

MID SUSSEX TRANSPORT STUDY

DISTRICT PLAN REVIEW

SCENARIO 5 Report

IDENTIFICATION TABLE	
Client/Project owner	Mid Sussex District Council
Project	Mid Sussex Transport Study
Study	District Plan Review
Type of document	SCENARIO 5 Report
Date	26/01/2024



SYSTRA

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1. INTRODUCTION

1.1 Work Undertaken

1.1.1 Mid Sussex District Council (MSDC) commissioned SYSTRA to:

- Build a strategic highway model to underpin the Mid Sussex Transport Study (MSTS); and
- Update the Mid Sussex Transport Study to test the impact of proposed development on the strategic and local transport network and upon significant routes in Ashdown Forest (adjacent to but outside of Mid Sussex District).

1.1.2 The work is further divided into the following stages:

- 2019 Base Year Highway Model Production and Validation
- 2039 Reference Case Scenario;
- 2039 District Plan Review (DPR) Scenarios
- 2039 District Plan Review (DPR) Scenarios including potential mitigation

1.2 Current Position and Next Steps

1.2.1 This report is part of an iterative process to test the impact of development and the potential mitigations to reduce those impacts. This report includes some initial proposed mitigation and testing. The next steps will be to undertake further investigations into the mitigation results, and work forward an approach will seek to address areas of remaining 'severe' category.

1.3 Highway Model

1.3.1 The Mid Sussex Strategic Highway Model (MSSHM) was first developed by SYSTRA in 2018, with a 2017 base year. This has subsequently been updated to a 2019 base year.

1.3.2 The model development and validation is summarised in the 2019 Base LMVR Report which can be found here: <https://www.midsussex.gov.uk/media/8669/lmvr-report-with-appendices.pdf>

1.3.3 The MSSHM was produced in accordance with standard good practice as set out in the Department for Transport's (DfT) transport analysis guidance (TAG) , in particular TAG Unit M3-1 Highway Assignment Modelling. As such, the approaches to data processing, matrices and network production, along with model calibration are consistent with those of similar strategic highways models. The model's base year is 2019.

1.3.4 The model production made appropriate use of existing data and existing models in the area. A small programme of surveys was undertaken to fill in some gaps in data. Figure 1 shows the highway model extent.

Figure 1. MSHM Model Extent



1.4 Transport Study

- 1.4.1 The impacts on the highway network of the agreed development scenarios were assessed based on the National Planning Policy Framework (NPPF). The assessment of impacts were based on criteria agreed by MSDC and West Sussex County Council (WSCC). These were derived using WSCC’s position statement in relation to the NPPF which sets out their interpretation of terms defining traffic impacts.
- 1.4.2 Where junctions or roads sections are assessed to be adversely impacted by development traffic, the potential impact of sustainable transport mitigation is assessed after which potential highway mitigation schemes are tested. These mitigations aim to remove all ‘severe’ impacts.
- 1.4.3 A safety review will also be undertaken to provide a junction and road-section based assessment of accident clusters, cross-referenced to national accident rates available from the DfT and forecast traffic flow changes as a result of the scenarios compared to the Reference Case. This is described in **Chapter 12 Next Steps – Safety Impacts**.

- 1.4.4 Parallel work, not reported in this document, will include:
- Undertaking environmental impact assessment to comply with National Planning Practice Guidance on transport evidence bases in plan making.
 - Undertaking air quality modelling and ecological interpretation for Habitats Regulations Assessment to test the impact of traffic, as a result of proposed development, on the Ashdown Forest Special Area of Conservation. This is based on the outputs of the Mid Sussex Transport Study.

1.5 Scenarios Tested

2039 Reference Case

- 1.5.1 The Reference Case represents the road network in 2039, and includes any committed highway infrastructure, development in the district and background growth to this date. This acts as a baseline when assessing the impacts of the development scenarios.

2039 Scenario 5

- 1.5.2 The 2039 development scenarios are being refined as part of the Council's plan making process, including sustainability appraisal, to help inform preparation of the District Plan Review and select a preferred option. Scenario 5 builds on the Reference Case and assesses proposed Local Plan development and supporting infrastructure in 2039.

2039 Scenario 5m2

- 1.5.3 Building off Scenario 5, Scenario tests the potential impact of initial car trip rate reductions as a result of home working, internalisation, future employment distribution, access and proximity to existing services, and mode share assumptions for trips to and from the scenario's site developments.

2039 Scenario 5m4

- 1.5.4 A Building off Scenario 5m2, Scenario 5m4 tests the potential impact of additional car trip rate reductions as a result of proposed LCWIP cycle improvement and site specific sustainable travel improvements.

2039 Scenario 5m5

- 1.5.5 Building off Scenario 5m2 Scenario 5m5 includes testing of an initial Highway Mitigation package.

1.6 Report Structure

1.6.1 The chapters in this report are:

- Chapter 1 Introduction
- Chapter 2 2039 Reference Case Preparation
- Chapter 3 2039 Scenario 5, 5m2, and 5m4 Preparation
- Chapter 4 Scenario 5 Capacity Impacts
- Chapter 5 Scenario 5m2 with Car Trip Rate Reduction Capacity Impacts
- Chapter 6 Scenario 5m4 with Sustainable Infrastructure Measures
- Chapter 7 Further Investigations into Route Choice
- Chapter 8 Local Junction Modelling Methodology
- Chapter 9 – Local Junction Impact Assessment
- Chapter 10 Strategic Modelling Mitigation Testing
- Chapter 11 Next Steps – Highway Mitigation
- Chapter 12 – Next Steps Safety Impacts

2. 2039 REFERENCE CASE PREPARATION

2.1 Introduction

2.1.1 This chapter describes the production of the 2039 Reference Case matrices and network, using the 2019 Base model as the starting point.

2.1.2 The 2039 Reference Case represents a benchmark against which the development scenarios are tested and compared. This enables separation of impacts resulting from the Scenarios from impacts due to background growth, committed development and infrastructure. The 2039 Reference Case includes the development sites that were in the previously modelled Site Allocations Development Plan Document (Sites DPD) which can be found here : <https://www.midsussex.gov.uk/media/3406/mid-sussex-district-plan.pdf>. It also includes the proposed mitigation for the Sites DPD Scenario as referenced in Section 2.8 below.

2.1.3 The following sections describe how the development growth was applied by location (external/non-MSDC or MSDC) and method (from the DfT's National Trip End Model or site specific).

2.2 2019-2039 External/Non-MSDC Development Growth (from TEMPro)

2.2.1 Travel demand matrices contain the forecast trips between origin and destination zones across the model study area. Forecasts are based on information obtained from the DfT's National Trip End Model (NTEM), obtained using the Trip End Model Presentation Program (TEMPro v8.0 High Economy). This is compliant with guidance set out in WebTAG (Web-based Transport Assessment Guidance, published by the DfT). The forecasts include:

- population
- employment
- households by car ownership
- trip ends

2.2.2 TEMPro is designed to allow analysis of pre-processed data from the NTEM. The pre-processed data is itself the output from a series of models developed and run by DfT's Transport Appraisal and Strategic Modelling (TASM) division. TEMPro can also be used to provide summaries of traffic growth using data from the National Transport Model (NTM).

2.2.3 For the transport study the trip ends data were used in the form of origin and destination growth factors. These were extracted for 2019-2039 for the AM (0700-1000) and PM (1600-1900) periods, for the locations required.

2.2.4 Tempro v8.0 High Economy was chosen over Tempro v8.0 Core following a West Sussex County Council review of planned housing growth in neighbouring districts, where it was found that Tempro v8.0 High Economy most closely aligned with forecast housing growth.

2.2.5 Comparisons against Tempro v7.2, which has been used for the previous Site DPD Local Plan testing, were then made to understand the expected changes between the previous Scenario 4 testing, and the current Scenario 5 testing.

2.2.6 Figure 2 below details the change in growth rates between Tempro v7.2 and Tempro v8.0 High Economy.

Figure 2. Difference in Growth Rates between Tempro v7.2 and Tempro v8.0 High Economy

	Origin		Destination	
	AM	PM	AM	PM
Arun	7.2%	3.5%	2.8%	6.2%
Brighton and Hove	1.2%	1.3%	2.0%	0.9%
Chichester	1.9%	1.5%	1.8%	1.6%
Crawley	2.0%	1.9%	2.1%	1.8%
Mid Sussex	2.3%	1.9%	2.2%	1.9%
Worthing	3.9%	2.3%	2.5%	3.2%

*This table illustrates the % change in growth rates between Tempro 7.2 & Tempro .0_HIGH Economy for the 2019-2039 period, not actual growth rates. These growth rates are for highway trips.

2.2.7 It should be noted that for Mid Sussex itself, TEMPro growth rates are restricted to a factor of 1. Therefore, no TEMPro growth is applied within the Mid Sussex area. All background growth within the Mid Sussex area is driven by the committed reference case development.

2.3 2019-2039 Mid Sussex Development Growth (Site Specific)

2.3.1 Reference Case growth in the District was applied on a site specific basis directly to model zones, in preference to using TEMPro, which was used for growth outside the District only.

Reference Case Housing in Mid Sussex District:

2.3.2 The housing developments listed in **Appendix A1 - Commitments** are included.

2.3.3 In addition, all completions that occurred between the model base year of 2019 and 2023 are included.

Reference Case Employment in Mid Sussex District:

2.3.4 The employment developments included are:

- Northern Arc, Business Park: 1,500 employees
- The Hub, Business Industrial and Storage/Distribution: 50,000 sqm
- Science and Technology Park (including 154 room hotel): 2,500 employees

2.3.5 In addition, the employment sites included in the previous Sites DPD Scenario and listed in **Appendix A2 - Employment Allocations** are included.

2.4 2019-2039 External Development Growth (Site Specific)

2.4.1 Some large development sites in neighbouring authorities are included as site specific developments. These are:

Reference Case Housing in Neighbouring Authorities:

○	West of Bewbush “Kilnwood Vale” (Horsham District)	2,500 units
○	Land North of Horsham “Mowbray” (Horsham District)	2,500 units
○	North East Crawley “Forge Wood” (Crawley Borough)	2,000 units

Reference Case Employment in Neighbouring Authorities:

○	West of Bewbush “Kilnwood Vale”, Industrial Estate:	721 employees
○	Land North of Horsham “Mowbray”, Industrial Estate:	714 employees
○	Horley Business Park (Reigate & Banstead Borough)	8,000 sqm

2.5 Freight

2.5.1 Growth in freight traffic was derived from national road traffic forecasts taken from the National Transport Model (NTM) in accordance with DfT guidance in paragraphs 7.3.18 to 7.3.19 of TAG Unit M4: Forecasting and Uncertainty.

2.6 Gatwick Airport

2.6.1 Gatwick Airport lies to the north west of the District within Crawley Borough Council’s administrative boundary. The airport currently operates as a single runway, two terminal airport, which accommodated 46.6 million passengers during 2019. Gatwick Airport Limited (GAL) has aspirations to increase the number of flights and passenger numbers. Through existing consents and improved operational efficiencies GAL estimate that passenger numbers could increase to 62.7 million per year by 2047.

2.6.2 In addition, GAL are seeking consent to bring the existing Stand-by/Northern runway into routine use. This is a Nationally Significant Infrastructure project. In July 2023, GAL submitted a Development Consent Order (DCO) to the Planning Inspectorate seeking consent to bring the northern runway into routine use along with associated infrastructure including upgrades to the M23 junction 9 spur, new junction layouts at north and south terminals, alterations to Longbridge roundabout at A23/A217 and alterations to Airport Way. The DCO Examination will commence in March 2024, with the Secretary of State for Transport decision expected in Spring 2025.

2.6.3 Forecasting for Gatwick Airport takes account of the advice provided in paragraphs 7.3.9 to 7.3.11 of TAG Unit M4: Forecasting and Uncertainty. Paragraph 7.3.10 states:

*The NTEM dataset includes all trip end productions for surface access trips to airports. However, the NTEM trip end attractions **exclude** surface travel for airline passengers and those escorting them. This may mean that the spatial distribution of the trip end attractions may need to be modified from NTEM levels if there is a major airport within the vicinity of the scheme.*

2.6.4 The airport is in Crawley Borough and so, by default, model growth was applied using TEMPro. Therefore, based on paragraph 7.3.10 of TAG Unit M4 an adjustment was applied to ensure that passenger growth is accounted for. This was based on the trajectories stated above in paragraph 2.6.1 assuming current configuration as a single runway, two terminal airport.

2.7 Trip Rates

2.7.1 Trip rates for Scenario 5 have been updated from the previous reported scenarios (1-4) for residential development sites for both the Reference Case and Local Plan sites.

2.7.2 The data extracted is for Mixed Use Housing sites for the following location types:

- Town Centre;
- Edge of Town Centre;
- Suburban Area; and
- Edge of Town.

2.7.3 Previously the only housing type used was “Privately Owned Houses and Flats (03/K)” Updated trip rates have also been extracted as a mean average (as agreed with WSCC), where previously the 85%ile was used. Note that the TRICS trips rates presented exclude any sites within London as these are not considered representative of Mid Sussex and the immediate surrounding area.

2.7.4 For the Reference Case Committed Development, all sites combined for all locations have been included. For the Local Plan development, “urban” and “rural” have been separated. As no rural sites were available for extraction in TRICS, “Edge of Town” has been considered as “Rural”, and “Town Centre”, “Edge of Town Centre”, “Suburban Area” as “Urban”.

Table 1. General Vehicle Trip Rates

	Employment Density Guide		TRICS Database Use Class	Value	Parameter	AM		PM		
	Use Class	New Class				O	D	O	D	
Housing 85%ile unit	Private Houses and Flats		Housing	85%ile unit		0.397	0.191	0.143	0.486	Previously used in Sc1-Sc4 (residential)
	Houses Privately Owned		C3	mean unit		0.385	0.133	0.190	0.352	not used
			C3	85%ile unit		0.559	0.265	0.225	0.520	not used
	Private Houses and Flats		C3	mean unit		0.297	0.126	0.154	0.257	not used
			C3	85%ile unit		0.397	0.191	0.143	0.486	Previously used in Sc1-Sc4 (residential)
	Flats Privately Owned		C3	mean unit		0.149	0.040	0.058	0.138	not used
			C3	85%ile unit		0.341	0.047	0.098	0.305	not used
B1a 85%ile sqm	General Office		B1a	E(g)(i) sqm		0.269	3.077	2.587	0.425	maintained
B1a 85%ile emp			B1a	E(g)(i) emp		0.043	0.511	0.394	0.021	maintained
B1b 85%ile sqm	R&D Space		B1b	E(g)(ii) sqm		0.450	1.606	1.933	0.212	maintained
B1b 85%ile emp			B1b	E(g)(ii) emp		0.183	0.367	0.465	0.045	maintained
B1c 85%ile sqm	Light Industrial		B1c	E(g)(iii) sqm		0.558	0.990	0.671	0.499	maintained
B1c 85%ile emp			B1c	E(g)(iii) emp		0.300	0.700	0.844	0.067	maintained
C1 85%ile emp	Hotel		C1	06/A emp		0.284	0.104	0.151	0.252	maintained
C1 85%ile rooms	Hotel		C1	06/A rooms		0.284	0.104	0.151	0.252	maintained
B1 85%ile sqm	Office / R&D / Light Industrial		B1	02/B sqm		0.450	1.606	1.933	0.212	maintained
B1 85%ile emp			B1	02/B emp		0.183	0.367	0.465	0.045	maintained
B2 85%ile sqm	Industrial / Manufacturing		B2	02/D sqm		0.468	1.000	0.737	0.263	maintained
B2 85%ile emp			B2	02/D emp		0.300	0.700	0.844	0.067	maintained
B8 85%ile sqm	Storage & Distribution		B8	02/F sqm		0.136	0.634	0.607	0.102	maintained
B8 85%ile emp			B8	02/F emp		0.171	0.667	0.440	0.100	maintained
E 85%ile sqm	Retail		E	sqm		3.428	3.532	6.281	5.140	maintained
Fp 85%ile sqm	Primary School		Fp	sqm		4.717	5.818	0.903	0.323	maintained
Fp 85%ile pupils	Primary School		Fp	pupils		0.388	0.482	0.060	0.034	maintained
Fs 85%ile pupils	Secondary School		Fs	pupils		0.179	0.237	0.041	0.039	maintained
Housing Mean unit	M - MIXED PRIVATE/AFFORDABLE HOUSING		Housing	03/M	Mean unit	0.367	0.134	0.162	0.315	Used for Sc5 RefCase Resi Dev
						Updated Sc5 new triprates & mean avg				
Urban Mean unit	M - MIXED PRIVATE/AFFORDABLE HOUSING		Urban	03/M	Mean unit	0.340	0.111	0.149	0.307	Local Plan Urban Resi Sites
Rural Mean unit	M - MIXED PRIVATE/AFFORDABLE HOUSING		Rural	03/M	Mean unit	0.373	0.139	0.164	0.316	Local Plan Rural Resi Sites

2.7.5 Full TRICS outputs are included in **Appendix E – TRICS Outputs**.

2.8 Committed Infrastructure in 2039 Reference Case

2.8.1 The reference case schemes from the previous Sites DPD modelling were carried forward to the 2039 Reference Case. These are shown in **Table 2**. The dualling of the A2300 includes the closure of the Bishopstone Lane/A2300 junction for vehicular use.

Table 2. Reference Case Infrastructure

Location	Description		Status	
Burgess Hill	A2300	Dualling and junction improvements	Completed	
	The Hub	A2300/Cuckfield Rd	Roundabout improvements	Comitted
		Gatehouse Lane	Signal controlled crossing	Comitted
	East Kings Way	B2113 Keymer Rd/Station Rd/Junction Rd/ Silverdale Rd	Traffic signals	Comitted
		Valebridge Rd / Janes Lane / Junction Rd	Traffic signals	Comitted
		Kings Way/B2113 Folders Lane	Traffic signals	Comitted
		B2113 Station Rd/Church Rd/Mill Rd	Traffic signals	Comitted
		B2113 Folders Lane/Keymer Road	Roundabout	Comitted
Junction Rd / Cants Lane		Traffic signals	Comitted	
Ditchling Common	Speed restrictions	Comitted		
Copharne	A264	A264/ Brookhill Rd /A2220	Roundabout improvements	Completed
		Dukes Head A264/B2028 Roundabout	Roundabout improvements	Comitted
Hassocks	Hassocks Stonepound	A273/B2116 Stonepound Crossroads	Traffic signals improvements	Completed
Haywards Heath	Penland Farm	Hanlye Lane, Borderhill Lane	Roundabout	Comitted
	Fox Hill	B2112 Fox Hill south of Hurstwood lane	Extension of 30mph speed limit	Completed
	Relief Road (east)	A272 Rocky Lane/Hurstwood Lane	Traffic Signals	Comitted
	Fox Hill	B2112, Colwell Rd	Roundabout improvements	Completed
Crawley	Copthorne	M23 J10	Junction improvements	Comitted
	Tinsley	Gatwick road	Roundabout improvements	Comitted
	Pound Hill	A2011 to B2036 Link Road and junctions	Link road and junction improvements	Comitted
	Tinsley	Radford Road/B2036 Balcombe Road	Traffic signals	Comitted
	Tinsley Green	Steers Lane / Radford Rd	Traffic signals	Completed
		Steers Lane / B2036	Traffic signals	Completed
	Hazelwick	A2011/A2004/Gatwick Rd/Hazelwick Ave	Signalised roundabout	Comitted
	Fernhill	B2036 Balcombe Road / B2037 Antlands Lane	Roundabout improvements	Comitted
Manor Royal	Gatwick Road	Roundabout improvements	Comitted	
Cheals Junction	A23 Crawley Ave/A2220 Horsham Rd	Roundabout slip lane	Completed	
Pease Pottage	M23 J11	Signalised gyrator	Completed	
Smart Motorways	M23	Motorway improvements	Completed	

2.8.2 The following mitigation associated with the Sites DPD Scenario was also included.

- Sustainable transport trip reductions for the Sites DPD developments
- Ansty A272/B2036 - minor widening on A272 western and eastern arms

2.8.3 In addition, the following mitigation associated with the Sites DPD Scenario as proposed by the Science and Technology Park was included:

- A2300/A23 Hickstead, Eastern Roundabout
- A23 Southbound upgraded merge and diverge between A2300 and Mill Lane
- A2300/Cuckfield Road roundabout upgrade and new S&T Park access/Cuckfield Road roundabout
- A2300/Northern Arc Roundabout
- Additional Northern Arc Infrastructure including new roads and junctions
- A272 Cowford Road/A23 Slips - Signalisation

2.8.4 One additional scheme was also included:

- New access road from A272/A23 northbound roundabout for Marylands Nursery

3. 2039 SCENARIO 5, 5M2, & 5M4 PREPARATION

3.1 Introduction

3.1.1 This section describes the preparation of 2039 Scenarios 5, 5m2, and 5m4.

3.2 Site Specific Growth

3.2.1 Scenario trip matrices were prepared for the AM peak and PM peak hours. The trip rates that were derived from TRICS for the committed Reference Case developments were used again to calculate trip generation for the development sites.

3.2.2 Scenario 5 assesses the impact of an additional 25 housing development sites some of which also include employment, retail and community uses. The sites are listed in **Appendix A3 - DPR Transport Scenario 5**.

3.2.3 In addition, **windfall sites** are assumed to be 1,488 units by 2039, distributed pro-rata across the Reference Case housing developments.

3.2.4 In addition, **windfall sites** are assumed to be 1488 units by 2039, distributed pro-rata across the Reference Case housing developments¹.

3.2.5 **Table 3** summarises the total housing units growth considered.

Table 3. Total Housing units growth Considered in Mid-Sussex in Scenario 5

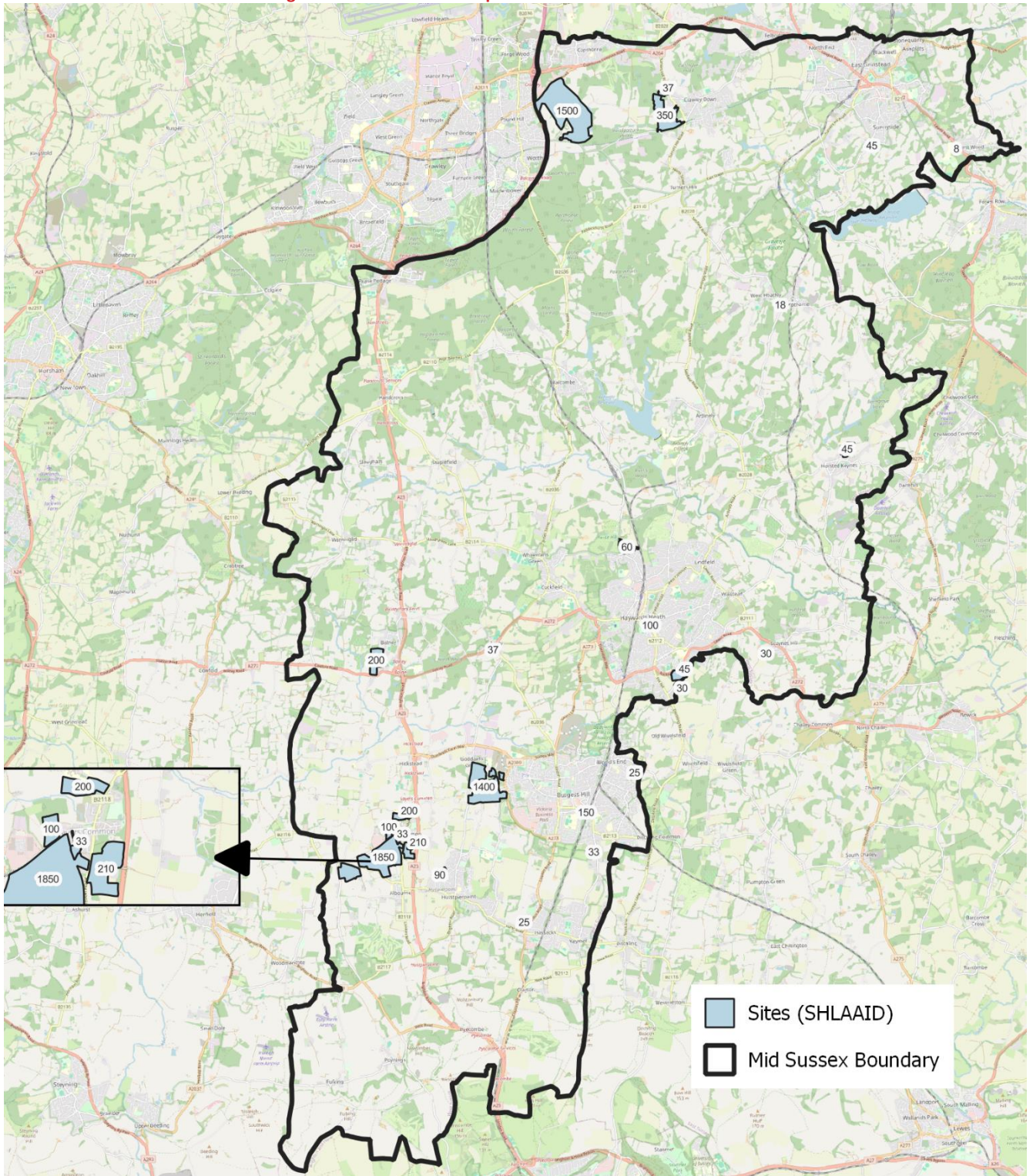
SCENARIO	TOTAL UNITS CONSIDERED	DIFFERENCE FROM REF
2039 Reference Case	13,884	
2039 Scenario 5	20,505	6,621
2039 Scenario 5 including windfall	21,993	8,109

3.2.6 Figure 3 shows the location of the SHLAAID (Strategic Housing Land Availability Assessment ID) site in Scenario 5 as referenced in Appendix A3. Figure 4 shows the number of units for each site².

¹ It is noted that the council’s position on windful allowance of 1,488 dwellings has since increased to 1,768 over the plan period. An increase of 280 dwellings across the district over the whole plan period up to 2039 is not however considered likely to materially alter the model outcomes.

