appear to accord with national standards for the observed speeds and the implementation of both schemes will not generate a smooth alignment which could lead to vehicles striking the kerb associated with the refuge island and loss of control type collisions.

RECOMMENDATION:

It is recommended that the nearside edge of carriageway and offside centreline markings of each lane is amended to allow for a smooth alignment

Location Plan:



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 1st February 2022 following formal issue of this Stage 1 Road Safety Audit on the 20th January 2022

Agreed – Drawing ITB15323-GA-001E has been revised to include the adjacent highway works as part of planning application 17/502331/OUT. The alignment generated as part of the works, provides the appropriate radii associated with the design speed.

A.3.2	PROBLEM
Location:	Proposed access and A20 Ashford Road
Summary:	Driver confusion over vehicle direction with vehicles approaching adjacent slip road
Acc Type:	Side impact collisions

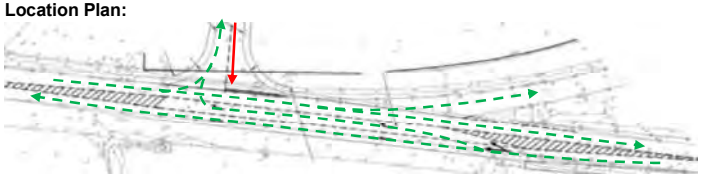
The A20 Ashford Road is part of the primary road network that links Maidstone with Ashford and connects with the strategic road network at a roundabout just 300 metres or so, to the south. A bypass is provided for southbound traffic to avoid the roundabout and continue unopposed

merging with the A20 Ashford Road to the south. The proposals include the provision of a priority access off the eastern side of the A20 Ashford Road that is to be situated just to the north of the access to the bypass. Data provided with the Audit Brief identifies a two-way traffic flow exceeding 1,500 vehicles during the evening peak hour (17:00-18:00) and the Transport Assessment associated with the adjacent extant development will generate in the region of 100 additional movements either side of the access, during the afternoon peak hour equating to a total of in excess of 1,600 two-way vehicular movements past the proposed access. A traffic flow of 1,600 vehicles in an hour plus the 58 that are expected to be generated by the proposals, equates to an average of 1 vehicle passing every 2.1 seconds. No modelling data has been provided with the Audit Brief, should insufficient gaps be present, the driver of an egressing vehicle could become frustrated with waiting to exit and attempt their manoeuvre when it is not safe to do so. The likelihood of a vehicle attempting to turn right when it is not safe to do so, increases due to the presence of the existing bypass to the east as approaching southbound vehicles could be indicating left and a frustrated driver could attempt to undertake their manoeuvre without waiting to ensure it is safe to proceed. A vehicle egressing when it is not safe to do so, could lead to side or rear end impact collision.

RECOMMENDATION:

It is recommended that the proposed access is formed with an appropriate junction that minimises delay and queuing thus maintaining driver frustration to a minimum.

Location Plan:



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 1st February 2022 following formal issue of this Stage 1 Road Safety Audit on the 20th January 2022

ITB15323-GA-001 demonstrates that visibility can be achieved in line with the 85th percentile vehicle speeds.

In addition, capacity testing has been undertaken for 2027 with committed and proposed development. This demonstrates that the site access will operate within capacity with minimal queuing and delay to vehicles exiting the site. The capacity assessments are included in Appendix A3.

	AM Peak Hour			PM Peak Hour		
	RFC	Queue (veh)	Delay (s/veh)	RFC	Queue (veh)	Delay (s/veh)
Site Access	0.07	<1	11	0.12	<1	12
A20 AshfordRd(right turn)	0.06	<1	9	0.06	<1	10

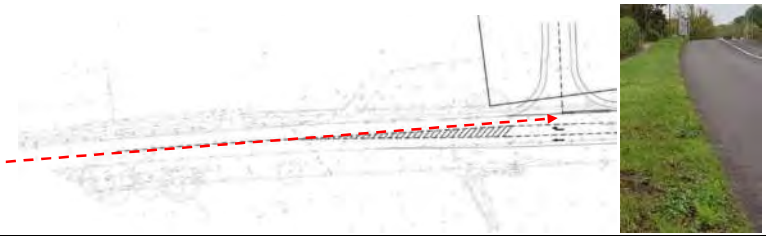
A.3.3	PROBLEM
Location:	A20 / Ashford Road
Summary:	Insufficient visibility to and from the proposed access
Acc Type:	Side impact collisions, rear end shunts

The A20, Ashford Road is a single carriageway two-way derestricted road. The Audit Brief identifies that a speed survey has been undertaken and provides the 85th percentile dry weather approach speeds that were observed and have been utilised to determine the stopping sight distance applicable for visibility purposes. However, the Audit Brief does not include details of the survey or full results. In accordance with the derestricted / speed limit of the A20 Ashford Road, a visibility splay of 215 metres either side of the proposed access would allow for the safe manoeuvring of vehicles, however due to the vertical alignment of the carriageway, a splay of 215 metres is not achievable. Insufficient visibilities are likely to result in vehicles attempting to exit when not safe to do so increasing the likelihood of side and rear-end impact collisions.

RECOMMENDATION:

It is recommended that warning signage is provided to highlight the presence of the proposed access to ensure that all approaching drivers / riders become aware of the proposed access.

Location Plan:



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 1st February 2022 following formal issue of this Stage 1 Road Safety Audit on the 20th January 2022

Agreed – appropriate signage to be provided. Exact details and locations to be agreed at detailed design stage with Kent County Council.

A.4	WALKING CYCLING AND HORSE RIDING
A.4.1	PROBLEM
Location:	A20 / Ashford Road
Summary:	No off-road route is available for cyclists between the proposed development and the footway cycleway to be provided as part of the adjacent development
Acc Type:	Vehicle cyclist and cyclist pedestrian collisions

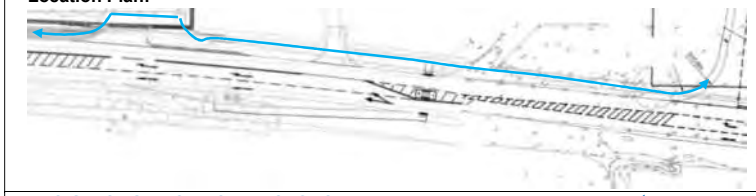
To the north, the A20 Ashford Road currently accommodates a footway to the east of the carriageway that is understood will be upgraded to a footway cycleway as part of the highway works associated with an adjacent development. The proposals subject to this Stage 1 Road

Safety Audit include the provision of a priority access off the eastern side of the carriageway that will serve a commercial development for distribution. The Audit Team is unaware of the number of employees that are expected cycle to the site, however, any cyclists travelling between the site and areas to the north that will benefit from the off-road cycle facility provided as part of the adjacent site, will be required to enter and travel along the carriageway which could lead to vehicle cyclist collisions or could travel along the existing narrow footway where pedestrians may be present leading to a cyclist pedestrian collision.

RECOMMENDATION:

It is recommended that the footway along the A20 Ashford Road is upgraded to a footway-cycleway to meet the one that is to be provided as part of the highway works associated with the adjacent development

Location Plan:



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 1st February 2022 following formal issue of this Stage 1 Road Safety Audit on the 20th January 2022

Drawing ITB15323-GA-001 has been revised to show a footway/cycleway connecting to the west.

A.5	**ROAD SIGNS, CARRIAGEWAY MARKINGS AND LIGHTING**
A.5.1	**PROBLEM**
Location:	A20 Ashford Road
Summary:	Drivers may attempt to overtake where it is not safe to do so
Acc Type:	Head on collisions

The A20, Ashford Road carriageway to the north of the proposed access accommodates a solid white road centreline markings that restrict vehicles from crossing onto the opposing lane and overtaking when approaching a crest in the carriageway. The solid road centreline is to be adjusted in accordance with a right turn lane and pedestrian refuge island that is to be provided as part of an adjacent commercial development. The proposals include the provision of a priority access off the eastern side of the carriageway approximately 80 metres south of the pedestrian refuge and includes highway works to form a right turn lane that has been designed in accordance with CD123 of the Design Manual for Roads and Bridges. The scheme drawing illustrates that the proposed right turn lane ghost island is to be formed with a broken road centreline allowing vehicles to cross into the opposing lane if it is safe to do so. As such, vehicles may attempt to overtake in proximity of the right turn lane and pedestrian refuge which could lead to a vehicle

collision with the refuge island or a vehicle illegally travelling the wrong side of the refuge island into the path of an opposing vehicle and a head-on collision.

RECOMMENDATION:

It is recommended that double white road centrelines are provided to restrict vehicles from crossing into opposing traffic

Location Plan:

DESIGN ORGANISATION RESPONSE provided by i-Transport on the 1st February 2022 following formal issue of this Stage 1 Road Safety Audit on the 20th January 2022

Agreed – Exact details to be agreed with KCC at detailed design stage.

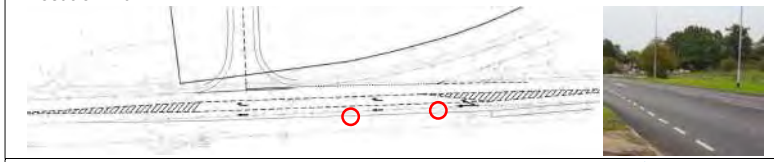
A.5.2	**PROBLEM**
Location:	A20 / Ashford Road
Summary:	Proposed carriageway widening has an impact on the existing lighting columns
Acc Type:	Vehicle-street furniture strikes

The A20, Ashford Road benefits from a network of street lighting with columns located within the grass verge along each side of the carriageway. The proposals realign the southern channel line such, that the existing street lighting columns will be situated within the path of northbound vehicles and will therefore be an obstruction. The removal of the street lighting columns is likely to result in inadequate lighting of the proposed ghost island right turn junction.

RECOMMENDATION:

It is recommended that the existing columns are relocated appropriately.

Location Plan:



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 1st February 2022 following formal issue of this Stage 1 Road Safety Audit on the 20th January 2022

Agreed – existing lighting columns to be relocated outside of the proposed widening. Exact details and locations to be agreed at detailed design stage with Kent County Council.

A.5.3	PROBLEM
Location:	A20 / Ashford Road
Summary:	Proposed carriageway widening has an impact on the existing bollards
Acc Type:	Vehicle-street furniture strikes

The A20, Ashford Road accommodates reflective bollards that are present for reasons unknown to the Audit Team but could have been installed to highlight the presence of a footway or to prevent parking. The proposals realign the southern channel line such, that the bollards will be situated within the path of northbound vehicles and will, therefore, be an obstruction. The removal of the reflective bollards could also result in insufficient driver awareness.

RECOMMENDATION:

It is recommended that the existing bollards are relocated.

Location Plan:

DESIGN ORGANISATION RESPONSE provided by i-Transport on the 1st February 2022 following formal issue of this Stage 1 Road Safety Audit on the 20th January 2022

Discussions to take place at detailed design stage to identify whether bollards are required. If identified for retention, then these will be re-provided in line with discussions with Kent County Council.

A.5.4	PROBLEM
Location:	A20 / Ashford Road
Summary:	Existing road sign could distract drivers from becoming aware of the proposed
Acc Type:	Side impact collisions, rear end shunts

The A20, Ashford Road is a single carriageway derestricted road which connects Maidstone with Ashford and links to the Strategic Road Network at a roundabout junction just south of the proposed access. An Advance Direction Sign is present within the eastern verge to the north of the proposed access. The presence of the sign may distract a drivers eye from the immediate road ahead where the proposed access is present. As such, a driver approaching the proposed access may not benefit from sufficient warning of the proposed access which could lead to side and rear impact collisions as well as heavy braking and loss of control type incidents.

RECOMMENDATION:

It is recommended that the existing ADS is relocated where appropriate and the proposed access, is added incorporated in the sign.

Location Plan:

DESIGN ORGANISATION RESPONSE provided by i-Transport on the 1st February 2022 following formal issue of this Stage 1 Road Safety Audit on the 20th January 2022

Agreed – existing ADS to be relocated and amended as required. Exact details and locations to be agreed at detailed design stage with Kent County Council.

5.0 STAGE 1 ROAD SAFETY AUDIT TEAM STATEMENT

5.1 We certify that this Road Safety Audit has been carried out in accordance with GG 119.

Audit Team Leader

Name: **Jamie Fenning** *BSc (Hons), MIHE, MCIHT, MSoRSA, HE RSA Certificate of Competency*

Signed: 

Position: Road Safety / Highway Engineer
Organisation: Fenley Road Safety Limited
Date: 20th January 2022

Audit Team Member

Name: **Farouk Bhatti** *MCIHT*

Signed: 

Position: Road Safety / Highway Engineer
Organisation: Fenley Road Safety Limited
Date: 20th January 2022

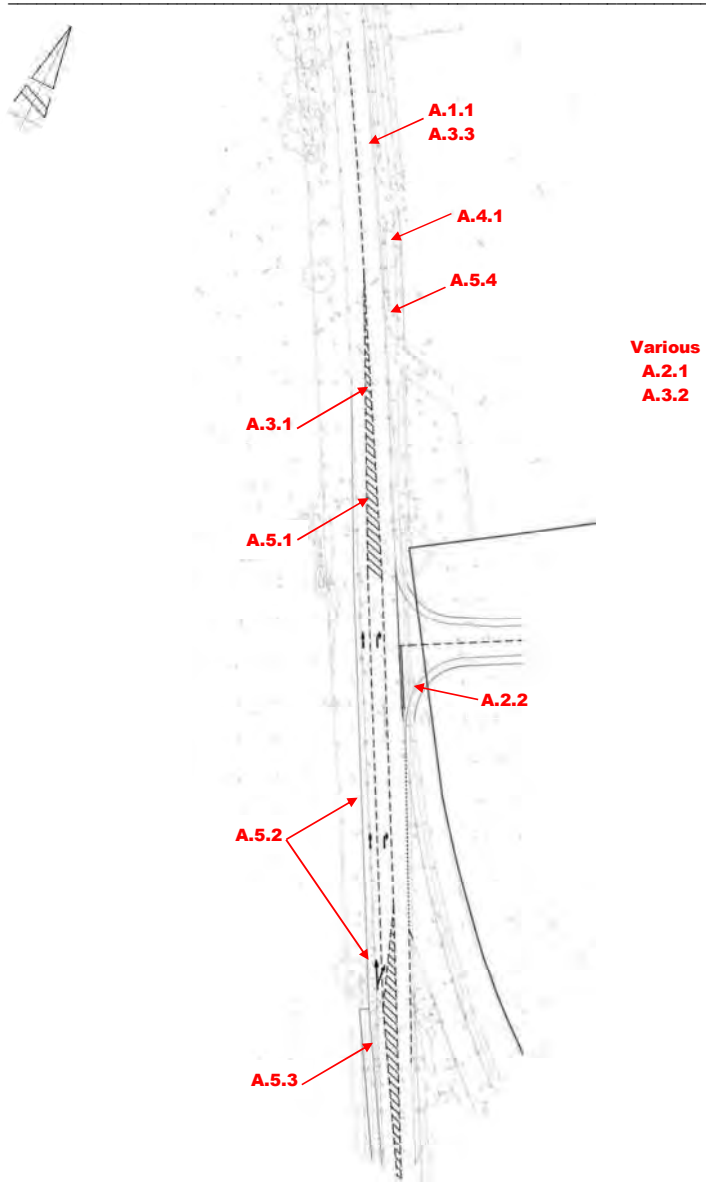
Appendix A1

Documents and Drawings provided for this Road Safety Audit

Audit Stage	Doc. No.	Rev	Title
Stage 1	ITB15323-007	-	Road Safety Audit Brief
	Dwg No.	Rev	Title
	ITB15323-GA-001	D	Proposed Site Access Arrangements
	ITB15323-GA-003	B	Proposed Site Access – Long Section 1.5 x SSD
	ITB15323-GA-004	-	Swept Path Analysis
	ITB15323-GA-007	-	Long Section- Vertical Alignment
	9325-PL-104	A	Masterplan
	Obtained from Local Authorities Planning Portal		
	B20139-PPL-XX-XX-DR-C-0102	P04	Site Access and Footway cycleway works

Appendix A2

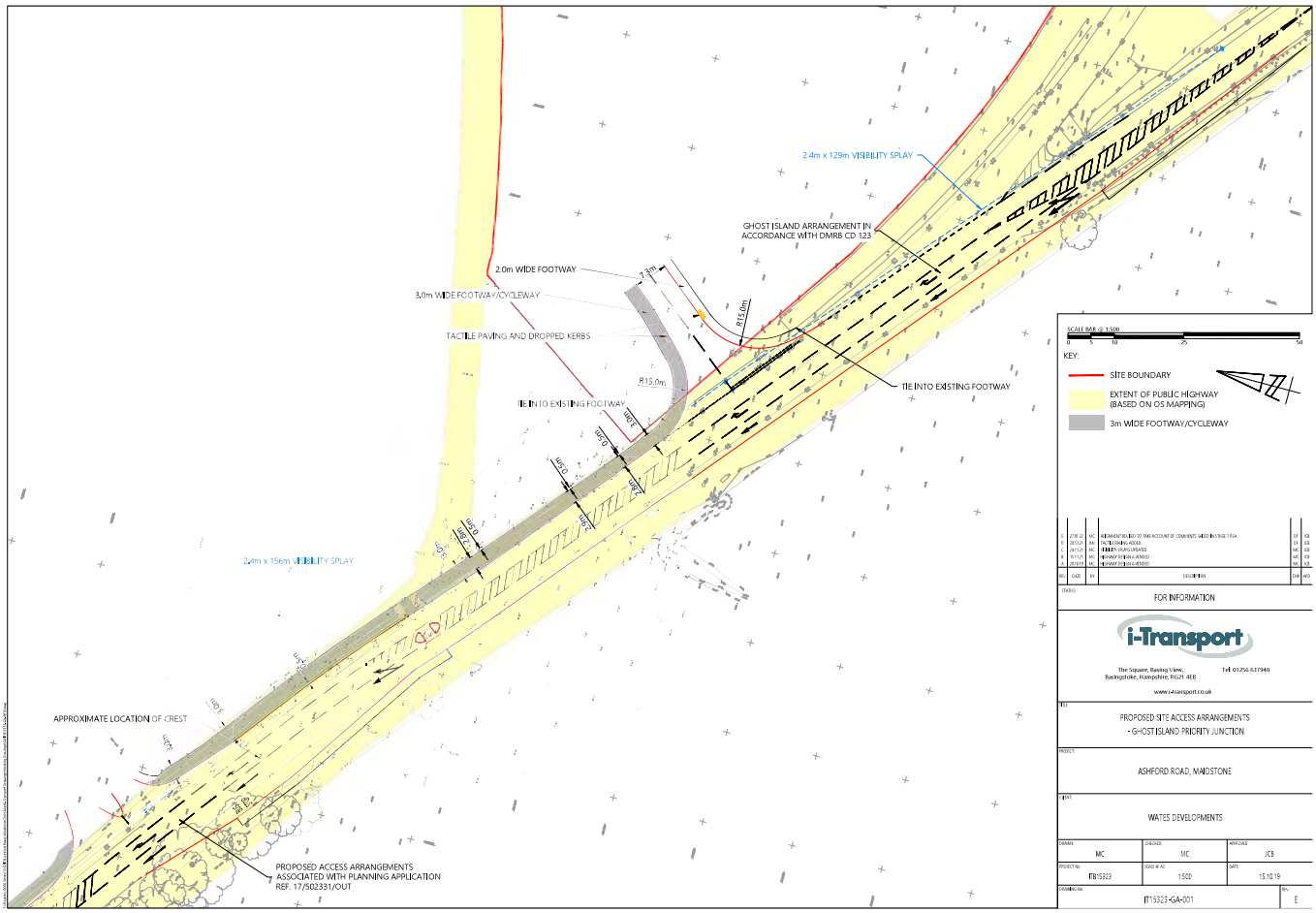
Item Location Plan



Appendix A3

Drawings associated with the Design Organisation Response

Audit Stage	Drawing No.	Rev	Title
Stage 1	ITB15323-GA-001	E	Proposed Site Access Arrangements



APPENDIX C. RSA LETTER

Highways, Transportation and Road Safety
2 Blaenant – Emmer Green
Reading – RG4 8PH
M: 07929 857 229
E: office@fenley.co.uk

Duncan Findlay
Associate
i-Transport
85 Gresham Street
London
EC2V 7NQ

Our Ref: RSA-21-169-L001

Friday 18th February 2022

Dear Mr Findlay

Re: A20 Ashford Road, Maidestone – RSA-21-169

Further to receipt of your email dated 9th February 2022 following your meeting with meeting with Kent Highway Services and their confirmation that they are happy for visibility to be illustrated on the scheme drawing in accordance with the absolute minimum stopping sight distance and your request for further comment, I have the following comments.

It is understood that the 119 and 100 metre stopping sight distance that has been utilised for visibility purposes accords with the observed 85th percentile east and westbound speeds of 51.8mph and 46.4mph based on a 2 second reaction time and deceleration rate of 0.375g stopping sight distance as opposed to 0.25g.

Based on the details published within Manual for Streets 2, the use of the greater deceleration rate accords with international vehicle standards for heavy goods vehicles and therefore the 119 and 100 metre splays should be adequate. However, this does not take account of the bonnet length of a vehicle and therefore 2.4 metres should be added to the forward visibility envelope to a slow moving vehicle turning out of the proposed access.

Measurements taken off the scheme drawing detailing a long section of the A20 Ashford Road, ref: ITB15323-GA-010, indicate that a forward visibility envelope of 155.3 metres is achievable from an eye height of 1.05 metres to a level of 0.26 metres at the road centreline of the proposed access. As such, the lowest permitted level fog lamps of an egressing vehicle, will be visible to an approaching driver.

It is understood that Kent Highway Services, as the County Highway Authority have accepted the provision of visibility in accordance with the absolute minimum stopping sight distance of the 85th percentile speeds, it is recommended, however, that the maximum achievable visibilities are illustrated to prevent obstruction being installed which could limit visibility in excess of 119 and 100 metres.

I trust that this correspondence is sufficient, should you require anything further, please do not hesitate to contact me.

Yours sincerely

Jamie Fenning
For and on behalf of Fenley

APPENDIX D. TRICS DATA

Calculation Reference: AUDIT-236603-220209-0200

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

TOTAL VEHICLES

Selected regions and areas:

02	**SOUTH EAST**		
	SO	SLOUGH	1 days
05	**EAST MIDLANDS**		
	LN	LINCOLNSHIRE	1 days
	NT	NOTTINGHAMSHIRE	1 days

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

Primary Filtering selection:

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

Parameter: Gross floor area
Actual Range: 1496 to 15583 (units: sqm)
Range Selected by User: 763 to 24154 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/13 to 11/05/21

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

Selected survey days:

Monday	1 days
Tuesday	1 days
Friday	1 days

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

Selected survey types:

Manual count	3 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town	3

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

Selected Location Sub Categories:

Industrial Zone	1
Commercial Zone	1
Development Zone	1

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

Secondary Filtering selection:

Use Class:

B8	3 days

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

Filter by Site Operations Breakdown:
All Surveys Included

Population within 500m Range:
All Surveys Included

Population within 1 mile:

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

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

Population within 5 miles:

125,001 to 250,000	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:

1.1 to 1.5	3 days

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

Travel Plan:

Yes	1 days
No	2 days

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

PTAL Rating:

No PTAL Present	3 days

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

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

LIST OF SITES relevant to selection parameters

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

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

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

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30	1	15583	0.006	1	15583	0.019	1	15583	0.025
00:30 - 01:00	1	15583	0.032	1	15583	0.013	1	15583	0.045
01:00 - 01:30	1	15583	0.026	1	15583	0.039	1	15583	0.065
01:30 - 02:00	1	15583	0.071	1	15583	0.032	1	15583	0.103
02:00 - 02:30	1	15583	0.026	1	15583	0.051	1	15583	0.077
02:30 - 03:00	1	15583	0.116	1	15583	0.083	1	15583	0.199
03:00 - 03:30	1	15583	0.083	1	15583	0.083	1	15583	0.166
03:30 - 04:00	1	15583	0.122	1	15583	0.109	1	15583	0.231
04:00 - 04:30	1	15583	0.096	1	15583	0.128	1	15583	0.224
04:30 - 05:00	1	15583	0.212	1	15583	0.096	1	15583	0.308
05:00 - 05:30	2	8540	0.240	2	8540	0.088	2	8540	0.328
05:30 - 06:00	2	8540	0.369	2	8540	0.100	2	8540	0.469
06:00 - 06:30	2	8540	0.258	2	8540	0.176	2	8540	0.434
06:30 - 07:00	**2**	**8540**	**0.410**	2	8540	0.199	2	8540	0.609
07:00 - 07:30	3	6693	0.229	**3**	**6693**	**0.583**	**3**	**6693**	**0.812**
07:30 - 08:00	3	6693	0.239	3	6693	0.269	3	6693	0.508
08:00 - 08:30	3	6693	0.174	3	6693	0.264	3	6693	0.438
08:30 - 09:00	3	6693	0.264	3	6693	0.105	3	6693	0.369
09:00 - 09:30	3	6693	0.164	3	6693	0.095	3	6693	0.259
09:30 - 10:00	3	6693	0.164	3	6693	0.154	3	6693	0.318
10:00 - 10:30	3	6693	0.105	3	6693	0.129	3	6693	0.234
10:30 - 11:00	3	6693	0.134	3	6693	0.154	3	6693	0.288
11:00 - 11:30	3	6693	0.090	3	6693	0.095	3	6693	0.185
11:30 - 12:00	3	6693	0.115	3	6693	0.194	3	6693	0.309
12:00 - 12:30	3	6693	0.149	3	6693	0.115	3	6693	0.264
12:30 - 13:00	3	6693	0.164	3	6693	0.179	3	6693	0.343
13:00 - 13:30	3	6693	0.209	3	6693	0.189	3	6693	0.398
13:30 - 14:00	3	6693	0.229	3	6693	0.179	3	6693	0.408
14:00 - 14:30	3	6693	0.095	3	6693	0.169	3	6693	0.264
14:30 - 15:00	3	6693	0.169	3	6693	0.144	3	6693	0.313
15:00 - 15:30	3	6693	0.154	3	6693	0.264	3	6693	0.418
15:30 - 16:00	3	6693	0.164	3	6693	0.184	3	6693	0.348
16:00 - 16:30	3	6693	0.289	3	6693	0.234	3	6693	0.523
16:30 - 17:00	3	6693	0.259	3	6693	0.244	3	6693	0.503
17:00 - 17:30	3	6693	0.214	3	6693	0.344	3	6693	0.558
17:30 - 18:00	3	6693	0.204	3	6693	0.304	3	6693	0.508
18:00 - 18:30	3	6693	0.244	3	6693	0.234	3	6693	0.478
18:30 - 19:00	3	6693	0.179	3	6693	0.204	3	6693	0.383
19:00 - 19:30	3	6693	0.209	3	6693	0.214	3	6693	0.423
19:30 - 20:00	3	6693	0.299	3	6693	0.194	3	6693	0.493
20:00 - 20:30	3	6693	0.144	3	6693	0.194	3	6693	0.338
20:30 - 21:00	3	6693	0.115	3	6693	0.035	3	6693	0.150
21:00 - 21:30	2	9292	0.038	2	9292	0.210	2	9292	0.248
21:30 - 22:00	2	9292	0.145	2	9292	0.226	2	9292	0.371
22:00 - 22:30	1	15583	0.160	1	15583	0.160	1	15583	0.320
22:30 - 23:00	1	15583	0.180	1	15583	0.154	1	15583	0.334
23:00 - 23:30	1	15583	0.039	1	15583	0.077	1	15583	0.116
23:30 - 24:00	1	15583	0.077	1	15583	0.083	1	15583	0.160
Total Rates:			7.873			7.792			15.665

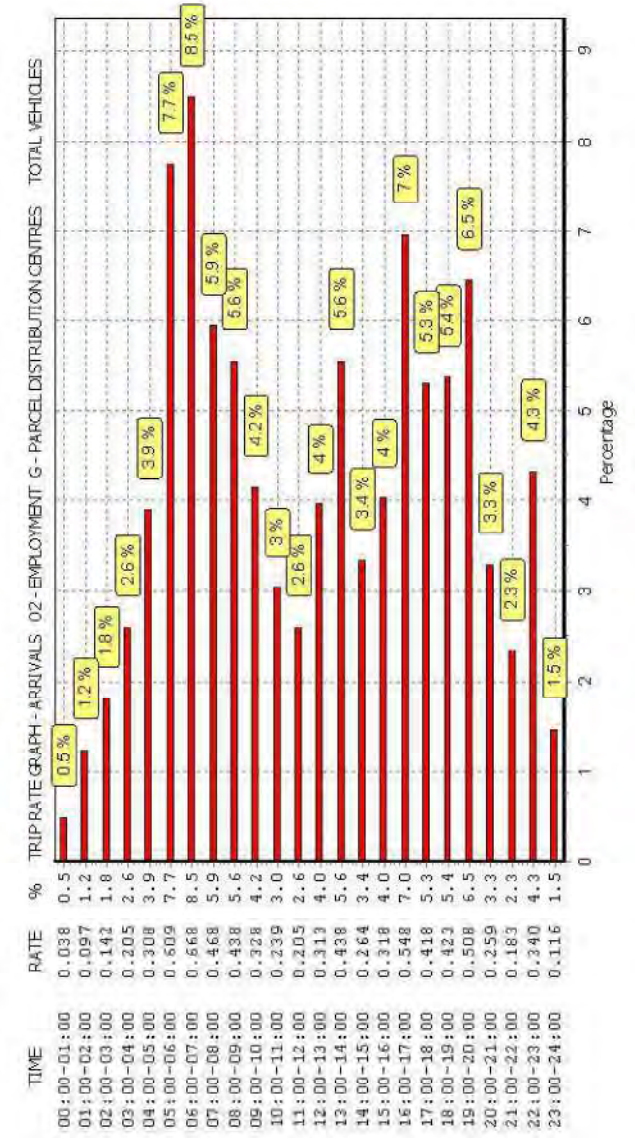
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are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

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

Parameter summary

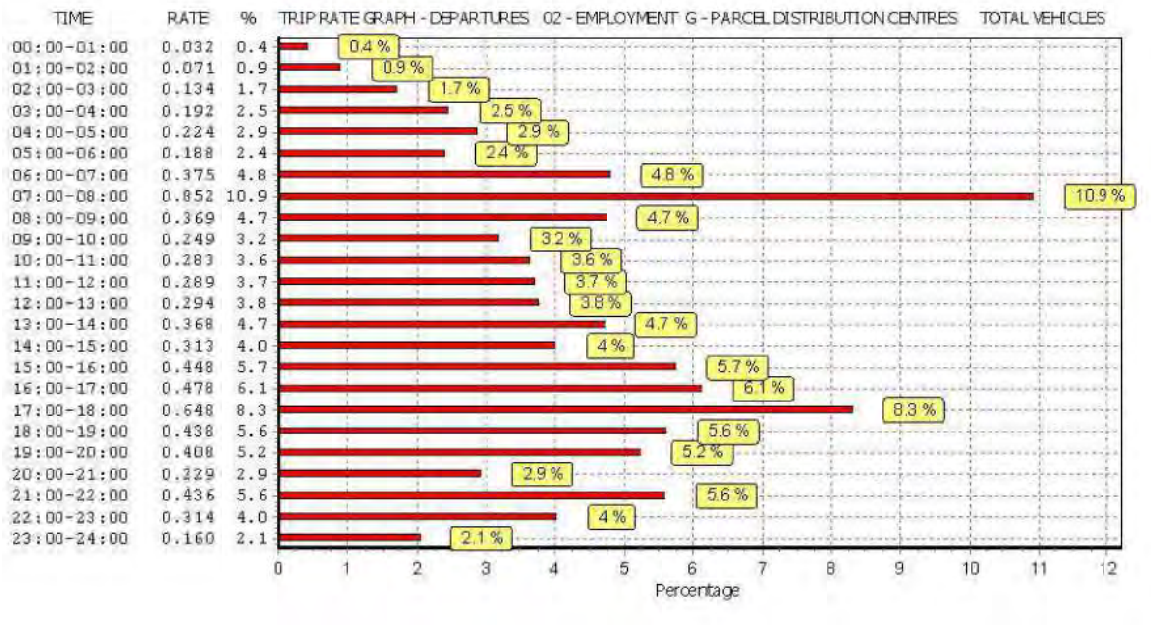
Trip rate parameter range selected:	1496 - 15583 (units: sqm)
Survey date date range:	01/01/13 - 11/05/21
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
Surveys manually removed from selection:	0

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

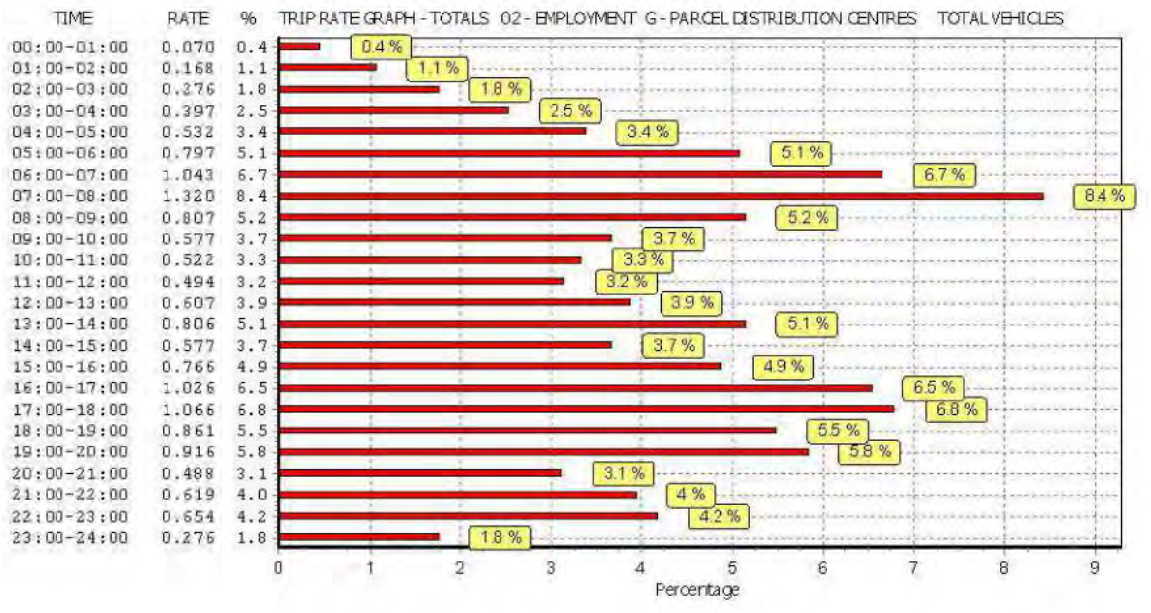


TIME	RATE	%
00:00-01:00	0.038	0.5
01:00-02:00	0.097	1.2
02:00-03:00	0.142	1.8
03:00-04:00	0.205	2.6
04:00-05:00	0.308	3.9
05:00-06:00	0.609	7.7
06:00-07:00	0.668	8.5
07:00-08:00	0.468	5.9
08:00-09:00	0.438	5.6
09:00-10:00	0.328	4.2
10:00-11:00	0.239	3.0
11:00-12:00	0.205	2.6
12:00-13:00	0.313	4.0
13:00-14:00	0.438	5.6
14:00-15:00	0.264	3.4
15:00-16:00	0.318	4.0
16:00-17:00	0.548	7.0
17:00-18:00	0.418	5.3
18:00-19:00	0.423	5.4
19:00-20:00	0.508	6.5
20:00-21:00	0.259	3.3
21:00-22:00	0.183	2.3
22:00-23:00	0.340	4.3
23:00-24:00	0.116	1.5

This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



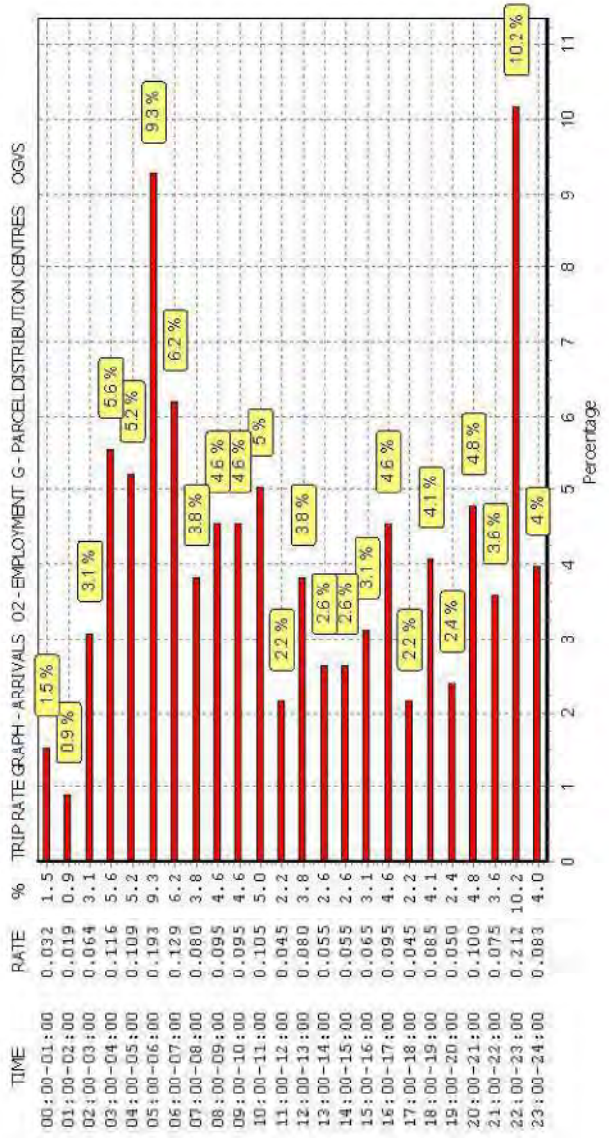
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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

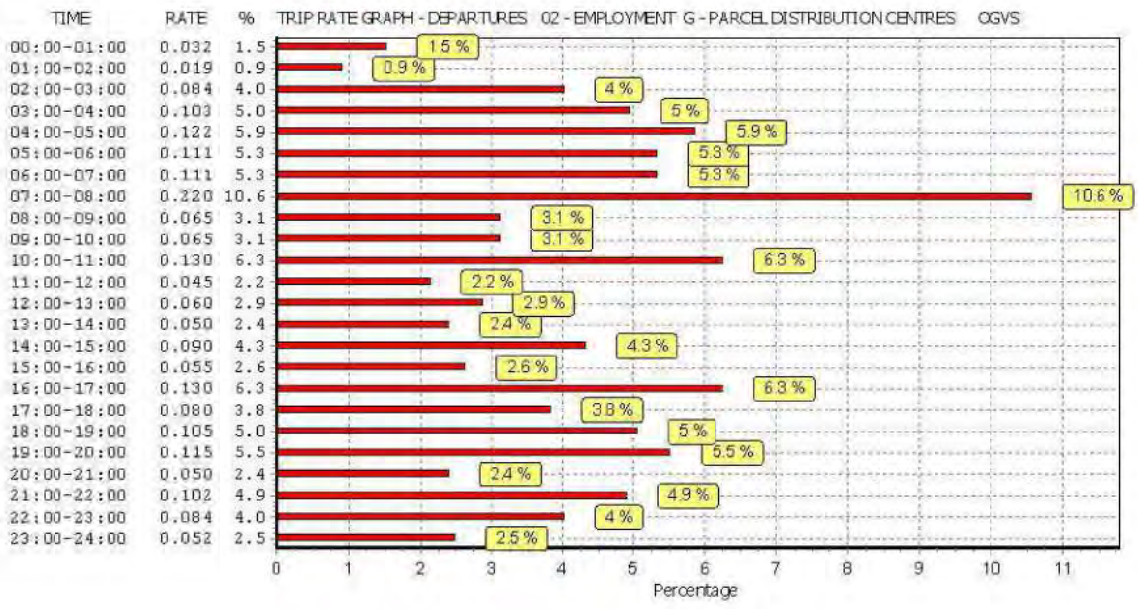
	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30	1	15583	0.006	1	15583	0.019	1	15583	0.025
00:30 - 01:00	1	15583	0.026	1	15583	0.013	1	15583	0.039
01:00 - 01:30	1	15583	0.000	1	15583	0.013	1	15583	0.013
01:30 - 02:00	1	15583	0.019	1	15583	0.006	1	15583	0.025
02:00 - 02:30	1	15583	0.013	1	15583	0.013	1	15583	0.026
02:30 - 03:00	1	15583	0.051	1	15583	0.071	1	15583	0.122
03:00 - 03:30	1	15583	0.058	1	15583	0.032	1	15583	0.090
03:30 - 04:00	1	15583	0.058	1	15583	0.071	1	15583	0.129
04:00 - 04:30	1	15583	0.026	1	15583	0.058	1	15583	0.084
04:30 - 05:00	1	15583	0.083	1	15583	0.064	1	15583	0.147
05:00 - 05:30	2	8540	0.064	2	8540	0.041	2	8540	0.105
05:30 - 06:00	**2**	**8540**	**0.129**	2	8540	0.070	**2**	**8540**	**0.199**
06:00 - 06:30	2	8540	0.088	2	8540	0.082	2	8540	0.170
06:30 - 07:00	2	8540	0.041	2	8540	0.029	2	8540	0.070
07:00 - 07:30	3	6693	0.040	**3**	**6693**	**0.125**	3	6693	0.165
07:30 - 08:00	3	6693	0.040	3	6693	0.095	3	6693	0.135
08:00 - 08:30	3	6693	0.040	3	6693	0.055	3	6693	0.095
08:30 - 09:00	3	6693	0.055	3	6693	0.010	3	6693	0.065
09:00 - 09:30	3	6693	0.030	3	6693	0.010	3	6693	0.040
09:30 - 10:00	3	6693	0.065	3	6693	0.055	3	6693	0.120
10:00 - 10:30	3	6693	0.040	3	6693	0.065	3	6693	0.105
10:30 - 11:00	3	6693	0.065	3	6693	0.065	3	6693	0.130
11:00 - 11:30	3	6693	0.025	3	6693	0.020	3	6693	0.045
11:30 - 12:00	3	6693	0.020	3	6693	0.025	3	6693	0.045
12:00 - 12:30	3	6693	0.050	3	6693	0.025	3	6693	0.075
12:30 - 13:00	3	6693	0.030	3	6693	0.035	3	6693	0.065
13:00 - 13:30	3	6693	0.015	3	6693	0.020	3	6693	0.035
13:30 - 14:00	3	6693	0.040	3	6693	0.030	3	6693	0.070
14:00 - 14:30	3	6693	0.020	3	6693	0.040	3	6693	0.060
14:30 - 15:00	3	6693	0.035	3	6693	0.050	3	6693	0.085
15:00 - 15:30	3	6693	0.030	3	6693	0.035	3	6693	0.065
15:30 - 16:00	3	6693	0.035	3	6693	0.020	3	6693	0.055
16:00 - 16:30	3	6693	0.065	3	6693	0.050	3	6693	0.115
16:30 - 17:00	3	6693	0.030	3	6693	0.080	3	6693	0.110
17:00 - 17:30	3	6693	0.035	3	6693	0.040	3	6693	0.075
17:30 - 18:00	3	6693	0.010	3	6693	0.040	3	6693	0.050
18:00 - 18:30	3	6693	0.065	3	6693	0.055	3	6693	0.120
18:30 - 19:00	3	6693	0.020	3	6693	0.050	3	6693	0.070
19:00 - 19:30	3	6693	0.005	3	6693	0.070	3	6693	0.075
19:30 - 20:00	3	6693	0.045	3	6693	0.045	3	6693	0.090
20:00 - 20:30	3	6693	0.035	3	6693	0.035	3	6693	0.070
20:30 - 21:00	3	6693	0.065	3	6693	0.015	3	6693	0.080
21:00 - 21:30	2	9292	0.016	2	9292	0.032	2	9292	0.048
21:30 - 22:00	2	9292	0.059	2	9292	0.070	2	9292	0.129
22:00 - 22:30	1	15583	0.103	1	15583	0.039	1	15583	0.142
22:30 - 23:00	1	15583	0.109	1	15583	0.045	1	15583	0.154
23:00 - 23:30	1	15583	0.032	1	15583	0.013	1	15583	0.045
23:30 - 24:00	1	15583	0.051	1	15583	0.039	1	15583	0.090
Total Rates:			2.082			2.080			4.162

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.

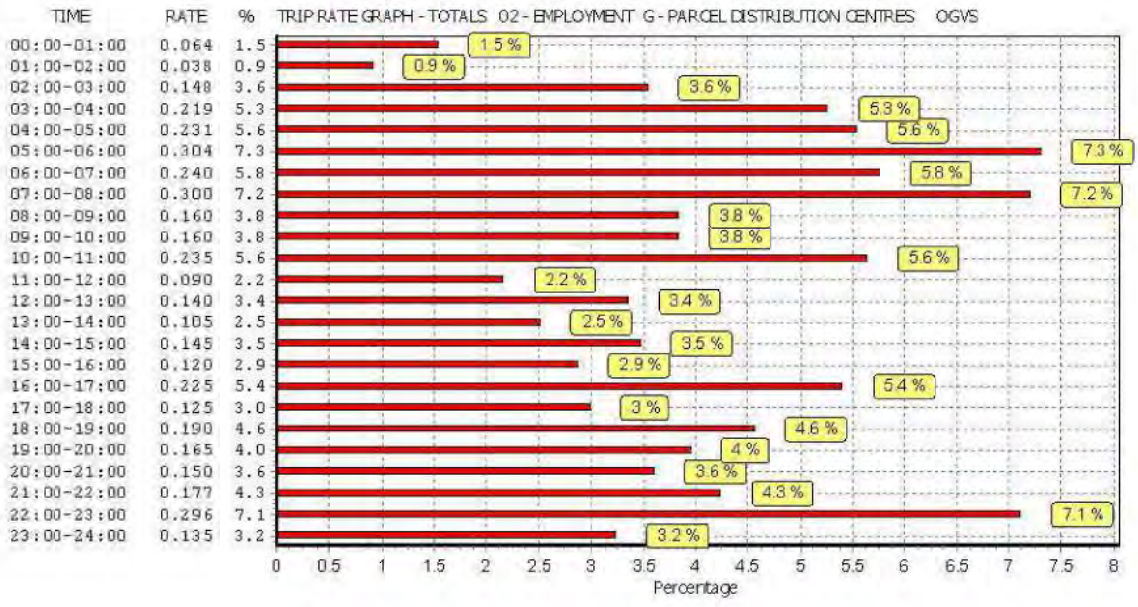
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected 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.*



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



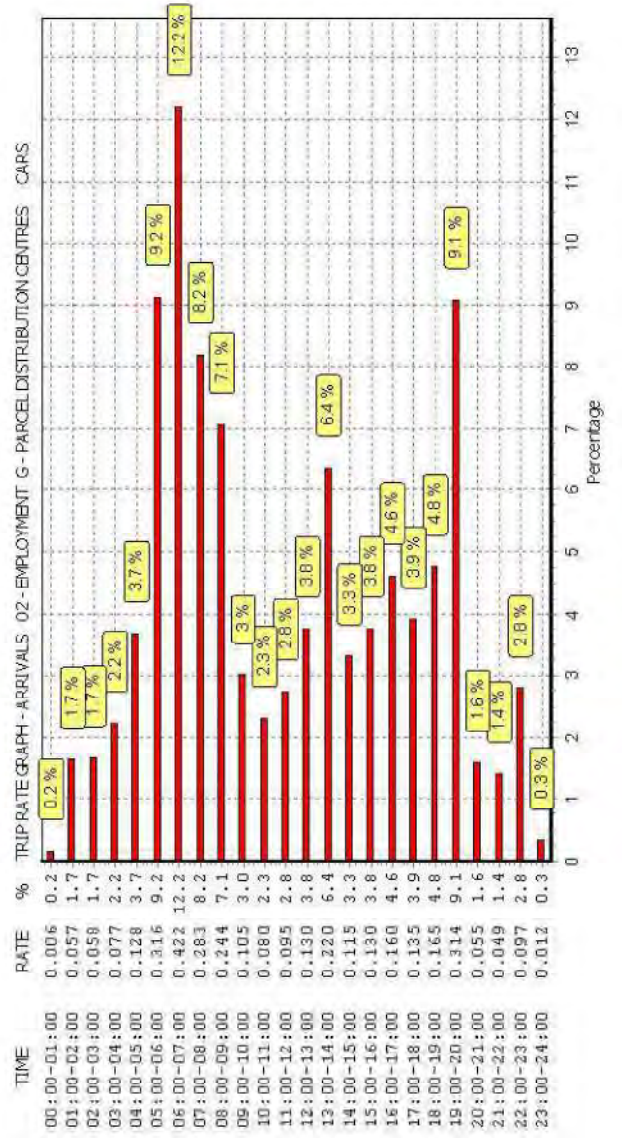
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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

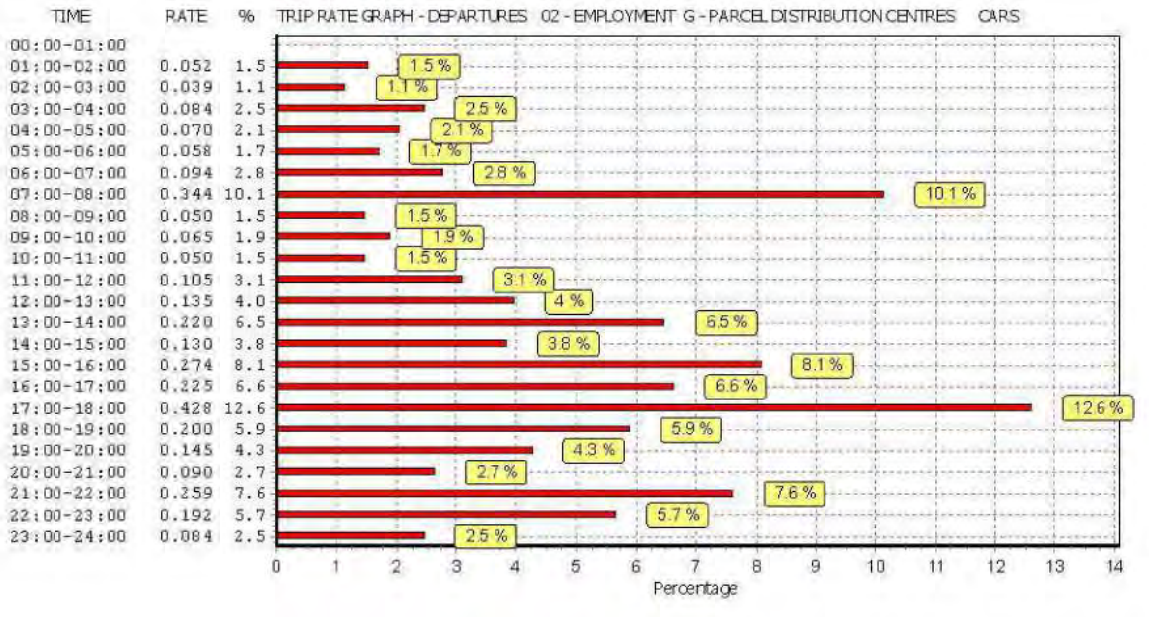
	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30	1	15583	0.000	1	15583	0.000	1	15583	0.000
00:30 - 01:00	1	15583	0.006	1	15583	0.000	1	15583	0.006
01:00 - 01:30	1	15583	0.006	1	15583	0.026	1	15583	0.032
01:30 - 02:00	1	15583	0.051	1	15583	0.026	1	15583	0.077
02:00 - 02:30	1	15583	0.013	1	15583	0.026	1	15583	0.039
02:30 - 03:00	1	15583	0.045	1	15583	0.013	1	15583	0.058
03:00 - 03:30	1	15583	0.026	1	15583	0.045	1	15583	0.071
03:30 - 04:00	1	15583	0.051	1	15583	0.039	1	15583	0.090
04:00 - 04:30	1	15583	0.045	1	15583	0.051	1	15583	0.096
04:30 - 05:00	1	15583	0.083	1	15583	0.019	1	15583	0.102
05:00 - 05:30	2	8540	0.111	2	8540	0.035	2	8540	0.146
05:30 - 06:00	2	8540	0.205	2	8540	0.023	2	8540	0.228
06:00 - 06:30	2	8540	0.100	2	8540	0.053	2	8540	0.153
06:30 - 07:00	**2**	**8540**	**0.322**	2	8540	0.041	2	8540	0.363
07:00 - 07:30	3	6693	0.144	**3**	**6693**	**0.294**	**3**	**6693**	**0.438**
07:30 - 08:00	3	6693	0.139	3	6693	0.050	3	6693	0.189
08:00 - 08:30	3	6693	0.085	3	6693	0.030	3	6693	0.115
08:30 - 09:00	3	6693	0.159	3	6693	0.020	3	6693	0.179
09:00 - 09:30	3	6693	0.070	3	6693	0.025	3	6693	0.095
09:30 - 10:00	3	6693	0.035	3	6693	0.040	3	6693	0.075
10:00 - 10:30	3	6693	0.035	3	6693	0.015	3	6693	0.050
10:30 - 11:00	3	6693	0.045	3	6693	0.035	3	6693	0.080
11:00 - 11:30	3	6693	0.030	3	6693	0.045	3	6693	0.075
11:30 - 12:00	3	6693	0.065	3	6693	0.060	3	6693	0.125
12:00 - 12:30	3	6693	0.045	3	6693	0.035	3	6693	0.080
12:30 - 13:00	3	6693	0.085	3	6693	0.100	3	6693	0.185
13:00 - 13:30	3	6693	0.120	3	6693	0.100	3	6693	0.220
13:30 - 14:00	3	6693	0.100	3	6693	0.120	3	6693	0.220
14:00 - 14:30	3	6693	0.050	3	6693	0.075	3	6693	0.125
14:30 - 15:00	3	6693	0.065	3	6693	0.055	3	6693	0.120
15:00 - 15:30	3	6693	0.045	3	6693	0.174	3	6693	0.219
15:30 - 16:00	3	6693	0.085	3	6693	0.100	3	6693	0.185
16:00 - 16:30	3	6693	0.100	3	6693	0.105	3	6693	0.205
16:30 - 17:00	3	6693	0.060	3	6693	0.120	3	6693	0.180
17:00 - 17:30	3	6693	0.035	3	6693	0.229	3	6693	0.264
17:30 - 18:00	3	6693	0.100	3	6693	0.199	3	6693	0.299
18:00 - 18:30	3	6693	0.075	3	6693	0.110	3	6693	0.185
18:30 - 19:00	3	6693	0.090	3	6693	0.090	3	6693	0.180
19:00 - 19:30	3	6693	0.115	3	6693	0.075	3	6693	0.190
19:30 - 20:00	3	6693	0.199	3	6693	0.070	3	6693	0.269
20:00 - 20:30	3	6693	0.035	3	6693	0.080	3	6693	0.115
20:30 - 21:00	3	6693	0.020	3	6693	0.010	3	6693	0.030
21:00 - 21:30	2	9292	0.011	2	9292	0.124	2	9292	0.135
21:30 - 22:00	2	9292	0.038	2	9292	0.135	2	9292	0.173
22:00 - 22:30	1	15583	0.058	1	15583	0.083	1	15583	0.141
22:30 - 23:00	1	15583	0.039	1	15583	0.109	1	15583	0.148
23:00 - 23:30	1	15583	0.006	1	15583	0.039	1	15583	0.045
23:30 - 24:00	1	15583	0.006	1	15583	0.045	1	15583	0.051
Total Rates:			3.453			3.393			6.846

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.

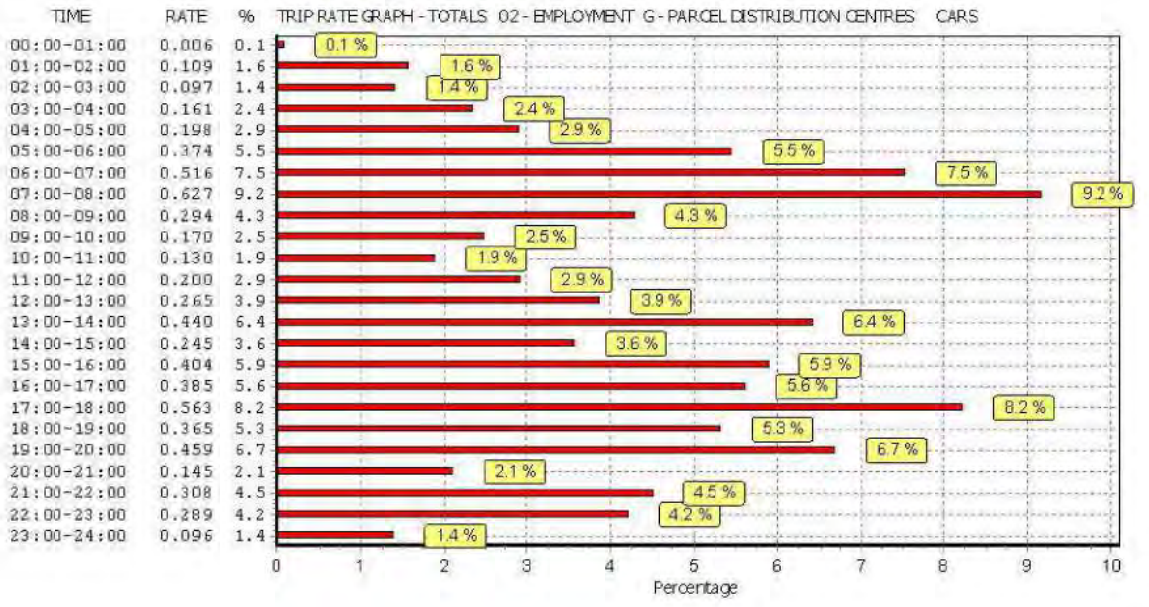
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected 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.*



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



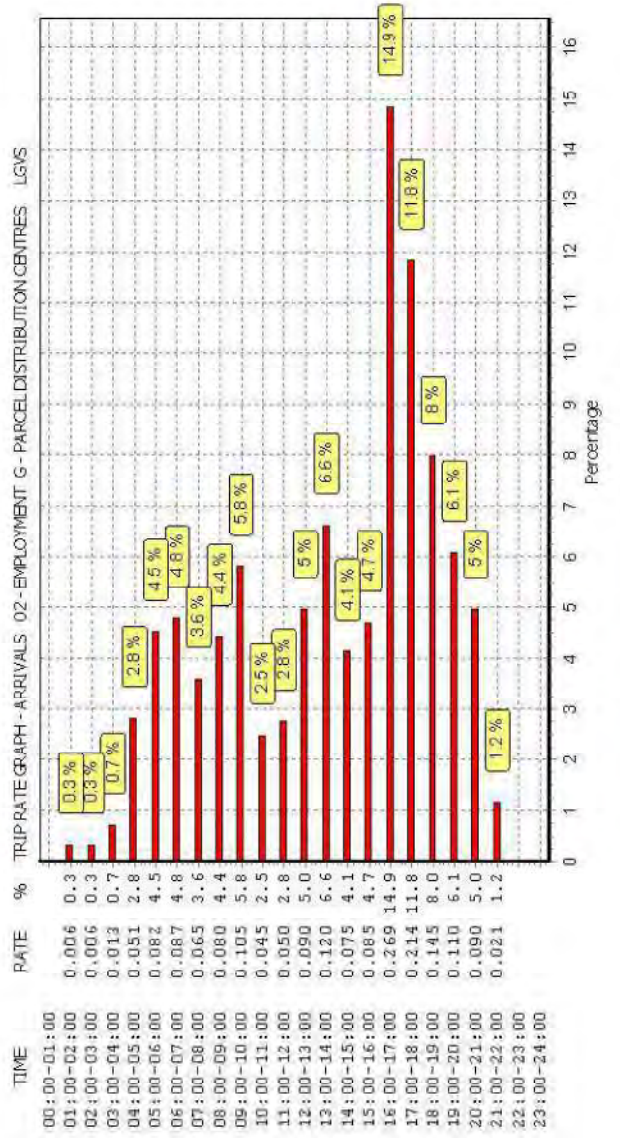
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30	1	15583	0.000	1	15583	0.000	1	15583	0.000
00:30 - 01:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
01:00 - 01:30	1	15583	0.006	1	15583	0.000	1	15583	0.006
01:30 - 02:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
02:00 - 02:30	1	15583	0.000	1	15583	0.006	1	15583	0.006
02:30 - 03:00	1	15583	0.006	1	15583	0.000	1	15583	0.006
03:00 - 03:30	1	15583	0.000	1	15583	0.000	1	15583	0.000
03:30 - 04:00	1	15583	0.013	1	15583	0.000	1	15583	0.013
04:00 - 04:30	1	15583	0.019	1	15583	0.000	1	15583	0.019
04:30 - 05:00	1	15583	0.032	1	15583	0.006	1	15583	0.038
05:00 - 05:30	2	8540	0.064	2	8540	0.000	2	8540	0.064
05:30 - 06:00	2	8540	0.018	2	8540	0.000	2	8540	0.018
06:00 - 06:30	2	8540	0.064	2	8540	0.023	2	8540	0.087
06:30 - 07:00	2	8540	0.023	2	8540	0.123	2	8540	0.146
07:00 - 07:30	3	6693	0.035	3	6693	0.125	3	6693	0.160
07:30 - 08:00	3	6693	0.030	3	6693	0.120	3	6693	0.150
08:00 - 08:30	3	6693	0.045	**3**	**6693**	**0.169**	**3**	**6693**	**0.214**
08:30 - 09:00	3	6693	0.035	3	6693	0.070	3	6693	0.105
09:00 - 09:30	3	6693	0.055	3	6693	0.055	3	6693	0.110
09:30 - 10:00	3	6693	0.050	3	6693	0.050	3	6693	0.100
10:00 - 10:30	3	6693	0.030	3	6693	0.040	3	6693	0.070
10:30 - 11:00	3	6693	0.015	3	6693	0.050	3	6693	0.065
11:00 - 11:30	3	6693	0.035	3	6693	0.020	3	6693	0.055
11:30 - 12:00	3	6693	0.015	3	6693	0.100	3	6693	0.115
12:00 - 12:30	3	6693	0.040	3	6693	0.045	3	6693	0.085
12:30 - 13:00	3	6693	0.050	3	6693	0.030	3	6693	0.080
13:00 - 13:30	3	6693	0.055	3	6693	0.045	3	6693	0.100
13:30 - 14:00	3	6693	0.065	3	6693	0.025	3	6693	0.090
14:00 - 14:30	3	6693	0.025	3	6693	0.040	3	6693	0.065
14:30 - 15:00	3	6693	0.050	3	6693	0.015	3	6693	0.065
15:00 - 15:30	3	6693	0.050	3	6693	0.045	3	6693	0.095
15:30 - 16:00	3	6693	0.035	3	6693	0.045	3	6693	0.080
16:00 - 16:30	3	6693	0.115	3	6693	0.070	3	6693	0.185
16:30 - 17:00	**3**	**6693**	**0.154**	3	6693	0.030	3	6693	0.184
17:00 - 17:30	3	6693	0.129	3	6693	0.045	3	6693	0.174
17:30 - 18:00	3	6693	0.085	3	6693	0.060	3	6693	0.145
18:00 - 18:30	3	6693	0.090	3	6693	0.055	3	6693	0.145
18:30 - 19:00	3	6693	0.055	3	6693	0.050	3	6693	0.105
19:00 - 19:30	3	6693	0.080	3	6693	0.050	3	6693	0.130
19:30 - 20:00	3	6693	0.030	3	6693	0.075	3	6693	0.105
20:00 - 20:30	3	6693	0.070	3	6693	0.065	3	6693	0.135
20:30 - 21:00	3	6693	0.020	3	6693	0.010	3	6693	0.030
21:00 - 21:30	2	9292	0.005	2	9292	0.027	2	9292	0.032
21:30 - 22:00	2	9292	0.016	2	9292	0.016	2	9292	0.032
22:00 - 22:30	1	15583	0.000	1	15583	0.006	1	15583	0.006
22:30 - 23:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
23:00 - 23:30	1	15583	0.000	1	15583	0.000	1	15583	0.000
23:30 - 24:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
Total Rates:			1.809			1.806			3.615

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.*



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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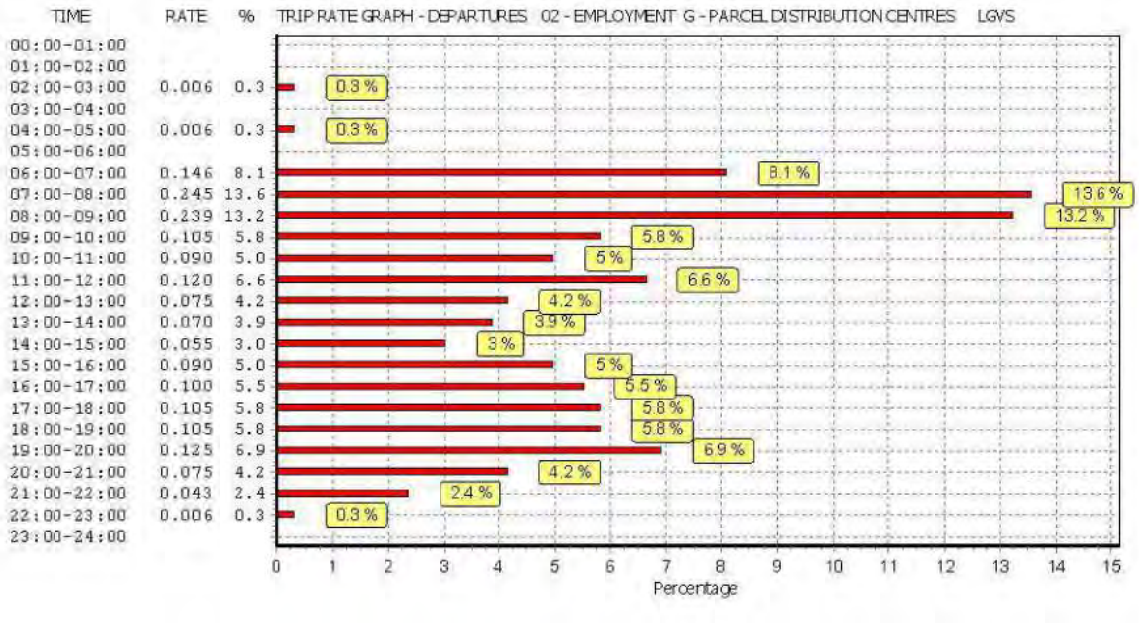
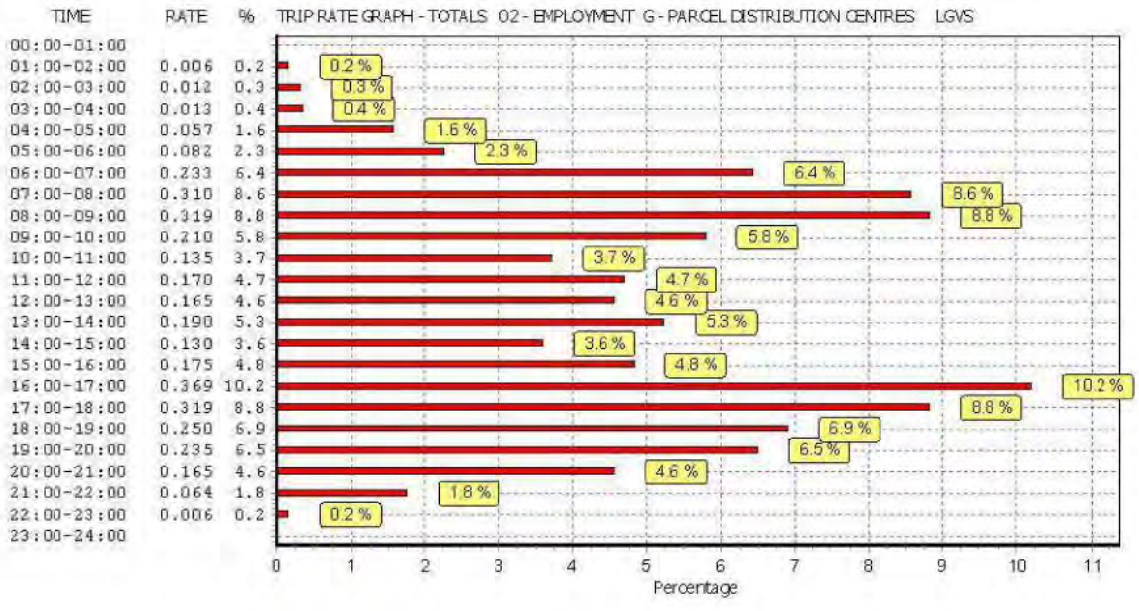
i-Transport LLP 85 Gresham Street London

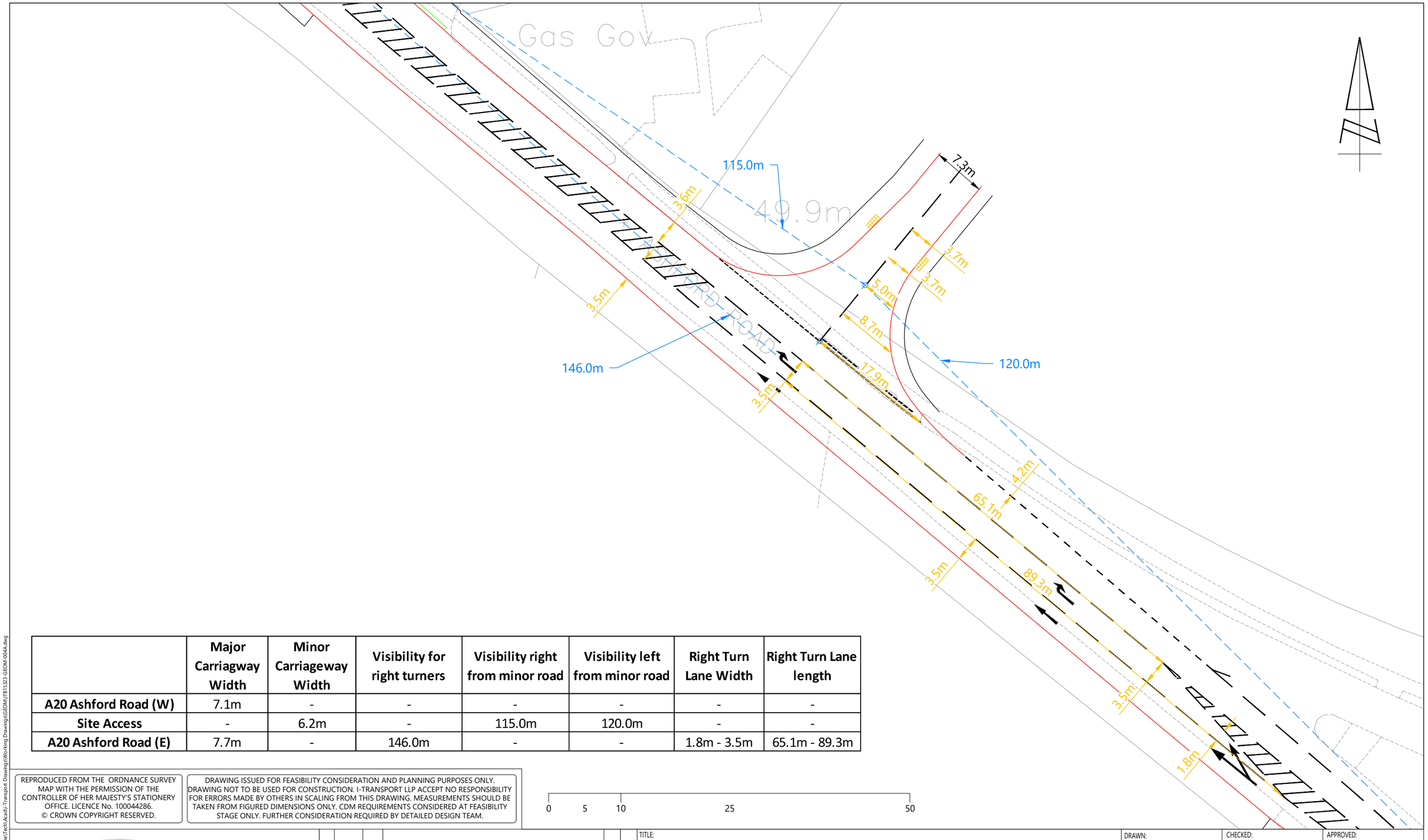


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

APPENDIX D. Junction Geometry Drawings



	Major Carriagway Width	Minor Carriageway Width	Visibility for right turners	Visibility right from minor road	Visibility left from minor road	Right Turn Lane Width	Right Turn Lane length
A20 Ashford Road (W)	7.1m	-	-	-	-	-	-
Site Access	-	6.2m	-	115.0m	120.0m	-	-
A20 Ashford Road (E)	7.7m	-	146.0m	-	-	1.8m - 3.5m	65.1m - 89.3m

0 5 10 25 50

i-Transport

The Square, Basing View,
Basingstoke, Hampshire, RG21 4EB

Tel: 01256 637940

www.i-transport.co.uk

REV	DATE	BY	DESCRIPTION	CHK	APD

STATUS: FOR INFORMATION

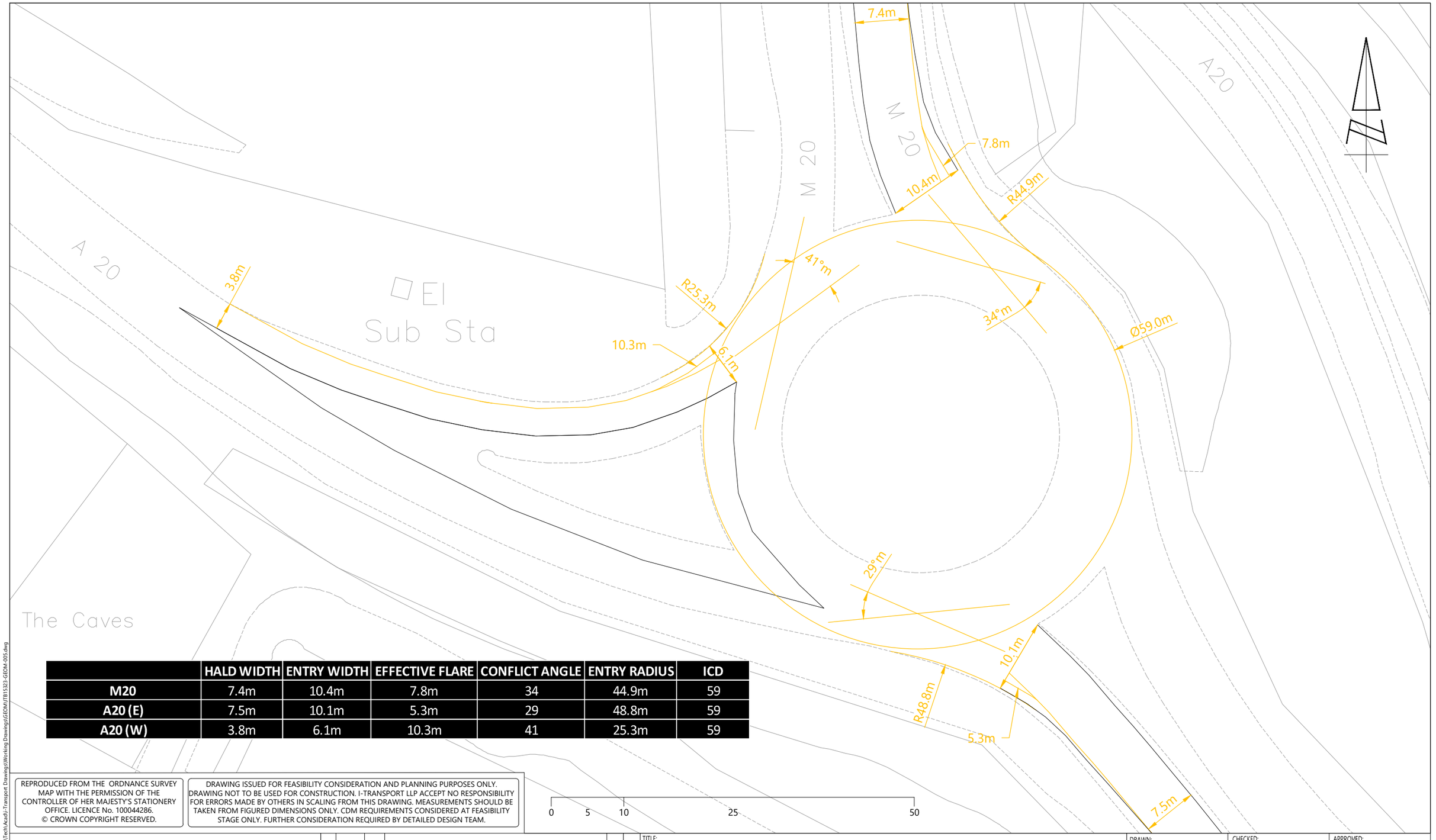
TITLE:

PROJECT:

CLIENT:

DRAWN:	CHECKED:	APPROVED:
PROJECT No:	SCALE @ A3:	DATE:
DRAWING No:		REV: -

T:\Projects\15000 Series\15323\TB Ashford Road, Maidstone\Tech\Acad\i-Transport Drawings\Working Drawings\GEOM\ITB15323-GEOM-004A.dwg



	HALD WIDTH	ENTRY WIDTH	EFFECTIVE FLARE	CONFLICT ANGLE	ENTRY RADIUS	ICD
M20	7.4m	10.4m	7.8m	34	44.9m	59
A20 (E)	7.5m	10.1m	5.3m	29	48.8m	59
A20 (W)	3.8m	6.1m	10.3m	41	25.3m	59

DRAWING ISSUED FOR FEASIBILITY CONSIDERATION AND PLANNING PURPOSES ONLY. DRAWING NOT TO BE USED FOR CONSTRUCTION. I-TRANSPORT LLP ACCEPT NO RESPONSIBILITY FOR ERRORS MADE BY OTHERS IN SCALING FROM THIS DRAWING. MEASUREMENTS SHOULD BE TAKEN FROM FIGURED DIMENSIONS ONLY. CDM REQUIREMENTS CONSIDERED AT FEASIBILITY STAGE ONLY. FURTHER CONSIDERATION REQUIRED BY DETAILED DESIGN TEAM.