² It is noted that the proposed yield has altered for some of the sites since the modelling commenced, however the changes are not however considered likely to materially alter the model outcomes.

Figure 4. Scenario Map with Number of Units



Development Zones – Representation of Sites

- 3.2.7 The larger developments sites were allocated to their own zone with appropriate access roads included. Smaller development sites were contained within existing zones in the model.

Trip Distribution

- 3.2.8 Trip distributions were taken from the main model zones that the development is located in or near to and based on Census Journey Work 2011 for commuting trips and existing local model matrices for other purposes.

Scenario 5 with Car Trip Rate Reduction (Scenario 5m2)

- 3.2.9 Three Local Plan scenarios were run prior to development of highway mitigation. Scenario 5, Scenario 5m2, and Scenario 5m4.

- 3.2.10 Scenario 5 uses the trip rates detailed in section 2.7, with no further adjustments considered. Scenario 5m2 takes into account additional mode shift reductions that have been applied to the Local Plan development sites. These reductions have been applied on the trip rates, or on an O-D level where appropriate. Only trips to/from Local Plan sites have been adjusted. Scenario 5m4 accounts for additional sustainable mode shift including LCWIP cycle schemes and developer specific proposals.

- 3.2.11 Mode shift assumptions have been agreed with the Local Highway Authority, WSCC.

3.3 Mode shift assumptions for Scenario 5m2

Home Working

- 3.3.1 MSDC has provided Economic Growth Assessment extracts from the *Northern West Sussex Economic Growth Assessment Focused Update for Mid Sussex (Lichfields March 2022)* to inform home working assumptions which are used to consider the reductions.

- 3.3.2 Paragraph 2.12 states:

The District supports a much lower level of out-of-work benefit claimants than other parts of the South East and the United Kingdom. Moreover, Mid Sussex resident occupations are also generally higher skilled, with a greater percentage of residents employed in SOC Major Group 1- 3. Mid Sussex has 64.3% of resident occupations falling within the 3 highest SOC groups, which consist of managers and director jobs, compared to both the South East (50.7%) and the UK (45.6%). Compared to the 2020 EGA (i.e. 2018 data), this portion has increased by 11.9%.

- 3.3.3 It is considered that Mid Sussex could have a higher homeworking proportion than the south-east and UK as a whole. Therefore, an additional 5% reduction on all Local Plan sites has been assumed and applied to commuter trips. In addition to this, the more significant sites have an additional 15% reduction to overall trip rates.

Internalisation

3.3.4 To account for internalization for Large Local Plan sites, primary schools have been allocated an 80% reduction on overall trip rates. Retail and Employment trips have also been allocated a 5% reduction in trip rates.

Distance Based Trip Reductions

3.3.5 It is proposed to apply distance based car trip reductions based on a similar approach to that used in the Crawley and Horsham Studies. These reductions are due to site developers being subject to delivery of travel planning measures and will be applied to non-committed development sites only. Short distance trips are the most likely to switch from car to active modes and therefore this is reflected in this approach. Longer distance trips are more likely to switch to public transport (PT). The proposed trip length reductions are shown in the table below as used in the Crawley/Horsham studies. The underlying data for the Crawley/Horsham study was derived from the DfT Sustainable Travel Towns Study and the National Travel Survey data.

3.3.6 Adjustments have been made at an O-D level to trips to/from the Local Plan sites.

3.3.7 The profile banding of O-D trips adjusted are detailed in the table below.

	Up to 1km	1-3 km	3-5 km	5-10 km	10-50km	Over 50km
Car Trip Reduction	-22%	-14%	-10%	-6%	-3%	0%

3.3.8 Only short trips are expected to be impacted by this mode shift. These short distance trips are made by road users that are considered less likely to be using the strategic road network, which are typically longer distance trips.

Future Employment Distribution and Location and Proximity to Existing Services

3.3.9 An additional 1-2% reduction to trip rates has been applied to large and medium size Local Plan sites to account for the changes in the future of employment distribution.

3.3.10 Sites considered as an urban extension (non-rural) have been allocated an additional 1% trip rate reduction as it is expected that existing services will benefit these new Local Plan development trips.

3.4 Sustainable Measures Including 'Site Specific Developer Proposal' Assumptions

3.4.1 This section details the sustainable measures proposed for the Mid Sussex area, including the LCWIP Cycle Improvements and Site DPD Developer Specific Sustainable Measures.

Local Cycling and Walking Infrastructure Plans (LCWIP)

3.4.2 Mid Sussex District Council and West Sussex County Council have provided Local Cycling and Walking Infrastructure Plans that are expected to be delivered within Mid Sussex. The plans include improvements to walking and cycling on existing corridors within the towns the key towns within the Mid Sussex area. These towns are:

- Burgess Hill
- Haywards Heath
- East Grinstead

3.4.3 Details of the LCWIP proposals can be found here:
<https://www.midsussex.gov.uk/media/9010/mid-sussex-local-cycling-and-walking-infrastructure-plan-2023-vfinal.pdf>

3.4.4 The Hassocks Cycle Corridor Route (Hassocks to Hurstpierpoint) has not been taken account of in the modelling but has since been confirmed as a committed scheme. It's omission in the modelling is not however anticipated to materially alter the strategic modelling results.

Site Specific Developer Proposals

3.4.5 Alongside the LCWIP improvements, the developers for the 3 large sites have provided additional walking and cycling corridor improvements that they are proposing to deliver as part of their development transport plan. The 3 large sites and a brief summary of their proposals are:

- Sayers Common – Cycle route from Sayers Common Development into Burgess Hill Town Centre and Railway Station
- Land West of Burgess Hill – A number of improvements on existing corridors on the north west quarter of Burgess Hill town, with access to the Town Centre and Railway Station.
- Crabbet Park – A north/south cycle corridor through the site, and a number of walking routes for access into Crawley Town Centre and Railway Station.

3.4.6 Details including plans of the proposed corridors can be found in in Figure 5, Figure 6, and Figure 7.

Figure 5. Sayers Common Development – Active Mode Improvements

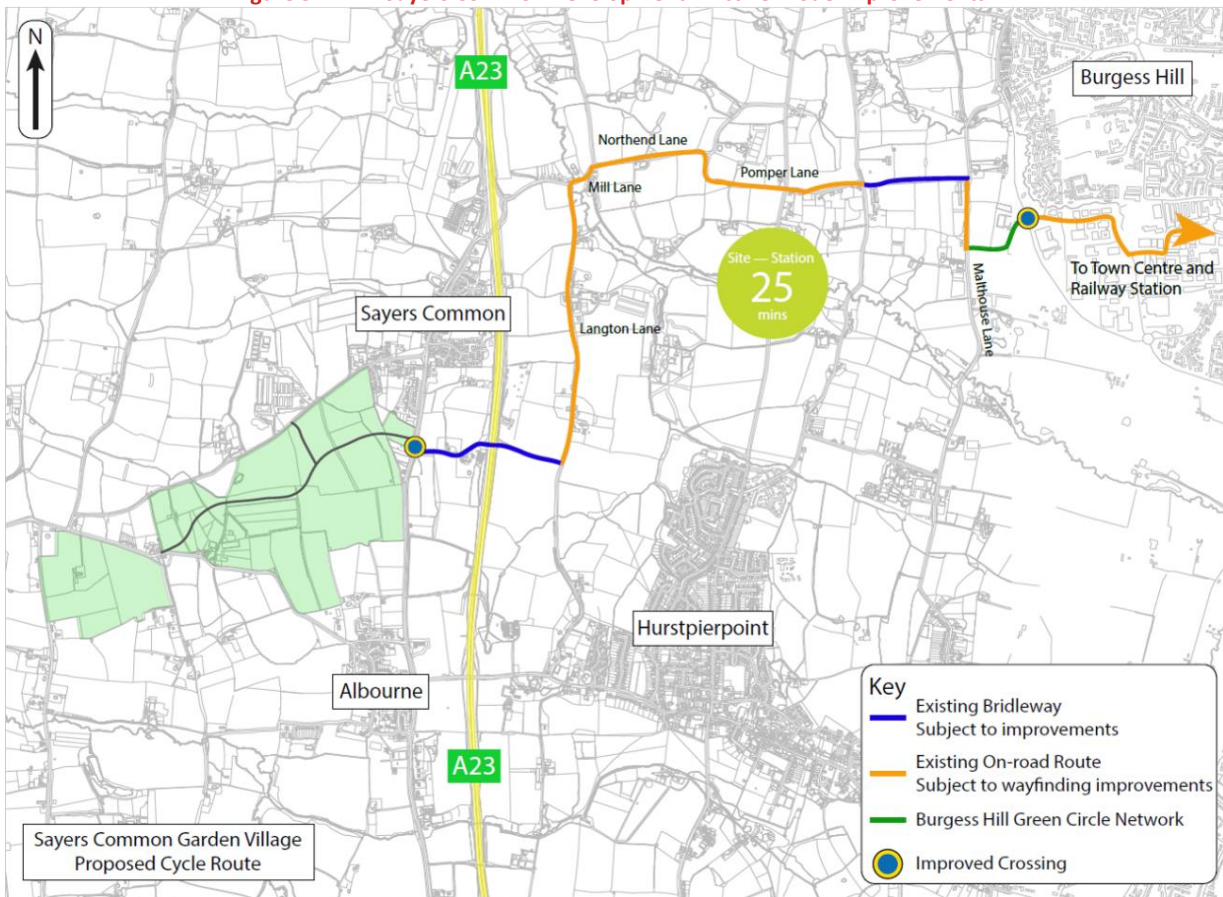


Figure 6. Land West of Burgess Hill Development - Active Mode Improvements

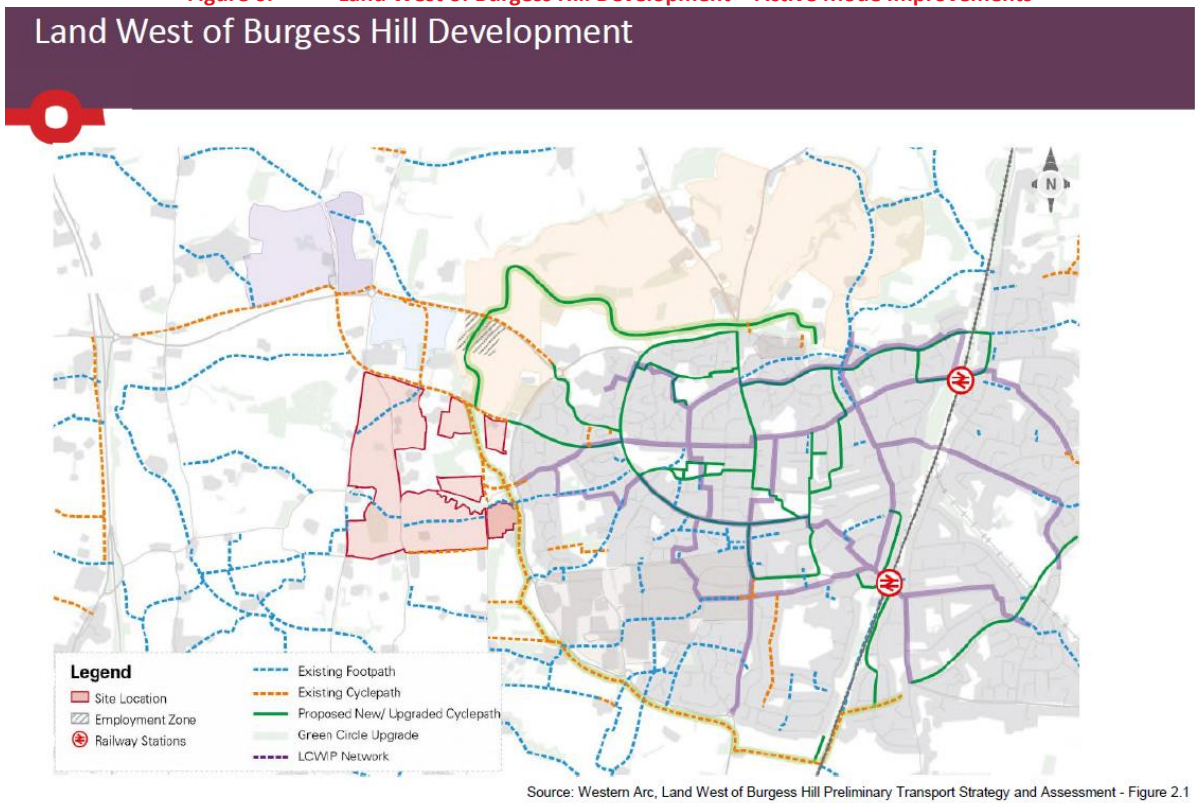
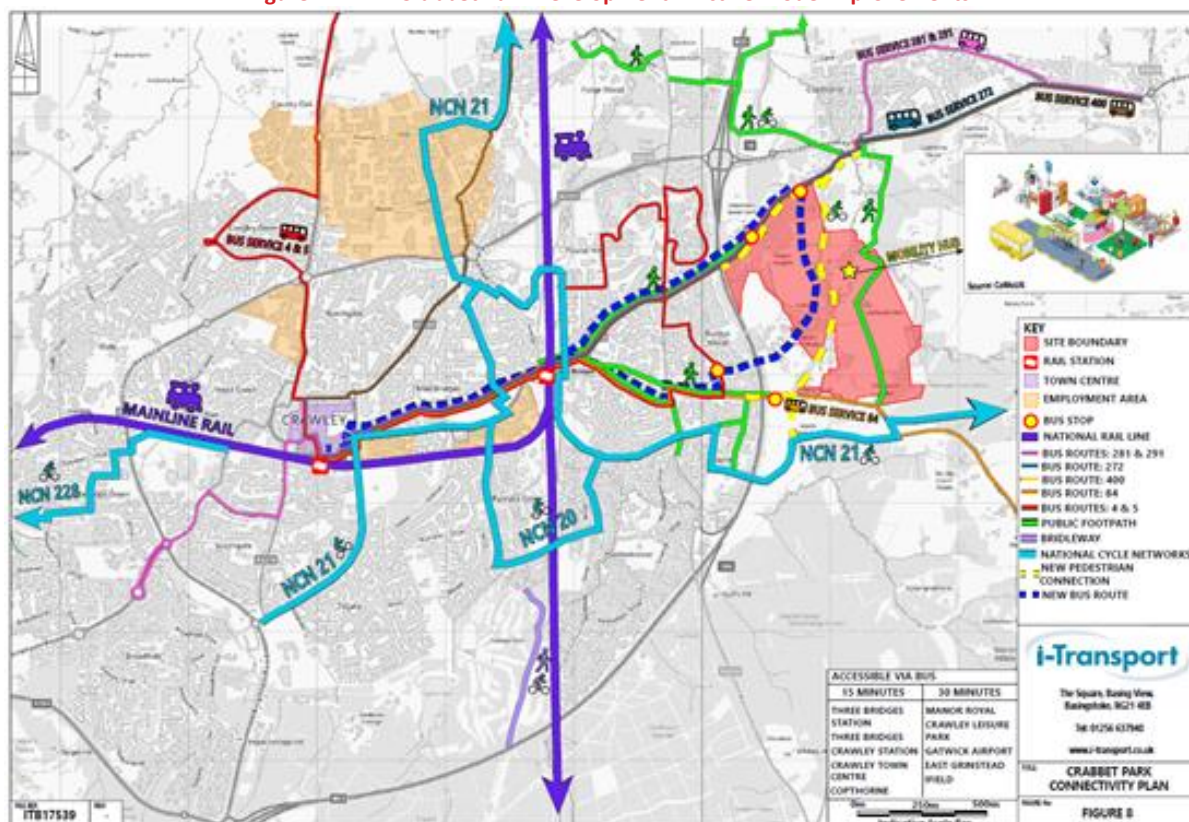


Figure 7. Crabbet Park Development - Active Mode Improvements



Methodology for Implementation into Local Plan Scenario Model

- 3.4.7 A review into mode shift achieved in a range of other studies (delivered by SYSTRA) has been undertaken to understand what level of mode shift from highway to active modes could be justifiably and robustly applied to the model.

Evidence from other Studies

- 3.4.8 In Aberdeen, active travel improvements have been proposed across various areas, including the City Centre Masterplan area. These proposals aim to encourage cycling and walking, reducing short-distance car use. A 5% reduction in road vehicle trips within a 5km radius of improvement areas is expected for commuter and similar trips, although the actual shift to cycling might come from public transport or walking.³
- 3.4.9 Research in London Borough of Lambeth, indicates that the introduction of Low Traffic Neighbourhoods (LTNs) led residents to reduced car and LGV trips, with a 6% decrease in total compared to the prior year. For shorter and local trips, the reduction in driving could be even more significant. This suggests that LTNs can play a vital role in reducing residents' reliance on cars and local traffic volumes.

³ Aberdeen Master Plan - <https://www.aberdeencity.gov.uk/sites/default/files/2018-06/Aberdeen%20City%20Centre%20Masterplan%20and%20Delivery%20Programme.pdf>

- 3.4.10 Another study examined the impact of active travel interventions in Outer London between 2015-2019, specifically focusing on low traffic neighbourhoods and cycle tracks. It found statistically significant reductions in car/van ownership in areas with LTNs (-6%) and smaller reductions in areas with cycle tracks (-2%) after two years. These effects persisted even after adjusting for changing demographics. This research suggests that active travel interventions, especially those involving low traffic neighbourhoods, can effectively reduce motor vehicle ownership.⁴
- 3.4.11 The Tyneside Air Quality project involved measures to improve air quality in central Newcastle, targeting areas with air quality issues, including the Tyne Bridge location. A 1.4% reduction in vehicle trips was calculated using the DfT Propensity to Cycle tool, which informed the modelling scenarios for future plans, aligning with the goal of improving air quality and promoting cycling.⁵
- 3.4.12 In summary, these studies and initiatives demonstrate the potential for active travel interventions like Low Traffic Neighbourhoods and cycling measures to reduce car use, vehicle ownership, and improve air quality in urban areas.

Conclusion of Studies informing Modelling Assumptions

- 3.4.13 Studies with % reductions of 5-6% are including of cycle schemes and additional measures in more urban areas. Where only cycles schemes are implemented, the studies indicate between a 1-2% reduction in highway traffic. It is noted the additional shift from other modes to cycling/active, with a larger proportion coming from PT than Highway. As such, a 2% value has been assumed for cycle improvements, with multiple cycle corridor improvement impacts in a single O-D pair up to a maximum of 3%, as multiple corridors are not expected to double (or more) mode shift benefits.
- 3.4.14 Benefits will only be applied to O-D pairs that are expected to have direct geographical travel improvements, such as trips made between the O-D pairs that are directly along the cycle corridor, or within limits at either end (such as for travel where a cycle corridor would improve connectivity between towns).

⁴ Impacts of Low Traffic Neighbourhoods - <https://findingspress.org/article/18200-the-impact-of-low-traffic-neighbourhoods-and-other-active-travel-interventions-on-vehicle-ownership-findings-from-the-outer-london-mini-holland-progr>

⁵ Tyneside Air Quality Feasibility Study - <https://my.northtyneside.gov.uk/sites/default/files/meeting/related-documents/3%20Tyneside%20Air%20Quality%20Feasibility%20Study%20Report%20v11-FINAL%2018.2.19.pdf> – Extract relates to a accompanying note not available to the public – the Early Measures Fund for Local NO2 Compliance which uses the PCT (propensity to cycle tool) to inform mode shift.

4. 2039 SCENARIO 5 CAPACITY IMPACTS

4.1 Introduction

4.1.1 This chapter reports on the outputs from the modelling and specifically the forecast impact(s) on junction operational performance as a result of development related traffic growth in Scenario 5 compared to the Reference Case. The following items are included:

- Traffic Flow Impacts
- Impacts on the M23 and A23 Strategic Road Network
- Identification of Junctions with Capacity Impacts
- Cross Boundary Impacts

4.1.2 Reporting includes assessment of locations in neighbouring authorities.

4.2 Traffic Flow Impacts

4.2.1 Appendix D includes highway traffic flow difference plots to identify the impact of Scenario 5 on traffic movements compared to the Reference Case.

4.2.2 In addition to the new traffic directly associated with the Local Plan sites, these plots highlight any re-routing of traffic that may result from localised congestion or redistribution of existing trips. These plots identify where the net change to traffic flow is most pronounced.

4.2.3 For the flow difference plots the absolute difference traffic volume (in passenger car units, PCUs) is identified adjacent to the appropriate link. Blue lines identify a reduction against the comparative scenario and green lines an increase. In addition, the scale of the change is represented graphically with the coloured lines of varying width.

4.3 Impacts on the M23 and A23 Strategic Road Network

Main Carriageways, Merges and Diverges

4.3.1 This section reports the impacts on the M23 and A23 Strategic Road Network (SRN) with assessment based on the Design Manual for Roads and Bridges CD122 Geometric design of grade separated junctions (DMRB CD 122).

4.3.2 Table 4 summarises the Reference Case and Scenario 5 vehicle flows on the mainline sections between the main junctions. Bold numbers denote traffic flows which exceed the maximum vehicles per hour calculated from the number of lanes and the mainline maximum vehicles per hour (vph) per lane as stated in DMRB CD 122 paragraph 3.8.

4.3.3 DMRB CD 122 notes (below paragraph 3.8) the following:

The flows for maximum vph per lane do not represent the maximum hourly throughputs that are possible, but greater flows often results in decreasing levels of service and safety.

Table 4. Scenario 5: M23 and A23 Vehicle Flows – Mainline Sections

Location	Ref Case No. of Lanes	Max. Vehicles per hour per lane	Max. Vehicles per hour	AM Dem (Veh) Ref	AM Dem (Veh) Sc	Diff from 2039 Ref	% Diff	PM Dem (Veh) Ref	PM Dem (Veh) Sc	Diff from 2039 Ref	% Diff
M23 / A23											
Northbound											
A23 - A27 to A273 DIVERGE	3	1600	4800	4275	4363	88	2%	3445	3746	301	9%
A23 - A273 MERGE to A281 DIVERGE	2	1600	3200	3755	3875	121	3%	2652	2915	264	10%
A23 - A281 MERGE to B2117 DIVERGE	2	1600	3200	3634	3843	209	6%	2331	2589	257	11%
A23 - B2117 DIVERGE to B2118 MERGE	2	1600	3200	3203	3399	196	6%	1830	1827	-2	0%
A23 - B2118 MERGE to A2300 DIVERGE	2	1600	3200	3748	4022	274	7%	2206	2369	162	7%
A23 - A2300 MERGE to A272 DIVERGE	3	1600	4800	4999	5289	290	6%	3779	3923	144	4%
A23 - A272 MERGE to B2115 DIVERGE	3	1600	4800	4624	4980	357	8%	3532	3672	140	4%
A23 - B2115 MERGE to B2110 DIVERGE	3	1600	4800	4720	5184	464	10%	3613	3730	117	3%
A23 - B2110 MERGE to J11 DIVERGE	3	1600	4800	5396	5797	402	7%	4084	4167	83	2%
M23 - J11 MERGE - J10a MERGE	3	1800	5400	4695	4927	232	5%	3637	3702	64	2%
M23 - J10a MERGE to J10 DIVERGE	3	1800	5400	5183	5431	248	5%	3922	3986	65	2%
M23 - J10 MERGE to J9 DIVERGE	4	1800	7200	4727	5064	337	7%	4347	4413	66	2%
M23 - J9 MERGE to J8 DIVERGE	4	1800	7200	4573	4820	247	5%	4977	5022	45	1%
M23 / A23											
Southbound											
M23 - J8 MERGE to J9 DIVERGE	4	1800	7200	5283	5336	53	1%	5383	5546	163	3%
M23 - J9 MERGE to J10 DIVERGE	4	1800	7200	4791	4854	63	1%	5248	5481	233	4%
M23 - J10 MERGE to J10a DIVERGE	3	1800	5400	4140	4331	191	5%	5202	5409	206	4%
M23 - J10a DIVERGE - J11 DIVERGE	3	1800	5400	3446	3580	134	4%	4425	4560	135	3%
A23 - J11 MERGE to B2114 DIVERGE	3	1600	4800	3738	3919	181	5%	5170	5326	156	3%
A23 - B2114 DIVERGE to B2110 MERGE	3	1600	4800	3431	3595	165	5%	4516	4758	242	5%
A23 - B2110 MERGE to B2115 DIVERGE	3	1600	4800	3730	3916	186	5%	4792	5081	289	6%
A23 - B2115 MERGE to A272 DIVERGE	3	1600	4800	3617	3844	228	6%	5009	5401	392	8%
A23 - A272 MERGE to A2300 DIVERGE	3	1600	4800	3699	3879	180	5%	5109	5471	361	7%
A23 - A2300 MERGE to B2118/Mill Lane DIVERGE	3	1600	4800	2971	3066	96	3%	4678	5073	395	8%
A23 - B2118/Mill Lane DIVERGE to B2117 MERGE	2	1600	3200	2448	2352	-96	-4%	4109	4033	-75	-2%
A23 - B2117 MERGE to A281 DIVERGE	2	1600	3200	2951	3226	275	9%	4154	4204	50	1%
A23 - A281 MERGE to A273 DIVERGE	2	1600	3200	3414	3752	338	10%	4168	4226	58	1%
A23 - A273 MERGE to A27	3	1600	4800	4081	4236	155	4%	5369	5371	2	0%

- 4.3.4 The highest percentage increase in the AM peak is the on the A23 northbound between the B2115 and the B2110 and southbound between the A281 and the A273. Both of these are a 10% increase.
- 4.3.5 The highest percentage increases in the PM peak are both northbound on the A23 between the A273 and the A281, and between the A281 and the B2117, which are 10% and 11% respectively.
- 4.3.6 There are some locations where the maximum vehicles per hour is exceeded. Most of these also exceed the threshold in the reference case as well.
- 4.3.7 Table 5 summarises the vehicle flows on the merges and diverges. Bold numbers show where the forecast traffic flow exceeds a vehicle flow of 1350 vph per lane on motorway merges and diverges and 1200 vph per lane on non-motorway merges and diverges.

Table 5. Scenario 5: M23 and A23 Vehicle Flows – Merges and Diverges

Location	Ref Case No. of Lanes	Max. Vehicles per hour per lane	Max. Vehicles per hour	Ref Case		Scenario 5		Ref Case		Scenario 5	
				AM Dem (Veh)	AM Dem (Veh)	Diff from 2039 Ref	% Diff	PM Dem (Veh)	PM Dem (Veh)	Diff from 2039 Ref	% Diff
M23 / A23											
Northbound											
A273 DIVERGE	1	1200	1200	799	860	61	8%	943	986	43	5%
A273 MERGE	1	1200	1200	279	373	93	33%	149	155	6	4%
A281 DIVERGE	1	1200	1200	305	393	88	29%	375	375	0	0%
A281 MERGE	1	1200	1200	184	361	177	96%	55	49	-6	-11%
B2117 DIVERGE	1	1200	1200	431	444	13	3%	502	761	260	52%
B2118 MERGE	1	1200	1200	545	622	77	14%	377	542	165	44%
A2300 DIVERGE	1	1200	1200	221	344	123	56%	69	59	-11	-15%
A2300 MERGE	1	1200	1200	1472	1611	140	9%	1642	1613	-29	-2%
A272 DIVERGE	1	1200	1200	611	569	-42	-7%	441	460	19	4%
A272 MERGE	1	1200	1200	236	260	24	10%	193	208	15	8%
B2115 DIVERGE	1	1200	1200	273	262	-12	-4%	141	172	31	22%
B2115 MERGE	1	1200	1200	370	466	96	26%	222	230	8	4%
B2110 DIVERGE	1	1200	1200	386	434	48	12%	176	205	29	16%
B2110 MERGE	1	1200	1200	1062	1047	-15	-1%	647	642	-5	-1%
J11 DIVERGE	2	1350	2700	1771	1948	177	10%	1676	1706	30	2%
J11 MERGE	1	1350	1350	1070	1078	8	1%	1229	1240	11	1%
J10a MERGE	1	1350	1350	489	505	16	3%	284	284	0	0%
J10 DIVERGE	2	1350	2700	1522	1616	94	6%	1134	1160	25	2%
J10 MERGE	2	1350	2700	1065	1248	183	17%	1560	1587	27	2%
J9 DIVERGE	2	1350	2700	1622	1712	90	6%	921	944	23	2%
J9 MERGE	2	1350	2700	1469	1469	0	0%	1551	1553	1	0%
M23 / A23											
Southbound											
J9 DIVERGE	2	1350	2700	1382	1377	-5	0%	1752	1743	-8	0%
J9 MERGE	2	1350	2700	890	895	5	1%	1617	1679	62	4%
J10 DIVERGE	2	1350	2700	1757	1704	-53	-3%	1295	1423	128	10%
J10 MERGE	2	1350	2700	1106	1181	75	7%	1249	1350	101	8%
J10a DIVERGE	2	1350	2700	693	750	57	8%	778	849	71	9%
J11 DIVERGE	2	1350	2700	1191	1220	29	2%	1032	1063	31	3%
J11 MERGE	1	1350	1350	1483	1558	76	5%	1777	1830	53	3%
B2114 DIVERGE	1	1200	1200	307	324	17	5%	654	569	-86	-13%
B2110 MERGE	1	1200	1200	299	321	21	7%	277	324	47	17%
B2115 DIVERGE	1	1200	1200	348	315	-33	-9%	405	349	-57	-14%
B2115 MERGE	1	1200	1200	234	244	9	4%	622	668	46	7%
A272 DIVERGE	1	1200	1200	273	293	20	7%	351	390	38	11%
A272 MERGE	1	1200	1200	461	480	18	4%	705	759	55	8%
A2300 DIVERGE	2	1200	2400	1497	1586	88	6%	1197	1281	84	7%
A2300 MERGE	1	1200	1200	769	773	4	1%	766	884	118	15%
B2118/Mill Lane DIVERGE	1	1200	1200	522	715	192	37%	569	1040	470	83%
B2117 MERGE	1	1200	1200	503	875	371	74%	46	171	125	272%
A281 MERGE	1	1200	1200	462	525	63	14%	14	22	8	58%
A273 DIVERGE	1	1200	1200	216	337	121	56%	24	39	15	63%
A273 MERGE	1	1200	1200	883	821	-62	-7%	1224	1183	-41	-3%

4.3.8 There are some locations where the maximum vehicle flow is exceeded including the A2300 northbound merge in both peaks, and the M23 Junction 11 southbound merge in both peaks. For these instances the maximum vehicle flow is also exceeded in the Reference Case.

M23 Junctions 9, 10, and 11

4.3.9 Table 6 shows model results at the approach arms and main circulatory links at Junctions 9, 10 and 11 of the M23. The following results are shown for Scenario 5 alongside the Reference Case, for the AM and PM peak models:

- Demand in vehicles

- Ratio of flow to capacity (RFC)
- Average vehicle delay in seconds
- Average queue length in passenger car units (PCUs)

Table 6. Scenario 5: M23 Junctions 9, 10 and 11 – Approach Arm Results

Junction	Approach Arm	2039 Reference Case								2039 Scenario 5							
		AM Dem (Veh)	AM RFC (%)	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	PM Delay (s)	PM Avg Q (pcu)	AM Dem (Veh)	AM RFC (%)	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	PM Delay (s)	PM Avg Q (pcu)
Junction 9	M23 Southbound off-slip (N)	1382	58.8	11.4	3.7	1752	95.1	33.3	8.5	1377	58.7	11.3	3.7	1743	94.6	32.3	8.4
	M23 Northbound off-slip (S)	1622	45.0	1.0	0.0	921	25.1	0.7	0.0	1712	46.5	1.0	0.0	944	25.5	0.7	0.0
	Gatwick Spur (W)	1051	54.0	3.0	0.0	1676	77.1	3.0	0.0	1054	54.1	3.0	0.0	1710	77.1	3.0	0.0
	Circulatory North	890	84.5	30.1	5.1	1617	98.4	51.8	7.2	895	84.9	30.3	5.1	1679	100.1	66.0	7.8
	Circulatory East	2272	38.1	0.5	0.0	3369	53.4	0.6	0.0	2272	38.1	0.5	0.0	3422	53.7	0.6	0.0
	Circulatory South	1382	31.3	0.6	0.0	1752	37.7	0.6	0.0	1377	31.2	0.6	0.0	1743	37.2	0.6	0.0
Junction 10	M23 Southbound off-slip (N)	1757	88.6	24.3	8.4	1295	58.3	14.7	4.6	1704	84.1	21.7	7.9	1423	62.4	16.1	5.4
	Copthorne Way (E)	678	33.2	18.5	2.7	1403	79.8	93.7	21.3	961	45.4	20.3	3.8	1489	83.3	96.4	23.5
	M23 Northbound off-slip (S)	1522	66.3	43.1	13.8	1134	66.9	84.1	14.0	1616	69.0	45.9	14.6	1160	67.9	93.3	17.0
	A2011 Crawley Avenue (W)	1830	84.9	21.7	8.4	2262	76.2	14.2	7.0	1817	83.3	21.1	8.2	2259	75.2	14.0	6.8
	Circulatory North	1480	98.7	55.0	7.7	1417	102.5	116.4	24.7	1521	100.2	68.8	9.0	1443	102.9	123.3	27.2
	Circulatory East	1827	79.2	16.7	7.0	1243	45.6	12.7	4.0	1824	78.8	16.5	6.9	1335	48.2	13.5	4.6
	Circulatory South	1400	72.4	22.1	7.9	1397	60.5	13.4	4.6	1604	81.3	25.4	9.6	1474	62.7	13.9	4.9
	Circulatory West	715	47.0	18.4	2.7	714	62.5	30.2	3.6	952	60.5	19.7	3.6	771	66.0	30.3	3.9
Junction 11	M23 Southbound off-slip (NE)	1191	56.6	17.2	4.8	1032	76.6	28.4	6.1	1220	58.0	17.4	5.0	1063	78.4	29.0	6.3
	Brighton Road (S)	1273	54.8	22.0	7.0	765	35.2	19.6	4.0	1284	54.8	22.1	7.0	756	34.7	19.6	4.0
	M23 Northbound off-slip (SW)	1165	32.2	9.9	2.9	656	19.3	9.1	1.8	1231	33.3	10.0	3.0	681	19.9	9.2	1.8
	A264 (W)	1055	48.1	21.1	5.8	802	35.1	19.6	4.0	1087	49.4	21.3	6.0	855	37.4	19.9	4.3
	A23 Brighton Road (N)	1016	45.2	13.7	3.5	2034	88.4	29.3	12.6	1047	46.2	14.0	3.6	2112	90.6	31.3	13.2
	Circulatory NE	1174	63.4	16.5	4.7	1989	74.0	11.8	5.0	1227	65.5	16.8	4.9	2089	76.9	12.4	5.3
	Circulatory South	2365	56.1	11.1	6.4	3021	67.8	13.0	9.3	2446	57.7	11.3	6.8	3152	70.1	13.5	10.1
	Circulatory SW	1142	98.1	57.6	6.5	941	78.5	24.9	4.8	1137	97.4	53.2	6.4	995	82.4	26.6	5.1
	Circulatory West	2307	66.2	59.1	16.8	1597	46.4	19.2	7.0	2369	67.1	63.8	20.2	1676	48.3	19.4	7.2
	Circulatory North	2804	86.0	17.3	10.9	2063	64.3	18.3	9.4	2870	86.8	17.6	11.1	2153	66.7	18.4	9.8

4.3.10 The tables show some RFCs in excess of 90%, however these are already present in Reference Case and not significantly added to in Scenario 5.

4.4 Identification of Junctions with Capacity Impacts

4.4.1 The impact of development was assessed based on the National Planning Policy Framework (NPPF) using criteria agreed by MSDC and WSCC. These were derived using WSCC’s position statement in relation to the NPPF which sets out their interpretation of terms defining traffic impacts, namely “significant amount of movement” and “severe impacts”. In addition, a “showstopper” is defined as a location where the impacts do not have a reasonable prospect of being able to comply with NPPF paragraph 32.

4.4.2 An approach was devised to identify junctions forecast to experience ‘severe’ impacts in the future due to the strategic developments. This uses appropriately selected criteria to reflect the interpretation of the NPPF. A ‘severe’ impact is defined as a junction with any approach arm experiencing both of the following:

- a junction with an increase in ratio of flow to capacity (RFC) of **3%** or more to an RFC of **95%** or more in any peak, in any Scenario; and
- an increase in average delay of **30 seconds** or more to an average delay of **two minutes** or more in any peak hour, in any Scenario

4.4.3 A ‘significant’ impact is a junction with any approach arm experiencing the following:

- a junction with an increase in ratio of flow to capacity (RFC) of **3%** or more to an RFC of **85%** or more in any peak hour, in any Scenario

4.4.4 The criteria for defining and categorising capacity impact into Significant/Severe have been agreed with West Sussex County Council.

4.4.5 Table 7 shows how many junctions are forecast to be impacted significantly or severely in Scenario 5 when compared to the Reference Case.

ID	Area	Junction	Scenario v Ref	'Severe' change in Ref v 2019 also?	Number of junction arms meeting 'Severe' criteria		Total over capacity demand where 'Severe'	Average change in delay where 'Severe' (secs)
					AM	PM	AM+P	AM+P
N1	Copthorne	A264 / A2220 Copthorne	SIG.		0	0	0	0
N4	Copthorne	B2028 / B2037 Copthorne	SIG.		0	0	0	0
N6	East Grinstead	A22 / Imberhorne Lane	SIG.		0	0	0	0
N7	Crawley Down	B2028 Turners Hill Road / Wallage Lane	SIG.		0	0	0	0
N8	Turners Hill	B2110 / B2028 Turners Hill	SEVERE	YES	1	0	88	77
N10	West Hoathly	Selsfield Road / Vowels Lane	SIG.		0	0	0	0
N11	Crawley	A2220 / B2036 (CRAWLEY)	SIG.		0	0	0	0
N13	Crawley	A2220 Haslett Avenue / St. Mary's Drive (CRAWLEY)	SIG.		0	0	0	0
N13a	Crawley	A2220 Haslett Avenue / Station Hill (CRAWLEY)	SIG.		0	0	0	0
N14	Crawley	B2036 Balcombe Road / Worth Road (CRAWLEY)	SIG.		0	0	0	0
N15	Crawley	Gatwick Road / Manor Royal (CRAWLEY)	SIG.		0	0	0	0
N16	Crawley	B2036 Balcombe Rd / B2037 Antlands Ln (CRAWLEY)	SIG.		0	0	0	0
N17	Tandridge	Redehall Road / B2037 (TANDRIDGE DISTRICT)	SIG.		0	0	0	0
N18	Handcross	A23 / B2110 Northbound On-Slip	SIG.		0	0	0	0
N21	Balcombe	Haywards Heath Road / Bramble Hill	SIG.		0	0	0	0
N22	Balcombe	B2036 / B2110	SIG.		0	0	0	0
N25	Crawley	Hazlewick Avenue / Bycroft Way (CRAWLEY)	SIG.		0	0	0	0
N27	Handcross	B2114 / B2110 Handcross	SIG.		0	0	0	0
N29	Crawley	B2036 / Radford Road	SIG.		0	0	0	0
C5	Haywards Heath	B2114 / B2036 Whitemans Green	SIG.		0	0	0	0
C6	Cuckfield	B2036 / Ardingly Road, Whitemans Green	SIG.		0	0	0	0
C7	Ansty	A272 / B2036	SEVERE		0	1	104	80
C10	Bolney	A23 / A272 Bolney Road	SIG.		0	0	0	0
C10a	Bolney	London Road / A272 Cowfold Road	SIG.		0	0	0	0
C11	North Chailey	A272 / A275 North Chailey	SIG.		0	0	0	0
C12	Haywards Heath	A273 / Isaac's Lane / Traustein Way	SEVERE		1	0	123	73
C14	Haywards Heath	A272 / Rocky Lane	SIG.		0	0	0	0
C17	Haywards Heath	B2112 / B2272	SIG.		0	0	0	0
S1	Burgess Hill	A23 / A2300 Southbound On-Slip	SIG.		0	0	0	0
S2	Burgess Hill	A23 / A2300 Eastern Roundabout	SEVERE	YES	1	0	251	60
S3	Burgess Hill	A2300 / Cuckfield Road	SEVERE		1	0	89	126
S4	Burgess Hill	Cuckfield Road / The Hub	SIG.		0	0	0	0
S6	Burgess Hill	Junction Road / B2113, Burgess Hill	SEVERE	YES	1	0	50	79
S7	Hurstpierpoint	B2117 / B2116 Hurstpierpoint	SIG.		0	0	0	0
S8	Hassocks	A273 / B2116 Hassocks (Stonepound)	SEVERE	YES	1	1	75	187
S9	Pyecombe	A23 / A281 Southbound On-Slip	SIG.		0	0	0	0
S10	Ditchling	B2112 / B2116 Ditchling (LEWES DISTRICT)	SIG.		0	0	0	0
S19	Hassocks	B2112 / Lodge Lane	SIG.		0	0	0	0
S21	Burgess Hill	B2112 / Green Road (LEWES DISTRICT)	SEVERE		1	0	110	88
S22	Burgess Hill	Valebridge Road / Junction Road / Leylands Road	SEVERE		1	0	46	65
S23	Burgess Hill	A273 / B2036 / Marchants Way	SIG.		0	0	0	0
S26	Burgess Hill	A273 / York Road	SIG.		0	0	0	0
S30	Burgess Hill	B2036 London Road / West Street	SIG.		0	0	0	0
S32	Burgess Hill	B2036 / Lower Church Road / Royal George Rd.	SIG.		0	0	0	0
S33	Burgess Hill	A273 Jane Murray Way / B2036 London Road	SIG.		0	0	0	0
S34	Burgess Hill	B2036 Cuckfield Road / A273 Isaacs Lane	SIG.		0	0	0	0
S35	Sayers Common	A23 / B2118 Sayers Common	SEVERE		1	0	109	263
S36	Burgess Hill	Wivelsfield Green (LEWES DISTRICT)	SIG.		0	0	0	0
S38	Burgess Hill	A23 / A2300 Western Roundabout	SEVERE		1	0	5	240
S44	Burgess Hill	Valebridge Road / Janes Lane	SIG.		0	0	0	0
S45	Burgess Hill	A2300 / A273 Jane Murray Way	SEVERE		1	0	154	71
S46	Burgess Hill	A23 / B2117 Southbound On-Slip	SIG.		0	0	0	0
S47	Burgess Hill	B2036 London Road / Dunstall Avenue / Maple Drive	SIG.		0	0	0	0

Table 7. Scenario 5: 'Severe' and 'Significant' Junction Impacts

4.4.6 Scenario 5 has 41 junctions that are significantly impacted and 12 that are severely impacted.

Severe Junctions:

- N8: B2110 / B2028 Turners Hill
- C7: A272 / B2036 Ansty
- C12: A273 / Isaac's Lane / Traustein Way
- S2: A23 / A2300 Eastern Roundabout
- S3: A2300 / Cuckfield Road
- S6: Junction Road / B2113, Burgess Hill
- S8: A273 / B2116 Hassocks (Stonepound)
- S21: B2112 / Green Road (LEWES DISTRICT)
- S22: Valebridge Road / Junction Road / Leylands Road
- S35: A23 / B2118 Sayers Common
- S38: A23 / A2300 Western Roundabout
- S45: A2300 / A273 Jane Murray Way

4.4.7 Figure 8 shows the locations of the significant and severely impacted junctions in Scenario 5.

4.4.8 **Appendix B1** summarises the results for all Scenarios (5, 5m2, 5m4, 5m5) and **Appendix C** shows detailed results by approach arm.

4.5 Cross Boundary Impacts

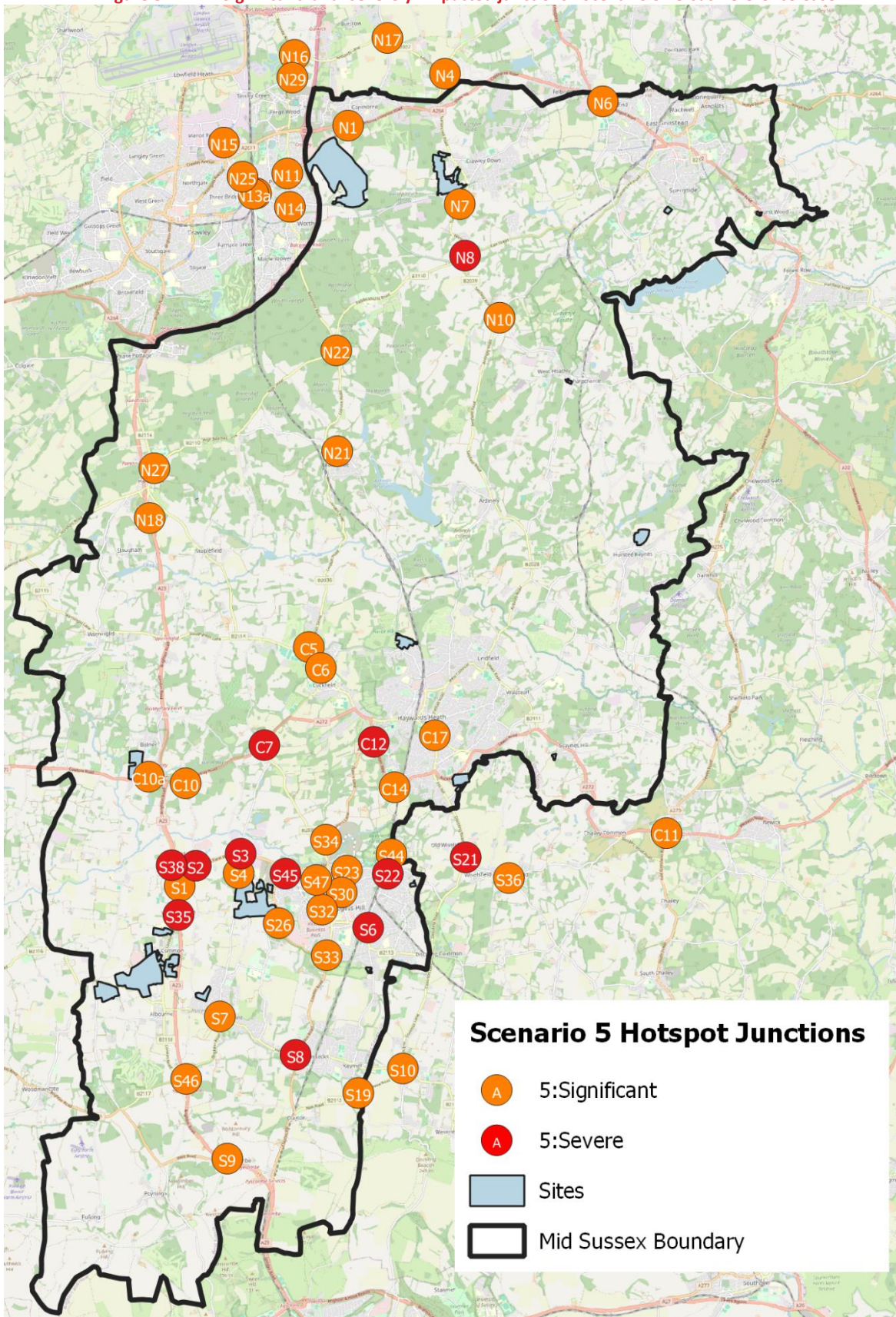
4.5.1 The analysis includes appropriate assessment of impact in neighbouring authorities, the extent of which is defined by the scale and location of the developments. These are:

- Crawley Borough;
- Horsham District;
- Tandridge District;
- Wealden District; and
- Lewes District

4.5.2 There is one junction in neighbouring authorities which experience a 'severe' impact:

- Lewes District: S21

Figure 8. 'Significant' and 'severely' impacted junctions - Scenario 5 versus Reference Case



5. SCENARIO 5 WITH CAR TRIP RATE REDUCTION (5M2) CAPACITY IMPACTS

5.1 Introduction

5.1.1 This chapter describes the results of Scenario 5m2 which based on research and analysis by SYSTRA which is detailed in Chapter 3.3 of this report, and was also informed by submissions made by the large site promoters, tests the potential impact of initial car trip rate reductions as a result of home working, internalisation and mode share assumptions for trips to and from the large sites.

5.1.2 The impacts of Scenario 5m2 compared to the Reference Case are summarised by the following categories:

- Traffic Flow Impacts
- Impacts on the M23 and A23 Strategic Road Network
- Identification of Junctions with Capacity Impacts

5.1.3 Reporting includes assessment of locations in neighbouring authorities.

5.2 Traffic Flow Impacts

5.2.1 Appendix D – includes highway traffic flow difference plots to identify the impact of Scenario 5m2 on traffic movements compared to the Reference Case.

5.3 Impacts on the M23 and A23 Strategic Road Network

Main Carriageways, Merges and Diverges

5.3.1 This section reports the impacts on the M23 and A23 Strategic Road Network with assessment based on the Design Manual for Roads and Bridges CD122 Geometric design of grade separated junctions (DMRB CD 122).

5.3.2 Table 8 summarises the Reference Case and Scenario 5m2 vehicle flows on the mainline sections between the main junctions. Bold numbers denote traffic flows which exceed the maximum vehicles per hour calculated from the number of lanes and the mainline maximum vehicles per hour (vph) per lane as stated in DMRB CD 122 paragraph 3.8.

5.3.3 DMRB CD 122 notes (below paragraph 3.8) the following:

The flows for maximum vph per lane do not represent the maximum hourly throughputs that are possible, but greater flows often results in decreasing levels of service and safety.

Table 8. Scenario 5m2: M23 and A23 Vehicle Flows – Mainline Sections

Location	Ref Case No. of Lanes	Max. Vehicles per hour per lane	Max. Vehicles per hour	AM Dem (Veh) Ref	AM Dem (Veh) Sc	Diff from 2039 Ref	% Diff	PM Dem (Veh) Ref	PM Dem (Veh) Sc	Diff from 2039 Ref4	% Diff
M23 / A23											
Northbound											
A23 - A27 to A273 DIVERGE	3	1600	4800	4275	4287	12	0%	3445	3678	233	7%
A23 - A273 MERGE to A281 DIVERGE	2	1600	3200	3755	3778	24	1%	2652	2871	219	8%
A23 - A281 MERGE to B2117 DIVERGE	2	1600	3200	3634	3701	67	2%	2331	2545	213	9%
A23 - B2117 DIVERGE to B2118 MERGE	2	1600	3200	3203	3316	113	4%	1830	1821	-8	0%
A23 - B2118 MERGE to A2300 DIVERGE	2	1600	3200	3748	3975	227	6%	2206	2477	270	12%
A23 - A2300 MERGE to A272 DIVERGE	3	1600	4800	4999	5217	218	4%	3779	4048	268	7%
A23 - A272 MERGE to B2115 DIVERGE	3	1600	4800	4624	4875	252	5%	3532	3769	237	7%
A23 - B2115 MERGE to B2110 DIVERGE	3	1600	4800	4720	5066	346	7%	3613	3826	213	6%
A23 - B2110 MERGE to J11 DIVERGE	3	1600	4800	5396	5685	289	5%	4084	4251	167	4%
M23 - J11 MERGE - J10a MERGE	3	1800	5400	4695	4854	160	3%	3637	3730	93	3%
M23 - J10a MERGE to J10 DIVERGE	3	1800	5400	5183	5329	146	3%	3922	4017	96	2%
M23 - J10 MERGE to J9 DIVERGE	4	1800	7200	4727	4955	228	5%	4347	4470	123	3%
M23 - J9 MERGE to J8 DIVERGE	4	1800	7200	4573	4755	182	4%	4977	5024	46	1%
M23 / A23											
Southbound											
M23 - J8 MERGE to J9 DIVERGE	4	1800	7200	5283	5366	83	2%	5383	5523	141	3%
M23 - J9 MERGE to J10 DIVERGE	4	1800	7200	4791	4928	137	3%	5248	5456	208	4%
M23 - J10 MERGE to J10a DIVERGE	3	1800	5400	4140	4305	165	4%	5202	5289	86	2%
M23 - J10a DIVERGE - J11 DIVERGE	3	1800	5400	3446	3610	164	5%	4425	4499	74	2%
A23 - J11 MERGE to B2114 DIVERGE	3	1600	4800	3738	3952	214	6%	5170	5305	135	3%
A23 - B2114 DIVERGE to B2110 MERGE	3	1600	4800	3431	3644	214	6%	4516	4739	224	5%
A23 - B2110 MERGE to B2115 DIVERGE	3	1600	4800	3730	3981	251	7%	4792	5031	239	5%
A23 - B2115 MERGE to A272 DIVERGE	3	1600	4800	3617	3900	283	8%	5009	5329	321	6%
A23 - A272 MERGE to A2300 DIVERGE	3	1600	4800	3699	4111	412	11%	5109	5424	315	6%
A23 - A2300 MERGE to B2118/Mill Lane DIVERGE	3	1600	4800	2971	3160	189	6%	4678	5002	324	7%
A23 - B2118/Mill Lane DIVERGE to B2117 MERGE	2	1600	3200	2448	2390	-58	-2%	4109	4031	-77	-2%
A23 - B2117 MERGE to A281 MERGE	2	1600	3200	2951	3190	239	8%	4154	4177	23	1%
A23 - A281 MERGE to A273 DIVERGE	2	1600	3200	3414	3730	317	9%	4168	4193	25	1%
A23 - A273 MERGE to A27	3	1600	4800	4081	4246	165	4%	5369	5346	-23	0%

- 5.3.4 The highest percentage increase in the AM peak are southbound on the A23 between the A272 and the A2300, where the increase is up to approximately 11%.
- 5.3.5 The highest percentage increases in the PM peak are northbound on the A23 between the B2118, the A2300 and where the increase is up to approximately 12%.
- 5.3.6 There are some locations where the maximum vehicles per hour is exceeded. However, it should be noted that many of these are also exceeded in the Reference Case.
- 5.3.7 Table 9 summarises the vehicle flows on the merges and diverges. Bold numbers show where the forecast traffic flow exceeds a vehicle flow of 1350 vph per lane on motorway merges and diverges and 1200 vph per lane on non-motorway merges and diverges.