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REV	DATE	BY	DESCRIPTION	CHK	APD

STATUS: FOR INFORMATION

TITLE: A20 / M20 LINK ROAD ROUNDABOUT - JUNCTION GEOMETRIES

PROJECT: ASHFORD ROAD, MAIDSTONE

CLIENT: WATES DEVELOPMENTS

DRAWN:	CHECKED:	APPROVED:
RW	DF	JCB
PROJECT No:	**SCALE @ A3:**	**DATE:**
ITB15323	1:500	22.11.22
DRAWING No:		**REV:**
ITB15323-GEOM-005		-

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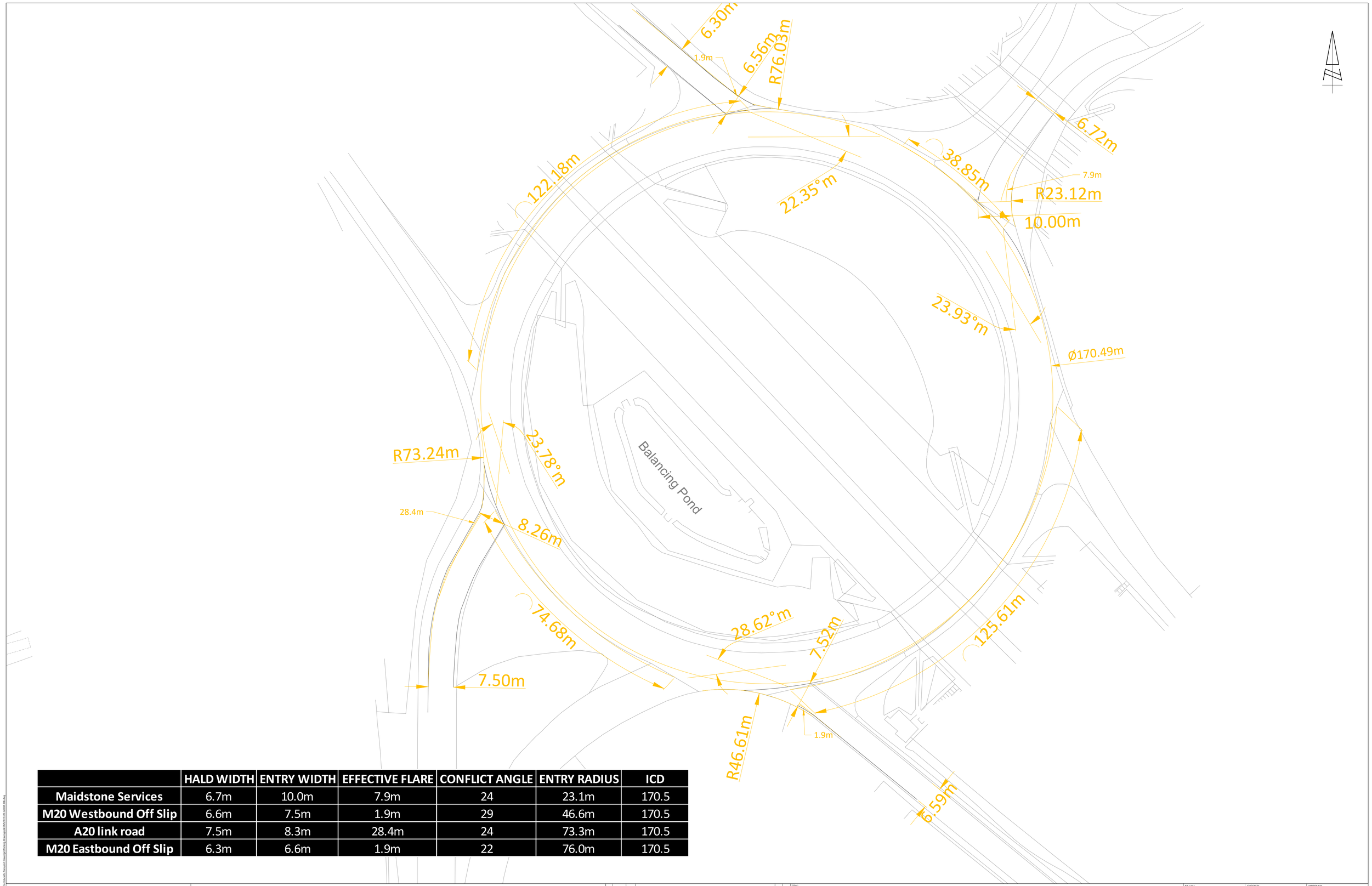

	HALD WIDTH	ENTRY WIDTH	EFFECTIVE FLARE	CONFLICT ANGLE	ENTRY RADIUS	ICD
Maidstone Services	6.7m	10.0m	7.9m	24	23.1m	170.5
M20 Westbound Off Slip	6.6m	7.5m	1.9m	29	46.6m	170.5
A20 link road	7.5m	8.3m	28.4m	24	73.3m	170.5
M20 Eastbound Off Slip	6.3m	6.6m	1.9m	22	76.0m	170.5

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0 5 10 25 50

REV	DATE	BY	DESCRIPTION	CHK	APD

STATUS: FOR INFORMATION

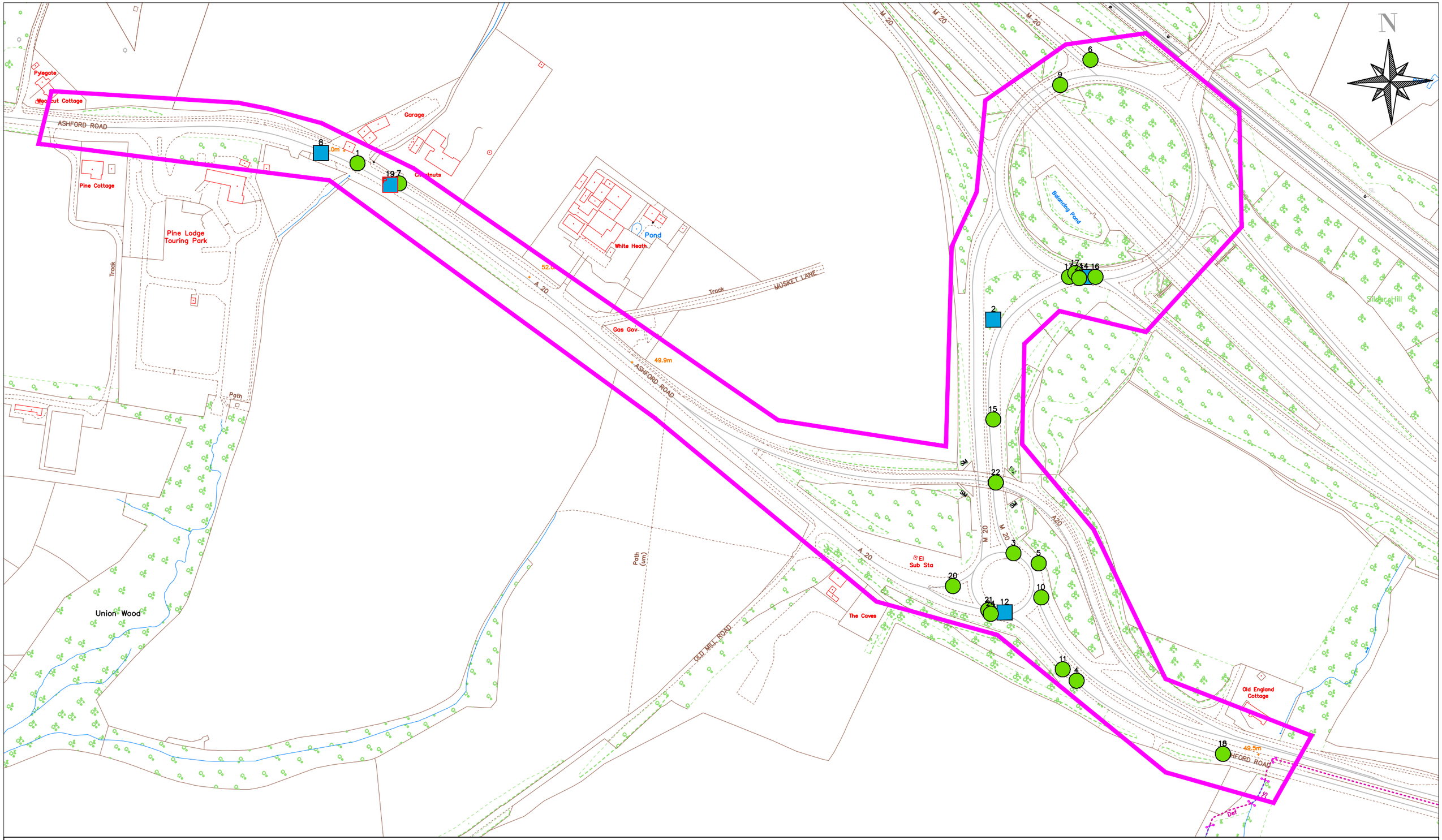
TITLE: M20 JUNCTION 8 HOLLINGBOURNE INTERCHANGE - GEOMETRY MEASUREMENTS

PROJECT: ASHFORD ROAD, MAIDSTONE

CLIENT:

DRAWN:	CHECKED:	APPROVED:
RW	DF	JCB
PROJECT No:	**SCALE @ A1:**	**DATE:**
ITB15323	1:500	12.10.22
DRAWING No:		**REV:**
ITB15323-GEOM-006		-

APPENDIX E. Personal Injury Accident Data



Location: A20 AShford Road, Hollingbourne

5 years personal injury crash data up to 30/06/2022

KCC Ref number: EXT/204/22

Crash Severity

- Slight
- Serious
- Fatal

Kent County Council
kent.gov.uk

Date: 12-October-2022
Time: 12:12:49

Title: **A20 Ashford Road, Hollingbourne**

Requested output:**D - Print Crash Report**

Date: 12-October-2022

Accident Date BETWEEN '01-Jul-2017' AND '30-Jun-2022'

There were 24 reported crashes resulting in injury

D-PRINT CRASH REPORT

12-Oct-2022
12:12:49

A20 Ashford Road, Hollingbourne
Accident Date BETWEEN '01-Jul-2017' AND '30-Jun-2022'

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
1	**Road No A20 Grid 581867E** **Section 255 Ref 154892N**	SLIGHT	12/07/2017	4	14:33	L	Dry	Fine		R.TURN	
	A20 ASHFORD ROAD O/S BEARSTED HAND CAR WASH, BEARSTED (MAPPED TO 581875,154901)								Maidstone		
	V2 WAS TRAVELLING SOUTHEAST-BOUND ALONG A20, ASHFORD ROAD. V1 WAS PULLING OUT OF A CAR WASH ALONG A20, ASHFORD ROAD TO TRAVEL NORTHWEST ALONG A20 ASHFORD ROAD. V1 CROSSED THE SIDE OF THE ROAD V2 WAS TRAVELLING ON AND HAS REACHED THE WHITE LINES SEPARATING THE TWO SIDES OF THE ROAD, V2 FRONT OFFSIDE COLLIDED WITH THE BACK OF V1 OFFSIDE.						Veh1, car, NE -> NW Veh2, car, NW -> SE			Casualties 1 Vehicles 2	
2	**Road No M20 Grid 582371E** **Section 064 Ref 154768N**	SERIOUS	12/07/2017	4	16:09	L	Dry	Fine		O/TAKE	HGV GV
	M20 J8 link road to A20, Hollingbourne								Maidstone		
	V1 travelling South left roundabout a Junction 8 along Southbound spur to A20, entering downhill left-hand bend. V2 was in process of overtaking V1 on its offside when V1 rolled onto its offside, crushing V2 beneath its trailer. V2 hits crash barrier to its offside and V1 slides clear of V2 and comes to rest in carriageway.						Veh1, goods > 7.5t, NE -> S Veh2, goods < 3.5t, NE -> S			Casualties 2 Vehicles 2	
3	**Road No A20 Grid 582387E** **Section 261 Ref 154583N**	SLIGHT	24/08/2017	5	06:24	L	Dry	Fine			GV
	A20, ASHFORD RD RNDBT J/W M20 SLIP, HOLLINGBOURNE.								Maidstone		
	V1 and V2 were negotiating the roundabout. V1 in lane 1 of 2, V2 in lane 2 of 2. V1 has pulled into the path of V2. Causing damage to V1 front off side corner and along the nearside of V2.						Veh1, goods < 3.5t, NW -> SE Veh2, goods < 3.5t, NW -> SE			Casualties 1 Vehicles 2	

Key

Involved
- *PED* Pedestrian
- *HGV* Heavy Goods Vehicle
- *GV* Goods Vehicle
- *M/C* Motor Cycle
- *P/C* Pedal Cycle
- *PSV* Bus/Coach

Street Lighting
- *L* Daylight
- *STL* Street Lights
- *USL* Street LIghts Unlit
- *NSL* No Street Lights
- *STU* Street Lights Unknown

FACTORS
- *+VE* Positive Breath Test
- *R.TURN* Right Turn Manoeuvre
- *O/TAKE* Overtaking Manoeuvre
- *S.VEH* Single Vehicle

Special Conditions
- *ATS OUT* Traffic Lights Not Working
- *ATS DEF* Traffic Lights Defective
- *SIGNS* Road Signs Defective or Obscurred
- *RD WRKS* Road Works
- *Surface* Road Surface Defective

D-PRINT CRASH REPORT

12-Oct-2022
12:12:49

A20 Ashford Road, Hollingbourne
Accident Date BETWEEN '01-Jul-2017' AND '30-Jun-2022'

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
4	**Road No A20 Grid 582437E** **Section 261 Ref 154482N**	SLIGHT	31/08/2017	5	07:40	L	Wet/Damp	Fog Mist			GV
	A20, ASHFORD RD, MAIDSTONE, (MAPPED TO COORDS).								Maidstone		
	V1 has overtaken V3 at Leeds Castle Rndbt and has also gone past V2. V2 has then overtaken V3 and is behind V1. V1 has braked hard causing V2 to brake hard. This caused V3 to swerve to the left and hit V2, pushing it to the other side of the road and into V5. V2 hit the side of V5. V4 was behind V3 and has hit V3 and also hit V2 hitting the back of the V1 and came to a standstill.						Veh1, car, SE -> NW Veh2, car, SE -> NW Veh3, car, SE -> NW Veh4, car, SE -> NW Veh5, goods < 3.5t, NW -> SE				Casualties 1 Vehicles 5
5	**Road No A20 Grid 582407E** **Section 134 Ref 154575N**	SLIGHT	16/09/2017	7	13:45	L	Dry	Fine			GV
	A20 ASHFORD ROAD, ROUNDABOUT AT J/W A20 ASHFORD ROAD, MAIDSTONE								Maidstone		
	Driver of V1 suffered a medical episode as a result of diabetes. As as result they lost control and collided with V2 before careering off the road and into the trees and bushes on the grass verge.						Veh1, goods < 3.5t, SW -> SE Veh2, car, SW -> SE				Casualties 1 Vehicles 2
6	**Road No M20 Grid 582448E** **Section 134 Ref 154974N**	SLIGHT	17/11/2017	6	18:02	DRK STL	Dry	Fine			
	M20 COASTBOUND JUNCTION 8, MAIDSTONE								Maidstone		
	V2 HAD STARTED TO PULL AWAY FROM LANE 1 OF SLIP RD ONTO RNDBT WHEN A VEHICLE ALREADY ON THE RNDBT APPROACHED SOME DISTANCE AWAY. V2 BRAKED SUDDENLY TO A STOP AND V1 FAILED TO SEE V2 HAD STOPPED AND SHUNTED V2 IN REAR.						Veh1, car, SE -> NW Veh2, car, SE -> NW				Casualties 1 Vehicles 2

Key

Involved

PED	*Pedestrian*
HGV	*Heavy Goods Vehicle*
GV	*Goods Vehicle*
M/C	*Motor Cycle*
P/C	*Pedal Cycle*
PSV	*Bus/Coach*

Street Lighting

L	*Daylight*
STL	*Street Lights*
USL	*Street LIghts Unlit*
NSL	*No Street Lights*
STU	*Street Lights Unknown*

FACTORS

+VE	*Positive Breath Test*
R.TURN	*Right Turn Manoeuvre*
O/TAKE	*Overtaking Manoeuvre*
S.VEH	*Single Vehicle*

Special Conditions

ATS OUT	*Traffic Lights Not Working*
ATS DEF	*Traffic Lights Defective*
SIGNS	*Road Signs Defective or Obscurred*
RD WRKS	*Road Works*
Surface	*Road Surface Defective*

D-PRINT CRASH REPORT

12-Oct-2022
12:12:49

A20 Ashford Road, Hollingbourne
Accident Date BETWEEN '01-Jul-2017' AND '30-Jun-2022'

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
7	**Road No A20 Grid 581900E** **Section 256 Ref 154876N**	SLIGHT	30/01/2018	3	15:05	L	Dry	Fine		O/TAKE R.TURN	HGV
	A20, ASHFORD ROAD, O/S CHESTNUTS, HOLLINGBOURNE								Maidstone		
	V1 slowed alongside the car sales garage. V2 then moved out to overtake. V1 then turned across the pathway of V2 where V2 has made contact with driver-side of V1						Veh1, car, NW -> S Veh2, goods > 7.5t, NW -> SE				Casualties 1 Vehicles 2
8	**Road No A20 Grid 581838E** **Section 255 Ref 154900N**	SERIOUS	15/04/2018	1	14:59	L	Dry	Fine			M/C
	A20 ASHFORD RD, EYHORNE STREET (MAPPED TO DESC. ORIGINAL COORDS - 581896,154878)								Maidstone		
	V1 WAS TRAVELLING ALONG THE A20 TOWARDS MAIDSTONE, PASSING THE CAR WASH ON THE OFFSIDE. JUST AFTER THIS, V1 HAS PULLED INTO LAYBY AREA ON THE NEARSIDE WHICH IS HIDDEN BY HEDGES. V1 HAS ATTEMPTED TO TURN RIGHT BACK ONTO THE A20. AS V1 HAS EMERGED V2 HAS COME ALONG THE A20 ASHFORD ROAD TOWARDS MAIDSTONE AND HAS BEEN UNABLE TO STOP IN TIME.						Veh1, car, SE -> SE Veh2, m/cycle > 500cc, SE -> W				Casualties 2 Vehicles 2
9	**Road No M20 Grid 582424E** **Section 064 Ref 154954N**	SLIGHT	10/05/2018	5	16:55	L	Dry	Fine			M/C
	M20 J8 INTERCHANGE RNDBT J/W ESSO PETROL STATION, EYHORNE STREET								Maidstone		
	V1 WAS POORLY POSITIONED ON THE RNDBT AND CROSSED PATHS WITH V2. V1'S OFFSIDE COLLIDED WITH V2'S NEARSIDE						Veh1, m/cycle 125 - 500cc, SW -> SE Veh2, car, SW -> SE				Casualties 1 Vehicles 2

Key

Involved

PED	*Pedestrian*
HGV	*Heavy Goods Vehicle*
GV	*Goods Vehicle*
M/C	*Motor Cycle*
P/C	*Pedal Cycle*
PSV	*Bus/Coach*

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L	*Daylight*
STL	*Street Lights*
USL	*Street LIghts Unlit*
NSL	*No Street Lights*
STU	*Street Lights Unknown*

FACTORS

+VE	*Positive Breath Test*
R.TURN	*Right Turn Manoeuvre*
O/TAKE	*Overtaking Manoeuvre*
S.VEH	*Single Vehicle*

Special Conditions

ATS OUT	*Traffic Lights Not Working*
ATS DEF	*Traffic Lights Defective*
SIGNS	*Road Signs Defective or Obscurred*
RD WRKS	*Road Works*
Surface	*Road Surface Defective*

D-PRINT CRASH REPORT

12-Oct-2022
12:12:49

A20 Ashford Road, Hollingbourne
Accident Date BETWEEN '01-Jul-2017' AND '30-Jun-2022'

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
10	**Road No A20 Grid 582409E** **Section Ref 154548N**	SLIGHT	21/05/2018	2	06:48	L	Dry	Fine		R.TURN	HGV GV
	A20 ASHFORD RD J/W M20 OFFSLIP RNDBT, LEEDS								Maidstone		
	Both V1 & V2 have exited the M20 J8 rndbt towards the A20 and entered rndbt junction with A20 to exit. V1 in lane 1 and V2 in lane 2. As V2 exited the rndbt V1 has continued around the rndbt and V1 offside front has collided with V2 nearside rear causing V2 to flip onto its offside.						Veh1, goods > 7.5t, N -> W Veh2, goods < 3.5t, N -> SE				Casualties 1 Vehicles 2
11	**Road No A20 Grid 582426E** **Section 261 Ref 154491N**	SLIGHT	10/06/2018	1	17:10	L	Dry	Fine		S.VEH	
	A20 ASHFORD RD, EYHORNE STREET (MAPPED TO COORDS)								Maidstone		
	V1 HAS VEERED FROM LANE 1 TO N/S COLLIDING WITH ROADSIDE FURNITURE.						Veh1, car, SE -> NW				Casualties 3 Vehicles 1
12	**Road No A20 Grid 582380E** **Section 261 Ref 154536N**	SERIOUS	20/10/2018	7	16:30	L	Dry	Fine			M/C
	A20, ASHFORD RD RNDBT J/W M20, HOLLINGBOURNE.								Maidstone		
	V2 HAS BEEN DRIVING IN LANE 1 APPROACHING A RNDBT WITH V1 SLIGHTLY BEHIND IT IN LANE 2. AS THEY HAVE JOINED THE RNDBT, V1 HAS CLIPPED THE REAR OF V2 AND R1 HAS FALLEN OFF THEIR BIKE.						Veh1, m/cycle > 500cc, SE -> NW Veh2, car, SE -> NW				Casualties 1 Vehicles 2

Key

Involved
- *PED* Pedestrian
- *HGV* Heavy Goods Vehicle
- *GV* Goods Vehicle
- *M/C* Motor Cycle
- *P/C* Pedal Cycle
- *PSV* Bus/Coach

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- *L* Daylight
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- *R.TURN* Right Turn Manoeuvre
- *O/TAKE* Overtaking Manoeuvre
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- *ATS DEF* Traffic Lights Defective
- *SIGNS* Road Signs Defective or Obscurred
- *RD WRKS* Road Works
- *Surface* Road Surface Defective

D-PRINT CRASH REPORT

12-Oct-2022
12:12:49

A20 Ashford Road, Hollingbourne
Accident Date BETWEEN '01-Jul-2017' AND '30-Jun-2022'

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
13	**Road No M20 Grid 582431E** **Section 134 Ref 154802N**	SLIGHT	22/05/2019	4	08:58	L	Dry	Fine			M/C
	M20 J8 INTERCHANGE J/W M20 J8 TO A20 LINK ROAD, EYHORNE STREET								Maidstone		
	V1 WAS TRAVELLING IN THE OUTSIDE LANE OF THE RNDBT AND V2 WAS IN THE INSIDE LANE. V1 CHOSE TO EXIT THE RNDBT AT THE MAIDSTONE TURN OFF, THUS CUTTING ACROSS THE INSIDE LANE AND IN FRONT OF V2, CAUSING A COLLISION AND CAUSING V2 TO LOSE THEIR BALANCE BEFORE FALLING TO THE GROUND.						Veh1, m/cycle > 500cc, N -> SW Veh2, car, E -> NW				Casualties 1 Vehicles 2
14	**Road No M20 Grid 582443E** **Section 134 Ref 154802N**	SERIOUS	14/08/2020	6	18:18	L	Dry	Fine			
	M20 J8 INTERCHANGE J/W M20 J8 FROM J9 OFF SLIP, EYHORNE STREET								Maidstone		
	V1 was being followed by V2, an unmarked police vehicle in an authorised police pursuit. V1 exited the London bound carriageway at junction 8 at high speed and entered the rndbt, colliding with the nearside of V3. V1 came to a stop in the carriageway on the rndbt and V3 came to a stop on the verge to the south of the rndbt.						Veh1, car, SE -> NW Veh2, car, SW -> NE Veh3, car, NE -> W				Casualties 3 Vehicles 3
15	**Road No M20 Grid 582371E** **Section 134 Ref 154689N**	SLIGHT	30/09/2020	4	14:32	L	Dry	Fine		S.VEH	GV
	M20 J8 TO A20 LINK RD, HOLLINGBOURNE (MAPPED TO COORDS)								Maidstone		
	V1 hit debris in the carriageway and swerved onto hard shoulder. Debris believed to be in lane 2. No other vehicles involved.						Veh1, goods < 3.5t, S -> N				Casualties 1 Vehicles 1

Key

Involved
- *PED* Pedestrian
- *HGV* Heavy Goods Vehicle
- *GV* Goods Vehicle
- *M/C* Motor Cycle
- *P/C* Pedal Cycle
- *PSV* Bus/Coach

Street Lighting
- *L* Daylight
- *STL* Street Lights
- *USL* Street LIghts Unlit
- *NSL* No Street Lights
- *STU* Street Lights Unknown

FACTORS
- *+VE* Positive Breath Test
- *R.TURN* Right Turn Manoeuvre
- *O/TAKE* Overtaking Manoeuvre
- *S.VEH* Single Vehicle

Special Conditions
- *ATS OUT* Traffic Lights Not Working
- *ATS DEF* Traffic Lights Defective
- *SIGNS* Road Signs Defective or Obscurred
- *RD WRKS* Road Works
- *Surface* Road Surface Defective

D-PRINT CRASH REPORT

12-Oct-2022
12:12:49

A20 Ashford Road, Hollingbourne
Accident Date BETWEEN '01-Jul-2017' AND '30-Jun-2022'

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
16	**Road No M20 Grid 582452E** **Section 134 Ref 154802N**	SLIGHT	06/10/2020	3	17:15	L	Wet/Damp	Fine			
	M20 J8 INTERCHANGE J/W M20 J8 FROM J9 OFF SLIP, EYHORNE STREET								Maidstone		
	V1 PULLED ONTO THE RNDBT FROM THE NORTTHBOUND OFFSLIP ACROSS THE PATH OF V2. V2 CLIPPED V1 AND OVERTURNED, COMING TO A STOP IN LANE 2.						Veh1, car, SE -> SW Veh2, car, NE -> NW				Casualties 1 Vehicles 2
17	**Road No M20 Grid 582436E** **Section 134 Ref 154805N**	SLIGHT	31/10/2020	7	07:30	L	Dry	Fine		O/TAKE	HGV
	M20 J8 RNDBT J/W M20 J8 TO A20 LINK ROAD, EYHORNE STREET (RE-MAPPED TO DESCRIPTION, OLD COORDS: 578119,157367)								Maidstone		
	V2 MANOEUVERING AROUND J8 R/BOUT TO JOIN LONDON BND C/WAY OF M20. V1 COMING AROUND R/BOUT ON V2'S OFFSIDE AND CUT ACROSS V2'S PATH TO LEAVE R/BOUT TOWARDS A20 BEARSTED. AS V1 CROSSED V2'S PATH, VEHS COLLIDED, TIPPING V1 ONTO ITS SIDE AND CAUSING MINOR DAMAGE TO V2.						Veh1, goods 3.5 - 7.5t, E -> S Veh2, goods > 7.5t, SE -> NW				Casualties 1 Vehicles 2
18	**Road No A20 Grid 582553E** **Section 262 Ref 154424N**	SLIGHT	25/11/2020	4	21:15	DRK STU	Wet/Damp	Fine			HGV
	A20, ASHFORD RD, B C/WAY, HOLLINGBOURNE (MAPPED TO COORDS)								Maidstone		
	D2 was driving on the A20 between the Mercure hotel and the next roundabout London bound. D2 was in the lane marked as M20 (right hand) and D1 (lorry) was in the lane marked A20 (left hand). Approaching the roundabout, V1 came over into D2's lane and hit the nearside of their car.						Veh1, goods > 7.5t, SE -> NW Veh2, car, SE -> NW				Casualties 1 Vehicles 2

Key

Involved

PED	*Pedestrian*
HGV	*Heavy Goods Vehicle*
GV	*Goods Vehicle*
M/C	*Motor Cycle*
P/C	*Pedal Cycle*
PSV	*Bus/Coach*

Street Lighting

L	*Daylight*
STL	*Street Lights*
USL	*Street LIghts Unlit*
NSL	*No Street Lights*
STU	*Street Lights Unknown*

FACTORS

+VE	*Positive Breath Test*
R.TURN	*Right Turn Manoeuvre*
O/TAKE	*Overtaking Manoeuvre*
S.VEH	*Single Vehicle*

Special Conditions

ATS OUT	*Traffic Lights Not Working*
ATS DEF	*Traffic Lights Defective*
SIGNS	*Road Signs Defective or Obscurred*
RD WRKS	*Road Works*
Surface	*Road Surface Defective*

D-PRINT CRASH REPORT

12-Oct-2022
12:12:49

A20 Ashford Road, Hollingbourne
Accident Date BETWEEN '01-Jul-2017' AND '30-Jun-2022'

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
19	**Road No A20 Grid 581893E** **Section 256 Ref 154875N**	SERIOUS	03/02/2021	4	18:58	DRK NSL	Dry	Fine	SW	S.VEH	GV
	A20 ASHFORD RD, EYHORNE STREET (MAPPED TO COORDS)								Maidstone		PED
	V1 was travelling southeast on Ashford Road when C1 stepped into its path from the grass verge and was struck by V1. (POSTCODE FOR C1 NOT KNOWN)						Veh1, goods < 3.5t, W -> SE				Casualties 1 Vehicles 1
20	**Road No A20 Grid 582339E** **Section 261 Ref 154557N**	SLIGHT	04/08/2021	4	19:23	L	Dry	Fine		S.VEH	
	A20 ASHFORD RD J/W A20 ASHFORD RD, HOLLINGBOURNE (MAPPED TO COORDS)								Maidstone		
	V1 was travelling southeast on Ashford Rd and left the carriageway to the offside at speed between lanes just before the rndbt and collided with a lamppost. D1 then fled the scene.						Veh1, car, NW -> E				Casualties 2 Vehicles 1
21	**Road No A20 Grid 582367E** **Section 261 Ref 154538N**	SLIGHT	13/10/2021	4	16:20	L	Dry	Fine		R.TURN	GV
	A20 ASHFORD RD RNDBT J/W A20 ASHFORD RD, EYHORNE STREET								Maidstone		
	V1 WAS TRAVELLING WEST ON ASHFORD RD IN LANE 1 AND V2 WAS IN LANE 2. V1 TURNED RIGHT ON THE RNDBT TOWARDS THE SECOND EXIT AND V2 WAS CONTINUING TOWARDS THE FIRST EXIT AND THE TWO VEHICLES COLLIDED. V1 SPAN OUT OF CONTROL AND COLLIDED WITH THE FRONT OF V3, WHICH WAS WAITING TO ENTER THE RNDBT.						Veh1, car, SE -> N Veh2, goods < 3.5t, SE -> NW Veh3, car, W -> E				Casualties 1 Vehicles 3

Key

Involved

PED	*Pedestrian*
HGV	*Heavy Goods Vehicle*
GV	*Goods Vehicle*
M/C	*Motor Cycle*
P/C	*Pedal Cycle*
PSV	*Bus/Coach*

Street Lighting

L	*Daylight*
STL	*Street Lights*
USL	*Street LIghts Unlit*
NSL	*No Street Lights*
STU	*Street Lights Unknown*

FACTORS

+VE	*Positive Breath Test*
R.TURN	*Right Turn Manoeuvre*
O/TAKE	*Overtaking Manoeuvre*
S.VEH	*Single Vehicle*

Special Conditions

ATS OUT	*Traffic Lights Not Working*
ATS DEF	*Traffic Lights Defective*
SIGNS	*Road Signs Defective or Obscurred*
RD WRKS	*Road Works*
Surface	*Road Surface Defective*

D-PRINT CRASH REPORT

12-Oct-2022
12:12:49

A20 Ashford Road, Hollingbourne
Accident Date BETWEEN '01-Jul-2017' AND '30-Jun-2022'

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
22	**Road No A20 Grid 582373E** **Section Ref 154639N**	SLIGHT	15/03/2022	3	03:05	DRK STL	Dry	Fine		O/TAKE	M/C
	A20 ASHFORD RD, HOLLINGBOURNE (MAPPED TO COORDS)								Maidstone		
	OLR: R2 was driving along Ashford Rd, was in the middle of the lane and V1 decided to try and overtake R2 on the inside and ended up crashing straight into R2 as was turning at the same time, the road is not a 2 lane road and R2 was in the middle. V1 driven off.						Veh1, car, NW -> SE Veh2, m/cycle 50 - 125cc, NW -> SE			Casualties 1 Vehicles 2	
23	**Road No M20 Grid 582439E** **Section Ref 154801N**	SLIGHT	23/03/2022	4	14:50	L	Dry	Fine		R.TURN	HGV
	M20 J8 INTERCHANGE J/W M20 J8 TO A20 LINK ROAD, MAIDSTONE (MAPPED TO COORDS)								Maidstone		
	V1 entered the rndbt intending to turn right towards the service station and V2 was turning left towards Ashford Rd. V1 clipped the nearside of V2, causing it to overturn.						Veh1, goods > 7.5t, SE -> NE Veh2, car, SE -> SW			Casualties 1 Vehicles 2	
24	**Road No A20 Grid 582369E** **Section Ref 154535N**	SLIGHT	19/04/2022	3	23:25	DRK STU	Dry	Fine			
	A20, ASHFORD RD J/W ASHFORD RD RNDBT, HOLLINGBOURNE								Maidstone		
	V2 on nearside lane doing 25mph, V1 shot round on nearside corner as V2 exited the roundabout towards LEEDS VILLAGE. V1 collided with nearside of V2.						Veh1, car, SE -> NW Veh2, car, E -> NW			Casualties 1 Vehicles 2	

Key

Involved
- *PED* Pedestrian
- *HGV* Heavy Goods Vehicle
- *GV* Goods Vehicle
- *M/C* Motor Cycle
- *P/C* Pedal Cycle
- *PSV* Bus/Coach

Street Lighting
- *L* Daylight
- *STL* Street Lights
- *USL* Street LIghts Unlit
- *NSL* No Street Lights
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FACTORS
- *+VE* Positive Breath Test
- *R.TURN* Right Turn Manoeuvre
- *O/TAKE* Overtaking Manoeuvre
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Special Conditions
- *ATS OUT* Traffic Lights Not Working
- *ATS DEF* Traffic Lights Defective
- *SIGNS* Road Signs Defective or Obscurred
- *RD WRKS* Road Works
- *Surface* Road Surface Defective

APPENDIX F. Illustrative Site Layout

metres 10 20 30 40 50

SCALE BAR: 1:500

North

NT = Indicative New Tree locations refer to Landscape design by Pegasus Group

ILLUSTRATIVE MASTER PLAN
1.500 @ A1

SKETCH ISSUE 27.01.2023

Revision	Description	Date	Drawn	Checked
4	Planning Issue	11/01/2022	PR	BC
3	Planning Issue	15/12/2022	PR	BC
2	Preliminary Issue	29/11/2022	PR	BC
1	First Issue	11/11/2022	PR	BC

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W scottbrownrigg.com

Client's Name
Wates Developments

Job Title
Ashford Road Maidstone

Drawing Title
Illustrative Master Plan

Scale
1 : 500 @A1

Practice Project No. Originator Volume Level Type Role Number
19512-SBR- ZZ-XX-DR-A-83100

Suitability Code Status
PLANNING ISSUE

Rev
4

APPENDIX G. Stage One Road Safety Audit

Road Safety Audit Report

Incorporating
Stage 1 Completion of Preliminary Design;
Design Organisation Response to items raised.

Proposed Access off and associated Highway Works along the A20 Ashford Road Maidstone

Client:
Wates Developments

Client reference:
ITB15323

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Emmer Green
READING
RG4 8PH

E: office@fenley.co.uk
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Report Status 3

Job no	**RSA-21-169**	Issue no	3	Date	February 2022
Prepared by	FB	Verified by	JJF	Approved by	JJF
Filename and Path	Fenley/Road Safety Audits/RSA-21/RSA-21-169-3				

1.0 PROJECT DETAILS

Report Title:	Stage 1 Road Safety Audit
Date:	February 2022
Document reference and revision:	RSA-21-169-3
Prepared by:	Fenley Road Safety Limited
Design Organisation:	i-Transport
Project Sponsor:	Wates Development
Overseeing Organisation:	Kent County Council

REV	ISSUE PURPOSE	AUTHOR	CHECKED	APPROVED	DATE
0	Stage 1 Road Safety Audit drafted for Audit Team discussions	JJF			4th January 2022
1	Stage 1 Road Safety Audit finalised and issued to the Design Organisation	JJF	FB	JJF	20th January 2022
2	Stage 1 Road Safety Audit Report format amended to incorporate a row for inclusion of a Design Organisation Response in order to maintain a concise record of items raised	JJF			20th January 2022
3	Design Organisation Response incorporated	Duncan Findlay on behalf of i-Transport			1st February 2022

Contents:

Appendices:

2.0 INTRODUCTION

2.1 This report has been prepared by Fenley Road Safety Limited and results from a Stage 1 Road Safety Audit of a proposed access off and associated highway works along the A20, Ashford Road in Maidstone. The priority access is formed with 15 metre corner radii tapering to the existing kerbline to the east (exit) and to the proposed 7.3 metre wide access road to the west (entry). The highway works consist of the widening along the southern side of the A20, opposite the proposed access, in order to allow for the provision of a right turn lane that has been designed in accordance the requirements set out in CD123 of the Design Manual for Roads and Bridges. The scheme is proposed in order to facilitate a Distribution Centre on a circa 3 acre parcel of land the lies to the west of the Hollingborune Interchange Link Road which connects to the M20, east of the A20 and south of a large commercial development that is currently under construction.

2.2 The Audit Team have been made aware that the proposals accommodate one Departure from Standard that relates to forward visibility to the proposed access from the west, which is yet to be approved by the County Highway Authority. The 156 metre visibility envelope can be achieved from an eye height of 1.05 metres to a height of 0.6 metres rather than the 0.26 metre height as set out in national standards.

2.3 It is understood that the 0.26 metre height stated within National Standards relates to the minimum height of a fog lamp and is a requirement on approach to a junction covering a distance of 1.5 times the SSD in order to allow for the driver of vehicle to become aware of a vehicle in front that could brake heavily; due to a hazard ahead such as a vehicle pulling out in front of them, a non-motorised user attempting to cross the carriageway ahead, a vehicle undertaking a turn ahead or allowing traffic to cross their path, amongst other thing. This Stage 1 Road Safety Audit includes an assessment of the Departure from Standard and raises a road safety concern if applicable.

2.4 The Road Safety Audit was undertaken during January 2022 in accordance with the Road Safety Audit Brief provided, on the 12th January 2022 by the Design Organisation, i-Transport, on behalf of the Project Sponsor, Wates Development. The Road Safety Audit comprised of a site visit as well as an examination of the documents provided which are identified in **Appendix A1**. The Audit Team were satisfied that that the Audit Brief was sufficient for the purpose of the Audit instructed.

2.5 The Road Safety Audit has been undertaken by an Audit Team whose qualifications and experience accord with the requirements of GG119. The Audit Team consists of the following members:

Audit Team Leader
Jamie Fenning *BSc (Hons), MIHE, MCIHT, MSoRSA, HE RSA Certificate of Competency*
Road Safety / Highway Engineer
Audit Team Member
Farouk Bhatti *MCIHT*
Road Safety Auditor

2.6 The site visit associated with this Road Safety Audit was undertaken by the Audit Team Leader and Audit Team Member, during the afternoon of Wednesday 16th October 2019 between the hours of 14:30 and 15:15 and revisited on the 19th January 2022 between the hours of 15:30 and 16:00. The site visit involved walking and driving around the local highway network for a 75-minute period whilst observing local infrastructure and current traffic conditions. The weather during the site visit was overcast, the road surface was observed both dry and damp and visibility was good. No pedestrians but a single cyclists was observed during the site visit. Vehicular traffic to include motorcycles, cars, passenger service vehicles, agricultural, light and heavy goods vehicles were also observed, the traffic flow was moderate. Vehicular speeds were not recorded by the Audit Team.

2.7 The terms of reference of this Road Safety Audit are as described in GG119. The scheme has been examined and this report compiled, only with regard to the safety implications for road users of the scheme as presented. It has not been examined or verified for compliance with any other standards or criteria. However, in order to clearly explain a safety problem or the recommendation to resolve a problem, the Audit Team may on occasion have referred to a design standard for information only. All comments and recommendations are referenced to the design drawings supplied with the Audit Brief and the location of road safety concerns raised have been illustrated adjacent to the items along with relevant photographs for clarity, where appropriate, as well as on the Location Plan attached at **Appendix A2**.

Design Organisation Response

2.8 In accordance with national standards, this Road Safety Audit was finalised and issued to the Design Organisation as per the Road Safety Audit Report Template within Appendix D of GG119, which can be provided upon request from either the Audit Team or Design Organisation. The format of the Audit Report was subsequently revised to incorporate these paragraphs under the sub-heading as well as sufficient space beneath the items and recommendation, within Section 4, for the inclusion of a Design Organisation Response. This is generally contained within a separate Design Organisation Response Report but is included

within this document in order to maintain a single record of all problems, recommendations and responses for the benefit of a concise Road Safety Audit trail to be held on file for Quality Assurance purposes.

2.9 The Design Organisation Response has been prepared by:

Name: Duncan Findlay
Position / Organisation: Associate, i-Transport LLP

2.10 Any drawings or documents associated with the Design Organisation Response are listed at **Appendix A3,** if applicable.

3.0 ITEMS RAISED IN ANY PREVIOUS ROAD SAFETY AUDITS

3.1 Fenley Road Safety Limited undertook a Stage 1 Road Safety Audits of the proposal to form a priority access off and right turn lane along the A20 Ashford Road at this location, previously ref: RSA-19-085. That document raised a number of road safety concerns. The current proposals increase the width of the proposed access road from 6 metres to 7.3 metres, introduces tapers alongside the 15 metre radii and identifies that an increased level of visibility is achievable. The current proposals are fully assessed within this Stage 1 Road Safety Audit and any road safety concerns that are applicable, raised whether or not addressed within the previous Stage 1 Road Safety Audit / Design Organisation Response report.

4.0 ITEMS RAISED AT THIS STAGE 1 ROAD SAFETY AUDIT

A.1	LOCAL ALIGNMENT
A.1.1	**PROBLEM**
Location:	A20 / Ashford Road
Summary:	Horizontal alignment of the eastern kerbline which is to be formed by the adjacent development could limit the level of visibility to and from the proposed access
Acc Type:	Side impact collisions, rear end shunts

To the north of the proposed access, the A20, Ashford Road is relatively straight and passes over a crest where overtaking restrictions are present due to the lack of forward visibility. The land to the west of the application site is understood to have an extant permission for a commercial development that is under construction and is to be accessed via a priority access that benefits from a right turn lane formed by widening the existing carriageway to the east. The current proposals that are subject to this Stage 1 Road Safety Audit, include the provision of a priority junction that benefits from a ghost island right turn lane formed by widening of the existing carriageway to the west. The scheme drawings provided with the Audit Brief, illustrates that a visibility splay of 2.4x156 metres is achievable to the north (right) and that a visibility envelope of 156 metres is achievable from an eye height of 1.05 metres to an object height of 0.6 metres, along the carriageway for a distance of 1.5x the SSD (234 metres). However, the scheme drawing is based upon a topographical survey and does not include the widening along on the eastern side of the A20 Ashford Road to the northwest that is to be provided as part of the adjacent development. That widening will result in a southbound vehicle approaching along a path that is circa 2 metres further east than existing. The Audit Team are concerned that the level of visibility illustrated and provided in accordance with 85th percentile observed approach speeds, will not be achievable following implementation of the adjacent highway works, particularly due to the trunk of the mature tree just to the north of the proposed access which was measured 2.8 metres from the existing channel line. The driver / rider of southbound vehicles may not therefore become aware of the proposed access or a vehicle turning in / out, at a safe distance and the driver / rider of a vehicle attempting to egress may not become aware of approaching southbound vehicles which could lead to side or rear impact collisions.

RECOMMENDATION:

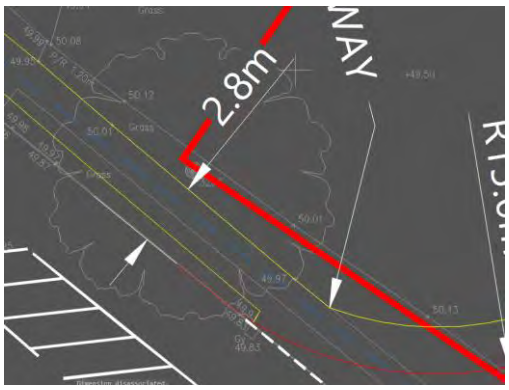
It is recommended that the adjacent highway works are included on the scheme drawing and that sufficient visibility is achievable.

Location Plan:

DESIGN ORGANISATION RESPONSE provided by i-Transport on the 1st February 2022 following formal issue of this Stage 1 Road Safety Audit on the 20th January 2022

Agreed – Drawing ITB15323-GA-001E has been revised to show the adjacent highway works as part of planning application 17/502331/OUT with the visibility splay adjusted accordingly.

From review of the topographical survey, it would appear that the existing tree to the north of the proposed access arrangements, has been plotted slightly incorrectly. Below illustrates 2.8m from the existing channel line and it is clear that the revised visibility splay would still continue to be in front of the tree.



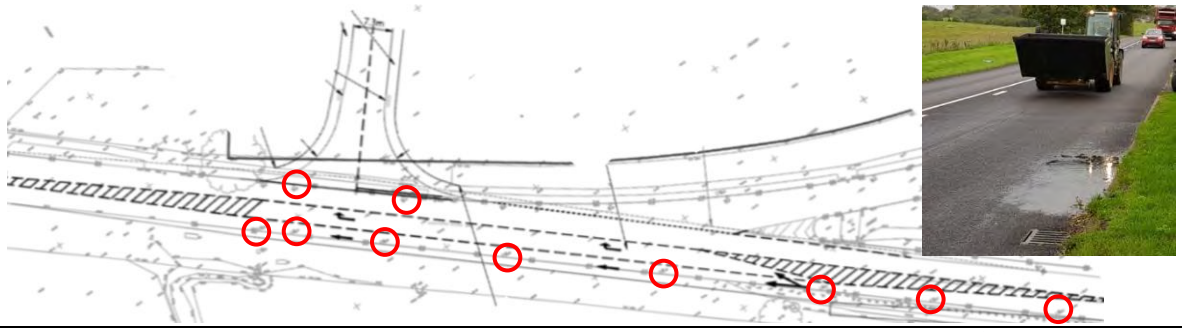
A.2	GENERAL
A.2.1	**PROBLEM**
Location:	A20 Ashford Road
Summary:	Existing road gullies will be within the path of vehicles
Acc Type:	Loss of control

The A20, Ashford Road accommodates a network of road gullies that drain the surface water which accumulates on the carriageway. The scheme drawing provided with the Audit Brief does not identify that the existing surface water drainage network is to be modified. Whilst the removal of road gullies without the re-provision of sufficient drainage is likely to result in surface water ponding, road gullies within the path of a vehicle, particularly a two wheeled vehicle, could destabilise the rider / driver and lead to loss of control type collisions.

RECOMMENDATION:

It is recommended that an adequate surface water drainage network is provided.

Location Plan: (Illustration below provided as an example, not all locations may be identified)



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 1st February 2022 following formal issue of this Stage 1 Road Safety Audit on the 20th January 2022

Agreed – surface water drainage to be re-provided accordingly. Details in relation to the relocation will be provided at detailed design stage.

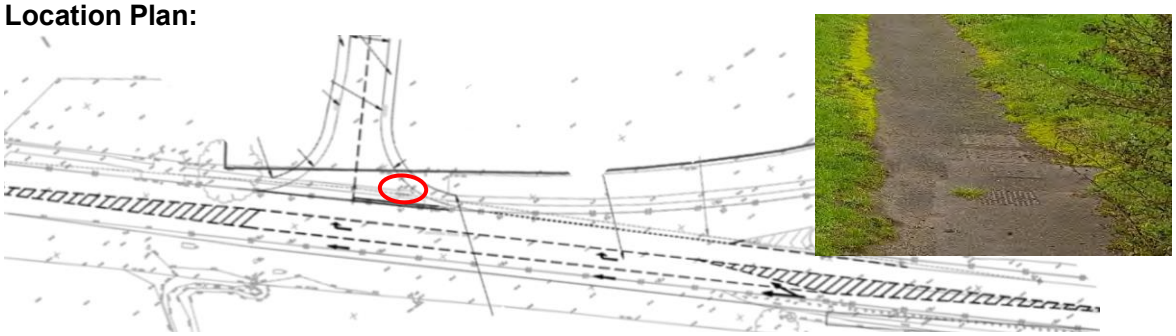
A.2.2	**PROBLEM**
Location:	Proposed access
Summary:	Existing utility covers within the footway / verge will be situated within the access carriageway
Acc Type:	Loss of control

The A20 Ashford Road accommodates a number of utility covers that are situated within the existing verge / footway as well as carriageway. The scheme drawings identify that a number of the covers that are currently within the footway / verge, will be situated within the proposed access. Those utility covers will become an obstruction unless adjusted adequately and could even fail due to not being sufficient to accommodate the expected traffic flow leading to loss of control type collisions or junction overshoots should their frictional surface properties be insufficient, particularly for two-wheeled vehicles.

RECOMMENDATION:

It is recommended that existing utility covers are relocated / adjusted appropriately

Location Plan:



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 1st February 2022 following formal issue of this Stage 1 Road Safety Audit on the 20th January 2022

Agreed – existing utility covers to be relocated / adjusted accordingly. Details in relation to the relocation and adjustment to be agreed at detailed design stage

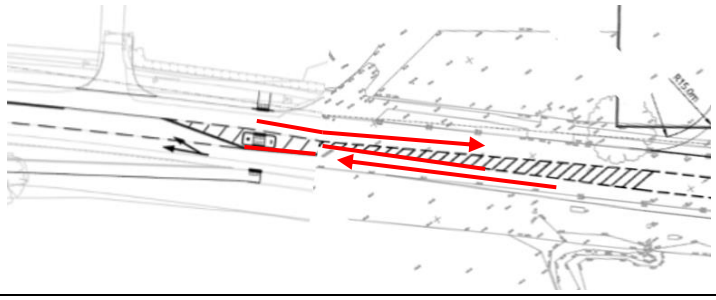
A.3	JUNCTIONS
A.3.1	**PROBLEM**
Location:	A20 / Ashford Road
Summary:	Proposed centreline taper to the northwest does not generate a smooth alignment
Acc Type:	Kerb strikes and loss of control

To the north of the proposed access, the A20, Ashford Road is relatively straight in alignment. The current proposals provide a priority junction off the eastern side of the carriageway that benefits from a ghost island right turn lane formed by widening the existing carriageway to the west. The scheme drawings provided with the Audit Brief illustrates that the ghost island is to accommodate tapers in accordance with CD123, however, the approved right turn lane associated with the adjacent development that is to be provided imminently and accommodates a pedestrian refuge, is not illustrated. The scheme drawing associated with the third-party scheme identifies a taper that does not appear to accord with national standards for the observed speeds and the implementation of both schemes will not generate a smooth alignment which could lead to vehicles striking the kerb associated with the refuge island and loss of control type collisions.

RECOMMENDATION:

It is recommended that the nearside edge of carriageway and offside centreline markings of each lane is amended to allow for a smooth alignment

Location Plan:



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 1st February 2022 following formal issue of this Stage 1 Road Safety Audit on the 20th January 2022

Agreed – Drawing ITB15323-GA-001E has been revised to include the adjacent highway works as part of planning application 17/502331/OUT. The alignment generated as part of the works, provides the appropriate radii associated with the design speed.

A.3.2	**PROBLEM**
Location:	Proposed access and A20 Ashford Road
Summary:	Driver confusion over vehicle direction with vehicles approaching adjacent slip road
Acc Type:	Side impact collisions

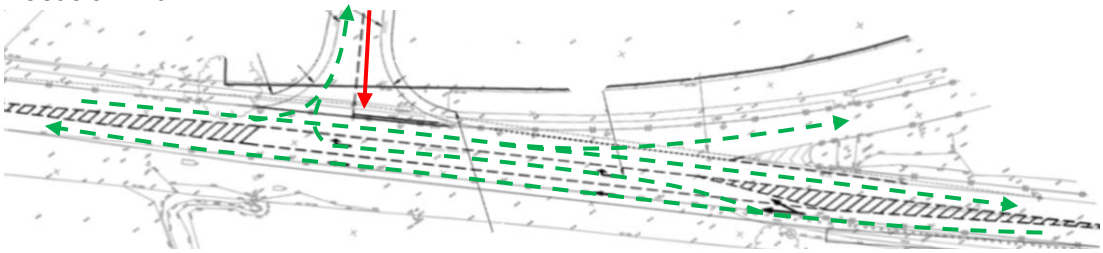
The A20 Ashford Road is part of the primary road network that links Maidstone with Ashford and connects with the strategic road network at a roundabout just 300 metres or so, to the south. A bypass is provided for southbound traffic to avoid the roundabout and continue unopposed

merging with the A20 Ashford Road to the south. The proposals include the provision of a priority access off the eastern side of the A20 Ashford Road that is to be situated just to the north of the access to the bypass. Data provided with the Audit Brief identifies a two-way traffic flow exceeding 1,500 vehicles during the evening peak hour (17:00-18:00) and the Transport Assessment associated with the adjacent extant development will generate in the region of 100 additional movements either side of the access, during the afternoon peak hour equating to a total of in excess of 1,600 two-way vehicular movements past the proposed access. A traffic flow of 1,600 vehicles in an hour plus the 58 that are expected to be generated by the proposals, equates to an average of 1 vehicle passing every 2.1 seconds. No modelling data has been provided with the Audit Brief, should insufficient gaps be present, the driver of an egressing vehicle could become frustrated with waiting to exit and attempt their manoeuvre when it is not safe to do so. The likelihood of a vehicle attempting to turn right when it is not safe to do so, increases due to the presence of the existing bypass to the east as approaching southbound vehicles could be indicating left and a frustrated driver could attempt to undertake their manoeuvre without waiting to ensure it is safe to proceed. A vehicle egressing when it is not safe to do so, could lead to side or rear end impact collision.

RECOMMENDATION:

It is recommended that the proposed access is formed with an appropriate junction that minimises delay and queuing thus maintaining driver frustration to a minimum.

Location Plan:



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 1st February 2022 following formal issue of this Stage 1 Road Safety Audit on the 20th January 2022

ITB15323-GA-001 demonstrates that visibility can be achieved in line with the 85th percentile vehicle speeds.

In addition, capacity testing has been undertaken for 2027 with committed and proposed development. This demonstrates that the site access will operate within capacity with minimal queuing and delay to vehicles exiting the site. The capacity assessments are included in Appendix A3.

	AM Peak Hour			PM Peak Hour		
	RFC	Queue (veh)	Delay (s/veh)	RFC	Queue (veh)	Delay (s/veh)
Site Access	0.07	<1	11	0.12	<1	12
A20 AshfordRd(right turn)	0.06	<1	9	0.06	<1	10

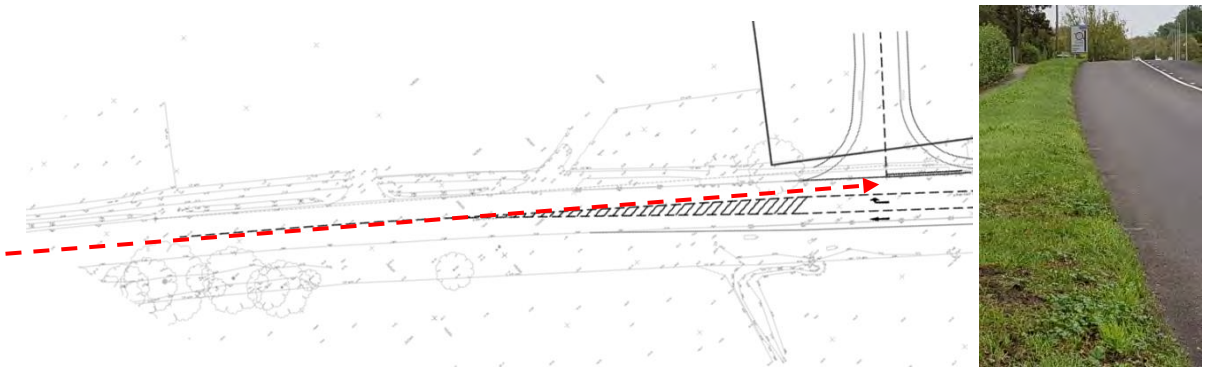
A.3.3	**PROBLEM**
Location:	A20 / Ashford Road
Summary:	Insufficient visibility to and from the proposed access
Acc Type:	Side impact collisions, rear end shunts

The A20, Ashford Road is a single carriageway two-way derestricted road. The Audit Brief identifies that a speed survey has been undertaken and provides the 85th percentile dry weather approach speeds that were observed and have been utilised to determine the stopping sight distance applicable for visibility purposes. However, the Audit Brief does not include details of the survey or full results. In accordance with the derestricted / speed limit of the A20 Ashford Road, a visibility splay of 215 metres either side of the proposed access would allow for the safe manoeuvring of vehicles, however due to the vertical alignment of the carriageway, a splay of 215 metres is not achievable. Insufficient visibilities are likely to result in vehicles attempting to exit when not safe to do so increasing the likelihood of side and rear-end impact collisions.

RECOMMENDATION:

It is recommended that warning signage is provided to highlight the presence of the proposed access to ensure that all approaching drivers / riders become aware of the proposed access.

Location Plan:



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 1st February 2022 following formal issue of this Stage 1 Road Safety Audit on the 20th January 2022

Agreed – appropriate signage to be provided. Exact details and locations to be agreed at detailed design stage with Kent County Council.

A.4	WALKING CYCLING AND HORSE RIDING
A.4.1	**PROBLEM**
Location:	A20 / Ashford Road
Summary:	No off-road route is available for cyclists between the proposed development and the footway cycleway to be provided as part of the adjacent development
Acc Type:	Vehicle cyclist and cyclist pedestrian collisions

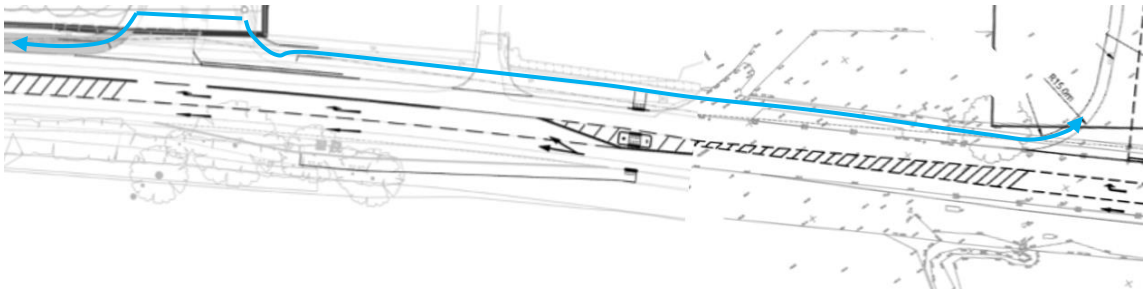
To the north, the A20 Ashford Road currently accommodates a footway to the east of the carriageway that is understood will be upgraded to a footway cycleway as part of the highway works associated with an adjacent development. The proposals subject to this Stage 1 Road

Safety Audit include the provision of a priority access off the eastern side of the carriageway that will serve a commercial development for distribution. The Audit Team is unaware of the number of employees that are expected cycle to the site, however, any cyclists travelling between the site and areas to the north that will benefit from the off-road cycle facility provided as part of the adjacent site, will be required to enter and travel along the carriageway which could lead to vehicle cyclist collisions or could travel along the existing narrow footway where pedestrians may be present leading to a cyclist pedestrian collision.

RECOMMENDATION:

It is recommended that the footway along the A20 Ashford Road is upgraded to a footway-cycleway to meet the one that is to be provided as part of the highway works associated with the adjacent development

Location Plan:



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 1st February 2022 following formal issue of this Stage 1 Road Safety Audit on the 20th January 2022

Drawing ITB15323-GA-001 has been revised to show a footway/cycleway connecting to the west.

A.5	ROAD SIGNS, CARRIAGEWAY MARKINGS AND LIGHTING
A.5.1	**PROBLEM**
Location:	A20 Ashford Road
Summary:	Drivers may attempt to overtake where it is not safe to do so
Acc Type:	Head on collisions

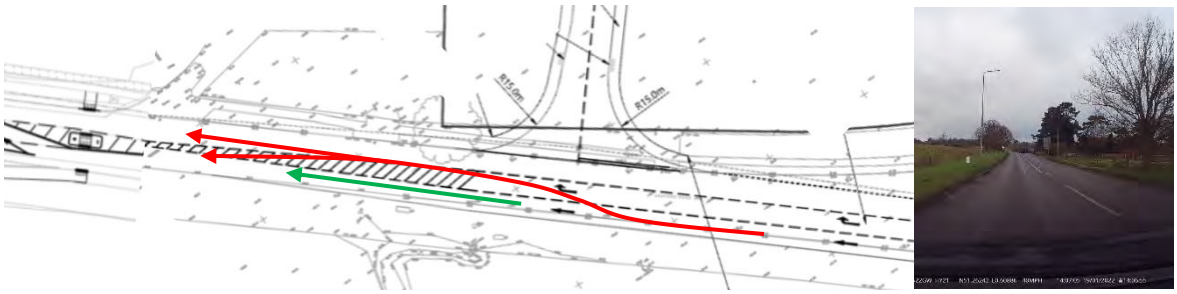
The A20, Ashford Road carriageway to the north of the proposed access accommodates a solid white road centreline markings that restrict vehicles from crossing onto the opposing lane and overtaking when approaching a crest in the carriageway. The solid road centreline is to be adjusted in accordance with a right turn lane and pedestrian refuge island that is to be provided as part of an adjacent commercial development. The proposals include the provision of a priority access off the eastern side of the carriageway approximately 80 metres south of the pedestrian refuge and includes highway works to form a right turn lane that has been designed in accordance with CD123 of the Design Manual for Roads and Bridges. The scheme drawing illustrates that the proposed right turn lane ghost island is to be formed with a broken road centreline allowing vehicles to cross into the opposing lane if it is safe to do so. As such, vehicles may attempt to overtake in proximity of the right turn lane and pedestrian refuge which could lead to a vehicle

collision with the refuge island or a vehicle illegally travelling the wrong side of the refuge island into the path of an opposing vehicle and a head-on collision.

RECOMMENDATION:

It is recommended that double white road centrelines are provided to restrict vehicles from crossing into opposing traffic

Location Plan:



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 1st February 2022 following formal issue of this Stage 1 Road Safety Audit on the 20th January 2022

Agreed – Exact details to be agreed with KCC at detailed design stage.

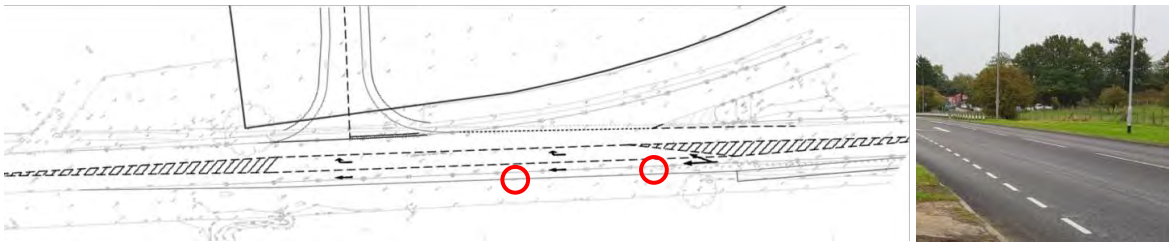
A.5.2	**PROBLEM**
Location:	A20 / Ashford Road
Summary:	Proposed carriageway widening has an impact on the existing lighting columns
Acc Type:	Vehicle-street furniture strikes

The A20, Ashford Road benefits from a network of street lighting with columns located within the grass verge along each side of the carriageway. The proposals realign the southern channel line such, that the existing street lighting columns will be situated within the path of northbound vehicles and will therefore be an obstruction. The removal of the street lighting columns is likely to result in inadequate lighting of the proposed ghost island right turn junction.

RECOMMENDATION:

It is recommended that the existing columns are relocated appropriately.

Location Plan:



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 1st February 2022 following formal issue of this Stage 1 Road Safety Audit on the 20th January 2022

Agreed – existing lighting columns to be relocated outside of the proposed widening. Exact details and locations to be agreed at detailed design stage with Kent County Council.

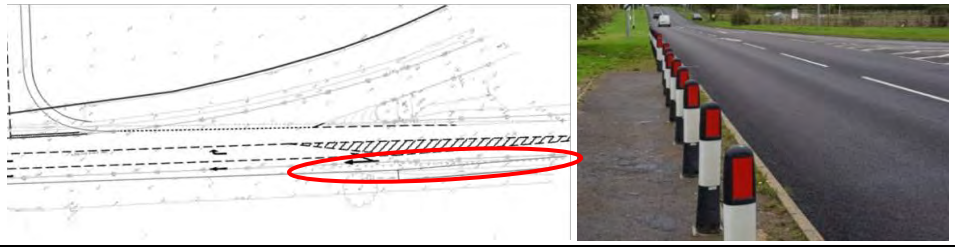
A.5.3	**PROBLEM**
Location:	A20 / Ashford Road
Summary:	Proposed carriageway widening has an impact on the existing bollards
Acc Type:	Vehicle-street furniture strikes

The A20, Ashford Road accommodates reflective bollards that are present for reasons unknown to the Audit Team but could have been installed to highlight the presence of a footway or to prevent parking. The proposals realign the southern channel line such, that the bollards will be situated within the path of northbound vehicles and will, therefore, be an obstruction. The removal of the reflective bollards could also result in insufficient driver awareness.

RECOMMENDATION:

It is recommended that the existing bollards are relocated.