Table 9. Scenario 5m2: M23 and A23 Vehicle Flows – Merges and Diverges

Location	Ref Case No. of Lanes	Max. Vehicles per hour per lane	Max. Vehicles per hour	Ref Case Scenario 5m2				Ref Case Scenario 5m2			
				AM Dem (Veh)	AM Dem (Veh)	Diff from 2039 Ref	% Diff	PM Dem (Veh)	PM Dem (Veh)	Diff from 2039 Ref4	% Diff
M23 / A23											
Northbound											
A273 DIVERGE	1	1200	1200	799	857	58	7%	943	964	21	2%
A273 MERGE	1	1200	1200	279	332	53	19%	149	155	6	4%
A281 DIVERGE	1	1200	1200	305	404	99	32%	375	374	-1	0%
A281 MERGE	1	1200	1200	184	318	134	73%	55	48	-7	-13%
B2117 DIVERGE	1	1200	1200	431	413	-18	-4%	502	724	222	44%
B2118 MERGE	1	1200	1200	545	685	140	26%	377	659	282	75%
A2300 DIVERGE	1	1200	1200	221	288	67	30%	69	67	-3	-4%
A2300 MERGE	1	1200	1200	1472	1582	111	8%	1642	1628	-15	-1%
A272 DIVERGE	1	1200	1200	611	554	-57	-9%	441	497	57	13%
A272 MERGE	1	1200	1200	236	224	-12	-5%	193	221	28	15%
B2115 DIVERGE	1	1200	1200	273	270	-4	-1%	141	174	33	24%
B2115 MERGE	1	1200	1200	370	416	46	12%	222	230	9	4%
B2110 DIVERGE	1	1200	1200	386	429	42	11%	176	208	32	18%
B2110 MERGE	1	1200	1200	1062	1041	-21	-2%	647	645	-2	0%
J11 DIVERGE	2	1350	2700	1771	1879	108	6%	1676	1739	63	4%
J11 MERGE	1	1350	1350	1070	1043	-27	-2%	1229	1220	-9	-1%
J10a MERGE	1	1350	1350	489	478	-11	-2%	284	288	4	1%
J10 DIVERGE	2	1350	2700	1522	1557	35	2%	1134	1173	39	3%
J10 MERGE	2	1350	2700	1065	1202	136	13%	1560	1621	61	4%
J9 DIVERGE	2	1350	2700	1622	1671	49	3%	921	993	73	8%
J9 MERGE	2	1350	2700	1469	1469	0	0%	1551	1543	-8	0%
M23 / A23											
Southbound											
J9 DIVERGE	2	1350	2700	1382	1380	-2	0%	1752	1743	-9	0%
J9 MERGE	2	1350	2700	890	933	43	5%	1617	1676	59	4%
J10 DIVERGE	2	1350	2700	1757	1765	8	0%	1295	1402	107	8%
J10 MERGE	2	1350	2700	1106	1244	139	13%	1249	1293	44	4%
J10a DIVERGE	2	1350	2700	693	762	69	10%	778	833	55	7%
J11 DIVERGE	2	1350	2700	1191	1208	17	1%	1032	1031	-1	0%
J11 MERGE	1	1350	1350	1483	1538	55	4%	1777	1819	42	2%
B2114 DIVERGE	1	1200	1200	307	312	4	1%	654	571	-83	-13%
B2110 MERGE	1	1200	1200	299	323	24	8%	277	301	24	9%
B2115 DIVERGE	1	1200	1200	348	340	-7	-2%	405	359	-47	-11%
B2115 MERGE	1	1200	1200	234	255	21	9%	622	652	30	5%
A272 DIVERGE	1	1200	1200	273	294	22	8%	351	373	22	6%
A272 MERGE	1	1200	1200	461	516	55	12%	705	746	41	6%
A2300 DIVERGE	2	1200	2400	1497	1513	15	1%	1197	1259	62	5%
A2300 MERGE	1	1200	1200	769	791	22	3%	766	863	96	13%
B2118/Mill Lane DIVERGE	1	1200	1200	522	771	248	48%	569	977	407	72%
B2117 MERGE	1	1200	1200	503	785	281	56%	46	141	95	208%
A281 MERGE	1	1200	1200	462	474	12	3%	14	16	2	16%
A273 DIVERGE	1	1200	1200	216	285	69	32%	24	29	5	21%
A273 MERGE	1	1200	1200	883	815	-69	-8%	1224	1182	-43	-3%

5.3.8 There are some locations where the maximum vehicle flow is exceeded including the A2300 northbound merge in the both peaks, and the M23 Junction 11 southbound merge in both peaks. For these instances the maximum vehicle flow is also exceeded in the Reference Case.

M23 Junctions 9, 10, and 11

5.3.9 Table 10 shows model results at the approach arms and main circulatory links at Junctions 9, 10 and 11 of the M23. The following results are shown for Scenario 5m2 alongside the Reference Case, for the AM and PM peak models:

- Demand in vehicles
- Ratio of flow to capacity (RFC)
- Average vehicle delay in seconds
- Average queue length in passenger car units (PCUs)

Table 10. Scenario 5m2: M23 Junctions 9, 10 and 11 – Approach Arm Results

Junction	Approach Arm	2039 Reference Case				2039 Scenario 5m2											
		AM Dem (Veh)	AM RFC (%)	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	PM Delay (s)	PM Avg Q (pcu)	AM Dem (Veh)	AM RFC (%)	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	PM Delay (s)	PM Avg Q (pcu)
Junction 9	M23 Southbound off-slip (N)	1382	58.8	11.4	3.7	1752	95.1	33.3	8.5	1380	58.8	11.4	3.7	1743	94.6	32.2	8.4
	M23 Northbound off-slip (S)	1622	45.0	1.0	0.0	921	25.1	0.7	0.0	1671	45.9	1.0	0.0	993	26.9	0.7	0.0
	Gatwick Spur (W)	1051	54.0	3.0	0.0	1676	77.1	3.0	0.0	1092	56.0	3.0	0.0	1774	80.2	3.0	0.0
	Circulatory North	890	84.5	30.1	5.1	1617	98.4	51.8	7.2	933	88.4	33.5	5.4	1676	100.3	69.8	9.4
	Circulatory East	2272	38.1	0.5	0.0	3369	53.4	0.6	0.0	2313	38.8	0.5	0.0	3419	53.7	0.6	0.0
	Circulatory South	1382	31.3	0.6	0.0	1752	37.7	0.6	0.0	1380	31.2	0.6	0.0	1743	37.2	0.6	0.0
Junction 10	M23 Southbound off-slip (N)	1757	88.6	24.3	8.4	1295	58.3	14.7	4.6	1765	88.9	24.7	8.5	1402	61.6	15.8	5.3
	Cophorne Way (E)	678	33.2	18.5	2.7	1403	79.8	93.7	21.3	903	43.3	20.1	3.6	1527	85.6	89.9	21.9
	M23 Northbound off-slip (S)	1522	66.3	43.1	13.8	1134	66.9	84.1	14.0	1557	67.4	42.8	14.0	1173	68.7	91.4	16.7
	A2011 Crawley Avenue (W)	1830	84.9	21.7	8.4	2262	76.2	14.2	7.0	1829	84.3	21.5	8.3	2261	75.6	14.1	6.9
	Circulatory North	1480	98.7	55.0	7.7	1417	102.5	116.4	24.7	1479	98.3	52.2	7.7	1441	103.1	127.6	28.8
	Circulatory East	1827	79.2	16.7	7.0	1243	45.6	12.7	4.0	1877	81.1	17.6	7.5	1284	46.6	13.0	4.2
	Circulatory South	1400	72.4	22.1	7.9	1397	60.5	13.4	4.6	1535	78.6	24.2	9.1	1517	64.7	14.2	5.2
Circulatory West	715	47.0	18.4	2.7	714	62.5	30.2	3.6	853	55.3	18.4	3.2	801	68.7	30.5	4.0	
Junction 11	M23 Southbound off-slip (NE)	1191	56.6	17.2	4.8	1032	76.6	28.4	6.1	1208	57.4	17.3	4.9	1031	76.2	28.3	6.1
	Brighton Road (S)	1273	54.8	22.0	7.0	765	35.2	19.6	4.0	1284	55.0	22.1	7.0	755	34.7	19.6	4.0
	M23 Northbound off-slip (SW)	1165	32.2	9.9	2.9	656	19.3	9.1	1.8	1210	33.2	10.0	3.0	720	21.0	9.2	1.9
	A264 (W)	1055	48.1	21.1	5.8	802	35.1	19.6	4.0	1038	47.2	21.0	5.7	844	37.0	19.8	4.2
	A23 Brighton Road (N)	1016	45.2	13.7	3.5	2034	88.4	29.3	12.6	1037	46.0	13.9	3.6	2099	90.3	31.0	13.1
	Circulatory NE	1174	63.4	16.5	4.7	1989	74.0	11.8	5.0	1210	65.0	16.7	4.8	2086	77.0	12.4	5.3
	Circulatory South	2365	56.1	11.1	6.4	3021	67.8	13.0	9.3	2418	57.2	11.2	6.7	3117	69.4	13.4	9.9
	Circulatory SW	1142	98.1	57.6	6.5	941	78.5	24.9	4.8	1140	97.7	55.1	6.5	969	80.4	25.7	4.9
	Circulatory West	2307	66.2	59.1	16.8	1597	46.4	19.2	7.0	2350	67.1	63.8	20.2	1689	48.8	20.5	7.6
	Circulatory North	2804	86.0	17.3	10.9	2063	64.3	18.3	9.4	2806	85.4	17.0	10.6	2186	67.8	17.7	9.5

5.3.10 The tables shows some RFCs in excess of 90%, however these are all already present in Reference Case and not significantly added to in Scenario 5m2.

5.4 Identification of Junctions with Capacity Impacts

5.4.1 The same categorisation has been used previously in Scenario 5, detailed in Chapter 4.4 in respect of the WSCC Highway network.

5.4.2 The impact of development was assessed based on the National Planning Policy Framework (NPPF) using criteria agreed by MSDC and WSCC. These were derived using WSCC’s position statement in relation to the NPPF which sets out their interpretation of terms defining traffic impacts, namely “significant amount of movement” and “severe impacts”. In addition, a “showstopper” is defined as a location where the impacts do not have a reasonable prospect of being able to comply with NPPF paragraph 32.

5.4.3 An approach was devised to identify junctions forecast to experience ‘severe’ impacts in the future due to the strategic developments. This uses appropriately selected criteria to reflect the interpretation of the NPPF. A ‘severe’ impact is defined as a junction with any approach arm experiencing both of the following:

- a junction with an increase in ratio of flow to capacity (RFC) of **3%** or more to an RFC of **95%** or more in any peak, in any Scenario; and
- an increase in average delay of **30 seconds** or more to an average delay of **two minutes** or more in any peak hour, in any Scenario

5.4.4 A ‘significant’ impact is a junction with any approach arm experiencing the following:

- a junction with an increase in ratio of flow to capacity (RFC) of **3%** or more to an RFC of **85%** or more in any peak hour, in any Scenario

5.4.5 The criteria for defining and categorising capacity impact into Significant/Severe on the WSCC highway network have been agreed with West Sussex County Council.

5.4.6 Table 11 shows how many junctions are forecast to be impacted significantly or severely in Scenario 5m2 when compared to the Reference Case.

Table 11. Scenario 5m2: 'Severe' and 'Significant' Junction Impacts

ID	Area	Junction	Scenario v Ref	'Severe' change in Ref v 2019 also?	Number of junction arms meeting 'Severe' criteria		Total over capacity demand where 'Severe'	Average change in delay where 'Severe' (secs)
					AM	PM		
N1	Copthorne	A264 / A2220 Copthorne	SIG.		0	0	0	0
N4	Copthorne	B2028 / B2037 Copthorne	SIG.		0	0	0	0
N6	East Grinstead	A22 / Imberhorne Lane	SIG.		0	0	0	0
N8	Turners Hill	B2110 / B2028 Turners Hill	SEVERE	YES	1	0	88	74
N10	West Hoathly	Selsfield Road / Vowels Lane	SIG.		0	0	0	0
N11	Crawley	A2220 / B2036 (CRAWLEY)	SIG.		0	0	0	0
N13	Crawley	A2220 Haslett Avenue / St. Mary's Drive (CRAWLEY)	SIG.		0	0	0	0
N13a	Crawley	A2220 Haslett Avenue / Station Hill (CRAWLEY)	SIG.		0	0	0	0
N14	Crawley	B2036 Balcombe Road / Worth Road (CRAWLEY)	SIG.		0	0	0	0
N15	Crawley	Gatwick Road / Manor Royal (CRAWLEY)	SIG.		0	0	0	0
N16	Crawley	B2036 Balcombe Rd / B2037 Antlands Ln (CRAWLEY)	SIG.		0	0	0	0
N17	Tandridge	Redehall Road / B2037 (TANDRIDGE DISTRICT)	SIG.		0	0	0	0
N18	Handcross	A23 / B2110 Northbound On-Slip	SIG.		0	0	0	0
N21	Balcombe	Haywards Heath Road / Bramble Hill	SIG.		0	0	0	0
N22	Balcombe	B2036 / B2110	SIG.		0	0	0	0
N25	Crawley	Hazlewick Avenue / Bycroft Way (CRAWLEY)	SIG.		0	0	0	0
N27	Handcross	B2114 / B2110 Handcross	SIG.		0	0	0	0
N29	Crawley	B2036 / Radford Road	SIG.		0	0	0	0
C5	Haywards Heath	B2114 / B2036 Whitemans Green	SIG.		0	0	0	0
C6	Cuckfield	B2036 / Ardingly Road, Whitemans Green	SIG.		0	0	0	0
C7	Ansty	A272 / B2036	SEVERE		0	1	97	67
C10	Bolney	A23 / A272 Bolney Road	SIG.		0	0	0	0
C12	Haywards Heath	A273 / Isaac's Lane / Traustein Way	SIG.		0	0	0	0
C13	Haywards Heath	A272 Rocky Lane / B2112	SIG.		0	0	0	0
C15	Haywards Heath	B2272 / Bolnore Road	SIG.		0	0	0	0
C17	Haywards Heath	B2112 / B2272	SIG.		0	0	0	0
S1	Burgess Hill	A23 / A2300 Southbound On-Slip	SIG.		0	0	0	0
S2	Burgess Hill	A23 / A2300 Eastern Roundabout	SIG.		0	0	0	0
S3	Burgess Hill	A2300 / Cuckfield Road	SIG.		0	0	0	0
S5	Burgess Hill	A2300 / Northern Arc Spine Road	SIG.		0	0	0	0
S7	Hurstpierpoint	B2117 / B2116 Hurstpierpoint	SIG.		0	0	0	0
S8	Hassocks	A273 / B2116 Hassocks (Stonepound)	SEVERE	YES	1	0	22	56
S9	Pyecombe	A23 / A281 Southbound On-Slip	SIG.		0	0	0	0
S10	Ditchling	B2112 / B2116 Ditchling (LEWES DISTRICT)	SIG.		0	0	0	0
S21	Burgess Hill	B2112 / Green Road (LEWES DISTRICT)	SIG.		0	0	0	0
S23	Burgess Hill	A273 / B2036 / Marchants Way	SIG.		0	0	0	0
S26	Burgess Hill	A273 / York Road	SIG.		0	0	0	0
S34	Burgess Hill	B2036 Cuckfield Road / A273 Isaacs Lane	SIG.		0	0	0	0
S35	Sayers Common	A23 / B2118 Sayers Common	SIG.		0	0	0	0
S36	Burgess Hill	Wivelsfield Green (LEWES DISTRICT)	SIG.		0	0	0	0
S38	Burgess Hill	A23 / A2300 Western Roundabout	SIG.		0	0	0	0
S44	Burgess Hill	Valebridge Road / Janes Lane	SIG.		0	0	0	0
S45	Burgess Hill	A2300 / A273 Jane Murray Way	SIG.		0	0	0	0

5.4.7 Scenario 5m2 has 40 junctions that are considered significantly impacted and 3 that are severely impacted.

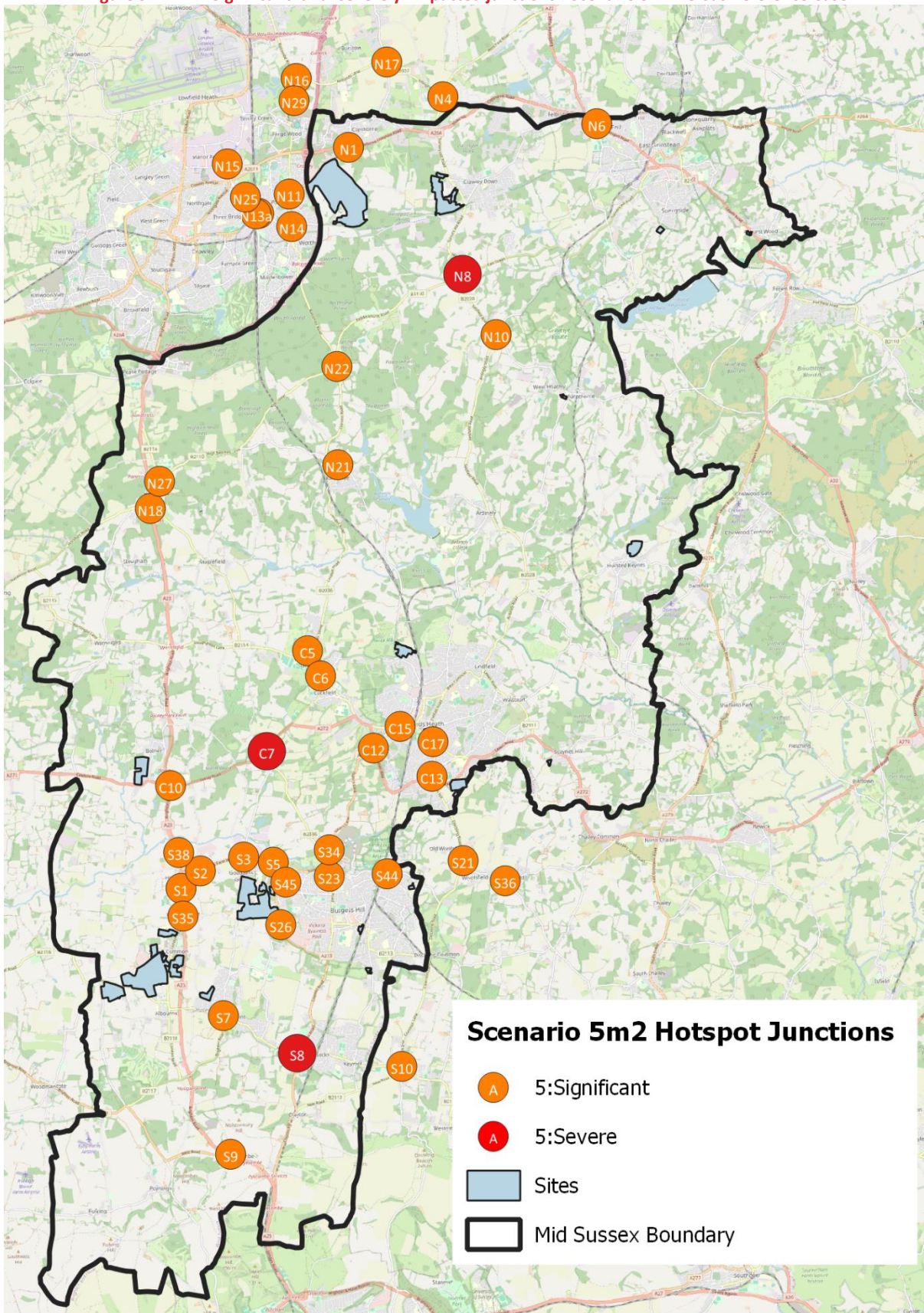
5.4.8 Severe Junctions:

- N8: B2110 / B2028 Turners Hill
- C7: A272 / B2036 Ansty
- S8: A273 / B2116 Hassocks (Stonepound)

5.4.9 Figure 9 shows the locations of the significant and severely impacted junctions in Scenario 5m2.

5.4.10 Appendix B1 shows summary results for all Scenarios (5, 5m2, 5m4, 5m5) and Appendix C shows detailed results by approach arm.

Figure 9. 'Significant' and 'severely' impacted junctions - Scenario 5m2 versus Reference Case



6. SCENARIO 5 WITH CYCLE INFRASTRUCTURE IMPACTS (5M4) CAPACITY IMPACTS

6.1 Introduction

6.1.1 This chapter describes the results of Scenario 5m4 which, informed by submissions made by the large site promoters, tests the potential impact of initial car trip rate reductions as a result of local plan and developer led cycle infrastructure schemes. These schemes are intended to reduce the amount of traffic at the large sites by encouraging further mode shift.

6.1.2 The following sections report the capacity impact results of Scenario 5m4 compared to the Reference Case. The following items are included:

- Traffic Flow Impacts
- Impacts on the M23 and A23 Strategic Road Network
- Identification of Junctions with Capacity Impacts

6.1.3 Reporting includes assessment of locations in neighbouring authorities.

6.2 Traffic Flow Impacts

6.2.1 Appendix D – includes highway traffic flow difference plots to identify the impact of Scenario 5m4 on traffic movements compared to the Reference Case.

6.3 Impacts on the M23 and A23 Strategic Road Network

Main Carriageways, Merges and Diverges

6.3.1 This section reports the impacts on the M23 and A23 Strategic Road Network with assessment based on the Design Manual for Roads and Bridges CD122 Geometric design of grade separated junctions (DMRB CD 122).

6.3.2 Table 12 summarises the Reference Case and Scenario 5m4 vehicle flows on the mainline sections between the main junctions. Bold numbers denote traffic flows which exceed the maximum vehicles per hour calculated from the number of lanes and the mainline maximum vehicles per hour (vph) per lane as stated in DMRB CD 122 paragraph 3.8.

6.3.3 DMRB CD 122 notes (below paragraph 3.8) the following:

The flows for maximum vph per lane do not represent the maximum hourly throughputs that are possible, but greater flows often results in decreasing levels of service and safety.

Table 12. Scenario 5m4: M23 and A23 Vehicle Flows – Mainline Sections

Location	Ref Case No. of Lanes	Max. Vehicles per hour per lane	Max. Vehicles per hour	AM Dem (Veh) Ref	AM Dem (Veh) Sc	Diff from 2039 Ref	% Diff	PM Dem (Veh) Ref	PM Dem (Veh) Sc	Diff from 2039 Ref4	% Diff
M23 / A23											
Northbound											
A23 - A27 to A273 DIVERGE	3	1600	4800	4275	4287	13	0%	3445	3682	237	7%
A23 - A273 MERGE to A281 DIVERGE	2	1600	3200	3755	3763	8	0%	2652	2869	217	8%
A23 - A281 MERGE to B2117 DIVERGE	2	1600	3200	3634	3678	44	1%	2331	2543	212	9%
A23 - B2117 DIVERGE to B2118 MERGE	2	1600	3200	3203	3266	63	2%	1830	1819	-10	-1%
A23 - B2118 MERGE to A2300 DIVERGE	2	1600	3200	3748	3949	201	5%	2206	2480	274	12%
A23 - A2300 MERGE to A272 DIVERGE	3	1600	4800	4999	5244	246	5%	3779	4042	263	7%
A23 - A272 MERGE to B2115 DIVERGE	3	1600	4800	4624	4914	291	6%	3532	3766	234	7%
A23 - B2115 MERGE to B2110 DIVERGE	3	1600	4800	4720	5057	337	7%	3613	3823	210	6%
A23 - B2110 MERGE to J11 DIVERGE	3	1600	4800	5396	5673	277	5%	4084	4257	173	4%
M23 - J11 MERGE - J10a MERGE	3	1800	5400	4695	4835	141	3%	3637	3739	102	3%
M23 - J10a MERGE to J10 DIVERGE	3	1800	5400	5183	5312	129	2%	3922	4027	106	3%
M23 - J10 MERGE to J9 DIVERGE	4	1800	7200	4727	4958	231	5%	4347	4475	128	3%
M23 - J9 MERGE to J8 DIVERGE	4	1800	7200	4573	4756	184	4%	4977	5025	48	1%
M23 / A23											
Southbound											
M23 - J8 MERGE to J9 DIVERGE	4	1800	7200	5283	5342	59	1%	5383	5520	137	3%
M23 - J9 MERGE to J10 DIVERGE	4	1800	7200	4791	4894	103	2%	5248	5452	204	4%
M23 - J10 MERGE to J10a DIVERGE	3	1800	5400	4140	4375	236	6%	5202	5342	140	3%
M23 - J10a DIVERGE - J11 DIVERGE	3	1800	5400	3446	3610	164	5%	4425	4510	86	2%
A23 - J11 MERGE to B2114 DIVERGE	3	1600	4800	3738	3942	204	5%	5170	5301	131	3%
A23 - B2114 DIVERGE to B2110 MERGE	3	1600	4800	3431	3631	200	6%	4516	4727	211	5%
A23 - B2110 MERGE to B2115 DIVERGE	3	1600	4800	3730	3953	223	6%	4792	5027	235	5%
A23 - B2115 MERGE to A272 DIVERGE	3	1600	4800	3617	3864	247	7%	5009	5321	313	6%
A23 - A272 MERGE to A2300 DIVERGE	3	1600	4800	3699	3937	238	6%	5109	5408	299	6%
A23 - A2300 MERGE to B2118/Mill Lane DIVERGE	3	1600	4800	2971	3217	247	8%	4678	5011	333	7%
A23 - B2118/Mill Lane DIVERGE to B2117 MERGE	2	1600	3200	2448	2449	1	0%	4109	4037	-71	-2%
A23 - B2117 MERGE to A281 MERGE	2	1600	3200	2951	3233	282	10%	4154	4175	21	1%
A23 - A281 MERGE to A273 DIVERGE	2	1600	3200	3414	3708	294	9%	4168	4192	23	1%
A23 - A273 MERGE to A27	3	1600	4800	4081	4238	157	4%	5369	5345	-24	0%

- 6.3.4 The highest percentage increase in the AM peak is southbound on the A23 between the B2117 and the A281, where the increase is approximately 10%. This is a 1% decrease from the comparison of Scenario 5M2 and 5.
- 6.3.5 The highest percentage increase in the PM peak is northbound on the A23 between the B2118 and the A2300, where the increase is up to approximately 12%.
- 6.3.6 There are some locations where the maximum vehicles per hour is exceeded. However, it should be noted that many of these are also exceeded in the Reference Case.
- 6.3.7 Table 13 summarises the vehicle flows on the merges and diverges. Bold numbers show where the forecast traffic flow exceeds a vehicle flow of 1350 vph per lane on motorway merges and diverges and 1200 vph per lane on non-motorway merges and diverges.

Table 13. Scenario 5m4: M23 and A23 Vehicle Flows – Merges and Diverges

Location	Ref Case No. of Lanes	Max. Vehicles per hour per lane	Max. Vehicles per hour	Ref Case Scenario 5m4				Ref Case Scenario 5m4			
				AM Dem (Veh)	AM Dem (Veh)	Diff from 2039 Ref	% Diff	PM Dem (Veh)	PM Dem (Veh)	Diff from 2039 Ref4	% Diff
M23 / A23											
Northbound											
A273 DIVERGE	1	1200	1200	799	857	57	7%	943	968	25	3%
A273 MERGE	1	1200	1200	279	332	53	19%	149	155	6	4%
A281 DIVERGE	1	1200	1200	305	402	97	32%	375	374	-2	0%
A281 MERGE	1	1200	1200	184	317	133	72%	55	48	-7	-13%
B2117 DIVERGE	1	1200	1200	431	412	-19	-4%	502	724	222	44%
B2118 MERGE	1	1200	1200	545	683	138	25%	377	661	284	75%
A2300 DIVERGE	1	1200	1200	221	287	66	30%	69	68	-2	-2%
A2300 MERGE	1	1200	1200	1472	1582	111	8%	1642	1630	-12	-1%
A272 DIVERGE	1	1200	1200	611	555	-56	-9%	441	500	59	13%
A272 MERGE	1	1200	1200	236	225	-11	-4%	193	223	30	16%
B2115 DIVERGE	1	1200	1200	273	270	-4	-1%	141	174	33	23%
B2115 MERGE	1	1200	1200	370	413	43	12%	222	231	9	4%
B2110 DIVERGE	1	1200	1200	386	428	42	11%	176	210	34	19%
B2110 MERGE	1	1200	1200	1062	1044	-18	-2%	647	645	-3	0%
J11 DIVERGE	2	1350	2700	1771	1879	108	6%	1676	1739	63	4%
J11 MERGE	1	1350	1350	1070	1042	-28	-3%	1229	1221	-8	-1%
J10a MERGE	1	1350	1350	489	477	-12	-2%	284	288	4	1%
J10 DIVERGE	2	1350	2700	1522	1555	34	2%	1134	1174	39	3%
J10 MERGE	2	1350	2700	1065	1201	136	13%	1560	1621	61	4%
J9 DIVERGE	2	1350	2700	1622	1670	47	3%	921	993	72	8%
J9 MERGE	2	1350	2700	1469	1469	0	0%	1551	1544	-8	0%
M23 / A23											
Southbound											
J9 DIVERGE	2	1350	2700	1382	1380	-2	0%	1752	1743	-8	0%
J9 MERGE	2	1350	2700	890	933	42	5%	1617	1676	59	4%
J10 DIVERGE	2	1350	2700	1757	1763	6	0%	1295	1402	108	8%
J10 MERGE	2	1350	2700	1106	1244	138	13%	1249	1293	44	3%
J10a DIVERGE	2	1350	2700	693	765	72	10%	778	832	54	7%
J11 DIVERGE	2	1350	2700	1191	1211	20	2%	1032	1031	-1	0%
J11 MERGE	1	1350	1350	1483	1543	60	4%	1777	1821	45	3%
B2114 DIVERGE	1	1200	1200	307	312	4	1%	654	575	-80	-12%
B2110 MERGE	1	1200	1200	299	323	23	8%	277	300	24	8%
B2115 DIVERGE	1	1200	1200	348	341	-7	-2%	405	358	-47	-12%
B2115 MERGE	1	1200	1200	234	251	17	7%	622	652	31	5%
A272 DIVERGE	1	1200	1200	273	292	20	7%	351	372	21	6%
A272 MERGE	1	1200	1200	461	510	49	11%	705	745	41	6%
A2300 DIVERGE	2	1200	2400	1497	1513	15	1%	1197	1260	62	5%
A2300 MERGE	1	1200	1200	769	793	24	3%	766	863	97	13%
B2118/Mill Lane DIVERGE	1	1200	1200	522	768	245	47%	569	974	405	71%
B2117 MERGE	1	1200	1200	503	784	281	56%	46	138	92	201%
A281 MERGE	1	1200	1200	462	474	12	3%	14	16	2	16%
A273 DIVERGE	1	1200	1200	216	286	70	33%	24	34	11	45%
A273 MERGE	1	1200	1200	883	816	-67	-8%	1224	1187	-37	-3%

6.3.8 There are some locations where the maximum vehicle flow is exceeded including the A2300 northbound merge in both peaks, and the M23 Junction 11 southbound merge in both peaks. For these instances the maximum vehicle flow is also exceeded in the Reference Case.

M23 Junctions 9, 10, and 11

6.3.9 Table 14 shows model results at the approach arms and main circulatory links at Junctions 9, 10 and 11 of the M23. The following results are shown for Scenario 5m4 alongside the Reference Case, for the AM and PM peak models:

- Demand in vehicles
- Ratio of flow to capacity (RFC)
- Average vehicle delay in seconds
- Average queue length in passenger car units (PCUs)

Table 14. Scenario 5m4: M23 Junctions 9, 10 and 11 – Approach Arm Results

Junction	Approach Arm	2039 Reference Case								2039 Scenario 5m4							
		AM Dem (Veh)	AM RFC (%)	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	PM Delay (s)	PM Avg Q (pcu)	AM Dem (Veh)	AM RFC (%)	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	PM Delay (s)	PM Avg Q (pcu)
Junction 9	M23 Southbound off-slip (N)	1382	58.8	11.4	3.7	1752	95.1	33.3	8.5	1380	58.8	11.4	3.7	1743	94.6	32.3	8.4
	M23 Northbound off-slip (S)	1622	45.0	1.0	0.0	921	25.1	0.7	0.0	1670	45.9	1.0	0.0	993	26.9	0.7	0.0
	Gatwick Spur (W)	1051	54.0	3.0	0.0	1676	77.1	3.0	0.0	1094	56.1	3.0	0.0	1772	80.1	3.0	0.0
	Circulatory North	890	84.5	30.1	5.1	1617	98.4	51.8	7.2	933	88.4	33.5	5.4	1676	100.3	69.7	9.3
	Circulatory East	2272	38.1	0.5	0.0	3369	53.4	0.6	0.0	2313	38.8	0.5	0.0	3419	53.7	0.6	0.0
	Circulatory South	1382	31.3	0.6	0.0	1752	37.7	0.6	0.0	1380	31.2	0.6	0.0	1743	37.2	0.6	0.0
Junction 10	M23 Southbound off-slip (N)	1757	88.6	24.3	8.4	1295	58.3	14.7	4.6	1763	88.8	24.6	8.4	1402	61.7	15.9	5.3
	Copthorne Way (E)	678	33.2	18.5	2.7	1403	79.8	93.7	21.3	902	43.2	20.1	3.6	1526	85.6	90.0	21.9
	M23 Northbound off-slip (S)	1522	66.3	43.1	13.8	1134	66.9	84.1	14.0	1555	67.3	42.8	14.0	1174	68.8	92.0	16.9
	A2011 Crawley Avenue (W)	1830	84.9	21.7	8.4	2262	76.2	14.2	7.0	1832	84.4	21.5	8.3	2261	75.6	14.1	6.9
	Circulatory North	1480	98.7	55.0	7.7	1417	102.5	116.4	24.7	1482	98.4	53.1	7.7	1441	103.1	128.0	29.0
	Circulatory East	1827	79.2	16.7	7.0	1243	45.6	12.7	4.0	1876	81.1	17.6	7.5	1284	46.5	13.0	4.2
	Circulatory South	1400	72.4	22.1	7.9	1397	60.5	13.4	4.6	1534	78.6	24.2	9.1	1517	64.7	14.2	5.2
	Circulatory West	715	47.0	18.4	2.7	714	62.5	30.2	3.6	851	55.2	18.3	3.2	801	68.7	30.5	4.0
Junction 11	M23 Southbound off-slip (NE)	1191	56.6	17.2	4.8	1032	76.6	28.4	6.1	1211	57.6	17.3	4.9	1031	76.2	28.3	6.1
	Brighton Road (S)	1273	54.8	22.0	7.0	765	35.2	19.6	4.0	1284	55.0	22.1	7.0	755	34.7	19.6	4.0
	M23 Northbound off-slip (SW)	1165	32.2	9.9	2.9	656	19.3	9.1	1.8	1209	33.2	10.0	3.0	719	20.9	9.2	1.9
	A264 (W)	1055	48.1	21.1	5.8	802	35.1	19.6	4.0	1040	47.3	21.0	5.7	846	37.0	19.8	4.3
	A23 Brighton Road (N)	1016	45.2	13.7	3.5	2034	88.4	29.3	12.6	1040	46.1	13.9	3.6	2099	90.3	31.0	13.1
	Circulatory NE	1174	63.4	16.5	4.7	1989	74.0	11.8	5.0	1212	65.1	16.7	4.8	2085	76.9	12.4	5.3
	Circulatory South	2365	56.1	11.1	6.4	3021	67.8	13.0	9.3	2423	57.3	11.2	6.7	3115	69.4	13.4	9.9
	Circulatory SW	1142	98.1	57.6	6.5	941	78.5	24.9	4.8	1141	97.8	55.5	6.5	966	80.2	25.6	4.9
	Circulatory West	2307	66.2	59.1	16.8	1597	46.4	19.2	7.0	2351	67.1	63.7	20.2	1685	48.7	20.5	7.6
	Circulatory North	2804	86.0	17.3	10.9	2063	64.3	18.3	9.4	2808	85.4	17.0	10.6	2187	67.8	17.7	9.5

6.3.10 The tables shows some RFCs in excess of 90%, however in most instances these are already present in Reference Case and not significantly added to in Scenario 5m4.

6.4 Identification of Junctions with Capacity Impacts

6.4.1 The same categorisation has been used previously in Scenario 5, detailed in Chapter 4.4 in respect of the WSCC Highway network.

6.4.2 The impact of development was assessed based on the National Planning Policy Framework (NPPF) using criteria agreed by MSDC and WSCC. These were derived using WSCC’s position statement in relation to the NPPF which sets out their interpretation of terms defining traffic impacts, namely “significant amount of movement” and “severe impacts”. In addition, a “showstopper” is defined as a location where the impacts do not have a reasonable prospect of being able to comply with NPPF paragraph 32.

6.4.3 An approach was devised to identify junctions forecast to experience ‘severe’ impacts in the future due to the strategic developments. This uses appropriately selected criteria to reflect the interpretation of the NPPF. A ‘severe’ impact is defined as a junction with any approach arm experiencing both of the following:

- a junction with an increase in ratio of flow to capacity (RFC) of **3%** or more to an RFC of **95%** or more in any peak, in any Scenario; and
- an increase in average delay of **30 seconds** or more to an average delay of **two minutes** or more in any peak hour, in any Scenario

6.4.4 A ‘significant’ impact is a junction with any approach arm experiencing the following:

- a junction with an increase in ratio of flow to capacity (RFC) of **3%** or more to an RFC of **85%** or more in any peak hour, in any Scenario

6.4.5 The criteria for defining and categorising capacity impact into Significant/Severe on the WSCC highway network have been agreed with West Sussex County Council.

6.4.6 Table 15 shows how many junctions are forecast to be impacted significantly or severely in Scenario 5m4 when compared to the Reference Case.

Table 15. Scenario 5m4: 'Severe' and 'Significant' Junction Impacts

ID	Area	Junction	Scenario v Ref	'Severe' change in Ref v 2019 also?	Number of junction arms meeting 'Severe' criteria			Total over capacity demand where 'Severe'	Average change in delay where 'Severe' (secs)
					AM	PM	AM+P		
N1	Copthorne	A264 / A2220 Copthorne	SIG.		0	0	0	0	
N4	Copthorne	B2028 / B2037 Copthorne	SIG.		0	0	0	0	
N6	East Grinstead	A22 / Imberhorne Lane	SIG.		0	0	0	0	
N8	Turners Hill	B2110 / B2028 Turners Hill	SEVERE	YES	1	0	90	78	
N10	West Hoathly	Selsfield Road / Vowels Lane	SIG.		0	0	0	0	
N11	Crawley	A2220 / B2036 (CRAWLEY)	SIG.		0	0	0	0	
N13	Crawley	A2220 Haslett Avenue / St. Mary's Drive (CRAWLEY)	SIG.		0	0	0	0	
N13a	Crawley	A2220 Haslett Avenue / Station Hill (CRAWLEY)	SIG.		0	0	0	0	
N14	Crawley	B2036 Balcombe Road / Worth Road (CRAWLEY)	SIG.		0	0	0	0	
N15	Crawley	Gatwick Road / Manor Royal (CRAWLEY)	SIG.		0	0	0	0	
N16	Crawley	B2036 Balcombe Rd / B2037 Antlands Ln (CRAWLEY)	SIG.		0	0	0	0	
N17	Tandridge	Redehall Road / B2037 (TANDRIDGE DISTRICT)	SIG.		0	0	0	0	
N18	Handcross	A23 / B2110 Northbound On-Slip	SIG.		0	0	0	0	
N21	Balcombe	Haywards Heath Road / Bramble Hill	SIG.		0	0	0	0	
N22	Balcombe	B2036 / B2110	SIG.		0	0	0	0	
N25	Crawley	Hazlewick Avenue / Bycroft Way (CRAWLEY)	SIG.		0	0	0	0	
N27	Handcross	B2114 / B2110 Handcross	SIG.		0	0	0	0	
N29	Crawley	B2036 / Radford Road	SIG.		0	0	0	0	
C5	Haywards Heath	B2114 / B2036 Whitemans Green	SIG.		0	0	0	0	
C6	Cuckfield	B2036 / Ardingly Road, Whitemans Green	SIG.		0	0	0	0	
C7	Ansty	A272 / B2036	SEVERE		0	1	97	67	
C10	Bolney	A23 / A272 Bolney Road	SIG.		0	0	0	0	
C12	Haywards Heath	A273 / Isaac's Lane / Traustein Way	SIG.		0	0	0	0	
C17	Haywards Heath	B2112 / B2272	SIG.		0	0	0	0	
S1	Burgess Hill	A23 / A2300 Southbound On-Slip	SIG.		0	0	0	0	
S2	Burgess Hill	A23 / A2300 Eastern Roundabout	SIG.		0	0	0	0	
S3	Burgess Hill	A2300 / Cuckfield Road	SIG.		0	0	0	0	
S7	Hurstpierpoint	B2117 / B2116 Hurstpierpoint	SIG.		0	0	0	0	
S8	Hassocks	A273 / B2116 Hassocks (Stonepound)	SEVERE	YES	1	0	22	55	
S9	Pyecombe	A23 / A281 Southbound On-Slip	SIG.		0	0	0	0	
S10	Ditchling	B2112 / B2116 Ditchling (LEWES DISTRICT)	SIG.		0	0	0	0	
S21	Burgess Hill	B2112 / Green Road (LEWES DISTRICT)	SIG.		0	0	0	0	
S23	Burgess Hill	A273 / B2036 / Marchants Way	SIG.		0	0	0	0	
S34	Burgess Hill	B2036 Cuckfield Road / A273 Isaacs Lane	SIG.		0	0	0	0	
S35	Sayers Common	A23 / B2118 Sayers Common	SIG.		0	0	0	0	
S36	Burgess Hill	Wivelsfield Green (LEWES DISTRICT)	SIG.		0	0	0	0	
S38	Burgess Hill	A23 / A2300 Western Roundabout	SIG.		0	0	0	0	
S44	Burgess Hill	Valebridge Road / Janes Lane	SIG.		0	0	0	0	
S45	Burgess Hill	A2300 / A273 Jane Murray Way	SIG.		0	0	0	0	

6.4.7 Scenario 5m4 has 39 junctions that are considered significantly impacted and 3 that are severely impacted.

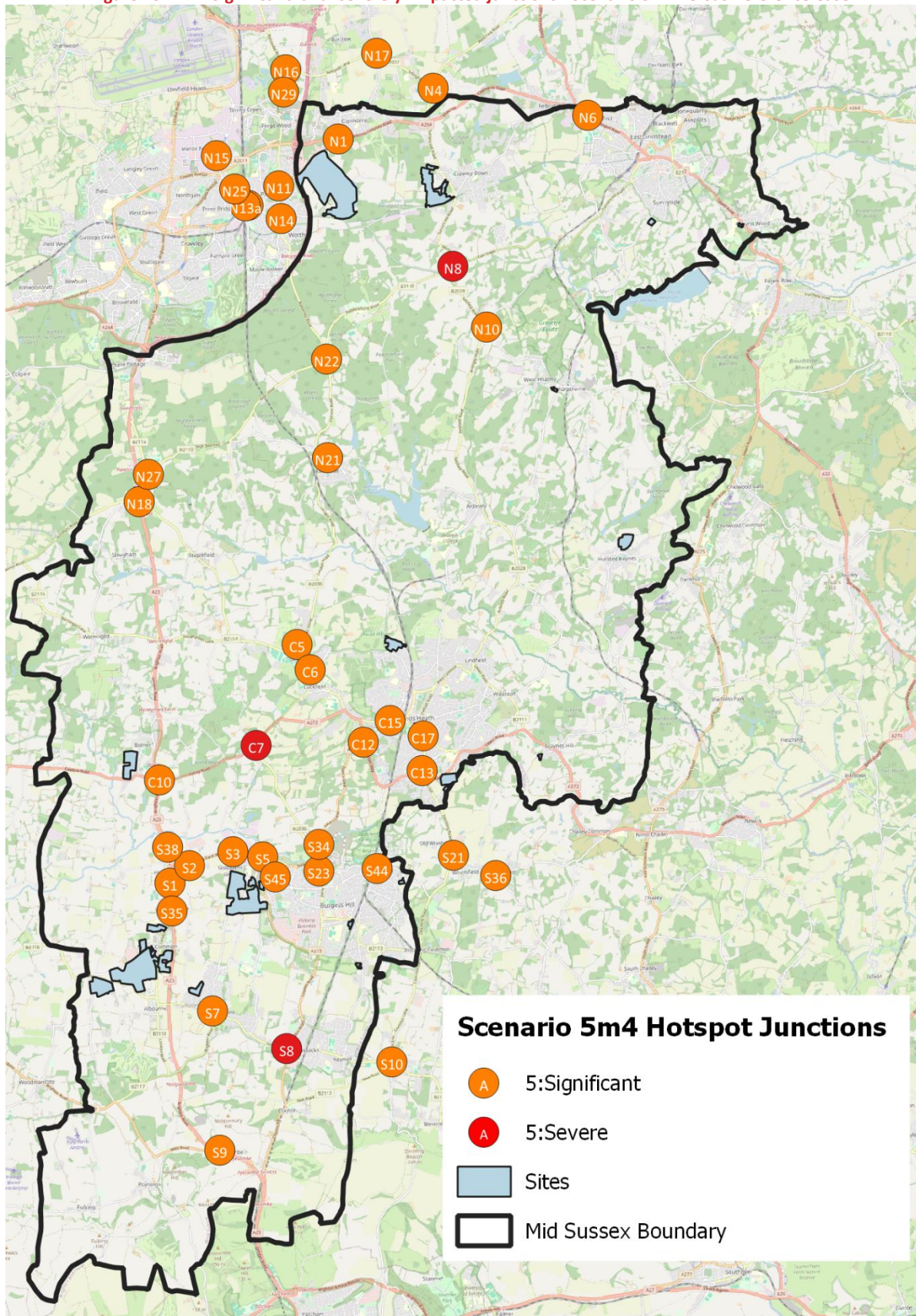
6.4.8 Severe Junctions:

- N8: B2110 / B2028 Turners Hill
- C7: A272 / B2036 Ansty
- S8: A273 / B2116 Hassocks (Stonepound)

6.4.9 Figure 10 shows the locations of the significant and severely impacted junctions in Scenario 5m4.

6.4.10 Appendix B1 shows summary results for all Scenarios (5, 5m2, 5m4, 5m5) and Appendix C shows detailed results by approach arm.

Figure 10. 'Significant' and 'severely' impacted junctions - Scenario 5m4 versus Reference Case



7. FURTHER INVESTIGATIONS INTO ROUTE CHOICE

7.1.1 In consultation with WSCC Highway Authority, MSDC requested further investigations to identify whether the causes of identified impacts at the Ansty and Stonepound Crossroad Junctions could include possible rerouting away from Hickstead Junction. This junction is not currently flagged as experiencing a severe impact in the Scenario 5m2 results, but is known to have capacity issues. The forecasting showed congestion at the Hickstead junction in the reference case scenario but the modelling did not show a large further increase as a result of the Local Plan scenario.

7.1.2 Results indicate that there are some trips with Origins & Destinations at Burgess Hill that are avoiding the Hickstead junction and opting to access/egress the A23 via alternative junctions to the north or south. Table 16 summarises the access proportions.

Table 16. Approximate Proportion of Traffic to/From Burgess Hill using each A23 junction

JUNCTION	NORTHBOUND AM PEAK BH→A23N	SOUTHBOUND AM PEAK BH→A23S	SOUTHBOUND PM PEAK A23N→BH	NORTHBOUND PM PEAK A23S→BH
Bolney via A272 Bolney Rd, Ansty & B2036	4%	10%	24%	0%
Hickstead via A2300	81%	25%	76%	0%
B2118 via Sayers Common	6%	0%	0%	0%
B2117 Cuckfield Rd	0%	9%	1%	9%
Malthouse Lane	0%	3%	0%	7%
Pyecombe via A273 London Road (Hassocks)	0%	37%	0%	30%
Pyecombe via Ockley Hill (Keymer)	8%	7%	0%	26%
Pyecombe via B2112 New Rd (Ditchling)	1%	8%	0%	28%

7.1.3 Within the model it is possible to perform a Select Link Analysis (SLA) that shows the routing of all trips to/ from the selected link. The figures below highlight some of the key select link flow analysis undertaken as part of these investigations.

7.1.4 Figure 11 demonstrates some southbound trips are opting to exit the A23 at the Bolney Road junction and use Bolney Road and B2036/ Cuckfield Road for access to Burgess Hill, instead of via the Hickstead Junction. This is via the severely impacted Ansty Junction.

7.1.5 Figure 12 demonstrates some trips are opting to use the A23 Pyecombe Junction via the A273 to head southbound on the A23 from Burgess Hill. This route is via the severely impacted Hassocks Stonepound Junction.

7.1.6 Similarly, in relation to impacts at the Turners Hill Junction, the B2110/B2028 Turners Hill crossroads already experiences peak period congestion from rat-running traffic. This applies to both east-west traffic using the B2110 in combination with Turners Hill Road from Pound Hill and to north-south traffic using the B2028 in combination with minor roads through Sharpthorne to A22 at Wych Cross. The existing and potential for additional rerouting results from the avoidance of congested locations on A264 and A22, notably the

Felbridge junction and A22 London Road into East Grinstead. Figure 13 illustrates the rerouting on the B2110 from East Grinstead to Crawley.

7.1.7 Potential for highway capacity improvements at Turners Hill are limited by environmental factors and equally could exacerbate existing rat-running. In accordance with the West Sussex County Council Local Transport Plan 2022-2036, any necessary highway mitigation measures will be focused, as far as possible, on the Strategic and Major Road Network to encourage the main flow of traffic along these routes and away from more minor roads across the highway network. A policy-compliant mitigation option for Turners Hill should therefore focus on encouraging road users to use the major road network along the A264/A22 corridor, making this route more desirable and reducing the use of the rural route along more minor roads via Turners Hill.