Location Plan:



DESIGN ORGANISATION RESPONSE provided by i-Transport on the 1st February 2022 following formal issue of this Stage 1 Road Safety Audit on the 20th January 2022

Discussions to take place at detailed design stage to identify whether bollards are required. If identified for retention, then these will be re-provided in line with discussions with Kent County Council.

A.5.4	**PROBLEM**
Location:	A20 / Ashford Road
Summary:	Existing road sign could distract drivers from becoming aware of the proposed
Acc Type:	Side impact collisions, rear end shunts

The A20, Ashford Road is a single carriageway derestricted road which connects Maidstone with Ashford and links to the Strategic Road Network at a roundabout junction just south of the proposed access. An Advance Direction Sign is present within the eastern verge to the north of the proposed access. The presence of the sign may distract a drivers eye from the immediate road ahead where the proposed access is present. As such, a driver approaching the proposed access may not benefit from sufficient warning of the proposed access which could lead to side and rear impact collisions as well as heavy braking and loss of control type incidents.

RECOMMENDATION:

It is recommended that the existing ADS is relocated where appropriate and the proposed access, is added incorporated in the sign.

Location Plan:

DESIGN ORGANISATION RESPONSE provided by i-Transport on the 1st February 2022 following formal issue of this Stage 1 Road Safety Audit on the 20th January 2022

Agreed – existing ADS to be relocated and amended as required. Exact details and locations to be agreed at detailed design stage with Kent County Council.

5.0 STAGE 1 ROAD SAFETY AUDIT TEAM STATEMENT

5.1 We certify that this Road Safety Audit has been carried out in accordance with GG 119.

Audit Team Leader

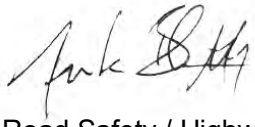
Name: **Jamie Fenning** *BSc (Hons), MIHE, MCIHT, MSoRSA, HE RSA Certificate of Competency*

Signed: 

Position: Road Safety / Highway Engineer
Organisation: Fenley Road Safety Limited
Date: 20th January 2022

Audit Team Member

Name: **Farouk Bhatti** *MCIHT*

Signed: 

Position: Road Safety / Highway Engineer
Organisation: Fenley Road Safety Limited
Date: 20th January 2022

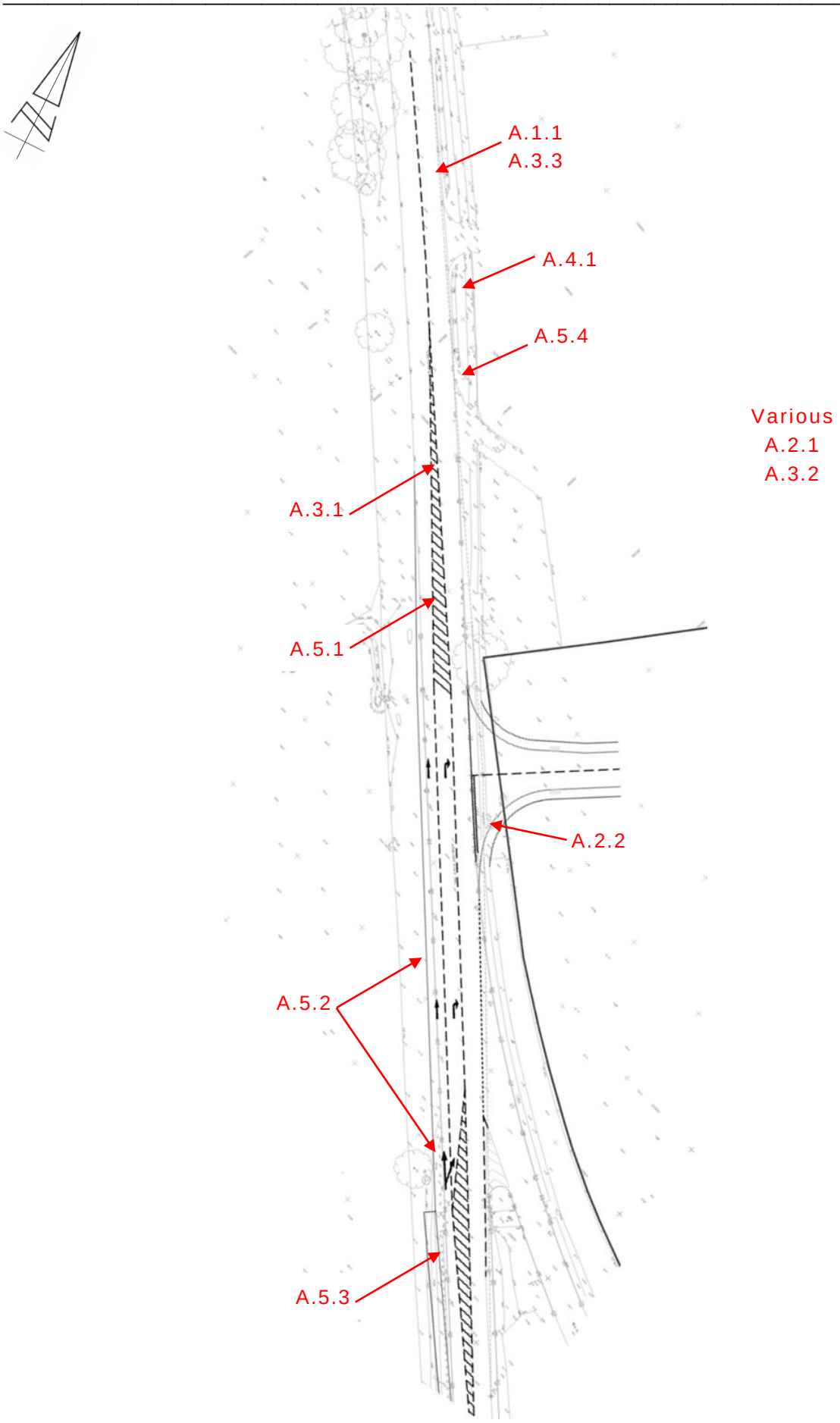
Appendix A1

Documents and Drawings provided for this Road Safety Audit

Audit Stage	Doc. No.	Rev	Title
Stage 1	ITB15323-007	-	Road Safety Audit Brief
	Dwg No.	Rev	Title
	ITB15323-GA-001	D	Proposed Site Access Arrangements
	ITB15323-GA-003	B	Proposed Site Access – Long Section 1.5 x SSD
	ITB15323-GA-004	-	Swept Path Analysis
	ITB15323-GA-007	-	Long Section- Vertical Alignment
	9325-PL-104	A	Masterplan
	Obtained from Local Authorities Planning Portal		
	B20139-PPL-XX-XX-DR-C-0102	P04	Site Access and Footway cycleway works

Appendix A2

Item Location Plan


A.1.1
A.3.3
A.4.1
A.5.4
Various
A.2.1
A.3.2
A.3.1
A.5.1
A.2.2
A.5.2
A.5.3

Appendix A3

Drawings associated with the Design Organisation Response

Audit Stage	Drawing No.	Rev	Title
Stage 1	ITB15323-GA-001	E	Proposed Site Access Arrangements


fenley

Highways, Transportation and Road Safety
2 Blaenant – Emmer Green
Reading – RG4 8PH
M: 07929 857 229
E: office@fenley.co.uk

Duncan Findlay
Associate
i-Transport
85 Gresham Street
London
EC2V 7NQ

Our Ref: RSA-21-169-L001

Friday 18th February 2022

Dear Mr Findlay

Re: A20 Ashford Road, Maidestone – RSA-21-169

Further to receipt of your email dated 9th February 2022 following your meeting with meeting with Kent Highway Services and their confirmation that they are happy for visibility to be illustrated on the scheme drawing in accordance with the absolute minimum stopping sight distance and your request for further comment, I have the following comments.

It is understood that the 119 and 100 metre stopping sight distance that has been utilised for visibility purposes accords with the observed 85th percentile east and westbound speeds of 51.8mph and 46.4mph based on a 2 second reaction time and deceleration rate of 0.375g stopping sight distance as opposed to 0.25g.

Based on the details published within Manual for Streets 2, the use of the greater deceleration rate accords with international vehicle standards for heavy goods vehicles and therefore the 119 and 100 metre splays should be adequate. However, this does not take account of the bonnet length of a vehicle and therefore 2.4 metres should be added to the forward visibility envelope to a slow moving vehicle turning out of the proposed access.

Measurements taken off the scheme drawing detailing a long section of the A20 Ashford Road, ref: ITB15323-GA-010, indicate that a forward visibility envelope of 155.3 metres is achievable from an eye height of 1.05 metres to a level of 0.26 metres at the road centreline of the proposed access. As such, the lowest permitted level fog lamps of an egressing vehicle, will be visible to an approaching driver.

It is understood that Kent Highway Services, as the County Highway Authority have accepted the provision of visibility in accordance with the absolute minimum stopping sight distance of the 85th percentile speeds, it is recommended, however, that the maximum achievable visibilities are illustrated to prevent obstruction being installed which could limit visibility in excess of 119 and 100 metres.

I trust that this correspondence is sufficient, should you require anything further, please do not hesitate to contact me.

Yours sincerely

Jamie Fenning
For and on behalf of Fenley

APPENDIX H. Swept Path Analysis

DRAWING ISSUED FOR FEASIBILITY CONSIDERATION AND PLANNING PURPOSES ONLY. DRAWING NOT TO BE USED FOR CONSTRUCTION. I-TRANSPORT LLP ACCEPT NO RESPONSIBILITY FOR ERRORS MADE BY OTHERS IN SCALING FROM THIS DRAWING. MEASUREMENTS SHOULD BE TAKEN FROM FIGURED DIMENSIONS ONLY. CDM REQUIREMENTS CONSIDERED AT FEASIBILITY STAGE ONLY. FURTHER CONSIDERATION REQUIRED BY DETAILED DESIGN TEAM.

SCALE BAR @ 1:1000

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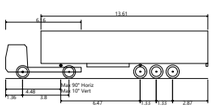

FTA Design Articulated Vehicle (2016) - including wing mirrors

Overall Length	16.480m
Overall Width	2.550m
Overall Body Height	3.870m
Min Body Ground Clearance	0.515m
Max Track Width	2.470m
Lock to lock time	3.00s
Kerb to Kerb Turning Radius	6.600m

i-Transport

The Square, Basing View,
Basingstoke, Hampshire, RG21 4EB

Tel: 01256 637940

www.i-transport.co.uk

REV	DATE	BY	DESCRIPTION	CHK	APD
B	19.12.22	JMc	UPDATED SITE LAYOUT	RW	DF
A	~~14.12.22~~	~~JMc~~	~~UPDATED SITE LAYOUT~~	~~RW~~	~~JCB~~

STATUS: FOR INFORMATION

TITLE: SWEPT PATH ANALYSIS - 16.5m ARTICUALTED VEHICLE

PROJECT: ASHFORD ROAD, MAIDSTONE

CLIENT: WATES DEVELOPMENT

DRAWN:	CHECKED:	APPROVED:
JB	DF	JCB
PROJECT No:	**SCALE @ A3:**	**DATE:**
ITB15323	1:1000	13.12.21
DRAWING No:		**REV:**
ITB15323-GA-008		B

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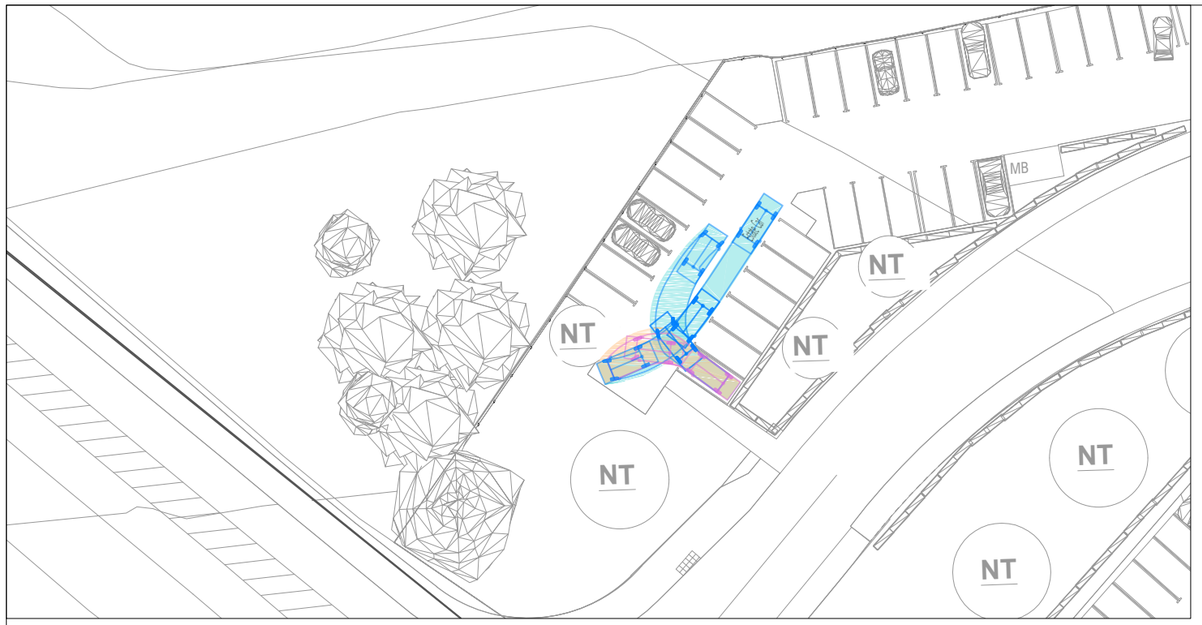

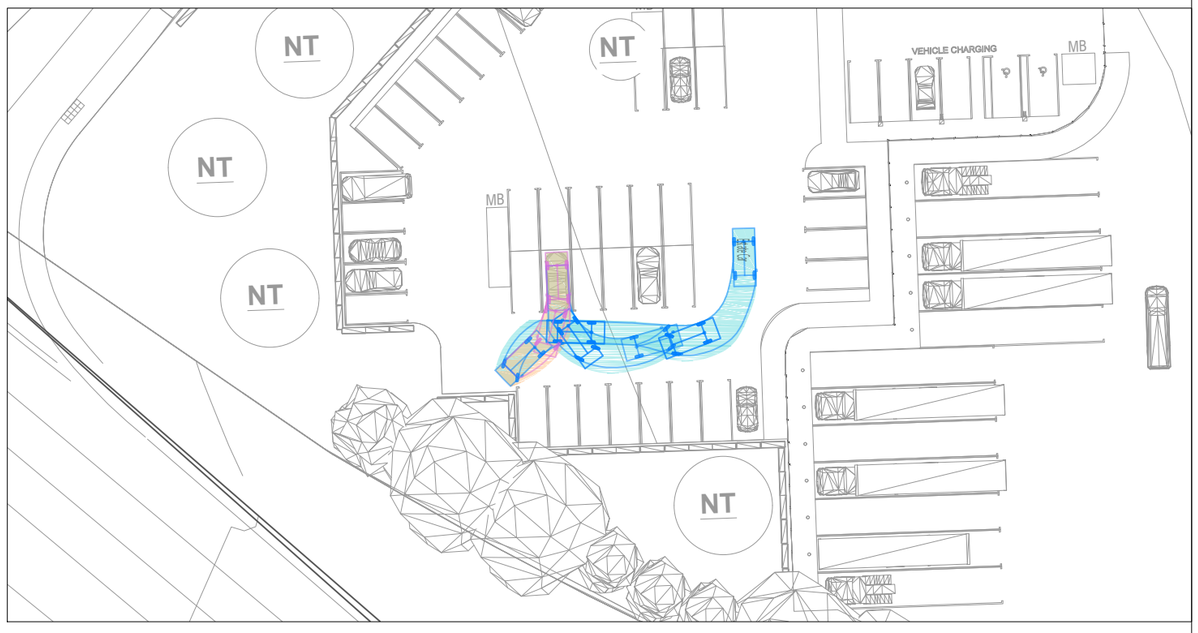

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SCALE BAR @ 1:1000

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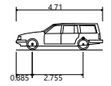

Estate Car including wing mirrors	
Overall Length	4.710m
Overall Width	1.804m
Overall Body Height	1.442m
Min Body Ground Clearance	0.207m
Max Track Width	1.756m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	5.950m

i-Transport

The Square, Basing View,
Basingstoke, Hampshire, RG21 4EB

Tel: 01256 637940

www.i-transport.co.uk

REV	DATE	BY	DESCRIPTION	CHK	APD
B	19.12.22	JMc	UPDATED SITE LAYOUT	RW	DF
A	14.11.22	JMc	UPDATED SITE LAYOUT	DF	JCB

STATUS: FOR INFORMATION

TITLE: SWEPT PATH ANALYSIS - ESTATE CAR

PROJECT: ASHFORD ROAD, MAIDSTONE

CLIENT: WATES DEVELOPMENT

DRAWN:	CHECKED:	APPROVED:
JB	DF	JCB
PROJECT No:	**SCALE @ A3:**	**DATE:**
ITB15323	1:1000	13.12.21

DRAWING No: ITB15323-GA-009 REV: B

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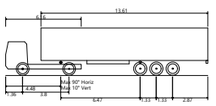

FTA Design Articulated Vehicle (2016) - including wing mirrors

Overall Length	16.480m
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Overall Body Height	3.870m
Min Body Ground Clearance	0.515m
Max Track Width	2.470m
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REV	DATE	BY	DESCRIPTION	CHK	APD
B	19.12.22	JMc	UPDATED SITE LAYOUT	RW	DF
A	14.11.22	JMc	UPDATED SITE LAYOUT	DF	JCB

STATUS: FOR INFORMATION

TITLE: SWEPT PATH ANALYSIS - 16.5m ARTICUALTED VEHICLE

PROJECT: ASHFORD ROAD, MAIDSTONE

CLIENT: WATES DEVELOPMENT

DRAWN:	CHECKED:	APPROVED:
JMc	DF	JCB
PROJECT No:	**SCALE @ A3:**	**DATE:**
ITB15323	1:1000	27.10.22
DRAWING No:		**REV:**
ITB15323-GA-011		B

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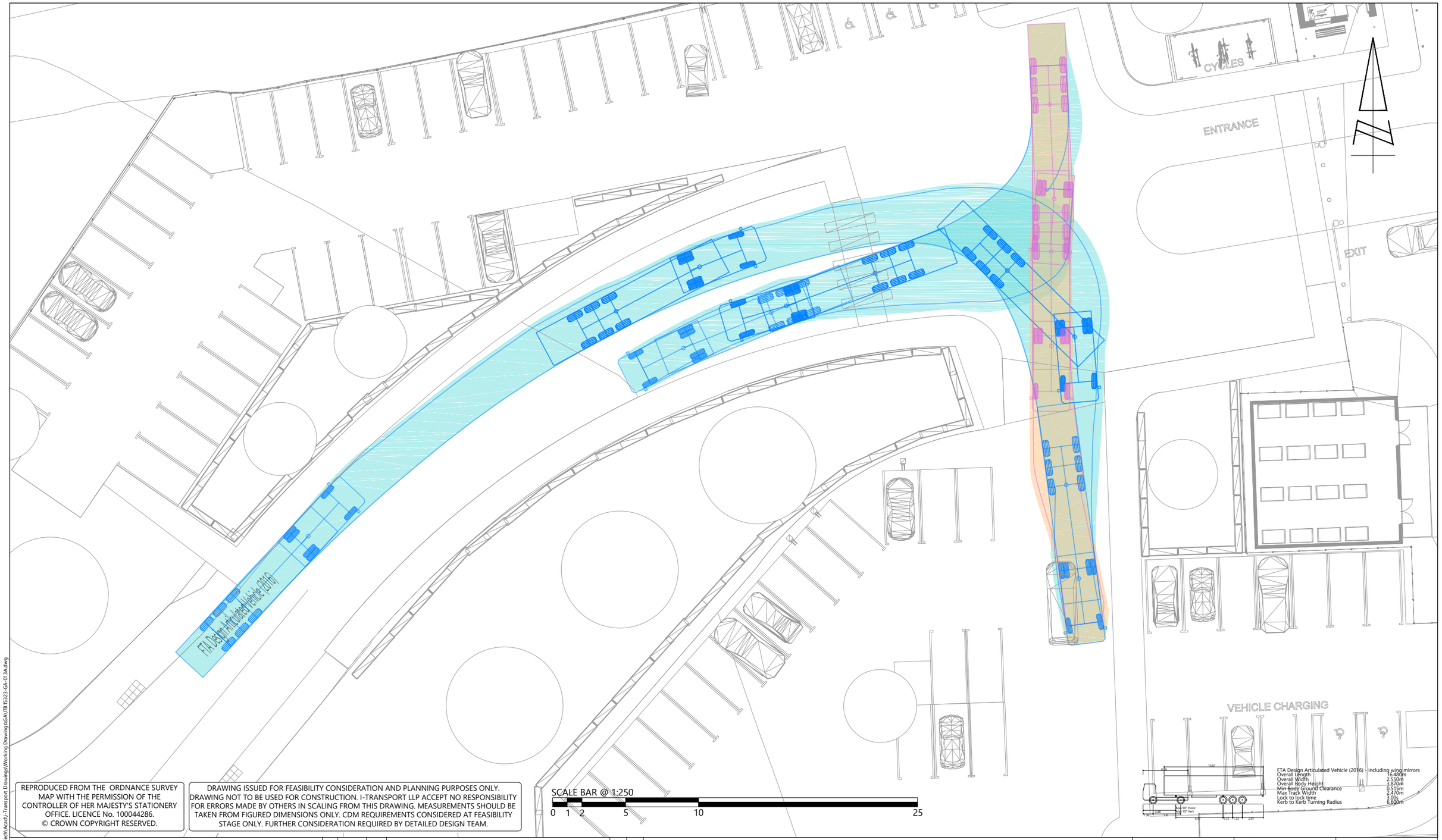

DRAWING ISSUED FOR FEASIBILITY CONSIDERATION AND PLANNING PURPOSES ONLY. DRAWING NOT TO BE USED FOR CONSTRUCTION. I-TRANSPORT LLP ACCEPT NO RESPONSIBILITY FOR ERRORS MADE BY OTHERS IN SCALING FROM THIS DRAWING. MEASUREMENTS SHOULD BE TAKEN FROM FIGURED DIMENSIONS ONLY. CDM REQUIREMENTS CONSIDERED AT FEASIBILITY STAGE ONLY. FURTHER CONSIDERATION REQUIRED BY DETAILED DESIGN TEAM.

i-Transport
The Square, Basing View,
Basingstoke, Hampshire, RG21 4EB
Tel: 01256 637940
www.i-transport.co.uk

REV	DATE	BY	DESCRIPTION	CHK	APD
A	19.12.22	JMc	UPDATED SITE LAYOUT	RW	DF

STATUS: FOR INFORMATION

TITLE: SWEPT PATH ANALYSIS - 16.5m ARTICUALTED VEHICLE

PROJECT: ASHFORD ROAD, MAIDSTONE

CLIENT: WATES DEVELOPMENT

DRAWN:	CHECKED:	APPROVED:
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PROJECT No:	SCALE @ A3:	DATE:
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DRAWING No:		REV:
ITB15323-GA-013		A

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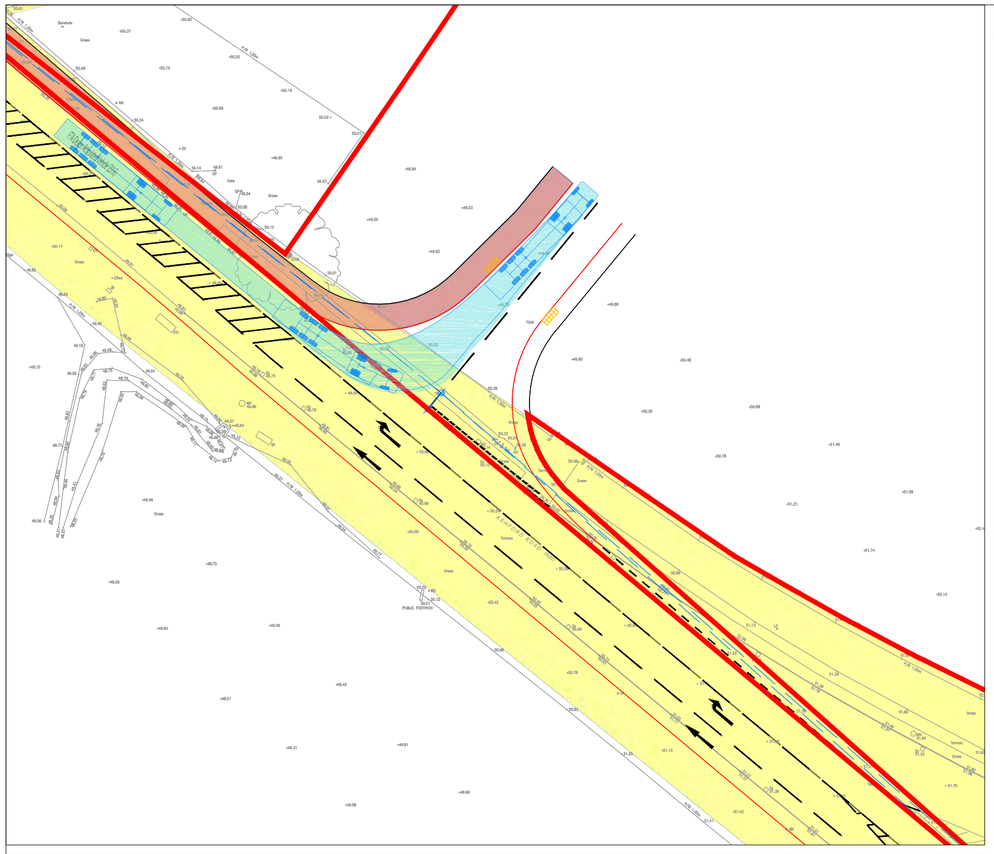
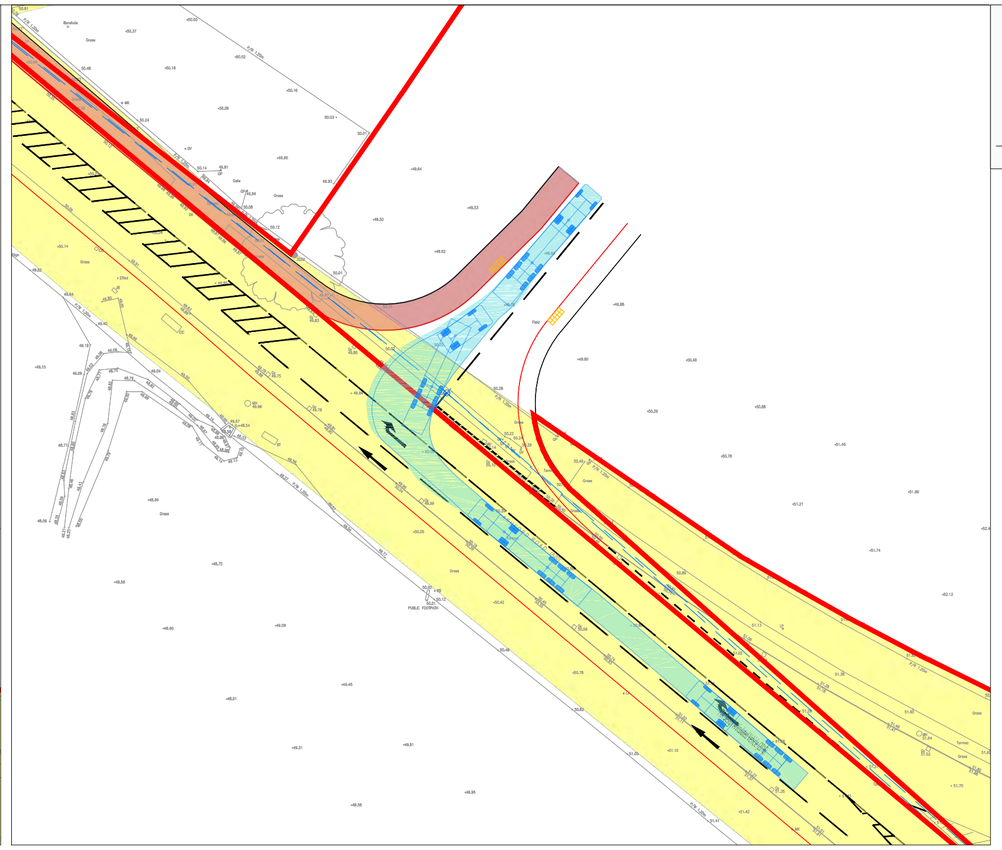
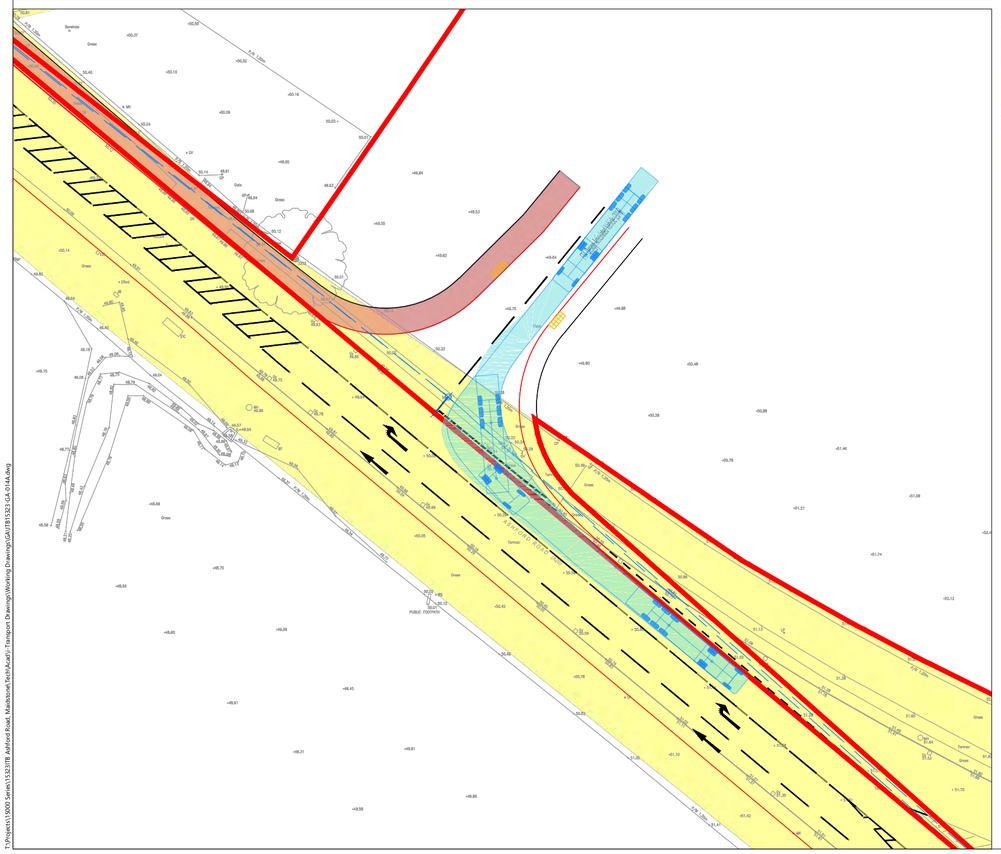
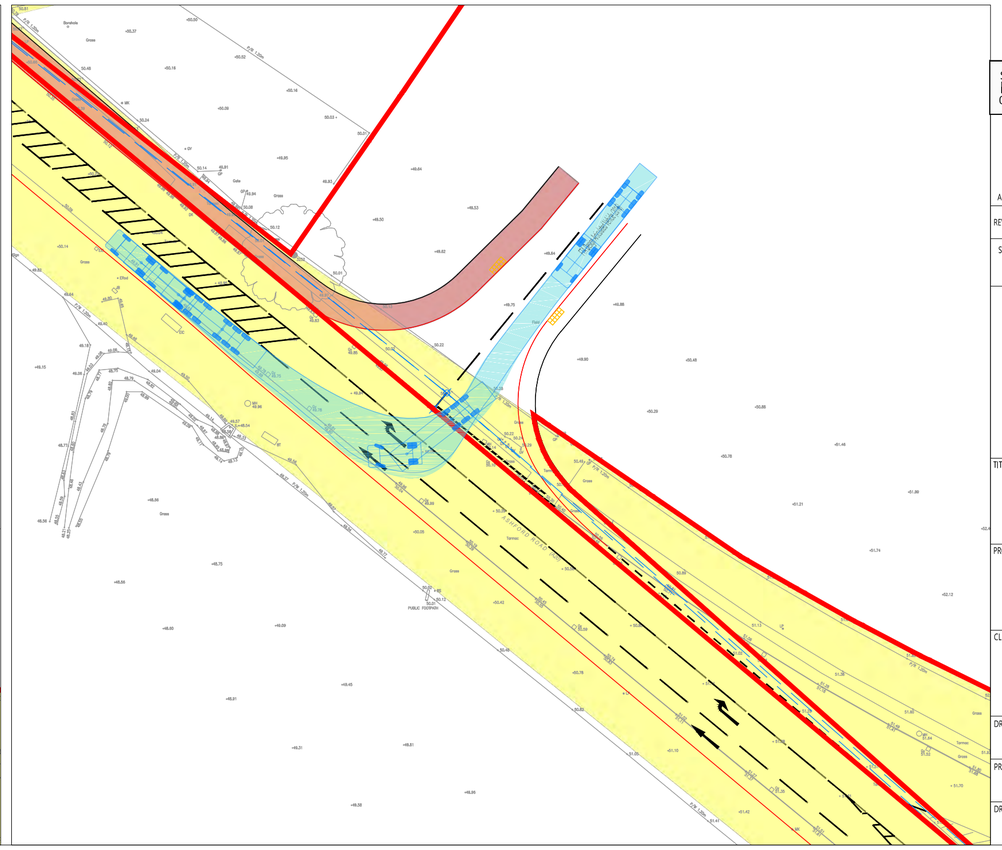
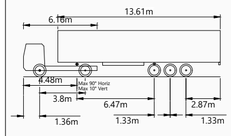








FTA DESIGN ARTICULATED VEHICLE (2006)



Overall Length	16.480m
Overall Width	2.550m
Overall Body Height	3.870m
Min Body Ground Clearance	0.515m
Max Track Width	2.470m
Lock to lock time	3.00s
Kerb to Kerb Turning Radius	6.550m

SCALE BAR @ 1:500

0 5 10 25 50

REV	DATE	BY	DESCRIPTION	CHK	APD
A	31.01.23	AH	UPDATED SITE ACCESS	RW	JCB

STATUS:

FOR INFORMATION

i-Transport

The Square, Basing View,
Basingstoke, Hampshire, RG21 4EB

Tel: 01256 637940

www.i-transport.co.uk

TITLE:

PROPOSED SITE ACCESS ARRANGEMENTS
- GHOST ISLAND PRIORITY JUNCTION
SWEPT PATH ANALYSIS - FTA DESIGN ARTICULATED VEHICLE

PROJECT:

ASHFORD ROAD, MAIDSTONE

CLIENT:

WATES DEVELOPMENTS

DRAWN:	CHECKED:	APPROVED:
JMc	DF	JCB
PROJECT No:	**SCALE @ A2:**	**DATE:**
ITB15323	1:500	19.12.22
DRAWING No:		**REV:**
IT15323-GA-014		A

I:\Projects\15000 Series\15323\TB Ashford Road, Maidstone\Tech\Acad\i-Transport Drawing\Working Drawings\[GA\ITB15323-GA-014A.dwg

APPENDIX I. TRICS Outputs – B8 Warehouse

Calculation Reference: AUDIT-236603-211108-1145

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST		
	EX	ESSEX	1 days
	HC	HAMPSHIRE	1 days
	KC	KENT	1 days
04	EAST ANGLIA		
	SF	SUFFOLK	1 days
06	WEST MIDLANDS		
	WM	WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	WY	WEST YORKSHIRE	1 days

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

Primary Filtering selection:

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

Parameter: Gross floor area
Actual Range: 3625 to 13200 (units: sqm)
Range Selected by User: 300 to 20000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/13 to 31/01/20

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

Selected survey days:

Monday	1 days
Thursday	2 days
Friday	3 days

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

Selected survey types:

Manual count	6 days
Directional ATC Count	0 days

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

Selected Locations:

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

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

Selected Location Sub Categories:

Industrial Zone	4
Commercial Zone	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:

n/a	1 days
B8	5 days

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

Filter by Site Operations Breakdown:
All Surveys Included

Population within 500m Range:
All Surveys Included

Population within 1 mile:

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

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

Population within 5 miles:

5,001 to 25,000	1 days
125,001 to 250,000	3 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	2 days
1.1 to 1.5	4 days

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

Travel Plan:

No	6 days

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

PTAL Rating:

No PTAL Present	6 days

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

LIST OF SITES relevant to selection parameters

1 EX-02-F-01 SPORTS SUPPLEMENTS ESSEX
BRUNEL WAY
COLCHESTER
SEVERALLS INDUSTRIAL PK
Edge of Town
Industrial Zone
Total Gross floor area: 6560 sqm
Survey date: FRIDAY *18/05/18* *Survey Type: MANUAL*

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

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

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

4 SF-02-F-03 ROAD HAULAGE SUFFOLK
CENTRAL AVENUE
IPSWICH
WARREN HEATH
Edge of Town
Industrial Zone
Total Gross floor area: 4700 sqm
Survey date: FRIDAY *18/09/15* *Survey Type: MANUAL*

5 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*

6 WY-02-F-02 DISTRIBUTION COMPANY WEST YORKSHIRE
STAITHGATE LANE
BRADFORD
NEWHALL
Edge of Town
Industrial Zone
Total Gross floor area: 10446 sqm
Survey date: THURSDAY *14/03/19* *Survey Type: MANUAL*

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	1	10446	0.105	1	10446	0.057	1	10446	0.162
05:30 - 06:00	1	10446	0.249	1	10446	0.115	1	10446	0.364
06:00 - 06:30	1	10446	0.182	1	10446	0.153	1	10446	0.335
06:30 - 07:00	1	10446	0.383	1	10446	0.096	1	10446	0.479
07:00 - 07:30	6	8289	0.133	6	8289	0.082	6	8289	0.215
07:30 - 08:00	6	8289	0.165	6	8289	0.082	6	8289	0.247
08:00 - 08:30	6	8289	0.115	6	8289	0.107	6	8289	0.222
08:30 - 09:00	6	8289	0.147	6	8289	0.070	6	8289	0.217
09:00 - 09:30	6	8289	0.121	6	8289	0.060	6	8289	0.181
09:30 - 10:00	6	8289	0.113	6	8289	0.066	6	8289	0.179
10:00 - 10:30	6	8289	0.078	6	8289	0.076	6	8289	0.154
10:30 - 11:00	6	8289	0.090	6	8289	0.080	6	8289	0.170
11:00 - 11:30	6	8289	0.080	6	8289	0.092	6	8289	0.172
11:30 - 12:00	6	8289	0.092	6	8289	0.092	6	8289	0.184
12:00 - 12:30	6	8289	0.084	6	8289	0.078	6	8289	0.162
12:30 - 13:00	6	8289	0.088	6	8289	0.062	6	8289	0.150
13:00 - 13:30	6	8289	0.070	6	8289	0.095	6	8289	0.165
13:30 - 14:00	6	8289	0.113	6	8289	0.125	6	8289	0.238
14:00 - 14:30	6	8289	0.070	6	8289	0.109	6	8289	0.179
14:30 - 15:00	6	8289	0.090	6	8289	0.099	6	8289	0.189
15:00 - 15:30	6	8289	0.090	6	8289	0.123	6	8289	0.213
15:30 - 16:00	6	8289	0.064	6	8289	0.086	6	8289	0.150
16:00 - 16:30	6	8289	0.088	6	8289	0.149	6	8289	0.237
16:30 - 17:00	6	8289	0.056	6	8289	0.117	6	8289	0.173
17:00 - 17:30	6	8289	0.092	6	8289	0.167	6	8289	0.259
17:30 - 18:00	6	8289	0.062	6	8289	0.123	6	8289	0.185
18:00 - 18:30	6	8289	0.040	6	8289	0.125	6	8289	0.165
18:30 - 19:00	6	8289	0.032	6	8289	0.064	6	8289	0.096
19:00 - 19:30	1	10446	0.057	1	10446	0.182	1	10446	0.239
19:30 - 20:00	1	10446	0.038	1	10446	0.067	1	10446	0.105
20:00 - 20:30	1	10446	0.019	1	10446	0.048	1	10446	0.067
20:30 - 21:00	1	10446	0.086	1	10446	0.038	1	10446	0.124
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			3.292			3.085			6.377

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

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

Parameter summary

Trip rate parameter range selected:	3625 - 13200 (units: sqm)
Survey date date range:	01/01/13 - 31/01/20
Number of weekdays (Monday-Friday):	6
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	1	10446	0.000	1	10446	0.000	1	10446	0.000
05:30 - 06:00	1	10446	0.000	1	10446	0.000	1	10446	0.000
06:00 - 06:30	1	10446	0.010	1	10446	0.010	1	10446	0.020
06:30 - 07:00	1	10446	0.000	1	10446	0.000	1	10446	0.000
07:00 - 07:30	6	8289	0.006	6	8289	0.004	6	8289	0.010
07:30 - 08:00	6	8289	0.002	6	8289	0.004	6	8289	0.006
08:00 - 08:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
08:30 - 09:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
09:00 - 09:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
09:30 - 10:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
10:00 - 10:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
10:30 - 11:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
11:00 - 11:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
11:30 - 12:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
12:00 - 12:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
12:30 - 13:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
13:00 - 13:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
13:30 - 14:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
14:00 - 14:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
14:30 - 15:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
15:00 - 15:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
15:30 - 16:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
16:00 - 16:30	6	8289	0.004	6	8289	0.004	6	8289	0.008
16:30 - 17:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
17:00 - 17:30	6	8289	0.002	6	8289	0.002	6	8289	0.004
17:30 - 18:00	6	8289	0.002	6	8289	0.002	6	8289	0.004
18:00 - 18:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
18:30 - 19:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
19:00 - 19:30	1	10446	0.000	1	10446	0.000	1	10446	0.000
19:30 - 20:00	1	10446	0.000	1	10446	0.000	1	10446	0.000
20:00 - 20:30	1	10446	0.000	1	10446	0.000	1	10446	0.000
20:30 - 21:00	1	10446	0.000	1	10446	0.000	1	10446	0.000
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.026			0.026			0.052

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

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	1	10446	0.019	1	10446	0.029	1	10446	0.048
05:30 - 06:00	1	10446	0.057	1	10446	0.086	1	10446	0.143
06:00 - 06:30	1	10446	0.038	1	10446	0.096	1	10446	0.134
06:30 - 07:00	1	10446	0.048	1	10446	0.067	1	10446	0.115
07:00 - 07:30	6	8289	0.034	6	8289	0.046	6	8289	0.080
07:30 - 08:00	6	8289	0.020	6	8289	0.042	6	8289	0.062
08:00 - 08:30	6	8289	0.024	6	8289	0.052	6	8289	0.076
08:30 - 09:00	6	8289	0.026	6	8289	0.036	6	8289	0.062
09:00 - 09:30	6	8289	0.028	6	8289	0.026	6	8289	0.054
09:30 - 10:00	6	8289	0.040	6	8289	0.012	6	8289	0.052
10:00 - 10:30	6	8289	0.044	6	8289	0.034	6	8289	0.078
10:30 - 11:00	6	8289	0.044	6	8289	0.026	6	8289	0.070
11:00 - 11:30	6	8289	0.050	6	8289	0.046	6	8289	0.096
11:30 - 12:00	6	8289	0.030	6	8289	0.030	6	8289	0.060
12:00 - 12:30	6	8289	0.044	6	8289	0.026	6	8289	0.070
12:30 - 13:00	6	8289	0.032	6	8289	0.012	6	8289	0.044
13:00 - 13:30	6	8289	0.024	6	8289	0.032	6	8289	0.056
13:30 - 14:00	6	8289	0.030	6	8289	0.046	6	8289	0.076
14:00 - 14:30	6	8289	0.030	6	8289	0.026	6	8289	0.056
14:30 - 15:00	6	8289	0.032	6	8289	0.034	6	8289	0.066
15:00 - 15:30	6	8289	0.038	6	8289	0.044	6	8289	0.082
15:30 - 16:00	6	8289	0.034	6	8289	0.020	6	8289	0.054
16:00 - 16:30	6	8289	0.044	6	8289	0.040	6	8289	0.084
16:30 - 17:00	6	8289	0.034	6	8289	0.024	6	8289	0.058
17:00 - 17:30	6	8289	0.048	6	8289	0.016	6	8289	0.064
17:30 - 18:00	6	8289	0.044	6	8289	0.042	6	8289	0.086
18:00 - 18:30	6	8289	0.020	6	8289	0.024	6	8289	0.044
18:30 - 19:00	6	8289	0.028	6	8289	0.010	6	8289	0.038
19:00 - 19:30	1	10446	0.010	1	10446	0.048	1	10446	0.058
19:30 - 20:00	1	10446	0.010	1	10446	0.010	1	10446	0.020
20:00 - 20:30	1	10446	0.019	1	10446	0.029	1	10446	0.048
20:30 - 21:00	1	10446	0.010	1	10446	0.019	1	10446	0.029
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			1.033			1.130			2.163

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

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	1	10446	0.000	1	10446	0.000	1	10446	0.000
05:30 - 06:00	1	10446	0.000	1	10446	0.000	1	10446	0.000
06:00 - 06:30	1	10446	0.000	1	10446	0.000	1	10446	0.000
06:30 - 07:00	1	10446	0.000	1	10446	0.000	1	10446	0.000
07:00 - 07:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
07:30 - 08:00	6	8289	0.002	6	8289	0.000	6	8289	0.002
08:00 - 08:30	6	8289	0.002	6	8289	0.000	6	8289	0.002
08:30 - 09:00	6	8289	0.012	6	8289	0.000	6	8289	0.012
09:00 - 09:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
09:30 - 10:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
10:00 - 10:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
10:30 - 11:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
11:00 - 11:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
11:30 - 12:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
12:00 - 12:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
12:30 - 13:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
13:00 - 13:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
13:30 - 14:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
14:00 - 14:30	6	8289	0.000	6	8289	0.002	6	8289	0.002
14:30 - 15:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
15:00 - 15:30	6	8289	0.000	6	8289	0.002	6	8289	0.002
15:30 - 16:00	6	8289	0.000	6	8289	0.002	6	8289	0.002
16:00 - 16:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
16:30 - 17:00	6	8289	0.000	6	8289	0.002	6	8289	0.002
17:00 - 17:30	6	8289	0.000	6	8289	0.004	6	8289	0.004
17:30 - 18:00	6	8289	0.000	6	8289	0.006	6	8289	0.006
18:00 - 18:30	6	8289	0.000	6	8289	0.002	6	8289	0.002
18:30 - 19:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
19:00 - 19:30	1	10446	0.000	1	10446	0.000	1	10446	0.000
19:30 - 20:00	1	10446	0.000	1	10446	0.000	1	10446	0.000
20:00 - 20:30	1	10446	0.000	1	10446	0.000	1	10446	0.000
20:30 - 21:00	1	10446	0.000	1	10446	0.000	1	10446	0.000
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.016			0.020			0.036

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

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	1	10446	0.077	1	10446	0.019	1	10446	0.096
05:30 - 06:00	1	10446	0.191	1	10446	0.029	1	10446	0.220
06:00 - 06:30	1	10446	0.124	1	10446	0.038	1	10446	0.162
06:30 - 07:00	1	10446	0.316	1	10446	0.019	1	10446	0.335
07:00 - 07:30	6	8289	0.068	6	8289	0.016	6	8289	0.084
07:30 - 08:00	6	8289	0.123	6	8289	0.020	6	8289	0.143
08:00 - 08:30	6	8289	0.074	6	8289	0.022	6	8289	0.096
08:30 - 09:00	6	8289	0.099	6	8289	0.018	6	8289	0.117
09:00 - 09:30	6	8289	0.058	6	8289	0.022	6	8289	0.080
09:30 - 10:00	6	8289	0.042	6	8289	0.018	6	8289	0.060
10:00 - 10:30	6	8289	0.010	6	8289	0.020	6	8289	0.030
10:30 - 11:00	6	8289	0.028	6	8289	0.030	6	8289	0.058
11:00 - 11:30	6	8289	0.018	6	8289	0.036	6	8289	0.054
11:30 - 12:00	6	8289	0.028	6	8289	0.034	6	8289	0.062
12:00 - 12:30	6	8289	0.022	6	8289	0.038	6	8289	0.060
12:30 - 13:00	6	8289	0.030	6	8289	0.026	6	8289	0.056
13:00 - 13:30	6	8289	0.030	6	8289	0.042	6	8289	0.072
13:30 - 14:00	6	8289	0.062	6	8289	0.060	6	8289	0.122
14:00 - 14:30	6	8289	0.024	6	8289	0.060	6	8289	0.084
14:30 - 15:00	6	8289	0.044	6	8289	0.056	6	8289	0.100
15:00 - 15:30	6	8289	0.028	6	8289	0.056	6	8289	0.084
15:30 - 16:00	6	8289	0.024	6	8289	0.054	6	8289	0.078
16:00 - 16:30	6	8289	0.018	6	8289	0.080	6	8289	0.098
16:30 - 17:00	6	8289	0.022	6	8289	0.086	6	8289	0.108
17:00 - 17:30	6	8289	0.028	6	8289	0.129	6	8289	0.157
17:30 - 18:00	6	8289	0.010	6	8289	0.068	6	8289	0.078
18:00 - 18:30	6	8289	0.018	6	8289	0.092	6	8289	0.110
18:30 - 19:00	6	8289	0.002	6	8289	0.050	6	8289	0.052
19:00 - 19:30	1	10446	0.048	1	10446	0.134	1	10446	0.182
19:30 - 20:00	1	10446	0.019	1	10446	0.048	1	10446	0.067
20:00 - 20:30	1	10446	0.000	1	10446	0.019	1	10446	0.019
20:30 - 21:00	1	10446	0.057	1	10446	0.010	1	10446	0.067
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			1.742			1.449			3.191

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

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	1	10446	0.000	1	10446	0.010	1	10446	0.010
05:30 - 06:00	1	10446	0.000	1	10446	0.000	1	10446	0.000
06:00 - 06:30	1	10446	0.010	1	10446	0.010	1	10446	0.020
06:30 - 07:00	1	10446	0.019	1	10446	0.010	1	10446	0.029
07:00 - 07:30	6	8289	0.024	6	8289	0.016	6	8289	0.040
07:30 - 08:00	6	8289	0.018	6	8289	0.016	6	8289	0.034
08:00 - 08:30	6	8289	0.016	6	8289	0.032	6	8289	0.048
08:30 - 09:00	6	8289	0.020	6	8289	0.016	6	8289	0.036
09:00 - 09:30	6	8289	0.034	6	8289	0.012	6	8289	0.046
09:30 - 10:00	6	8289	0.030	6	8289	0.036	6	8289	0.066
10:00 - 10:30	6	8289	0.024	6	8289	0.022	6	8289	0.046
10:30 - 11:00	6	8289	0.018	6	8289	0.024	6	8289	0.042
11:00 - 11:30	6	8289	0.012	6	8289	0.010	6	8289	0.022
11:30 - 12:00	6	8289	0.034	6	8289	0.028	6	8289	0.062
12:00 - 12:30	6	8289	0.018	6	8289	0.014	6	8289	0.032
12:30 - 13:00	6	8289	0.022	6	8289	0.024	6	8289	0.046
13:00 - 13:30	6	8289	0.016	6	8289	0.020	6	8289	0.036
13:30 - 14:00	6	8289	0.018	6	8289	0.018	6	8289	0.036
14:00 - 14:30	6	8289	0.016	6	8289	0.020	6	8289	0.036
14:30 - 15:00	6	8289	0.014	6	8289	0.004	6	8289	0.018
15:00 - 15:30	6	8289	0.024	6	8289	0.022	6	8289	0.046
15:30 - 16:00	6	8289	0.006	6	8289	0.012	6	8289	0.018
16:00 - 16:30	6	8289	0.022	6	8289	0.024	6	8289	0.046
16:30 - 17:00	6	8289	0.000	6	8289	0.006	6	8289	0.006
17:00 - 17:30	6	8289	0.014	6	8289	0.016	6	8289	0.030
17:30 - 18:00	6	8289	0.006	6	8289	0.010	6	8289	0.016
18:00 - 18:30	6	8289	0.002	6	8289	0.008	6	8289	0.010
18:30 - 19:00	6	8289	0.002	6	8289	0.004	6	8289	0.006
19:00 - 19:30	1	10446	0.000	1	10446	0.000	1	10446	0.000
19:30 - 20:00	1	10446	0.010	1	10446	0.010	1	10446	0.020
20:00 - 20:30	1	10446	0.000	1	10446	0.000	1	10446	0.000
20:30 - 21:00	1	10446	0.019	1	10446	0.010	1	10446	0.029
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.468			0.464			0.932

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

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	1	10446	0.010	1	10446	0.000	1	10446	0.010
05:30 - 06:00	1	10446	0.000	1	10446	0.000	1	10446	0.000
06:00 - 06:30	1	10446	0.000	1	10446	0.000	1	10446	0.000
06:30 - 07:00	1	10446	0.000	1	10446	0.000	1	10446	0.000
07:00 - 07:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
07:30 - 08:00	6	8289	0.002	6	8289	0.000	6	8289	0.002
08:00 - 08:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
08:30 - 09:00	6	8289	0.002	6	8289	0.000	6	8289	0.002
09:00 - 09:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
09:30 - 10:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
10:00 - 10:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
10:30 - 11:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
11:00 - 11:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
11:30 - 12:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
12:00 - 12:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
12:30 - 13:00	6	8289	0.004	6	8289	0.000	6	8289	0.004
13:00 - 13:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
13:30 - 14:00	6	8289	0.002	6	8289	0.000	6	8289	0.002
14:00 - 14:30	6	8289	0.000	6	8289	0.002	6	8289	0.002
14:30 - 15:00	6	8289	0.000	6	8289	0.004	6	8289	0.004
15:00 - 15:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
15:30 - 16:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
16:00 - 16:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
16:30 - 17:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
17:00 - 17:30	6	8289	0.000	6	8289	0.004	6	8289	0.004
17:30 - 18:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
18:00 - 18:30	6	8289	0.000	6	8289	0.000	6	8289	0.000
18:30 - 19:00	6	8289	0.000	6	8289	0.000	6	8289	0.000
19:00 - 19:30	1	10446	0.000	1	10446	0.000	1	10446	0.000
19:30 - 20:00	1	10446	0.000	1	10446	0.000	1	10446	0.000
20:00 - 20:30	1	10446	0.000	1	10446	0.000	1	10446	0.000
20:30 - 21:00	1	10446	0.000	1	10446	0.000	1	10446	0.000
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.020			0.010			0.030

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

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

APPENDIX J. Census Trip Distribution Analysis

i-Transport Project No: ITB15323
i-Transport Project Title: Ashford Road, Maidstone
2011 Census Analysis - Mid-output Maidstone 011 **Staff Journey to Work Distribution**

Broad Destination	% Car by Destination	Proportion by all modes	Proportion by car	All	WfH	Underg	Train	Bus	Taxi	P2W	Car D	Car Pass	Bike	Foot	Other
Ashford	94%	3.9%	5.6%	32	0	0	2	0	0	0	30	0	0	0	0
Canterbury	100%	0.1%	0.2%	1	0	0	0	0	0	0	1	0	0	0	0
Chatham	80%	0.6%	0.8%	5	0	0	0	0	0	0	4	1	0	0	0
Cranbrook	100%	0.2%	0.4%	2	0	0	0	0	0	0	2	0	0	0	0
Dartford	100%	0.1%	0.2%	1	0	0	0	0	0	0	1	0	0	0	0
Dover	100%	0.4%	0.6%	3	0	0	0	0	0	0	3	0	0	0	0
Eccles	76%	2.1%	2.4%	17	0	0	0	1	0	1	13	1	1	0	0
Faversham	86%	2.7%	3.6%	22	0	0	0	0	0	1	19	2	0	0	0
Gillingham	100%	1.3%	2.1%	11	0	0	0	0	0	0	11	0	0	0	0
Gravesham	100%	0.4%	0.6%	3	0	0	0	0	0	0	3	0	0	0	0
Harrietsham	49%	55.6%	42.0%	456	0	0	12	1	1	5	224	29	12	172	0
Headcorn	82%	6.0%	7.5%	49	0	0	1	0	0	1	40	6	1	0	0
Hempstead	64%	1.3%	1.3%	11	0	0	0	0	0	1	7	3	0	0	0
Isle of Sheppey	91%	1.3%	1.9%	11	0	0	0	0	0	0	10	1	0	0	0
Larkfield	83%	2.8%	3.6%	23	0	0	1	0	0	0	19	2	0	1	0
Maidstone	85%	4.9%	6.4%	40	0	0	3	0	0	0	34	0	0	3	0
Marden	80%	2.4%	3.0%	20	0	0	1	0	0	0	16	2	0	1	0
North/East London	100%	0.1%	0.2%	1	0	0	0	0	0	0	1	0	0	0	0
Other East	50%	0.2%	0.2%	2	0	0	1	0	0	0	1	0	0	0	0
Other North	100%	0.1%	0.2%	1	0	0	0	0	0	0	1	0	0	0	0
Other North East	100%	0.1%	0.2%	1	0	0	0	0	0	0	1	0	0	0	0
Other North West	100%	0.1%	0.2%	1	0	0	0	0	0	0	1	0	0	0	0
Other South	100%	0.1%	0.2%	1	0	0	0	0	0	0	1	0	0	0	0
Other South West	100%	0.1%	0.2%	1	0	0	0	0	0	0	1	0	0	0	0
Other West	100%	0.1%	0.2%	1	0	0	0	0	0	0	1	0	0	0	0
Parkwood	67%	1.1%	1.1%	9	0	0	0	0	0	1	6	1	1	0	0
Rochester	100%	0.4%	0.6%	3	0	0	0	0	0	0	3	0	0	0	0
Shepway	50%	0.5%	0.4%	4	0	0	0	0	0	0	2	2	0	0	0
Sittingbourne	94%	3.8%	5.4%	31	0	0	0	0	0	1	29	1	0	0	0
Snodland	86%	2.6%	3.4%	21	0	0	0	1	0	0	18	2	0	0	0
South/West London	0%	0.1%	0.0%	1	0	0	1	0	0	0	0	0	0	0	0
Staplehurst	93%	1.7%	2.4%	14	0	0	0	0	0	0	13	1	0	0	0
Tonbridge	100%	1.1%	1.7%	9	0	0	0	0	0	0	9	0	0	0	0
West Malling	67%	1.5%	1.5%	12	0	0	0	0	0	0	8	3	1	0	0
TOTAL		**100%**	**100%**	**820**	**0**	**0**	**22**	**3**	**1**	**11**	**533**	**57**	**16**	**177**	**0**

i-Transport Project No: ITB15323
i-Transport Project Title: Ashford Road, Maidstone
2011 Census Analysis - Staff Journey to Work Distribution

Traffic Routing

Journey to Work - Employment	Proportion by Route	Proportion car by route	Route 1	Route 2	Route 3	Route 4	Route 5	Route 6
Ashford	100%	17.6%	Ashford Road E	A20 N	M20 E	A20 S	LIN	LIN
Canterbury	100%	3.4%	Ashford Road E	A20 N	M20 W	Sittingbourne Road N	M2 E	LIN
Chatham	100%	5.4%	Ashford Road E	A20 N	M20 W	A229 N	LIN	LIN
Cranbrook	100%	0.7%	Ashford Road E	Ashford Road E	B2163 S	Upper Street S	Leeds Road S	LIN
Dartford	100%	0.6%	Ashford Road E	A20 N	M20 W	LIN	LIN	LIN
Dover	100%	1.3%	Ashford Road E	A20 N	M20 E	LIN	LIN	LIN
Eccles	100%	0.5%	Ashford Road E	A20 N	M20 W	A229 N	Rochester Road W	LIN
Faversham	100%	3.0%	Ashford Road E	A20 N	M20 W	Sittingbourne Road N	M2 E	LIN
Gillingham	100%	2.5%	Ashford Road E	A20 N	M20 W	A229 N	LIN	LIN
Gravesham	100%	1.1%	Ashford Road E	A20 N	M20 W	A229 N	LIN	LIN
Harrietsham	100%	9.3%	Ashford Road E	Ashford Road E	LIN	LIN	LIN	LIN
Headcorn	100%	1.7%	Ashford Road E	Ashford Road E	B2163 S	Upper Street S	Leeds Road S	LIN
Hempstead	100%	0.5%	Ashford Road E	A20 N	M20 W	A429 S	Bearsted Road W	LIN
Isle of Sheppey	100%	2.2%	Ashford Road E	A20 N	M20 W	Sittingbourne Road N	A249 N	LIN
Larkfield	100%	1.6%	Ashford Road E	A20 N	M20 W	Coldharbour Lane S	A20 W	LIN
Maidstone	80%	12.9%	Ashford Road W	LIN	LIN	LIN	LIN	LIN
	20%	3.2%	Ashford Road W	Roundwell	LIN	LIN	LIN	LIN
Marden	100%	0.7%	Ashford Road E	Ashford Road E	B2163 S	Upper Street S	Leeds Road S	LIN
North/East London	100%	2.6%	Ashford Road E	A20 N	M20 W	LIN	LIN	LIN
Other East	100%	0.9%	Ashford Road E	A20 N	M20 W	Sittingbourne Road N	M2 E	LIN
Other North	100%	3.6%	Ashford Road E	A20 N	M20 W	LIN	LIN	LIN
Other North East	100%	0.5%	Ashford Road E	A20 N	M20 W	LIN	LIN	LIN
Other North West	100%	0.2%	Ashford Road E	A20 N	M20 W	M26 W	LIN	LIN
Other South	100%	0.6%	Ashford Road E	Ashford Road E	B2163 S	Upper Street S	Leeds Road S	LIN
Other South West	100%	0.7%	Ashford Road E	A20 N	M20 W	A228 S	Ashton Way S	LIN
Other West	100%	1.6%	Ashford Road E	A20 N	M20 W	M26 W	LIN	LIN
Parkwood	50%	2.4%	Ashford Road E	Ashford Road E	B2163 S	Upper Street S	Leeds Road S	LIN
	50%	2.4%	Ashford Road W	Otham Lane S	Green Hill S	Otham Street S	LIN	LIN
Rochester	100%	2.3%	Ashford Road E	A20 N	M20 W	A229 N	LIN	LIN
Shepway	100%	4.0%	Ashford Road W	Willington Street S	School Lane W	Oxford Road S	LIN	LIN
Sittingbourne	100%	6.7%	Ashford Road E	A20 N	M20 W	A229 N	LIN	LIN
Snodland	100%	0.7%	Ashford Road E	A20 N	M20 W	Castle Way N	Malling Road N	LIN
South/West London	100%	0.1%	Ashford Road E	A20 N	M20 W	M26 W	LIN	LIN
Staplehurst	100%	0.5%	Ashford Road E	Ashford Road E	B2163 S	Upper Street S	Leeds Road S	LIN
Tonbridge	100%	1.4%	Ashford Road E	A20 N	M20 W	A228 S	Ashton Way S	LIN
West Malling	50%	0.2%	Ashford Road E	A20 N	M20 W	Castle Way S	A20 W	LIN
	50%	0.2%	Ashford Road E	A20 N	M20 W	Coldharbour Lane S	A20 W	LIN

Route 1	Proportion of Cars	Route 2	Proportion of Cars	Route 3	Proportion of Cars	Route 4	Proportion of Cars	Route 5	Proportion of Cars	Route 6	Proportion of Cars
Ashford Road E	77.4%	Ashford Road E	16.0%	Green Hill S	2.4%	A20 S	17.6%	A20 W	2.0%	LIN	100.0%
Ashford Road W	22.6%	LIN	12.9%	LIN	25.5%	A228 S	2.1%	A249 N	2.2%		
	100.0%	Roundwell	3.2%	M20 E	18.9%	A229 N	18.6%	Ashton Way S	2.1%		
		A20 N	61.4%	M20 W	42.5%	A429 S	0.5%	Bearsted Road W	0.5%		
		Otham Lane S	2.4%	School Lane W	4.0%	Castle Way N	0.7%	Leeds Road S	6.6%		
		Willington Street S	4.0%	B2163 S	6.6%	Castle Way S	0.2%	LIN	78.1%		
			100.0%		100.0%	Coldharbour Lane S	1.8%	M2 E	7.2%		
						Upper Street S	6.6%	Malling Road N	0.7%		
						LIN	34.1%	Rochester Road W	0.5%		
						M26 W	1.8%		100.0%		
						Otham Street S	2.4%				
						Oxford Road S	4.0%				
						Sittingbourne Road N	9.4%				
							100.0%				

APPENDIX K. TRICS Outputs – B8 Parcel Distribution Centre

Calculation Reference: AUDIT-236603-220209-0200

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST		
	SO	SLOUGH	1 days
05	EAST MIDLANDS		
	LN	LINCOLNSHIRE	1 days
	NT	NOTTINGHAMSHIRE	1 days

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

Primary Filtering selection:

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

Parameter: Gross floor area
Actual Range: 1496 to 15583 (units: sqm)
Range Selected by User: 763 to 24154 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/13 to 11/05/21

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

Selected survey days:

Monday	1 days
Tuesday	1 days
Friday	1 days

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

Selected survey types:

Manual count	3 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town	3

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

Selected Location Sub Categories:

Industrial Zone	1
Commercial Zone	1
Development Zone	1

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

Secondary Filtering selection:

Use Class:

B8	3 days

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

Filter by Site Operations Breakdown:
All Surveys Included

Population within 500m Range:
All Surveys Included

Population within 1 mile:

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

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

Population within 5 miles:

125,001 to 250,000	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:

1.1 to 1.5	3 days

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

Travel Plan:

Yes	1 days
No	2 days

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

PTAL Rating:

No PTAL Present	3 days

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

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

LIST OF SITES relevant to selection parameters

1	LN-02-G-01	PARCELFORCE WORLDWIDE		LINCOLNSHIRE
	WHISBY WAY			
	LINCOLN			
	BIRCHWOOD			
	Edge of Town			
	Industrial Zone			
	Total Gross floor area:		1496 sqm	
	Survey date: FRIDAY		*28/06/19*	*Survey Type: MANUAL*
2	NT-02-G-02	CITY LINK		NOTTINGHAMSHIRE
	MILLENIUM WAY			
	NOTTINGHAM			
	PHOENIX CENTRE			
	Edge of Town			
	Commercial Zone			
	Total Gross floor area:		3000 sqm	
	Survey date: MONDAY		*17/06/13*	*Survey Type: MANUAL*
3	SO-02-G-02	DHL		SLOUGH
	HORTON ROAD			
	SLOUGH			
	COLNBROOK			
	Edge of Town			
	Development Zone			
	Total Gross floor area:		15583 sqm	
	Survey date: TUESDAY		*11/05/21*	*Survey Type: MANUAL*

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30	1	15583	0.006	1	15583	0.019	1	15583	0.025
00:30 - 01:00	1	15583	0.032	1	15583	0.013	1	15583	0.045
01:00 - 01:30	1	15583	0.026	1	15583	0.039	1	15583	0.065
01:30 - 02:00	1	15583	0.071	1	15583	0.032	1	15583	0.103
02:00 - 02:30	1	15583	0.026	1	15583	0.051	1	15583	0.077
02:30 - 03:00	1	15583	0.116	1	15583	0.083	1	15583	0.199
03:00 - 03:30	1	15583	0.083	1	15583	0.083	1	15583	0.166
03:30 - 04:00	1	15583	0.122	1	15583	0.109	1	15583	0.231
04:00 - 04:30	1	15583	0.096	1	15583	0.128	1	15583	0.224
04:30 - 05:00	1	15583	0.212	1	15583	0.096	1	15583	0.308
05:00 - 05:30	2	8540	0.240	2	8540	0.088	2	8540	0.328
05:30 - 06:00	2	8540	0.369	2	8540	0.100	2	8540	0.469
06:00 - 06:30	2	8540	0.258	2	8540	0.176	2	8540	0.434
06:30 - 07:00	2	8540	0.410	2	8540	0.199	2	8540	0.609
07:00 - 07:30	3	6693	0.229	3	6693	0.583	3	6693	0.812
07:30 - 08:00	3	6693	0.239	3	6693	0.269	3	6693	0.508
08:00 - 08:30	3	6693	0.174	3	6693	0.264	3	6693	0.438
08:30 - 09:00	3	6693	0.264	3	6693	0.105	3	6693	0.369
09:00 - 09:30	3	6693	0.164	3	6693	0.095	3	6693	0.259
09:30 - 10:00	3	6693	0.164	3	6693	0.154	3	6693	0.318
10:00 - 10:30	3	6693	0.105	3	6693	0.129	3	6693	0.234
10:30 - 11:00	3	6693	0.134	3	6693	0.154	3	6693	0.288
11:00 - 11:30	3	6693	0.090	3	6693	0.095	3	6693	0.185
11:30 - 12:00	3	6693	0.115	3	6693	0.194	3	6693	0.309
12:00 - 12:30	3	6693	0.149	3	6693	0.115	3	6693	0.264
12:30 - 13:00	3	6693	0.164	3	6693	0.179	3	6693	0.343
13:00 - 13:30	3	6693	0.209	3	6693	0.189	3	6693	0.398
13:30 - 14:00	3	6693	0.229	3	6693	0.179	3	6693	0.408
14:00 - 14:30	3	6693	0.095	3	6693	0.169	3	6693	0.264
14:30 - 15:00	3	6693	0.169	3	6693	0.144	3	6693	0.313
15:00 - 15:30	3	6693	0.154	3	6693	0.264	3	6693	0.418
15:30 - 16:00	3	6693	0.164	3	6693	0.184	3	6693	0.348
16:00 - 16:30	3	6693	0.289	3	6693	0.234	3	6693	0.523
16:30 - 17:00	3	6693	0.259	3	6693	0.244	3	6693	0.503
17:00 - 17:30	3	6693	0.214	3	6693	0.344	3	6693	0.558
17:30 - 18:00	3	6693	0.204	3	6693	0.304	3	6693	0.508
18:00 - 18:30	3	6693	0.244	3	6693	0.234	3	6693	0.478
18:30 - 19:00	3	6693	0.179	3	6693	0.204	3	6693	0.383
19:00 - 19:30	3	6693	0.209	3	6693	0.214	3	6693	0.423
19:30 - 20:00	3	6693	0.299	3	6693	0.194	3	6693	0.493
20:00 - 20:30	3	6693	0.144	3	6693	0.194	3	6693	0.338
20:30 - 21:00	3	6693	0.115	3	6693	0.035	3	6693	0.150
21:00 - 21:30	2	9292	0.038	2	9292	0.210	2	9292	0.248
21:30 - 22:00	2	9292	0.145	2	9292	0.226	2	9292	0.371
22:00 - 22:30	1	15583	0.160	1	15583	0.160	1	15583	0.320
22:30 - 23:00	1	15583	0.180	1	15583	0.154	1	15583	0.334
23:00 - 23:30	1	15583	0.039	1	15583	0.077	1	15583	0.116
23:30 - 24:00	1	15583	0.077	1	15583	0.083	1	15583	0.160
Total Rates:			7.873			7.792			15.665

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

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

Parameter summary

Trip rate parameter range selected:	1496 - 15583 (units: sqm)
Survey date date range:	01/01/13 - 11/05/21
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
Surveys manually removed from selection:	0