Figure 11. – Select Link on B2036 Southbound (PM peak)

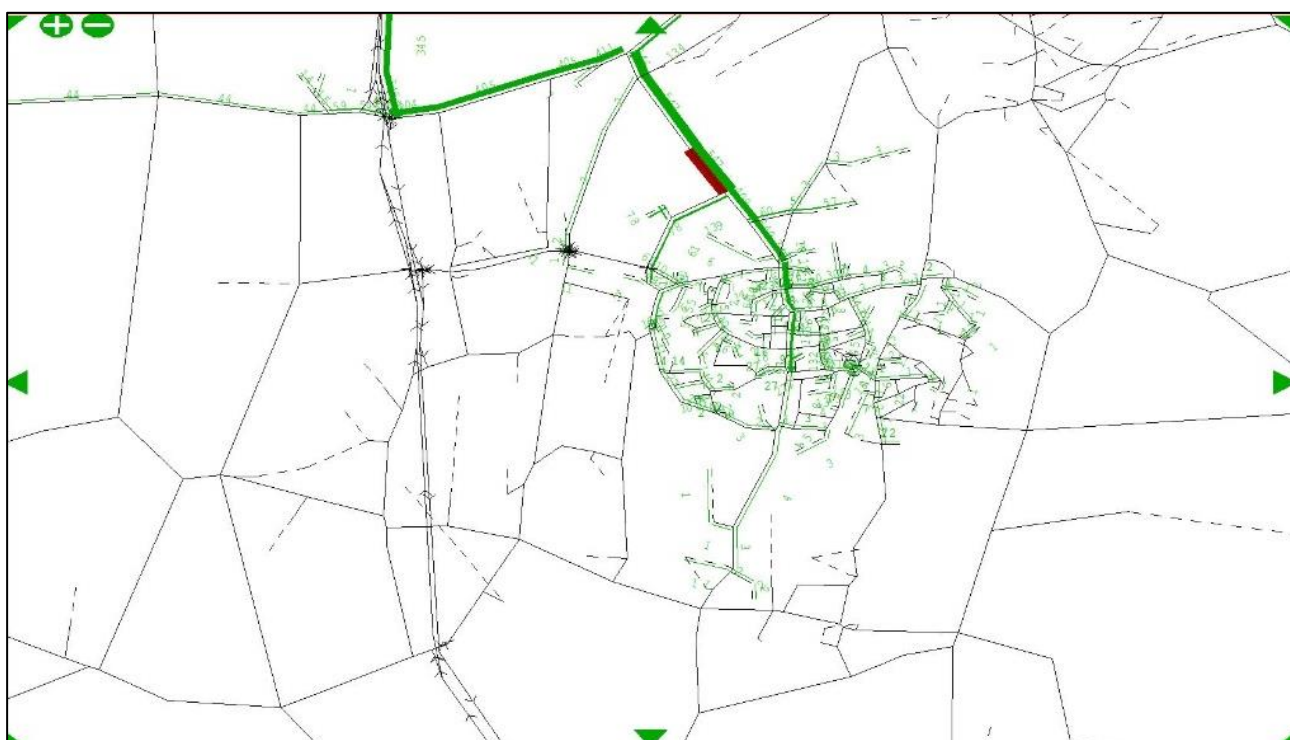
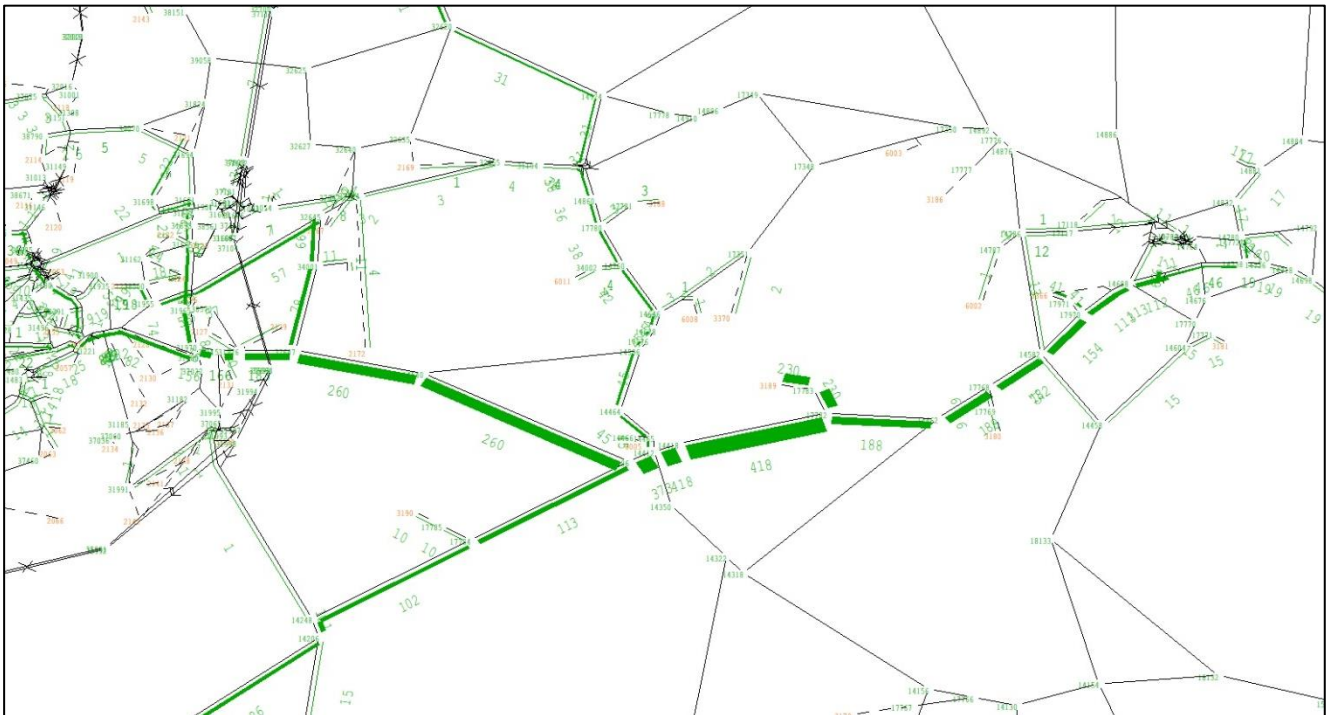


Figure 12. – Select Link on the A23 Southbound (AM Peak)



Figure 13. Select Link on the B2110 Westbound (AM Peak)



7.2 Mitigation Strategy

7.2.1 Following the further investigations and taking account of the SLA, Mid Sussex District Council, in partnership with West Sussex County Council, have identified a method of approach to mitigate the proposed junctions identified.

7.2.2 Turners Hill Junction – The aim is to target improvements to the A264 East – West corridor by targeting junction improvements at:

- Dukes Head Roundabout
- Copthorne Hotel Roundabout

7.2.3 Targeted improvements will seek to generate rerouting away from the B2110 via Turners Hill and onto the A264 Copthorne Road.

7.2.4 Ansty Junction and Stonepound (Hassocks) junctions – The aim is to target improvements for access to the A23 along the A2300 from Burgess Hill through improvements at:

- A23 / A2300 Hickstead Junction

7.2.5 Targeted improvements will seek to generate rerouting away from the B2036 and A272 for access to the A23, and the A273 via Pycombe access to the A23 /to/from Burgess Hill, and encourage more trips to access the A23 via the A2300 via Hickstead to/from Burgess Hill.

Other studies

7.2.6 WSCC in partnership with Surrey County Council (SCC) Highway Authority are undertaking a combined study into the A22/A264 corridor. The aim of the study is to bring forward improvements which would ease traffic flow and/or promote mode shift to more sustainable modes between Crawley and East Grinstead which would in turn reduce rat running through Turners Hill. The study is at an early stage, so analysis is yet to take place of improvement options and their potential benefits.

7.2.7 The development of mitigation in this location to support the local plan development has therefore sought to take account of potential measures on the A264 in the design of any scheme to ensure that mitigation options do not undermine the successful delivery of future corridor study improvement options.

8. LOCAL JUNCTION MODELLING METHODOLOGY

8.1 Local Junction Assessments

8.1.1 The scope of the junction assessments was agreed with MSDC and WSCC, informed by a junction impacts identification spreadsheet which identified locations with significant and severe impacts resulting from the additional traffic generated by the proposed local plan development allocations. These impacts include those from secondary re-routing of existing or background traffic in response to the development traffic flows.

8.1.2 The locations identified considered local knowledge of key strategic routes through the District. Policies within the WSCC Local Transport Plan 2022-2036 seek to encourage the main flow of traffic along these routes and away from more minor roads across the highway network. This includes alleviating congested junctions along the A264 corridor towards the M23 and A22, to make this route more desirable and reduce the level of traffic using more rural routes through local villages such as Turners Hill and Crawley Down.

8.1.3 The following junctions have been taken forward for local junction modelling assessment:

- **Hickstead Interchange** – Hickstead Lane/ A2300/A23 SB off-slip/Service Station Access/ A23 SB on-slip
- **Copthorne Roundabout** - A264 Copthorne Way/Brookhill Road/A264 Copthorne Common Road/Copthorne Hotel Access/ A2220 Copthorne Road Roundabout
- **Dukes Head Roundabout** – A264 Copthorne Common Road, B2028 Turners Hill Road, A264 Snowhill.

8.2 Local Junction Modelling Methodology

Model Scenarios

8.2.1 The following Scenarios have been assessed in the local junction models. Further detail on the Model Scenarios and the assumptions on growth and infrastructure is provided at section 1.5 of this Report.

- **2019 Baseline** – MSSHM model base year;
- **2039 Reference Case** – Includes any committed development in the district, including the development sites and associated infrastructure modelled in the Site Allocations Development Plan Document (Sites DPD), the committed highway infrastructure and background growth;
- **2039 Scenario 5m4** – Includes the full targeted Local Plan growth and is informed by submissions made by significant site promoters considering mode shift potential due to LCWiP improvements and site specific sustainable corridor improvements.

Local Junction Modelling Software

- 8.2.2 Priority-controlled (non-signalised) junctions have been modelled using Junctions 10, whilst LinSig V3.2.44 has been used for modelling the signal-controlled junctions, and the partially signalised junctions. These software packages reflect the industry standard for assessing junction capacity.
- 8.2.3 Junction geometries have been measured based on OS data for each site, and drawings for each of the three locations can be found in **Appendix F**.

Local Junction Model Validation

- 8.2.4 In the absence of queue length survey data, the local junction models have been validated using the 2019 Baseline outputs from the MSSHM modelling, as the strategic model has undergone an extensive process of model validation across links and cordons using 2019 base survey traffic flow data.
- 8.2.5 The methodology of the validation exercise is to use the outputs from the validated MSSHM model to ensure that the 2019 baseline results from the strategic model are comparable with the 2019 baseline local junction model outputs. In doing so we can use the validated base local junction models as a suitable baseline from which to forecast the future scenarios.
- 8.2.6 The following criteria has been used to determine compliant thresholds for validation.
 - **For non-signalised junctions**, model validation is required when either the MSSHM outputs or the local junction model initial outputs are reporting a mean maximum queue length of 5PCUs or more. A non-signalised local junction model is considered validated if the queue lengths reported within the local junction model are within $\pm 15\%$ of the comparable SRTM output results.
- 8.2.7 All of the locally-modelled junctions are non-signalised in the 2019 baseline scenario and therefore no validation criteria for signalised junctions are required.
- 8.2.8 The amendments to the Junctions 10 models typically include changes to the percentage capacity adjustment factors as well as slope and intercept adjustments. The particular changes that have been included as part of the model validation are detailed in the subsequent chapter which details the results of the local junction modelling.
- 8.2.9 By achieving the required model validation criteria, the Baseline models can be used to forecast the future scenarios to assess the impact of local growth and the Local Plan development allocations. Where particular discrepancies occur between the MSSHM model and the junction form, for example if a minor arm is not coded in the strategic model or pedestrian crossings are not coded, due to the strategic scale of the MSSHM, this is noted within the relevant junction results.
- 8.2.10 Details regarding the model calibration and validation changes are provided at the start of the results section for each of the local junction models prepared within the next Chapter of this Technical Report.

9. LOCAL JUNCTION IMPACT ASSESSMENT

9.1.1 The results of the local junction assessment are presented below for the agreed three locations taken forward for local junction modelling assessments.

9.1.2 Local Junction Model Output Reports are presented in **Appendix G** for the Baseline, 2039 Reference Case and 2039 Do Minimum Models and the 2039 Do Something with mitigation models.

9.2 Local Junction Modelling Results Output Definitions

Junction 10 Output Definitions

9.2.1 The Junctions 10 modelling software uses empirical formulae based on traffic flows and junction geometries to calculate the capacity of non-priority traffic streams (streams that must give-way to priority traffic). Geometric measurements include lane width available to the non-priority stream, visibility to waiting drivers, and width of the major road. Angles of intercept are also calculated for roundabout junctions.

9.2.2 The key outputs from Junctions 10 are the “ratio of flow to capacity” (RFC), the mean and maximum queue lengths and the average delay in seconds per vehicle arriving at the junction. An RFC of 0.85 or less on all arms indicates that a junction is functioning well without significant delay on any arm. An RFC of 0.85 to 1.0 indicates that the junction will be busy and may experience intermittent delays; different junction arms can have different RFCs so a single arm with an RFC in this range may not present an issue, particularly if this is observed in only a limited period of the modelled time. An RFC of greater than 1.0 indicates that the given arm(s) are operating beyond their nominal capacity, and extended queuing would be expected on a regular basis. Once a junction has reached nominal capacity, the model is more sensitive to small changes to traffic flows and any further increase in traffic flow will cause forecasted queue lengths and delays to increase exponentially.

9.2.3 The second key output from Junctions 10 is the Level of Service (LoS) of the junction. LoS is a qualitative measure used to relate to the quality of traffic service. LoS is used to analyse highways by categorising traffic flow and assigning quality levels of traffic based on performance measures such as speed and density. LoS references include:

- A = Free flow (Traffic flows at or above the posted speed limit and motorists have complete mobility between lanes);
- B = Reasonably free flow (Speeds are maintained, manoeuvrability within the traffic stream is slightly restricted);
- C = Stable flow (The ability to manoeuvre through lanes is noticeably restricted and lane changes require more driver awareness);
- D = Approaching unstable flow (Speeds slightly decrease as traffic volume slightly increases);
- E = Unstable flow (Flow becomes irregular and speed varies rapidly because there are virtually no usable gaps to manoeuvre in the traffic stream and speeds rarely reach the posted limit); and
- F = Forced or Breakdown Flow (Every vehicle moves in lockstep with the vehicle in front of it, with frequent slowing required).

Source - Junctions 10 User Guide and Highways Capacity Manual

LinSig v3 Output Definitions

- 9.2.4 The outputs of LinSig include the Degree of Saturation (DoS), Mean Maximum Queue (MMQ) and the Practical Reserve Capacity (PRC).
- 9.2.5 The % DoS is a ratio of demand to capacity for each traffic phase. Although not formally specified within any recognised guidance, it is generally preferred to seek to maintain the overall junction's % DoS below 90% in order to provide a level of confidence that the junction will operate within capacity even if day-to-day traffic flows vary. If the DoS for a given arm of the junction does exceed 100%, then queues will build up during red signal periods which will be unable to fully dissipate within the next green signal period and will therefore gradually become longer and longer during subsequent cycles, until the demand from traffic arriving at that arm of the junction subsides.
- 9.2.6 The PRC is related to the maximum % DoS, and is a measure of how much additional traffic can pass through a junction, whilst maintaining a maximum saturation of 90% on all lanes. A positive PRC indicates that a junction has spare capacity, whilst a negative PRC indicates that a junction is over capacity.

9.3 Hickstead Interchange – Hickstead Lane/ A2300/A23 SB off-slip/Service Station Access/ A23 SB on-slip

- 9.3.1 The A23 Hickstead Interchange is a grade-separated dumbbell arrangement junction providing access between the A23, the A2300 and Hickstead Lane. Vehicles would use this junction to route between the A23 and Burgess Hill, approximately three kilometres east of the junction.
- 9.3.2 The western roundabout is a four arm non-signalised roundabout with uncontrolled crossings and associated tactiles on the north (A2300) and west arms (Hickstead Lane), with Hickstead Lane just having a dropped kerb and no tactile paving.
- 9.3.3 The eastern roundabout is a six arm non-signalised roundabout, consisting of the A23 on and off slip roads, the A2300 (east and west arms), a service station access road and a curtailed access road connecting to adjacent farmland. Uncontrolled pedestrian crossings are present on each arm with the exception of the west approach linking to the western roundabout, some of which provide appropriate tactile paving. An overbridge of approximately 90 metres in length connects the two roundabouts, with footways present on both sides of the carriageway. A shared footway/cycleway is located on the A2300 eastern approach on both sides of the carriageway.
- 9.3.4 It is noted that the entry/exit arm which connects the eastern roundabout to the adjacent farmland north of the junction is not represented within the MSSHM. It is understood that this access road relates to a historic extant permission that is unlikely to be delivered and the site is not allocated for any purpose in either the adopted or emerging Local Plan. Therefore, this access road has not been represented within the local modelling for this junction.
- 9.3.5 Additionally, the service station access is not accounted for in the strategic model. Based on an estimated parking capacity of 95 spaces a total of 82 inbound and 82 outbound vehicles have been accommodated within the models, which represents the upper limit of circulatory capacity in relation to available stacking space. This is considered a robust estimate of maximum demand and caters for pass- by trips along the A23 who would

continue straight on along the A23 in the strategic model given that the model zone does not account for the trip attraction of the service station.

Model Validation

9.3.6 **Table 17** details the amendments which have been made to the western roundabout junction model arms to allow validation to meet the required criteria detailed in Section 8.2.6.

Table 17. A23 Hickstead Interchange Western Roundabout – Local Model Validation Amendments

ARM	PERCENTAGE CAPACITY ADJUSTMENT CHANGES	
	AM	PM
Hickstead Lane	No Change	No Change
A23 NB On Slip	No Change	No Change
A2300 Overbridge	125%	125%
A23 NB Off Slip	No Change	No Change

9.3.7 The capacity adjustments applied result in mean maximum queues which better reflect those in the MSSHM, with queues on all arms being within $\pm 15\%$ threshold or below 5 PCUs within both models. The model is considered appropriately validated.

9.3.8 **Table 18** details the amendments which have been made to the eastern roundabout junction model arms to allow validation to meet the required criteria detailed in Section 8.2.6.

Table 18. A23 Hickstead Interchange Eastern Roundabout – Local Model Validation Amendments

ARM	PERCENTAGE CAPACITY ADJUSTMENT CHANGES	
	AM	PM
A2300 Overbridge	No Change	No Change
A23 SB Off Slip	No Change	No Change
A2300 E	48%	No Change
A23 SB ON Slip	No Change	No Change

9.3.9 The capacity amendments applied result in mean maximum queues which better reflect those in the MSSHM, with queues on all arms being within $\pm 15\%$ threshold or below 5 PCUs within both models. The model is considered appropriately validated.

9.4 A23 Hickstead Interchange - Junction Model Results

2019 Baseline Junction Model Results

9.4.1 This junction has been modelled using Junctions 10, with the results presented in **Table 19** below.

Table 19. A23 Hickstead Interchange - 2019 Baseline Junction Model Results

Arm Name	AM Peak				PM Peak			
	RFC	Delay(s)	Queue (pcu)	LOS	RFC	Delay(s)	Queue (pcu)	LOS
2019 Baseline – Western Roundabout								
A2300 Hickstead Lane	0.14	7.49	0.2	A	0.12	5.41	0.1	A
A23 North	0.00	0.00	0.0	A	0.00	0.00	0.0	A
A2300 East	0.79	17.23	4.0	C	0.65	10.48	2.1	B
A23 South	0.64	18.08	1.7	C	0.32	8.48	0.5	A
2019 Baseline – Eastern Roundabout								
A2300 Overbridge	0.28	3.61	0.4	A	0.20	3.19	0.3	A
A23 S/B off-slip	0.56	5.80	1.5	A	0.59	5.51	1.5	A
A2300 East	1.04	124.00	36.3	F	0.41	3.11	0.8	A
Service Station	0.11	4.91	0.1	A	0.10	4.63	0.1	A
A23 S/B on-slip								

9.4.2 It can be seen that the eastern roundabout is operating above capacity in the 2019 Baseline AM peak scenario. The A2300 East arm records a maximum RFC of 1.04 with a resulting maximum queue of 36 PCUs. All remaining arms across both junctions operate within capacity during the AM peak scenario. Both junctions operate within capacity during the PM peak scenario.

2039 Reference Case and Do Minimum Junction Model Results

9.4.3 As part of the Site Allocations Development Plan Document (DPD), allocation SA9 allocated land to the north of the A2300 for a Science and Technology Park. Mitigation was proposed to support this allocation during the plan making process, including improvements to the Hickstead Interchange. The proposed mitigation at the junction included partial signalisation of the Eastern roundabout, realignment of the roundabout circulation to maximise stacking space for the eastbound A2300 overbridge approach as well as improvement on operation at the western roundabout through creation of a tear drop roundabout arrangement and improvements to walking and cycling connections. **Figure 14** and **Figure 15** below shows the mitigation sketch designs of junction improvements at Hickstead Interchange included within the Reference Case and Do Minimum model runs as part of the Science Park proposals.

Figure 14. Science Park Mitigation, Hickstead Interchange – Eastern Roundabout

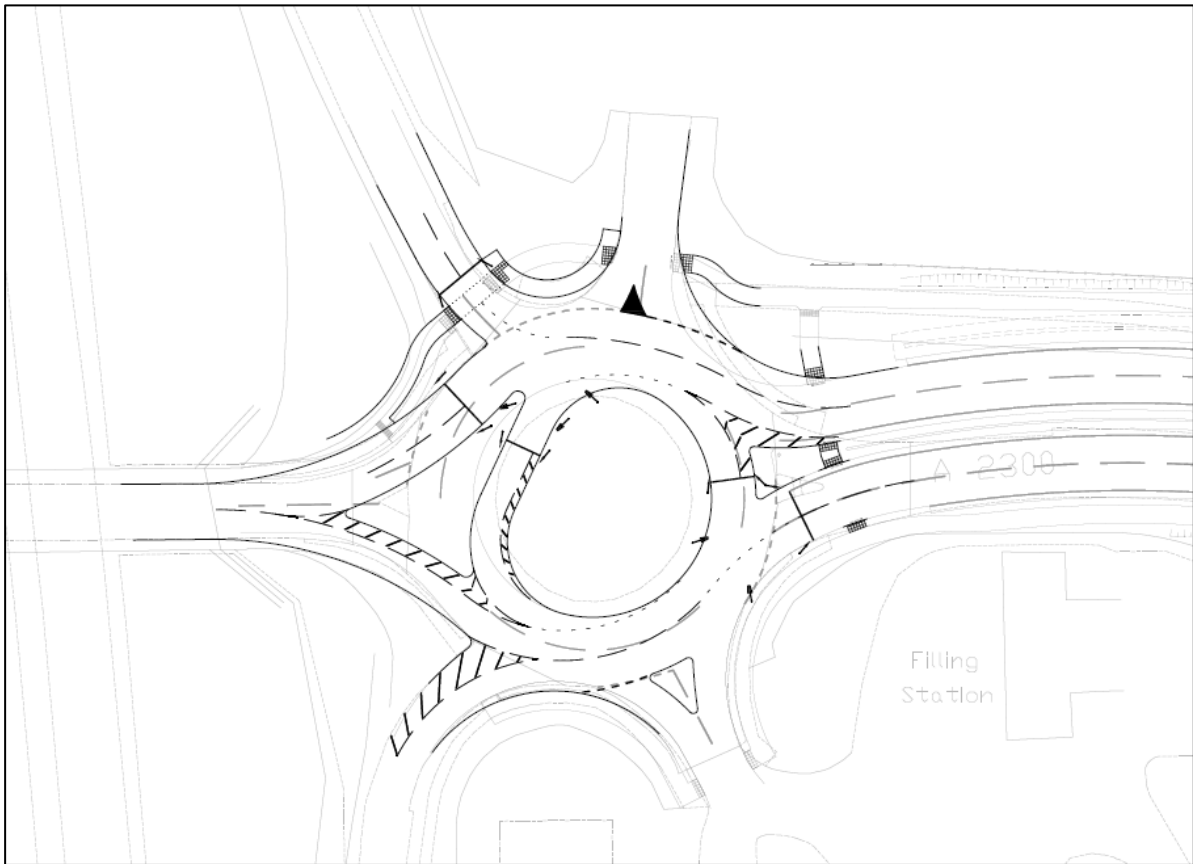
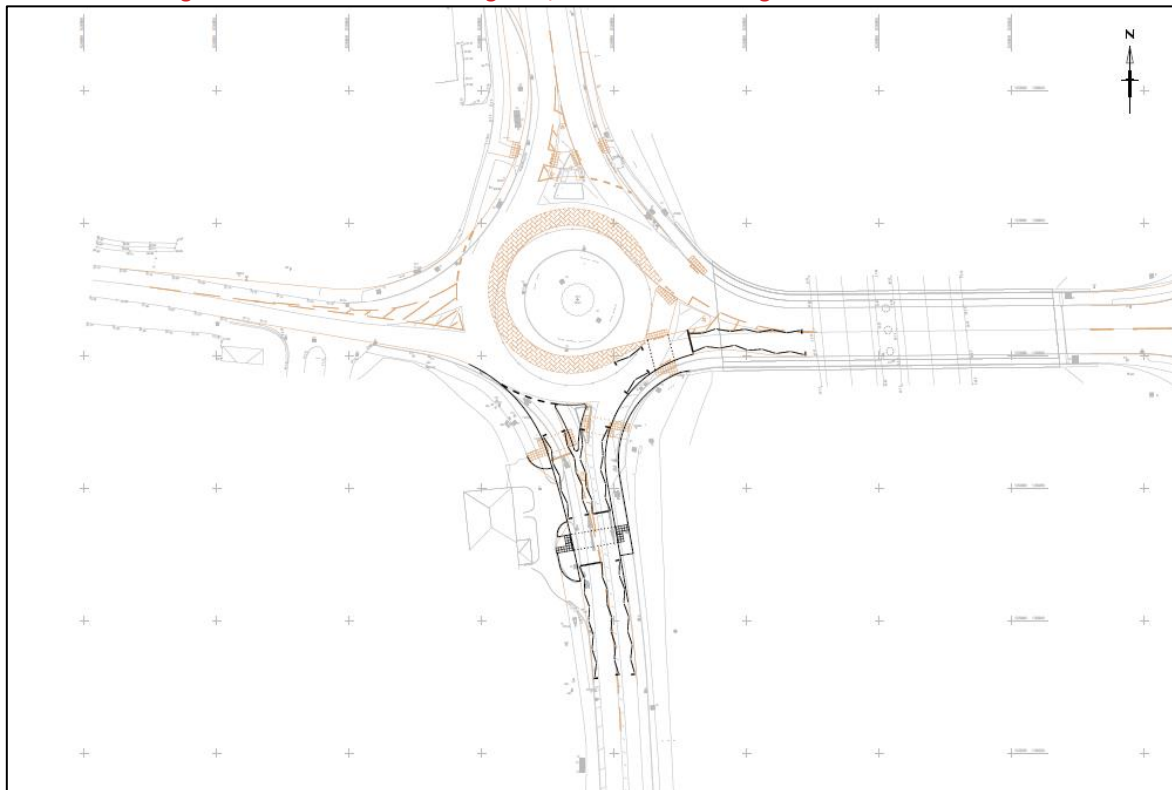


Figure 15. Science Park Mitigation, Hickstead Interchange – Western Roundabout



9.4.4 Given the introduction of partial signalisation associated with the above improvements, this junction has been modelled using a combined network LinSig, with the results presented in **Table 20** below.

Table 20. A23 Hickstead Interchange – 2039 Reference Case & 2039 Do Minimum Junction Model Results (Science Park Mitigation)

Lane Name	AM Peak				PM Peak			
	DoS (%)	Total Delay (pcuHr)	Average Delay (s/pcu)	Mean Maximum Queue (pcu)	DoS (%)	Total Delay (pcuHr)	Average Delay (s/pcu)	Mean Maximum Queue (pcu)
2039 Reference Case								
Western Roundabout								
Hickstead Lane	45.1%	0.4	7.8	0.4	27.0%	0.2	5.3	0.2
A2300 North	0.0%	0.0	0.0	0.0	0.0%	0.0	0.0	0.0
A2300 Overbridge	95.7%	10.3	23.7	28.3	98.3%	15.8	35.4	40.7
A2300 South	14.6%	0.2	2.9	1.3	6.0%	0.1	2.7	0.5
Eastern Roundabout								
A2300 Overbridge	82.5%	5.8	51.8	9.4	66.6%	3.0	56.0	3.5
A23 N	72.3%	4.4	19.6	15.8	48.3%	1.7	9.6	8.0
A2300 East	102.5%	38.5	84.8	74.6	110.0%	97.9	200.6	133.2
Service Station	23.6%	0.2	6.8	0.2	24.7%	0.2	7.2	0.2
Central Right Turn Lane	48.0%	1.4	64.2	2.2	21.8%	0.5	56.9	0.9
2039 Do Minimum								
Western Roundabout								
Hickstead Lane	69.9%	1.1	14.7	1.1	22.7%	0.1	5.0	0.1
A2300 North	0.0%	0.0	0.0	0.0	0.0%	0.0	0.0	0.0
A2300 Overbridge	95.6%	10.0	23.2	28.6	98.2%	15.7	35.2	40.0
A2300 South	18.1%	0.2	3.1	1.6	6.2%	0.1	2.7	0.5
Eastern Roundabout								
A2300 Overbridge	86.8%	7.3	50.4	12.9	65.5%	2.7	57.9	3.3
A23 N	79.7%	5.8	26.2	18.1	49.4%	1.7	9.3	8.1
A2300 East	102.0%	35.2	77.8	71.3	108.0%	80.2	167.3	116.6
Service Station	18.6%	0.1	5.0	0.1	27.5%	0.2	8.3	0.2
Central Right Turn Lane	49.5%	1.4	64.7	2.3	22.2%	0.5	50.6	1.0

9.4.5 The western roundabout is shown to operate within capacity across all scenarios. It is noted however that the A2300 Overbridge is nearing capacity in all scenarios. The maximum 2039 Reference Case DoS value for this arm is 98.3% in the PM peak, resulting in a MMQ of 40.7 PCUs. The addition of Local Plan traffic flows does not noticeably change the levels of congestion on this arm. Congestion on this arm is being caused by the pedestrian crossing being called every cycle, resulting in queues building up on the overbridge.

9.4.6 The eastern roundabout is shown to operate above capacity on the A2300 East arm in both 2039 Reference Case and Do Minimum scenarios, for both AM and PM peaks. The maximum 2039 Reference Case DoS value for this arm is 110% in the PM peak, resulting in a MMQ of 133.2 PCUs. The addition of Local Plan traffic flows does not noticeably change the levels of congestion on this arm with only slight reductions in the DoS value. Congestion on this arm is being caused by the signalisation of this arm whereas previously

this arm was give way, as well as the lane allocations requiring vehicles accessing the A23 to only use the nearside lane.

2039 Do Minimum with SYSTRA Mitigation Junction Model Results

9.4.7 SYSTRA have reviewed the mitigation associated with the Science and Technology park and considered whether any further junction improvements can be made to support the full development of the Local Plan and traffic volumes associated with the targeted levels of growth.

9.4.8 **Figure 14** above shows the proposed Science Park mitigation layout of the eastern roundabout which introduces an additional green phase to facilitate traffic turning right from the service station or for vehicles making a u-turn from the A2300 eastbound approach, which would include left-turn movements from Pookbourne Lane. The existing layout results in the aforementioned movements having to use both the eastern and western roundabout to facilitate this movement. However, on balance, given the anticipated low frequency of vehicles making this movement it is expected that removal of the new green phase would have a positive overall contribution to the operation of the junction and help to reduce the level of queuing particularly on the A23 off-slip. The junction model results with the SYSTRA proposed mitigation is presented in **Table 21**.

Table 21. A23 Hickstead Interchange– 2039 Do Minimum Junction Model Results (with SYSTRA Proposed Mitigation)

Lane Name	AM Peak				PM Peak			
	DoS (%)	Total Delay (pcuHr)	Average Delay (s/pcu)	Mean Maximum Queue (pcu)	DoS (%)	Total Delay (pcuHr)	Average Delay (s/pcu)	Mean Maximum Queue (pcu)
2039 Do Minimum								
Western Roundabout								
Hickstead Lane	64.2%	0.9	11.4	0.9	17.7%	0.1	3.7	0.1
A23 North	0%	0.0	0.0	0.0	0%	0.0	0.0	0.0
A2300 Overbridge	103.8%	45.8	98.6	83.9	109.7%	95.2	190.9	132.1
A23 South	17.8%	0.2	3.0	1.5	6.1%	0.1	2.7	0.5
Eastern Roundabout								
A2300 Overbridge	83.7%	6.8	40.9	12.9	62.0%	2.9	51.1	3.5
A2300 East	68.3%	2.2	7.1	12.6	80.0%	3.6	10.1	19.1
Service Station	16.7%	0.1	5.5	0.5	24.6%	0.3	14.3	1.1
A23 S/B on-slip	74.0%	4.4	19.8	15.8	45.8%	1.0	5.8	6.0

9.4.9 The western roundabout is shown to operate above capacity in both AM and PM peak periods, with a maximum DoS value of 109.7% on the A2300 Overbridge arm in the PM peak. This leads to a Mean Maximum Queue of 132 PCUs, which would extend across the overbridge and beyond the eastern roundabout, as well as an average delay of over three minutes per PCU. Congestion on this arm is caused by the pedestrian crossing being called every cycle, resulting in queues building up on the overbridge.

9.4.10 The eastern roundabout is shown to operate within capacity within both AM and PM peak periods. It is however acknowledged that the notable queue on the western roundabout east arm would impact the operation of this junction. A sensitivity test has been added to establish if this queue can be mitigated such that it no longer impacts the eastern roundabout operation.

Sensitivity Testing – Pedestrian Crossing Demand

9.4.11 SYSTRA have undertaken a sensitivity test based on the pedestrian crossing on the western roundabout of the junction called every three cycles rather than every cycle. It is considered that this would be more reflective of expected conditions due to anticipated fairly low frequency of pedestrians using the A23 overbridge. The model output reports in Appendix G ending with ST in the file name relate to the sensitivity testing.

2039 Science Park Mitigation (Pedestrian Crossing called every third Cycle)

9.4.12 The results for the Science Park Mitigation with the pedestrian crossing being called every third cycle is shown in **Table 22** below.

Table 22. A23 Hickstead Interchange West – 2039 Do Minimum Junction Model Results with altered pedestrian cycle (Science Park Model)

Lane Name	AM Peak				PM Peak			
	DoS (%)	Total Delay (pcuHr)	Average Delay (s/pcu)	Mean Max Queue (pcu)	DoS (%)	Total Delay (pcuHr)	Average Delay (s/pcu)	Mean Max Queue (pcu)
2039 Do Minimum								
Western Roundabout								
Hickstead Lane	69.9%	1.1	14.7	1.1	22.7%	0.1	5.0	0.1
A2300 North	0.0%	0.0	0.0	0.0	0.0%	0.0	0.0	0.0
A2300 Overbridge	83.2%	2.6	6.0	7.0	85.5%	3.1	7.0	9.0
A2300 South	18.1%	0.2	3.1	1.6	6.2%	0.1	2.7	0.5
Eastern Roundabout								
A2300 Overbridge	86.8%	7.2	49.9	12.9	65.5%	2.7	57.9	3.3
A23 N	79.7%	5.8	26.2	18.1	49.4%	1.7	9.3	8.1
A2300 East	102.0%	35.2	77.8	71.3	108.0%	80.1	167.2	116.6
Service Station	18.6%	0.1	5.0	0.1	27.5%	0.2	8.3	0.2
Central Right Turn Lane	49.5%	1.4	65.3	2.3	22.2%	0.5	49.4	1.0

9.4.13 As is evident from the information in **Table 22**, the proposed alteration of the pedestrian crossing cycle on the western roundabout of the Hickstead Interchange leads to significant improvement on the A2300 overbridge (westbound) in the AM peak, with the Degree of Saturation decreasing from 95.6% to 83.2%, and Mean Max Queues reduce from 29 to 7 PCUs.

9.4.14 Additionally in the PM peak, there is significant improvement on the results of the A2300 overbridge (westbound). Degree of Saturation reduces from 98.2% to 85.5%, and the Mean Max Queue reduces from 40 to 9 PCUs.

9.4.15 The changes to the pedestrian crossing demand have a negligible impact the results of the Eastern Roundabout.

SYSTRA Proposed Mitigations (Pedestrian Crossing called every third Cycle)

9.4.16 The results for the SYSTRA Mitigation with the altered cycle for the pedestrian crossing is shown in **Table 23** below.

Table 23. A23 Hickstead Interchange – 2039 Do Minimum Junction Model Results with Altered Pedestrian Cycle (SYSTRA Model)

Lane Name	AM Peak				PM Peak			
	DoS (%)	Total Delay (pcuHr)	Average Delay (s/pcu)	Mean Max Queue (pcu)	DoS (%)	Total Delay (pcuHr)	Average Delay (s/pcu)	Mean Max Queue (pcu)
2039 Do Minimum								
Western Roundabout								
A2300 Hickstead Lane	66.8%	1.0	12.8	1.0	19.4%	0.1	4.1	0.1
A23 North	0.0%	0.0	0.0	0.0	0.0%	0.0	0.0	0.0
A2300 Overbridge	89.1%	4.1	8.8	8.4	94.2%	7.6	15.4	33.7
A23 South	17.8%	0.2	3.0	1.5	6.1%	0.1	2.7	0.5
Eastern Roundabout								
A2300 Overbridge	84.1%	6.9	41.1	13.2	63.1%	2.9	50.1	3.6
A2300 East	68.4%	2.2	7.1	12.6	80.0%	3.6	10.1	19.1
Service Station	16.7%	0.1	5.5	0.5	24.6%	0.3	14.3	1.1
A23 S/B on-slip	74.0%	4.4	19.8	15.8	45.9%	1.1	5.8	6.0

9.4.17 As noted in the table above, when the crossing is called every three cycles the operation of the A2300 overbridge (westbound) into the western roundabout improves with DoS decreasing from 103.8% to 89%, and a resultant decrease in Mean Max Queue from 29 to 8 PCUs.

9.4.18 In the PM peak, it is noted that with the alteration of the pedestrian cycle reduces the Degree of Saturation from 109.7% to 94.2%, and the resulting Mean Max Queue from 117 to 34 PCUs.

9.4.19 There is a negligible impact on the operation of the Eastern Roundabout.

Summary

9.4.20 The results of the sensitivity test demonstrate that the level of queues reported substantially reduces in the more reflective scenario whereby the proposed signalised crossing on the western roundabout is called every third cycle. The level of queues reported with the Science Park proposed mitigation are accommodated within the available stacking space of the A2300 overbridge, however greater queues are observed on the A2300 westbound approach to the eastern roundabout when compared to the SYSTRA proposed mitigation.

9.4.21 The level of queues forecast with the SYSTRA mitigation is within the available stacking capacity for the AM however it is still in excess for the PM peak during this single peak period. Further investigation will be undertaken to assess the results of the Science Park and the SYSTRA proposed mitigation to enable a comparison to be drawn and conclusions to be reached on the form of mitigation required to support the level of growth targeted within the Local Plan.

9.4.22 It is also noted that the strategic modelling results suggest much lower queues on the A2300 Eastbound entry into the eastern roundabout with the SYSTRA proposed mitigation, due to the removal of the green phase associated with the revised internal circulatory of the eastern roundabout. It is also noted that the A23 off-slip improves in operation within the strategic modelling when comparing the Science Park and SYSTRA developed mitigation, which also suggests the benefits of the SYSTRA scheme due to the off-slip being a key focus of mitigations.

9.5 Copthorne Roundabout - A264 Copthorne Way/Brookhill Road/A264 Copthorne Common Road/Copthorne Hotel Access/ A2220 Copthorne Road Roundabout

9.5.1 The Copthorne Roundabout is a non-signalised five arm roundabout located at the junction of the A264, A2220 Copthorne Road and Brookhill Road, which provides access to the village of Copthorne. The fifth arm provides access to the Copthorne Hotel complex. Uncontrolled pedestrian crossings are present on the north arm (Brookhill Road), which has recently been upgraded to include tactile paving. Copthorne Way only provides a footway on the northern side of the carriageway.

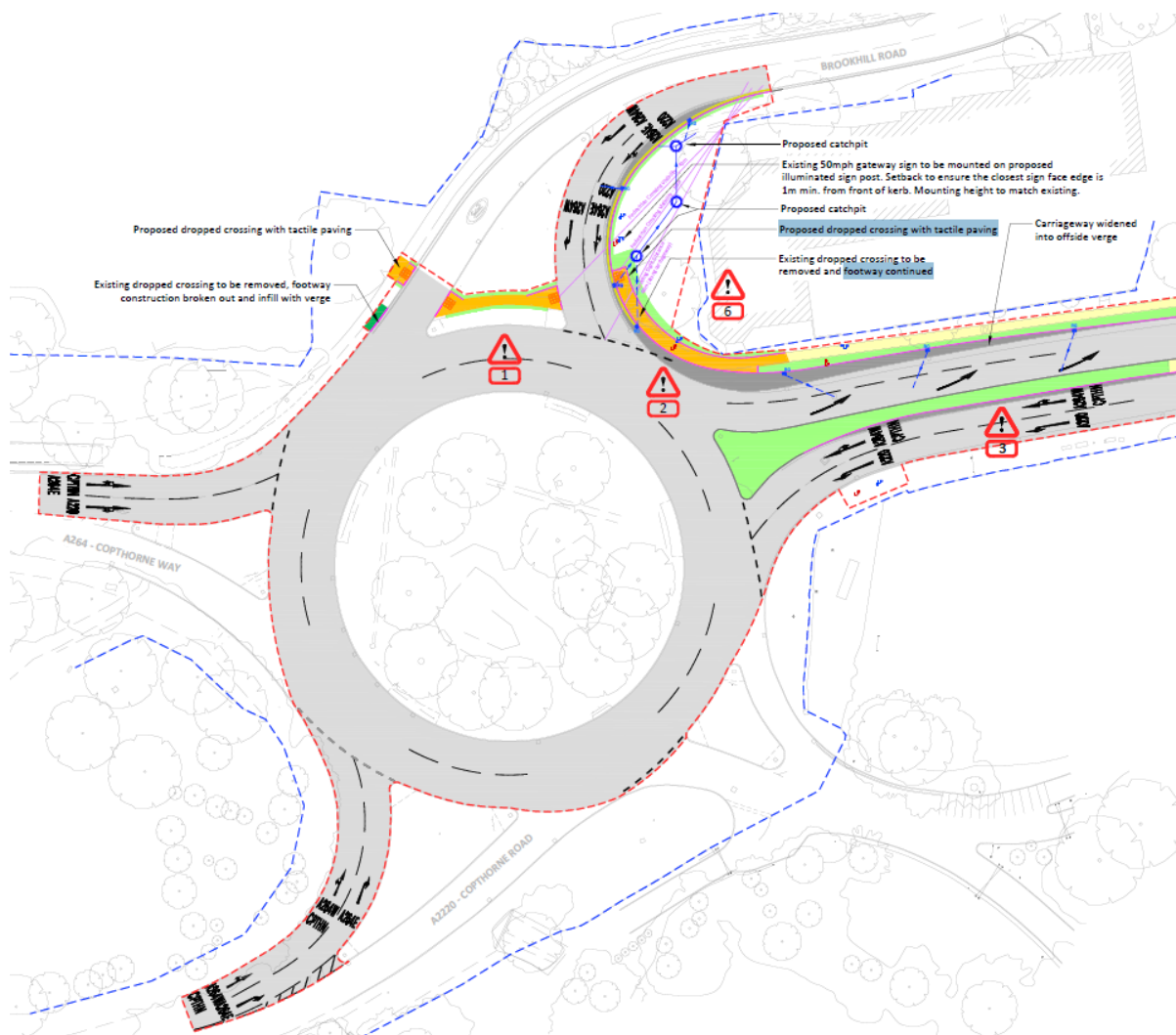
2023 Junction Upgrades

9.5.2 It is noted that Copthorne Roundabout has been subject to recent upgrade works which were completed in Summer 2023. The proposed improvements include widening of Brookhill Road approach arm, widening of the eastbound A264 Copthorne Common Road exit arm and improved pedestrian crossing facilities.

9.5.3 A plan showing the completed 'as-built' layout of these works is shown in **Figure 16**.

9.5.4 Due to the timing of the modelling work, the local junction model results presented in this section have been assessed based on the pre-existing layout (with no improvement works as per the description in paragraph 9.5.2). Further local modelling work is to commence considering the combined benefits of the 'as-built' scheme at Copthorne Roundabout as well as proposed Local Plan mitigation identified.

Figure 16. Copthorne Roundabout 'as-built' Improvement Scheme (Completed Summer 2023)



Model Validation

9.5.5 **Table 24** details the amendments which have been made to the junction model arms to allow validation to meet the required criteria detailed in Section 8.2.6.

Table 24. Copthorne Roundabout – Local Model Validation Amendments

ARM	PERCENTAGE CAPACITY AJUSTMENT CHANGES	
	AM	PM
A264 W	115%	115%
Brookhill Rd	No Change	No Change
A264 E	130%	130%
Copthorne Hotel	No Change	No Change
A2220 SW	No Change	No Change

9.5.6 The capacity amendments applied result in maximum queues which better reflect those in the MSSHM, with queues on all arms being within $\pm 15\%$ threshold or below 5 PCUs within both models. The model is considered appropriately validated.

9.6 Copthorne Roundabout – Junction Model Results

Pre-existing Layout Junction Model Results

9.6.1 The junction modelling results for the Copthorne Roundabout are presented in Table 25. The modelling was undertaken using the pre-existing junction geometry in all three scenarios prior to the completion of the works shown at Figure 16.

Table 25. Copthorne Roundabout – Pre-existing Layout Junction Model Results

	AM (08:00-09:00)				PM (17:00-18:00)			
	Queue (PCU)	Delay (s)	RFC	LoS	Queue (PCU)	Delay (s)	RFC	LoS
2019 Base								
A – A264 Copthorne Way	6.4	15.71	0.86	B	2.0	5.62	0.65	A
B – Brookhill Road	1.0	9.59	0.46	A	1.4	8.33	0.57	A
C – A264 Copthorne Common Road	0.9	4.33	0.46	A	2.4	7.20	0.71	A
D – Copthorne Hotel Access	0.1	4.20	0.06	A	0.1	5.48	0.10	A
E – A2220 Copthorne Road	1.6	6.25	0.61	A	0.9	5.04	0.47	A
2039 Reference Case								
A – A264 Copthorne Way	55.8	113.72	1.05	F	3.2	8.46	0.76	A
B – Brookhill Road	1.7	14.16	0.60	B	13.2	56.65	0.96	F
C – A264 Copthorne Common Road	0.8	4.34	0.44	A	5.4	15.03	0.84	C
D – Copthorne Hotel Access	0.1	4.28	0.08	A	0.2	7.38	0.15	A
E – A2220 Copthorne Road	2.8	8.41	0.74	A	1.9	8.48	0.66	A

2039 Do Minimum								
A – A264 Copthorne Way	80.9	165.93	1.10	F	5.2	13.51	0.84	B
B – Brookhill Road	2.3	17.00	0.67	C	103.5	337.54	1.24	F
C – A264 Copthorne Common Road	1.0	4.87	0.48	A	4.5	13.48	0.82	B
D – Copthorne Hotel Access	0.1	4.63	0.09	A	0.2	7.46	0.15	A
E – A2220 Copthorne Road	24.8	55.69	0.99	F	6.5	21.23	0.88	C

9.6.2 Modelling of the 2019 base case has shown that all roundabout arms operate within their practical capacity (RFC <0.85) in both the AM and PM scenarios, with the exception of the A264 western approach which is slightly above its practical capacity in the AM peak. The busiest approach in the PM peak hour is the A264 eastern arm but this has spare capacity with an RFC of 0.71.

9.6.3 The 2039 reference case shows the roundabout to experience increased congestion in both peak hours. In the AM peak the A264 western arm exceed theoretical capacity, with an RFC of 1.05, forecasting a queue length exceeding 55 PCUs and delay of over 110 seconds. All other arms show increased congestion but operate within their practical capacity. In the PM peak all arms experience increased congestion but operate within theoretical capacity. Brookhill Road is approaching theoretical capacity with an RFC of 0.96 and over a 55 second delay.

9.6.4 The 2039 Do Minimum scenario shows further increases in congestion, albeit the greatest increases are associated with the background growth to 2039 rather than the Local Plan growth itself. In the AM peak the A2220 approach has reached theoretical capacity (RFC 0.99) and the A264 western arm is over capacity (1.10), although all other arms operate well within capacity. In the PM peak the Brookhill Road approach has become significantly over capacity (RFC 1.24) and the A2220 approach is approaching capacity (RFC 0.88).

Proposed Mitigation Option and Results

9.6.5 An improvement scheme has been proposed to alleviate congestion forecast on the A264 Copthorne Road and Brookhill Road in both the 2039 Reference Case and Do Minimum Scenario.

9.6.6 The improvement scheme builds on the recently completed scheme shown at **Figure 16** above; the scheme comprises, widening of the approach arm on the A264 Copthorne Way, resulting in increased entry width and additional effective flare length associated with this increase to 8.09m on Copthorne Way. Compared to the pre-existing layout the additional effective flare length of Brookhill Road increases by 26.76m. The improvement works can be fully accommodated within the highway boundary. Further work will be undertaken to assess the impact of the improvement scheme in relation to the ‘as built’ junction upgrade at Copthorne Roundabout as shown in **Figure 16**.

9.6.7 Drawing GB01T23G40-dwg-100-04 in **Appendix H** and **Figure 17** below highlights the proposed mitigation option.

- 9.6.10 The proposed mitigation has initially been tested in the local junction modelling against the pre-existing junction layout and the model results for the proposed mitigation demonstrate a notable improvement on the junction approaches that are shown to be over capacity with the pre-existing layout. In the AM peak, delays on the A264 western arm are reduced by over 90 seconds and Brookhill Road also shows a reduction in queuing. The delay incurred on A264 Copthorne Way is greater in the 2039 Reference Case under the pre-existing layout, compared to the with mitigation 2039 Do Minimum Scenario, hence mitigating the impacts of the Local Plan traffic.
- 9.6.11 In the PM peak the mitigation reduces delays on Brookhill Road by over four minutes compared to the pre-existing layout and the A264 western arm also sees an improvement. Whilst Brookhill Road operates slightly over capacity the improvement scheme has brought marked improvements to the arm operation and the level of reported queueing is not anticipated to have an impact on adjacent junctions due to the stacking space available. All other arms show a marginal increase in queue and delays but operate within theoretical capacity.
- 9.6.12 The proposed mitigation is considered to be successful in alleviating the capacity issues at the most congested arms in both peak periods. Further assessment will be undertaken in due course to assess the combined benefits of the recently completed improvement scheme at **Figure 16** in combination with the additional improvement works presented at **Figure 17**, to provide a comparison of the Local Plan impacts compared to the ‘as- built’ junction layout, rather than the pre-existing layout as per the comparisons presented in this chapter.

9.7 Dukes Head Roundabout – A264 Copthorne Common Road, B2028 Turners Hill Road, A264 Snowhill.

- 9.7.1 The Dukes Head Roundabout is a non-signalised four arm roundabout located at the junction of the A264 and Turners Hill Road. Uncontrolled pedestrian crossings are present on the north and west arms however no tactile paving is provided.

Model Validation

- 9.7.2 **Table 27** details the amendments which have been made to the junction model arms to allow validation to meet the required criteria detailed in section 2.3.6.