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

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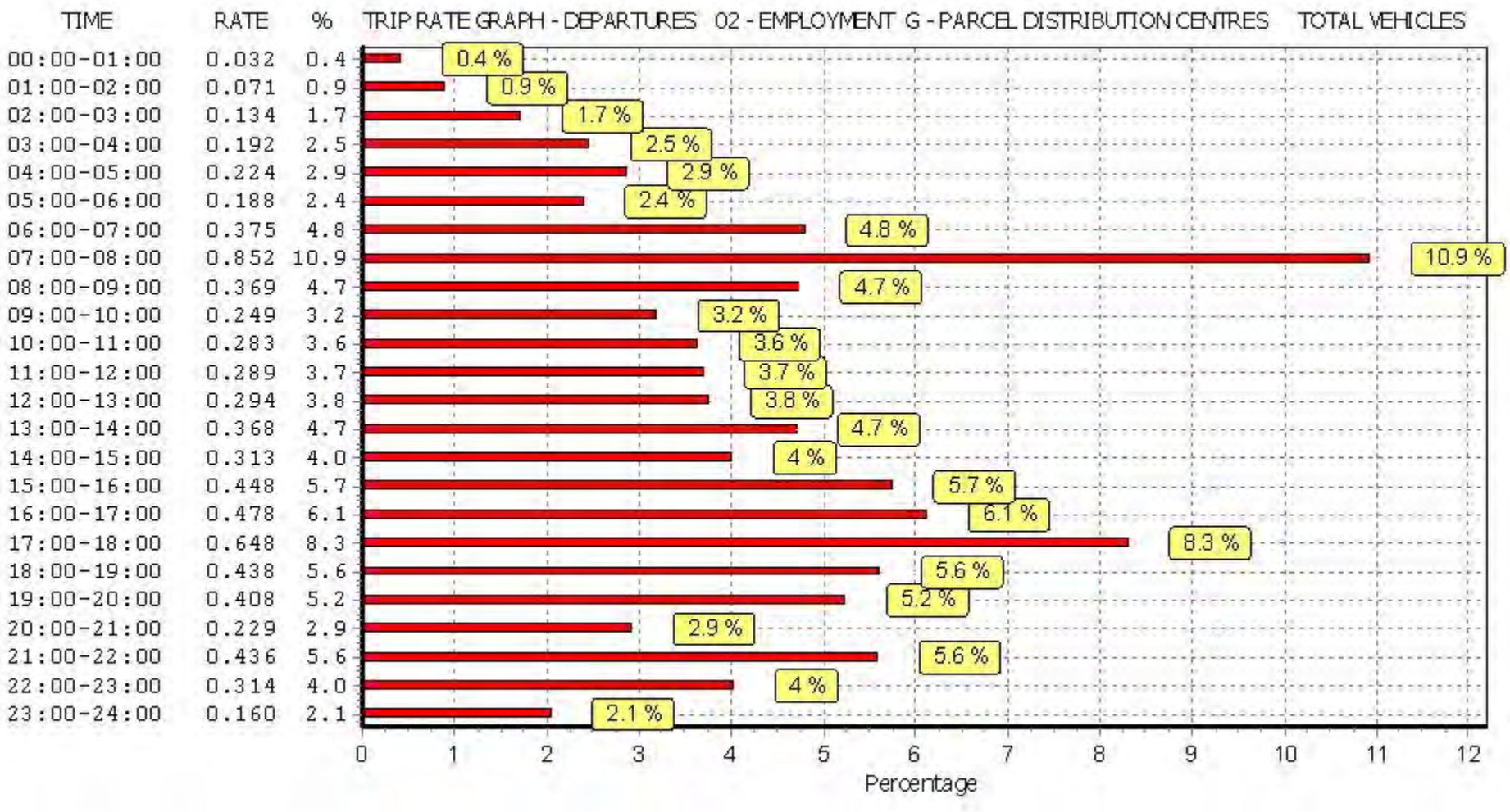
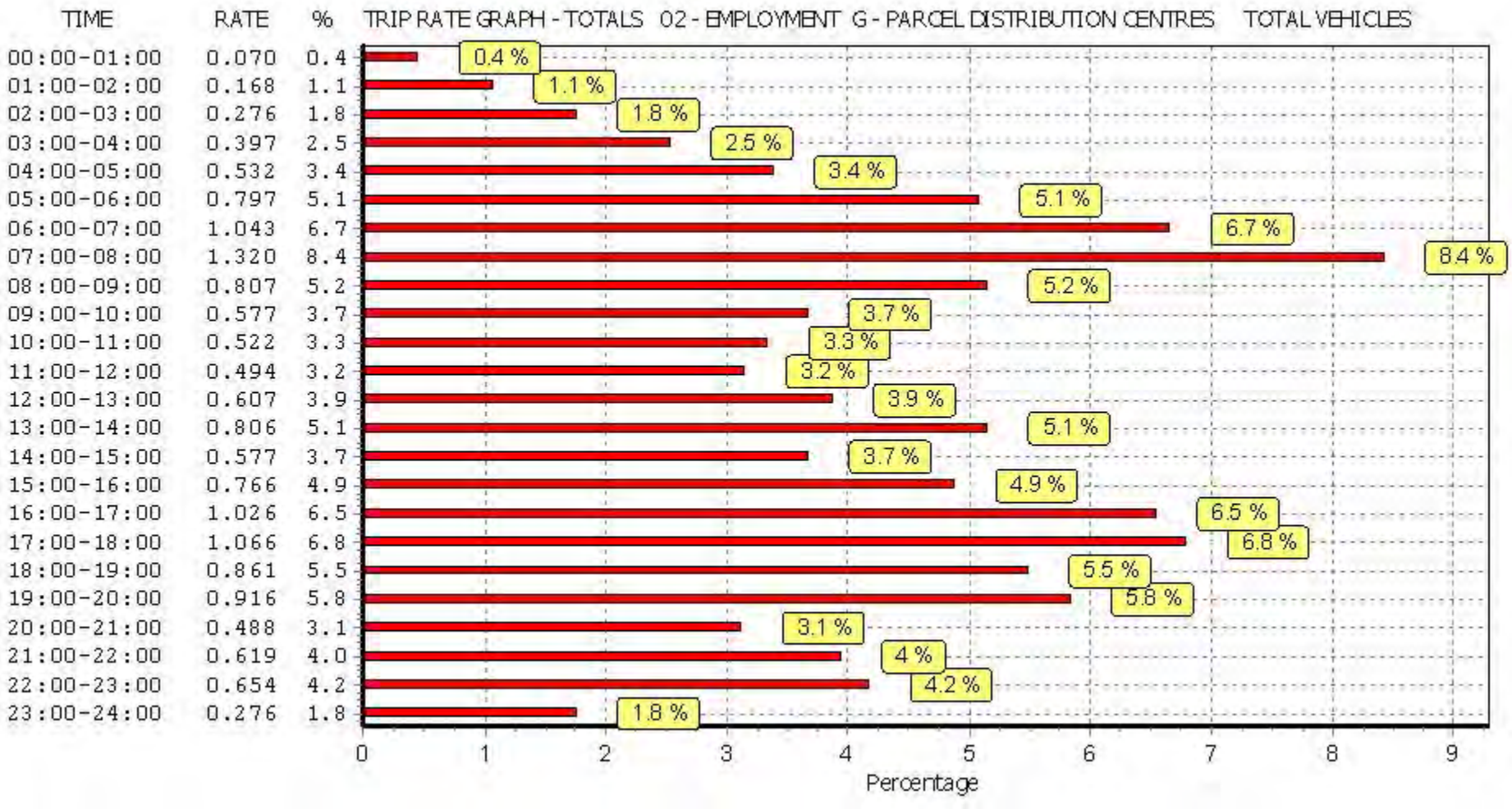
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

i-Transport LLP 85 Gresham Street London Licence No: 236603



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

i-Transport LLP 85 Gresham Street London Licence No: 236603



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

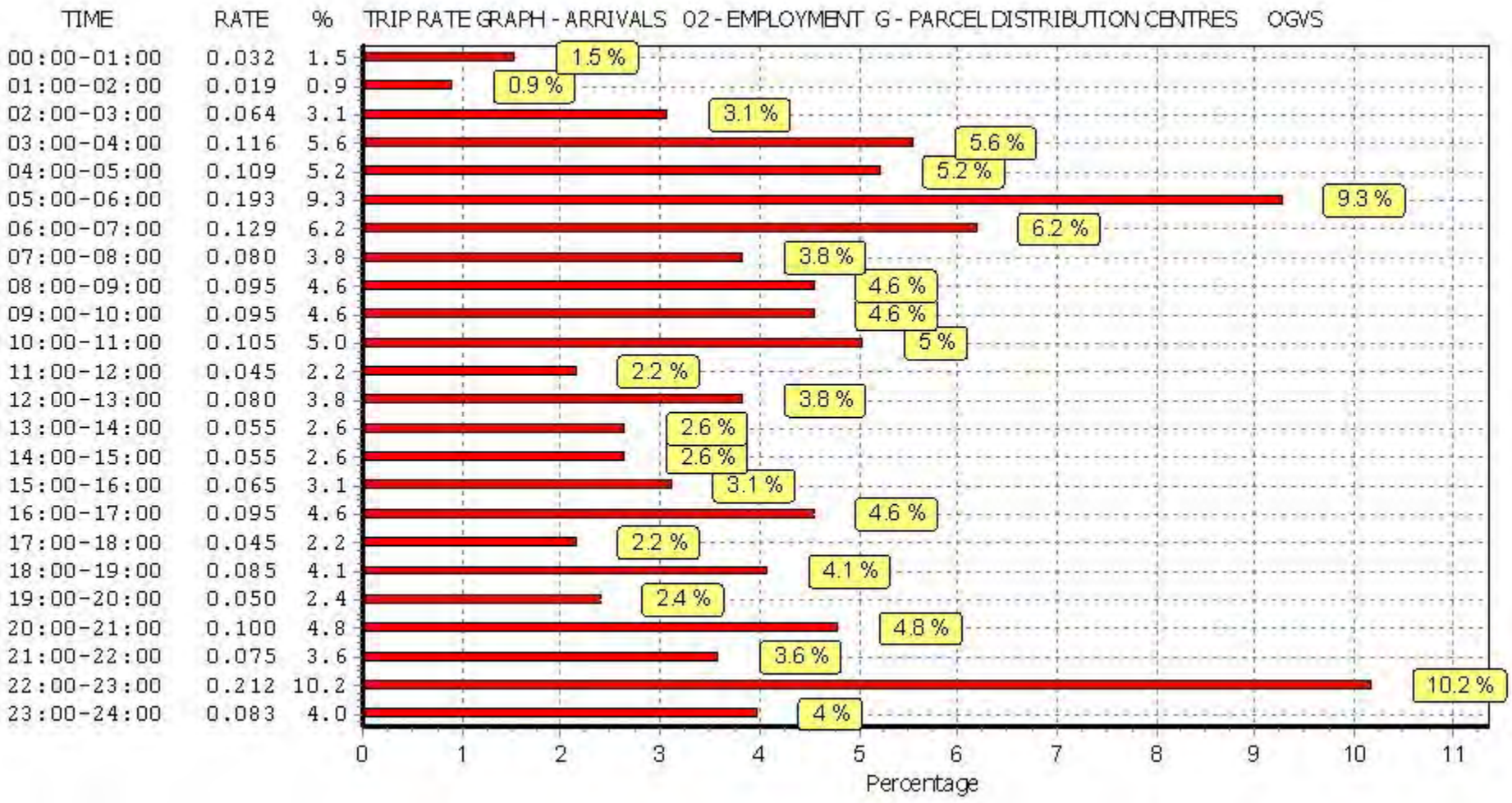
TRIP RATE for Land Use 02 - EMPLOYMENT/G - PARCEL DISTRIBUTION CENTRES
OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30	1	15583	0.006	1	15583	0.019	1	15583	0.025
00:30 - 01:00	1	15583	0.026	1	15583	0.013	1	15583	0.039
01:00 - 01:30	1	15583	0.000	1	15583	0.013	1	15583	0.013
01:30 - 02:00	1	15583	0.019	1	15583	0.006	1	15583	0.025
02:00 - 02:30	1	15583	0.013	1	15583	0.013	1	15583	0.026
02:30 - 03:00	1	15583	0.051	1	15583	0.071	1	15583	0.122
03:00 - 03:30	1	15583	0.058	1	15583	0.032	1	15583	0.090
03:30 - 04:00	1	15583	0.058	1	15583	0.071	1	15583	0.129
04:00 - 04:30	1	15583	0.026	1	15583	0.058	1	15583	0.084
04:30 - 05:00	1	15583	0.083	1	15583	0.064	1	15583	0.147
05:00 - 05:30	2	8540	0.064	2	8540	0.041	2	8540	0.105
05:30 - 06:00	2	8540	0.129	2	8540	0.070	2	8540	0.199
06:00 - 06:30	2	8540	0.088	2	8540	0.082	2	8540	0.170
06:30 - 07:00	2	8540	0.041	2	8540	0.029	2	8540	0.070
07:00 - 07:30	3	6693	0.040	3	6693	0.125	3	6693	0.165
07:30 - 08:00	3	6693	0.040	3	6693	0.095	3	6693	0.135
08:00 - 08:30	3	6693	0.040	3	6693	0.055	3	6693	0.095
08:30 - 09:00	3	6693	0.055	3	6693	0.010	3	6693	0.065
09:00 - 09:30	3	6693	0.030	3	6693	0.010	3	6693	0.040
09:30 - 10:00	3	6693	0.065	3	6693	0.055	3	6693	0.120
10:00 - 10:30	3	6693	0.040	3	6693	0.065	3	6693	0.105
10:30 - 11:00	3	6693	0.065	3	6693	0.065	3	6693	0.130
11:00 - 11:30	3	6693	0.025	3	6693	0.020	3	6693	0.045
11:30 - 12:00	3	6693	0.020	3	6693	0.025	3	6693	0.045
12:00 - 12:30	3	6693	0.050	3	6693	0.025	3	6693	0.075
12:30 - 13:00	3	6693	0.030	3	6693	0.035	3	6693	0.065
13:00 - 13:30	3	6693	0.015	3	6693	0.020	3	6693	0.035
13:30 - 14:00	3	6693	0.040	3	6693	0.030	3	6693	0.070
14:00 - 14:30	3	6693	0.020	3	6693	0.040	3	6693	0.060
14:30 - 15:00	3	6693	0.035	3	6693	0.050	3	6693	0.085
15:00 - 15:30	3	6693	0.030	3	6693	0.035	3	6693	0.065
15:30 - 16:00	3	6693	0.035	3	6693	0.020	3	6693	0.055
16:00 - 16:30	3	6693	0.065	3	6693	0.050	3	6693	0.115
16:30 - 17:00	3	6693	0.030	3	6693	0.080	3	6693	0.110
17:00 - 17:30	3	6693	0.035	3	6693	0.040	3	6693	0.075
17:30 - 18:00	3	6693	0.010	3	6693	0.040	3	6693	0.050
18:00 - 18:30	3	6693	0.065	3	6693	0.055	3	6693	0.120
18:30 - 19:00	3	6693	0.020	3	6693	0.050	3	6693	0.070
19:00 - 19:30	3	6693	0.005	3	6693	0.070	3	6693	0.075
19:30 - 20:00	3	6693	0.045	3	6693	0.045	3	6693	0.090
20:00 - 20:30	3	6693	0.035	3	6693	0.035	3	6693	0.070
20:30 - 21:00	3	6693	0.065	3	6693	0.015	3	6693	0.080
21:00 - 21:30	2	9292	0.016	2	9292	0.032	2	9292	0.048
21:30 - 22:00	2	9292	0.059	2	9292	0.070	2	9292	0.129
22:00 - 22:30	1	15583	0.103	1	15583	0.039	1	15583	0.142
22:30 - 23:00	1	15583	0.109	1	15583	0.045	1	15583	0.154
23:00 - 23:30	1	15583	0.032	1	15583	0.013	1	15583	0.045
23:30 - 24:00	1	15583	0.051	1	15583	0.039	1	15583	0.090
Total Rates:			2.082			2.080			4.162

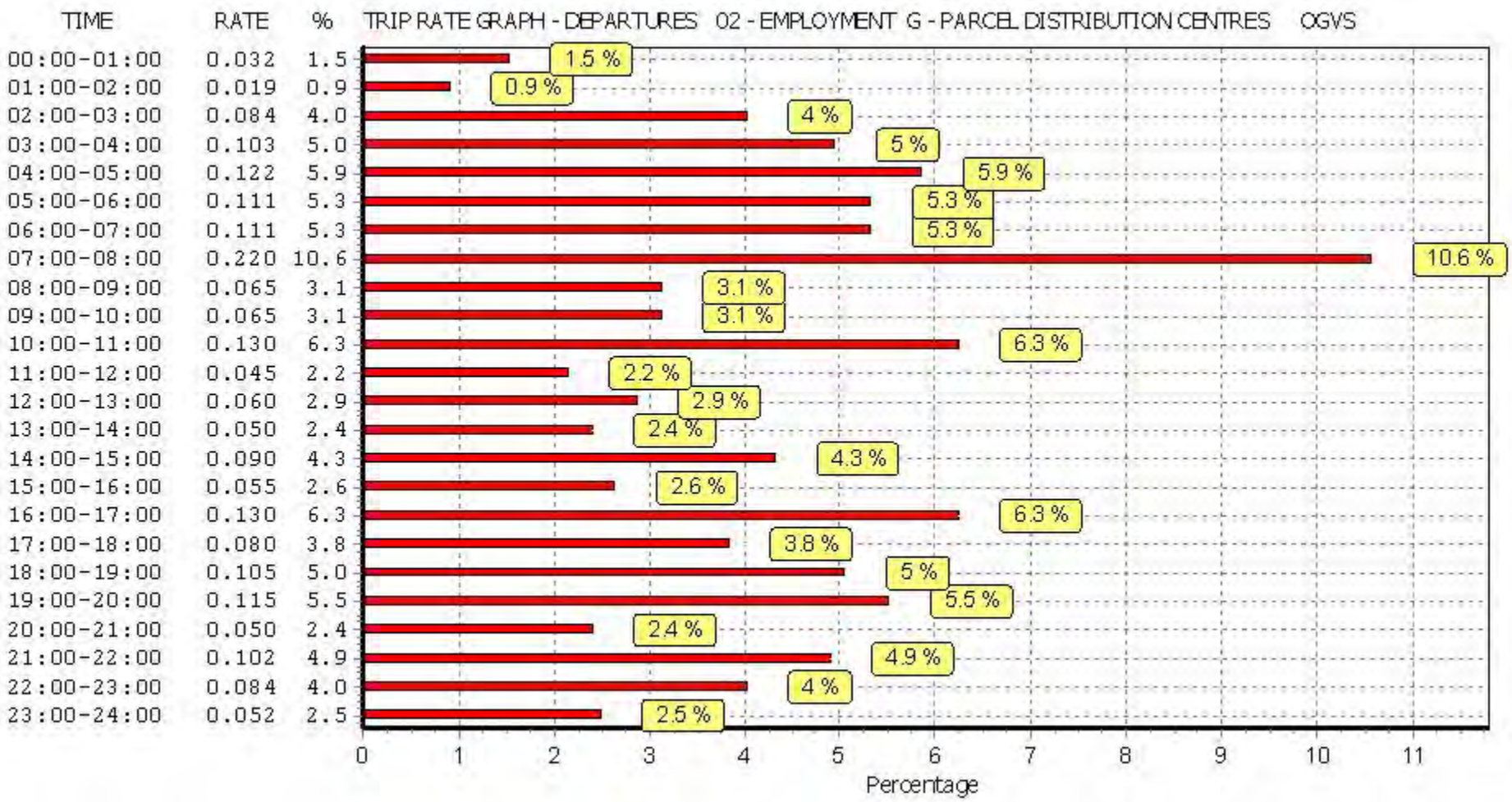
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are 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.*

i-Transport LLP 85 Gresham Street London Licence No: 236603



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



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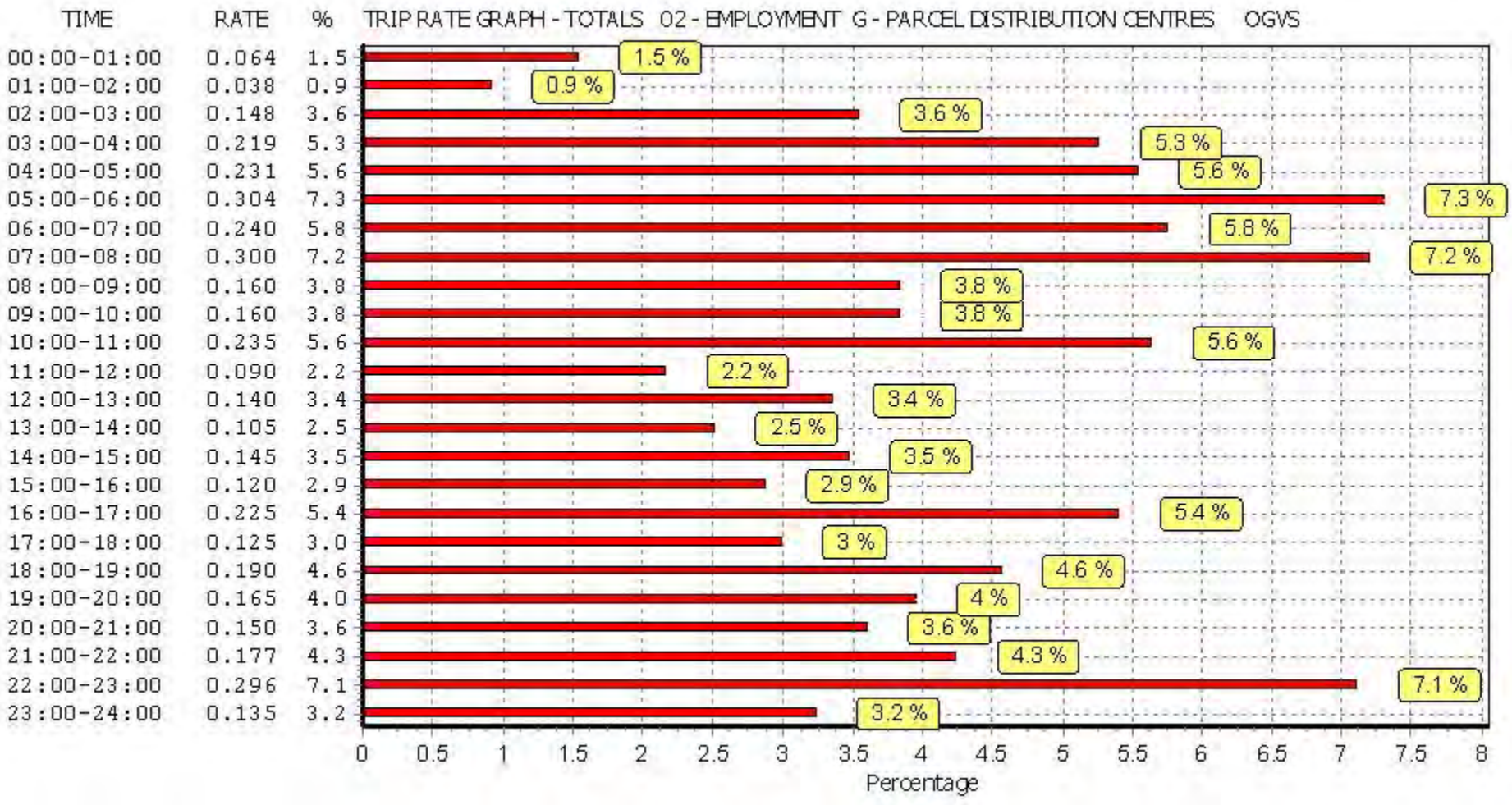


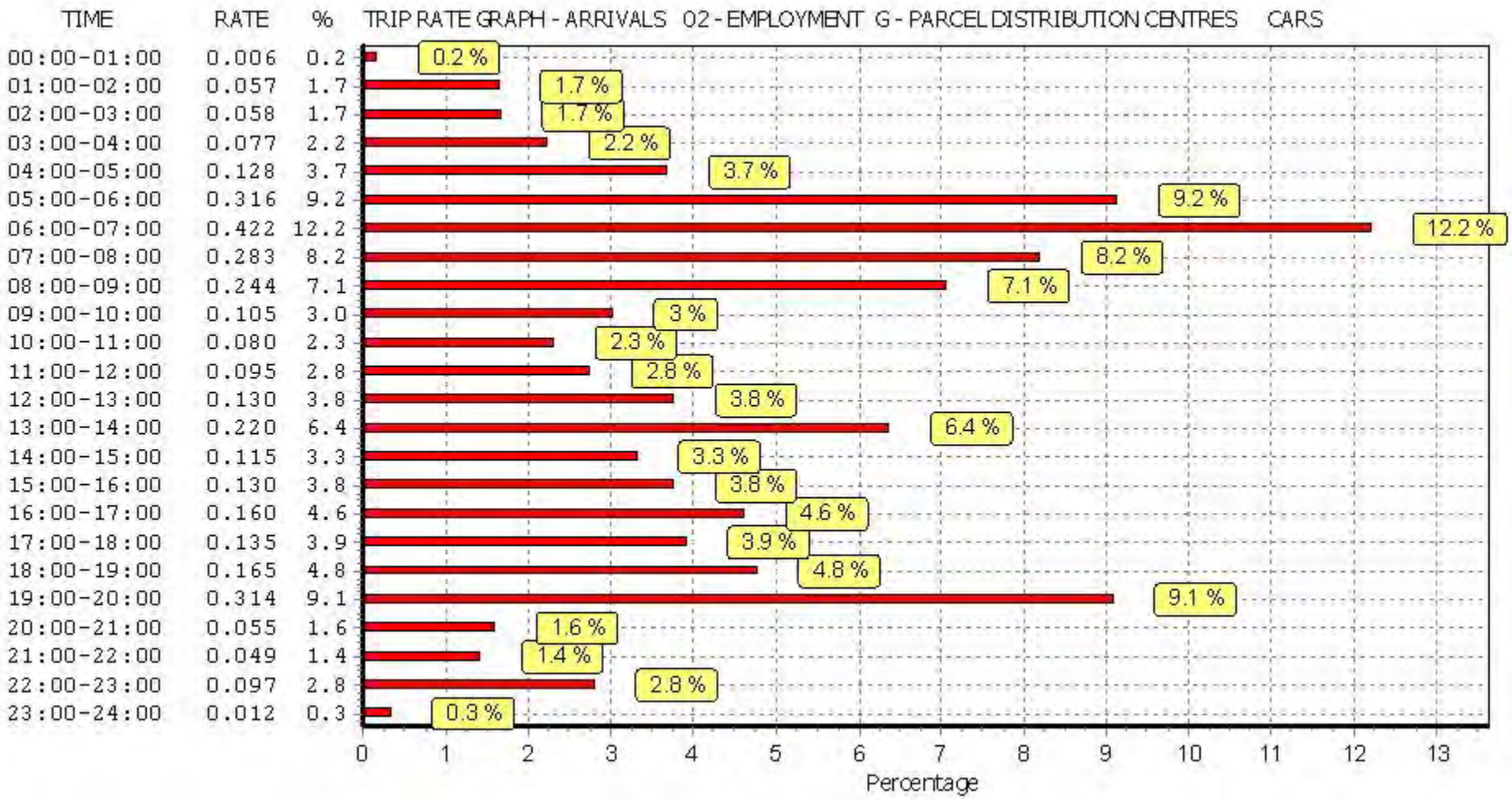
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30	1	15583	0.000	1	15583	0.000	1	15583	0.000
00:30 - 01:00	1	15583	0.006	1	15583	0.000	1	15583	0.006
01:00 - 01:30	1	15583	0.006	1	15583	0.026	1	15583	0.032
01:30 - 02:00	1	15583	0.051	1	15583	0.026	1	15583	0.077
02:00 - 02:30	1	15583	0.013	1	15583	0.026	1	15583	0.039
02:30 - 03:00	1	15583	0.045	1	15583	0.013	1	15583	0.058
03:00 - 03:30	1	15583	0.026	1	15583	0.045	1	15583	0.071
03:30 - 04:00	1	15583	0.051	1	15583	0.039	1	15583	0.090
04:00 - 04:30	1	15583	0.045	1	15583	0.051	1	15583	0.096
04:30 - 05:00	1	15583	0.083	1	15583	0.019	1	15583	0.102
05:00 - 05:30	2	8540	0.111	2	8540	0.035	2	8540	0.146
05:30 - 06:00	2	8540	0.205	2	8540	0.023	2	8540	0.228
06:00 - 06:30	2	8540	0.100	2	8540	0.053	2	8540	0.153
06:30 - 07:00	2	8540	0.322	2	8540	0.041	2	8540	0.363
07:00 - 07:30	3	6693	0.144	3	6693	0.294	3	6693	0.438
07:30 - 08:00	3	6693	0.139	3	6693	0.050	3	6693	0.189
08:00 - 08:30	3	6693	0.085	3	6693	0.030	3	6693	0.115
08:30 - 09:00	3	6693	0.159	3	6693	0.020	3	6693	0.179
09:00 - 09:30	3	6693	0.070	3	6693	0.025	3	6693	0.095
09:30 - 10:00	3	6693	0.035	3	6693	0.040	3	6693	0.075
10:00 - 10:30	3	6693	0.035	3	6693	0.015	3	6693	0.050
10:30 - 11:00	3	6693	0.045	3	6693	0.035	3	6693	0.080
11:00 - 11:30	3	6693	0.030	3	6693	0.045	3	6693	0.075
11:30 - 12:00	3	6693	0.065	3	6693	0.060	3	6693	0.125
12:00 - 12:30	3	6693	0.045	3	6693	0.035	3	6693	0.080
12:30 - 13:00	3	6693	0.085	3	6693	0.100	3	6693	0.185
13:00 - 13:30	3	6693	0.120	3	6693	0.100	3	6693	0.220
13:30 - 14:00	3	6693	0.100	3	6693	0.120	3	6693	0.220
14:00 - 14:30	3	6693	0.050	3	6693	0.075	3	6693	0.125
14:30 - 15:00	3	6693	0.065	3	6693	0.055	3	6693	0.120
15:00 - 15:30	3	6693	0.045	3	6693	0.174	3	6693	0.219
15:30 - 16:00	3	6693	0.085	3	6693	0.100	3	6693	0.185
16:00 - 16:30	3	6693	0.100	3	6693	0.105	3	6693	0.205
16:30 - 17:00	3	6693	0.060	3	6693	0.120	3	6693	0.180
17:00 - 17:30	3	6693	0.035	3	6693	0.229	3	6693	0.264
17:30 - 18:00	3	6693	0.100	3	6693	0.199	3	6693	0.299
18:00 - 18:30	3	6693	0.075	3	6693	0.110	3	6693	0.185
18:30 - 19:00	3	6693	0.090	3	6693	0.090	3	6693	0.180
19:00 - 19:30	3	6693	0.115	3	6693	0.075	3	6693	0.190
19:30 - 20:00	3	6693	0.199	3	6693	0.070	3	6693	0.269
20:00 - 20:30	3	6693	0.035	3	6693	0.080	3	6693	0.115
20:30 - 21:00	3	6693	0.020	3	6693	0.010	3	6693	0.030
21:00 - 21:30	2	9292	0.011	2	9292	0.124	2	9292	0.135
21:30 - 22:00	2	9292	0.038	2	9292	0.135	2	9292	0.173
22:00 - 22:30	1	15583	0.058	1	15583	0.083	1	15583	0.141
22:30 - 23:00	1	15583	0.039	1	15583	0.109	1	15583	0.148
23:00 - 23:30	1	15583	0.006	1	15583	0.039	1	15583	0.045
23:30 - 24:00	1	15583	0.006	1	15583	0.045	1	15583	0.051
Total Rates:			3.453			3.393			6.846

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.*



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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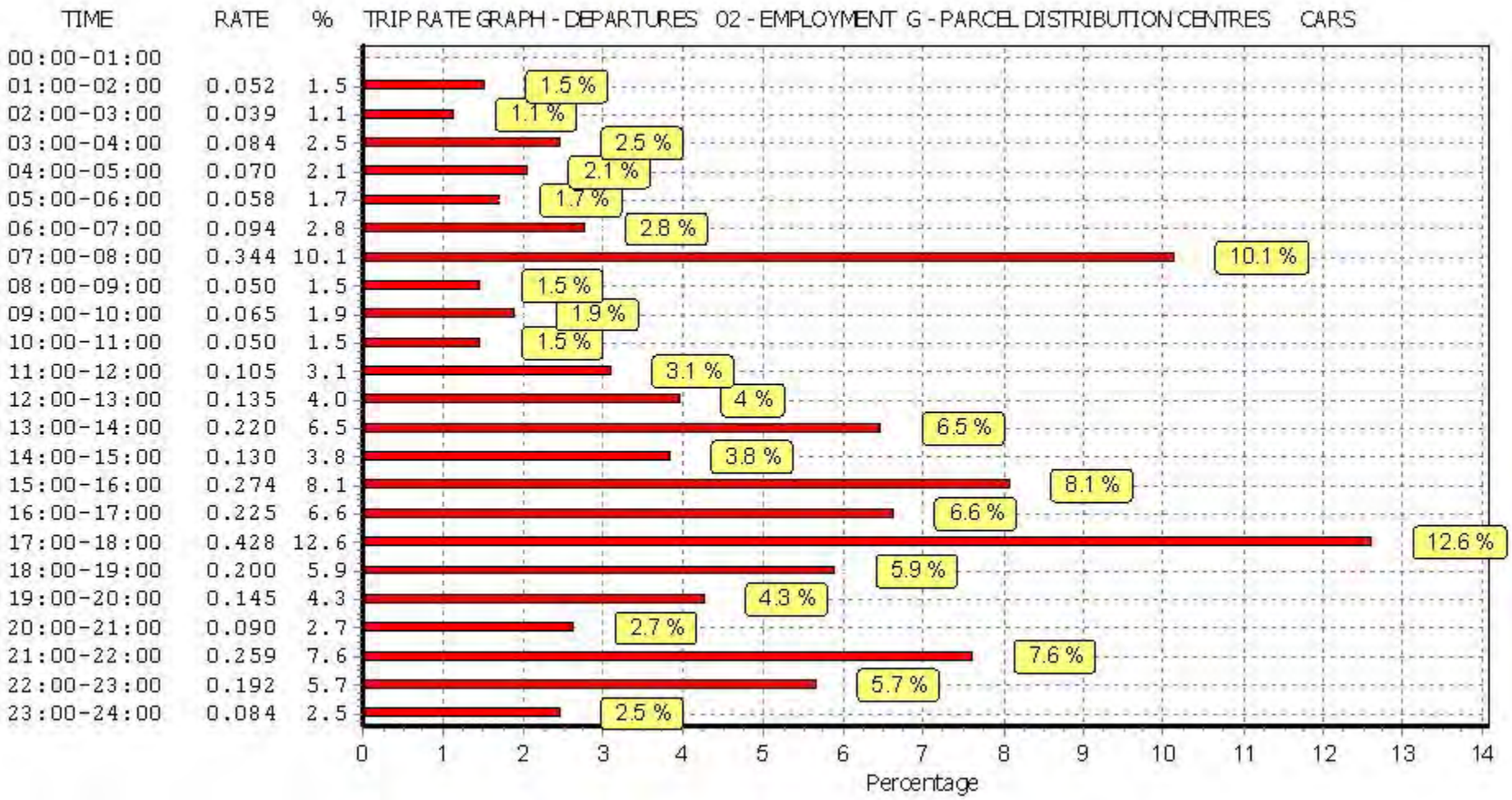

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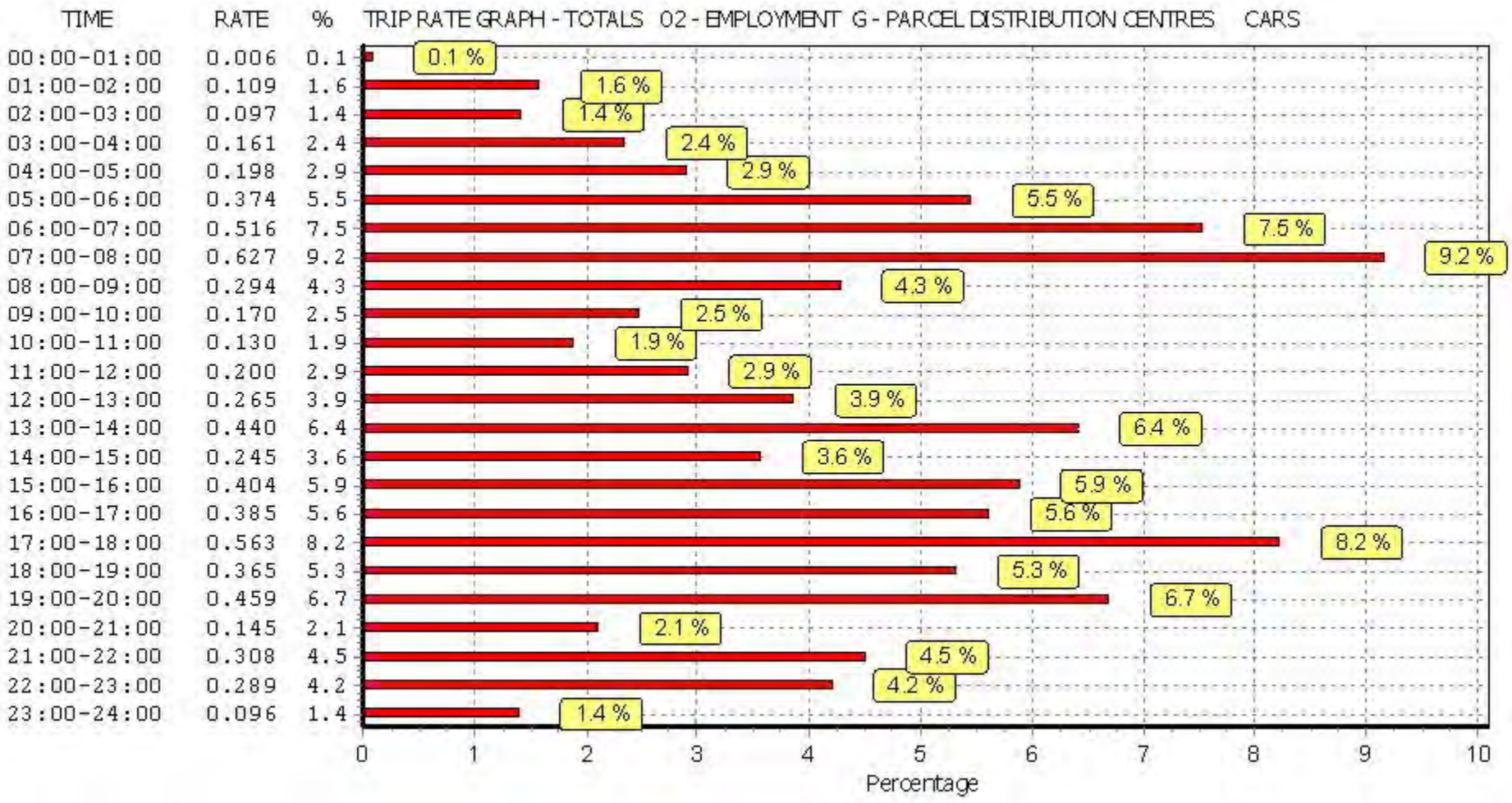

This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30	1	15583	0.000	1	15583	0.000	1	15583	0.000
00:30 - 01:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
01:00 - 01:30	1	15583	0.006	1	15583	0.000	1	15583	0.006
01:30 - 02:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
02:00 - 02:30	1	15583	0.000	1	15583	0.006	1	15583	0.006
02:30 - 03:00	1	15583	0.006	1	15583	0.000	1	15583	0.006
03:00 - 03:30	1	15583	0.000	1	15583	0.000	1	15583	0.000
03:30 - 04:00	1	15583	0.013	1	15583	0.000	1	15583	0.013
04:00 - 04:30	1	15583	0.019	1	15583	0.000	1	15583	0.019
04:30 - 05:00	1	15583	0.032	1	15583	0.006	1	15583	0.038
05:00 - 05:30	2	8540	0.064	2	8540	0.000	2	8540	0.064
05:30 - 06:00	2	8540	0.018	2	8540	0.000	2	8540	0.018
06:00 - 06:30	2	8540	0.064	2	8540	0.023	2	8540	0.087
06:30 - 07:00	2	8540	0.023	2	8540	0.123	2	8540	0.146
07:00 - 07:30	3	6693	0.035	3	6693	0.125	3	6693	0.160
07:30 - 08:00	3	6693	0.030	3	6693	0.120	3	6693	0.150
08:00 - 08:30	3	6693	0.045	3	6693	0.169	3	6693	0.214
08:30 - 09:00	3	6693	0.035	3	6693	0.070	3	6693	0.105
09:00 - 09:30	3	6693	0.055	3	6693	0.055	3	6693	0.110
09:30 - 10:00	3	6693	0.050	3	6693	0.050	3	6693	0.100
10:00 - 10:30	3	6693	0.030	3	6693	0.040	3	6693	0.070
10:30 - 11:00	3	6693	0.015	3	6693	0.050	3	6693	0.065
11:00 - 11:30	3	6693	0.035	3	6693	0.020	3	6693	0.055
11:30 - 12:00	3	6693	0.015	3	6693	0.100	3	6693	0.115
12:00 - 12:30	3	6693	0.040	3	6693	0.045	3	6693	0.085
12:30 - 13:00	3	6693	0.050	3	6693	0.030	3	6693	0.080
13:00 - 13:30	3	6693	0.055	3	6693	0.045	3	6693	0.100
13:30 - 14:00	3	6693	0.065	3	6693	0.025	3	6693	0.090
14:00 - 14:30	3	6693	0.025	3	6693	0.040	3	6693	0.065
14:30 - 15:00	3	6693	0.050	3	6693	0.015	3	6693	0.065
15:00 - 15:30	3	6693	0.050	3	6693	0.045	3	6693	0.095
15:30 - 16:00	3	6693	0.035	3	6693	0.045	3	6693	0.080
16:00 - 16:30	3	6693	0.115	3	6693	0.070	3	6693	0.185
16:30 - 17:00	3	6693	0.154	3	6693	0.030	3	6693	0.184
17:00 - 17:30	3	6693	0.129	3	6693	0.045	3	6693	0.174
17:30 - 18:00	3	6693	0.085	3	6693	0.060	3	6693	0.145
18:00 - 18:30	3	6693	0.090	3	6693	0.055	3	6693	0.145
18:30 - 19:00	3	6693	0.055	3	6693	0.050	3	6693	0.105
19:00 - 19:30	3	6693	0.080	3	6693	0.050	3	6693	0.130
19:30 - 20:00	3	6693	0.030	3	6693	0.075	3	6693	0.105
20:00 - 20:30	3	6693	0.070	3	6693	0.065	3	6693	0.135
20:30 - 21:00	3	6693	0.020	3	6693	0.010	3	6693	0.030
21:00 - 21:30	2	9292	0.005	2	9292	0.027	2	9292	0.032
21:30 - 22:00	2	9292	0.016	2	9292	0.016	2	9292	0.032
22:00 - 22:30	1	15583	0.000	1	15583	0.006	1	15583	0.006
22:30 - 23:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
23:00 - 23:30	1	15583	0.000	1	15583	0.000	1	15583	0.000
23:30 - 24:00	1	15583	0.000	1	15583	0.000	1	15583	0.000
Total Rates:			1.809			1.806			3.615

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

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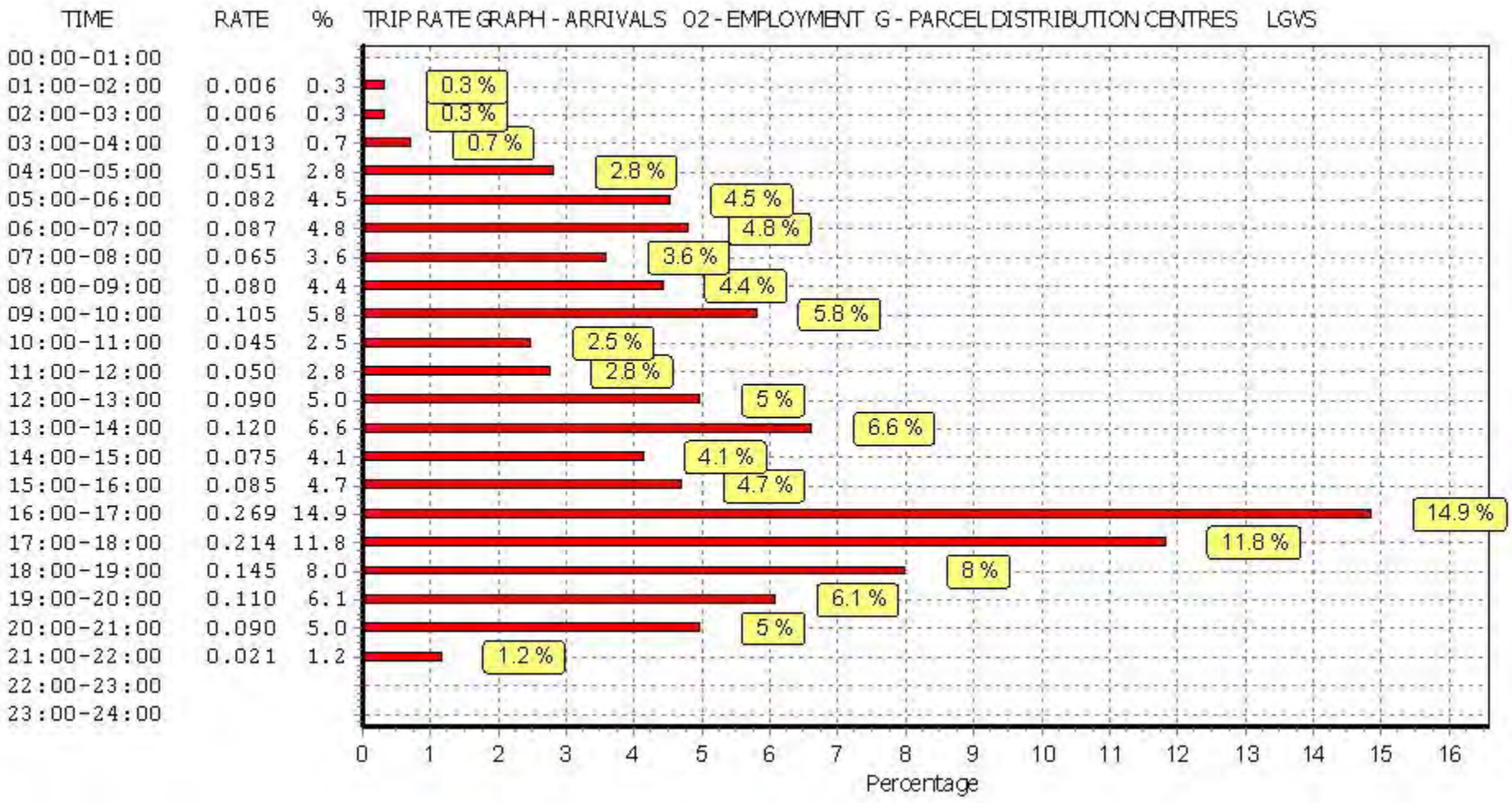

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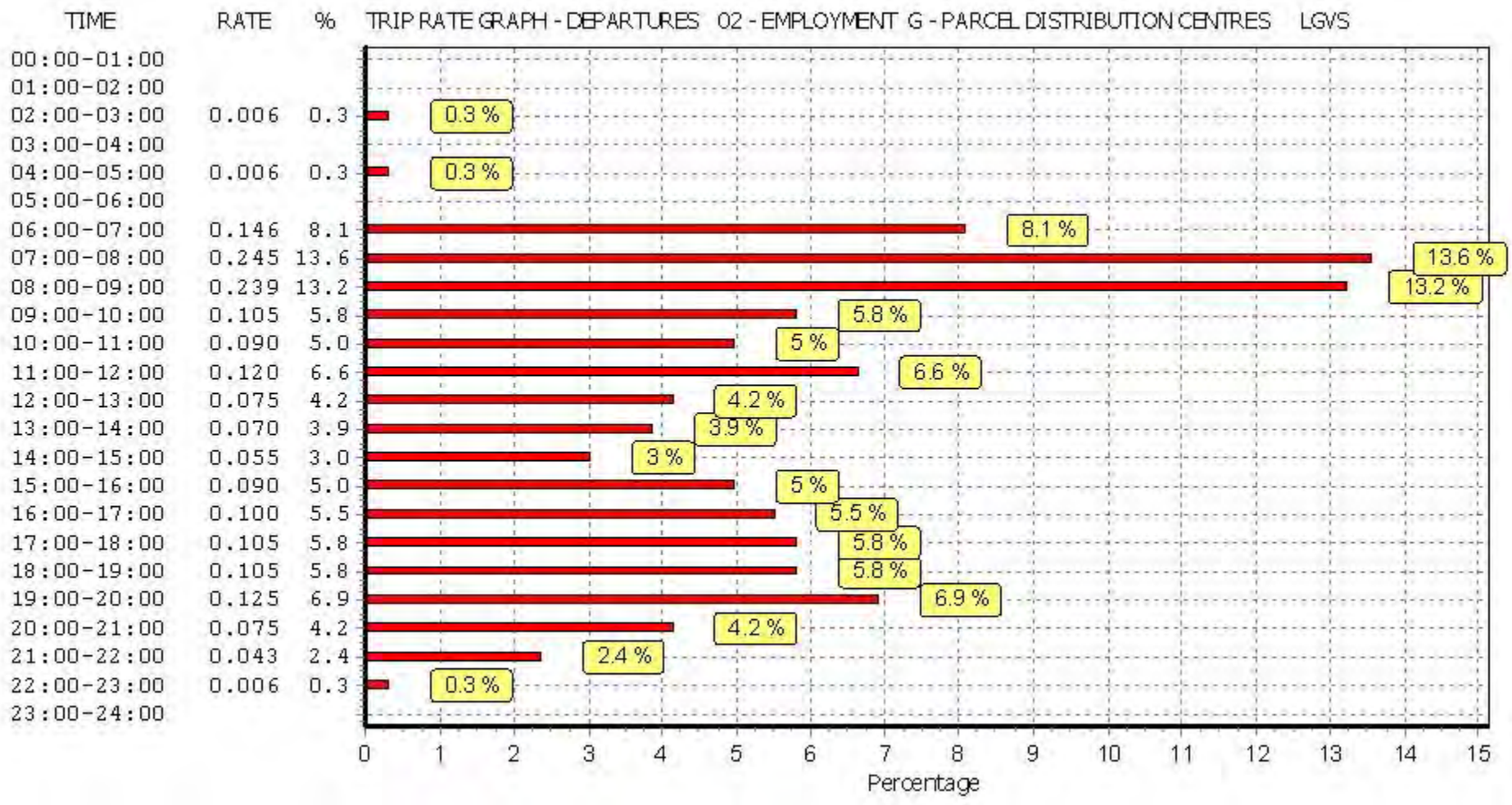
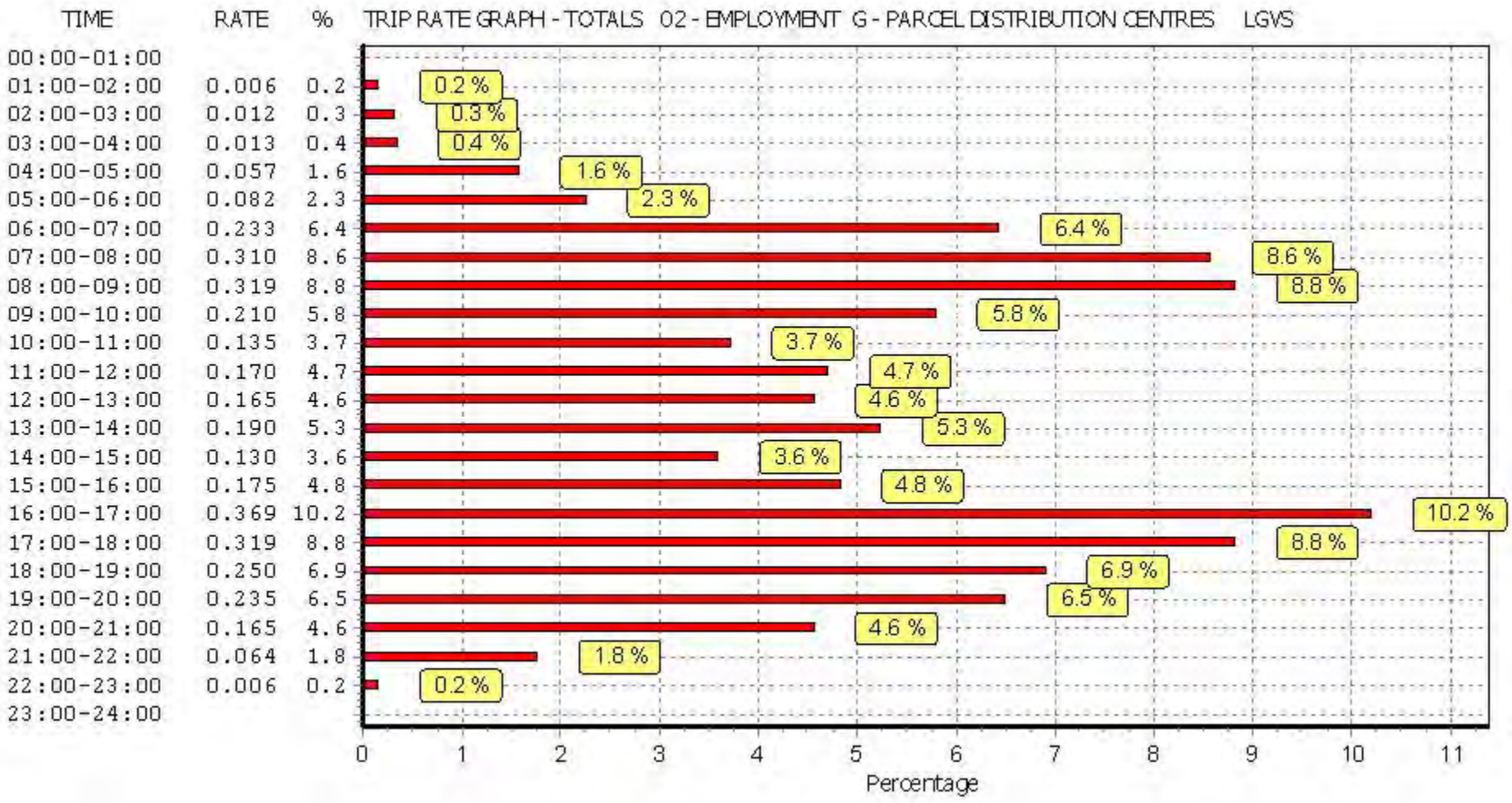


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



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APPENDIX L. Junction Modelling Outputs – All Scenarios

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.0.1.1519

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

Filename: Ashford Road_Site Access priority.j10
Path: T:\Projects\15000 Series\15323ITB Ashford Road, Maidstone\Tech\Junction Assessments\2022 Scheme\FINAL
Report generation date: 14/12/2022 12:08:28

Summary of junction performance

	AM						PM					
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Network Residual Capacity
	2027 Future Year with Development											
Stream B-AC	D1	0.1	9.04	0.05	A	71 %	D2	0.1	9.07	0.08	A	60 %
Stream C-AB		0.1	7.89	0.06	A	[Stream B-AC]		0.0	9.47	0.04	A	[Stream B-AC]
	2037 Future Year with Development											
Stream B-AC	D3	0.1	9.36	0.06	A	61 %	D4	0.1	9.53	0.09	A	50 %
Stream C-AB		0.1	8.09	0.06	A	[Stream B-AC]		0.0	9.70	0.05	A	[Stream B-AC]
	2027 Future Year with Development (Sensitivity Test)											
Stream B-AC	D5	0.2	9.80	0.15	A	59 %	D6	0.2	9.94	0.18	A	49 %
Stream C-AB		0.1	8.33	0.09	A	[Stream B-AC]		0.1	7.94	0.08	A	[Stream B-AC]
	2037 Future Year with Development (Sensitivity Test)											
Stream B-AC	D7	0.2	10.39	0.16	B	48 %	D8	0.2	10.55	0.19	B	40 %
Stream C-AB		0.1	8.60	0.09	A	[Stream B-AC]		0.1	8.14	0.09	A	[Stream B-AC]

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

File summary

File Description

Title	
Location	
Site number	
Date	11/11/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	I-TRANSPORT\Hotdesk
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	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
	✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2027 Future Year with Development	AM	ONE HOUR	07:30	09:00	15
D2	2027 Future Year with Development	PM	ONE HOUR	16:30	18:00	15
D3	2037 Future Year with Development	AM	ONE HOUR	07:30	09:00	15
D4	2037 Future Year with Development	PM	ONE HOUR	16:30	18:00	15
D5	2027 Future Year with Development (Sensitivity Test)	AM	ONE HOUR	07:30	09:00	15
D6	2027 Future Year with Development (Sensitivity Test)	PM	ONE HOUR	16:30	18:00	15
D7	2037 Future Year with Development (Sensitivity Test)	AM	ONE HOUR	07:30	09:00	15
D8	2037 Future Year with Development (Sensitivity Test)	PM	ONE HOUR	16:30	18:00	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2027 Future Year with Development , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A20 Ashford Road / Site Access	T-Junction	Two-way	Two-way	Two-way		0.33	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	71	Stream B-AC	0.33	A

Arms

Arms

Arm	Name	Description	Arm type
A	A20 Ashford Road (W)		Major
B	Employment Site Access		Minor
C	A20 Ashford Road (E)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - A20 Ashford Road (E)	7.40		✓	3.50	146.0	✓	14.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Employment Site Access	One lane	4.48	120	115

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	661	0.115	0.290	0.182	0.414
B-C	800	0.113	0.287	-	-
C-B	752	0.274	0.274	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2027 Future Year with Development	AM	ONE HOUR	07:30	09:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A20 Ashford Road (W)		✓	610	100.000
B - Employment Site Access		✓	21	100.000
C - A20 Ashford Road (E)		✓	789	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A20 Ashford Road (W)	B - Employment Site Access	C - A20 Ashford Road (E)
From	A - A20 Ashford Road (W)	0	6	604
	B - Employment Site Access	2	0	19
	C - A20 Ashford Road (E)	763	26	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A20 Ashford Road (W)	B - Employment Site Access	C - A20 Ashford Road (E)
From	A - A20 Ashford Road (W)	0	0	3
	B - Employment Site Access	0	0	36
	C - A20 Ashford Road (E)	4	16	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.05	9.04	0.1	A
C-AB	0.06	7.89	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	16	479	0.033	16	0.0	7.761	A
C-AB	20	537	0.036	19	0.0	6.960	A
C-A	574			574			
A-B	5			5			
A-C	455			455			

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	19	456	0.041	19	0.0	8.239	A
C-AB	23	515	0.045	23	0.0	7.323	A
C-A	686			686			
A-B	5			5			
A-C	543			543			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	23	421	0.055	23	0.1	9.036	A
C-AB	29	485	0.059	29	0.1	7.887	A
C-A	840			840			
A-B	7			7			
A-C	665			665			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	23	421	0.055	23	0.1	9.038	A
C-AB	29	485	0.059	29	0.1	7.888	A
C-A	840			840			
A-B	7			7			
A-C	665			665			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	19	456	0.041	19	0.0	8.243	A
C-AB	23	515	0.045	23	0.0	7.328	A
C-A	686			686			
A-B	5			5			
A-C	543			543			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	16	479	0.033	16	0.0	7.767	A
C-AB	20	537	0.036	20	0.0	6.964	A
C-A	574			574			
A-B	5			5			
A-C	455			455			

2027 Future Year with Development , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A20 Ashford Road / Site Access	T-Junction	Two-way	Two-way	Two-way		0.36	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	60	Stream B-AC	0.36	A

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)
D2	2027 Future Year with Development	PM	ONE HOUR	16:30	18:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A20 Ashford Road (W)		✓	640	100.000
B - Employment Site Access		✓	33	100.000
C - A20 Ashford Road (E)		✓	837	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A20 Ashford Road (W)	B - Employment Site Access	C - A20 Ashford Road (E)
From	A - A20 Ashford Road (W)	0	2	638
	B - Employment Site Access	6	0	27
	C - A20 Ashford Road (E)	821	16	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A20 Ashford Road (W)	B - Employment Site Access	C - A20 Ashford Road (E)
From	A - A20 Ashford Road (W)	0	0	1
	B - Employment Site Access	0	0	20
	C - A20 Ashford Road (E)	3	40	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.08	9.07	0.1	A
C-AB	0.04	9.47	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	25	514	0.048	25	0.1	7.351	A
C-AB	12	442	0.027	12	0.0	8.372	A
C-A	618			618			
A-B	2			2			
A-C	480			480			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	30	482	0.062	30	0.1	7.964	A
C-AB	14	423	0.034	14	0.0	8.801	A
C-A	738			738			
A-B	2			2			
A-C	574			574			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	36	433	0.084	36	0.1	9.069	A
C-AB	18	398	0.044	18	0.0	9.464	A
C-A	904			904			
A-B	2			2			
A-C	702			702			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	36	433	0.084	36	0.1	9.073	A
C-AB	18	398	0.044	18	0.0	9.466	A
C-A	904			904			
A-B	2			2			
A-C	702			702			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	30	482	0.062	30	0.1	7.970	A
C-AB	14	423	0.034	14	0.0	8.804	A
C-A	738			738			
A-B	2			2			
A-C	574			574			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	25	514	0.048	25	0.1	7.359	A
C-AB	12	442	0.027	12	0.0	8.376	A
C-A	618			618			
A-B	2			2			
A-C	480			480			

2037 Future Year with Development , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A20 Ashford Road / Site Access	T-Junction	Two-way	Two-way	Two-way		0.32	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	61	Stream B-AC	0.32	A

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)
D3	2037 Future Year with Development	AM	ONE HOUR	07:30	09:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A20 Ashford Road (W)		✓	652	100.000
B - Employment Site Access		✓	21	100.000
C - A20 Ashford Road (E)		✓	843	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A20 Ashford Road (W)	B - Employment Site Access	C - A20 Ashford Road (E)
From	A - A20 Ashford Road (W)	0	6	646
	B - Employment Site Access	2	0	19
	C - A20 Ashford Road (E)	817	26	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A20 Ashford Road (W)	B - Employment Site Access	C - A20 Ashford Road (E)
From	A - A20 Ashford Road (W)	0	0	3
	B - Employment Site Access	0	0	36
	C - A20 Ashford Road (E)	4	16	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.06	9.36	0.1	A
C-AB	0.06	8.09	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	16	471	0.034	16	0.0	7.901	A
C-AB	20	529	0.037	19	0.0	7.065	A
C-A	615			615			
A-B	5			5			
A-C	486			486			

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	19	446	0.042	19	0.0	8.437	A
C-AB	23	506	0.046	23	0.0	7.462	A
C-A	734			734			
A-B	5			5			
A-C	581			581			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	23	408	0.057	23	0.1	9.355	A
C-AB	29	474	0.060	29	0.1	8.086	A
C-A	900			900			
A-B	7			7			
A-C	711			711			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	23	408	0.057	23	0.1	9.357	A
C-AB	29	474	0.060	29	0.1	8.088	A
C-A	900			900			
A-B	7			7			
A-C	711			711			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	19	446	0.042	19	0.0	8.442	A
C-AB	23	506	0.046	23	0.0	7.467	A
C-A	734			734			
A-B	5			5			
A-C	581			581			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	16	471	0.034	16	0.0	7.908	A
C-AB	20	529	0.037	20	0.0	7.069	A
C-A	615			615			
A-B	5			5			
A-C	486			486			

2037 Future Year with Development , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A20 Ashford Road / Site Access	T-Junction	Two-way	Two-way	Two-way		0.35	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	50	Stream B-AC	0.35	A

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)
D4	2037 Future Year with Development	PM	ONE HOUR	16:30	18:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A20 Ashford Road (W)		✓	683	100.000
B - Employment Site Access		✓	33	100.000
C - A20 Ashford Road (E)		✓	892	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A20 Ashford Road (W)	B - Employment Site Access	C - A20 Ashford Road (E)
From	A - A20 Ashford Road (W)	0	2	681
	B - Employment Site Access	6	0	27
	C - A20 Ashford Road (E)	876	16	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A20 Ashford Road (W)	B - Employment Site Access	C - A20 Ashford Road (E)
From	A - A20 Ashford Road (W)	0	0	1
	B - Employment Site Access	0	0	20
	C - A20 Ashford Road (E)	3	40	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.09	9.53	0.1	A
C-AB	0.05	9.70	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	25	503	0.049	25	0.1	7.518	A
C-AB	12	435	0.028	12	0.0	8.498	A
C-A	659			659			
A-B	2			2			
A-C	513			513			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	30	468	0.063	30	0.1	8.214	A
C-AB	14	416	0.035	14	0.0	8.968	A
C-A	788			788			
A-B	2			2			
A-C	612			612			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	36	414	0.088	36	0.1	9.522	A
C-AB	18	389	0.045	18	0.0	9.703	A
C-A	964			964			
A-B	2			2			
A-C	750			750			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	36	414	0.088	36	0.1	9.528	A
C-AB	18	389	0.045	18	0.0	9.705	A
C-A	964			964			
A-B	2			2			
A-C	750			750			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	30	468	0.063	30	0.1	8.222	A
C-AB	14	416	0.035	14	0.0	8.970	A
C-A	788			788			
A-B	2			2			
A-C	612			612			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	25	503	0.049	25	0.1	7.530	A
C-AB	12	435	0.028	12	0.0	8.503	A
C-A	659			659			
A-B	2			2			
A-C	513			513			

2027 Future Year with Development (Sensitivity Test), AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A20 Ashford Road / Site Access	T-Junction	Two-way	Two-way	Two-way		0.72	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	59	Stream B-AC	0.72	A

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)
D5	2027 Future Year with Development (Sensitivity Test)	AM	ONE HOUR	07:30	09:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A20 Ashford Road (W)		✓	612	100.000
B - Employment Site Access		✓	61	100.000
C - A20 Ashford Road (E)		✓	802	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A20 Ashford Road (W)	B - Employment Site Access	C - A20 Ashford Road (E)
From	A - A20 Ashford Road (W)	0	8	604
	B - Employment Site Access	10	0	51
	C - A20 Ashford Road (E)	763	39	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A20 Ashford Road (W)	B - Employment Site Access	C - A20 Ashford Road (E)
From	A - A20 Ashford Road (W)	0	0	1
	B - Employment Site Access	0	0	25
	C - A20 Ashford Road (E)	4	19	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.15	9.80	0.2	A
C-AB	0.09	8.33	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	46	507	0.091	46	0.1	7.796	A
C-AB	29	525	0.056	29	0.1	7.260	A
C-A	574			574			
A-B	6			6			
A-C	455			455			

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	55	478	0.115	55	0.1	8.507	A
C-AB	35	504	0.070	35	0.1	7.676	A
C-A	686			686			
A-B	7			7			
A-C	543			543			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	67	435	0.155	67	0.2	9.787	A
C-AB	43	475	0.090	43	0.1	8.323	A
C-A	840			840			
A-B	9			9			
A-C	665			665			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	67	435	0.155	67	0.2	9.796	A
C-AB	43	475	0.090	43	0.1	8.326	A
C-A	840			840			
A-B	9			9			
A-C	665			665			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	55	478	0.115	55	0.1	8.521	A
C-AB	35	504	0.070	35	0.1	7.681	A
C-A	686			686			
A-B	7			7			
A-C	543			543			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	46	507	0.091	46	0.1	7.815	A
C-AB	29	525	0.056	29	0.1	7.271	A
C-A	574			574			
A-B	6			6			
A-C	455			455			

2027 Future Year with Development (Sensitivity Test), PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A20 Ashford Road / Site Access	T-Junction	Two-way	Two-way	Two-way		0.70	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	49	Stream B-AC	0.70	A

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)
D6	2027 Future Year with Development (Sensitivity Test)	PM	ONE HOUR	16:30	18:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A20 Ashford Road (W)		✓	647	100.000
B - Employment Site Access		✓	73	100.000
C - A20 Ashford Road (E)		✓	859	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A20 Ashford Road (W)	B - Employment Site Access	C - A20 Ashford Road (E)
From	A - A20 Ashford Road (W)	0	9	638
	B - Employment Site Access	14	0	59
	C - A20 Ashford Road (E)	821	38	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A20 Ashford Road (W)	B - Employment Site Access	C - A20 Ashford Road (E)
From	A - A20 Ashford Road (W)	0	0	1
	B - Employment Site Access	0	0	13
	C - A20 Ashford Road (E)	3	12	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.18	9.94	0.2	A
C-AB	0.08	7.94	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	55	533	0.103	55	0.1	7.517	A
C-AB	29	551	0.052	28	0.1	6.884	A
C-A	618			618			
A-B	7			7			
A-C	480			480			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	66	497	0.132	65	0.2	8.340	A
C-AB	34	528	0.065	34	0.1	7.293	A
C-A	738			738			
A-B	8			8			
A-C	574			574			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	80	443	0.182	80	0.2	9.922	A
C-AB	42	495	0.084	42	0.1	7.931	A
C-A	904			904			
A-B	10			10			
A-C	702			702			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	80	443	0.182	80	0.2	9.937	A
C-AB	42	495	0.084	42	0.1	7.935	A
C-A	904			904			
A-B	10			10			
A-C	702			702			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	66	497	0.132	66	0.2	8.358	A
C-AB	34	528	0.065	34	0.1	7.298	A
C-A	738			738			
A-B	8			8			
A-C	574			574			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	55	533	0.103	55	0.1	7.538	A
C-AB	29	551	0.052	29	0.1	6.894	A
C-A	618			618			
A-B	7			7			
A-C	480			480			

2037 Future Year with Development (Sensitivity Test), AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A20 Ashford Road / Site Access	T-Junction	Two-way	Two-way	Two-way		0.71	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	48	Stream B-AC	0.71	A

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)
D7	2037 Future Year with Development (Sensitivity Test)	AM	ONE HOUR	07:30	09:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A20 Ashford Road (W)		✓	654	100.000
B - Employment Site Access		✓	61	100.000
C - A20 Ashford Road (E)		✓	856	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A20 Ashford Road (W)	B - Employment Site Access	C - A20 Ashford Road (E)
From	A - A20 Ashford Road (W)	0	8	646
	B - Employment Site Access	10	0	51
	C - A20 Ashford Road (E)	817	39	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A20 Ashford Road (W)	B - Employment Site Access	C - A20 Ashford Road (E)
From	A - A20 Ashford Road (W)	0	0	3
	B - Employment Site Access	0	0	25
	C - A20 Ashford Road (E)	4	19	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.16	10.39	0.2	B
C-AB	0.09	8.60	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	46	495	0.093	46	0.1	8.010	A
C-AB	29	515	0.057	29	0.1	7.403	A
C-A	615			615			
A-B	6			6			
A-C	486			486			

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	55	462	0.119	55	0.1	8.829	A
C-AB	35	493	0.071	35	0.1	7.867	A
C-A	734			734			
A-B	7			7			
A-C	581			581			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	67	414	0.162	67	0.2	10.375	B
C-AB	43	461	0.093	43	0.1	8.602	A
C-A	900			900			
A-B	9			9			
A-C	711			711			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	67	414	0.162	67	0.2	10.388	B
C-AB	43	461	0.093	43	0.1	8.605	A
C-A	900			900			
A-B	9			9			
A-C	711			711			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	55	462	0.119	55	0.1	8.846	A
C-AB	35	493	0.071	35	0.1	7.873	A
C-A	734			734			
A-B	7			7			
A-C	581			581			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	46	494	0.093	46	0.1	8.031	A
C-AB	29	515	0.057	29	0.1	7.411	A
C-A	615			615			
A-B	6			6			
A-C	486			486			

2037 Future Year with Development (Sensitivity Test), PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A20 Ashford Road / Site Access	T-Junction	Two-way	Two-way	Two-way		0.70	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	40	Stream B-AC	0.70	A

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)
D8	2037 Future Year with Development (Sensitivity Test)	PM	ONE HOUR	16:30	18:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A20 Ashford Road (W)		✓	690	100.000
B - Employment Site Access		✓	73	100.000
C - A20 Ashford Road (E)		✓	914	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A20 Ashford Road (W)	B - Employment Site Access	C - A20 Ashford Road (E)
From	A - A20 Ashford Road (W)	0	9	681
	B - Employment Site Access	14	0	59
	C - A20 Ashford Road (E)	876	38	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A20 Ashford Road (W)	B - Employment Site Access	C - A20 Ashford Road (E)
From	A - A20 Ashford Road (W)	0	0	1
	B - Employment Site Access	0	0	13
	C - A20 Ashford Road (E)	3	12	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.19	10.55	0.2	B
C-AB	0.09	8.14	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	55	521	0.105	54	0.1	7.706	A
C-AB	29	543	0.053	28	0.1	6.991	A
C-A	659			659			
A-B	7			7			
A-C	513			513			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	66	482	0.136	65	0.2	8.645	A
C-AB	34	518	0.066	34	0.1	7.436	A
C-A	788			788			
A-B	8			8			
A-C	612			612			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	80	422	0.191	80	0.2	10.528	B
C-AB	42	484	0.086	42	0.1	8.142	A
C-A	964			964			
A-B	10			10			
A-C	750			750			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	80	422	0.191	80	0.2	10.547	B
C-AB	42	484	0.086	42	0.1	8.145	A
C-A	964			964			
A-B	10			10			
A-C	750			750			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	66	482	0.136	66	0.2	8.662	A
C-AB	34	518	0.066	34	0.1	7.442	A
C-A	788			788			
A-B	8			8			
A-C	612			612			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	55	521	0.105	55	0.1	7.728	A
C-AB	29	543	0.053	29	0.1	6.998	A
C-A	659			659			
A-B	7			7			
A-C	513			513			

Junctions 10

ARCADY 10 - Roundabout Module

Filename: A20_M20 Roundabout AM (Lane Sim)_al.j10
Path: T:\Projects\15000 Series\15323ITB Ashford Road, Maidstone\Tech\Junction Assessments\2022 Scheme\FINAL
Report generation date: 14/12/2022 11:10:14

Summary of junction performance

	AM	
	Queue (Veh)	Delay (s)
	[Lane Simulation] - 2022 Observed	
1 - M20 link road	4.2	8.72
2 - A20 (E)	6.3	14.55
3 - A20 (W)	0.6	7.39
	[Lane Simulation] - 2027 Future Year without Development	
1 - M20 link road	4.4	8.96
2 - A20 (E)	10.1	17.50
3 - A20 (W)	1.0	8.62
	[Lane Simulation] - 2037 Future Year without Development	
1 - M20 link road	4.8	10.11
2 - A20 (E)	15.1	26.04
3 - A20 (W)	1.0	9.97
	[Lane Simulation] - 2027 Future Year with Development	
1 - M20 link road	4.7	9.82
2 - A20 (E)	8.4	16.78
3 - A20 (W)	0.9	8.93
	[Lane Simulation] - 2037 Future Year with Development	
1 - M20 link road	6.1	10.74
2 - A20 (E)	20.7	36.43
3 - A20 (W)	0.9	11.07
	[Lane Simulation] - 2027 Future Year with Development (Sensitivity Test)	
1 - M20 link road	4.2	10.04
2 - A20 (E)	9.1	18.44
3 - A20 (W)	1.0	10.03
	[Lane Simulation] - 2037 Future Year with Development (Sensitivity Test)	
1 - M20 link road	5.6	11.17
2 - A20 (E)	18.6	33.04
3 - A20 (W)	1.5	12.43

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. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	
Location	
Site number	
Date	13/10/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	I-TRANSPORT\londonhotdesk
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	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75	✓					0.85	36.00	20.00		500

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials	Last run time taken (s)
Delay	1.00	100000	100000	-1	3	1	60	✓			1080279379	99	9.44

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	2022 Observed	AM	ONE HOUR	07:15	08:45	15	✓
D2	2027 Future Year without Development	AM	ONE HOUR	07:15	08:45	15	✓
D3	2037 Future Year without Development	AM	ONE HOUR	07:15	08:45	15	✓
D4	2027 Future Year with Development	AM	ONE HOUR	07:15	08:45	15	✓
D5	2037 Future Year with Development	AM	ONE HOUR	07:15	08:45	15	✓
D8	2027 Future Year with Development (Sensitivity Test)	AM	ONE HOUR	07:15	08:45	15	✓
D9	2037 Future Year with Development (Sensitivity Test)	AM	ONE HOUR	07:15	08:45	15	✓

Analysis Set Details

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

2022 Observed, AM

Data Errors and Warnings

Severity	Area	Item	Description

Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.
Info	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A20 / M20 Roundabout	Standard Roundabout		1, 2, 3	11.46	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	11.46	B

Arms

Arms

Arm	Name	Description	No give-way line
1	M20 link road		
2	A20 (E)		
3	A20 (W)		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - M20 link road	7.40	10.40	7.8	44.9	59.0	34.0		
2 - A20 (E)	7.50	10.00	5.3	48.8	59.0	14.5		
3 - A20 (W)	3.80	6.10	10.3	25.3	59.0	20.5		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - M20 link road	0.738	2685
2 - A20 (E)	0.775	2787
3 - A20 (W)	0.561	1625

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

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
1 - M20 link road	Apportion from lane geometry	10.00
2 - A20 (E)	Apportion from lane geometry	20.00
3 - A20 (W)	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
1 - M20 link road	Entry	1	1	2	✓	2.00			0	99999	
			2	2	✓	2.00			0	99999	
			3	1, 3	✓	2.00			0	99999	
		2	1	(2)		Infinity					
			2	(1, 2, 3)		Infinity					
	Exit	1	1			Infinity					
2 - A20 (E)	Entry	1	1	(1), 3		Infinity			0	99999	
			2	1, 2		Infinity			0	99999	
	Exit	1	1			Infinity					
3 - A20 (W)	Entry	1	1	1, 2, 3		Infinity			0	99999	
	Exit	1	1			Infinity					

Entry Lane Geometry

Arm	Side	Lane level	Lane	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Notes
1 - M20 link road	Entry	1	1	3.70	3.70	0.0	44.9	59.0	34.0		
			2	3.70	3.70	0.0	44.9	59.0	34.0		
			3	3.00	3.00	0.0	44.9	59.0	34.0		
2 - A20 (E)	Entry	1	1	3.75	3.75	0.0	48.8	59.0	14.5		
			2	3.75	6.25	5.3	48.8	59.0	14.5		

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
1 - M20 link road	Entry	1	1	0.263	955
			2	0.263	955
			3	0.213	774
2 - A20 (E)	Entry	1	1	0.342	1230
			2	0.433	1557
3 - A20 (W)	Entry	1	1	0.561	1625

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm		
			M20 link road	A20 (E)	A20 (W)
1 - M20 link road	1	1		✓	
		2		✓	
		3	✓		✓
	2	1		✓	
		2	✓	✓	✓
2 - A20 (E)	1	1			✓
		2	✓	✓	
3 - A20 (W)	1	1	✓	✓	✓

Summary of Entry Lane allowed secondary movements

Arm	Lane Level	Lane	Destination arm		
			M20 link road	A20 (E)	A20 (W)
1 - M20 link road	1	1			
		2			
		3			
	2	1			
		2			
2 - A20 (E)	1	1	✓		
		2			
3 - A20 (W)	1	1			

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	2022 Observed	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 (Veh/hr)	Scaling Factor (%)
1 - M20 link road		ONE HOUR	✓	1364	100.000
2 - A20 (E)		ONE HOUR	✓	1581	100.000
3 - A20 (W)		ONE HOUR	✓	281	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - M20 link road	2 - A20 (E)	3 - A20 (W)
From	1 - M20 link road	0	984	380
	2 - A20 (E)	1215	0	366
	3 - A20 (W)	255	24	2

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - M20 link road	2 - A20 (E)	3 - A20 (W)
From	1 - M20 link road	0	7	5
	2 - A20 (E)	6	0	3
	3 - A20 (W)	4	4	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - M20 link road	8.72	4.2	10.4	A	1252	1877
2 - A20 (E)	14.55	6.3	19.1	B	1452	2178
3 - A20 (W)	7.39	0.6	2.7	A	257	385

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1007	252	19	1006	1075	1103	0.0	1.7	6.116	A
2 - A20 (E)	1205	301	285	1204	1255	739	0.0	2.1	5.798	A
3 - A20 (W)	207	52	915	206	216	574	0.0	0.3	4.304	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1231	308	28	1232	1305	1338	1.7	2.3	6.958	A
2 - A20 (E)	1418	355	334	1422	1488	926	2.1	2.5	7.479	A
3 - A20 (W)	265	66	1100	266	269	656	0.3	0.4	5.402	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1508	377	25	1502	1598	1604	2.3	3.8	8.586	A
2 - A20 (E)	1703	426	421	1715	1807	1108	2.5	6.0	12.216	B
3 - A20 (W)	308	77	1322	308	322	813	0.4	0.6	6.937	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1505	376	29	1494	1604	1628	3.8	4.1	8.721	A
2 - A20 (E)	1747	437	415	1763	1840	1108	6.0	6.1	14.547	B
3 - A20 (W)	300	75	1355	302	318	823	0.6	0.6	7.390	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1243	311	24	1246	1313	1346	4.1	2.3	7.008	A
2 - A20 (E)	1436	359	344	1430	1516	926	6.1	3.4	8.219	A
3 - A20 (W)	257	64	1113	256	268	661	0.6	0.4	5.902	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1018	255	17	1019	1096	1097	2.3	1.7	6.206	A
2 - A20 (E)	1198	299	289	1195	1262	748	3.4	2.3	5.993	A
3 - A20 (W)	204	51	911	203	215	573	0.4	0.3	4.322	A

Queue Variation Results for each time segment

07:15 - 07:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	1.74	0.00	0.92	3.58	5.00
2 - A20 (E)	2.11	0.00	0.77	5.75	8.25
3 - A20 (W)	0.27	0.00	0.00	0.72	1.17

07:30 - 07:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	2.27	0.00	1.33	4.51	6.29
2 - A20 (E)	2.59	0.00	1.57	4.83	7.82
3 - A20 (W)	0.40	0.00	0.00	0.98	1.66

07:45 - 08:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	3.94	0.00	2.70	8.14	10.36
2 - A20 (E)	6.12	0.21	4.32	12.40	16.20
3 - A20 (W)	0.63	0.00	0.00	1.49	1.86

08:00 - 08:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	4.18	0.00	3.15	7.62	10.06
2 - A20 (E)	6.29	0.00	4.69	12.43	19.07
3 - A20 (W)	0.61	0.00	0.00	1.77	2.69

08:15 - 08:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	2.33	0.00	1.37	4.25	5.98
2 - A20 (E)	3.41	0.00	1.93	7.32	10.48
3 - A20 (W)	0.38	0.00	0.00	0.84	1.35

08:30 - 08:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	1.69	0.00	0.82	3.55	4.25
2 - A20 (E)	2.41	0.00	1.26	4.84	7.13
3 - A20 (W)	0.28	0.00	0.00	0.71	1.21

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	356	884	0.402	354	388	0.0	0.6	4.893	A
			2	2	367	889	0.413	368	392	0.0	0.4	4.804	A
			3	1, 3	283	727	0.390	284	295	0.0	0.5	6.843	A
		2	1	(2)	396			395	422	0.0	0.0	0.252	A
			2	(1, 2, 3)	611			611	660	0.0	0.2	0.996	A
	Exit	1	1		1103			1103	1161	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	411	1087	0.379	410	414	0.0	0.7	4.977	A
			2	1, 2	794	1345	0.590	795	841	0.0	1.3	6.209	A
	Exit	1	1		739			739	798	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	207	1048	0.197	206	216	0.0	0.3	4.304	A
	Exit	1	1		574			574	587	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	447	889	0.503	448	476	0.6	0.5	5.246	A
			2	2	452	888	0.509	451	476	0.4	0.7	5.211	A
			3	1, 3	333	731	0.455	333	353	0.5	0.8	7.142	A
		2	1	(2)	508			508	538	0.0	0.1	0.570	A
			2	(1, 2, 3)	724			725	768	0.2	0.3	1.648	A
	Exit	1	1		1338			1338	1394	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	476	1067	0.446	476	499	0.7	0.7	5.619	A
			2	1, 2	942	1319	0.715	946	989	1.3	1.8	8.434	A
	Exit	1	1		926			926	976	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	265	932	0.284	266	269	0.3	0.4	5.402	A
	Exit	1	1		656			656	691	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	539	886	0.608	539	576	0.5	0.9	5.682	A
			2	2	545	886	0.616	545	583	0.7	0.8	5.679	A
			3	1, 3	420	728	0.577	418	438	0.8	0.8	7.475	A
		2	1	(2)	665			664	708	0.1	0.3	1.221	A
			2	(1, 2, 3)	844			839	893	0.3	1.0	3.333	A
	Exit	1	1		1604			1604	1690	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	598	1039	0.576	602	631	0.7	1.2	7.526	A
			2	1, 2	1105	1289	0.858	1113	1176	1.8	4.8	14.764	B
	Exit	1	1		1108			1108	1186	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	308	810	0.379	308	322	0.4	0.6	6.937	A
	Exit	1	1		813			813	851	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	536	888	0.603	533	579	0.9	0.9	5.694	A
			2	2	550	886	0.619	547	585	0.8	0.9	5.662	A
			3	1, 3	416	731	0.568	413	440	0.8	1.1	7.455	A
		2	1	(2)	671			670	721	0.3	0.2	1.265	A
			2	(1, 2, 3)	835			832	885	1.0	1.0	3.585	A
	Exit	1	1		1628			1628	1713	0.0	0.0	0.000	A

2 - A20 (E)	Entry	1	1	(1), 3	622	1040	0.598	621	642	1.2	1.2	8.205	A
			2	1, 2	1125	1289	0.875	1141	1198	4.8	4.9	18.012	C
	Exit	1	1		1108			1108	1192	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	300	782	0.384	302	318	0.6	0.6	7.390	A
	Exit	1	1		823			823	858	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	454	890	0.510	454	480	0.9	0.6	5.181	A
			2	2	450	886	0.507	451	475	0.9	0.7	5.211	A
			3	1, 3	342	735	0.465	342	358	1.1	0.6	7.158	A
		2	1	(2)	500			502	532	0.2	0.1	0.591	A
			2	(1, 2, 3)	743			744	776	1.0	0.3	1.747	A
	Exit	1	1		1346			1346	1426	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	471	1068	0.441	471	497	1.2	0.7	5.728	A
			2	1, 2	964	1322	0.730	960	1019	4.9	2.6	9.470	A
	Exit	1	1		926			926	979	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	257	924	0.277	256	268	0.6	0.4	5.902	A
	Exit	1	1		661			661	692	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	361	886	0.408	361	397	0.6	0.5	4.991	A
			2	2	372	895	0.415	370	397	0.7	0.5	4.963	A
			3	1, 3	286	737	0.387	288	303	0.6	0.5	6.746	A
		2	1	(2)	389			390	429	0.1	0.0	0.329	A
			2	(1, 2, 3)	629			630	666	0.3	0.1	0.999	A
	Exit	1	1		1097			1097	1170	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	402	1084	0.372	401	415	0.7	0.6	4.938	A
			2	1, 2	796	1344	0.592	793	847	2.6	1.8	6.521	A
	Exit	1	1		748			748	813	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	204	1041	0.196	203	215	0.4	0.3	4.322	A
	Exit	1	1		573			573	591	0.0	0.0	0.000	A

Lanes: Queue Variation Results for each time segment

07:15 - 07:30

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.55	0.00	0.00	1.17	1.55
			2	0.44	0.00	0.00	1.87	1.87
			3	0.55	0.00	0.00	1.89	1.89
		2	1	0.01	0.00	0.00	0.00	0.00
			2	0.19	0.00	0.00	0.02	0.96
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	0.75	0.00	0.00	1.59	2.94
			2	1.36	0.00	0.22	2.92	5.99
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.27	0.00	0.00	0.72	1.17
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

07:30 - 07:45

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.52	0.00	0.00	1.18	1.57
			2	0.68	0.00	0.05	1.44	1.68
			3	0.74	0.00	0.11	1.52	1.73
		2	1	0.06	0.00	0.00	0.00	0.00
			2	0.28	0.00	0.00	0.55	1.59
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

2 - A20 (E)	Entry	1	1	0.71	0.00	0.00	1.71	2.42
			2	1.88	0.00	0.73	3.79	6.59
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.40	0.00	0.00	0.98	1.66
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

07:45 - 08:00

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.94	0.00	0.45	1.63	1.78
			2	0.89	0.00	0.33	1.63	1.76
			3	0.85	0.00	0.27	1.61	1.77
		2	1	0.31	0.00	0.00	0.58	2.36
			2	0.95	0.00	0.00	3.10	3.77
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	1.17	0.00	0.38	2.42	3.23
			2	4.94	0.00	3.22	10.88	13.71
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.63	0.00	0.00	1.49	1.86
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:00 - 08:15

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.95	0.00	0.45	1.66	1.79
			2	0.94	0.00	0.48	1.87	1.87
			3	1.08	0.00	0.71	1.74	1.86
		2	1	0.23	0.00	0.00	0.21	1.43
			2	0.99	0.00	0.00	3.19	4.83
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	1.24	0.00	0.00	3.04	3.72
			2	5.02	0.00	2.89	10.41	17.05
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.61	0.00	0.00	1.77	2.69
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:15 - 08:30

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.63	0.00	0.01	1.88	1.88
			2	0.73	0.00	0.21	1.34	1.67
			3	0.61	0.00	0.00	1.53	1.77
		2	1	0.05	0.00	0.00	0.00	0.00
			2	0.32	0.00	0.00	0.69	2.14
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	0.75	0.00	0.00	1.73	2.91
			2	2.65	0.00	1.42	5.45	8.09
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.38	0.00	0.00	0.84	1.35
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:30 - 08:45

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.57	0.00	0.00	1.25	1.64
			2	0.51	0.00	0.00	1.88	1.88
			3	0.53	0.00	0.00	1.20	1.60
		2	1	0.00	0.00	0.00	0.00	0.00
			2	0.07	0.00	0.00	0.00	0.02
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	0.60	0.00	0.00	1.45	1.79
			2	1.81	0.00	0.67	4.74	6.30
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.28	0.00	0.00	0.71	1.21
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

Lane movements: Main Results for each time segment

07:15 - 07:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	356	89	955	884	0.402	354	388	0.0	0.6	4.893	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	367	92	955	889	0.413	368	392	0.0	0.4	4.804	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	283	71	774	726	0.390	284	295	0.0	0.5	6.843	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	396	99	-	-	-	395	422	0.0	0.0	0.252	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	328	82	-	-	-	328	362	0.0	0.0	0.251	A
				3	284	71	-	-	-	283	298	0.0	0.2	1.884	A
2 - A20 (E)	Entry	1	1	1	121	30	1230	1077	0.113	121	124	0.0	0.2	4.344	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	290	73	1230	1092	0.266	289	290	0.0	0.6	5.241	A
			2	1	794	199	1557	1345	0.590	795	841	0.0	1.3	6.209	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	188	47	1625	1050	0.179	188	196	0.0	0.2	4.313	A
				2	17	4	1609	1035	0.017	17	19	0.0	0.0	4.244	A
				3	2	0.39	509	351	0.004	1	1	0.0	0.0	3.932	A

07:30 - 07:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	447	112	955	889	0.503	448	476	0.6	0.5	5.246	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

				2	452	113	955	888	0.509	451	476	0.4	0.7	5.211	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	333	83	774	731	0.456	333	353	0.5	0.8	7.142	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	508	127	-	-	-	508	538	0.0	0.1	0.570	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	391	98	-	-	-	392	415	0.2	0.0	0.574	A
				3	333	83	-	-	-	333	353	0.2	0.3	2.886	A
2 - A20 (E)	Entry	1	1	1	155	39	1230	1051	0.148	154	162	0.7	0.3	5.085	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	321	80	1230	1076	0.298	321	336	0.7	0.4	5.871	A
			2	1	942	235	1557	1319	0.715	946	989	1.3	1.8	8.434	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	236	59	1625	932	0.254	237	242	0.3	0.3	5.401	A
				2	27	7	1625	937	0.029	27	24	0.3	0.1	5.491	A
				3	2	0.42	591	371	0.005	2	2	0.3	0.0	4.487	A

07:45 - 08:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	539	135	955	886	0.608	539	576	0.5	0.9	5.682	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	545	136	955	886	0.616	545	583	0.7	0.8	5.679	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	420	105	774	728	0.577	418	438	0.8	0.8	7.475	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	665	166	-	-	-	664	708	0.1	0.3	1.221	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	422	106	-	-	-	419	454	0.3	0.4	1.417	A
				3	422	105	-	-	-	420	439	0.3	0.6	5.286	A

2 - A20 (E)	Entry	1	1	1	208	52	1230	1020	0.204	209	220	0.7	0.4	7.087	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	391	98	1230	1049	0.372	393	411	0.7	0.8	7.755	A
			2	1	1105	276	1557	1289	0.858	1113	1176	1.8	4.8	14.764	B
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	282	71	1625	810	0.348	282	294	0.4	0.6	6.938	A
				2	24	6	1625	813	0.029	23	26	0.4	0.0	6.921	A
				3	2	0.52	673	356	0.006	2	2	0.0	0.0	6.985	A

08:00 - 08:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	536	134	955	888	0.603	533	579	0.9	0.9	5.694	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	550	137	955	886	0.619	547	585	0.8	0.9	5.662	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	416	104	774	731	0.568	413	440	0.8	1.1	7.455	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	671	168	-	-	-	670	721	0.3	0.2	1.265	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	417	104	-	-	-	416	444	1.0	0.2	1.447	A
				3	418	104	-	-	-	416	441	1.0	0.8	5.701	A
2 - A20 (E)	Entry	1	1	1	215	54	1230	1018	0.212	214	227	1.2	0.5	7.709	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	407	102	1230	1052	0.387	408	416	1.2	0.7	8.466	A
			2	1	1125	281	1557	1289	0.875	1141	1198	4.8	4.9	18.012	C
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	271	68	1625	783	0.346	273	288	0.6	0.5	7.409	A
				2	28	7	1625	782	0.035	27	27	0.6	0.0	7.261	A
				3	2	0.45	755	385	0.005	2	2	0.0	0.0	6.617	A

08:15 - 08:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	454	113	955	890	0.510	454	480	0.9	0.6	5.181	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	450	113	955	886	0.507	451	475	0.9	0.7	5.211	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	342	86	774	735	0.465	342	358	1.1	0.6	7.158	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	500	125	-	-	-	502	532	0.2	0.1	0.591	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	402	100	-	-	-	402	420	1.0	0.1	0.582	A
				3	341	85	-	-	-	342	356	1.0	0.2	3.111	A
2 - A20 (E)	Entry	1	1	1	155	39	1230	1047	0.148	154	165	1.2	0.3	5.231	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	316	79	1230	1078	0.293	317	332	1.2	0.5	5.967	A
			2	1	964	241	1557	1322	0.730	960	1019	4.9	2.6	9.470	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	233	58	1625	923	0.252	232	242	0.6	0.4	5.876	A
				2	21	5	1625	921	0.023	21	24	0.6	0.0	6.123	A
				3	3	0.67	591	341	0.008	3	2	0.0	0.0	6.384	A

08:30 - 08:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	361	90	955	886	0.408	361	397	0.6	0.5	4.991	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	372	93	955	895	0.415	370	397	0.7	0.5	4.963	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	286	72	774	737	0.387	288	303	0.6	0.5	6.746	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	389	97	-	-	-	390	429	0.1	0.0	0.329	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	343	86	-	-	-	344	364	0.3	0.0	0.312	A
				3	285	71	-	-	-	286	302	0.3	0.1	1.812	A
2 - A20 (E)	Entry	1	1	1	118	30	1230	1056	0.112	118	128	0.7	0.2	4.635	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	284	71	1230	1096	0.260	284	287	0.7	0.4	5.069	A
			2	1	796	199	1557	1344	0.592	793	847	2.6	1.8	6.521	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	186	47	1625	1040	0.179	186	195	0.4	0.2	4.342	A
				2	17	4	1609	1046	0.016	16	19	0.4	0.0	4.089	A
				3	1	0.27	443	291	0.004	1	1	0.0	0.0	4.669	A

2027 Future Year without Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.
Info	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A20 / M20 Roundabout	Standard Roundabout		1, 2, 3	13.10	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	13.10	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2027 Future Year without Development	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 (Veh/hr)	Scaling Factor (%)
1 - M20 link road		ONE HOUR	✓	1396	100.000
2 - A20 (E)		ONE HOUR	✓	1617	100.000
3 - A20 (W)		ONE HOUR	✓	288	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - M20 link road	2 - A20 (E)	3 - A20 (W)
From	1 - M20 link road	0	1007	389
	2 - A20 (E)	1243	0	374
	3 - A20 (W)	261	25	2

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - M20 link road	2 - A20 (E)	3 - A20 (W)
From	1 - M20 link road	0	7	5
	2 - A20 (E)	6	0	3
	3 - A20 (W)	4	4	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - M20 link road	8.96	4.4	10.9	A	1286	1929
2 - A20 (E)	17.50	10.1	27.3	C	1485	2227
3 - A20 (W)	8.62	1.0	4.8	A	259	389

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1072	268	21	1069	1115	1132	0.0	2.1	5.988	A
2 - A20 (E)	1222	305	289	1221	1296	801	0.0	1.9	5.815	A
3 - A20 (W)	217	54	936	217	222	574	0.0	0.2	4.578	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1257	314	22	1259	1335	1347	2.1	2.3	6.957	A
2 - A20 (E)	1459	365	357	1458	1533	924	1.9	3.3	7.843	A
3 - A20 (W)	252	63	1121	248	267	693	0.2	0.6	5.632	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1535	384	27	1528	1614	1627	2.3	4.3	8.956	A
2 - A20 (E)	1766	441	431	1762	1861	1125	3.3	7.8	14.332	B
3 - A20 (W)	305	76	1350	304	322	842	0.6	0.8	7.437	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1547	387	31	1541	1632	1618	4.3	3.9	8.913	A
2 - A20 (E)	1772	443	440	1753	1871	1132	7.8	9.9	17.501	C
3 - A20 (W)	315	79	1335	313	332	858	0.8	0.9	8.620	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1258	314	23	1249	1336	1357	3.9	3.0	7.128	A
2 - A20 (E)	1470	368	346	1471	1570	925	9.9	3.2	9.031	A
3 - A20 (W)	251	63	1131	248	262	686	0.9	0.5	6.028	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1048	262	22	1049	1121	1137	3.0	1.6	5.968	A
2 - A20 (E)	1220	305	291	1220	1278	781	3.2	2.1	6.036	A
3 - A20 (W)	215	54	944	216	223	567	0.5	0.2	4.562	A

Queue Variation Results for each time segment

07:15 - 07:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	2.14	0.00	1.33	4.65	5.34
2 - A20 (E)	1.97	0.00	1.07	3.54	4.45
3 - A20 (W)	0.23	0.00	0.00	0.60	1.06

07:30 - 07:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	2.33	0.00	1.45	4.60	5.79
2 - A20 (E)	3.36	0.00	2.10	7.31	9.83
3 - A20 (W)	0.56	0.00	0.00	1.38	2.08

07:45 - 08:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	4.45	1.00	3.29	6.91	8.79
2 - A20 (E)	7.99	0.10	5.52	17.47	22.17
3 - A20 (W)	0.84	0.00	0.00	1.82	3.08

08:00 - 08:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	3.92	0.00	2.41	8.18	10.87
2 - A20 (E)	10.08	0.00	7.12	21.70	27.31
3 - A20 (W)	0.96	0.00	0.00	2.15	4.84

08:15 - 08:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	3.13	0.00	1.95	6.18	9.74
2 - A20 (E)	3.29	0.00	2.32	6.43	7.38
3 - A20 (W)	0.59	0.00	0.00	1.50	1.85

08:30 - 08:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	1.66	0.00	0.68	3.60	5.10
2 - A20 (E)	2.16	0.00	0.99	5.88	6.77
3 - A20 (W)	0.21	0.00	0.00	0.45	0.79

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	390	887	0.440	387	403	0.0	0.7	4.941	A
			2	2	394	891	0.443	393	405	0.0	0.6	4.986	A
			3	1, 3	287	734	0.390	288	307	0.0	0.5	6.407	A
		2	1	(2)	426			426	434	0.0	0.1	0.260	A
			2	(1, 2, 3)	645			645	689	0.0	0.1	0.850	A
	Exit	1	1		1132			1132	1205	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	405	1086	0.372	407	424	0.0	0.4	4.941	A
			2	1, 2	817	1350	0.605	815	872	0.0	1.5	6.247	A
	Exit	1	1		801			801	829	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	217	1019	0.213	217	222	0.0	0.2	4.578	A
	Exit	1	1		574			574	600	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	457	886	0.517	457	482	0.7	0.7	5.221	A
			2	2	446	892	0.501	448	482	0.6	0.6	5.180	A
			3	1, 3	355	726	0.488	355	371	0.5	0.7	7.130	A
		2	1	(2)	514			515	548	0.1	0.1	0.558	A
			2	(1, 2, 3)	742			744	787	0.1	0.3	1.662	A
	Exit	1	1		1347			1347	1431	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	498	1056	0.471	498	514	0.4	0.9	5.677	A
			2	1, 2	960	1316	0.731	960	1019	1.5	2.4	8.955	A
	Exit	1	1		924			924	987	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	252	916	0.275	248	267	0.2	0.6	5.632	A
	Exit	1	1		693			693	716	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	544	886	0.614	542	582	0.7	1.0	5.742	A
			2	2	560	887	0.632	557	585	0.6	1.0	5.675	A
			3	1, 3	433	735	0.590	429	448	0.7	1.1	7.600	A
		2	1	(2)	705			706	737	0.1	0.2	1.158	A
			2	(1, 2, 3)	831			833	883	0.3	1.0	3.993	A
	Exit	1	1		1627			1627	1735	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	620	1032	0.601	621	651	0.9	1.5	8.630	A
			2	1, 2	1146	1286	0.891	1141	1209	2.4	6.4	17.425	C
	Exit	1	1		1125			1125	1192	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	305	797	0.382	304	322	0.6	0.8	7.437	A
	Exit	1	1		842			842	869	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service

1 - M20 link road	Entry	1	1	2	553	885	0.625	552	589	1.0	0.9	5.720	A
			2	2	553	883	0.627	551	598	1.0	0.9	5.625	A
			3	1, 3	436	734	0.593	438	445	1.1	0.8	7.558	A
		2	1	(2)	693			690	740	0.2	0.3	1.303	A
			2	(1, 2, 3)	855			852	890	1.0	1.0	3.878	A
	Exit	1	1		1618			1618	1743	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	629	1034	0.609	634	666	1.5	1.4	9.006	A
			2	1, 2	1143	1279	0.894	1119	1205	6.4	8.5	22.260	C
	Exit	1	1		1132			1132	1215	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	315	801	0.393	313	332	0.8	0.9	8.620	A
	Exit	1	1		858			858	876	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	462	888	0.521	460	489	0.9	0.9	5.333	A
			2	2	445	888	0.502	444	479	0.9	0.7	5.371	A
			3	1, 3	347	735	0.472	345	369	0.8	0.7	6.838	A
		2	1	(2)	499			499	551	0.3	0.2	0.741	A
			2	(1, 2, 3)	758			755	784	1.0	0.5	1.798	A
	Exit	1	1		1357			1357	1458	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	498	1066	0.468	498	529	1.4	0.9	6.210	A
			2	1, 2	972	1317	0.737	973	1041	8.5	2.3	10.526	B
	Exit	1	1		925			925	990	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	251	908	0.277	248	262	0.9	0.5	6.028	A
	Exit	1	1		686			686	721	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	387	885	0.437	387	409	0.9	0.5	4.884	A
			2	2	373	881	0.423	373	407	0.7	0.3	4.855	A
			3	1, 3	289	728	0.397	289	304	0.7	0.5	6.633	A
		2	1	(2)	413			413	438	0.2	0.1	0.250	A
			2	(1, 2, 3)	635			635	679	0.5	0.2	0.860	A
	Exit	1	1		1137			1137	1194	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	403	1086	0.371	401	415	0.9	0.5	4.936	A
			2	1, 2	816	1345	0.607	819	863	2.3	1.5	6.580	A
	Exit	1	1		781			781	836	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	215	1013	0.213	216	223	0.5	0.2	4.562	A
	Exit	1	1		567			567	592	0.0	0.0	0.000	A

Lanes: Queue Variation Results for each time segment

07:15 - 07:30

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.78	0.00	0.21	1.52	1.72
			2	0.68	0.00	0.02	1.46	1.75
			3	0.48	0.00	0.00	1.91	1.91
		2	1	0.08	0.00	0.00	0.00	0.00
			2	0.12	0.00	0.00	-0.06	0.63
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	0.44	0.00	0.00	0.89	1.77
			2	1.53	0.00	0.64	3.16	4.12
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.23	0.00	0.00	0.60	1.06
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

07:30 - 07:45

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)

1 - M20 link road	Entry	1	1	0.68	0.00	0.02	1.47	1.81
			2	0.64	0.00	0.00	1.46	1.70
			3	0.67	0.00	0.00	1.89	1.89
		2	1	0.08	0.00	0.00	0.00	0.94
			2	0.26	0.00	0.00	0.63	1.10
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	0.85	0.00	0.14	1.72	2.57
			2	2.48	0.00	0.99	6.20	7.35
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.56	0.00	0.00	1.38	2.08
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

07:45 - 08:00

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	1.02	0.00	0.56	1.61	1.76
			2	1.06	0.00	0.63	1.65	1.78
			3	1.14	0.00	0.92	1.76	1.87
		2	1	0.22	0.00	0.00	0.22	1.25
			2	1.01	0.00	0.00	2.53	4.83
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	1.52	0.00	0.48	2.73	4.27
			2	6.44	0.00	4.33	14.82	18.27
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.84	0.00	0.00	1.82	3.08
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:00 - 08:15

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.89	0.00	0.39	1.60	1.76
			2	0.96	0.00	0.47	1.63	1.79
			3	0.81	0.00	0.00	1.91	1.91
		2	1	0.29	0.00	0.00	0.42	1.10
			2	0.96	0.00	0.00	2.70	4.43
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	1.44	0.00	0.13	3.76	4.99
			2	8.59	0.00	6.44	15.16	24.02
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.96	0.00	0.00	2.15	4.84
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:15 - 08:30

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.90	0.00	0.40	1.87	1.87
			2	0.76	0.00	0.03	1.60	1.79
			3	0.69	0.00	0.00	1.59	1.78
		2	1	0.22	0.00	0.00	0.16	1.26
			2	0.57	0.00	0.00	1.64	3.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	0.94	0.00	0.00	2.20	2.79
			2	2.33	0.00	1.27	5.34	6.09
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.59	0.00	0.00	1.50	1.85
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:30 - 08:45

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.54	0.00	0.00	1.87	1.87
			2	0.38	0.00	0.00	1.86	1.86
			3	0.52	0.00	0.00	1.30	1.64
		2	1	0.05	0.00	0.00	0.00	0.00
			2	0.18	0.00	0.00	0.32	1.04

	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	0.57	0.00	0.00	1.48	2.10
			2	1.59	0.00	0.64	4.18	5.15
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.21	0.00	0.00	0.45	0.79
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

Lane movements: Main Results for each time segment

07:15 - 07:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	390	97	955	887	0.440	387	403	0.0	0.7	4.941	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	394	99	955	891	0.443	393	405	0.0	0.6	4.986	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	287	72	774	734	0.390	288	307	0.0	0.5	6.407	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	426	107	-	-	-	426	434	0.0	0.1	0.260	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	359	90	-	-	-	359	380	0.0	0.0	0.270	A
				3	286	72	-	-	-	287	309	0.0	0.1	1.548	A
2 - A20 (E)	Entry	1	1	1	122	30	1230	1059	0.115	122	133	0.0	0.1	4.509	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	283	71	1230	1097	0.257	285	291	0.0	0.3	5.132	A
			2	1	817	204	1557	1350	0.605	815	872	0.0	1.5	6.247	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	195	49	1625	1022	0.192	196	200	0.0	0.2	4.559	A
				2	20	5	1625	982	0.020	20	21	0.0	0.0	4.907	A
				3	1	0.37	468	307	0.005	1	1	0.0	0.0	2.398	A

07:30 - 07:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

				2	457	114	955	886	0.517	457	482	0.7	0.7	5.221	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	446	112	955	892	0.501	448	482	0.6	0.6	5.180	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	355	89	774	725	0.489	355	371	0.5	0.7	7.130	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	514	129	-	-	-	515	548	0.1	0.1	0.558	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	389	97	-	-	-	389	415	0.1	0.1	0.538	A
				3	354	88	-	-	-	355	372	0.1	0.2	2.899	A
2 - A20 (E)	Entry	1	1	1	162	41	1230	1034	0.157	161	170	0.4	0.3	5.199	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	335	84	1230	1066	0.314	336	344	0.4	0.6	5.908	A
			2	1	960	240	1557	1315	0.731	960	1019	1.5	2.4	8.955	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	228	57	1625	915	0.250	226	242	0.2	0.5	5.627	A
				2	21	5	1625	938	0.023	20	23	0.2	0.1	5.690	A
				3	2	0.49	579	342	0.006	2	2	0.0	0.0	5.560	A

07:45 - 08:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	544	136	955	886	0.614	542	582	0.7	1.0	5.742	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	560	140	955	887	0.632	557	585	0.6	1.0	5.675	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	433	108	774	735	0.590	429	448	0.7	1.1	7.600	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	705	176	-	-	-	706	737	0.1	0.2	1.158	A

				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	397	99	-	-	-	399	433	0.3	0.1	1.391	A
				3	433	108	-	-	-	433	449	0.3	0.9	6.430	A
2 - A20 (E)	Entry	1	1	1	209	52	1230	1009	0.207	209	232	0.9	0.6	8.270	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	411	103	1230	1045	0.393	411	420	0.9	0.9	8.824	A
			2	1	1146	286	1557	1286	0.890	1141	1209	2.4	6.4	17.425	C
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	277	69	1625	792	0.350	277	293	0.6	0.8	7.443	A
				2	26	7	1625	784	0.033	26	26	0.6	0.1	7.289	A
				3	1	0.37	623	329	0.005	1	2	0.6	0.0	8.370	A

08:00 - 08:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	553	138	955	885	0.625	552	589	1.0	0.9	5.720	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	553	138	955	883	0.627	551	598	1.0	0.9	5.625	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	436	109	774	734	0.593	438	445	1.1	0.8	7.558	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	693	173	-	-	-	690	740	0.2	0.3	1.303	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	418	104	-	-	-	416	446	1.0	0.2	1.426	A
				3	437	109	-	-	-	436	444	1.0	0.8	6.291	A
2 - A20 (E)	Entry	1	1	1	214	54	1230	1019	0.211	216	237	1.5	0.5	8.813	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	415	104	1230	1043	0.398	419	429	1.5	0.9	9.109	A
			2	1	1143	286	1557	1279	0.893	1119	1205	6.4	8.5	22.260	C
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

3 - A20 (W)	Entry	1	1	1	284	71	1625	802	0.354	283	301	0.8	0.8	8.600	A
				2	30	7	1625	782	0.038	29	28	0.8	0.1	8.965	A
				3	2	0.49	579	291	0.007	2	2	0.0	0.0	6.920	A

08:15 - 08:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	462	116	955	888	0.521	460	489	0.9	0.9	5.333	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	445	111	955	888	0.502	444	479	0.9	0.7	5.371	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	347	87	774	735	0.472	345	369	0.8	0.7	6.838	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	499	125	-	-	-	499	551	0.3	0.2	0.741	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	409	102	-	-	-	409	416	1.0	0.2	0.734	A
				3	349	87	-	-	-	347	368	1.0	0.4	2.983	A
2 - A20 (E)	Entry	1	1	1	158	39	1230	1046	0.151	158	179	1.4	0.2	5.576	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	341	85	1230	1075	0.317	340	350	1.4	0.7	6.524	A
			2	1	972	243	1557	1317	0.737	973	1041	8.5	2.3	10.526	B
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	227	57	1625	905	0.253	225	238	0.9	0.4	6.028	A
				2	21	5	1625	904	0.023	21	23	0.9	0.1	5.988	A
				3	2	0.45	512	304	0.006	2	2	0.0	0.0	6.511	A

08:30 - 08:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	387	97	955	885	0.437	387	409	0.9	0.5	4.884	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	373	93	955	881	0.423	373	407	0.7	0.3	4.855	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	289	72	774	728	0.397	289	304	0.7	0.5	6.633	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	413	103	-	-	-	413	438	0.2	0.1	0.250	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	347	87	-	-	-	347	376	0.5	0.0	0.232	A
				3	289	72	-	-	-	289	303	0.5	0.1	1.625	A
2 - A20 (E)	Entry	1	1	1	124	31	1230	1073	0.115	124	129	0.9	0.1	4.334	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	279	70	1230	1092	0.256	277	286	0.9	0.4	5.202	A
			2	1	816	204	1557	1345	0.607	819	863	2.3	1.5	6.580	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	193	48	1625	1011	0.191	194	202	0.5	0.2	4.565	A
				2	20	5	1603	976	0.021	20	19	0.5	0.0	4.524	A
				3	2	0.49	646	417	0.005	2	2	0.5	0.0	4.681	A

2037 Future Year without Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.
Info	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A20 / M20 Roundabout	Standard Roundabout		1, 2, 3	17.86	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	17.86	C

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	2037 Future Year without Development	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 (Veh/hr)	Scaling Factor (%)
1 - M20 link road		ONE HOUR	✓	1494	100.000
2 - A20 (E)		ONE HOUR	✓	1732	100.000
3 - A20 (W)		ONE HOUR	✓	307	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - M20 link road	2 - A20 (E)	3 - A20 (W)
From	1 - M20 link road	0	1078	416
	2 - A20 (E)	1331	0	401
	3 - A20 (W)	279	26	2

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - M20 link road	2 - A20 (E)	3 - A20 (W)
From	1 - M20 link road	0	7	5
	2 - A20 (E)	6	0	3
	3 - A20 (W)	4	4	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - M20 link road	10.11	4.8	11.9	B	1376	2064
2 - A20 (E)	26.04	15.1	43.2	D	1588	2382
3 - A20 (W)	9.97	1.0	3.2	A	284	426

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1138	284	21	1140	1197	1217	0.0	1.8	6.454	A
2 - A20 (E)	1297	324	316	1298	1361	844	0.0	2.2	6.613	A
3 - A20 (W)	237	59	1001	237	243	614	0.0	0.3	4.798	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1333	333	27	1333	1415	1428	1.8	2.5	7.209	A
2 - A20 (E)	1545	386	371	1536	1629	989	2.2	4.5	10.198	B
3 - A20 (W)	279	70	1176	279	284	731	0.3	0.4	5.900	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1660	415	29	1655	1740	1775	2.5	4.6	10.079	B
2 - A20 (E)	1908	477	465	1908	1965	1218	4.5	12.6	20.986	C
3 - A20 (W)	339	85	1466	338	349	908	0.4	1.0	8.510	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1659	415	31	1655	1755	1762	4.6	4.7	10.110	B
2 - A20 (E)	1914	478	462	1899	1997	1225	12.6	14.9	26.038	D
3 - A20 (W)	337	84	1453	339	355	908	1.0	1.0	9.971	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1336	334	25	1338	1429	1452	4.7	2.6	7.436	A
2 - A20 (E)	1555	389	374	1551	1681	989	14.9	4.8	13.510	B
3 - A20 (W)	277	69	1197	279	284	728	1.0	0.4	6.573	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1134	283	22	1131	1208	1222	2.6	2.1	6.564	A
2 - A20 (E)	1305	326	326	1304	1385	827	4.8	2.3	6.825	A
3 - A20 (W)	233	58	1013	232	246	618	0.4	0.4	5.098	A

Queue Variation Results for each time segment

07:15 - 07:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	1.82	0.00	0.89	3.51	4.55
2 - A20 (E)	2.25	0.00	1.25	4.96	6.22
3 - A20 (W)	0.27	0.00	0.00	0.73	1.55

07:30 - 07:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	2.62	0.00	1.72	4.97	6.29
2 - A20 (E)	4.65	0.00	2.92	10.78	12.68
3 - A20 (W)	0.43	0.00	0.00	0.87	1.67

07:45 - 08:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	4.55	0.00	2.69	9.11	11.93
2 - A20 (E)	12.86	0.37	9.84	27.99	33.71
3 - A20 (W)	0.98	0.00	0.10	2.23	3.24

08:00 - 08:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	4.82	0.03	3.26	9.51	11.80
2 - A20 (E)	15.04	0.51	12.03	29.71	43.11

3 - A20 (W)	0.98	0.00	0.00	2.35	3.05

08:15 - 08:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	2.67	0.00	1.60	5.97	7.28
2 - A20 (E)	4.86	0.00	3.41	10.49	12.03
3 - A20 (W)	0.42	0.00	0.00	1.18	1.79

08:30 - 08:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	2.16	0.00	1.26	4.27	5.85
2 - A20 (E)	2.43	0.00	1.51	5.02	6.34
3 - A20 (W)	0.39	0.00	0.00	1.00	1.54

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	**Entry**	**1**	**1**	2	410	885	0.463	410	432	0.0	0.5	5.010	A
			2	2	415	885	0.470	415	434	0.0	0.4	5.048	A
			3	1, 3	314	735	0.426	314	331	0.0	0.6	6.846	A
		2	**1**	(2)	453			454	478	0.0	0.0	0.371	A
			2	(1, 2, 3)	684			685	726	0.0	0.2	1.262	A
	Exit	**1**	**1**		1217			1217	1271	0.0	0.0	0.000	A
2 - A20 (E)	**Entry**	**1**	**1**	(1), 3	436	1070	0.407	436	452	0.0	0.7	5.345	A
			2	1, 2	861	1332	0.647	862	909	0.0	1.5	7.253	A
	Exit	**1**	**1**		844			844	887	0.0	0.0	0.000	A
3 - A20 (W)	**Entry**	**1**	**1**	1, 2, 3	237	988	0.240	237	243	0.0	0.3	4.798	A
	Exit	**1**	**1**		614			614	643	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	**Entry**	**1**	**1**	2	481	888	0.542	481	512	0.5	0.8	5.314	A
			2	2	483	891	0.543	483	512	0.4	0.7	5.378	A
			3	1, 3	369	730	0.504	368	391	0.6	0.6	7.020	A
		2	**1**	(2)	552			552	588	0.0	0.1	0.648	A
			2	(1, 2, 3)	780			781	830	0.2	0.3	1.919	A
	Exit	**1**	**1**		1428			1428	1519	0.0	0.0	0.000	A
2 - A20 (E)	**Entry**	**1**	**1**	(1), 3	532	1056	0.504	529	552	0.7	1.1	6.745	A
			2	1, 2	1012	1309	0.774	1007	1077	1.5	3.4	12.003	B
	Exit	**1**	**1**		989			989	1049	0.0	0.0	0.000	A
3 - A20 (W)	**Entry**	**1**	**1**	1, 2, 3	279	887	0.314	279	284	0.3	0.4	5.900	A
	Exit	**1**	**1**		731			731	760	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	**Entry**	**1**	**1**	2	592	888	0.667	593	629	0.8	1.0	5.959	A
			2	2	599	882	0.677	599	634	0.7	0.9	5.934	A
			3	1, 3	464	730	0.634	463	477	0.6	1.0	7.668	A
		2	**1**	(2)	790			788	819	0.1	0.4	1.863	A
			2	(1, 2, 3)	871			866	923	0.3	1.3	5.209	A
	Exit	**1**	**1**		1775			1775	1837	0.0	0.0	0.000	A
2 - A20 (E)	**Entry**	**1**	**1**	(1), 3	702	1021	0.688	699	709	1.1	2.2	10.253	B

			2	1, 2	1206	1275	0.948	1209	1256	3.4	10.4	27.052	D
	Exit	1	1		1218			1218	1291	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	339	733	0.464	338	349	0.4	1.0	8.510	A
	Exit	1	1		908			908	926	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	591	887	0.666	592	638	1.0	0.9	5.863	A
			2	2	604	885	0.683	605	634	0.9	0.9	5.922	A
			3	1, 3	461	728	0.634	459	483	1.0	1.0	7.802	A
		2	1	(2)	790			791	835	0.4	0.3	1.756	A
			2	(1, 2, 3)	870			866	921	1.3	1.5	5.423	A
	Exit	1	1		1762			1762	1860	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	698	1020	0.684	695	730	2.2	2.1	11.117	B
			2	1, 2	1216	1264	0.962	1204	1267	10.4	12.8	34.694	D
	Exit	1	1		1225			1225	1303	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	337	727	0.463	339	355	1.0	1.0	9.971	A
	Exit	1	1		908			908	945	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	481	889	0.540	480	518	0.9	0.7	5.332	A
			2	2	487	885	0.550	486	515	0.9	0.7	5.392	A
			3	1, 3	371	735	0.504	372	396	1.0	0.8	7.133	A
		2	1	(2)	554			554	595	0.3	0.1	0.740	A
			2	(1, 2, 3)	782			783	830	1.5	0.5	2.189	A
	Exit	1	1		1452			1452	1571	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	531	1049	0.507	532	568	2.1	1.0	7.294	A
			2	1, 2	1024	1308	0.784	1020	1113	12.8	3.8	16.810	C
	Exit	1	1		989			989	1056	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	277	871	0.318	279	284	1.0	0.4	6.573	A
	Exit	1	1		728			728	766	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	408	884	0.462	407	438	0.7	0.6	5.050	A
			2	2	401	883	0.454	400	438	0.7	0.6	5.079	A
			3	1, 3	325	737	0.441	324	333	0.8	0.6	7.073	A
		2	1	(2)	450			450	481	0.1	0.0	0.367	A
			2	(1, 2, 3)	684			684	727	0.5	0.3	1.321	A
	Exit	1	1		1222			1222	1297	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	432	1074	0.402	431	457	1.0	0.7	5.214	A
			2	1, 2	873	1330	0.657	874	928	3.8	1.7	7.640	A
	Exit	1	1		827			827	896	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	233	983	0.237	232	246	0.4	0.4	5.098	A
	Exit	1	1		618			618	646	0.0	0.0	0.000	A

Lanes: Queue Variation Results for each time segment

07:15 - 07:30

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.56	0.00	0.00	1.86	1.86
			2	0.46	0.00	0.00	1.86	1.86
			3	0.60	0.00	0.00	1.49	1.74
		2	1	0.01	0.00	0.00	0.00	0.00
			2	0.19	0.00	0.00	0.08	1.26
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

2 - A20 (E)	Entry	1	1	0.68	0.00	0.00	1.62	2.24
			2	1.56	0.00	0.49	3.72	4.54
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.27	0.00	0.00	0.73	1.55
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

07:30 - 07:45

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.81	0.00	0.27	1.53	1.72
			2	0.78	0.00	0.21	1.88	1.88
			3	0.66	0.00	0.00	1.53	1.75
		2	1	0.08	0.00	0.00	0.00	-0.09
			2	0.29	0.00	0.00	0.72	1.82
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	1.16	0.00	0.08	3.22	4.08
			2	3.48	0.00	1.58	8.68	11.65
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.43	0.00	0.00	0.87	1.67
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

07:45 - 08:00

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.95	0.00	0.49	1.87	1.87
			2	0.88	0.00	0.37	1.86	1.86
			3	1.01	0.00	0.56	1.69	1.80
		2	1	0.40	0.00	0.00	1.03	2.72
			2	1.32	0.00	0.00	4.03	5.56
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	2.23	0.00	0.93	5.41	8.23
			2	10.60	0.00	7.58	24.07	28.15
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.98	0.00	0.10	2.23	3.24
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:00 - 08:15

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.95	0.00	0.45	1.61	1.77
			2	0.96	0.00	0.49	1.62	1.75
			3	1.06	0.00	0.69	1.71	1.82
		2	1	0.32	0.00	0.00	0.80	2.10
			2	1.54	0.00	0.00	4.51	6.49
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	2.15	0.00	1.22	4.52	5.50
			2	12.83	0.00	10.14	26.95	39.82
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.98	0.00	0.00	2.35	3.05
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:15 - 08:30

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.67	0.00	0.08	1.35	1.66
			2	0.68	0.00	0.10	1.37	1.64
			3	0.78	0.00	0.10	1.91	1.91
		2	1	0.09	0.00	0.00	0.00	0.00
			2	0.45	0.00	0.00	1.27	2.29
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	0.99	0.00	0.00	2.45	4.15
			2	3.87	0.00	2.40	7.44	9.86
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.42	0.00	0.00	1.18	1.79
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:30 - 08:45

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.58	0.00	0.00	1.86	1.86
			2	0.63	0.00	0.00	1.44	1.67
			3	0.68	0.00	0.00	1.52	1.73
		2	1	0.03	0.00	0.00	0.00	0.00
			2	0.25	0.00	0.00	0.54	1.53
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	0.70	0.00	0.00	1.70	2.30
			2	1.73	0.00	0.68	4.04	5.52
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.39	0.00	0.00	1.00	1.54
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

Lane movements: Main Results for each time segment

07:15 - 07:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	410	102	955	884	0.464	410	432	0.0	0.5	5.010	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	415	104	955	885	0.470	415	434	0.0	0.4	5.048	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	314	78	774	735	0.426	314	331	0.0	0.6	6.846	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	453	113	-	-	-	454	478	0.0	0.0	0.371	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	371	93	-	-	-	372	393	0.0	0.0	0.341	A
				3	313	78	-	-	-	314	334	0.0	0.2	2.322	A
2 - A20 (E)	Entry	1	1	1	138	35	1230	1047	0.132	139	142	0.0	0.2	4.810	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	298	74	1230	1081	0.275	297	309	0.0	0.5	5.584	A
			2	1	861	215	1557	1331	0.647	862	909	0.0	1.5	7.253	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	216	54	1625	991	0.218	216	220	0.0	0.2	4.808	A
				2	19	5	1612	991	0.019	18	21	0.0	0.0	4.641	A
				3	2	0.60	619	396	0.006	2	2	0.0	0.0	5.301	A

07:30 - 07:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	481	120	955	888	0.542	481	512	0.5	0.8	5.314	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	483	121	955	891	0.543	483	512	0.4	0.7	5.378	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	369	92	774	730	0.504	368	391	0.6	0.6	7.020	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	552	138	-	-	-	552	588	0.0	0.1	0.648	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	412	103	-	-	-	412	438	0.2	0.1	0.658	A
				3	368	92	-	-	-	369	391	0.2	0.2	3.306	A
2 - A20 (E)	Entry	1	1	1	169	42	1230	1034	0.163	169	185	0.7	0.3	6.062	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	363	91	1230	1068	0.341	360	367	0.7	0.8	7.079	A
			2	1	1012	253	1557	1309	0.774	1007	1077	1.5	3.4	12.003	B
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	252	63	1625	883	0.286	252	257	0.3	0.4	5.901	A
				2	24	6	1612	878	0.027	24	25	0.3	0.0	5.990	A
				3	2	0.57	645	368	0.006	2	2	0.0	0.0	4.531	A

07:45 - 08:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	592	148	955	888	0.667	593	629	0.8	1.0	5.959	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	599	150	955	882	0.677	599	634	0.7	0.9	5.934	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	464	116	774	730	0.634	463	477	0.6	1.0	7.668	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	790	197	-	-	-	788	819	0.1	0.4	1.863	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	403	101	-	-	-	403	445	0.3	0.2	2.173	A
				3	467	117	-	-	-	464	478	0.3	1.1	7.963	A
2 - A20 (E)	Entry	1	1	1	258	64	1230	1005	0.256	257	262	1.1	0.8	9.763	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	445	111	1230	1030	0.431	442	447	1.1	1.5	10.532	B
			2	1	1206	301	1557	1275	0.948	1209	1256	3.4	10.4	27.052	D
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	310	78	1625	732	0.424	309	319	0.4	0.9	8.521	A
				2	26	7	1612	737	0.036	26	28	0.4	0.1	8.449	A
				3	3	0.69	748	365	0.008	3	2	0.4	0.0	7.827	A

08:00 - 08:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	591	148	955	887	0.666	592	638	1.0	0.9	5.863	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	604	151	955	885	0.683	605	634	0.9	0.9	5.922	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	461	115	774	728	0.634	459	483	1.0	1.0	7.802	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	790	197	-	-	-	791	835	0.4	0.3	1.756	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	405	101	-	-	-	405	438	1.3	0.3	2.127	A
				3	465	116	-	-	-	461	483	1.3	1.2	8.342	A
2 - A20 (E)	Entry	1	1	1	249	62	1230	996	0.251	249	271	2.2	0.8	10.916	B
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	449	112	1230	1035	0.434	446	459	2.2	1.3	11.232	B

			2	1	1216	304	1557	1264	0.962	1204	1267	10.4	12.8	34.694	D
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	307	77	1625	733	0.419	309	322	1.0	0.9	9.966	A
				2	28	7	1625	721	0.039	28	31	1.0	0.1	10.101	B
				3	2	0.55	697	325	0.007	2	2	0.0	0.0	8.987	A

08:15 - 08:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	481	120	955	889	0.540	480	518	0.9	0.7	5.332	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	487	122	955	885	0.550	486	515	0.9	0.7	5.392	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	371	93	774	735	0.504	372	396	1.0	0.8	7.133	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	554	138	-	-	-	554	595	0.3	0.1	0.740	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	412	103	-	-	-	413	435	1.5	0.1	0.737	A
				3	370	93	-	-	-	371	395	1.5	0.4	3.767	A
2 - A20 (E)	Entry	1	1	1	177	44	1230	1031	0.171	177	199	2.1	0.3	6.820	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	355	89	1230	1058	0.336	354	368	2.1	0.7	7.542	A
			2	1	1024	256	1557	1308	0.784	1020	1113	12.8	3.8	16.810	C
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	253	63	1625	870	0.290	255	259	1.0	0.4	6.614	A
				2	23	6	1625	851	0.027	23	24	1.0	0.0	6.223	A
				3	2	0.40	542	292	0.006	2	2	0.0	0.0	5.317	A

08:30 - 08:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service

1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	408	102	955	884	0.462	407	438	0.7	0.6	5.050	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	401	100	955	883	0.454	400	438	0.7	0.6	5.079	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	325	81	774	737	0.441	324	333	0.8	0.6	7.073	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	450	112	-	-	-	450	481	0.1	0.0	0.367	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	359	90	-	-	-	359	394	0.5	0.0	0.377	A
				3	325	81	-	-	-	325	332	0.5	0.2	2.416	A
2 - A20 (E)	Entry	1	1	1	138	35	1230	1057	0.131	138	145	1.0	0.2	4.761	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	293	73	1230	1083	0.271	292	312	1.0	0.5	5.419	A
			2	1	873	218	1557	1330	0.657	874	928	3.8	1.7	7.640	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	211	53	1625	982	0.214	209	224	0.4	0.4	5.109	A
				2	21	5	1625	1005	0.021	21	20	0.4	0.0	5.033	A
				3	2	0.40	426	270	0.006	2	1	0.0	0.0	4.111	A

2027 Future Year with Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.
Info	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A20 / M20 Roundabout	Standard Roundabout		1, 2, 3	13.08	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	13.08	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2027 Future Year with Development	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 (Veh/hr)	Scaling Factor (%)
1 - M20 link road		ONE HOUR	✓	1417	100.000
2 - A20 (E)		ONE HOUR	✓	1622	100.000
3 - A20 (W)		ONE HOUR	✓	305	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - M20 link road	2 - A20 (E)	3 - A20 (W)
From	1 - M20 link road	0	1007	410
	2 - A20 (E)	1243	0	379
	3 - A20 (W)	278	25	2

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - M20 link road	2 - A20 (E)	3 - A20 (W)
From	1 - M20 link road	0	7	6
	2 - A20 (E)	6	0	3
	3 - A20 (W)	8	4	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - M20 link road	9.82	4.7	11.8	A	1304	1956
2 - A20 (E)	16.78	8.4	23.5	C	1483	2225
3 - A20 (W)	8.93	0.9	3.7	A	279	419

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1043	261	22	1049	1124	1146	0.0	1.6	6.126	A
2 - A20 (E)	1212	303	305	1208	1282	766	0.0	2.0	5.687	A

3 - A20 (W)	233	58	935	233	252	578	0.0	0.4	4.903	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1280	320	24	1278	1358	1348	1.6	2.3	7.132	A
2 - A20 (E)	1440	360	369	1438	1518	932	2.0	3.3	8.232	A
3 - A20 (W)	272	68	1100	271	295	707	0.4	0.5	5.588	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1566	391	30	1565	1663	1671	2.3	3.9	9.208	A
2 - A20 (E)	1785	446	455	1783	1858	1140	3.3	8.2	15.222	C
3 - A20 (W)	339	85	1362	340	367	876	0.5	0.9	8.933	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1574	393	29	1572	1670	1649	3.9	4.7	9.823	A
2 - A20 (E)	1760	440	459	1759	1871	1142	8.2	8.3	16.783	C
3 - A20 (W)	329	82	1349	329	359	870	0.9	0.7	8.731	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1276	319	25	1279	1362	1403	4.7	2.7	7.291	A
2 - A20 (E)	1498	374	366	1500	1577	938	8.3	3.3	9.337	A
3 - A20 (W)	275	69	1151	277	297	716	0.7	0.4	6.644	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1089	272	19	1088	1155	1129	2.7	1.9	6.404	A
2 - A20 (E)	1205	301	310	1203	1288	797	3.3	2.0	6.038	A
3 - A20 (W)	226	56	923	225	249	591	0.4	0.4	4.968	A

Queue Variation Results for each time segment

07:15 - 07:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	1.61	0.00	0.85	3.11	3.64
2 - A20 (E)	2.06	0.00	1.03	4.49	5.67
3 - A20 (W)	0.44	0.00	0.00	1.21	1.74

07:30 - 07:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	2.42	0.00	1.50	4.64	5.91
2 - A20 (E)	3.31	0.00	1.99	7.27	8.97
3 - A20 (W)	0.44	0.00	0.00	0.89	1.82

07:45 - 08:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	4.05	0.01	2.91	7.69	9.24
2 - A20 (E)	8.34	0.33	5.21	20.67	23.51
3 - A20 (W)	0.93	0.00	0.00	2.21	3.71

08:00 - 08:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	4.73	0.09	3.24	10.47	11.82
2 - A20 (E)	8.43	0.29	6.18	17.04	20.81
3 - A20 (W)	0.68	0.00	0.00	1.72	2.31

08:15 - 08:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	2.87	0.00	1.61	5.44	7.46
2 - A20 (E)	3.30	0.00	2.27	6.52	8.47
3 - A20 (W)	0.43	0.00	0.00	0.87	1.65

08:30 - 08:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	1.88	0.00	0.94	3.67	4.99
2 - A20 (E)	2.01	0.00	0.91	4.18	5.04
3 - A20 (W)	0.41	0.00	0.00	1.20	2.00

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	366	886	0.413	367	397	0.0	0.4	4.929	A
			2	2	379	892	0.424	378	402	0.0	0.5	4.866	A
			3	1, 3	302	725	0.417	303	325	0.0	0.5	6.583	A
		2	1	(2)	394			394	432	0.0	0.0	0.256	A
			2	(1, 2, 3)	650			653	698	0.0	0.1	1.035	A
	Exit	1	1		1146			1146	1221	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	396	1073	0.370	395	424	0.0	0.6	4.993	A
			2	1, 2	815	1340	0.608	813	858	0.0	1.4	6.036	A
	Exit	1	1		766			766	819	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	233	988	0.236	233	252	0.0	0.4	4.903	A
	Exit	1	1		578			578	618	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	456	884	0.514	454	489	0.4	0.7	5.202	A
			2	2	456	889	0.514	457	483	0.5	0.6	5.320	A
			3	1, 3	368	727	0.506	367	386	0.5	0.7	6.991	A
		2	1	(2)	520			520	560	0.0	0.0	0.576	A
			2	(1, 2, 3)	760			759	801	0.1	0.3	1.926	A
	Exit	1	1		1348			1348	1439	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	498	1053	0.473	498	515	0.6	0.9	6.075	A
			2	1, 2	941	1303	0.722	940	1003	1.4	2.4	9.361	A
	Exit	1	1		932			932	995	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	272	898	0.303	271	295	0.4	0.5	5.588	A
	Exit	1	1		707			707	736	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	564	888	0.635	562	595	0.7	0.9	5.641	A
			2	2	553	884	0.625	551	586	0.6	0.9	5.752	A
			3	1, 3	451	723	0.623	451	482	0.7	1.0	7.569	A
		2	1	(2)	705			704	759	0.0	0.2	1.240	A

			2	(1, 2, 3)	861			863	908	0.3	1.0	4.395	A
	Exit	1	1		1671			1671	1767	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	641	1020	0.628	641	663	0.9	1.6	8.555	A
			2	1, 2	1145	1271	0.901	1142	1196	2.4	6.6	18.939	C
	Exit	1	1		1140			1140	1209	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	339	761	0.447	340	367	0.5	0.9	8.933	A
	Exit	1	1		876			876	913	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	552	881	0.627	552	592	0.9	0.9	5.786	A
			2	2	564	888	0.634	563	603	0.9	0.9	5.579	A
			3	1, 3	457	722	0.633	457	475	1.0	1.2	7.954	A
		2	1	(2)	744			744	780	0.2	0.3	1.300	A
			2	(1, 2, 3)	829			828	891	1.0	1.5	5.401	A
	Exit	1	1		1649			1649	1774	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	618	1022	0.605	624	663	1.6	1.2	8.645	A
			2	1, 2	1142	1271	0.899	1135	1208	6.6	7.1	21.300	C
	Exit	1	1		1142			1142	1223	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	329	764	0.431	329	359	0.9	0.7	8.731	A
	Exit	1	1		870			870	902	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	461	893	0.516	462	489	0.9	0.7	5.157	A
			2	2	450	880	0.512	453	483	0.9	0.6	5.227	A
			3	1, 3	364	728	0.501	365	389	1.2	0.7	7.200	A
		2	1	(2)	526			526	561	0.3	0.2	0.653	A
			2	(1, 2, 3)	749			750	798	1.5	0.5	2.150	A
	Exit	1	1		1403			1403	1497	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	513	1062	0.482	514	528	1.2	0.7	6.078	A
			2	1, 2	985	1312	0.751	986	1050	7.1	2.6	11.040	B
	Exit	1	1		938			938	996	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	275	875	0.315	277	297	0.7	0.4	6.644	A
	Exit	1	1		716			716	743	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	392	894	0.438	393	410	0.7	0.5	4.948	A
			2	2	386	891	0.433	386	411	0.6	0.5	4.893	A
			3	1, 3	312	721	0.432	309	334	0.7	0.6	6.848	A
		2	1	(2)	425			426	450	0.2	0.0	0.316	A
			2	(1, 2, 3)	664			664	702	0.5	0.3	1.322	A
	Exit	1	1		1129			1129	1223	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	401	1071	0.375	400	424	0.7	0.6	5.024	A
			2	1, 2	804	1337	0.601	803	863	2.6	1.4	6.548	A
	Exit	1	1		797			797	841	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	226	991	0.229	225	249	0.4	0.4	4.968	A
	Exit	1	1		591			591	628	0.0	0.0	0.000	A

Lanes: Queue Variation Results for each time segment

07:15 - 07:30

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.41	0.00	0.00	1.87	1.87
			2	0.53	0.00	0.00	1.88	1.88
			3	0.56	0.00	0.00	1.88	1.88

		2	1	0.01	0.00	0.00	0.00	0.00
			2	0.08	0.00	0.00	0.00	0.28
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	0.68	0.00	0.00	1.53	2.84
			2	1.38	0.00	0.47	2.99	4.07
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.44	0.00	0.00	1.21	1.74
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

07:30 - 07:45

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.68	0.00	0.03	1.44	1.67
			2	0.62	0.00	0.00	1.44	1.68
			3	0.77	0.00	0.16	1.54	1.73
		2	1	0.04	0.00	0.00	0.00	0.00
			2	0.32	0.00	0.00	1.02	1.56
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	0.90	0.00	0.12	2.01	2.55
			2	2.40	0.00	0.89	5.35	7.25
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.44	0.00	0.00	0.89	1.82
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

07:45 - 08:00

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.93	0.00	0.43	1.65	1.81
			2	0.91	0.00	0.38	1.66	1.83
			3	1.04	0.00	0.63	1.71	1.83
		2	1	0.17	0.00	0.00	-0.03	0.77
			2	1.00	0.00	0.00	2.75	4.66
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	1.58	0.00	0.66	3.78	5.22
			2	6.74	0.00	3.37	18.29	21.30
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.93	0.00	0.00	2.21	3.71
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:00 - 08:15

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.91	0.00	0.43	1.58	1.74
			2	0.87	0.00	0.36	1.58	1.74
			3	1.21	0.00	1.01	1.77	1.86
		2	1	0.28	0.00	0.00	0.45	1.36
			2	1.45	0.00	0.00	4.62	6.16
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	1.15	0.00	0.16	2.82	4.76
			2	7.25	0.10	4.72	15.77	20.68
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.68	0.00	0.00	1.72	2.31
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:15 - 08:30

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.75	0.00	0.07	1.55	1.74
			2	0.66	0.00	0.00	1.49	1.72
			3	0.78	0.00	0.00	1.63	1.79
		2	1	0.23	0.00	0.00	0.00	0.89
			2	0.46	0.00	0.00	0.85	2.73
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	0.71	0.00	0.00	1.79	2.56
			2	2.58	0.00	1.63	5.16	7.46

	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.43	0.00	0.00	0.87	1.65
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:30 - 08:45

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.47	0.00	0.00	0.88	1.33
			2	0.51	0.00	0.00	1.88	1.88
			3	0.61	0.00	0.00	1.87	1.87
		2	1	0.01	0.00	0.00	0.00	0.00
			2	0.27	0.00	0.00	0.78	1.55
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	0.58	0.00	0.00	1.36	1.85
			2	1.42	0.00	0.47	3.44	4.24
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.41	0.00	0.00	1.20	2.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

Lane movements: Main Results for each time segment

07:15 - 07:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	366	91	955	886	0.413	367	397	0.0	0.4	4.929	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	379	95	955	892	0.424	378	402	0.0	0.5	4.866	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	302	76	774	725	0.417	303	325	0.0	0.5	6.583	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	394	98	-	-	-	394	432	0.0	0.0	0.256	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	350	87	-	-	-	351	371	0.0	0.0	0.256	A
				3	300	75	-	-	-	302	327	0.0	0.1	1.911	A
2 - A20 (E)	Entry	1	1	1	123	31	1230	1041	0.118	122	132	0.0	0.2	4.448	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	274	69	1230	1085	0.253	273	291	0.0	0.5	5.232	A
			2	1	815	204	1557	1340	0.608	813	858	0.0	1.4	6.036	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	212	53	1625	984	0.214	211	230	0.0	0.4	4.886	A

				2	21	5	1625	1005	0.021	21	20	0.0	0.0	5.184	A
				3	1	0.29	558	363	0.003	1	1	0.0	0.0	3.692	A

07:30 - 07:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	456	114	955	884	0.514	454	489	0.4	0.7	5.202	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	456	114	955	889	0.514	457	483	0.5	0.6	5.320	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	368	92	774	727	0.506	367	386	0.5	0.7	6.991	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	520	130	-	-	-	520	560	0.0	0.0	0.576	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	392	98	-	-	-	392	414	0.1	0.0	0.585	A
				3	369	92	-	-	-	368	387	0.1	0.3	3.345	A
2 - A20 (E)	Entry	1	1	1	159	40	1230	1038	0.154	160	167	0.6	0.2	5.441	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	339	85	1230	1060	0.320	338	348	0.6	0.6	6.372	A
			2	1	941	235	1557	1303	0.722	940	1003	1.4	2.4	9.361	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	248	62	1625	895	0.277	248	269	0.4	0.4	5.617	A
				2	22	5	1625	913	0.024	21	24	0.4	0.0	5.291	A
				3	2	0.56	621	379	0.006	2	2	0.0	0.0	5.307	A

07:45 - 08:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	564	141	955	888	0.635	562	595	0.7	0.9	5.641	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

				2	553	138	955	884	0.625	551	586	0.6	0.9	5.752	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	451	113	774	723	0.623	451	482	0.7	1.0	7.569	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	705	176	-	-	-	704	759	0.0	0.2	1.240	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	413	103	-	-	-	412	424	0.3	0.2	1.486	A
				3	448	112	-	-	-	451	483	0.3	0.8	6.926	A
2 - A20 (E)	Entry	1	1	1	221	55	1230	995	0.222	220	235	0.9	0.5	8.093	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	420	105	1230	1032	0.407	421	428	0.9	1.1	8.801	A
			2	1	1145	286	1557	1271	0.901	1142	1196	2.4	6.6	18.939	C
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	309	77	1625	756	0.408	309	337	0.5	0.8	8.954	A
				2	28	7	1609	786	0.035	27	28	0.5	0.1	8.810	A
				3	3	0.76	669	345	0.009	3	2	0.0	0.0	7.509	A

08:00 - 08:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	552	138	955	881	0.627	552	592	0.9	0.9	5.786	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	564	141	955	888	0.634	563	603	0.9	0.9	5.579	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	457	114	774	722	0.633	457	475	1.0	1.2	7.954	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	744	186	-	-	-	744	780	0.2	0.3	1.300	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	371	93	-	-	-	371	415	1.0	0.2	1.605	A
				3	458	115	-	-	-	457	476	1.0	1.3	8.657	A

2 - A20 (E)	Entry	1	1	1	212	53	1230	999	0.211	214	238	1.6	0.3	8.212	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	407	102	1230	1035	0.393	410	425	1.6	0.9	8.878	A
			2	1	1142	285	1557	1271	0.899	1135	1208	6.6	7.1	21.300	C
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	300	75	1625	762	0.393	300	329	0.9	0.6	8.786	A
				2	27	7	1625	783	0.034	27	28	0.9	0.0	8.182	A
				3	3	0.68	669	346	0.008	2	2	0.0	0.0	7.727	A

08:15 - 08:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	461	115	955	893	0.516	462	489	0.9	0.7	5.157	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	450	113	955	880	0.512	453	483	0.9	0.6	5.227	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	364	91	774	728	0.501	365	389	1.2	0.7	7.200	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	526	132	-	-	-	526	561	0.3	0.2	0.653	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	385	96	-	-	-	386	410	1.5	0.1	0.709	A
				3	364	91	-	-	-	364	387	1.5	0.3	3.676	A
2 - A20 (E)	Entry	1	1	1	164	41	1230	1040	0.158	164	176	1.2	0.2	5.647	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	348	87	1230	1072	0.325	350	352	1.2	0.5	6.287	A
			2	1	985	246	1557	1311	0.751	986	1050	7.1	2.6	11.040	B
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	250	63	1625	872	0.288	252	272	0.7	0.4	6.676	A
				2	23	6	1609	909	0.025	23	23	0.7	0.0	6.278	A
				3	2	0.41	574	329	0.005	2	2	0.7	0.0	6.765	A

08:30 - 08:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	392	98	955	894	0.438	393	410	0.7	0.5	4.948	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	386	96	955	891	0.433	386	411	0.6	0.5	4.893	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	312	78	774	721	0.432	309	334	0.7	0.6	6.848	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	425	106	-	-	-	426	450	0.2	0.0	0.316	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	352	88	-	-	-	352	369	0.5	0.0	0.293	A
				3	313	78	-	-	-	312	333	0.5	0.3	2.454	A
2 - A20 (E)	Entry	1	1	1	121	30	1230	1051	0.115	120	132	0.7	0.2	4.590	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	281	70	1230	1081	0.260	280	292	0.7	0.4	5.215	A
			2	1	804	201	1557	1338	0.600	803	863	2.6	1.4	6.548	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	207	52	1625	985	0.211	206	227	0.4	0.3	4.946	A
				2	18	5	1609	1014	0.018	18	20	0.4	0.0	5.279	A
				3	1	0.26	542	347	0.003	1	2	0.0	0.0	4.016	A

2037 Future Year with Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.
Info	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A20 / M20 Roundabout	Standard Roundabout		1, 2, 3	23.21	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	23.21	C

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	2037 Future Year with Development	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 (Veh/hr)	Scaling Factor (%)
1 - M20 link road		ONE HOUR	✓	1516	100.000
2 - A20 (E)		ONE HOUR	✓	1736	100.000
3 - A20 (W)		ONE HOUR	✓	325	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - M20 link road	2 - A20 (E)	3 - A20 (W)
From	1 - M20 link road	0	1078	438
	2 - A20 (E)	1331	0	405
	3 - A20 (W)	297	26	2

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - M20 link road	2 - A20 (E)	3 - A20 (W)
From	1 - M20 link road	0	7	6
	2 - A20 (E)	6	0	3
	3 - A20 (W)	7	4	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - M20 link road	10.74	6.1	14.8	B	1387	2081
2 - A20 (E)	36.43	20.7	46.8	E	1593	2390
3 - A20 (W)	11.07	0.9	3.8	B	288	432

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1121	280	19	1120	1196	1206	0.0	1.8	6.466	A
2 - A20 (E)	1292	323	325	1292	1359	815	0.0	2.1	6.414	A
3 - A20 (W)	230	58	996	230	260	621	0.0	0.4	5.061	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1351	338	24	1359	1457	1440	1.8	2.6	7.968	A
2 - A20 (E)	1533	383	398	1540	1616	986	2.1	3.4	9.081	A
3 - A20 (W)	282	70	1184	280	306	753	0.4	0.7	6.008	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1679	420	29	1673	1775	1758	2.6	5.9	10.741	B
2 - A20 (E)	1918	479	494	1884	1960	1208	3.4	16.6	23.193	C
3 - A20 (W)	341	85	1440	347	378	937	0.7	0.6	9.874	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1664	416	30	1664	1762	1770	5.9	4.8	10.669	B
2 - A20 (E)	1916	479	486	1897	2019	1208	16.6	20.4	36.435	E
3 - A20 (W)	354	88	1444	356	378	939	0.6	0.9	11.070	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1364	341	21	1366	1468	1452	4.8	2.6	7.625	A
2 - A20 (E)	1568	392	402	1559	1707	986	20.4	5.1	16.486	C
3 - A20 (W)	279	70	1196	277	317	764	0.9	0.8	7.839	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1145	286	22	1146	1220	1239	2.6	2.0	6.750	A
2 - A20 (E)	1328	332	337	1328	1400	832	5.1	2.2	6.832	A
3 - A20 (W)	240	60	1019	243	263	646	0.8	0.3	5.354	A

Queue Variation Results for each time segment

07:15 - 07:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	1.90	0.00	1.22	3.41	4.45
2 - A20 (E)	2.12	0.00	1.17	4.50	6.04
3 - A20 (W)	0.42	0.00	0.00	0.91	2.13

07:30 - 07:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	2.71	0.00	1.70	5.73	6.31
2 - A20 (E)	3.42	0.00	2.18	7.22	7.82
3 - A20 (W)	0.75	0.00	0.00	1.73	2.28

07:45 - 08:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	6.10	0.05	4.07	12.36	14.70

2 - A20 (E)	17.05	0.71	11.89	34.24	38.28
3 - A20 (W)	0.67	0.00	0.00	1.65	3.18

08:00 - 08:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	4.96	0.03	3.60	8.93	8.69
2 - A20 (E)	20.65	1.66	15.39	42.13	46.63
3 - A20 (W)	0.92	0.00	0.00	2.34	3.36

08:15 - 08:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	2.66	0.00	1.44	5.28	6.33
2 - A20 (E)	5.06	0.00	3.98	9.43	11.91
3 - A20 (W)	0.83	0.00	0.00	2.13	3.70

08:30 - 08:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	2.01	0.00	0.98	3.88	4.46
2 - A20 (E)	2.25	0.00	1.13	4.55	6.41
3 - A20 (W)	0.26	0.00	0.00	0.64	0.83

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	**Entry**	**1**	**1**	2	396	886	0.449	395	427	0.0	0.6	5.033	A
			2	2	402	891	0.453	403	425	0.0	0.5	4.986	A
			3	1, 3	324	727	0.445	323	343	0.0	0.6	6.748	A
		2	**1**	(2)	439			439	468	0.0	0.0	0.384	A
			2	(1, 2, 3)	683			683	735	0.0	0.2	1.311	A
	Exit	**1**	**1**		1206			1206	1293	0.0	0.0	0.000	A
2 - A20 (E)	**Entry**	**1**	**1**	(1), 3	432	1066	0.406	431	444	0.0	0.7	5.129	A
			2	1, 2	860	1329	0.647	860	915	0.0	1.4	7.050	A
	Exit	**1**	**1**		815			815	874	0.0	0.0	0.000	A
3 - A20 (W)	**Entry**	**1**	**1**	1, 2, 3	230	976	0.237	230	260	0.0	0.4	5.061	A
	Exit	**1**	**1**		621			621	648	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	**Entry**	**1**	**1**	2	482	887	0.543	483	517	0.6	0.7	5.403	A
			2	2	479	878	0.545	480	521	0.5	0.6	5.337	A
			3	1, 3	396	730	0.543	397	419	0.6	0.8	7.415	A
		2	**1**	(2)	576			578	629	0.0	0.0	0.775	A
			2	(1, 2, 3)	775			779	830	0.2	0.4	2.919	A
	Exit	**1**	**1**		1440			1440	1527	0.0	0.0	0.000	A
2 - A20 (E)	**Entry**	**1**	**1**	(1), 3	529	1046	0.506	534	555	0.7	0.6	6.556	A
			2	1, 2	1004	1291	0.777	1006	1061	1.4	2.7	10.418	B
	Exit	**1**	**1**		986			986	1062	0.0	0.0	0.000	A
3 - A20 (W)	**Entry**	**1**	**1**	1, 2, 3	282	859	0.329	280	306	0.4	0.7	6.008	A
	Exit	**1**	**1**		753			753	791	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service

1 - M20 link road	Entry	1	1	2	580	885	0.655	578	626	0.7	1.2	5.980	A
			2	2	604	879	0.686	602	635	0.6	1.0	5.879	A
			3	1, 3	491	719	0.683	492	514	0.8	1.1	8.049	A
		2	1	(2)	834			832	867	0.0	0.7	1.712	A
			2	(1, 2, 3)	844			843	912	0.4	2.0	6.529	A
	Exit	1	1		1758			1758	1848	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	706	1005	0.702	702	722	0.6	2.0	9.695	A
			2	1, 2	1212	1259	0.965	1182	1238	2.7	14.6	30.941	D
	Exit	1	1		1208			1208	1292	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	341	726	0.469	347	378	0.7	0.6	9.874	A
	Exit	1	1		937			937	973	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	599	888	0.675	600	625	1.2	0.8	5.835	A
			2	2	579	889	0.653	580	622	1.0	0.8	5.865	A
			3	1, 3	484	724	0.669	483	515	1.1	1.2	8.028	A
		2	1	(2)	795			795	850	0.7	0.4	1.677	A
			2	(1, 2, 3)	869			867	911	2.0	1.5	6.523	A
	Exit	1	1		1770			1770	1905	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	716	1012	0.708	717	741	2.0	2.4	12.491	B
			2	1, 2	1200	1252	0.959	1181	1278	14.6	17.9	50.488	F
	Exit	1	1		1208			1208	1276	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	354	714	0.496	356	378	0.6	0.9	11.070	B
	Exit	1	1		939			939	977	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	486	888	0.547	488	518	0.8	0.6	5.323	A
			2	2	476	888	0.536	478	518	0.8	0.7	5.283	A
			3	1, 3	401	730	0.551	401	432	1.2	0.8	7.216	A
		2	1	(2)	576			576	618	0.4	0.1	0.673	A
			2	(1, 2, 3)	788			787	845	1.5	0.5	2.569	A
	Exit	1	1		1452			1452	1620	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	550	1044	0.527	550	583	2.4	0.9	7.314	A
			2	1, 2	1018	1303	0.781	1009	1123	17.9	4.2	21.534	C
	Exit	1	1		986			986	1058	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	279	849	0.330	277	317	0.9	0.8	7.839	A
	Exit	1	1		764			764	812	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	399	896	0.445	400	433	0.6	0.4	5.051	A
			2	2	410	890	0.460	410	434	0.7	0.6	4.915	A
			3	1, 3	335	721	0.464	336	353	0.8	0.7	7.134	A
		2	1	(2)	449			449	490	0.1	0.0	0.336	A
			2	(1, 2, 3)	696			696	728	0.5	0.3	1.687	A
	Exit	1	1		1239			1239	1324	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	441	1063	0.414	441	464	0.9	0.7	5.455	A
			2	1, 2	887	1324	0.670	888	936	4.2	1.6	7.535	A
	Exit	1	1		832			832	888	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	240	964	0.249	243	263	0.8	0.3	5.354	A
	Exit	1	1		646			646	671	0.0	0.0	0.000	A

Lanes: Queue Variation Results for each time segment

07:15 - 07:30

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.59	0.00	0.00	1.86	1.86
			2	0.50	0.00	0.00	1.88	1.88
			3	0.65	0.00	0.00	1.89	1.89
		2	1	0.00	0.00	0.00	0.00	0.00
			2	0.14	0.00	0.00	0.00	0.82
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	0.72	0.00	0.00	2.12	2.57
			2	1.39	0.00	0.22	3.19	5.43
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.42	0.00	0.00	0.91	2.13
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

07:30 - 07:45

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.76	0.00	0.13	1.55	1.74
			2	0.66	0.00	0.00	1.43	1.68
			3	0.85	0.00	0.25	1.62	1.78
		2	1	0.04	0.00	0.00	0.00	0.92
			2	0.41	0.00	0.00	1.06	1.65
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	0.62	0.00	0.00	1.44	2.17
			2	2.79	0.00	1.49	6.85	7.28
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.75	0.00	0.00	1.73	2.28
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

07:45 - 08:00

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	1.16	0.00	1.87	1.87	1.87
			2	1.08	0.00	0.72	1.70	1.81
			3	1.14	0.00	0.84	1.73	1.83
		2	1	0.69	0.00	0.00	2.15	2.57
			2	2.03	0.00	0.35	4.91	8.18
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	2.05	0.00	0.60	5.74	7.42
			2	14.95	0.00	10.26	30.55	35.76
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.67	0.00	0.00	1.65	3.18
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:00 - 08:15

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.90	0.00	0.41	1.65	1.78
			2	0.94	0.00	0.36	1.75	2.82
			3	1.25	0.00	1.89	1.89	1.89
		2	1	0.38	0.00	0.00	0.71	1.65
			2	1.47	0.00	0.11	3.98	5.39
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	2.48	0.00	0.93	6.84	7.44
			2	18.02	0.70	15.14	36.85	45.53
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.92	0.00	0.00	2.34	3.36
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:15 - 08:30

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.65	0.00	0.02	1.87	1.87
			2	0.68	0.00	0.14	1.87	1.87
			3	0.83	0.00	0.17	1.64	1.79
		2	1	0.06	0.00	0.00	0.00	0.94

			2	0.43	0.00	0.00	1.41	2.29
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	0.86	0.00	0.00	1.83	2.64
			2	4.19	0.00	3.08	8.77	10.19
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.83	0.00	0.00	2.13	3.70
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:30 - 08:45

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.46	0.00	0.00	1.89	1.89
			2	0.53	0.00	0.00	0.92	1.45
			3	0.69	0.00	0.07	1.87	1.87
		2	1	0.00	0.00	0.00	0.00	0.00
			2	0.32	0.00	0.00	0.59	1.77
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	0.64	0.00	0.00	1.44	2.28
			2	1.61	0.00	0.56	3.58	4.33
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.26	0.00	0.00	0.64	0.83
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

Lane movements: Main Results for each time segment

07:15 - 07:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	396	99	955	886	0.449	395	427	0.0	0.6	5.033	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	402	101	955	891	0.453	403	425	0.0	0.5	4.986	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	324	81	774	727	0.445	323	343	0.0	0.6	6.748	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	439	110	-	-	-	439	468	0.0	0.0	0.384	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	359	90	-	-	-	359	389	0.0	0.0	0.377	A
				3	324	81	-	-	-	324	346	0.0	0.2	2.348	A
2 - A20 (E)	Entry	1	1	1	135	34	1230	1039	0.130	136	141	0.0	0.2	4.544	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	297	74	1230	1075	0.277	296	303	0.0	0.5	5.393	A
			2	1	860	215	1557	1329	0.647	860	915	0.0	1.4	7.050	A

				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	211	53	1625	976	0.217	211	237	0.0	0.4	5.052	A
				2	18	4	1625	973	0.018	18	21	0.0	0.0	5.161	A
				3	2	0.42	650	425	0.004	2	2	0.0	0.0	4.974	A

07:30 - 07:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	482	120	955	887	0.543	483	517	0.6	0.7	5.403	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	479	120	955	878	0.545	480	521	0.5	0.6	5.337	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	396	99	774	730	0.543	397	419	0.6	0.8	7.415	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	576	144	-	-	-	578	629	0.0	0.0	0.775	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	382	96	-	-	-	383	410	0.0	0.0	0.837	A
				3	392	98	-	-	-	396	420	0.2	0.4	4.924	A
2 - A20 (E)	Entry	1	1	1	177	44	1230	1028	0.172	178	185	0.7	0.2	5.768	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	353	88	1230	1056	0.334	356	370	0.7	0.4	6.939	A
			2	1	1004	251	1557	1291	0.777	1006	1061	1.4	2.7	10.418	B
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	258	65	1625	853	0.302	256	280	0.4	0.7	6.013	A
				2	23	6	1625	909	0.025	23	24	0.4	0.0	6.033	A
				3	0.92	0.23	550	325	0.003	0.92	2	0.0	0.0	5.039	A

07:45 - 08:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

				2	580	145	955	884	0.655	578	626	0.7	1.2	5.980	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	604	151	955	879	0.686	602	635	0.6	1.0	5.879	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	491	123	774	719	0.683	492	514	0.8	1.1	8.049	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	834	209	-	-	-	832	867	0.0	0.7	1.712	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	356	89	-	-	-	352	397	0.4	0.5	2.218	A
				3	488	122	-	-	-	491	515	0.4	1.5	9.799	A
2 - A20 (E)	Entry	1	1	1	261	65	1230	986	0.264	258	265	0.6	0.8	9.544	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	445	111	1230	1016	0.438	443	457	0.6	1.2	9.780	A
			2	1	1212	303	1557	1259	0.965	1182	1238	2.7	14.6	30.941	D
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	312	78	1625	726	0.429	318	345	0.7	0.6	9.916	A
				2	27	7	1625	726	0.036	27	31	0.7	0.1	9.579	A
				3	2	0.46	700	338	0.005	2	2	0.0	0.0	7.744	A

08:00 - 08:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	599	150	955	888	0.675	600	625	1.2	0.8	5.835	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	579	145	955	889	0.653	580	622	1.0	0.8	5.865	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	484	121	774	724	0.669	483	515	1.1	1.2	8.028	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	795	199	-	-	-	795	850	0.7	0.4	1.677	A

				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	384	96	-	-	-	384	396	2.0	0.2	2.238	A
				3	485	121	-	-	-	484	515	2.0	1.3	9.784	A
2 - A20 (E)	Entry	1	1	1	263	66	1230	989	0.267	264	282	2.0	1.0	12.212	B
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	453	113	1230	1026	0.441	453	460	2.0	1.5	12.657	B
			2	1	1200	300	1557	1252	0.959	1181	1278	14.6	17.9	50.488	F
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	325	81	1625	711	0.456	326	346	0.6	0.8	11.107	B
				2	27	7	1625	721	0.037	27	29	0.6	0.1	10.790	B
				3	2	0.60	825	393	0.006	3	3	0.0	0.0	9.499	A

08:15 - 08:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	486	121	955	887	0.547	488	518	0.8	0.6	5.323	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	476	119	955	888	0.536	478	518	0.8	0.7	5.283	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	401	100	774	730	0.551	401	432	1.2	0.8	7.216	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	576	144	-	-	-	576	618	0.4	0.1	0.673	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	386	96	-	-	-	386	415	1.5	0.0	0.732	A
				3	403	101	-	-	-	401	430	1.5	0.4	4.334	A
2 - A20 (E)	Entry	1	1	1	187	47	1230	1019	0.183	186	204	2.4	0.4	6.711	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	364	91	1230	1056	0.344	364	379	2.4	0.5	7.629	A
			2	1	1018	255	1557	1303	0.781	1009	1123	17.9	4.2	21.534	C
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

3 - A20 (W)	Entry	1	1	1	258	64	1625	844	0.306	256	293	0.9	0.7	7.844	A
				2	20	5	1625	864	0.023	20	22	0.9	0.1	7.774	A
				3	1	0.28	600	317	0.004	1	2	0.0	0.0	7.891	A

08:30 - 08:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	399	100	955	896	0.445	400	433	0.6	0.4	5.051	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	410	103	955	890	0.460	410	434	0.7	0.6	4.915	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	335	84	774	721	0.465	336	353	0.8	0.7	7.134	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	449	112	-	-	-	449	490	0.1	0.0	0.336	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	360	90	-	-	-	360	376	0.5	0.0	0.326	A
				3	337	84	-	-	-	335	352	0.5	0.3	3.134	A
2 - A20 (E)	Entry	1	1	1	131	33	1230	1039	0.125	131	147	0.9	0.2	4.869	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	310	78	1230	1076	0.289	310	317	0.9	0.5	5.716	A
			2	1	887	222	1557	1324	0.670	888	936	4.2	1.6	7.535	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	218	55	1625	961	0.227	220	241	0.8	0.3	5.354	A
				2	21	5	1625	978	0.022	21	21	0.8	0.0	5.291	A
				3	1	0.28	350	217	0.005	1	1	0.0	0.0	6.641	A

2027 Future Year with Development (Sensitivity Test), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.
Info	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A20 / M20 Roundabout	Standard Roundabout		1, 2, 3	14.02	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	14.02	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2027 Future Year with Development (Sensitivity Test)	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 (Veh/hr)	Scaling Factor (%)
1 - M20 link road		ONE HOUR	✓	1428	100.000
2 - A20 (E)		ONE HOUR	✓	1623	100.000
3 - A20 (W)		ONE HOUR	✓	332	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - M20 link road	2 - A20 (E)	3 - A20 (W)
From	1 - M20 link road	0	1007	421
	2 - A20 (E)	1243	0	380
	3 - A20 (W)	305	25	2

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - M20 link road	2 - A20 (E)	3 - A20 (W)
From	1 - M20 link road	0	7	7
	2 - A20 (E)	6	0	3
	3 - A20 (W)	9	4	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - M20 link road	10.04	4.2	12.5	B	1317	1975
2 - A20 (E)	18.44	9.1	18.3	C	1490	2235
3 - A20 (W)	10.03	1.0	4.9	B	308	461

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1064	266	20	1067	1145	1178	0.0	1.7	6.616	A
2 - A20 (E)	1245	311	323	1242	1292	764	0.0	2.4	5.976	A
3 - A20 (W)	252	63	944	254	278	620	0.0	0.2	5.285	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1292	323	25	1291	1371	1385	1.7	2.6	7.456	A
2 - A20 (E)	1444	361	384	1438	1533	932	2.4	3.3	8.204	A
3 - A20 (W)	300	75	1110	300	321	711	0.2	0.5	6.048	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1593	398	30	1592	1680	1682	2.6	4.0	10.044	B
2 - A20 (E)	1789	447	465	1776	1861	1157	3.3	9.1	15.320	C
3 - A20 (W)	367	92	1348	363	394	892	0.5	1.0	9.303	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1560	390	28	1568	1681	1731	4.0	3.4	9.960	A
2 - A20 (E)	1791	448	462	1810	1892	1134	9.1	7.3	18.439	C
3 - A20 (W)	365	91	1386	374	396	887	1.0	0.8	10.035	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1311	328	30	1312	1379	1386	3.4	2.5	7.476	A
2 - A20 (E)	1461	365	386	1457	1560	956	7.3	3.3	8.819	A
3 - A20 (W)	304	76	1111	306	330	732	0.8	0.4	6.986	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1077	269	18	1082	1156	1157	2.5	1.7	6.592	A
2 - A20 (E)	1212	303	325	1208	1297	775	3.3	2.2	6.057	A
3 - A20 (W)	258	64	920	255	271	613	0.4	0.6	4.985	A

Queue Variation Results for each time segment

07:15 - 07:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	1.73	0.00	0.77	3.68	4.37
2 - A20 (E)	2.45	0.00	1.14	5.63	6.51
3 - A20 (W)	0.25	0.00	0.00	0.71	1.46

07:30 - 07:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	2.77	0.00	1.53	5.90	8.10
2 - A20 (E)	3.31	0.00	1.76	7.26	8.83
3 - A20 (W)	0.50	0.00	0.00	1.27	1.76

07:45 - 08:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	4.20	0.00	2.39	8.99	12.46
2 - A20 (E)	9.12	0.85	7.11	16.49	18.30
3 - A20 (W)	1.01	0.00	0.00	2.57	4.87

08:00 - 08:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	3.51	0.00	2.47	7.06	8.72
2 - A20 (E)	7.40	0.18	6.02	15.49	18.34
3 - A20 (W)	0.83	0.00	0.00	2.20	3.05

08:15 - 08:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	2.53	0.00	1.53	5.09	5.91
2 - A20 (E)	3.23	0.00	1.53	7.21	10.10
3 - A20 (W)	0.38	0.00	0.00	0.84	1.52

08:30 - 08:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	1.77	0.00	0.81	3.61	4.86
2 - A20 (E)	2.35	0.00	1.04	5.36	6.24
3 - A20 (W)	0.64	0.00	0.00	1.57	2.92

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	369	887	0.415	369	403	0.0	0.5	5.068	A
			2	2	378	890	0.425	375	407	0.0	0.5	5.013	A
			3	1, 3	320	725	0.441	322	335	0.0	0.4	7.015	A
		2	1	(2)	419			419	456	0.0	0.0	0.312	A
			2	(1, 2, 3)	645			648	695	0.0	0.1	1.445	A
	Exit	1	1		1178			1178	1254	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	429	1083	0.396	429	426	0.0	0.6	4.927	A
			2	1, 2	816	1328	0.615	813	866	0.0	1.8	6.502	A
	Exit	1	1		764			764	828	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	252	984	0.256	254	278	0.0	0.2	5.285	A
	Exit	1	1		620			620	632	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	447	884	0.505	448	482	0.5	0.6	5.299	A
			2	2	460	891	0.516	461	487	0.5	0.6	5.232	A
			3	1, 3	383	721	0.533	382	402	0.4	0.8	7.281	A
		2	1	(2)	519			520	565	0.0	0.0	0.654	A
			2	(1, 2, 3)	772			770	809	0.1	0.5	2.246	A
	Exit	1	1		1385			1385	1478	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	485	1047	0.464	483	517	0.6	0.8	6.149	A
			2	1, 2	959	1303	0.736	955	1016	1.8	2.4	9.270	A

	Exit	1	1		932			932	993	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	300	893	0.336	300	321	0.2	0.5	6.048	A
	Exit	1	1		711			711	754	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	565	885	0.639	566	590	0.6	0.8	5.808	A
			2	2	562	887	0.634	563	595	0.6	0.7	5.755	A
			3	1, 3	462	721	0.641	462	495	0.8	1.0	7.870	A
		2	1	(2)	755			754	783	0.0	0.4	1.527	A
			2	(1, 2, 3)	839			835	899	0.5	1.2	5.474	A
	Exit	1	1		1682			1682	1794	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	651	1020	0.637	648	664	0.8	2.0	8.662	A
			2	1, 2	1138	1263	0.901	1128	1197	2.4	7.1	19.043	C
	Exit	1	1		1157			1157	1215	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	367	756	0.485	363	394	0.5	1.0	9.303	A
	Exit	1	1		892			892	926	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	554	887	0.625	555	594	0.8	0.7	5.835	A
			2	2	552	887	0.623	552	591	0.7	0.7	5.825	A
			3	1, 3	460	722	0.638	460	496	1.0	1.0	7.768	A
		2	1	(2)	719			718	786	0.4	0.2	1.338	A
			2	(1, 2, 3)	841			849	894	1.2	0.8	5.522	A
	Exit	1	1		1731			1731	1819	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	649	1023	0.634	656	675	2.0	1.3	9.850	A
			2	1, 2	1142	1268	0.901	1155	1216	7.1	6.1	23.301	C
	Exit	1	1		1134			1134	1214	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	365	735	0.497	374	396	1.0	0.8	10.035	B
	Exit	1	1		887			887	935	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	472	886	0.531	471	491	0.7	0.6	5.125	A
			2	2	457	886	0.516	457	489	0.7	0.7	5.219	A
			3	1, 3	383	722	0.531	383	399	1.0	0.7	7.469	A
		2	1	(2)	557			556	586	0.2	0.1	0.508	A
			2	(1, 2, 3)	755			756	791	0.8	0.4	2.486	A
	Exit	1	1		1386			1386	1501	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	501	1046	0.480	501	530	1.3	0.8	6.424	A
			2	1, 2	959	1299	0.737	955	1031	6.1	2.5	10.088	B
	Exit	1	1		956			956	1007	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	304	883	0.344	306	330	0.8	0.4	6.986	A
	Exit	1	1		732			732	761	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	380	888	0.428	379	404	0.6	0.6	4.983	A
			2	2	378	886	0.425	379	407	0.7	0.5	4.858	A
			3	1, 3	323	721	0.449	324	346	0.7	0.5	7.143	A
		2	1	(2)	418			418	448	0.1	0.0	0.340	A
			2	(1, 2, 3)	660			663	707	0.4	0.1	1.431	A
	Exit	1	1		1157			1157	1248	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	418	1067	0.392	417	434	0.8	0.7	5.171	A

			2	1, 2	794	1326	0.599	791	863	2.5	1.6	6.514	A
	Exit	1	1		775			775	829	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	258	998	0.259	255	271	0.4	0.6	4.985	A
	Exit	1	1		613			613	648	0.0	0.0	0.000	A

Lanes: Queue Variation Results for each time segment

07:15 - 07:30

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.51	0.00	0.00	1.87	1.87
			2	0.62	0.00	0.00	1.87	1.87
			3	0.45	0.00	0.00	1.21	1.60
		2	1	0.05	0.00	0.00	0.00	0.00
			2	0.10	0.00	0.00	0.00	0.28
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	0.63	0.00	0.00	1.87	2.59
			2	1.81	0.00	0.63	4.07	5.00
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.25	0.00	0.00	0.71	1.46
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

07:30 - 07:45

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.68	0.00	0.00	1.48	1.74
			2	0.62	0.00	0.00	1.88	1.88
			3	0.90	0.00	0.40	1.88	1.88
		2	1	0.04	0.00	0.00	0.00	0.00
			2	0.53	0.00	0.00	1.43	2.49
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	0.82	0.00	0.00	1.83	2.88
			2	2.49	0.00	0.94	6.17	7.96
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.50	0.00	0.00	1.27	1.76
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

07:45 - 08:00

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.85	0.00	0.27	1.62	1.79
			2	0.76	0.00	0.00	1.59	1.75
			3	1.02	0.00	0.60	1.71	1.82
		2	1	0.34	0.00	0.00	0.72	2.01
			2	1.24	0.00	0.00	3.42	5.18
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	1.99	0.00	0.90	4.42	7.15
			2	7.10	-0.09	5.64	14.25	15.61
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	1.01	0.00	0.00	2.57	4.87
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:00 - 08:15

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.80	0.00	0.20	1.58	1.78
			2	0.76	0.00	0.00	1.61	1.79
			3	0.97	0.00	0.49	1.69	1.82
		2	1	0.20	0.00	0.00	0.00	1.08
			2	0.78	0.00	0.00	2.48	3.34
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	1.29	0.00	0.17	3.08	4.48
			2	6.08	0.00	4.24	12.83	16.17
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.83	0.00	0.00	2.20	3.05

	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:15 - 08:30

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.58	0.00	0.00	1.87	1.87
			2	0.68	0.00	0.08	1.44	1.69
			3	0.78	0.00	0.06	1.88	1.88
		2	1	0.10	0.00	0.00	0.00	0.14
			2	0.38	0.00	0.00	1.08	2.02
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	0.75	0.00	0.00	1.79	2.98
			2	2.47	0.00	0.90	6.22	8.76
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.38	0.00	0.00	0.84	1.52
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:30 - 08:45

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.62	0.00	0.00	1.87	1.87
			2	0.49	0.00	0.00	1.15	1.64
			3	0.52	0.00	0.00	1.87	1.87
		2	1	0.03	0.00	0.00	0.00	0.00
			2	0.13	0.00	0.00	0.00	0.61
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	0.73	0.00	0.00	2.02	2.61
			2	1.62	0.00	0.51	3.68	4.55
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.64	0.00	0.00	1.57	2.92
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

Lane movements: Main Results for each time segment

07:15 - 07:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	369	92	955	887	0.415	369	403	0.0	0.5	5.068	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	378	94	955	890	0.425	375	407	0.0	0.5	5.013	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	320	80	774	725	0.441	322	335	0.0	0.4	7.015	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	419	105	-	-	-	419	456	0.0	0.0	0.312	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	328	82	-	-	-	328	358	0.0	0.1	0.315	A
				3	317	79	-	-	-	320	337	0.0	0.0	2.645	A

2 - A20 (E)	Entry	1	1	1	131	33	1230	1064	0.123	132	131	0.0	0.2	4.522	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	298	74	1230	1095	0.272	297	295	0.0	0.5	5.102	A
			2	1	816	204	1557	1329	0.615	813	866	0.0	1.8	6.502	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	232	58	1625	981	0.237	234	258	0.0	0.2	5.319	A
				2	19	5	1625	1048	0.018	19	19	0.0	0.0	4.950	A
				3	0.81	0.20	527	356	0.002	0.97	2	0.0	0.0	3.852	A

07:30 - 07:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	447	112	955	884	0.505	448	482	0.5	0.6	5.299	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	460	115	955	891	0.516	461	487	0.5	0.6	5.232	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	383	96	774	722	0.533	382	402	0.4	0.8	7.281	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	519	130	-	-	-	520	565	0.0	0.0	0.654	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	386	97	-	-	-	387	405	0.1	0.1	0.641	A
				3	386	97	-	-	-	383	404	0.1	0.5	3.847	A
2 - A20 (E)	Entry	1	1	1	156	39	1230	1013	0.154	155	166	0.6	0.2	5.626	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	329	82	1230	1063	0.310	328	351	0.6	0.6	6.388	A
			2	1	959	240	1557	1303	0.736	955	1016	1.8	2.4	9.270	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	275	69	1625	889	0.309	275	295	0.2	0.4	6.062	A
				2	24	6	1625	916	0.026	23	24	0.0	0.1	5.995	A
				3	2	0.41	549	330	0.005	2	2	0.0	0.0	4.482	A

07:45 - 08:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	565	141	955	885	0.638	566	590	0.6	0.8	5.808	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	562	140	955	887	0.634	563	595	0.6	0.7	5.755	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	462	115	774	721	0.641	462	495	0.8	1.0	7.870	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	755	189	-	-	-	754	783	0.0	0.4	1.527	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	373	93	-	-	-	373	404	0.5	0.2	1.847	A
				3	465	116	-	-	-	462	495	0.5	1.0	8.414	A
2 - A20 (E)	Entry	1	1	1	222	55	1230	1006	0.220	220	234	0.8	0.6	7.982	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	429	107	1230	1026	0.417	427	429	0.8	1.4	9.023	A
			2	1	1138	285	1557	1263	0.901	1128	1197	2.4	7.1	19.043	C
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	337	84	1625	752	0.448	334	362	0.5	0.9	9.332	A
				2	27	7	1625	786	0.035	27	30	0.5	0.1	9.081	A
				3	3	0.65	725	372	0.007	2	2	0.0	0.0	8.085	A

08:00 - 08:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	554	139	955	887	0.625	555	594	0.8	0.7	5.835	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	552	138	955	887	0.623	552	591	0.7	0.7	5.825	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	460	115	774	722	0.638	460	496	1.0	1.0	7.768	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	719	180	-	-	-	718	786	0.4	0.2	1.338	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	389	97	-	-	-	389	399	1.2	0.1	1.650	A
				3	452	113	-	-	-	460	496	1.2	0.7	8.646	A
2 - A20 (E)	Entry	1	1	1	225	56	1230	1010	0.222	231	238	2.0	0.3	9.607	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	424	106	1230	1030	0.412	425	437	2.0	0.9	9.979	A
			2	1	1142	286	1557	1268	0.901	1155	1216	7.1	6.1	23.301	C
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	337	84	1625	730	0.461	346	365	1.0	0.7	10.079	B
				2	26	7	1625	783	0.033	26	29	1.0	0.1	9.613	A
				3	2	0.57	659	336	0.007	2	2	1.0	0.0	8.721	A

08:15 - 08:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	472	118	955	886	0.531	471	491	0.7	0.6	5.125	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	457	114	955	886	0.516	457	489	0.7	0.7	5.219	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	383	96	774	722	0.531	383	399	1.0	0.7	7.469	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	557	139	-	-	-	556	586	0.2	0.1	0.508	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	372	93	-	-	-	373	393	0.8	0.0	0.587	A
				3	382	96	-	-	-	383	398	0.8	0.4	4.368	A
2 - A20 (E)	Entry	1	1	1	155	39	1230	1025	0.151	155	170	1.3	0.2	5.820	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	347	87	1230	1058	0.328	346	360	1.3	0.6	6.701	A

			2	1	959	240	1557	1299	0.737	955	1031	6.1	2.5	10.088	B
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	274	68	1625	877	0.312	276	301	0.8	0.4	7.048	A
				2	27	7	1625	918	0.030	27	27	0.8	0.0	6.391	A
				3	3	0.65	703	407	0.006	3	2	0.8	0.0	6.158	A

08:30 - 08:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	380	95	955	888	0.428	379	404	0.6	0.6	4.983	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	378	94	955	886	0.425	379	407	0.7	0.5	4.858	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	323	81	774	721	0.449	324	346	0.7	0.5	7.143	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	418	104	-	-	-	418	448	0.1	0.0	0.340	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	339	85	-	-	-	339	362	0.4	0.0	0.334	A
				3	322	80	-	-	-	323	345	0.4	0.1	2.580	A
2 - A20 (E)	Entry	1	1	1	130	33	1230	1046	0.125	129	133	0.8	0.2	4.694	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	288	72	1230	1076	0.268	288	301	0.8	0.5	5.376	A
			2	1	794	199	1557	1326	0.599	791	863	2.5	1.6	6.514	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	240	60	1625	994	0.242	237	251	0.4	0.5	5.000	A
				2	17	4	1581	999	0.017	17	18	0.4	0.0	4.899	A
				3	0.65	0.16	461	290	0.002	0.65	1	0.0	0.0	3.483	A

2037 Future Year with Development (Sensitivity Test), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.
Info	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A20 / M20 Roundabout	Standard Roundabout		1, 2, 3	21.71	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	21.71	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2037 Future Year with Development (Sensitivity Test)	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 (Veh/hr)	Scaling Factor (%)
1 - M20 link road		ONE HOUR	✓	1527	100.000
2 - A20 (E)		ONE HOUR	✓	1738	100.000
3 - A20 (W)		ONE HOUR	✓	351	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - M20 link road	2 - A20 (E)	3 - A20 (W)
From	1 - M20 link road	0	1078	449
	2 - A20 (E)	1331	0	407
	3 - A20 (W)	323	26	2

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - M20 link road	2 - A20 (E)	3 - A20 (W)
From	1 - M20 link road	0	7	7
	2 - A20 (E)	6	0	3
	3 - A20 (W)	9	4	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - M20 link road	11.17	5.6	14.3	B	1402	2103
2 - A20 (E)	33.04	18.6	48.1	D	1595	2393
3 - A20 (W)	12.43	1.5	4.5	B	319	479

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1146	286	21	1148	1216	1232	0.0	2.1	6.729	A
2 - A20 (E)	1288	322	338	1290	1365	831	0.0	2.6	6.654	A
3 - A20 (W)	263	66	989	264	287	639	0.0	0.3	5.497	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1388	347	25	1385	1471	1494	2.1	3.2	8.289	A
2 - A20 (E)	1574	394	403	1562	1642	1007	2.6	5.2	9.832	A
3 - A20 (W)	315	79	1202	317	341	764	0.3	0.5	6.947	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1658	415	28	1661	1780	1810	3.2	4.7	10.767	B
2 - A20 (E)	1935	484	488	1920	1974	1200	5.2	15.3	23.894	C
3 - A20 (W)	378	95	1462	376	415	946	0.5	1.5	10.948	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1685	421	34	1682	1799	1818	4.7	5.6	11.175	B
2 - A20 (E)	1918	480	492	1921	2008	1223	15.3	18.6	33.037	D
3 - A20 (W)	386	97	1465	387	417	949	1.5	1.2	12.431	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1379	345	26	1380	1491	1491	5.6	3.1	8.426	A
2 - A20 (E)	1571	393	409	1576	1697	997	18.6	5.2	17.015	C
3 - A20 (W)	307	77	1210	307	344	776	1.2	0.7	8.426	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1158	290	20	1159	1235	1232	3.1	2.2	6.745	A
2 - A20 (E)	1291	323	332	1287	1380	847	5.2	2.5	6.866	A
3 - A20 (W)	267	67	984	268	290	636	0.7	0.4	5.749	A

Queue Variation Results for each time segment

07:15 - 07:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)

1 - M20 link road	2.21	0.00	1.31	4.90	5.93
2 - A20 (E)	2.63	0.00	1.50	5.40	7.07
3 - A20 (W)	0.31	0.00	0.00	0.82	1.33

07:30 - 07:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	3.29	0.00	2.06	6.98	8.82
2 - A20 (E)	5.28	0.00	2.90	12.78	16.47
3 - A20 (W)	0.55	0.00	0.00	1.50	2.04

07:45 - 08:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	4.85	0.00	3.69	9.05	11.99
2 - A20 (E)	15.33	1.77	10.64	32.69	41.24
3 - A20 (W)	1.50	0.00	0.52	3.21	4.53

08:00 - 08:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	5.64	0.00	3.96	11.11	14.35
2 - A20 (E)	18.59	0.50	14.48	39.12	48.14
3 - A20 (W)	1.19	0.00	0.17	3.03	3.60

08:15 - 08:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	3.14	0.00	1.84	6.62	8.27
2 - A20 (E)	5.31	0.00	3.28	10.84	12.71
3 - A20 (W)	0.77	0.00	0.00	2.19	2.85

08:30 - 08:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	2.18	0.00	1.21	4.54	5.55
2 - A20 (E)	2.56	0.00	1.33	5.41	6.46
3 - A20 (W)	0.41	0.00	0.00	0.91	1.54

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	408	887	0.460	407	431	0.0	0.6	4.948	A
			2	2	403	885	0.455	403	431	0.0	0.5	4.996	A
			3	1, 3	336	721	0.466	337	354	0.0	0.6	7.049	A
		2	1	(2)	463			462	492	0.0	0.1	0.358	A
			2	(1, 2, 3)	683			684	732	0.0	0.3	1.681	A
	Exit	1	1		1232			1232	1317	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	434	1065	0.407	435	455	0.0	0.7	5.378	A
			2	1, 2	854	1326	0.643	855	911	0.0	1.9	7.301	A
	Exit	1	1		831			831	883	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	263	964	0.273	264	287	0.0	0.3	5.497	A
	Exit	1	1		639			639	669	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	489	883	0.554	490	518	0.6	0.7	5.361	A
			2	2	494	885	0.559	494	519	0.5	0.7	5.369	A
			3	1, 3	402	720	0.557	401	434	0.6	0.9	7.586	A

		2	1	(2)	610			609	645	0.1	0.1	0.680	A
			2	(1, 2, 3)	778			776	829	0.3	0.8	3.489	A
	Exit	1	1		1494			1494	1585	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	540	1040	0.519	537	559	0.7	1.3	6.697	A
			2	1, 2	1034	1293	0.800	1025	1084	1.9	3.9	11.477	B
	Exit	1	1		1007			1007	1062	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	315	840	0.375	317	341	0.3	0.5	6.947	A
	Exit	1	1		764			764	808	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	589	885	0.665	590	634	0.7	0.9	5.872	A
			2	2	584	883	0.661	585	626	0.7	0.9	5.925	A
			3	1, 3	486	717	0.677	486	520	0.9	1.1	7.934	A
		2	1	(2)	789			788	863	0.1	0.4	1.704	A
			2	(1, 2, 3)	869			871	920	0.8	1.4	6.666	A
	Exit	1	1		1810			1810	1897	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	719	1009	0.713	720	726	1.3	2.3	11.266	B
			2	1, 2	1216	1258	0.966	1200	1248	3.9	13.0	31.198	D
	Exit	1	1		1200			1200	1289	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	378	697	0.543	376	415	0.5	1.5	10.948	B
	Exit	1	1		946			946	983	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	594	888	0.668	595	637	0.9	0.9	5.980	A
			2	2	597	882	0.677	598	640	0.9	0.9	5.946	A
			3	1, 3	490	717	0.684	489	523	1.1	1.1	7.917	A
		2	1	(2)	832			831	875	0.4	0.6	1.873	A
			2	(1, 2, 3)	853			850	925	1.4	2.0	7.248	A
	Exit	1	1		1818			1818	1928	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	718	1007	0.713	722	742	2.3	2.5	11.590	B
			2	1, 2	1200	1255	0.955	1200	1266	13.0	16.1	45.722	E
	Exit	1	1		1223			1223	1308	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	386	690	0.559	387	417	1.5	1.2	12.431	B
	Exit	1	1		949			949	988	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	490	892	0.549	489	525	0.9	0.7	5.453	A
			2	2	483	882	0.547	483	526	0.9	0.8	5.448	A
			3	1, 3	407	715	0.569	407	440	1.1	0.8	7.680	A
		2	1	(2)	598			598	652	0.6	0.2	0.849	A
			2	(1, 2, 3)	781			782	836	2.0	0.7	3.500	A
	Exit	1	1		1491			1491	1638	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	547	1040	0.526	543	575	2.5	1.3	7.684	A
			2	1, 2	1025	1286	0.797	1034	1122	16.1	3.9	22.074	C
	Exit	1	1		997			997	1076	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	307	832	0.369	307	344	1.2	0.7	8.426	A
	Exit	1	1		776			776	817	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	414	887	0.466	414	439	0.7	0.6	5.053	A
			2	2	415	890	0.466	415	440	0.8	0.6	5.112	A

			3	1, 3	329	718	0.458	330	356	0.8	0.6	6.989	A
		2	1	(2)	461			461	494	0.2	0.1	0.422	A
			2	(1, 2, 3)	697			697	738	0.7	0.3	1.596	A
	Exit	1	1		1232			1232	1332	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	438	1066	0.411	436	460	1.3	0.8	5.473	A
			2	1, 2	853	1322	0.645	851	920	3.9	1.7	7.583	A
	Exit	1	1		847			847	899	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	267	956	0.279	268	290	0.7	0.4	5.749	A
	Exit	1	1		636			636	673	0.0	0.0	0.000	A

Lanes: Queue Variation Results for each time segment

07:15 - 07:30

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.64	0.00	0.00	1.37	1.63
			2	0.58	0.00	0.00	1.32	1.61
			3	0.64	0.00	0.00	1.57	1.81
		2	1	0.06	0.00	0.00	0.00	0.00
			2	0.29	0.00	0.00	0.63	2.09
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	0.68	0.00	0.00	1.61	2.25
			2	1.94	0.00	0.73	4.21	5.25
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.31	0.00	0.00	0.82	1.33
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

07:30 - 07:45

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.73	0.00	0.10	1.51	1.72
			2	0.76	0.00	0.19	1.51	1.74
			3	0.89	0.00	0.33	1.64	1.76
		2	1	0.13	0.00	0.00	0.00	0.50
			2	0.78	0.00	0.00	2.42	3.44
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	1.30	0.00	0.35	2.85	4.55
			2	3.97	0.00	1.78	10.45	14.01
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.55	0.00	0.00	1.50	2.04
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

07:45 - 08:00

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.98	0.00	0.51	1.67	1.81
			2	0.96	0.00	0.46	1.67	1.81
			3	1.06	0.00	0.74	1.69	1.80
		2	1	0.45	0.00	0.00	1.46	3.12
			2	1.41	0.00	0.00	3.95	5.40
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	2.32	0.00	1.06	5.31	6.94
			2	12.96	0.72	8.35	30.68	37.23
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	1.50	0.00	0.52	3.21	4.53
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:00 - 08:15

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.96	0.00	0.48	1.66	1.80
			2	0.99	0.00	0.52	1.67	1.80
			3	1.11	0.00	0.93	1.69	1.78
		2	1	0.56	0.00	0.00	1.79	2.69
			2	2.01	0.00	0.23	5.98	7.30

	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	2.52	0.00	1.11	5.69	7.36
			2	16.00	0.00	11.33	36.33	46.64
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	1.19	0.00	0.17	3.03	3.60
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:15 - 08:30

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.77	0.00	0.14	1.54	1.73
			2	0.77	0.00	0.18	1.52	1.71
			3	0.79	0.00	0.11	1.59	1.75
		2	1	0.17	0.00	0.00	0.00	0.87
			2	0.66	0.00	0.00	1.91	3.66
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	1.29	0.00	0.20	3.18	4.76
			2	4.00	0.00	2.26	8.17	12.09
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.77	0.00	0.00	2.19	2.85
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

08:30 - 08:45

Arm	Side	Lane level	Lane	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)
1 - M20 link road	Entry	1	1	0.58	0.00	0.00	1.87	1.87
			2	0.62	0.00	0.00	1.88	1.88
			3	0.64	0.00	0.00	1.51	1.73
		2	1	0.06	0.00	0.00	0.00	0.00
			2	0.28	0.00	0.00	0.16	1.44
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
2 - A20 (E)	Entry	1	1	0.83	0.00	0.00	2.25	2.98
			2	1.73	0.00	0.57	4.17	5.45
	Exit	1	1	0.00	0.00	0.00	0.00	0.00
3 - A20 (W)	Entry	1	1	0.41	0.00	0.00	0.91	1.54
	Exit	1	1	0.00	0.00	0.00	0.00	0.00

Lane movements: Main Results for each time segment

07:15 - 07:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	408	102	955	887	0.460	407	431	0.0	0.6	4.948	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	403	101	955	885	0.455	403	431	0.0	0.5	4.996	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	336	84	774	721	0.466	337	354	0.0	0.6	7.049	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	463	116	-	-	-	462	492	0.0	0.1	0.358	A

				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	348	87	-	-	-	348	375	0.0	0.0	0.382	A
				3	335	84	-	-	-	336	357	0.0	0.3	3.042	A
2 - A20 (E)	Entry	1	1	1	134	33	1230	1044	0.128	134	141	0.0	0.2	4.768	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	300	75	1230	1075	0.279	301	314	0.0	0.5	5.645	A
			2	1	854	214	1557	1326	0.644	855	911	0.0	1.9	7.301	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	242	61	1625	959	0.252	243	266	0.0	0.3	5.518	A
				2	20	5	1616	996	0.020	20	20	0.0	0.0	5.250	A
				3	1	0.27	402	252	0.004	1	1	0.0	0.0	5.390	A

07:30 - 07:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	489	122	955	883	0.554	490	518	0.6	0.7	5.361	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	494	124	955	885	0.559	494	519	0.5	0.7	5.369	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	402	100	774	720	0.557	401	434	0.6	0.9	7.586	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	610	152	-	-	-	609	645	0.1	0.1	0.680	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	374	94	-	-	-	374	394	0.3	0.1	0.826	A
				3	403	101	-	-	-	402	435	0.3	0.7	5.890	A
2 - A20 (E)	Entry	1	1	1	177	44	1230	1024	0.173	177	187	0.7	0.4	6.187	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	362	91	1230	1049	0.346	361	372	0.7	0.9	6.947	A
			2	1	1034	259	1557	1293	0.800	1025	1084	1.9	3.9	11.477	B
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

3 - A20 (W)	Entry	1	1	1	290	72	1625	836	0.347	292	314	0.3	0.5	6.935	A
				2	23	6	1616	874	0.026	23	25	0.3	0.0	7.172	A
				3	2	0.55	673	385	0.006	2	2	0.3	0.0	6.004	A

07:45 - 08:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	589	147	955	884	0.665	590	634	0.7	0.9	5.872	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	584	146	955	883	0.661	585	626	0.7	0.9	5.925	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	486	122	774	717	0.677	486	520	0.9	1.1	7.934	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	789	197	-	-	-	788	863	0.1	0.4	1.704	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	385	96	-	-	-	384	399	0.8	0.3	2.201	A
				3	484	121	-	-	-	486	520	0.8	1.2	10.066	B
2 - A20 (E)	Entry	1	1	1	262	65	1230	994	0.263	262	265	1.3	0.8	10.755	B
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	457	114	1230	1018	0.449	458	461	1.3	1.5	11.552	B
			2	1	1216	304	1557	1258	0.966	1200	1248	3.9	13.0	31.198	D
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	350	88	1625	693	0.506	348	384	0.5	1.3	10.936	B
				2	26	6	1625	738	0.035	26	29	0.5	0.1	11.137	B
				3	2	0.53	699	342	0.006	2	2	0.5	0.0	10.370	B

08:00 - 08:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	594	149	955	888	0.668	595	637	0.9	0.9	5.980	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	597	149	955	881	0.677	598	640	0.9	0.9	5.946	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	490	122	774	717	0.684	489	523	1.1	1.1	7.917	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	832	208	-	-	-	831	875	0.4	0.6	1.873	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	361	90	-	-	-	360	401	1.4	0.3	2.500	A
				3	492	123	-	-	-	490	523	1.4	1.7	10.868	B
2 - A20 (E)	Entry	1	1	1	265	66	1230	989	0.268	265	279	2.3	1.0	11.440	B
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	453	113	1230	1018	0.445	457	463	2.3	1.5	11.678	B
			2	1	1200	300	1557	1255	0.955	1200	1266	13.0	16.1	45.722	E
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	352	88	1625	684	0.515	353	383	1.5	1.0	12.497	B
				2	31	8	1625	731	0.042	31	31	1.5	0.1	11.771	B
				3	3	0.79	682	321	0.010	3	2	1.5	0.0	10.981	B

08:15 - 08:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	490	122	955	892	0.549	489	525	0.9	0.7	5.453	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	483	121	955	882	0.547	483	526	0.9	0.8	5.448	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	407	102	774	715	0.569	407	440	1.1	0.8	7.680	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	598	150	-	-	-	598	652	0.6	0.2	0.849	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

				2	374	93	-	-	-	374	397	2.0	0.1	0.964	A
				3	407	102	-	-	-	407	439	2.0	0.5	5.829	A
2 - A20 (E)	Entry	1	1	1	179	45	1230	1024	0.175	177	199	2.5	0.4	7.425	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	368	92	1230	1048	0.351	366	375	2.5	0.9	7.817	A
			2	1	1025	256	1557	1286	0.797	1034	1122	16.1	3.9	22.074	C
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	281	70	1625	827	0.340	281	316	1.2	0.7	8.412	A
				2	24	6	1625	877	0.027	24	25	1.2	0.1	8.600	A
				3	2	0.52	638	340	0.006	2	2	1.2	0.0	8.265	A

08:30 - 08:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	414	103	955	887	0.466	414	439	0.7	0.6	5.053	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	415	104	955	890	0.466	415	440	0.8	0.6	5.112	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	329	82	774	718	0.458	330	356	0.8	0.6	6.989	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	461	115	-	-	-	461	494	0.2	0.1	0.422	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	369	92	-	-	-	368	383	0.6	0.0	0.427	A
				3	329	82	-	-	-	329	355	0.7	0.3	2.862	A
2 - A20 (E)	Entry	1	1	1	133	33	1230	1054	0.126	132	145	1.3	0.2	4.872	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	305	76	1230	1073	0.284	304	315	1.3	0.6	5.742	A
			2	1	853	213	1557	1322	0.645	851	920	3.9	1.7	7.583	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	247	62	1625	952	0.260	248	268	0.7	0.4	5.748	A
				2	18	4	1616	966	0.018	18	20	0.7	0.0	5.706	A

				3	2	0.52	472	292	0.007	2	1	0.0	0.0	6.557	A

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.0.1.1519

Filename: A20_M20 Roundabout PM (Lane Sim)_al.j10
Path: T:\Projects\15000 Series\15323ITB Ashford Road, Maidstone\Tech\Junction Assessments\2022 Scheme\FINAL
Report generation date: 14/12/2022 11:14:18

Summary of junction performance

	PM	
	Queue (Veh)	Delay (s)
	[Lane Simulation] - 2022 Observed	
1 - M20 link road	8.7	14.04
2 - A20 (E)	3.6	8.15
3 - A20 (W)	0.5	5.63
	[Lane Simulation] - 2027 Future Year without Development	
1 - M20 link road	10.0	17.39
2 - A20 (E)	3.8	8.53
3 - A20 (W)	0.7	5.87
	[Lane Simulation] - 2037 Future Year without Development	
1 - M20 link road	20.2	30.51
2 - A20 (E)	5.7	10.66
3 - A20 (W)	0.7	6.44
	[Lane Simulation] - 2027 Future Year with Development	
1 - M20 link road	12.2	21.48
2 - A20 (E)	4.1	8.81
3 - A20 (W)	0.7	6.36
	[Lane Simulation] - 2037 Future Year with Development	
1 - M20 link road	17.3	28.95
2 - A20 (E)	5.1	10.65
3 - A20 (W)	0.8	7.34
	[Lane Simulation] - 2027 Future Year with Development (Sensitivity Test)	
1 - M20 link road	10.4	20.44
2 - A20 (E)	4.1	9.39
3 - A20 (W)	0.8	6.88
	[Lane Simulation] - 2037 Future Year with Development (Sensitivity Test)	
1 - M20 link road	18.9	29.04
2 - A20 (E)	5.6	10.80
3 - A20 (W)	0.8	7.79

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	
Location	
Site number	
Date	13/10/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	I-TRANSPORT\londonhotdesk
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	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials	Last run time taken (s)
Delay	1.00	100000	100000	-1	3	1	60	✓			546944514	61	6.73

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	2022 Observed	PM	ONE HOUR	16:30	18:00	15	✓
D2	2027 Future Year without Development	PM	ONE HOUR	16:30	18:00	15	✓
D3	2037 Future Year without Development	PM	ONE HOUR	16:30	18:00	15	✓
D4	2027 Future Year with Development	PM	ONE HOUR	16:30	18:00	15	✓
D5	2037 Future Year with Development	PM	ONE HOUR	16:30	18:00	15	✓
D6	2027 Future Year with Development (Sensitivity Test)	PM	ONE HOUR	16:30	18:00	15	✓
D7	2037 Future Year with Development (Sensitivity Test)	PM	ONE HOUR	16:30	18:00	15	✓

Analysis Set Details

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

2022 Observed, PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A20 / M20 Roundabout	Standard Roundabout		1, 2, 3	10.98	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	10.98	B

Arms

Arms

Arm	Name	Description	No give-way line
1	M20 link road		
2	A20 (E)		
3	A20 (W)		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - M20 link road	7.40	10.40	7.8	44.9	59.0	34.0		
2 - A20 (E)	7.50	10.10	5.3	48.8	59.0	14.5		
3 - A20 (W)	3.80	6.10	10.3	25.3	59.0	20.5		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - M20 link road	0.738	2685
2 - A20 (E)	0.776	2792
3 - A20 (W)	0.561	1625

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

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
1 - M20 link road	Apportion from lane geometry	10.00
2 - A20 (E)	Apportion from lane geometry	20.00
3 - A20 (W)	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
1 - M20 link road	Entry	1	1	2	✓	2.00			0	99999	
			2	2	✓	2.00			0	99999	
			3	1, 3	✓	2.00			0	99999	
		2	1	(2)		Infinity					
			2	(1, 2, 3)		Infinity					
	Exit	1	1			Infinity					
2 - A20 (E)	Entry	1	1	(1), 3		Infinity			0	99999	
			2	1, 2		Infinity			0	99999	
	Exit	1	1			Infinity					
3 - A20 (W)	Entry	1	1	1, 2, 3		Infinity			0	99999	
	Exit	1	1			Infinity					

Entry Lane Geometry

Arm	Side	Lane level	Lane	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Notes
1 - M20 link road	Entry	1	1	3.70	3.70	0.0	44.9	59.0	34.0		
			2	3.70	3.70	0.0	44.9	59.0	34.0		
			3	3.00	3.00	0.0	44.9	59.0	34.0		
2 - A20 (E)	Entry	1	1	3.75	3.75	0.0	48.8	59.0	14.5		
			2	3.75	6.25	5.3	48.8	59.0	14.5		

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
1 - M20 link road	Entry	1	1	0.263	955
			2	0.263	955
			3	0.213	774
2 - A20 (E)	Entry	1	1	0.342	1232
			2	0.433	1560
3 - A20 (W)	Entry	1	1	0.561	1625

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm		
			M20 link road	A20 (E)	A20 (W)
1 - M20 link road	1	1		✓	
		2		✓	
		3	✓		✓
	2	1		✓	
		2	✓	✓	✓
2 - A20 (E)	1	1			✓
		2	✓	✓	
3 - A20 (W)	1	1	✓	✓	✓

Summary of Entry Lane allowed secondary movements

Arm	Lane Level	Lane	Destination arm		
			M20 link road	A20 (E)	A20 (W)
1 - M20 link road	1	1			
		2			
		3			
	2	1			
		2			
2 - A20 (E)	1	1	✓		
		2			
3 - A20 (W)	1	1			

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	2022 Observed	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 (Veh/hr)	Scaling Factor (%)
1 - M20 link road		ONE HOUR	✓	1776	100.000
2 - A20 (E)		ONE HOUR	✓	1377	100.000
3 - A20 (W)		ONE HOUR	✓	297	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - M20 link road	2 - A20 (E)	3 - A20 (W)
From	1 - M20 link road	0	1370	406
	2 - A20 (E)	983	0	394
	3 - A20 (W)	259	38	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - M20 link road	2 - A20 (E)	3 - A20 (W)
From	1 - M20 link road	0	4	4
	2 - A20 (E)	4	0	2
	3 - A20 (W)	2	0	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - M20 link road	14.04	8.7	B	1627	2440
2 - A20 (E)	8.15	3.6	A	1266	1900
3 - A20 (W)	5.63	0.5	A	273	409

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1326	332	27	1324	1369	959	0.0	2.3	6.676	A
2 - A20 (E)	1057	264	307	1059	1078	1043	0.0	1.5	4.836	A
3 - A20 (W)	235	59	750	236	236	616	0.0	0.2	4.017	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1622	406	35	1630	1652	1113	2.3	4.0	8.738	A
2 - A20 (E)	1246	312	368	1248	1277	1297	1.5	1.7	5.674	A
3 - A20 (W)	259	65	891	257	268	725	0.2	0.4	4.281	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1945	486	43	1952	2015	1359	4.0	6.6	13.437	B
2 - A20 (E)	1493	373	462	1494	1545	1533	1.7	3.7	7.987	A
3 - A20 (W)	328	82	1074	327	341	881	0.4	0.5	5.395	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1932	483	39	1918	2011	1362	6.6	8.5	14.044	B
2 - A20 (E)	1500	375	442	1495	1561	1514	3.7	3.3	8.148	A
3 - A20 (W)	325	81	1070	330	331	867	0.5	0.5	5.626	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1605	401	30	1610	1683	1129	8.5	3.7	9.699	A
2 - A20 (E)	1229	307	360	1238	1293	1280	3.3	1.8	5.928	A
3 - A20 (W)	268	67	894	266	276	705	0.5	0.4	4.562	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1334	334	27	1344	1401	957	3.7	2.4	6.812	A
2 - A20 (E)	1073	268	304	1075	1091	1067	1.8	1.0	4.821	A
3 - A20 (W)	222	55	762	222	231	617	0.4	0.2	3.796	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	513	918	0.560	512	525	0.0	0.8	5.277	A
			2	2	503	912	0.551	505	527	0.0	0.6	5.229	A
			3	1, 3	307	738	0.417	307	317	0.0	0.5	6.774	A
		2	1	(2)	567			566	576	0.0	0.1	0.641	A
			2	(1, 2, 3)	759			758	801	0.0	0.3	1.379	A
	Exit	1	1		959			959	983	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	394	1100	0.359	396	391	0.0	0.5	4.803	A
			2	1, 2	662	1366	0.485	663	686	0.0	0.9	4.856	A
	Exit	1	1		1043			1043	1080	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	235	1162	0.203	236	236	0.0	0.2	4.017	A
	Exit	1	1		616			616	620	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	626	910	0.686	627	636	0.8	1.0	5.899	A
			2	2	635	910	0.697	635	639	0.6	1.0	5.929	A
			3	1, 3	369	730	0.505	368	377	0.5	0.8	7.170	A
		2	1	(2)	757			759	744	0.1	0.4	1.876	A
			2	(1, 2, 3)	865			870	911	0.3	0.7	3.072	A
	Exit	1	1		1113			1113	1147	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	458	1071	0.428	460	474	0.5	0.5	5.190	A
			2	1, 2	788	1336	0.590	788	803	0.9	1.2	5.963	A
	Exit	1	1		1297			1297	1311	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	259	1075	0.240	257	268	0.2	0.4	4.281	A
	Exit	1	1		725			725	739	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	747	906	0.823	743	773	1.0	1.5	6.525	A
			2	2	749	908	0.824	747	774	1.0	1.5	6.513	A
			3	1, 3	461	742	0.621	462	469	0.8	0.8	7.740	A
		2	1	(2)	1015			1018	1042	0.4	1.1	4.694	A
			2	(1, 2, 3)	930			939	977	0.7	1.7	8.684	A
	Exit	1	1		1359			1359	1414	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	566	1043	0.542	562	579	0.5	1.4	6.757	A
			2	1, 2	927	1302	0.713	932	966	1.2	2.3	8.736	A
	Exit	1	1		1533			1533	1589	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	328	974	0.337	327	341	0.4	0.5	5.395	A
	Exit	1	1		881			881	898	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	742	909	0.816	740	771	1.5	1.5	6.573	A
			2	2	737	903	0.817	736	780	1.5	1.4	6.486	A
			3	1, 3	444	737	0.602	442	460	0.8	1.1	7.728	A
		2	1	(2)	996			992	1036	1.1	1.7	5.170	A
			2	(1, 2, 3)	936			931	975	1.7	2.8	9.426	A
	Exit	1	1		1362			1362	1414	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	565	1051	0.536	566	586	1.4	1.0	6.867	A
			2	1, 2	935	1310	0.714	929	975	2.3	2.2	8.928	A
	Exit	1	1		1514			1514	1591	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	325	985	0.331	330	331	0.5	0.5	5.626	A
	Exit	1	1		867			867	898	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	629	916	0.686	628	645	1.5	1.1	6.122	A
			2	2	620	904	0.686	622	654	1.4	1.0	6.051	A
			3	1, 3	360	739	0.488	360	384	1.1	0.8	7.234	A
		2	1	(2)	751			753	780	1.7	0.3	2.546	A
			2	(1, 2, 3)	854			857	898	2.8	0.6	4.081	A
	Exit	1	1		1129			1129	1173	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	447	1080	0.415	451	472	1.0	0.7	5.443	A
			2	1, 2	782	1353	0.578	787	821	2.2	1.1	6.211	A
	Exit	1	1		1280			1280	1333	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	268	1084	0.246	266	276	0.5	0.4	4.562	A
	Exit	1	1		705			705	746	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	518	910	0.569	520	538	1.1	0.7	5.365	A
			2	2	518	912	0.568	520	544	1.0	0.7	5.447	A
			3	1, 3	303	736	0.410	304	319	0.8	0.5	6.613	A
		2	1	(2)	568			570	592	0.3	0.1	0.845	A
			2	(1, 2, 3)	766			769	805	0.6	0.3	1.352	A
	Exit	1	1		957			957	984	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	394	1090	0.363	396	398	0.7	0.4	4.922	A
			2	1, 2	679	1365	0.498	679	693	1.1	0.7	4.762	A
	Exit	1	1		1067			1067	1111	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	222	1153	0.192	222	231	0.4	0.2	3.796	A
	Exit	1	1		617			617	629	0.0	0.0	0.000	A

Lane movements: Main Results for each time segment

16:30 - 16:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	513	128	955	918	0.560	512	525	0.0	0.8	5.277	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	503	126	955	912	0.551	505	527	0.0	0.6	5.229	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	307	77	774	738	0.417	307	317	0.0	0.5	6.774	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	567	142	-	-	-	566	576	0.0	0.1	0.641	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	451	113	-	-	-	450	482	0.0	0.1	0.604	A
				3	308	77	-	-	-	307	319	0.0	0.2	2.551	A
2 - A20 (E)	Entry	1	1	1	85	21	1232	1084	0.078	87	88	0.0	0.0	3.943	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	309	77	1232	1106	0.280	309	304	0.0	0.5	5.046	A
			2	1	662	166	1560	1366	0.485	663	686	0.0	0.9	4.856	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	209	52	1625	1159	0.181	209	209	0.0	0.2	4.058	A
				2	26	7	1625	1197	0.022	27	27	0.0	0.0	3.701	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	626	156	955	910	0.687	627	636	0.8	1.0	5.899	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	635	159	955	910	0.697	635	639	0.6	1.0	5.929	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	369	92	774	730	0.505	368	377	0.5	0.8	7.170	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	757	189	-	-	-	759	744	0.1	0.4	1.876	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	499	125	-	-	-	501	533	0.3	0.3	1.963	A
				3	366	92	-	-	-	369	378	0.3	0.4	4.641	A
2 - A20 (E)	Entry	1	1	1	102	25	1232	1040	0.098	103	112	0.5	0.1	4.409	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	356	89	1232	1081	0.330	357	362	0.5	0.4	5.426	A
			2	1	788	197	1560	1336	0.590	788	803	0.9	1.2	5.963	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	224	56	1625	1074	0.208	223	232	0.2	0.3	4.198	A
				2	35	9	1625	1114	0.032	35	36	0.2	0.1	4.811	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	747	187	955	906	0.823	743	773	1.0	1.5	6.525	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	749	187	955	908	0.824	747	774	1.0	1.5	6.513	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	461	115	774	742	0.621	462	469	0.8	0.8	7.740	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	1015	254	-	-	-	1018	1042	0.4	1.1	4.694	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	475	119	-	-	-	478	508	0.7	0.7	5.954	A
				3	454	114	-	-	-	461	469	0.7	1.0	11.623	B
2 - A20 (E)	Entry	1	1	1	141	35	1232	1018	0.138	143	150	0.5	0.2	5.867	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	425	106	1232	1051	0.404	419	429	0.5	1.1	7.058	A
			2	1	927	232	1560	1302	0.713	932	966	1.2	2.3	8.736	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	285	71	1625	970	0.294	284	298	0.4	0.4	5.410	A
				2	43	11	1625	993	0.043	43	42	0.4	0.0	5.290	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	742	185	955	909	0.816	740	771	1.5	1.5	6.573	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	737	184	955	903	0.817	736	780	1.5	1.4	6.486	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	444	111	774	737	0.601	442	460	0.8	1.1	7.728	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	996	249	-	-	-	992	1036	1.1	1.7	5.170	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	486	122	-	-	-	487	515	1.7	0.9	6.566	A
				3	449	112	-	-	-	444	461	1.7	1.9	12.586	B
2 - A20 (E)	Entry	1	1	1	142	36	1232	1051	0.135	141	148	1.4	0.3	5.718	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	422	106	1232	1052	0.401	425	438	1.4	0.8	7.252	A
			2	1	935	234	1560	1310	0.714	929	975	2.3	2.2	8.928	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	287	72	1625	982	0.293	292	291	0.5	0.5	5.648	A
				2	38	10	1625	999	0.038	39	40	0.5	0.1	5.470	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	629	157	955	916	0.686	628	645	1.5	1.1	6.122	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	620	155	955	904	0.686	622	654	1.4	1.0	6.051	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	360	90	774	739	0.488	360	384	1.1	0.8	7.234	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	751	188	-	-	-	753	780	1.7	0.3	2.546	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	496	124	-	-	-	496	515	2.8	0.2	2.591	A
				3	358	90	-	-	-	360	382	2.8	0.3	6.110	A
2 - A20 (E)	Entry	1	1	1	107	27	1232	1072	0.100	106	110	1.0	0.2	4.793	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	340	85	1232	1081	0.315	345	362	1.0	0.5	5.636	A
			2	1	782	195	1560	1352	0.578	787	821	2.2	1.1	6.211	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	236	59	1625	1085	0.218	236	242	0.5	0.4	4.563	A
				2	31	8	1625	1108	0.028	30	34	0.5	0.1	4.556	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	518	130	955	910	0.569	520	538	1.1	0.7	5.365	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	518	129	955	913	0.568	520	544	1.0	0.7	5.447	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	303	76	774	736	0.410	304	319	0.8	0.5	6.613	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	568	142	-	-	-	570	592	0.3	0.1	0.845	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	464	116	-	-	-	466	487	0.6	0.1	0.761	A
				3	302	75	-	-	-	303	318	0.6	0.2	2.259	A
2 - A20 (E)	Entry	1	1	1	83	21	1232	1072	0.078	83	89	0.7	0.1	4.095	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	311	78	1232	1095	0.285	313	310	0.7	0.3	5.153	A
			2	1	679	170	1560	1365	0.497	679	693	1.1	0.7	4.762	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	194	49	1625	1152	0.169	195	203	0.4	0.2	3.829	A
				2	27	7	1625	1180	0.023	27	29	0.4	0.0	3.565	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

2027 Future Year without Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A20 / M20 Roundabout	Standard Roundabout		1, 2, 3	12.88	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	12.88	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2027 Future Year without Development	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 (Veh/hr)	Scaling Factor (%)
1 - M20 link road		ONE HOUR	✓	1834	100.000
2 - A20 (E)		ONE HOUR	✓	1422	100.000
3 - A20 (W)		ONE HOUR	✓	306	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - M20 link road	2 - A20 (E)	3 - A20 (W)
From	1 - M20 link road	0	1415	419
	2 - A20 (E)	1015	0	407
	3 - A20 (W)	267	39	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - M20 link road	2 - A20 (E)	3 - A20 (W)
From	1 - M20 link road	0	4	4
	2 - A20 (E)	4	0	2
	3 - A20 (W)	2	0	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - M20 link road	17.39	10.0	C	1677	2515
2 - A20 (E)	8.53	3.8	A	1305	1957
3 - A20 (W)	5.87	0.7	A	279	419

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1389	347	28	1395	1437	979	0.0	2.4	6.928	A
2 - A20 (E)	1070	267	313	1069	1107	1110	0.0	1.2	4.842	A
3 - A20 (W)	235	59	773	235	239	609	0.0	0.3	3.900	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1625	406	38	1627	1699	1132	2.4	4.5	9.263	A
2 - A20 (E)	1244	311	371	1250	1312	1294	1.2	1.9	5.880	A
3 - A20 (W)	267	67	903	268	275	718	0.3	0.4	4.511	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	2020	505	50	2004	2064	1417	4.5	10.0	15.376	C
2 - A20 (E)	1573	393	455	1576	1589	1598	1.9	3.7	8.373	A
3 - A20 (W)	337	84	1133	334	332	899	0.4	0.7	5.436	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	2022	506	42	2011	2087	1421	10.0	9.5	17.394	C
2 - A20 (E)	1562	391	469	1573	1627	1583	3.7	3.3	8.529	A
3 - A20 (W)	343	86	1122	341	348	920	0.7	0.6	5.868	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1639	410	36	1639	1739	1155	9.5	3.4	9.809	A
2 - A20 (E)	1292	323	367	1295	1341	1308	3.3	2.0	6.197	A
3 - A20 (W)	273	68	918	273	282	744	0.6	0.4	4.679	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1363	341	31	1370	1443	961	3.4	2.6	7.103	A
2 - A20 (E)	1086	271	316	1082	1113	1086	2.0	1.4	5.088	A
3 - A20 (W)	220	55	772	221	233	626	0.4	0.2	3.893	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	536	914	0.587	537	555	0.0	0.8	5.496	A
			2	2	542	913	0.594	545	557	0.0	0.6	5.496	A
			3	1, 3	312	742	0.420	313	325	0.0	0.5	6.663	A
		2	1	(2)	588			589	614	0.0	0.1	0.838	A
			2	(1, 2, 3)	801			802	831	0.0	0.3	1.410	A
	Exit	1	1		979			979	1005	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	384	1094	0.351	383	402	0.0	0.4	4.649	A
			2	1, 2	686	1365	0.502	685	705	0.0	0.9	4.953	A
	Exit	1	1		1110			1110	1141	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	235	1152	0.204	235	239	0.0	0.3	3.900	A
	Exit	1	1		609			609	638	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	633	912	0.694	633	659	0.8	1.1	5.963	A
			2	2	621	915	0.680	623	655	0.6	1.0	6.047	A
			3	1, 3	371	734	0.505	371	386	0.5	0.9	7.465	A
		2	1	(2)	740			744	786	0.1	0.4	2.057	A
			2	(1, 2, 3)	884			883	917	0.3	1.1	3.659	A
	Exit	1	1		1132			1132	1181	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	457	1074	0.425	461	485	0.4	0.7	5.276	A
			2	1, 2	787	1343	0.587	789	827	0.9	1.2	6.241	A
	Exit	1	1		1294			1294	1350	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	267	1082	0.246	268	275	0.3	0.4	4.511	A
	Exit	1	1		718			718	756	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	785	906	0.867	786	802	1.1	1.5	6.595	A
			2	2	760	905	0.840	763	790	1.0	1.4	6.695	A
			3	1, 3	453	733	0.617	455	472	0.9	1.0	7.899	A
		2	1	(2)	1056			1046	1078	0.4	2.4	6.155	A
			2	(1, 2, 3)	963			952	989	1.1	3.7	10.921	B
	Exit	1	1		1417			1417	1434	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	587	1046	0.561	585	593	0.7	1.2	7.016	A
			2	1, 2	986	1307	0.755	991	996	1.2	2.5	9.192	A
	Exit	1	1		1598			1598	1636	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	337	954	0.353	334	332	0.4	0.7	5.436	A
	Exit	1	1		899			899	915	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	773	906	0.854	770	807	1.5	1.5	6.811	A
			2	2	772	908	0.850	771	804	1.4	1.4	6.822	A
			3	1, 3	469	737	0.638	469	476	1.0	1.1	7.819	A
		2	1	(2)	1069			1068	1105	2.4	1.9	7.810	A
			2	(1, 2, 3)	953			947	983	3.7	3.6	13.215	B
	Exit	1	1		1421			1421	1473	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	593	1031	0.576	597	613	1.2	1.0	7.109	A
			2	1, 2	970	1297	0.747	976	1013	2.5	2.3	9.400	A
	Exit	1	1		1583			1583	1654	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	343	948	0.361	341	348	0.7	0.6	5.868	A
	Exit	1	1		920			920	935	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	639	906	0.706	640	670	1.5	0.9	6.105	A
			2	2	633	911	0.696	631	673	1.4	0.9	6.049	A
			3	1, 3	366	739	0.496	367	396	1.1	0.7	7.257	A
		2	1	(2)	736			738	799	1.9	0.1	2.718	A
			2	(1, 2, 3)	903			901	935	3.6	0.6	4.112	A
	Exit	1	1		1155			1155	1214	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	487	1075	0.453	487	491	1.0	0.7	5.843	A
			2	1, 2	806	1338	0.603	809	851	2.3	1.3	6.406	A
	Exit	1	1		1308			1308	1379	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	273	1071	0.255	273	282	0.6	0.4	4.679	A
	Exit	1	1		744			744	769	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	533	903	0.589	534	564	0.9	0.9	5.596	A
			2	2	518	914	0.567	521	553	0.9	0.8	5.648	A
			3	1, 3	316	744	0.425	316	326	0.7	0.6	6.404	A
		2	1	(2)	565			567	614	0.1	0.1	1.081	A
			2	(1, 2, 3)	798			799	826	0.6	0.3	1.479	A
	Exit	1	1		961			961	1003	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	404	1091	0.370	400	405	0.7	0.6	4.832	A
			2	1, 2	682	1369	0.498	682	707	1.3	0.7	5.237	A
	Exit	1	1		1086			1086	1147	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	220	1157	0.190	221	233	0.4	0.2	3.893	A
	Exit	1	1		626			626	638	0.0	0.0	0.000	A

Lane movements: Main Results for each time segment

16:30 - 16:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	536	134	955	914	0.587	537	555	0.0	0.8	5.496	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	542	136	955	913	0.594	545	557	0.0	0.6	5.496	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	312	78	774	742	0.420	313	325	0.0	0.5	6.663	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	588	147	-	-	-	589	614	0.0	0.1	0.838	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	489	122	-	-	-	490	504	0.0	0.1	0.826	A
				3	313	78	-	-	-	312	327	0.0	0.3	2.310	A
2 - A20 (E)	Entry	1	1	1	88	22	1232	1087	0.081	88	89	0.0	0.0	3.827	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	297	74	1232	1097	0.270	296	313	0.0	0.3	4.879	A
			2	1	686	171	1560	1364	0.502	685	705	0.0	0.9	4.953	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	207	52	1625	1151	0.180	206	211	0.0	0.2	3.929	A
				2	28	7	1625	1180	0.024	28	29	0.0	0.0	3.691	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	633	158	955	912	0.694	633	659	0.8	1.1	5.963	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	621	155	955	915	0.680	623	655	0.6	1.0	6.047	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	371	93	774	734	0.506	371	386	0.5	0.9	7.465	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	740	185	-	-	-	744	786	0.1	0.4	2.057	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	510	128	-	-	-	511	530	0.3	0.4	2.284	A
				3	374	94	-	-	-	371	387	0.3	0.7	5.556	A
2 - A20 (E)	Entry	1	1	1	111	28	1232	1062	0.105	114	115	0.4	0.1	4.565	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	346	86	1232	1077	0.320	347	370	0.4	0.6	5.493	A
			2	1	787	197	1560	1343	0.587	789	827	0.9	1.2	6.241	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	230	57	1625	1077	0.213	230	238	0.2	0.4	4.523	A
				2	37	9	1625	1100	0.034	38	36	0.3	0.1	4.430	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	785	196	955	906	0.867	786	802	1.1	1.5	6.595	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	760	190	955	905	0.840	763	790	1.0	1.4	6.695	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	453	113	774	733	0.617	455	472	0.9	1.0	7.899	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	1056	264	-	-	-	1046	1078	0.4	2.4	6.155	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	507	127	-	-	-	500	516	1.1	1.7	7.973	A
				3	457	114	-	-	-	453	473	1.1	2.0	14.139	B
2 - A20 (E)	Entry	1	1	1	143	36	1232	1025	0.139	142	150	0.7	0.3	6.084	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	444	111	1232	1054	0.422	443	443	0.7	0.9	7.325	A
			2	1	986	247	1560	1307	0.755	991	996	1.2	2.5	9.192	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	286	72	1625	948	0.301	284	288	0.4	0.5	5.460	A
				2	51	13	1625	970	0.053	50	44	0.4	0.1	5.278	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	773	193	955	906	0.854	770	807	1.5	1.5	6.811	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	772	193	955	908	0.850	771	804	1.4	1.4	6.822	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	469	117	774	737	0.638	469	476	1.0	1.1	7.819	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	1069	267	-	-	-	1068	1105	2.4	1.9	7.810	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	483	121	-	-	-	478	507	3.7	1.5	10.435	B
				3	470	118	-	-	-	469	476	3.7	2.1	16.163	C
2 - A20 (E)	Entry	1	1	1	146	36	1232	1011	0.144	146	154	1.2	0.2	6.196	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	447	112	1232	1038	0.431	451	459	1.2	0.8	7.409	A
			2	1	970	242	1560	1297	0.747	976	1013	2.5	2.3	9.400	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	300	75	1625	948	0.317	299	305	0.7	0.5	5.862	A
				2	43	11	1625	973	0.044	42	43	0.7	0.1	5.911	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	639	160	955	906	0.706	640	670	1.5	0.9	6.105	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	633	158	955	911	0.696	631	673	1.4	0.9	6.049	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	366	92	774	739	0.496	367	396	1.1	0.7	7.257	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	736	184	-	-	-	738	799	1.9	0.1	2.718	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	534	134	-	-	-	535	540	3.6	0.1	2.611	A
				3	368	92	-	-	-	366	395	3.6	0.5	6.172	A
2 - A20 (E)	Entry	1	1	1	108	27	1232	1050	0.103	109	118	1.0	0.1	5.190	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	378	95	1232	1081	0.350	377	373	1.0	0.6	6.045	A
			2	1	806	201	1560	1337	0.603	809	851	2.3	1.3	6.406	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	237	59	1625	1071	0.222	237	246	0.6	0.3	4.721	A
				2	36	9	1625	1085	0.033	36	36	0.6	0.1	4.391	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	533	133	955	903	0.589	534	564	0.9	0.9	5.596	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	518	129	955	914	0.567	521	553	0.9	0.8	5.648	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	316	79	774	744	0.425	316	326	0.7	0.6	6.404	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	565	141	-	-	-	567	614	0.1	0.1	1.081	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	482	121	-	-	-	484	501	0.6	0.1	1.017	A
				3	316	79	-	-	-	316	325	0.6	0.2	2.191	A
2 - A20 (E)	Entry	1	1	1	91	23	1232	1068	0.086	90	93	0.7	0.1	4.039	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	313	78	1232	1097	0.285	310	313	0.7	0.5	5.064	A
			2	1	682	170	1560	1369	0.498	682	707	1.3	0.7	5.237	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	188	47	1625	1152	0.163	189	203	0.4	0.2	3.887	A
				2	31	8	1625	1178	0.027	31	31	0.4	0.0	3.929	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

2037 Future Year without Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A20 / M20 Roundabout	Standard Roundabout		1, 2, 3	20.57	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	20.57	C

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	2037 Future Year without Development	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 (Veh/hr)	Scaling Factor (%)
1 - M20 link road		ONE HOUR	✓	1958	100.000
2 - A20 (E)		ONE HOUR	✓	1518	100.000
3 - A20 (W)		ONE HOUR	✓	328	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - M20 link road	2 - A20 (E)	3 - A20 (W)
From	1 - M20 link road	0	1510	448
	2 - A20 (E)	1084	0	434
	3 - A20 (W)	286	42	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - M20 link road	2 - A20 (E)	3 - A20 (W)
From	1 - M20 link road	0	4	4
	2 - A20 (E)	4	0	2
	3 - A20 (W)	2	0	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - M20 link road	30.51	20.2	D	1805	2708
2 - A20 (E)	10.66	5.7	B	1394	2091
3 - A20 (W)	6.44	0.7	A	305	458

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1474	368	36	1468	1530	1015	0.0	3.0	7.532	A
2 - A20 (E)	1142	285	336	1138	1176	1168	0.0	1.9	5.300	A
3 - A20 (W)	251	63	802	249	247	672	0.0	0.4	4.190	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1758	440	37	1750	1829	1227	3.0	5.9	11.063	B
2 - A20 (E)	1371	343	407	1364	1408	1380	1.9	2.9	6.687	A
3 - A20 (W)	296	74	969	295	303	802	0.4	0.4	4.788	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	2162	540	48	2124	2187	1512	5.9	20.2	26.160	D
2 - A20 (E)	1652	413	478	1646	1717	1694	2.9	5.1	10.199	B
3 - A20 (W)	375	94	1187	374	369	937	0.4	0.7	6.284	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	2190	548	44	2138	2248	1519	20.2	19.9	30.508	D
2 - A20 (E)	1692	423	476	1673	1720	1706	5.1	5.7	10.662	B
3 - A20 (W)	363	91	1198	364	363	950	0.7	0.6	6.444	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1775	444	37	1769	1895	1235	19.9	5.3	13.388	B
2 - A20 (E)	1367	342	409	1361	1420	1397	5.7	3.1	7.076	A
3 - A20 (W)	296	74	975	297	306	796	0.6	0.4	5.063	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1478	370	35	1487	1549	1038	5.3	3.0	7.913	A
2 - A20 (E)	1143	286	344	1146	1212	1178	3.1	1.7	5.541	A
3 - A20 (W)	251	63	823	251	250	667	0.4	0.3	4.154	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	563	909	0.619	562	588	0.0	0.9	5.702	A
			2	2	572	914	0.625	570	595	0.0	0.9	5.639	A
			3	1, 3	335	733	0.458	336	347	0.0	0.5	6.842	A
		2	1	(2)	656			653	671	0.0	0.3	1.217	A
			2	(1, 2, 3)	818			816	869	0.0	0.4	1.883	A
	Exit	1	1		1015			1015	1058	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	433	1080	0.401	431	432	0.0	0.8	4.967	A
			2	1, 2	708	1356	0.523	707	743	0.0	1.1	5.497	A
	Exit	1	1		1168			1168	1214	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	251	1137	0.221	249	247	0.0	0.4	4.190	A
	Exit	1	1		672			672	680	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	662	908	0.730	661	699	0.9	1.2	6.427	A
			2	2	682	909	0.750	682	709	0.9	1.2	6.308	A
			3	1, 3	405	737	0.549	407	421	0.5	0.8	7.489	A
		2	1	(2)	841			837	882	0.3	1.0	3.206	A
			2	(1, 2, 3)	917			913	950	0.4	1.7	5.571	A
	Exit	1	1		1227			1227	1273	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	518	1058	0.489	518	525	0.8	0.9	5.824	A
			2	1, 2	853	1324	0.644	846	883	1.1	1.9	7.206	A
	Exit	1	1		1380			1380	1446	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	296	1045	0.283	295	303	0.4	0.4	4.788	A
	Exit	1	1		802			802	821	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	827	906	0.913	828	853	1.2	1.6	7.048	A
			2	2	817	907	0.901	818	844	1.2	1.6	7.131	A
			3	1, 3	477	731	0.653	478	490	0.8	0.9	7.821	A
		2	1	(2)	1220			1202	1210	1.0	7.2	14.807	B
			2	(1, 2, 3)	942			920	981	1.7	8.8	23.911	C
	Exit	1	1		1512			1512	1563	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	638	1039	0.614	636	653	0.9	1.5	8.250	A
			2	1, 2	1013	1291	0.785	1010	1064	1.9	3.7	11.413	B
	Exit	1	1		1694			1694	1744	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	375	916	0.410	374	369	0.4	0.7	6.284	A
	Exit	1	1		937			937	967	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	832	906	0.919	832	871	1.6	1.7	7.158	A
			2	2	830	908	0.914	830	860	1.6	1.7	7.268	A
			3	1, 3	477	737	0.647	476	516	0.9	1.2	7.979	A
		2	1	(2)	1254			1227	1285	7.2	6.6	17.217	C
			2	(1, 2, 3)	936			912	964	8.8	8.7	30.934	D
	Exit	1	1		1519			1519	1549	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	644	1042	0.618	641	659	1.5	1.6	8.237	A
			2	1, 2	1048	1297	0.807	1032	1061	3.7	4.1	12.188	B
	Exit	1	1		1706			1706	1777	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	363	913	0.397	364	363	0.7	0.6	6.444	A
	Exit	1	1		950			950	1004	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	679	910	0.747	677	729	1.7	1.4	6.516	A
			2	2	685	910	0.752	684	728	1.7	1.2	6.507	A
			3	1, 3	408	736	0.554	409	438	1.2	0.8	7.579	A
		2	1	(2)	872			870	943	6.6	0.7	5.215	A
			2	(1, 2, 3)	904			902	947	8.7	1.2	8.101	A
	Exit	1	1		1235			1235	1291	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	502	1060	0.473	503	522	1.6	0.8	6.185	A
			2	1, 2	865	1321	0.656	859	898	4.1	2.3	7.601	A
	Exit	1	1		1397			1397	1495	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	296	1031	0.287	297	306	0.6	0.4	5.063	A
	Exit	1	1		796			796	835	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	576	906	0.636	575	596	1.4	0.9	5.656	A
			2	2	568	912	0.623	568	600	1.2	0.9	5.703	A
			3	1, 3	344	740	0.464	344	353	0.8	0.8	6.640	A
		2	1	(2)	644			649	675	0.7	0.1	1.633	A
			2	(1, 2, 3)	834			839	870	1.2	0.3	2.323	A
	Exit	1	1		1038			1038	1093	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	430	1083	0.397	427	444	0.8	0.8	5.209	A
			2	1, 2	713	1346	0.529	719	769	2.3	0.8	5.738	A
	Exit	1	1		1178			1178	1227	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	251	1129	0.222	251	250	0.4	0.3	4.154	A
	Exit	1	1		667			667	692	0.0	0.0	0.000	A

Lane movements: Main Results for each time segment

16:30 - 16:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	563	141	955	909	0.619	562	588	0.0	0.9	5.702	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	572	143	955	914	0.625	570	595	0.0	0.9	5.639	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	335	84	774	733	0.458	336	347	0.0	0.5	6.842	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	656	164	-	-	-	653	671	0.0	0.3	1.217	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	482	121	-	-	-	481	519	0.0	0.2	1.235	A
				3	336	84	-	-	-	335	350	0.0	0.2	2.848	A
2 - A20 (E)	Entry	1	1	1	95	24	1232	1047	0.090	94	99	0.0	0.1	4.184	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	339	85	1232	1090	0.311	336	333	0.0	0.7	5.193	A
			2	1	708	177	1560	1356	0.523	707	743	0.0	1.1	5.497	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	215	54	1625	1135	0.189	213	216	0.0	0.4	4.241	A
				2	36	9	1625	1152	0.031	36	31	0.0	0.0	3.843	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	662	166	955	908	0.730	661	699	0.9	1.2	6.427	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	682	170	955	909	0.750	682	709	0.9	1.2	6.308	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	405	101	774	737	0.549	407	421	0.5	0.8	7.489	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	841	210	-	-	-	837	882	0.3	1.0	3.206	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	512	128	-	-	-	507	528	0.4	0.8	3.635	A
				3	405	101	-	-	-	405	422	0.4	0.8	8.004	A
2 - A20 (E)	Entry	1	1	1	126	32	1232	1058	0.119	123	126	0.8	0.4	4.738	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	392	98	1232	1060	0.369	395	400	0.8	0.6	6.165	A
			2	1	853	213	1560	1324	0.644	846	883	1.1	1.9	7.206	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	259	65	1625	1046	0.247	258	265	0.4	0.4	4.822	A
				2	37	9	1625	1062	0.035	37	38	0.4	0.0	4.561	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	827	207	955	906	0.913	828	853	1.2	1.6	7.048	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	817	204	955	907	0.901	818	844	1.2	1.6	7.131	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	477	119	774	731	0.653	478	490	0.8	0.9	7.821	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	1220	305	-	-	-	1202	1210	1.0	7.2	14.807	B
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	449	112	-	-	-	443	491	1.7	3.6	20.035	C
				3	493	123	-	-	-	477	490	1.7	5.2	27.746	D
2 - A20 (E)	Entry	1	1	1	177	44	1232	1025	0.173	177	176	0.9	0.4	7.254	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	461	115	1232	1043	0.442	459	477	0.9	1.1	8.610	A
			2	1	1013	253	1560	1291	0.785	1010	1064	1.9	3.7	11.413	B
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	327	82	1625	915	0.357	325	323	0.4	0.6	6.297	A
				2	49	12	1625	924	0.053	48	47	0.4	0.1	6.195	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	832	208	955	906	0.919	832	871	1.6	1.7	7.158	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	830	207	955	908	0.914	830	860	1.6	1.7	7.268	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	477	119	774	737	0.647	476	516	0.9	1.2	7.979	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	1254	314	-	-	-	1227	1285	7.2	6.6	17.217	C
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	449	112	-	-	-	435	448	8.8	3.8	25.724	D
				3	488	122	-	-	-	477	517	8.8	4.8	35.459	E
2 - A20 (E)	Entry	1	1	1	168	42	1232	1029	0.163	167	170	1.5	0.4	7.345	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	476	119	1232	1045	0.455	475	489	1.5	1.2	8.542	A
			2	1	1048	262	1560	1297	0.807	1032	1061	3.7	4.1	12.188	B
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	319	80	1625	910	0.351	320	317	0.7	0.5	6.512	A
				2	44	11	1625	934	0.047	44	46	0.7	0.0	5.978	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	679	170	955	910	0.747	677	729	1.7	1.4	6.516	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	685	171	955	910	0.752	684	728	1.7	1.2	6.507	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	408	102	774	736	0.554	409	438	1.2	0.8	7.579	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	872	218	-	-	-	870	943	6.6	0.7	5.215	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	496	124	-	-	-	494	510	8.7	0.5	5.578	A
				3	408	102	-	-	-	408	437	8.7	0.7	11.083	B
2 - A20 (E)	Entry	1	1	1	117	29	1232	1043	0.112	116	125	1.6	0.2	5.199	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	385	96	1232	1066	0.361	387	397	1.6	0.6	6.489	A
			2	1	865	216	1560	1322	0.656	859	898	4.1	2.3	7.601	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	259	65	1625	1023	0.253	260	268	0.6	0.4	5.023	A
				2	36	9	1625	1059	0.034	37	38	0.6	0.0	5.339	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	576	144	955	906	0.636	575	596	1.4	0.9	5.656	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	568	142	955	912	0.623	568	600	1.2	0.9	5.703	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	344	86	774	741	0.464	344	353	0.8	0.8	6.640	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	644	161	-	-	-	649	675	0.7	0.1	1.633	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	494	124	-	-	-	495	518	1.2	0.2	1.587	A
				3	340	85	-	-	-	344	353	1.2	0.2	3.403	A
2 - A20 (E)	Entry	1	1	1	104	26	1232	1066	0.097	103	105	0.8	0.1	4.596	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	326	81	1232	1087	0.300	324	338	0.8	0.7	5.394	A
			2	1	713	178	1560	1346	0.529	719	769	2.3	0.8	5.738	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	216	54	1625	1126	0.192	216	219	0.4	0.2	4.142	A
				2	35	9	1625	1142	0.030	35	31	0.4	0.0	4.233	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

2027 Future Year with Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A20 / M20 Roundabout	Standard Roundabout		1, 2, 3	15.14	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	15.14	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2027 Future Year with Development	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 (Veh/hr)	Scaling Factor (%)
1 - M20 link road		ONE HOUR	✓	1849	100.000
2 - A20 (E)		ONE HOUR	✓	1423	100.000
3 - A20 (W)		ONE HOUR	✓	329	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - M20 link road	2 - A20 (E)	3 - A20 (W)
From	1 - M20 link road	0	1415	434
	2 - A20 (E)	1015	0	408
	3 - A20 (W)	290	39	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - M20 link road	2 - A20 (E)	3 - A20 (W)
From	1 - M20 link road	0	4	6
	2 - A20 (E)	4	0	2
	3 - A20 (W)	4	0	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - M20 link road	21.48	12.2	C	1699	2548
2 - A20 (E)	8.81	4.1	A	1301	1951
3 - A20 (W)	6.36	0.7	A	300	450

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1384	346	23	1391	1444	977	0.0	2.9	7.328	A
2 - A20 (E)	1078	270	335	1076	1104	1079	0.0	1.4	4.998	A
3 - A20 (W)	242	61	759	241	255	651	0.0	0.3	4.124	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1678	419	35	1666	1729	1166	2.9	4.9	9.396	A
2 - A20 (E)	1276	319	387	1276	1327	1315	1.4	2.0	5.895	A
3 - A20 (W)	290	72	913	288	305	750	0.3	0.5	5.066	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	2050	513	45	2044	2098	1439	4.9	11.6	18.854	C
2 - A20 (E)	1565	391	466	1568	1606	1623	2.0	3.7	8.575	A
3 - A20 (W)	366	92	1115	369	376	918	0.5	0.5	6.232	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	2039	510	42	2047	2139	1425	11.6	12.0	21.478	C
2 - A20 (E)	1573	393	481	1561	1608	1609	3.7	4.1	8.811	A
3 - A20 (W)	359	90	1108	359	373	933	0.5	0.7	6.365	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1640	410	36	1648	1774	1167	12.0	4.2	10.402	B
2 - A20 (E)	1264	316	376	1269	1331	1308	4.1	1.8	6.264	A
3 - A20 (W)	300	75	903	300	314	742	0.7	0.3	4.749	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1399	350	30	1392	1457	964	4.2	3.4	7.371	A
2 - A20 (E)	1050	262	331	1049	1095	1090	1.8	1.7	4.955	A
3 - A20 (W)	245	61	747	246	256	633	0.3	0.3	4.236	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	520	915	0.568	522	547	0.0	0.8	5.533	A
			2	2	534	912	0.586	534	554	0.0	1.0	5.442	A
			3	1, 3	334	726	0.461	335	342	0.0	0.7	6.926	A
		2	1	(2)	596			598	632	0.0	0.1	0.894	A
			2	(1, 2, 3)	788			790	822	0.0	0.4	1.970	A
	Exit	1	1		977			977	1016	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	406	1085	0.374	405	410	0.0	0.5	4.878	A
			2	1, 2	672	1350	0.498	671	694	0.0	0.9	5.069	A
	Exit	1	1		1079			1079	1129	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	242	1137	0.213	241	255	0.0	0.3	4.124	A
	Exit	1	1		651			651	658	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	643	914	0.704	642	659	0.8	1.2	5.969	A
			2	2	640	909	0.704	638	657	1.0	1.2	6.041	A
			3	1, 3	387	723	0.535	387	412	0.7	0.7	7.304	A
		2	1	(2)	766			764	800	0.1	0.6	2.117	A
			2	(1, 2, 3)	911			906	930	0.4	1.3	3.910	A
	Exit	1	1		1166			1166	1223	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	471	1061	0.444	470	488	0.5	0.7	5.497	A
			2	1, 2	805	1334	0.603	806	839	0.9	1.3	6.129	A
	Exit	1	1		1315			1315	1353	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	290	1055	0.274	288	305	0.3	0.5	5.066	A
	Exit	1	1		750			750	785	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	802	906	0.885	801	810	1.2	1.5	6.709	A
			2	2	778	905	0.860	777	798	1.2	1.5	6.802	A
			3	1, 3	465	720	0.648	466	491	0.7	1.0	7.820	A
		2	1	(2)	1124			1124	1128	0.6	2.7	8.592	A
			2	(1, 2, 3)	925			921	975	1.3	4.9	15.597	C
	Exit	1	1		1439			1439	1482	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	598	1034	0.578	595	605	0.7	1.2	7.202	A
			2	1, 2	967	1296	0.747	973	1000	1.3	2.5	9.418	A
	Exit	1	1		1623			1623	1651	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	366	942	0.389	369	376	0.5	0.5	6.232	A
	Exit	1	1		918			918	947	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	789	908	0.871	789	819	1.5	1.5	6.911	A
			2	2	778	908	0.857	777	806	1.5	1.5	7.028	A
			3	1, 3	480	722	0.664	481	515	1.0	1.1	8.141	A
		2	1	(2)	1133			1137	1197	2.7	3.1	9.647	A
			2	(1, 2, 3)	906			911	943	4.9	4.8	20.186	C
	Exit	1	1		1425			1425	1481	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	594	1034	0.575	595	607	1.2	1.0	7.739	A
			2	1, 2	979	1285	0.762	967	1002	2.5	3.1	9.469	A
	Exit	1	1		1609			1609	1666	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	359	947	0.379	359	373	0.5	0.7	6.365	A
	Exit	1	1		933			933	972	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	629	905	0.694	628	669	1.5	1.1	6.197	A
			2	2	642	906	0.708	644	682	1.5	1.1	6.093	A
			3	1, 3	375	724	0.518	376	423	1.1	0.7	7.358	A
		2	1	(2)	777			779	843	3.1	0.4	2.795	A
			2	(1, 2, 3)	863			867	925	4.8	0.8	5.102	A
	Exit	1	1		1167			1167	1245	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	469	1070	0.438	470	482	1.0	0.7	5.566	A
			2	1, 2	795	1331	0.597	799	849	3.1	1.1	6.669	A
	Exit	1	1		1308			1308	1387	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	300	1062	0.282	300	314	0.7	0.3	4.749	A
	Exit	1	1		742			742	787	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	543	914	0.594	541	558	1.1	1.0	5.584	A
			2	2	523	908	0.575	519	557	1.1	1.0	5.554	A
			3	1, 3	330	722	0.456	331	342	0.7	0.7	6.754	A
		2	1	(2)	605			602	623	0.4	0.3	1.072	A
			2	(1, 2, 3)	794			793	833	0.8	0.5	1.894	A
	Exit	1	1		964			964	1013	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	396	1089	0.364	393	403	0.7	0.7	4.883	A
			2	1, 2	654	1350	0.484	656	693	1.1	1.0	4.998	A
	Exit	1	1		1090			1090	1144	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	245	1146	0.214	246	256	0.3	0.3	4.236	A
	Exit	1	1		633			633	652	0.0	0.0	0.000	A

Lane movements: Main Results for each time segment

16:30 - 16:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	520	130	955	915	0.568	522	547	0.0	0.8	5.533	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	534	134	955	912	0.586	534	554	0.0	1.0	5.442	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	334	84	774	726	0.461	335	342	0.0	0.7	6.926	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	596	149	-	-	-	598	632	0.0	0.1	0.894	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	454	114	-	-	-	456	477	0.0	0.1	0.966	A
				3	334	84	-	-	-	334	345	0.0	0.3	3.381	A
2 - A20 (E)	Entry	1	1	1	88	22	1232	1069	0.082	88	93	0.0	0.1	4.114	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	318	79	1232	1092	0.291	317	316	0.0	0.4	5.099	A
			2	1	672	168	1560	1351	0.498	671	694	0.0	0.9	5.069	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	220	55	1625	1134	0.194	218	228	0.0	0.3	4.161	A
				2	23	6	1625	1179	0.019	23	27	0.0	0.0	3.821	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	643	161	955	915	0.704	642	659	0.8	1.2	5.969	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	640	160	955	909	0.704	638	657	1.0	1.2	6.041	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	387	97	774	723	0.535	387	412	0.7	0.7	7.304	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	766	192	-	-	-	764	800	0.1	0.6	2.117	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	520	130	-	-	-	519	519	0.4	0.5	2.306	A
				3	391	98	-	-	-	387	412	0.4	0.8	5.980	A
2 - A20 (E)	Entry	1	1	1	107	27	1232	1047	0.102	107	116	0.5	0.1	4.736	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	364	91	1232	1065	0.342	363	372	0.5	0.6	5.729	A
			2	1	805	201	1560	1334	0.603	806	839	0.9	1.3	6.129	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	254	64	1625	1050	0.242	253	268	0.3	0.4	5.048	A
				2	36	9	1625	1093	0.033	35	36	0.3	0.0	5.197	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	802	200	955	906	0.885	801	810	1.2	1.5	6.709	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	778	195	955	905	0.860	777	798	1.2	1.5	6.802	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	465	116	774	720	0.648	466	491	0.7	1.0	7.820	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	1124	281	-	-	-	1124	1128	0.6	2.7	8.592	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	451	113	-	-	-	456	482	1.2	1.2	10.991	B
				3	474	119	-	-	-	465	493	1.3	3.7	20.119	C
2 - A20 (E)	Entry	1	1	1	143	36	1232	1014	0.140	143	149	0.7	0.3	6.177	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	455	114	1232	1041	0.437	452	457	0.7	1.0	7.528	A
			2	1	967	242	1560	1296	0.747	973	1000	1.3	2.5	9.418	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	322	80	1625	935	0.344	324	333	0.5	0.5	6.291	A
				2	45	11	1625	976	0.046	45	43	0.5	0.0	5.800	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	789	197	955	908	0.871	789	819	1.5	1.5	6.911	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	778	194	955	908	0.857	777	806	1.5	1.5	7.028	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	480	120	774	722	0.664	481	515	1.0	1.1	8.141	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	1133	283	-	-	-	1137	1197	2.7	3.1	9.647	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	427	107	-	-	-	430	428	4.9	1.4	13.738	B
				3	479	120	-	-	-	480	514	4.9	3.3	25.671	D
2 - A20 (E)	Entry	1	1	1	142	36	1232	1015	0.140	142	149	1.2	0.3	6.358	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	452	113	1232	1040	0.435	453	457	1.2	0.7	8.183	A
			2	1	979	245	1560	1286	0.761	967	1002	2.5	3.1	9.469	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	316	79	1625	943	0.335	317	330	0.5	0.6	6.403	A
				2	42	11	1625	985	0.043	42	42	0.5	0.1	6.075	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	629	157	955	905	0.694	628	669	1.5	1.1	6.197	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	642	160	955	906	0.708	644	682	1.5	1.1	6.093	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	375	94	774	724	0.518	376	423	1.1	0.7	7.358	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	777	194	-	-	-	779	843	3.1	0.4	2.795	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	493	123	-	-	-	492	504	4.7	0.4	3.061	A
				3	370	92	-	-	-	375	422	4.8	0.4	7.632	A
2 - A20 (E)	Entry	1	1	1	104	26	1232	1050	0.099	104	118	1.0	0.1	4.788	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	365	91	1232	1077	0.338	366	364	1.0	0.6	5.813	A
			2	1	795	199	1560	1331	0.597	799	849	3.1	1.1	6.669	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	262	66	1625	1058	0.249	264	278	0.7	0.2	4.693	A
				2	36	9	1625	1096	0.033	36	36	0.7	0.1	5.157	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	543	136	955	914	0.594	541	558	1.1	1.0	5.584	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	523	131	955	908	0.575	519	557	1.1	1.0	5.554	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	330	82	774	722	0.456	331	342	0.7	0.7	6.754	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	605	151	-	-	-	602	623	0.4	0.3	1.072	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	465	116	-	-	-	463	491	0.8	0.2	1.081	A
				3	329	82	-	-	-	330	342	0.8	0.3	3.084	A
2 - A20 (E)	Entry	1	1	1	91	23	1232	1076	0.085	91	93	0.7	0.1	4.301	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	305	76	1232	1093	0.279	302	310	0.7	0.6	5.054	A
			2	1	654	163	1560	1349	0.484	656	693	1.1	1.0	4.998	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	215	54	1625	1140	0.189	217	227	0.3	0.2	4.233	A
				2	29	7	1625	1191	0.025	30	29	0.3	0.0	4.259	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

2037 Future Year with Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A20 / M20 Roundabout	Standard Roundabout		1, 2, 3	19.78	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	19.78	C

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	2037 Future Year with Development	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 (Veh/hr)	Scaling Factor (%)
1 - M20 link road		ONE HOUR	✓	1972	100.000
2 - A20 (E)		ONE HOUR	✓	1519	100.000
3 - A20 (W)		ONE HOUR	✓	351	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - M20 link road	2 - A20 (E)	3 - A20 (W)
From	1 - M20 link road	0	1510	462
	2 - A20 (E)	1084	0	435
	3 - A20 (W)	309	42	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - M20 link road	2 - A20 (E)	3 - A20 (W)
From	1 - M20 link road	0	4	6
	2 - A20 (E)	4	0	2
	3 - A20 (W)	4	0	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - M20 link road	28.95	17.3	D	1813	2719
2 - A20 (E)	10.65	5.1	B	1397	2096
3 - A20 (W)	7.34	0.8	A	322	483

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1487	372	32	1483	1534	1055	0.0	3.0	7.938	A
2 - A20 (E)	1148	287	341	1148	1179	1175	0.0	1.7	5.187	A
3 - A20 (W)	272	68	814	274	278	675	0.0	0.2	4.268	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1775	444	37	1779	1842	1261	3.0	5.6	11.190	B
2 - A20 (E)	1384	346	422	1374	1402	1393	1.7	3.3	6.784	A
3 - A20 (W)	309	77	988	310	319	809	0.2	0.5	4.921	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	2168	542	48	2162	2218	1514	5.6	17.1	24.444	C
2 - A20 (E)	1662	415	506	1656	1727	1704	3.3	5.0	10.520	B
3 - A20 (W)	378	95	1184	378	393	978	0.5	0.8	6.905	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	2170	542	46	2175	2262	1535	17.1	16.8	28.952	D
2 - A20 (E)	1674	419	510	1676	1734	1711	5.0	4.7	10.655	B
3 - A20 (W)	386	97	1194	386	396	991	0.8	0.7	7.342	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1786	447	37	1788	1906	1264	16.8	5.2	13.024	B
2 - A20 (E)	1368	342	425	1375	1424	1400	4.7	2.3	7.034	A
3 - A20 (W)	316	79	987	314	330	813	0.7	0.5	5.483	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1485	371	31	1482	1565	1061	5.2	3.7	7.953	A
2 - A20 (E)	1145	286	343	1146	1181	1170	2.3	1.4	5.362	A
3 - A20 (W)	271	68	822	270	277	667	0.5	0.4	4.420	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	570	909	0.626	570	586	0.0	0.8	5.667	A
			2	2	574	909	0.631	572	589	0.0	0.9	5.622	A
			3	1, 3	342	726	0.471	341	360	0.0	0.7	7.108	A
		2	1	(2)	665			665	682	0.0	0.1	1.291	A
			2	(1, 2, 3)	823			821	863	0.0	0.5	2.476	A
	Exit	1	1		1055			1055	1091	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	426	1084	0.393	427	432	0.0	0.5	5.069	A
			2	1, 2	722	1346	0.536	721	747	0.0	1.2	5.256	A
	Exit	1	1		1175			1175	1206	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	272	1104	0.246	274	278	0.0	0.2	4.268	A
	Exit	1	1		675			675	694	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	675	908	0.743	676	697	0.8	1.1	6.337	A
			2	2	680	910	0.747	680	706	0.9	1.2	6.273	A
			3	1, 3	421	722	0.583	422	438	0.7	0.8	7.389	A
		2	1	(2)	870			871	890	0.1	0.8	3.204	A
			2	(1, 2, 3)	906			904	955	0.5	1.7	5.956	A
	Exit	1	1		1261			1261	1292	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	513	1051	0.488	512	521	0.5	0.9	6.009	A
			2	1, 2	870	1314	0.663	862	881	1.2	2.4	7.246	A
	Exit	1	1		1393			1393	1440	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	309	1012	0.305	310	319	0.2	0.5	4.921	A
	Exit	1	1		809			809	831	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	826	904	0.913	827	848	1.1	1.6	7.090	A
			2	2	828	902	0.918	829	852	1.2	1.6	7.026	A
			3	1, 3	506	723	0.700	506	518	0.8	1.2	8.166	A
		2	1	(2)	1268			1263	1268	0.8	5.1	12.133	B
			2	(1, 2, 3)	901			896	955	1.7	7.6	23.716	C
	Exit	1	1		1514			1514	1590	0.0	0.0	0.000	A
			1	(1), 3	638	1023	0.625	638	656	0.9	1.5	8.083	A
	Exit	1	1		1704			1704	1746	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	378	901	0.420	378	393	0.5	0.8	6.905	A
	Exit	1	1		978			978	1002	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	829	909	0.913	830	861	1.6	1.6	7.129	A
			2	2	836	910	0.918	835	862	1.6	1.6	7.138	A
			3	1, 3	509	721	0.706	510	539	1.2	1.0	8.201	A
		2	1	(2)	1260			1260	1317	5.1	5.3	15.319	C
			2	(1, 2, 3)	911			914	945	7.6	7.1	30.405	D
	Exit	1	1		1535			1535	1590	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	645	1018	0.633	644	664	1.5	1.6	8.782	A
			2	1, 2	1030	1277	0.807	1032	1070	3.5	3.1	11.835	B
	Exit	1	1		1711			1711	1768	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	386	898	0.430	386	396	0.8	0.7	7.342	A
	Exit	1	1		991			991	1034	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	675	914	0.739	675	721	1.6	1.2	6.316	A
			2	2	688	908	0.758	688	725	1.6	1.2	6.301	A
			3	1, 3	425	726	0.586	425	461	1.0	0.8	7.635	A
		2	1	(2)	879			880	949	5.3	0.6	4.712	A
			2	(1, 2, 3)	907			908	953	7.1	1.3	8.154	A
	Exit	1	1		1264			1264	1321	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	507	1054	0.481	509	526	1.6	0.8	6.390	A
			2	1, 2	861	1315	0.656	866	898	3.1	1.5	7.417	A
	Exit	1	1		1400			1400	1482	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	316	1012	0.313	314	330	0.7	0.5	5.483	A
	Exit	1	1		813			813	857	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	565	911	0.620	565	598	1.2	0.9	5.705	A
			2	2	573	913	0.628	573	594	1.2	0.9	5.692	A
			3	1, 3	343	723	0.474	343	373	0.8	0.7	6.964	A
		2	1	(2)	663			661	689	0.6	0.3	1.314	A
			2	(1, 2, 3)	823			819	873	1.3	0.8	2.507	A
	Exit	1	1		1061			1061	1093	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	422	1078	0.391	423	436	0.8	0.5	5.067	A
			2	1, 2	723	1344	0.538	723	745	1.5	1.0	5.538	A
	Exit	1	1		1170			1170	1223	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	271	1106	0.245	270	277	0.5	0.4	4.420	A
	Exit	1	1		667			667	707	0.0	0.0	0.000	A

Lane movements: Main Results for each time segment

16:30 - 16:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	570	143	955	909	0.626	570	586	0.0	0.8	5.667	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	574	143	955	909	0.631	572	589	0.0	0.9	5.622	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	342	85	774	726	0.471	341	360	0.0	0.7	7.108	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	665	166	-	-	-	665	682	0.0	0.1	1.291	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	479	120	-	-	-	479	500	0.0	0.1	1.335	A
				3	344	86	-	-	-	342	363	0.0	0.3	4.070	A
2 - A20 (E)	Entry	1	1	1	93	23	1232	1076	0.086	93	99	0.0	0.1	4.373	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	333	83	1232	1086	0.307	334	334	0.0	0.4	5.270	A
			2	1	722	181	1560	1346	0.536	721	747	0.0	1.2	5.256	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	240	60	1625	1096	0.219	241	246	0.0	0.2	4.254	A
				2	32	8	1625	1146	0.028	32	32	0.0	0.0	4.378	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	675	169	955	908	0.743	676	697	0.8	1.1	6.337	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	680	170	955	910	0.747	680	706	0.9	1.2	6.273	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	421	105	774	722	0.583	422	438	0.7	0.8	7.389	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	870	217	-	-	-	871	890	0.1	0.8	3.204	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	483	121	-	-	-	483	516	0.5	0.5	3.759	A
				3	422	106	-	-	-	421	439	0.5	1.2	8.581	A
2 - A20 (E)	Entry	1	1	1	127	32	1232	1032	0.123	126	128	0.5	0.2	5.144	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	387	97	1232	1058	0.365	386	393	0.5	0.7	6.288	A
			2	1	870	218	1560	1314	0.663	862	881	1.2	2.4	7.246	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	273	68	1625	1007	0.271	273	283	0.2	0.5	4.945	A
				2	36	9	1625	1053	0.035	37	36	0.2	0.0	4.737	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	826	206	955	904	0.913	827	848	1.1	1.6	7.090	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	828	207	955	902	0.918	829	852	1.2	1.6	7.026	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	506	126	774	723	0.700	506	518	0.8	1.2	8.166	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	1268	317	-	-	-	1263	1268	0.8	5.1	12.133	B
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	394	98	-	-	-	390	435	1.7	2.7	18.297	C
				3	507	127	-	-	-	506	519	1.7	4.8	28.299	D
2 - A20 (E)	Entry	1	1	1	167	42	1232	1018	0.164	166	172	0.9	0.4	7.324	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	471	118	1232	1025	0.460	472	484	0.9	1.1	8.349	A
			2	1	1023	256	1560	1276	0.802	1018	1071	2.4	3.5	12.033	B
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	330	83	1625	898	0.368	330	347	0.5	0.7	6.917	A
				2	48	12	1625	937	0.051	48	46	0.5	0.1	6.819	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	829	207	955	909	0.913	830	861	1.6	1.6	7.129	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	836	209	955	910	0.918	835	862	1.6	1.6	7.138	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	509	127	774	721	0.706	510	539	1.2	1.0	8.201	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	1260	315	-	-	-	1260	1317	5.1	5.3	15.319	C
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	404	101	-	-	-	405	407	7.6	2.5	23.872	C
				3	507	127	-	-	-	509	538	7.6	4.6	35.462	E
2 - A20 (E)	Entry	1	1	1	162	40	1232	1002	0.161	162	169	1.5	0.3	7.646	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	483	121	1232	1023	0.472	482	495	1.5	1.3	9.161	A
			2	1	1030	257	1560	1277	0.807	1032	1070	3.5	3.1	11.835	B
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	340	85	1625	896	0.380	341	351	0.8	0.6	7.406	A
				2	46	12	1625	932	0.049	46	45	0.8	0.1	6.865	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	675	169	955	914	0.739	675	721	1.6	1.2	6.316	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	688	172	955	908	0.758	688	725	1.6	1.2	6.301	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	425	106	774	726	0.586	425	461	1.0	0.8	7.635	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	879	220	-	-	-	880	949	5.3	0.6	4.712	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	483	121	-	-	-	483	493	7.1	0.4	4.845	A
				3	424	106	-	-	-	425	460	7.1	0.9	11.827	B
2 - A20 (E)	Entry	1	1	1	120	30	1232	1035	0.116	121	130	1.6	0.1	5.319	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	386	97	1232	1059	0.364	388	396	1.6	0.7	6.732	A
			2	1	861	215	1560	1315	0.656	866	898	3.1	1.5	7.417	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	279	70	1625	1008	0.277	277	293	0.7	0.5	5.513	A
				2	37	9	1625	1053	0.035	37	37	0.7	0.0	5.247	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	565	141	955	911	0.620	565	598	1.2	0.9	5.705	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	573	143	955	913	0.628	573	594	1.2	0.9	5.692	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	343	86	774	723	0.474	343	373	0.8	0.7	6.964	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	663	166	-	-	-	661	689	0.6	0.3	1.314	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	478	120	-	-	-	477	501	1.3	0.3	1.362	A
				3	344	86	-	-	-	343	373	1.3	0.5	4.078	A
2 - A20 (E)	Entry	1	1	1	98	25	1232	1058	0.093	99	102	0.8	0.1	4.292	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	323	81	1232	1081	0.299	324	334	0.8	0.4	5.300	A
			2	1	723	181	1560	1344	0.538	723	745	1.5	1.0	5.538	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	239	60	1625	1101	0.217	239	246	0.5	0.3	4.428	A
				2	31	8	1625	1149	0.027	31	31	0.5	0.0	4.358	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

2027 Future Year with Development (Sensitivity Test), PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A20 / M20 Roundabout	Standard Roundabout		1, 2, 3	14.81	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	14.81	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2027 Future Year with Development (Sensitivity Test)	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 (Veh/hr)	Scaling Factor (%)
1 - M20 link road		ONE HOUR	✓	1866	100.000
2 - A20 (E)		ONE HOUR	✓	1429	100.000
3 - A20 (W)		ONE HOUR	✓	355	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - M20 link road	2 - A20 (E)	3 - A20 (W)
From	1 - M20 link road	0	1415	451
	2 - A20 (E)	1015	0	414
	3 - A20 (W)	316	39	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - M20 link road	2 - A20 (E)	3 - A20 (W)
From	1 - M20 link road	0	4	4
	2 - A20 (E)	4	0	2
	3 - A20 (W)	4	0	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - M20 link road	20.44	10.4	C	1712	2567
2 - A20 (E)	9.39	4.1	A	1308	1961
3 - A20 (W)	6.88	0.8	A	325	488

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1415	354	29	1415	1456	989	0.0	3.1	7.543	A
2 - A20 (E)	1068	267	339	1067	1112	1105	0.0	1.8	4.881	A
3 - A20 (W)	257	64	761	256	273	645	0.0	0.3	4.134	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1684	421	35	1680	1737	1212	3.1	4.8	9.580	A
2 - A20 (E)	1291	323	409	1293	1324	1304	1.8	2.1	6.121	A
3 - A20 (W)	328	82	921	326	334	783	0.3	0.6	4.809	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	2061	515	48	2066	2127	1460	4.8	9.9	16.935	C
2 - A20 (E)	1578	394	494	1578	1622	1620	2.1	4.0	9.164	A
3 - A20 (W)	386	97	1118	391	407	954	0.6	0.6	6.668	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	2041	510	45	2069	2142	1465	9.9	10.3	20.436	C
2 - A20 (E)	1565	391	511	1569	1632	1602	4.0	3.8	9.390	A
3 - A20 (W)	399	100	1111	399	407	969	0.6	0.7	6.882	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1664	416	35	1669	1760	1194	10.3	4.2	10.418	B
2 - A20 (E)	1286	321	396	1287	1338	1308	3.8	2.2	6.543	A
3 - A20 (W)	314	78	916	314	333	766	0.7	0.4	5.193	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1406	351	31	1406	1464	982	4.2	2.2	7.247	A
2 - A20 (E)	1058	264	350	1059	1110	1088	2.2	1.4	4.960	A
3 - A20 (W)	269	67	745	268	278	664	0.4	0.4	4.310	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	541	911	0.593	539	554	0.0	0.9	5.519	A
			2	2	536	912	0.588	537	550	0.0	0.9	5.561	A
			3	1, 3	338	733	0.462	339	351	0.0	0.6	6.998	A
		2	1	(2)	611			612	624	0.0	0.2	1.039	A
			2	(1, 2, 3)	804			803	842	0.0	0.6	2.099	A
	Exit	1	1		989			989	1040	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	394	1082	0.363	393	406	0.0	0.6	4.737	A
			2	1, 2	674	1352	0.499	674	707	0.0	1.1	4.965	A
	Exit	1	1		1105			1105	1134	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	257	1144	0.225	256	273	0.0	0.3	4.134	A
	Exit	1	1		645			645	666	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	631	912	0.692	631	656	0.9	1.1	6.048	A
			2	2	639	909	0.702	638	661	0.9	1.2	6.049	A
			3	1, 3	408	731	0.559	409	421	0.6	0.8	7.501	A
		2	1	(2)	781			779	811	0.2	0.6	2.081	A
			2	(1, 2, 3)	902			899	929	0.6	1.1	4.140	A
	Exit	1	1		1212			1212	1246	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	487	1059	0.459	486	493	0.6	0.8	5.848	A
			2	1, 2	804	1321	0.609	807	831	1.1	1.3	6.285	A
	Exit	1	1		1304			1304	1353	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	328	1052	0.312	326	334	0.3	0.6	4.809	A
	Exit	1	1		783			783	797	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	778	904	0.859	779	807	1.1	1.4	6.701	A
			2	2	793	905	0.875	794	811	1.2	1.4	6.693	A
			3	1, 3	493	733	0.674	494	509	0.8	1.1	8.030	A
		2	1	(2)	1135			1138	1160	0.6	1.9	6.456	A
			2	(1, 2, 3)	926			926	971	1.1	4.0	13.981	B
	Exit	1	1		1460			1460	1517	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	603	1030	0.586	601	616	0.8	1.4	7.629	A
			2	1, 2	974	1289	0.756	977	1006	1.3	2.6	10.112	B
	Exit	1	1		1620			1620	1663	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	386	942	0.410	391	407	0.6	0.6	6.668	A
	Exit	1	1		954			954	976	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	779	910	0.855	778	813	1.4	1.5	6.912	A
			2	2	781	905	0.864	780	810	1.4	1.4	6.916	A
			3	1, 3	507	736	0.689	511	520	1.1	1.0	7.995	A
		2	1	(2)	1123			1135	1186	1.9	2.3	9.170	A
			2	(1, 2, 3)	918			933	957	4.0	4.0	18.339	C
	Exit	1	1		1465			1465	1531	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	601	1027	0.585	601	618	1.4	1.3	7.526	A
			2	1, 2	964	1279	0.753	968	1014	2.6	2.5	10.544	B
	Exit	1	1		1602			1602	1666	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	399	939	0.424	399	407	0.6	0.7	6.882	A
	Exit	1	1		969			969	984	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	645	912	0.707	645	669	1.5	1.0	6.119	A
			2	2	630	907	0.696	628	662	1.4	1.2	6.127	A
			3	1, 3	395	741	0.533	396	428	1.0	0.7	7.400	A
		2	1	(2)	775			776	830	2.3	0.4	2.890	A
			2	(1, 2, 3)	890			894	926	4.0	0.8	5.021	A
	Exit	1	1		1194			1194	1256	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	480	1065	0.451	480	496	1.3	0.6	5.956	A
			2	1, 2	806	1327	0.606	807	842	2.5	1.6	6.895	A
	Exit	1	1		1308			1308	1367	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	314	1048	0.299	314	333	0.7	0.4	5.193	A
	Exit	1	1		766			766	808	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	521	913	0.570	522	553	1.0	0.7	5.436	A
			2	2	535	906	0.591	535	555	1.2	0.7	5.434	A
			3	1, 3	348	744	0.469	350	357	0.7	0.5	6.983	A
		2	1	(2)	587			587	628	0.4	0.1	0.792	A
			2	(1, 2, 3)	818			817	832	0.8	0.2	1.935	A
	Exit	1	1		982			982	1042	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	401	1081	0.371	402	410	0.6	0.6	4.999	A
			2	1, 2	657	1349	0.487	657	700	1.6	0.8	4.937	A
	Exit	1	1		1088			1088	1136	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	269	1153	0.233	268	278	0.4	0.4	4.310	A
	Exit	1	1		664			664	674	0.0	0.0	0.000	A

Lane movements: Main Results for each time segment

16:30 - 16:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	541	135	955	911	0.593	539	554	0.0	0.9	5.519	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	536	134	955	912	0.588	537	550	0.0	0.9	5.561	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	338	85	774	733	0.462	339	351	0.0	0.6	6.998	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	611	153	-	-	-	612	624	0.0	0.2	1.039	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	466	116	-	-	-	465	489	0.0	0.2	0.996	A
				3	338	85	-	-	-	338	354	0.0	0.4	3.621	A
2 - A20 (E)	Entry	1	1	1	88	22	1232	1071	0.082	88	91	0.0	0.1	3.927	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	306	77	1232	1087	0.281	305	315	0.0	0.5	4.968	A
			2	1	674	169	1560	1352	0.499	674	707	0.0	1.1	4.965	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	229	57	1625	1140	0.201	228	243	0.0	0.3	4.131	A
				2	29	7	1625	1179	0.024	29	30	0.0	0.0	4.158	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	631	158	955	912	0.691	631	656	0.9	1.1	6.048	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	639	160	955	909	0.702	638	661	0.9	1.2	6.049	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	408	102	774	731	0.559	409	421	0.6	0.8	7.501	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	781	195	-	-	-	779	811	0.2	0.6	2.081	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	490	123	-	-	-	490	507	0.6	0.3	2.293	A
				3	412	103	-	-	-	408	422	0.6	0.8	6.377	A
2 - A20 (E)	Entry	1	1	1	114	28	1232	1044	0.109	113	117	0.6	0.1	4.991	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	373	93	1232	1064	0.350	373	376	0.6	0.6	6.111	A
			2	1	804	201	1560	1321	0.609	807	831	1.1	1.3	6.285	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	293	73	1625	1049	0.279	291	297	0.3	0.5	4.835	A
				2	35	9	1625	1094	0.032	35	37	0.3	0.0	4.604	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	778	194	955	905	0.859	779	807	1.1	1.4	6.701	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	793	198	955	905	0.875	794	811	1.2	1.4	6.693	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	493	123	774	732	0.674	494	509	0.8	1.1	8.030	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	1135	284	-	-	-	1138	1160	0.6	1.9	6.456	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	430	107	-	-	-	433	461	1.1	1.1	9.295	A
				3	496	124	-	-	-	493	510	1.1	3.0	18.164	C
2 - A20 (E)	Entry	1	1	1	141	35	1232	1020	0.138	141	149	0.8	0.3	6.584	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	463	116	1232	1034	0.448	460	467	0.8	1.1	7.955	A
			2	1	974	244	1560	1289	0.756	977	1006	1.3	2.6	10.112	B
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	339	85	1625	937	0.362	343	362	0.6	0.5	6.655	A
				2	47	12	1625	980	0.048	48	45	0.6	0.1	6.763	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	779	195	955	910	0.855	778	813	1.4	1.5	6.912	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	781	195	955	905	0.864	780	810	1.4	1.4	6.916	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	507	127	774	736	0.689	511	520	1.1	1.0	7.995	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	1123	281	-	-	-	1135	1186	1.9	2.3	9.170	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	418	104	-	-	-	425	437	4.0	1.1	13.260	B
				3	500	125	-	-	-	507	519	4.0	2.9	22.617	C
2 - A20 (E)	Entry	1	1	1	144	36	1232	1018	0.141	143	154	1.4	0.3	6.570	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	458	114	1232	1030	0.444	458	465	1.4	1.0	7.837	A
			2	1	964	241	1560	1279	0.753	968	1014	2.6	2.5	10.544	B
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	354	88	1625	933	0.379	354	364	0.6	0.7	6.887	A
				2	45	11	1625	971	0.046	45	43	0.6	0.1	6.845	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	645	161	955	912	0.707	645	669	1.5	1.0	6.119	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	630	158	955	907	0.696	628	662	1.4	1.2	6.127	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	395	99	774	741	0.533	396	428	1.0	0.7	7.400	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	775	194	-	-	-	776	830	2.3	0.4	2.890	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	500	125	-	-	-	499	498	4.0	0.4	3.031	A
				3	389	97	-	-	-	395	427	4.0	0.5	7.377	A
2 - A20 (E)	Entry	1	1	1	109	27	1232	1048	0.104	109	116	1.3	0.1	5.075	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	371	93	1232	1070	0.346	371	380	1.3	0.5	6.220	A
			2	1	806	201	1560	1327	0.606	807	842	2.5	1.6	6.895	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	279	70	1625	1045	0.267	278	297	0.7	0.4	5.222	A
				2	35	9	1625	1091	0.032	35	36	0.7	0.0	4.962	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	521	130	955	913	0.570	522	553	1.0	0.7	5.436	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	535	134	955	906	0.591	535	555	1.2	0.7	5.434	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	348	87	774	744	0.469	350	357	0.7	0.5	6.983	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	587	147	-	-	-	587	628	0.4	0.1	0.792	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	469	117	-	-	-	469	476	0.8	0.1	0.848	A
				3	349	87	-	-	-	348	356	0.8	0.2	3.389	A
2 - A20 (E)	Entry	1	1	1	87	22	1232	1057	0.083	88	93	0.6	0.1	4.164	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	314	78	1232	1087	0.288	314	317	0.6	0.5	5.236	A
			2	1	657	164	1560	1349	0.487	657	700	1.6	0.8	4.937	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	238	60	1625	1147	0.208	238	249	0.4	0.3	4.295	A
				2	31	8	1625	1189	0.026	31	29	0.4	0.0	4.444	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

2037 Future Year with Development (Sensitivity Test), PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A20 / M20 Roundabout	Standard Roundabout		1, 2, 3	19.87	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	19.87	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2037 Future Year with Development (Sensitivity Test)	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 (Veh/hr)	Scaling Factor (%)
1 - M20 link road		ONE HOUR	✓	1989	100.000
2 - A20 (E)		ONE HOUR	✓	1525	100.000
3 - A20 (W)		ONE HOUR	✓	376	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - M20 link road	2 - A20 (E)	3 - A20 (W)
From	1 - M20 link road	0	1510	479
	2 - A20 (E)	1084	0	441
	3 - A20 (W)	334	42	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - M20 link road	2 - A20 (E)	3 - A20 (W)
From	1 - M20 link road	0	4	4
	2 - A20 (E)	4	0	2
	3 - A20 (W)	4	0	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - M20 link road	29.04	18.9	D	1830	2745
2 - A20 (E)	10.80	5.6	B	1395	2093
3 - A20 (W)	7.79	0.8	A	349	524

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1499	375	32	1496	1540	1072	0.0	3.7	7.806	A
2 - A20 (E)	1134	283	371	1137	1180	1158	0.0	1.5	5.222	A
3 - A20 (W)	292	73	814	291	298	694	0.0	0.5	4.314	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1791	448	37	1784	1840	1261	3.7	5.7	10.602	B
2 - A20 (E)	1357	339	433	1360	1404	1389	1.5	2.6	6.595	A
3 - A20 (W)	334	83	964	334	349	829	0.5	0.4	5.321	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	2185	546	46	2167	2227	1564	5.7	16.7	24.284	C
2 - A20 (E)	1692	423	511	1680	1725	1702	2.6	5.6	10.482	B
3 - A20 (W)	418	105	1194	416	425	996	0.4	0.8	7.427	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	2203	551	49	2190	2269	1577	16.7	18.9	29.045	D
2 - A20 (E)	1679	420	533	1677	1741	1707	5.6	5.0	10.802	B
3 - A20 (W)	420	105	1203	423	431	1007	0.8	0.8	7.786	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1798	450	38	1811	1926	1278	18.9	5.4	14.349	B
2 - A20 (E)	1369	342	442	1366	1424	1407	5.0	3.0	7.301	A
3 - A20 (W)	337	84	977	339	355	831	0.8	0.5	5.790	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Throughput (Veh/hr)	Average throughput (PCU/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	1506	376	32	1514	1575	1073	5.4	2.9	7.923	A
2 - A20 (E)	1143	286	365	1142	1188	1182	3.0	1.7	5.395	A
3 - A20 (W)	295	74	812	294	299	695	0.5	0.3	4.645	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	570	912	0.625	569	584	0.0	1.0	5.646	A
			2	2	558	905	0.616	557	583	0.0	1.0	5.633	A
			3	1, 3	370	738	0.501	371	373	0.0	0.7	6.991	A
		2	1	(2)	662			661	678	0.0	0.3	1.166	A
			2	(1, 2, 3)	837			837	873	0.0	0.7	2.352	A
	Exit	1	1		1072			1072	1113	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	420	1073	0.391	419	431	0.0	0.6	5.112	A
			2	1, 2	714	1339	0.533	718	749	0.0	0.9	5.286	A
	Exit	1	1		1158			1158	1200	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	292	1117	0.261	291	298	0.0	0.5	4.314	A
	Exit	1	1		694			694	705	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	674	908	0.743	676	695	1.0	1.1	6.170	A
			2	2	678	911	0.743	676	700	1.0	1.3	6.111	A
			3	1, 3	432	736	0.587	433	445	0.7	0.9	7.674	A
		2	1	(2)	872			870	891	0.3	0.9	2.704	A
			2	(1, 2, 3)	918			915	952	0.7	1.5	5.376	A
	Exit	1	1		1261			1261	1312	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	512	1054	0.486	514	527	0.6	0.8	6.003	A
			2	1, 2	846	1312	0.645	846	877	0.9	1.8	6.955	A
	Exit	1	1		1389			1389	1433	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	334	1026	0.325	334	349	0.5	0.4	5.321	A
	Exit	1	1		829			829	847	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	824	907	0.908	825	847	1.1	1.5	7.104	A
			2	2	830	906	0.917	830	852	1.3	1.6	7.068	A
			3	1, 3	512	736	0.696	511	528	0.9	1.2	8.078	A
		2	1	(2)	1268			1261	1273	0.9	4.9	11.794	B
			2	(1, 2, 3)	917			906	958	1.5	7.5	23.710	C
	Exit	1	1		1564			1564	1616	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	653	1026	0.637	649	660	0.8	2.1	8.481	A
			2	1, 2	1039	1277	0.813	1031	1065	1.8	3.5	11.740	B
	Exit	1	1		1702			1702	1745	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	418	897	0.466	416	425	0.4	0.8	7.427	A
	Exit	1	1		996			996	1017	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	830	907	0.915	832	861	1.5	1.5	7.024	A
			2	2	824	904	0.912	826	858	1.6	1.6	7.061	A
			3	1, 3	533	737	0.723	533	550	1.2	1.2	8.370	A
		2	1	(2)	1308			1298	1338	4.9	6.1	14.705	B
			2	(1, 2, 3)	895			889	931	7.5	8.4	31.727	D
	Exit	1	1		1577			1577	1628	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	647	1019	0.635	646	669	2.1	1.4	8.803	A
			2	1, 2	1032	1271	0.812	1031	1072	3.5	3.6	12.062	B
	Exit	1	1		1707			1707	1767	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	420	893	0.471	423	431	0.8	0.8	7.786	A
	Exit	1	1		1007			1007	1046	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	678	907	0.747	679	721	1.5	1.1	6.461	A
			2	2	689	909	0.758	690	732	1.6	1.2	6.340	A
			3	1, 3	443	736	0.602	442	474	1.2	0.9	7.817	A
		2	1	(2)	895			900	974	6.1	0.7	5.261	A
			2	(1, 2, 3)	903			910	948	8.4	1.5	10.068	B
	Exit	1	1		1278			1278	1340	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	512	1049	0.488	512	532	1.4	1.0	6.609	A
			2	1, 2	857	1309	0.655	854	892	3.6	2.0	7.721	A
	Exit	1	1		1407			1407	1490	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	337	1021	0.331	339	355	0.8	0.5	5.790	A
	Exit	1	1		831			831	875	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	2	573	912	0.629	576	597	1.1	0.8	5.729	A
			2	2	572	909	0.630	574	598	1.2	0.8	5.681	A
			3	1, 3	368	737	0.498	365	379	0.9	0.8	7.035	A
		2	1	(2)	656			660	695	0.7	0.1	1.253	A
			2	(1, 2, 3)	850			853	876	1.5	0.4	2.424	A
	Exit	1	1		1073			1073	1114	0.0	0.0	0.000	A
2 - A20 (E)	Entry	1	1	(1), 3	430	1080	0.399	431	442	1.0	0.6	5.305	A
			2	1, 2	712	1340	0.532	712	746	2.0	1.2	5.449	A
	Exit	1	1		1182			1182	1228	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1, 2, 3	295	1106	0.266	294	299	0.5	0.3	4.645	A
	Exit	1	1		695			695	720	0.0	0.0	0.000	A

Lane movements: Main Results for each time segment

16:30 - 16:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	570	143	955	912	0.625	569	584	0.0	1.0	5.646	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	558	140	955	905	0.616	557	583	0.0	1.0	5.633	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	370	92	774	738	0.501	371	373	0.0	0.7	6.991	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	662	166	-	-	-	661	678	0.0	0.3	1.166	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	467	117	-	-	-	467	497	0.0	0.2	1.158	A
				3	370	92	-	-	-	370	376	0.0	0.5	3.916	A
2 - A20 (E)	Entry	1	1	1	96	24	1232	1052	0.092	96	99	0.0	0.1	4.266	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	323	81	1232	1081	0.299	323	332	0.0	0.4	5.359	A
			2	1	714	178	1560	1339	0.533	718	749	0.0	0.9	5.286	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	259	65	1625	1112	0.233	258	265	0.0	0.4	4.319	A
				2	32	8	1625	1147	0.028	32	33	0.0	0.1	4.274	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	674	169	955	908	0.742	676	695	1.0	1.1	6.170	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	678	169	955	911	0.743	676	700	1.0	1.3	6.111	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	432	108	774	736	0.587	433	445	0.7	0.9	7.674	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	872	218	-	-	-	870	891	0.3	0.9	2.704	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	483	121	-	-	-	483	506	0.7	0.5	3.263	A
				3	435	109	-	-	-	432	446	0.7	1.0	7.767	A
2 - A20 (E)	Entry	1	1	1	117	29	1232	1036	0.113	118	124	0.6	0.1	5.039	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	395	99	1232	1059	0.373	396	403	0.6	0.7	6.294	A
			2	1	846	211	1560	1312	0.644	846	877	0.9	1.8	6.955	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	297	74	1625	1020	0.291	298	311	0.5	0.4	5.330	A
				2	37	9	1625	1061	0.035	37	38	0.5	0.0	5.252	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	824	206	955	907	0.908	825	847	1.1	1.5	7.104	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	830	208	955	906	0.917	830	852	1.3	1.6	7.068	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	512	128	774	736	0.696	511	528	0.9	1.2	8.078	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	1268	317	-	-	-	1261	1273	0.9	4.9	11.794	B
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	398	100	-	-	-	394	429	1.5	2.6	18.169	C
				3	519	130	-	-	-	512	529	1.5	4.9	28.150	D
2 - A20 (E)	Entry	1	1	1	165	41	1232	1016	0.163	163	171	0.8	0.5	7.429	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	488	122	1232	1029	0.474	485	488	0.8	1.6	8.844	A
			2	1	1039	260	1560	1277	0.813	1031	1065	1.8	3.5	11.740	B
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	371	93	1625	894	0.415	370	379	0.4	0.7	7.453	A
				2	47	12	1625	936	0.050	46	46	0.4	0.1	7.223	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	830	207	955	907	0.915	832	861	1.5	1.5	7.024	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	824	206	955	904	0.912	826	858	1.6	1.6	7.061	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	533	133	774	737	0.723	533	550	1.2	1.2	8.370	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	1308	327	-	-	-	1298	1338	4.9	6.1	14.705	B
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	364	91	-	-	-	356	381	7.5	2.9	23.835	C
				3	530	133	-	-	-	533	550	7.5	5.5	37.161	E
2 - A20 (E)	Entry	1	1	1	173	43	1232	1008	0.172	172	172	2.1	0.4	7.530	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	473	118	1232	1023	0.463	474	497	2.1	1.0	9.239	A
			2	1	1032	258	1560	1271	0.812	1031	1072	3.5	3.6	12.062	B
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	372	93	1625	888	0.418	374	384	0.8	0.7	7.785	A
				2	49	12	1625	923	0.053	49	48	0.8	0.1	7.794	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	678	170	955	907	0.747	679	721	1.5	1.1	6.461	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	689	172	955	909	0.758	690	732	1.6	1.2	6.340	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	443	111	774	736	0.602	442	474	1.2	0.9	7.817	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	895	224	-	-	-	900	974	6.1	0.7	5.261	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	463	116	-	-	-	467	475	8.4	0.4	5.629	A
				3	440	110	-	-	-	443	473	8.4	1.1	14.602	B
2 - A20 (E)	Entry	1	1	1	122	31	1232	1037	0.118	123	131	1.4	0.2	5.623	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	389	97	1232	1054	0.369	389	401	1.4	0.8	6.922	A
			2	1	857	214	1560	1309	0.654	854	892	3.6	2.0	7.721	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	300	75	1625	1018	0.295	301	318	0.8	0.4	5.800	A
				2	38	9	1625	1047	0.036	38	38	0.8	0.0	5.710	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Simulation max flow (PCU/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Average throughput (PCU/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - M20 link road	Entry	1	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	573	143	955	912	0.629	576	597	1.1	0.8	5.729	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	572	143	955	909	0.630	574	598	1.2	0.8	5.681	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			3	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	368	92	774	737	0.498	365	379	0.9	0.8	7.035	A
		2	1	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	656	164	-	-	-	660	695	0.7	0.1	1.253	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	1	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				2	483	121	-	-	-	486	498	1.5	0.1	1.286	A
				3	366	92	-	-	-	368	379	1.5	0.3	3.931	A
2 - A20 (E)	Entry	1	1	1	100	25	1232	1067	0.094	100	101	1.0	0.1	4.498	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	330	82	1232	1084	0.305	331	341	1.0	0.4	5.541	A
			2	1	712	178	1560	1340	0.532	712	746	2.0	1.2	5.449	A
				2	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
3 - A20 (W)	Entry	1	1	1	262	66	1625	1102	0.238	262	267	0.5	0.3	4.658	A
				2	32	8	1625	1149	0.028	32	32	0.5	0.0	4.539	A
				3	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.0.1.1519

Filename: M20 Junction 8 - AM.j10
Path: T:\Projects\15000 Series\15323ITB Ashford Road, Maidstone\Tech\Junction Assessments\2022 Scheme\FINAL
Report generation date: 14/12/2022 12:20:49

Summary of junction performance

	AM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Observed				
1 - Maidstone Services	D1	0.3	2.98	0.21	A
2 - M20 On/Off Slip (E)		0.4	4.56	0.27	A
3 - A20 Link Road		1.2	2.64	0.54	A
4 - M20 On/Off Slip (W)		1.8	4.67	0.64	A
	2027 Future Year without Development				
1 - Maidstone Services	D3	0.3	3.05	0.22	A
2 - M20 On/Off Slip (E)		0.4	4.74	0.28	A
3 - A20 Link Road		1.3	2.73	0.56	A
4 - M20 On/Off Slip (W)		1.9	4.92	0.66	A
	2037 Future Year without Development				
1 - Maidstone Services	D5	0.3	3.32	0.25	A
2 - M20 On/Off Slip (E)		0.5	5.39	0.32	A
3 - A20 Link Road		1.5	3.06	0.60	A
4 - M20 On/Off Slip (W)		2.4	5.91	0.71	A
	2027 Future Year with Development				
1 - Maidstone Services	D7	0.3	3.10	0.22	A
2 - M20 On/Off Slip (E)		0.4	4.90	0.30	A
3 - A20 Link Road		1.3	2.83	0.57	A
4 - M20 On/Off Slip (W)		2.0	5.10	0.67	A
	2037 Future Year with Development				
1 - Maidstone Services	D9	0.3	3.37	0.25	A
2 - M20 On/Off Slip (E)		0.5	5.60	0.34	A
3 - A20 Link Road		1.6	3.19	0.61	A
4 - M20 On/Off Slip (W)		2.6	6.18	0.72	A
	2027 Future Year with Development (Sensitivity Test)				
1 - Maidstone Services	D12	0.3	3.14	0.22	A
2 - M20 On/Off Slip (E)		0.4	4.97	0.30	A
3 - A20 Link Road		1.4	2.90	0.58	A
4 - M20 On/Off Slip (W)		2.0	5.22	0.67	A
	2037 Future Year with Development (Sensitivity Test)				
1 - Maidstone Services	D13	0.3	3.41	0.25	A
2 - M20 On/Off Slip (E)		0.5	5.67	0.34	A
3 - A20 Link Road		1.6	3.27	0.62	A
4 - M20 On/Off Slip (W)		2.6	6.34	0.73	A

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

File summary

File Description

Title	
Location	
Site number	
Date	13/10/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	I-TRANSPORT\londonhotdesk
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	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

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	2022 Observed	AM	ONE HOUR	07:15	08:45	15	✓
D3	2027 Future Year without Development	AM	ONE HOUR	07:15	08:45	15	✓
D5	2037 Future Year without Development	AM	ONE HOUR	07:15	08:45	15	✓
D7	2027 Future Year with Development	AM	ONE HOUR	07:15	08:45	15	✓
D9	2037 Future Year with Development	AM	ONE HOUR	07:15	08:45	15	✓
D12	2027 Future Year with Development (Sensitivity Test)	AM	ONE HOUR	07:15	08:45	15	✓
D13	2037 Future Year with Development (Sensitivity Test)	AM	ONE HOUR	07:15	08:45	15	✓

Analysis Set Details

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

2022 Observed, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	M20 Junction 8	Large Roundabout		1, 2, 3, 4	3.60	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.60	A

Arms

Arms

Arm	Name	Description	No give-way line
1	Maidstone Services		
2	M20 On/Off Slip (E)		
3	A20 Link Road		
4	M20 On/Off Slip (W)		

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)	Entry only	Exit only
1 - Maidstone Services	6.70	10.00	7.9	23.1	170.5	24.0		
2 - M20 On/Off Slip (E)	6.60	7.50	1.9	46.6	170.5	29.0		
3 - A20 Link Road	7.50	8.30	28.4	73.3	170.5	24.0		
4 - M20 On/Off Slip (W)	6.30	6.60	1.9	76.0	170.5	22.0		

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Has entry-to-exit separation	Entry-to-exit separation (m)
1 - Maidstone Services	1430		0.00
2 - M20 On/Off Slip (E)	1541	✓	125.60
3 - A20 Link Road	258		0.00
4 - M20 On/Off Slip (W)	313	✓	122.20

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Maidstone Services	0.901	3065
2 - M20 On/Off Slip (E)	0.803	2415
3 - A20 Link Road	1.198	3447
4 - M20 On/Off Slip (W)	1.038	2628

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	2022 Observed	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 (Veh/hr)	Scaling Factor (%)
1 - Maidstone Services		ONE HOUR	✓	292	100.000
2 - M20 On/Off Slip (E)		ONE HOUR	✓	266	100.000
3 - A20 Link Road		ONE HOUR	✓	1470	100.000
4 - M20 On/Off Slip (W)		ONE HOUR	✓	1235	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - Maidstone Services	2 - M20 On/Off Slip (E)	3 - A20 Link Road	4 - M20 On/Off Slip (W)
From	1 - Maidstone Services	0	84	85	123
	2 - M20 On/Off Slip (E)	76	0	190	0
	3 - A20 Link Road	56	128	0	1286
	4 - M20 On/Off Slip (W)	147	1	1087	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Maidstone Services	2 - M20 On/Off Slip (E)	3 - A20 Link Road	4 - M20 On/Off Slip (W)
From	1 - Maidstone Services	0	22	6	19
	2 - M20 On/Off Slip (E)	16	0	6	0
	3 - A20 Link Road	11	5	0	5
	4 - M20 On/Off Slip (W)	16	0	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Maidstone Services	0.21	2.98	0.3	A	268	402
2 - M20 On/Off Slip (E)	0.27	4.56	0.4	A	244	366
3 - A20 Link Road	0.54	2.64	1.2	A	1349	2023
4 - M20 On/Off Slip (W)	0.64	4.67	1.8	A	1133	1700

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	220	55	913	1884	0.117	219	209	0.0	0.1	2.163	A
2 - M20 On/Off Slip (E)	200	50	972	1444	0.139	200	160	0.0	0.2	2.891	A
3 - A20 Link Road	1107	277	149	3075	0.360	1104	1022	0.0	0.6	1.824	A
4 - M20 On/Off Slip (W)	930	232	195	2226	0.418	927	1059	0.0	0.7	2.765	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	263	66	1092	1735	0.151	262	251	0.1	0.2	2.443	A
2 - M20 On/Off Slip (E)	239	60	1163	1292	0.185	239	191	0.2	0.2	3.417	A
3 - A20 Link Road	1321	330	179	3036	0.435	1321	1223	0.6	0.8	2.097	A
4 - M20 On/Off Slip (W)	1110	278	234	2186	0.508	1109	1266	0.7	1.0	3.340	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	321	80	1336	1533	0.210	321	307	0.2	0.3	2.970	A
2 - M20 On/Off Slip (E)	293	73	1423	1085	0.270	292	234	0.2	0.4	4.539	A
3 - A20 Link Road	1618	405	219	2982	0.543	1617	1497	0.8	1.2	2.633	A
4 - M20 On/Off Slip (W)	1360	340	286	2131	0.638	1357	1550	1.0	1.7	4.635	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	321	80	1339	1531	0.210	321	307	0.3	0.3	2.976	A
2 - M20 On/Off Slip (E)	293	73	1426	1083	0.270	293	235	0.4	0.4	4.557	A
3 - A20 Link Road	1618	405	219	2982	0.543	1618	1500	1.2	1.2	2.640	A
4 - M20 On/Off Slip (W)	1360	340	286	2130	0.638	1360	1551	1.7	1.8	4.670	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	263	66	1096	1732	0.152	263	251	0.3	0.2	2.452	A
2 - M20 On/Off Slip (E)	239	60	1167	1289	0.186	240	192	0.4	0.2	3.434	A
3 - A20 Link Road	1321	330	179	3035	0.435	1323	1227	1.2	0.8	2.105	A
4 - M20 On/Off Slip (W)	1110	278	234	2185	0.508	1113	1268	1.8	1.0	3.368	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	220	55	917	1881	0.117	220	210	0.2	0.1	2.169	A
2 - M20 On/Off Slip (E)	200	50	976	1441	0.139	201	160	0.2	0.2	2.902	A
3 - A20 Link Road	1107	277	150	3075	0.360	1108	1027	0.8	0.6	1.832	A
4 - M20 On/Off Slip (W)	930	232	196	2225	0.418	931	1062	1.0	0.7	2.783	A

2027 Future Year without Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	M20 Junction 8	Large Roundabout		1, 2, 3, 4	3.76	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.76	A

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Has entry-to-exit separation	Entry-to-exit separation (m)
1 - Maidstone Services	1463		0.00
2 - M20 On/Off Slip (E)	1577	✓	125.60
3 - A20 Link Road	265		0.00
4 - M20 On/Off Slip (W)	321	✓	122.20

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2027 Future Year without Development	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 (Veh/hr)	Scaling Factor (%)
1 - Maidstone Services		ONE HOUR	✓	299	100.000
2 - M20 On/Off Slip (E)		ONE HOUR	✓	272	100.000
3 - A20 Link Road		ONE HOUR	✓	1503	100.000
4 - M20 On/Off Slip (W)		ONE HOUR	✓	1263	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - Maidstone Services	2 - M20 On/Off Slip (E)	3 - A20 Link Road	4 - M20 On/Off Slip (W)
From	1 - Maidstone Services	0	86	87	126
	2 - M20 On/Off Slip (E)	78	0	194	0
	3 - A20 Link Road	57	131	0	1315
	4 - M20 On/Off Slip (W)	150	1	1112	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Maidstone Services	2 - M20 On/Off Slip (E)	3 - A20 Link Road	4 - M20 On/Off Slip (W)
From	1 - Maidstone Services	0	22	6	19
	2 - M20 On/Off Slip (E)	16	0	6	0
	3 - A20 Link Road	11	5	0	5
	4 - M20 On/Off Slip (W)	16	0	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Maidstone Services	0.22	3.05	0.3	A	274	412
2 - M20 On/Off Slip (E)	0.28	4.74	0.4	A	250	374
3 - A20 Link Road	0.56	2.73	1.3	A	1379	2069
4 - M20 On/Off Slip (W)	0.66	4.92	1.9	A	1159	1738

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	225	56	934	1866	0.121	225	214	0.0	0.1	2.193	A
2 - M20 On/Off Slip (E)	205	51	995	1426	0.144	204	164	0.0	0.2	2.945	A
3 - A20 Link Road	1132	283	153	3069	0.369	1129	1045	0.0	0.6	1.854	A
4 - M20 On/Off Slip (W)	951	238	200	2220	0.428	948	1083	0.0	0.7	2.824	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	269	67	1117	1715	0.157	269	256	0.1	0.2	2.488	A
2 - M20 On/Off Slip (E)	245	61	1190	1271	0.192	244	196	0.2	0.2	3.505	A
3 - A20 Link Road	1351	338	183	3029	0.446	1350	1251	0.6	0.8	2.143	A
4 - M20 On/Off Slip (W)	1135	284	239	2179	0.521	1134	1295	0.7	1.1	3.440	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	329	82	1367	1510	0.218	329	313	0.2	0.3	3.047	A
2 - M20 On/Off Slip (E)	299	75	1456	1061	0.282	299	240	0.2	0.4	4.717	A
3 - A20 Link Road	1655	414	224	2974	0.556	1653	1530	0.8	1.2	2.722	A
4 - M20 On/Off Slip (W)	1391	348	292	2123	0.655	1387	1585	1.1	1.9	4.873	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	329	82	1370	1508	0.218	329	314	0.3	0.3	3.053	A
2 - M20 On/Off Slip (E)	299	75	1459	1059	0.283	299	240	0.4	0.4	4.739	A
3 - A20 Link Road	1655	414	225	2973	0.557	1655	1534	1.2	1.3	2.729	A
4 - M20 On/Off Slip (W)	1391	348	293	2122	0.655	1391	1587	1.9	1.9	4.918	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	269	67	1121	1712	0.157	269	257	0.3	0.2	2.495	A
2 - M20 On/Off Slip (E)	245	61	1194	1268	0.193	245	196	0.4	0.2	3.523	A
3 - A20 Link Road	1351	338	184	3028	0.446	1353	1256	1.3	0.8	2.150	A
4 - M20 On/Off Slip (W)	1135	284	240	2178	0.521	1139	1297	1.9	1.1	3.471	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	225	56	938	1863	0.121	225	215	0.2	0.1	2.200	A
2 - M20 On/Off Slip (E)	205	51	999	1422	0.144	205	164	0.2	0.2	2.960	A
3 - A20 Link Road	1132	283	154	3068	0.369	1132	1050	0.8	0.6	1.862	A
4 - M20 On/Off Slip (W)	951	238	200	2219	0.428	952	1086	1.1	0.8	2.843	A

2037 Future Year without Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	M20 Junction 8	Large Roundabout		1, 2, 3, 4	4.36	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.36	A

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Has entry-to-exit separation	Entry-to-exit separation (m)
1 - Maidstone Services	1566		0.00
2 - M20 On/Off Slip (E)	1689	✓	125.60
3 - A20 Link Road	283		0.00
4 - M20 On/Off Slip (W)	342	✓	122.20

Slope / Intercept / Capacity

[same as above]

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	2037 Future Year without Development	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 (Veh/hr)	Scaling Factor (%)
1 - Maidstone Services		ONE HOUR	✓	320	100.000
2 - M20 On/Off Slip (E)		ONE HOUR	✓	291	100.000
3 - A20 Link Road		ONE HOUR	✓	1610	100.000
4 - M20 On/Off Slip (W)		ONE HOUR	✓	1353	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - Maidstone Services	2 - M20 On/Off Slip (E)	3 - A20 Link Road	4 - M20 On/Off Slip (W)
From	1 - Maidstone Services	0	92	93	135
	2 - M20 On/Off Slip (E)	83	0	208	0
	3 - A20 Link Road	61	140	0	1409
	4 - M20 On/Off Slip (W)	161	1	1191	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Maidstone Services	2 - M20 On/Off Slip (E)	3 - A20 Link Road	4 - M20 On/Off Slip (W)
From	1 - Maidstone Services	0	22	6	19
	2 - M20 On/Off Slip (E)	16	0	6	0
	3 - A20 Link Road	11	5	0	5
	4 - M20 On/Off Slip (W)	16	0	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Maidstone Services	0.25	3.32	0.3	A	294	440
2 - M20 On/Off Slip (E)	0.32	5.39	0.5	A	267	401
3 - A20 Link Road	0.60	3.06	1.5	A	1477	2216
4 - M20 On/Off Slip (W)	0.71	5.91	2.4	A	1242	1862

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	241	60	1000	1812	0.133	240	229	0.0	0.2	2.291	A
2 - M20 On/Off Slip (E)	219	55	1065	1370	0.160	218	175	0.0	0.2	3.125	A
3 - A20 Link Road	1212	303	164	3052	0.397	1209	1120	0.0	0.7	1.951	A
4 - M20 On/Off Slip (W)	1019	255	213	2202	0.463	1015	1160	0.0	0.9	3.024	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	288	72	1196	1655	0.174	287	274	0.2	0.2	2.633	A
2 - M20 On/Off Slip (E)	262	65	1274	1209	0.216	261	209	0.2	0.3	3.797	A
3 - A20 Link Road	1447	362	196	3009	0.481	1446	1339	0.7	0.9	2.303	A
4 - M20 On/Off Slip (W)	1216	304	255	2159	0.564	1215	1387	0.9	1.3	3.807	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	352	88	1462	1441	0.245	352	335	0.2	0.3	3.303	A
2 - M20 On/Off Slip (E)	320	80	1558	991	0.323	320	256	0.3	0.5	5.353	A
3 - A20 Link Road	1773	443	240	2950	0.601	1770	1638	0.9	1.5	3.046	A
4 - M20 On/Off Slip (W)	1490	372	312	2099	0.710	1485	1698	1.3	2.4	5.823	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	352	88	1466	1438	0.245	352	336	0.3	0.3	3.316	A
2 - M20 On/Off Slip (E)	320	80	1562	988	0.324	320	257	0.5	0.5	5.391	A
3 - A20 Link Road	1773	443	240	2950	0.601	1773	1643	1.5	1.5	3.057	A
4 - M20 On/Off Slip (W)	1490	372	313	2098	0.710	1490	1700	2.4	2.4	5.912	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	288	72	1202	1650	0.174	288	275	0.3	0.2	2.643	A
2 - M20 On/Off Slip (E)	262	65	1280	1205	0.217	262	210	0.5	0.3	3.822	A
3 - A20 Link Road	1447	362	196	3008	0.481	1450	1346	1.5	0.9	2.312	A
4 - M20 On/Off Slip (W)	1216	304	256	2158	0.564	1221	1390	2.4	1.3	3.860	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	241	60	1004	1808	0.133	241	230	0.2	0.2	2.297	A
2 - M20 On/Off Slip (E)	219	55	1070	1366	0.160	219	176	0.3	0.2	3.140	A
3 - A20 Link Road	1212	303	164	3051	0.397	1213	1125	0.9	0.7	1.959	A
4 - M20 On/Off Slip (W)	1019	255	214	2201	0.463	1020	1163	1.3	0.9	3.051	A

2027 Future Year with Development , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	M20 Junction 8	Large Roundabout		1, 2, 3, 4	3.89	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.89	A

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Has entry-to-exit separation	Entry-to-exit separation (m)
1 - Maidstone Services	1487		0.00
2 - M20 On/Off Slip (E)	1593	✓	125.60
3 - A20 Link Road	265		0.00
4 - M20 On/Off Slip (W)	328	✓	122.20

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2027 Future Year with Development	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 (Veh/hr)	Scaling Factor (%)
1 - Maidstone Services		ONE HOUR	✓	299	100.000
2 - M20 On/Off Slip (E)		ONE HOUR	✓	279	100.000
3 - A20 Link Road		ONE HOUR	✓	1521	100.000
4 - M20 On/Off Slip (W)		ONE HOUR	✓	1278	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - Maidstone Services	2 - M20 On/Off Slip (E)	3 - A20 Link Road	4 - M20 On/Off Slip (W)
From	1 - Maidstone Services	0	86	87	126
	2 - M20 On/Off Slip (E)	78	0	201	0
	3 - A20 Link Road	57	136	0	1328
	4 - M20 On/Off Slip (W)	150	1	1127	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Maidstone Services	2 - M20 On/Off Slip (E)	3 - A20 Link Road	4 - M20 On/Off Slip (W)
From	1 - Maidstone Services	0	22	6	19
	2 - M20 On/Off Slip (E)	16	0	7	0
	3 - A20 Link Road	11	7	0	6
	4 - M20 On/Off Slip (W)	16	0	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Maidstone Services	0.22	3.10	0.3	A	274	412
2 - M20 On/Off Slip (E)	0.30	4.90	0.4	A	256	384
3 - A20 Link Road	0.57	2.83	1.3	A	1396	2094
4 - M20 On/Off Slip (W)	0.67	5.10	2.0	A	1173	1759

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	225	56	949	1852	0.122	225	214	0.0	0.1	2.212	A
2 - M20 On/Off Slip (E)	210	53	1006	1408	0.149	209	168	0.0	0.2	3.001	A
3 - A20 Link Road	1145	286	153	3039	0.377	1143	1062	0.0	0.6	1.897	A
4 - M20 On/Off Slip (W)	962	241	204	2213	0.435	959	1092	0.0	0.8	2.863	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	269	67	1135	1699	0.158	269	256	0.1	0.2	2.515	A
2 - M20 On/Off Slip (E)	251	63	1203	1254	0.200	251	200	0.2	0.2	3.588	A
3 - A20 Link Road	1367	342	183	2999	0.456	1366	1271	0.6	0.8	2.204	A
4 - M20 On/Off Slip (W)	1149	287	243	2171	0.529	1147	1306	0.8	1.1	3.512	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	329	82	1389	1492	0.221	329	313	0.2	0.3	3.095	A
2 - M20 On/Off Slip (E)	307	77	1472	1044	0.294	307	245	0.2	0.4	4.880	A
3 - A20 Link Road	1675	419	224	2944	0.569	1673	1554	0.8	1.3	2.827	A
4 - M20 On/Off Slip (W)	1407	352	298	2114	0.666	1404	1599	1.1	2.0	5.047	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	329	82	1392	1489	0.221	329	314	0.3	0.3	3.102	A
2 - M20 On/Off Slip (E)	307	77	1475	1041	0.295	307	246	0.4	0.4	4.904	A
3 - A20 Link Road	1675	419	225	2944	0.569	1675	1558	1.3	1.3	2.835	A
4 - M20 On/Off Slip (W)	1407	352	298	2113	0.666	1407	1601	2.0	2.0	5.098	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	269	67	1139	1696	0.159	269	257	0.3	0.2	2.525	A
2 - M20 On/Off Slip (E)	251	63	1208	1250	0.201	251	201	0.4	0.3	3.608	A
3 - A20 Link Road	1367	342	184	2998	0.456	1369	1276	1.3	0.8	2.212	A
4 - M20 On/Off Slip (W)	1149	287	244	2171	0.529	1152	1309	2.0	1.1	3.546	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	225	56	953	1848	0.122	225	215	0.2	0.1	2.219	A
2 - M20 On/Off Slip (E)	210	53	1010	1405	0.150	210	168	0.3	0.2	3.014	A
3 - A20 Link Road	1145	286	154	3038	0.377	1146	1067	0.8	0.6	1.902	A
4 - M20 On/Off Slip (W)	962	241	204	2213	0.435	964	1096	1.1	0.8	2.887	A

2037 Future Year with Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	M20 Junction 8	Large Roundabout		1, 2, 3, 4	4.54	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.54	A

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Has entry-to-exit separation	Entry-to-exit separation (m)
1 - Maidstone Services	1592		0.00
2 - M20 On/Off Slip (E)	1705	✓	125.60
3 - A20 Link Road	283		0.00
4 - M20 On/Off Slip (W)	351	✓	122.20

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2037 Future Year with Development	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 (Veh/hr)	Scaling Factor (%)
1 - Maidstone Services		ONE HOUR	✓	320	100.000
2 - M20 On/Off Slip (E)		ONE HOUR	✓	298	100.000
3 - A20 Link Road		ONE HOUR	✓	1627	100.000
4 - M20 On/Off Slip (W)		ONE HOUR	✓	1368	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - Maidstone Services	2 - M20 On/Off Slip (E)	3 - A20 Link Road	4 - M20 On/Off Slip (W)
From	1 - Maidstone Services	0	92	93	135
	2 - M20 On/Off Slip (E)	83	0	215	0
	3 - A20 Link Road	61	145	0	1421
	4 - M20 On/Off Slip (W)	161	1	1206	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Maidstone Services	2 - M20 On/Off Slip (E)	3 - A20 Link Road	4 - M20 On/Off Slip (W)
From	1 - Maidstone Services	0	22	6	19
	2 - M20 On/Off Slip (E)	16	0	7	0
	3 - A20 Link Road	11	7	0	6
	4 - M20 On/Off Slip (W)	16	0	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Maidstone Services	0.25	3.37	0.3	A	294	440
2 - M20 On/Off Slip (E)	0.34	5.60	0.5	A	273	410
3 - A20 Link Road	0.61	3.19	1.6	A	1493	2239
4 - M20 On/Off Slip (W)	0.72	6.18	2.6	A	1255	1883

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	241	60	1015	1798	0.134	240	229	0.0	0.2	2.309	A
2 - M20 On/Off Slip (E)	224	56	1076	1353	0.166	224	179	0.0	0.2	3.185	A
3 - A20 Link Road	1225	306	164	3022	0.405	1222	1136	0.0	0.7	1.998	A
4 - M20 On/Off Slip (W)	1030	257	217	2195	0.469	1026	1169	0.0	0.9	3.071	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	288	72	1214	1639	0.175	287	274	0.2	0.2	2.662	A
2 - M20 On/Off Slip (E)	268	67	1287	1193	0.225	268	214	0.2	0.3	3.888	A
3 - A20 Link Road	1463	366	196	2979	0.491	1462	1359	0.7	1.0	2.371	A
4 - M20 On/Off Slip (W)	1230	307	260	2150	0.572	1228	1398	0.9	1.3	3.896	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	352	88	1484	1424	0.247	352	335	0.2	0.3	3.356	A
2 - M20 On/Off Slip (E)	328	82	1574	975	0.337	327	262	0.3	0.5	5.554	A
3 - A20 Link Road	1791	448	240	2921	0.613	1789	1662	1.0	1.6	3.173	A
4 - M20 On/Off Slip (W)	1506	377	318	2089	0.721	1501	1711	1.3	2.5	6.075	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	352	88	1488	1420	0.248	352	336	0.3	0.3	3.370	A
2 - M20 On/Off Slip (E)	328	82	1579	971	0.338	328	262	0.5	0.5	5.596	A
3 - A20 Link Road	1791	448	240	2921	0.613	1791	1667	1.6	1.6	3.187	A
4 - M20 On/Off Slip (W)	1506	377	318	2089	0.721	1506	1713	2.5	2.6	6.175	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	288	72	1220	1634	0.176	288	275	0.3	0.2	2.676	A
2 - M20 On/Off Slip (E)	268	67	1294	1188	0.226	269	214	0.5	0.3	3.921	A
3 - A20 Link Road	1463	366	196	2978	0.491	1465	1366	1.6	1.0	2.384	A
4 - M20 On/Off Slip (W)	1230	307	260	2149	0.572	1235	1401	2.6	1.4	3.955	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	241	60	1020	1794	0.134	241	230	0.2	0.2	2.319	A
2 - M20 On/Off Slip (E)	224	56	1081	1349	0.166	225	179	0.3	0.2	3.201	A
3 - A20 Link Road	1225	306	164	3021	0.405	1226	1142	1.0	0.7	2.006	A
4 - M20 On/Off Slip (W)	1030	257	218	2194	0.469	1032	1173	1.4	0.9	3.100	A

2027 Future Year with Development (Sensitivity Test), AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	M20 Junction 8	Large Roundabout		1, 2, 3, 4	3.97	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.97	A

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Has entry-to-exit separation	Entry-to-exit separation (m)
1 - Maidstone Services	1487		0.00
2 - M20 On/Off Slip (E)	1593	✓	125.60
3 - A20 Link Road	265		0.00
4 - M20 On/Off Slip (W)	328	✓	122.20

Slope / Intercept / Capacity

[same as above]

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
D12	2027 Future Year with Development (Sensitivity Test)	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 (Veh/hr)	Scaling Factor (%)
1 - Maidstone Services		ONE HOUR	✓	299	100.000
2 - M20 On/Off Slip (E)		ONE HOUR	✓	282	100.000
3 - A20 Link Road		ONE HOUR	✓	1548	100.000
4 - M20 On/Off Slip (W)		ONE HOUR	✓	1286	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - Maidstone Services	2 - M20 On/Off Slip (E)	3 - A20 Link Road	4 - M20 On/Off Slip (W)
From	1 - Maidstone Services	0	86	87	126
	2 - M20 On/Off Slip (E)	78	0	204	0
	3 - A20 Link Road	57	144	0	1347
	4 - M20 On/Off Slip (W)	150	1	1135	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Maidstone Services	2 - M20 On/Off Slip (E)	3 - A20 Link Road	4 - M20 On/Off Slip (W)
From	1 - Maidstone Services	0	22	6	19
	2 - M20 On/Off Slip (E)	16	0	7	0
	3 - A20 Link Road	11	6	0	6
	4 - M20 On/Off Slip (W)	16	0	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Maidstone Services	0.22	3.14	0.3	A	274	412
2 - M20 On/Off Slip (E)	0.30	4.97	0.4	A	259	388
3 - A20 Link Road	0.58	2.90	1.4	A	1420	2131
4 - M20 On/Off Slip (W)	0.67	5.22	2.0	A	1180	1770

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	225	56	961	1843	0.122	225	214	0.0	0.1	2.224	A
2 - M20 On/Off Slip (E)	212	53	1012	1404	0.151	212	174	0.0	0.2	3.018	A
3 - A20 Link Road	1165	291	153	3042	0.383	1163	1070	0.0	0.6	1.914	A
4 - M20 On/Off Slip (W)	968	242	210	2208	0.438	965	1107	0.0	0.8	2.888	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	269	67	1149	1689	0.159	269	256	0.1	0.2	2.534	A
2 - M20 On/Off Slip (E)	254	63	1210	1249	0.203	253	208	0.2	0.3	3.616	A
3 - A20 Link Road	1392	348	183	3002	0.464	1391	1280	0.6	0.9	2.233	A
4 - M20 On/Off Slip (W)	1156	289	251	2165	0.534	1155	1323	0.8	1.1	3.558	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	329	82	1406	1479	0.223	329	313	0.2	0.3	3.131	A
2 - M20 On/Off Slip (E)	310	78	1481	1037	0.299	310	254	0.3	0.4	4.945	A
3 - A20 Link Road	1704	426	224	2947	0.578	1702	1566	0.9	1.4	2.887	A
4 - M20 On/Off Slip (W)	1416	354	307	2106	0.672	1412	1620	1.1	2.0	5.164	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	329	82	1409	1476	0.223	329	314	0.3	0.3	3.138	A
2 - M20 On/Off Slip (E)	310	78	1484	1035	0.300	310	254	0.4	0.4	4.971	A
3 - A20 Link Road	1704	426	225	2947	0.578	1704	1570	1.4	1.4	2.897	A
4 - M20 On/Off Slip (W)	1416	354	307	2106	0.672	1416	1622	2.0	2.0	5.216	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	269	67	1154	1685	0.160	269	257	0.3	0.2	2.543	A
2 - M20 On/Off Slip (E)	254	63	1215	1245	0.204	254	208	0.4	0.3	3.638	A
3 - A20 Link Road	1392	348	184	3001	0.464	1394	1286	1.4	0.9	2.243	A
4 - M20 On/Off Slip (W)	1156	289	251	2165	0.534	1160	1326	2.0	1.2	3.596	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	225	56	965	1839	0.122	225	215	0.2	0.1	2.231	A
2 - M20 On/Off Slip (E)	212	53	1016	1400	0.152	213	174	0.3	0.2	3.031	A
3 - A20 Link Road	1165	291	154	3041	0.383	1166	1075	0.9	0.6	1.922	A
4 - M20 On/Off Slip (W)	968	242	210	2208	0.439	970	1110	1.2	0.8	2.913	A

2037 Future Year with Development (Sensitivity Test), AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	M20 Junction 8	Large Roundabout		1, 2, 3, 4	4.64	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.64	A

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Has entry-to-exit separation	Entry-to-exit separation (m)
1 - Maidstone Services	1592		0.00
2 - M20 On/Off Slip (E)	1705	✓	125.60
3 - A20 Link Road	283		0.00
4 - M20 On/Off Slip (W)	351	✓	122.20

Slope / Intercept / Capacity

[same as above]

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
D13	2037 Future Year with Development (Sensitivity Test)	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 (Veh/hr)	Scaling Factor (%)
1 - Maidstone Services		ONE HOUR	✓	320	100.000
2 - M20 On/Off Slip (E)		ONE HOUR	✓	301	100.000
3 - A20 Link Road		ONE HOUR	✓	1654	100.000
4 - M20 On/Off Slip (W)		ONE HOUR	✓	1375	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - Maidstone Services	2 - M20 On/Off Slip (E)	3 - A20 Link Road	4 - M20 On/Off Slip (W)
From	1 - Maidstone Services	0	92	93	135
	2 - M20 On/Off Slip (E)	83	0	218	0
	3 - A20 Link Road	61	153	0	1440
	4 - M20 On/Off Slip (W)	161	1	1213	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Maidstone Services	2 - M20 On/Off Slip (E)	3 - A20 Link Road	4 - M20 On/Off Slip (W)
From	1 - Maidstone Services	0	22	6	19
	2 - M20 On/Off Slip (E)	16	0	7	0
	3 - A20 Link Road	11	6	0	6
	4 - M20 On/Off Slip (W)	16	0	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Maidstone Services	0.25	3.41	0.3	A	294	440
2 - M20 On/Off Slip (E)	0.34	5.67	0.5	A	276	414
3 - A20 Link Road	0.62	3.27	1.6	A	1518	2277
4 - M20 On/Off Slip (W)	0.73	6.34	2.6	A	1262	1893

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	241	60	1026	1790	0.135	240	229	0.0	0.2	2.321	A
2 - M20 On/Off Slip (E)	227	57	1081	1350	0.168	226	185	0.0	0.2	3.202	A
3 - A20 Link Road	1245	311	164	3024	0.412	1242	1143	0.0	0.7	2.020	A
4 - M20 On/Off Slip (W)	1035	259	223	2190	0.473	1032	1183	0.0	0.9	3.099	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	288	72	1227	1630	0.177	287	274	0.2	0.2	2.682	A
2 - M20 On/Off Slip (E)	271	68	1294	1188	0.228	270	221	0.2	0.3	3.919	A
3 - A20 Link Road	1487	372	196	2982	0.499	1486	1368	0.7	1.0	2.403	A
4 - M20 On/Off Slip (W)	1236	309	267	2144	0.576	1234	1415	0.9	1.3	3.947	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	352	88	1500	1412	0.250	352	335	0.2	0.3	3.394	A
2 - M20 On/Off Slip (E)	331	83	1582	969	0.342	331	270	0.3	0.5	5.628	A
3 - A20 Link Road	1821	455	240	2924	0.623	1819	1673	1.0	1.6	3.247	A
4 - M20 On/Off Slip (W)	1514	378	326	2082	0.727	1509	1732	1.3	2.6	6.228	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	352	88	1505	1408	0.250	352	336	0.3	0.3	3.408	A
2 - M20 On/Off Slip (E)	331	83	1586	966	0.343	331	271	0.5	0.5	5.675	A
3 - A20 Link Road	1821	455	240	2923	0.623	1821	1678	1.6	1.6	3.265	A
4 - M20 On/Off Slip (W)	1514	378	327	2081	0.727	1514	1734	2.6	2.6	6.338	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	288	72	1234	1625	0.177	288	275	0.3	0.2	2.696	A
2 - M20 On/Off Slip (E)	271	68	1300	1183	0.229	271	222	0.5	0.3	3.951	A
3 - A20 Link Road	1487	372	196	2981	0.499	1489	1375	1.6	1.0	2.419	A
4 - M20 On/Off Slip (W)	1236	309	268	2144	0.577	1241	1418	2.6	1.4	4.012	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	241	60	1031	1786	0.135	241	230	0.2	0.2	2.331	A
2 - M20 On/Off Slip (E)	227	57	1087	1345	0.168	227	185	0.3	0.2	3.218	A
3 - A20 Link Road	1245	311	164	3023	0.412	1246	1149	1.0	0.7	2.028	A
4 - M20 On/Off Slip (W)	1035	259	224	2189	0.473	1037	1187	1.4	0.9	3.131	A

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.0.1.1519

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

Filename: M20 Junction 8 - PM (Calibrated).j10
Path: T:\Projects\15000 Series\15323ITB Ashford Road, Maidstone\Tech\Junction Assessments\2022 Scheme\FINAL
Report generation date: 14/12/2022 12:00:43

Summary of junction performance

	PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Observed				
1 - Maidstone Services	D2	0.3	3.67	0.22	A
2 - M20 On/Off Slip (E)		0.4	6.02	0.29	A
3 - A20 Link Road		0.8	2.04	0.44	A
4 - M20 On/Off Slip (W)		2.8	5.54	0.74	A
	2027 Future Year without Development				
1 - Maidstone Services	D4	0.3	3.84	0.24	A
2 - M20 On/Off Slip (E)		0.4	6.46	0.31	A
3 - A20 Link Road		0.8	2.10	0.45	A
4 - M20 On/Off Slip (W)		3.2	6.22	0.77	A
	2037 Future Year without Development				
1 - Maidstone Services	D6	0.4	4.21	0.27	A
2 - M20 On/Off Slip (E)		0.6	7.55	0.36	A
3 - A20 Link Road		0.9	2.25	0.48	A
4 - M20 On/Off Slip (W)		4.6	8.37	0.83	A
	2027 Future Year with Development				
1 - Maidstone Services	D8	0.3	3.88	0.24	A
2 - M20 On/Off Slip (E)		0.5	6.64	0.32	A
3 - A20 Link Road		0.9	2.17	0.46	A
4 - M20 On/Off Slip (W)		3.4	6.46	0.78	A
	2037 Future Year with Development				
1 - Maidstone Services	D10	0.4	4.26	0.27	A
2 - M20 On/Off Slip (E)		0.6	7.79	0.37	A
3 - A20 Link Road		1.0	2.33	0.50	A
4 - M20 On/Off Slip (W)		4.9	8.84	0.83	A
	2027 Future Year with Development (Sensitivity Test)				
1 - Maidstone Services	D13	0.3	3.95	0.24	A
2 - M20 On/Off Slip (E)		0.5	6.81	0.33	A
3 - A20 Link Road		0.9	2.21	0.47	A
4 - M20 On/Off Slip (W)		3.5	6.71	0.78	A
	2037 Future Year with Development (Sensitivity Test)				
1 - Maidstone Services	D14	0.4	4.34	0.27	A
2 - M20 On/Off Slip (E)		0.6	8.02	0.38	A
3 - A20 Link Road		1.0	2.37	0.51	A
4 - M20 On/Off Slip (W)		5.2	9.32	0.84	A

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

File summary

File Description

Title	
Location	
Site number	
Date	13/10/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	I-TRANSPORT\londonhotdesk
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	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

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
D2	2022 Observed	PM	ONE HOUR	16:30	18:00	15	✓
D4	2027 Future Year without Development	PM	ONE HOUR	16:30	18:00	15	✓
D6	2037 Future Year without Development	PM	ONE HOUR	16:30	18:00	15	✓
D8	2027 Future Year with Development	PM	ONE HOUR	16:30	18:00	15	✓
D10	2037 Future Year with Development	PM	ONE HOUR	16:30	18:00	15	✓
D13	2027 Future Year with Development (Sensitivity Test)	PM	ONE HOUR	16:30	18:00	15	✓
D14	2037 Future Year with Development (Sensitivity Test)	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

2022 Observed, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	M20 Junction 8	Large Roundabout		1, 2, 3, 4	4.16	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.16	A

Arms

Arms

Arm	Name	Description	No give-way line
1	Maidstone Services		
2	M20 On/Off Slip (E)		
3	A20 Link Road		
4	M20 On/Off Slip (W)		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - Maidstone Services	6.70	10.00	7.9	23.1	170.5	24.0		
2 - M20 On/Off Slip (E)	6.60	7.50	1.9	46.6	170.5	29.0		
3 - A20 Link Road	7.50	8.30	28.4	73.3	170.5	24.0		
4 - M20 On/Off Slip (W)	6.30	6.60	1.9	76.0	170.5	22.0		

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Has entry-to-exit separation	Entry-to-exit separation (m)
1 - Maidstone Services	1895		0.00
2 - M20 On/Off Slip (E)	1953	✓	125.60
3 - A20 Link Road	183		0.00
4 - M20 On/Off Slip (W)	282	✓	122.20

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct intercept adjustment (PCU/hr)
1 - Maidstone Services	None		
2 - M20 On/Off Slip (E)	None		
3 - A20 Link Road	None		
4 - M20 On/Off Slip (W)	Direct	Queue Lengths	300

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Maidstone Services	0.800	2957
2 - M20 On/Off Slip (E)	0.721	2320
3 - A20 Link Road	1.215	3465
4 - M20 On/Off Slip (W)	1.044	2935

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
D2	2022 Observed	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 (Veh/hr)	Scaling Factor (%)
1 - Maidstone Services		ONE HOUR	✓	256	100.000
2 - M20 On/Off Slip (E)		ONE HOUR	✓	219	100.000
3 - A20 Link Road		ONE HOUR	✓	1242	100.000
4 - M20 On/Off Slip (W)		ONE HOUR	✓	1676	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - Maidstone Services	2 - M20 On/Off Slip (E)	3 - A20 Link Road	4 - M20 On/Off Slip (W)
From	1 - Maidstone Services	0	89	84	83
	2 - M20 On/Off Slip (E)	55	0	164	0
	3 - A20 Link Road	53	124	0	1065
	4 - M20 On/Off Slip (W)	147	1	1528	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Maidstone Services	2 - M20 On/Off Slip (E)	3 - A20 Link Road	4 - M20 On/Off Slip (W)
From	1 - Maidstone Services	0	21	2	19
	2 - M20 On/Off Slip (E)	23	0	4	0
	3 - A20 Link Road	7	6	0	3
	4 - M20 On/Off Slip (W)	25	0	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Maidstone Services	0.22	3.67	0.3	A	235	352
2 - M20 On/Off Slip (E)	0.29	6.02	0.4	A	201	301
3 - A20 Link Road	0.44	2.04	0.8	A	1140	1710
4 - M20 On/Off Slip (W)	0.74	5.54	2.8	A	1538	2307

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	193	48	1241	1685	0.114	192	191	0.0	0.1	2.411	A
2 - M20 On/Off Slip (E)	165	41	1272	1251	0.132	164	161	0.0	0.2	3.312	A
3 - A20 Link Road	935	234	104	3202	0.292	933	1333	0.0	0.4	1.587	A
4 - M20 On/Off Slip (W)	1262	315	174	2584	0.488	1258	863	0.0	0.9	2.708	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	230	58	1484	1508	0.153	230	229	0.1	0.2	2.817	A
2 - M20 On/Off Slip (E)	197	49	1522	1077	0.183	197	192	0.2	0.2	4.086	A
3 - A20 Link Road	1117	279	124	3173	0.352	1116	1595	0.4	0.5	1.749	A
4 - M20 On/Off Slip (W)	1507	377	208	2546	0.592	1505	1032	0.9	1.4	3.450	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	282	70	1815	1266	0.223	281	280	0.2	0.3	3.653	A
2 - M20 On/Off Slip (E)	241	60	1861	842	0.286	240	235	0.2	0.4	5.977	A
3 - A20 Link Road	1367	342	152	3134	0.436	1367	1950	0.5	0.8	2.036	A
4 - M20 On/Off Slip (W)	1845	461	255	2496	0.739	1840	1263	1.4	2.8	5.446	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	282	70	1820	1263	0.223	282	281	0.3	0.3	3.669	A
2 - M20 On/Off Slip (E)	241	60	1866	839	0.287	241	236	0.4	0.4	6.022	A
3 - A20 Link Road	1367	342	152	3133	0.436	1367	1955	0.8	0.8	2.038	A
4 - M20 On/Off Slip (W)	1845	461	255	2495	0.740	1845	1264	2.8	2.8	5.536	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	230	58	1491	1503	0.153	231	230	0.3	0.2	2.830	A
2 - M20 On/Off Slip (E)	197	49	1529	1073	0.184	198	193	0.4	0.2	4.117	A
3 - A20 Link Road	1117	279	124	3172	0.352	1117	1602	0.8	0.5	1.751	A
4 - M20 On/Off Slip (W)	1507	377	209	2546	0.592	1512	1033	2.8	1.5	3.501	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	193	48	1246	1681	0.115	193	192	0.2	0.1	2.418	A
2 - M20 On/Off Slip (E)	165	41	1278	1247	0.132	165	161	0.2	0.2	3.331	A
3 - A20 Link Road	935	234	104	3201	0.292	936	1339	0.5	0.4	1.591	A
4 - M20 On/Off Slip (W)	1262	315	175	2583	0.489	1264	865	1.5	1.0	2.734	A

2027 Future Year without Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	M20 Junction 8	Large Roundabout		1, 2, 3, 4	4.57	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.57	A

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Has entry-to-exit separation	Entry-to-exit separation (m)
1 - Maidstone Services	1957		0.00
2 - M20 On/Off Slip (E)	2017	✓	125.60
3 - A20 Link Road	190		0.00
4 - M20 On/Off Slip (W)	291	✓	122.20

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2027 Future Year without Development	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 (Veh/hr)	Scaling Factor (%)
1 - Maidstone Services		ONE HOUR	✓	265	100.000
2 - M20 On/Off Slip (E)		ONE HOUR	✓	226	100.000
3 - A20 Link Road		ONE HOUR	✓	1283	100.000
4 - M20 On/Off Slip (W)		ONE HOUR	✓	1731	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - Maidstone Services	2 - M20 On/Off Slip (E)	3 - A20 Link Road	4 - M20 On/Off Slip (W)
From	1 - Maidstone Services	0	92	87	86
	2 - M20 On/Off Slip (E)	57	0	169	0
	3 - A20 Link Road	55	128	0	1100
	4 - M20 On/Off Slip (W)	152	1	1578	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Maidstone Services	2 - M20 On/Off Slip (E)	3 - A20 Link Road	4 - M20 On/Off Slip (W)
From	1 - Maidstone Services	0	21	2	19
	2 - M20 On/Off Slip (E)	23	0	4	0
	3 - A20 Link Road	7	6	0	3
	4 - M20 On/Off Slip (W)	25	0	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Maidstone Services	0.24	3.84	0.3	A	243	365
2 - M20 On/Off Slip (E)	0.31	6.46	0.4	A	207	311
3 - A20 Link Road	0.45	2.10	0.8	A	1177	1766
4 - M20 On/Off Slip (W)	0.77	6.22	3.2	A	1588	2383

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	200	50	1281	1659	0.120	199	198	0.0	0.1	2.466	A
2 - M20 On/Off Slip (E)	170	43	1314	1224	0.139	170	166	0.0	0.2	3.413	A
3 - A20 Link Road	966	241	107	3195	0.302	964	1376	0.0	0.4	1.614	A
4 - M20 On/Off Slip (W)	1303	326	180	2575	0.506	1299	891	0.0	1.0	2.811	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	238	60	1532	1479	0.161	238	237	0.1	0.2	2.901	A
2 - M20 On/Off Slip (E)	203	51	1572	1048	0.194	203	199	0.2	0.2	4.258	A
3 - A20 Link Road	1153	288	128	3165	0.364	1153	1646	0.4	0.6	1.788	A
4 - M20 On/Off Slip (W)	1556	389	216	2537	0.613	1554	1066	1.0	1.6	3.655	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	292	73	1873	1234	0.236	291	290	0.2	0.3	3.816	A
2 - M20 On/Off Slip (E)	249	62	1922	810	0.307	248	243	0.2	0.4	6.396	A
3 - A20 Link Road	1413	353	157	3125	0.452	1412	2013	0.6	0.8	2.100	A
4 - M20 On/Off Slip (W)	1906	476	264	2484	0.767	1899	1305	1.6	3.2	6.085	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	292	73	1879	1230	0.237	292	291	0.3	0.3	3.836	A
2 - M20 On/Off Slip (E)	249	62	1928	806	0.309	249	243	0.4	0.4	6.461	A
3 - A20 Link Road	1413	353	157	3124	0.452	1413	2019	0.8	0.8	2.103	A
4 - M20 On/Off Slip (W)	1906	476	264	2484	0.767	1906	1306	3.2	3.2	6.218	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	238	60	1541	1473	0.162	239	238	0.3	0.2	2.917	A
2 - M20 On/Off Slip (E)	203	51	1580	1042	0.195	204	199	0.4	0.2	4.297	A
3 - A20 Link Road	1153	288	129	3164	0.364	1154	1655	0.8	0.6	1.793	A
4 - M20 On/Off Slip (W)	1556	389	216	2536	0.614	1563	1067	3.2	1.6	3.721	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	200	50	1287	1655	0.121	200	199	0.2	0.1	2.476	A
2 - M20 On/Off Slip (E)	170	43	1320	1219	0.140	170	167	0.2	0.2	3.435	A
3 - A20 Link Road	966	241	108	3194	0.302	966	1383	0.6	0.4	1.618	A
4 - M20 On/Off Slip (W)	1303	326	181	2575	0.506	1305	893	1.6	1.0	2.841	A

2037 Future Year without Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	M20 Junction 8	Large Roundabout		1, 2, 3, 4	5.79	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.79	A

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Has entry-to-exit separation	Entry-to-exit separation (m)
1 - Maidstone Services	2089		0.00
2 - M20 On/Off Slip (E)	2151	✓	125.60
3 - A20 Link Road	202		0.00
4 - M20 On/Off Slip (W)	311	✓	122.20

Slope / Intercept / Capacity

[same as above]

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	2037 Future Year without Development	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 (Veh/hr)	Scaling Factor (%)
1 - Maidstone Services		ONE HOUR	✓	281	100.000
2 - M20 On/Off Slip (E)		ONE HOUR	✓	242	100.000
3 - A20 Link Road		ONE HOUR	✓	1369	100.000
4 - M20 On/Off Slip (W)		ONE HOUR	✓	1847	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - Maidstone Services	2 - M20 On/Off Slip (E)	3 - A20 Link Road	4 - M20 On/Off Slip (W)
From	1 - Maidstone Services	0	98	92	91
	2 - M20 On/Off Slip (E)	61	0	181	0
	3 - A20 Link Road	58	137	0	1174
	4 - M20 On/Off Slip (W)	162	1	1684	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Maidstone Services	2 - M20 On/Off Slip (E)	3 - A20 Link Road	4 - M20 On/Off Slip (W)
From	1 - Maidstone Services	0	21	2	19
	2 - M20 On/Off Slip (E)	23	0	4	0
	3 - A20 Link Road	7	6	0	3
	4 - M20 On/Off Slip (W)	25	0	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Maidstone Services	0.27	4.21	0.4	A	258	387
2 - M20 On/Off Slip (E)	0.36	7.55	0.6	A	222	333
3 - A20 Link Road	0.48	2.25	0.9	A	1256	1884
4 - M20 On/Off Slip (W)	0.83	8.37	4.6	A	1695	2542

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	212	53	1367	1606	0.132	211	211	0.0	0.2	2.579	A
2 - M20 On/Off Slip (E)	182	46	1401	1172	0.155	181	177	0.0	0.2	3.633	A
3 - A20 Link Road	1031	258	114	3183	0.324	1029	1468	0.0	0.5	1.669	A
4 - M20 On/Off Slip (W)	1391	348	192	2559	0.543	1386	951	0.0	1.2	3.057	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	253	63	1635	1421	0.178	252	252	0.2	0.2	3.081	A
2 - M20 On/Off Slip (E)	218	54	1676	992	0.219	217	212	0.2	0.3	4.644	A
3 - A20 Link Road	1231	308	136	3152	0.391	1230	1756	0.5	0.6	1.873	A
4 - M20 On/Off Slip (W)	1660	415	230	2518	0.659	1657	1137	1.2	1.9	4.170	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	309	77	1996	1171	0.264	309	308	0.2	0.4	4.173	A
2 - M20 On/Off Slip (E)	266	67	2046	749	0.356	265	260	0.3	0.5	7.422	A
3 - A20 Link Road	1507	377	167	3109	0.485	1506	2144	0.6	0.9	2.246	A
4 - M20 On/Off Slip (W)	2034	508	281	2462	0.826	2023	1392	1.9	4.5	8.014	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	309	77	2006	1164	0.266	309	309	0.4	0.4	4.209	A
2 - M20 On/Off Slip (E)	266	67	2055	743	0.359	266	260	0.5	0.6	7.551	A
3 - A20 Link Road	1507	377	167	3108	0.485	1507	2154	0.9	0.9	2.248	A
4 - M20 On/Off Slip (W)	2034	508	282	2462	0.826	2033	1393	4.5	4.6	8.374	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	253	63	1648	1412	0.179	253	254	0.4	0.2	3.107	A
2 - M20 On/Off Slip (E)	218	54	1688	983	0.221	219	212	0.6	0.3	4.712	A
3 - A20 Link Road	1231	308	137	3151	0.391	1232	1770	0.9	0.6	1.876	A
4 - M20 On/Off Slip (W)	1660	415	231	2517	0.660	1671	1138	4.6	2.0	4.308	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	212	53	1375	1601	0.132	212	212	0.2	0.2	2.591	A
2 - M20 On/Off Slip (E)	182	46	1409	1167	0.156	183	178	0.3	0.2	3.660	A
3 - A20 Link Road	1031	258	115	3182	0.324	1031	1477	0.6	0.5	1.675	A
4 - M20 On/Off Slip (W)	1391	348	193	2558	0.544	1394	953	2.0	1.2	3.101	A

2027 Future Year with Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	M20 Junction 8	Large Roundabout		1, 2, 3, 4	4.71	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.71	A

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Has entry-to-exit separation	Entry-to-exit separation (m)
1 - Maidstone Services	1979		0.00
2 - M20 On/Off Slip (E)	2029	✓	125.60
3 - A20 Link Road	190		0.00
4 - M20 On/Off Slip (W)	301	✓	122.20

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2027 Future Year with Development	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 (Veh/hr)	Scaling Factor (%)
1 - Maidstone Services		ONE HOUR	✓	265	100.000
2 - M20 On/Off Slip (E)		ONE HOUR	✓	230	100.000
3 - A20 Link Road		ONE HOUR	✓	1306	100.000
4 - M20 On/Off Slip (W)		ONE HOUR	✓	1741	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - Maidstone Services	2 - M20 On/Off Slip (E)	3 - A20 Link Road	4 - M20 On/Off Slip (W)
From	1 - Maidstone Services	0	92	87	86
	2 - M20 On/Off Slip (E)	57	0	173	0
	3 - A20 Link Road	55	135	0	1116
	4 - M20 On/Off Slip (W)	152	1	1588	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Maidstone Services	2 - M20 On/Off Slip (E)	3 - A20 Link Road	4 - M20 On/Off Slip (W)
From	1 - Maidstone Services	0	21	2	19
	2 - M20 On/Off Slip (E)	23	0	5	0
	3 - A20 Link Road	7	7	0	4
	4 - M20 On/Off Slip (W)	25	0	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Maidstone Services	0.24	3.88	0.3	A	243	365
2 - M20 On/Off Slip (E)	0.32	6.64	0.5	A	211	317
3 - A20 Link Road	0.46	2.17	0.9	A	1198	1798
4 - M20 On/Off Slip (W)	0.78	6.46	3.4	A	1598	2396

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	200	50	1294	1650	0.121	199	198	0.0	0.1	2.481	A
2 - M20 On/Off Slip (E)	173	43	1322	1212	0.143	172	171	0.0	0.2	3.463	A
3 - A20 Link Road	983	246	107	3165	0.311	981	1387	0.0	0.4	1.646	A
4 - M20 On/Off Slip (W)	1311	328	186	2567	0.511	1307	903	0.0	1.0	2.846	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	238	60	1548	1469	0.162	238	237	0.1	0.2	2.924	A
2 - M20 On/Off Slip (E)	207	52	1581	1037	0.199	206	205	0.2	0.2	4.332	A
3 - A20 Link Road	1174	294	128	3136	0.374	1173	1659	0.4	0.6	1.834	A
4 - M20 On/Off Slip (W)	1565	391	222	2528	0.619	1563	1080	1.0	1.6	3.721	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	292	73	1892	1223	0.238	291	290	0.2	0.3	3.860	A
2 - M20 On/Off Slip (E)	253	63	1932	800	0.317	252	251	0.2	0.5	6.569	A
3 - A20 Link Road	1438	359	157	3096	0.464	1437	2028	0.6	0.9	2.169	A
4 - M20 On/Off Slip (W)	1917	479	272	2474	0.775	1910	1322	1.6	3.3	6.313	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	292	73	1898	1219	0.239	292	291	0.3	0.3	3.882	A
2 - M20 On/Off Slip (E)	253	63	1939	795	0.318	253	251	0.5	0.5	6.639	A
3 - A20 Link Road	1438	359	157	3095	0.465	1438	2034	0.9	0.9	2.171	A
4 - M20 On/Off Slip (W)	1917	479	272	2473	0.775	1917	1323	3.3	3.4	6.463	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	238	60	1556	1463	0.163	239	238	0.3	0.2	2.943	A
2 - M20 On/Off Slip (E)	207	52	1590	1031	0.201	208	205	0.5	0.3	4.377	A
3 - A20 Link Road	1174	294	129	3135	0.374	1175	1668	0.9	0.6	1.836	A
4 - M20 On/Off Slip (W)	1565	391	222	2527	0.619	1572	1082	3.4	1.6	3.796	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	200	50	1300	1646	0.121	200	199	0.2	0.1	2.489	A
2 - M20 On/Off Slip (E)	173	43	1328	1207	0.143	173	172	0.3	0.2	3.482	A
3 - A20 Link Road	983	246	108	3165	0.311	984	1394	0.6	0.5	1.652	A
4 - M20 On/Off Slip (W)	1311	328	186	2567	0.511	1313	906	1.6	1.1	2.879	A

2037 Future Year with Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	M20 Junction 8	Large Roundabout		1, 2, 3, 4	6.04	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.04	A

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Has entry-to-exit separation	Entry-to-exit separation (m)
1 - Maidstone Services	2112		0.00
2 - M20 On/Off Slip (E)	2163	✓	125.60
3 - A20 Link Road	202		0.00
4 - M20 On/Off Slip (W)	321	✓	122.20

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2037 Future Year with Development	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 (Veh/hr)	Scaling Factor (%)
1 - Maidstone Services		ONE HOUR	✓	281	100.000
2 - M20 On/Off Slip (E)		ONE HOUR	✓	246	100.000
3 - A20 Link Road		ONE HOUR	✓	1392	100.000
4 - M20 On/Off Slip (W)		ONE HOUR	✓	1858	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - Maidstone Services	2 - M20 On/Off Slip (E)	3 - A20 Link Road	4 - M20 On/Off Slip (W)
From	1 - Maidstone Services	0	98	92	91
	2 - M20 On/Off Slip (E)	61	0	185	0
	3 - A20 Link Road	58	144	0	1190
	4 - M20 On/Off Slip (W)	162	1	1695	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Maidstone Services	2 - M20 On/Off Slip (E)	3 - A20 Link Road	4 - M20 On/Off Slip (W)
From	1 - Maidstone Services	0	21	2	19
	2 - M20 On/Off Slip (E)	23	0	5	0
	3 - A20 Link Road	7	7	0	4
	4 - M20 On/Off Slip (W)	25	0	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Maidstone Services	0.27	4.26	0.4	A	258	387
2 - M20 On/Off Slip (E)	0.37	7.79	0.6	A	226	339
3 - A20 Link Road	0.50	2.33	1.0	A	1277	1916
4 - M20 On/Off Slip (W)	0.83	8.84	4.9	A	1705	2557

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	212	53	1381	1597	0.132	211	211	0.0	0.2	2.595	A
2 - M20 On/Off Slip (E)	185	46	1409	1160	0.160	184	183	0.0	0.2	3.688	A
3 - A20 Link Road	1048	262	114	3154	0.332	1046	1479	0.0	0.5	1.706	A
4 - M20 On/Off Slip (W)	1399	350	198	2551	0.548	1394	963	0.0	1.2	3.100	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	253	63	1651	1411	0.179	252	252	0.2	0.2	3.106	A
2 - M20 On/Off Slip (E)	221	55	1685	981	0.225	221	218	0.2	0.3	4.734	A
3 - A20 Link Road	1251	313	136	3122	0.401	1251	1770	0.5	0.7	1.923	A
4 - M20 On/Off Slip (W)	1670	418	236	2509	0.666	1667	1151	1.2	2.0	4.263	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	309	77	2015	1161	0.267	309	308	0.2	0.4	4.222	A
2 - M20 On/Off Slip (E)	271	68	2057	740	0.366	270	267	0.3	0.6	7.644	A
3 - A20 Link Road	1533	383	167	3080	0.498	1531	2160	0.7	1.0	2.322	A
4 - M20 On/Off Slip (W)	2046	511	289	2451	0.835	2034	1409	2.0	4.8	8.415	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	309	77	2025	1154	0.268	309	309	0.4	0.4	4.261	A
2 - M20 On/Off Slip (E)	271	68	2067	733	0.370	271	268	0.6	0.6	7.787	A
3 - A20 Link Road	1533	383	167	3079	0.498	1533	2171	1.0	1.0	2.327	A
4 - M20 On/Off Slip (W)	2046	511	290	2451	0.835	2045	1410	4.8	4.9	8.842	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	253	63	1665	1402	0.180	253	254	0.4	0.2	3.134	A
2 - M20 On/Off Slip (E)	221	55	1699	972	0.228	222	219	0.6	0.3	4.811	A
3 - A20 Link Road	1251	313	137	3122	0.401	1253	1784	1.0	0.7	1.927	A
4 - M20 On/Off Slip (W)	1670	418	237	2508	0.666	1682	1153	4.9	2.0	4.416	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	212	53	1388	1592	0.133	212	212	0.2	0.2	2.610	A
2 - M20 On/Off Slip (E)	185	46	1417	1155	0.160	186	183	0.3	0.2	3.717	A
3 - A20 Link Road	1048	262	115	3153	0.332	1049	1488	0.7	0.5	1.713	A
4 - M20 On/Off Slip (W)	1399	350	198	2550	0.549	1402	965	2.0	1.2	3.144	A

2027 Future Year with Development (Sensitivity Test), PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	M20 Junction 8	Large Roundabout		1, 2, 3, 4	4.85	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.85	A

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Has entry-to-exit separation	Entry-to-exit separation (m)
1 - Maidstone Services	1979		0.00
2 - M20 On/Off Slip (E)	2029	✓	125.60
3 - A20 Link Road	190		0.00
4 - M20 On/Off Slip (W)	301	✓	122.20

Slope / Intercept / Capacity

[same as above]

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
D13	2027 Future Year with Development (Sensitivity Test)	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 (Veh/hr)	Scaling Factor (%)
1 - Maidstone Services		ONE HOUR	✓	265	100.000
2 - M20 On/Off Slip (E)		ONE HOUR	✓	236	100.000
3 - A20 Link Road		ONE HOUR	✓	1331	100.000
4 - M20 On/Off Slip (W)		ONE HOUR	✓	1752	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - Maidstone Services	2 - M20 On/Off Slip (E)	3 - A20 Link Road	4 - M20 On/Off Slip (W)
From	1 - Maidstone Services	0	92	87	86
	2 - M20 On/Off Slip (E)	57	0	179	0
	3 - A20 Link Road	55	143	0	1133
	4 - M20 On/Off Slip (W)	152	1	1599	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Maidstone Services	2 - M20 On/Off Slip (E)	3 - A20 Link Road	4 - M20 On/Off Slip (W)
From	1 - Maidstone Services	0	21	2	19
	2 - M20 On/Off Slip (E)	23	0	5	0
	3 - A20 Link Road	7	7	0	4
	4 - M20 On/Off Slip (W)	25	0	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Maidstone Services	0.24	3.95	0.3	A	243	365
2 - M20 On/Off Slip (E)	0.33	6.81	0.5	A	217	325
3 - A20 Link Road	0.47	2.21	0.9	A	1221	1832
4 - M20 On/Off Slip (W)	0.78	6.71	3.5	A	1608	2411

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	200	50	1308	1640	0.122	199	198	0.0	0.1	2.498	A
2 - M20 On/Off Slip (E)	178	44	1330	1207	0.147	177	177	0.0	0.2	3.492	A
3 - A20 Link Road	1002	251	107	3165	0.317	1000	1400	0.0	0.5	1.660	A
4 - M20 On/Off Slip (W)	1319	330	192	2561	0.515	1315	916	0.0	1.1	2.879	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	238	60	1565	1457	0.164	238	237	0.1	0.2	2.953	A
2 - M20 On/Off Slip (E)	212	53	1591	1031	0.206	212	212	0.2	0.3	4.391	A
3 - A20 Link Road	1197	299	128	3136	0.382	1196	1674	0.5	0.6	1.855	A
4 - M20 On/Off Slip (W)	1575	394	229	2520	0.625	1573	1095	1.1	1.6	3.789	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	292	73	1912	1209	0.241	291	290	0.2	0.3	3.923	A
2 - M20 On/Off Slip (E)	260	65	1944	793	0.328	259	260	0.3	0.5	6.734	A
3 - A20 Link Road	1465	366	157	3095	0.473	1464	2046	0.6	0.9	2.206	A
4 - M20 On/Off Slip (W)	1929	482	280	2465	0.783	1922	1341	1.6	3.5	6.541	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	292	73	1919	1204	0.242	292	291	0.3	0.3	3.946	A
2 - M20 On/Off Slip (E)	260	65	1951	788	0.330	260	260	0.5	0.5	6.814	A
3 - A20 Link Road	1465	366	157	3095	0.474	1465	2053	0.9	0.9	2.208	A
4 - M20 On/Off Slip (W)	1929	482	281	2464	0.783	1929	1342	3.5	3.5	6.715	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	238	60	1574	1450	0.164	239	238	0.3	0.2	2.974	A
2 - M20 On/Off Slip (E)	212	53	1600	1025	0.207	213	212	0.5	0.3	4.438	A
3 - A20 Link Road	1197	299	129	3135	0.382	1198	1684	0.9	0.6	1.861	A
4 - M20 On/Off Slip (W)	1575	394	230	2520	0.625	1582	1097	3.5	1.7	3.872	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	200	50	1315	1635	0.122	200	199	0.2	0.1	2.507	A
2 - M20 On/Off Slip (E)	178	44	1336	1203	0.148	178	178	0.3	0.2	3.512	A
3 - A20 Link Road	1002	251	108	3164	0.317	1003	1407	0.6	0.5	1.664	A
4 - M20 On/Off Slip (W)	1319	330	192	2560	0.515	1321	918	1.7	1.1	2.910	A

2037 Future Year with Development (Sensitivity Test), PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	M20 Junction 8	Large Roundabout		1, 2, 3, 4	6.30	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.30	A

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Has entry-to-exit separation	Entry-to-exit separation (m)
1 - Maidstone Services	2112		0.00
2 - M20 On/Off Slip (E)	2163	✓	125.60
3 - A20 Link Road	202		0.00
4 - M20 On/Off Slip (W)	321	✓	122.20

Slope / Intercept / Capacity

[same as above]

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
D14	2037 Future Year with Development (Sensitivity Test)	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 (Veh/hr)	Scaling Factor (%)
1 - Maidstone Services		ONE HOUR	✓	281	100.000
2 - M20 On/Off Slip (E)		ONE HOUR	✓	252	100.000
3 - A20 Link Road		ONE HOUR	✓	1418	100.000
4 - M20 On/Off Slip (W)		ONE HOUR	✓	1869	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - Maidstone Services	2 - M20 On/Off Slip (E)	3 - A20 Link Road	4 - M20 On/Off Slip (W)
From	1 - Maidstone Services	0	98	92	91
	2 - M20 On/Off Slip (E)	61	0	191	0
	3 - A20 Link Road	58	152	0	1208
	4 - M20 On/Off Slip (W)	162	1	1706	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Maidstone Services	2 - M20 On/Off Slip (E)	3 - A20 Link Road	4 - M20 On/Off Slip (W)
From	1 - Maidstone Services	0	21	2	19
	2 - M20 On/Off Slip (E)	23	0	5	0
	3 - A20 Link Road	7	7	0	4
	4 - M20 On/Off Slip (W)	25	0	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Maidstone Services	0.27	4.34	0.4	A	258	387
2 - M20 On/Off Slip (E)	0.38	8.02	0.6	A	231	347
3 - A20 Link Road	0.51	2.37	1.0	A	1301	1952
4 - M20 On/Off Slip (W)	0.84	9.32	5.2	A	1715	2573

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	212	53	1395	1588	0.133	211	211	0.0	0.2	2.613	A
2 - M20 On/Off Slip (E)	190	47	1417	1156	0.164	189	189	0.0	0.2	3.718	A
3 - A20 Link Road	1068	267	114	3154	0.339	1066	1492	0.0	0.5	1.722	A
4 - M20 On/Off Slip (W)	1407	352	204	2545	0.553	1402	976	0.0	1.2	3.139	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	253	63	1668	1400	0.180	252	252	0.2	0.2	3.138	A
2 - M20 On/Off Slip (E)	227	57	1695	975	0.232	226	225	0.2	0.3	4.802	A
3 - A20 Link Road	1275	319	136	3122	0.408	1274	1785	0.5	0.7	1.948	A
4 - M20 On/Off Slip (W)	1680	420	243	2501	0.672	1677	1167	1.2	2.0	4.350	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	309	77	2036	1147	0.270	309	308	0.2	0.4	4.292	A
2 - M20 On/Off Slip (E)	277	69	2068	733	0.379	276	276	0.3	0.6	7.862	A
3 - A20 Link Road	1561	390	167	3080	0.507	1560	2178	0.7	1.0	2.366	A
4 - M20 On/Off Slip (W)	2058	514	298	2442	0.843	2046	1429	2.0	5.0	8.816	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	309	77	2046	1140	0.271	309	309	0.4	0.4	4.335	A
2 - M20 On/Off Slip (E)	277	69	2079	726	0.382	277	276	0.6	0.6	8.024	A
3 - A20 Link Road	1561	390	167	3079	0.507	1561	2189	1.0	1.0	2.371	A
4 - M20 On/Off Slip (W)	2058	514	298	2442	0.843	2057	1430	5.0	5.2	9.319	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	253	63	1683	1390	0.182	253	254	0.4	0.2	3.168	A
2 - M20 On/Off Slip (E)	227	57	1710	966	0.235	228	226	0.6	0.3	4.886	A
3 - A20 Link Road	1275	319	137	3121	0.408	1276	1801	1.0	0.7	1.952	A
4 - M20 On/Off Slip (W)	1680	420	244	2501	0.672	1693	1169	5.2	2.1	4.521	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Maidstone Services	212	53	1403	1582	0.134	212	212	0.2	0.2	2.627	A
2 - M20 On/Off Slip (E)	190	47	1425	1151	0.165	190	189	0.3	0.2	3.748	A
3 - A20 Link Road	1068	267	115	3153	0.339	1068	1501	0.7	0.5	1.729	A
4 - M20 On/Off Slip (W)	1407	352	204	2544	0.553	1410	979	2.1	1.2	3.187	A

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