Table 27. Dukes Head Roundabout – Local Model Validation Amendments

ARM	PERCENTAGE CAPACITY AJUSTMENT CHANGES	
	AM	PM
A264 W	60.5%	67.0%
Turners Hill Road N	No Change	No Change
A264 E	No Change	No Change
Turners Hill Road S	No Change	No Change

9.7.3 The capacity amendments applied result in maximum queues which better reflect those in the MSSHM, with queues on all arms being within $\pm 15\%$ threshold or below 5 PCUs within both models. The model is considered appropriately validated.

9.8 Dukes Head Roundabout – Junction Model Results

Existing Layout Junction Model Results

9.8.1 The Dukes Head roundabout has also been modelled using Junctions 10 software and a summary of the modelling results is shown in **Table 28**. This junction has also been modelled using the existing junction geometry.

Table 28. Dukes Head Roundabout – Existing Layout Junction Model Results

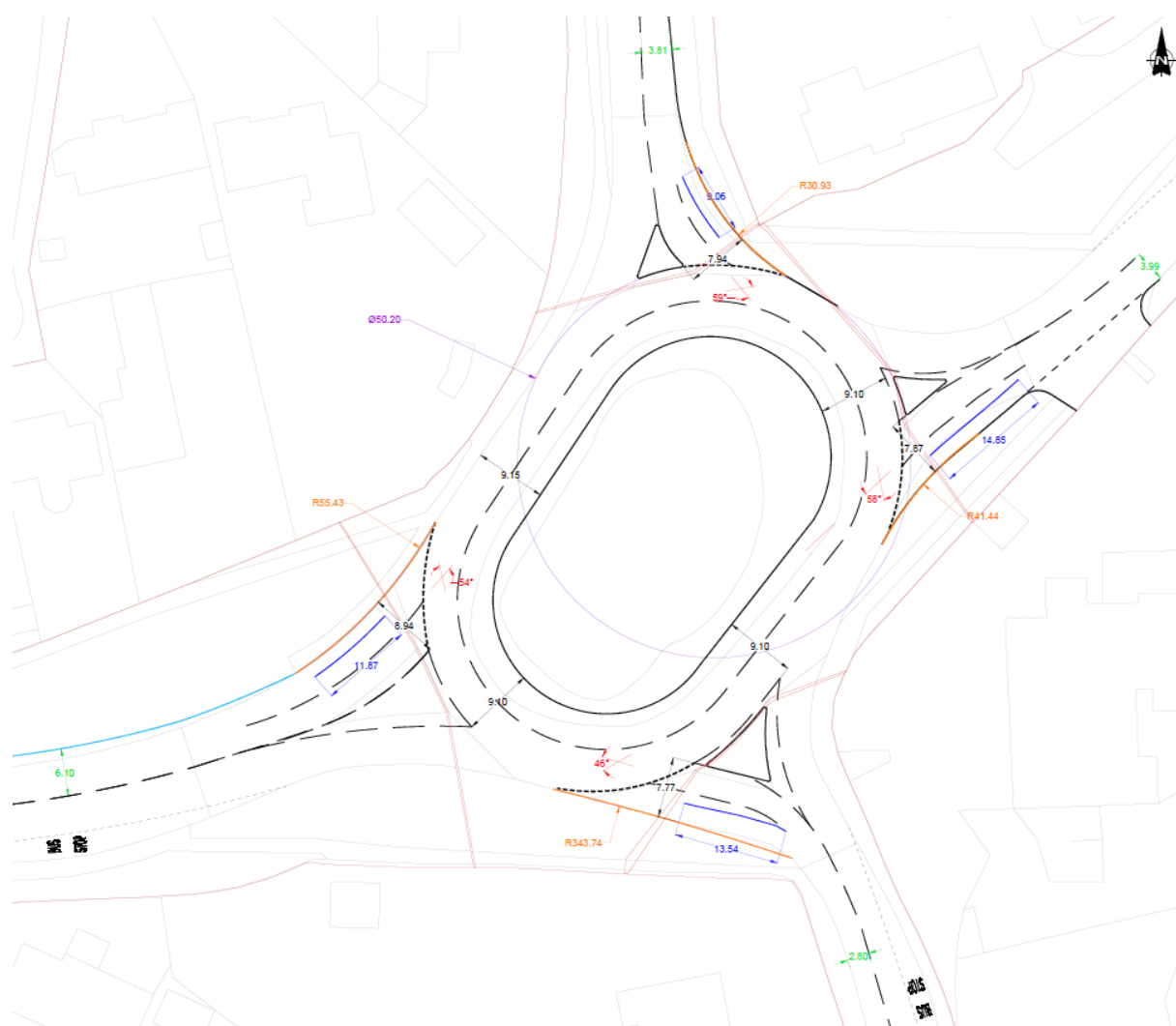
	AM (08:00-09:00)				PM (17:00-18:00)			
	Queue (PCU)	Delay (s)	RFC	LoS	Queue (PCU)	Delay (s)	RFC	LoS
2019 Base								
A – A264 Copthorne Common Road	19.4	69.96	0.98	F	6.4	22.53	0.87	C
B – B2028 Turners Hill Road (N)	0.3	4.49	0.20	A	0.8	6.33	0.44	A
C – A264 Snow Hill	0.7	5.35	0.38	A	1.6	12.00	0.61	B
D – B2028 Turners Hill Road (S)	0.6	5.28	0.36	A	0.8	6.91	0.441	A
2039 Reference Case								
A – A264 Copthorne Common Road	116.5	416.44	1.22	F	65.2	160.66	1.09	F
B – B2028 Turners Hill Road (N)	0.5	4.90	0.33	A	3.3	16.78	0.78	C
C – A264 Snow Hill	0.4	5.07	0.26	A	3.0	24.93	0.75	C
D – B2028 Turners Hill Road (S)	1.8	8.50	0.64	A	1.2	8.38	0.53	A
2039 Do Minimum								
A – A264 Copthorne Common Road	114.8	411.08	1.22	F	106.6	291.37	1.15	F
B – B2028 Turners Hill Road (N)	0.6	5.16	0.37	A	6.1	28.23	0.87	D
C – A264 Snow Hill	0.4	5.24	0.28	A	4.9	41.84	0.84	E
D – B2028 Turners Hill Road (S)	2.0	9.34	0.67	A	1.2	8.60	0.54	A

- 9.8.2 The 2019 base year results show the A264 western arm to operate close to its operational capacity in both the AM and PM peak hours. All other arms operate well within capacity in both peaks.
- 9.8.3 In the 2039 reference case the A264 western approach becomes significantly over capacity in both peak periods, whilst all other arms continue to operate within their practical capacity in both peaks.
- 9.8.4 In the AM peak, the 2039 Do Minimum Scenario shows little difference in operation compared to the 2039 Reference Case, suggesting that the Local Plan traffic itself is having limited impact on junction operation and it is likely, given the congestion observed, that vehicles may be seeking alternative routes. In the PM peak the increases are also less pronounced compared to the RFC increases associated with the background growth in the 2039 Reference Case. The A264 Copthorne Common Road operates over capacity with an RFC of 1.15 and B2028 Turners Hill Road is approaching capacity with an RFC of 0.87. The A264 Snow Hill arm reports 41 seconds of delay in the PM peak, increasing from 12 seconds in the 2019 Base Year.

Proposed Mitigation Option and Results

- 9.8.5 An improvement scheme has been proposed to alleviate congestion on the A264 Cophorne Common Road and A264 Snow Hill.
- 9.8.6 The improvement scheme comprises, widening of the approach arms on the A264 Cophorne Common Road and A264 Snow Hill, resulting in increased entry width and additional effective flare length associated with this increase to 11.97m on Cophorne Common Road and 14.85m on Snow Hill. Additionally, the internal circulatory lanes on the roundabout have been widened to create a circulatory width of 9.10m of higher. This allows for two lanes to be clearly marked around the circulatory in order to delineate clear lane positioning of vehicles to minimise the safety risk from vehicle weaving. The improvement works can be fully accommodated within the highway boundary.
- 9.8.7 Drawing **GB01T23G40-dwg-100-04** in **Appendix H** and **Figure 18** below highlights the proposed mitigation option. Whilst it is noted that a mitigation design associated with Barns Court Development has been considered, the proposed improvements as shown in **Figure 18** have a greater beneficial impact to specifically support the Local Plan traffic growth rather than focusing on widening along Turners Hill Road.

Figure 18. Dukes Head Roundabout Proposed Mitigation



- 9.8.8 The results of the Do Something assessment are presented in **Table 29** below.
- 9.8.9 The 2039 Do Minimum flows have been used to assess the proposed mitigation.

Table 29. Dukes Head Roundabout – With Mitigation Results

	AM (08:00-09:00)				PM (17:00-18:00)			
	Queue (PCU)	Delay (s)	RFC	LoS	Queue (PCU)	Delay (s)	RFC	LoS
2039 Do Minimum								
A – A264 Copthorne Common Road	32.6	99.29	1.03	F	21.2	55.64	0.98	F
B – B2028 Turners Hill Road (N)	0.6	5.39	0.38	A	8.5	39.95	0.92	E
C – A264 Snow Hill	0.3	3.81	0.22	A	1.7	13.68	0.62	B
D – B2028 Turners Hill Road (S)	1.7	7.63	0.62	A	1.0	7.29	0.50	A

- 9.8.10 Modelling of the mitigation scheme for the roundabout shows a significant improvement in results compared to the 2039 Reference Case and Do Minimum Scenarios with the existing roundabout layout. In the AM peak the queue length forecast on the A264 western arm is reduced by over 80 PCU and delay reduced by over five minutes when compared with the unmitigated 2030 Do Minimum scenario.
- 9.8.11 Similar improvements are seen on the A264 Copthorne Common Road in the PM peak, with forecast queue lengths reduced by 85 PCU and delays by almost four minutes. The RFC values on A264 Snow Hill decrease, with queue lengths anticipated to be less than two PCUs in both the AM and PM peak. A minor increase in RFC is noted along the B2028 Turners Hill Road however this operates within capacity in both the AM and PM peak.

9.9 Summary and Conclusions

- 9.9.1 It can be seen from the junction model results presented in this chapter that the three identified junctions are already approaching and on certain arms already exceeding theoretical capacity in the 2019 Base Year Scenario. Congestion and delay incurred are forecast to increase associated with background growth and committed developments (2039 Reference Case) and then further with the introduction of traffic associated with growth targets set out in the Local Plan (2039 Do Minimum).
- 9.9.2 Consequently, capacity and safety improvement schemes have been developed to support the target levels of growth identified in the Mid-Sussex Local Plan. The Do Something with mitigation model results have shown that the mitigation proposed by SYSTRA for the three locations would be beneficial in managing the traffic impacts of this growth going forward.
- 9.9.3 In all instances, implementation of the proposed mitigation would provide junction performance at a level that would either improve on or broadly align with the 2039 Reference Case scenario with the existing junction layouts. The proposed mitigation has had a significant positive benefit on junction performance when comparing the 2039 Do Minimum results based on the existing junction layout, compared to the results with the proposed mitigation schemes developed. Therefore, the proposed mitigation is successful to support the level of target growth identified in the Mid-Sussex Local Plan at these three locations and where further assessments are ongoing this has been noted within this chapter.

10. STRATEGIC MODEL MITIGATION TESTING

10.1 Introduction

10.1.1 This chapter reports on the outputs from the modelling and specifically the forecast impact(s) on junction operational performance as a result of development related traffic growth in Scenario 5m5 with mitigation compared to the Reference Case. Details of the mitigation proposed can be found in Chapter 9.

10.1.2 The analysis includes the following:

- Traffic Flow Impacts
- Impacts on the M23 and A23 Strategic Road Network
- Identification of Junctions with Capacity Impacts

10.1.3 Reporting includes assessment of locations in neighbouring authorities.

10.2 Scenario 5m5 Mitigation Test – Model Inputs

Model Demand

10.2.1 Scenario 5m5 uses the same demand as that used in Scenario 5m2. Please see Chapter 5 for a more detail on the demand assumptions.

Highway Changes

10.2.2 Highway changes implemented in Scenario 5m5 include improvements at 3 junctions listed below and the changes are detailed in Chapter 8:

- Hickstead Junction (A2300 j/w A23)
- Dukes Head Roundabout (A264 j/wB2028)
- Copthorne Hotel Roundabout (A264 j/w A2220)

10.2.3 Within the Strategic Modelling, it should be noted that as part of the forecast modelling, Reference Case schemes are included. These schemes are overlayed on top of the 2019 base scenario network, to build up an accurate representation of the transport network for the 2039 future year. These schemes are included in the 2039 Reference Case and subsequent 2039 Local Plan scenarios. Details of these can be found in Section 2.8. However, it's worth noting 3 key committed schemes that are included in the 2039 forecast years:

- A264 / Brookhill Rd / A2220 Roundabout (Copthorne Hotel Roundabout)
- A264 Dukes Head Roundabout
- A23/A2300 Hickstead Eastern Roundabout – Science Park Scheme

10.3 Impacts on the M23 and A23 Strategic Road Network

Main Carriageways, Merges and Diverges

10.3.1 This section reports the impacts on the M23 and A23 Strategic Road Network with assessment based on the Design Manual for Roads and Bridges CD122 Geometric design of grade separated junctions (DMRB CD 122).

10.3.2 Table 30 summarises the Reference Case and Scenario 5m5vehicle flows on the mainline sections between the main junctions. Bold numbers denote traffic flows which exceed the maximum vehicles per hour calculated from the number of lanes and the mainline maximum vehicles per hour (vph) per lane as stated in DMRB CD 122 paragraph 3.8.

10.3.3 DMRB CD 122 notes (below paragraph 3.8) the following:

The flows for maximum vph per lane do not represent the maximum hourly throughputs that are possible, but greater flows often results in decreasing levels of service and safety.

Table 30. Scenario 5m4: M23 and A23 Vehicle Flows – Mainline Sections

Location	Ref Case No. of Lanes	Max. Vehicles per hour per lane	Max. Vehicles per hour	AM Dem (Veh) Ref	AM Dem (Veh) Sc	Diff from 2039 Ref	% Diff	PM Dem (Veh) Ref	PM Dem (Veh) Sc	Diff from 2039 Ref ⁴	% Diff
M23 / A23											
Northbound											
A23 - A27 to A273 DIVERGE	3	1600	4800	4275	4287	12	0%	3445	3678	233	7%
A23 - A273 MERGE to A281 DIVERGE	2	1600	3200	3755	3778	24	1%	2652	2871	219	8%
A23 - A281 MERGE to B2117 DIVERGE	2	1600	3200	3634	3701	67	2%	2331	2545	213	9%
A23 - B2117 DIVERGE to B2118 MERGE	2	1600	3200	3203	3316	113	4%	1830	1821	-8	0%
A23 - B2118 MERGE to A2300 DIVERGE	2	1600	3200	3748	3975	227	6%	2206	2477	270	12%
A23 - A2300 MERGE to A272 DIVERGE	3	1600	4800	4999	5217	218	4%	3779	4048	268	7%
A23 - A272 MERGE to B2115 DIVERGE	3	1600	4800	4624	4875	252	5%	3532	3769	237	7%
A23 - B2115 MERGE to B2110 DIVERGE	3	1600	4800	4720	5066	346	7%	3613	3826	213	6%
A23 - B2110 MERGE to J11 DIVERGE	3	1600	4800	5396	5685	289	5%	4084	4251	167	4%
M23 - J11 MERGE - J10a MERGE	3	1800	5400	4695	4854	160	3%	3637	3730	93	3%
M23 - J10a MERGE to J10 DIVERGE	3	1800	5400	5183	5329	146	3%	3922	4017	96	2%
M23 - J10 MERGE to J9 DIVERGE	4	1800	7200	4727	4955	228	5%	4347	4470	123	3%
M23 - J9 MERGE to J8 DIVERGE	4	1800	7200	4573	4755	182	4%	4977	5024	46	1%
M23 / A23											
Southbound											
M23 - J8 MERGE to J9 DIVERGE	4	1800	7200	5283	5366	83	2%	5383	5523	141	3%
M23 - J9 MERGE to J10 DIVERGE	4	1800	7200	4791	4928	137	3%	5248	5456	208	4%
M23 - J10 MERGE to J10a DIVERGE	3	1800	5400	4140	4305	165	4%	5202	5289	86	2%
M23 - J10a DIVERGE - J11 DIVERGE	3	1800	5400	3446	3610	164	5%	4425	4499	74	2%
A23 - J11 MERGE to B2114 DIVERGE	3	1600	4800	3738	3952	214	6%	5170	5305	135	3%
A23 - B2114 DIVERGE to B2110 MERGE	3	1600	4800	3431	3644	214	6%	4516	4739	224	5%
A23 - B2110 MERGE to B2115 DIVERGE	3	1600	4800	3730	3981	251	7%	4792	5031	239	5%
A23 - B2115 MERGE to A272 DIVERGE	3	1600	4800	3617	3900	283	8%	5009	5329	321	6%
A23 - A272 MERGE to A2300 DIVERGE	3	1600	4800	3699	4111	412	11%	5109	5424	315	6%
A23 - A2300 MERGE to B2118/ Mill Lane DIVERGE	3	1600	4800	2971	3160	189	6%	4678	5002	324	7%
A23 - B2118/ Mill Lane DIVERGE to B2117 MERGE	2	1600	3200	2448	2390	-58	-2%	4109	4031	-77	-2%
A23 - B2117 MERGE to A281 MERGE	2	1600	3200	2951	3190	239	8%	4154	4177	23	1%
A23 - A281 MERGE to A273 DIVERGE	2	1600	3200	3414	3730	317	9%	4168	4193	25	1%
A23 - A273 MERGE to A27	3	1600	4800	4081	4246	165	4%	5369	5346	-23	0%

10.3.4 The highest percentage increase in the AM peak is southbound on the A23 between the A272 and the A2300, where the increase is approximately 11%. This is a 5% increase from the comparison of Scenario 5M4 and 5.

10.3.5 The highest percentage increase in the PM peak is northbound on the A23 between the B2118 and the A2300, where the increase is approximately 12%, which is the same as the change from Scenario 5 to 5M4.

10.3.6 There are some locations where the maximum vehicles per hour is exceeded. However, it should be noted that many of these locations are also exceeded in the Reference Case.

10.3.7 Table 31 summarises the vehicle flows on the merges and diverges. Bold numbers show where the forecast traffic flow exceeds a vehicle flow of 1350 vph per lane on motorway merges and diverges and 1200 vph per lane on non-motorway merges and diverges.

Table 31. Scenario 5m4: M23 and A23 Vehicle Flows – Merges and Diverges

Location	Ref Case No. of Lanes	Max. Vehicles per hour per lane	Max. Vehicles per hour	Ref Case Scenario 5m5				Ref Case Scenario 5m5			
				AM Dem (Veh)	AM Dem (Veh)	Diff from 2039 Ref	% Diff	PM Dem (Veh)	PM Dem (Veh)	Diff from 2039 Ref4	% Diff
M23 / A23											
Northbound											
A273 DIVERGE	1	1200	1200	799	837	37	5%	943	964	21	2%
A273 MERGE	1	1200	1200	279	328	49	17%	149	157	8	5%
A281 DIVERGE	1	1200	1200	305	413	108	36%	375	374	-1	0%
A281 MERGE	1	1200	1200	184	335	151	82%	55	48	-7	-13%
B2117 DIVERGE	1	1200	1200	431	385	-46	-11%	502	723	222	44%
B2118 MERGE	1	1200	1200	545	659	114	21%	377	655	279	74%
A2300 DIVERGE	1	1200	1200	221	301	80	36%	69	64	-5	-7%
A2300 MERGE	1	1200	1200	1472	1543	71	5%	1642	1636	-7	0%
A272 DIVERGE	1	1200	1200	611	540	-71	-12%	441	500	60	14%
A272 MERGE	1	1200	1200	236	198	-38	-16%	193	222	29	15%
B2115 DIVERGE	1	1200	1200	273	263	-10	-4%	141	174	33	23%
B2115 MERGE	1	1200	1200	370	454	84	23%	222	230	9	4%
B2110 DIVERGE	1	1200	1200	386	431	45	12%	176	212	36	20%
B2110 MERGE	1	1200	1200	1062	1050	-12	-1%	647	637	-10	-2%
J11 DIVERGE	2	1350	2700	1771	1879	107	6%	1676	1745	69	4%
J11 MERGE	1	1350	1350	1070	1048	-22	-2%	1229	1224	-5	0%
J10a MERGE	1	1350	1350	489	475	-13	-3%	284	287	3	1%
J10 DIVERGE	2	1350	2700	1522	1570	48	3%	1134	1165	31	3%
J10 MERGE	2	1350	2700	1065	1195	130	12%	1560	1618	58	4%
J9 DIVERGE	2	1350	2700	1622	1668	46	3%	921	996	75	8%
J9 MERGE	2	1350	2700	1469	1468	0	0%	1551	1549	-2	0%
M23 / A23											
Southbound											
J9 DIVERGE	2	1350	2700	1382	1381	-1	0%	1752	1744	-7	0%
J9 MERGE	2	1350	2700	890	943	53	6%	1617	1677	60	4%
J10 DIVERGE	2	1350	2700	1757	1815	58	3%	1295	1410	115	9%
J10 MERGE	2	1350	2700	1106	1192	86	8%	1249	1243	-6	0%
J10a DIVERGE	2	1350	2700	693	695	2	0%	778	790	12	2%
J11 DIVERGE	2	1350	2700	1191	1213	22	2%	1032	1030	-2	0%
J11 MERGE	1	1350	1350	1483	1555	73	5%	1777	1836	59	3%
B2114 DIVERGE	1	1200	1200	307	308	1	0%	654	566	-89	-14%
B2110 MERGE	1	1200	1200	299	337	37	13%	277	292	15	5%
B2115 DIVERGE	1	1200	1200	348	332	-16	-5%	405	356	-50	-12%
B2115 MERGE	1	1200	1200	234	251	16	7%	622	654	32	5%
A272 DIVERGE	1	1200	1200	273	258	-15	-6%	351	370	19	5%
A272 MERGE	1	1200	1200	461	607	146	32%	705	750	46	6%
A2300 DIVERGE	2	1200	2400	1497	1795	297	20%	1197	1281	83	7%
A2300 MERGE	1	1200	1200	769	843	75	10%	766	858	92	12%
B2118/Mill Lane DIVERGE	1	1200	1200	522	770	247	47%	569	970	401	70%
B2117 MERGE	1	1200	1200	503	800	297	59%	46	146	100	218%
A281 MERGE	1	1200	1200	462	540	78	17%	14	16	2	14%
A273 DIVERGE	1	1200	1200	216	308	92	43%	24	31	7	29%
A273 MERGE	1	1200	1200	883	824	-59	-7%	1224	1183	-41	-3%

10.3.8 There are some locations where the maximum vehicle flow is exceeded including the A2300 northbound merge in the both peaks, and the M23 Junction 11 southbound merge in both peaks. For these instances the maximum vehicle flow is also exceeded in the Reference Case.

M23 Junctions 9, 10, and 11

10.3.9 Table 32 shows model results at the approach arms and main circulatory links at Junctions 9, 10 and 11 of the M23. The following results are shown for Scenario 5m5 alongside the Reference Case, for the AM and PM peak models:

- Demand in vehicles
- Ratio of flow to capacity (RFC)
- Average vehicle delay in seconds
- Average queue length in passenger car units (PCUs)

Table 32. Scenario 5m4: M23 Junctions 9, 10 and 11 – Approach Arm Results

Junction	Approach Arm	2039 Reference Case								2039 Scenario 5m5							
		AM Dem (Veh)	AM RFC (%)	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	PM Delay (s)	PM Avg Q (pcu)	AM Dem (Veh)	AM RFC (%)	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	PM Delay (s)	PM Avg Q (pcu)
Junction 9	M23 Southbound off-slip (N)	1382	58.8	11.4	3.7	1752	95.1	33.3	8.5	1381	58.8	11.4	3.7	1744	94.7	32.4	8.4
	M23 Northbound off-slip (S)	1622	45.0	1.0	0.0	921	25.1	0.7	0.0	1668	45.7	1.0	0.0	996	26.9	0.7	0.0
	Gatwick Spur (W)	1051	54.0	3.0	0.0	1676	77.1	3.0	0.0	1105	56.7	3.0	0.0	1772	80.1	3.0	0.0
	Circulatory North	890	84.5	30.1	5.1	1617	98.4	51.8	7.2	943	89.3	34.6	5.5	1677	100.3	68.4	8.7
	Circulatory East	2272	38.1	0.5	0.0	3369	53.4	0.6	0.0	2324	39.0	0.5	0.0	3421	53.7	0.6	0.0
	Circulatory South	1382	31.3	0.6	0.0	1752	37.7	0.6	0.0	1381	31.2	0.6	0.0	1744	37.2	0.6	0.0
Junction 10	M23 Southbound off-slip (N)	1757	88.6	24.3	8.4	1295	58.3	14.7	4.6	1815	89.9	25.4	8.8	1410	61.9	16.0	5.3
	Copthorne Way (E)	678	33.2	18.5	2.7	1403	79.8	93.7	21.3	932	44.6	21.4	3.8	1560	88.0	99.1	26.0
	M23 Northbound off-slip (S)	1522	66.3	43.1	13.8	1134	66.9	84.1	14.0	1570	67.7	43.1	14.1	1165	68.2	94.1	17.3
	A2011 Crawley Avenue (W)	1830	84.9	21.7	8.4	2262	76.2	14.2	7.0	1846	85.1	21.8	8.4	2271	75.8	14.2	6.9
	Circulatory North	1480	98.7	55.0	7.7	1417	102.5	116.4	24.7	1505	99.8	63.7	7.8	1457	104.0	144.3	35.0
	Circulatory East	1827	79.2	16.7	7.0	1243	45.6	12.7	4.0	1789	77.5	16.1	6.7	1227	44.5	12.3	3.8
	Circulatory South	1400	72.4	22.1	7.9	1397	60.5	13.4	4.6	1529	78.2	24.1	9.0	1544	65.9	14.5	5.4
	Circulatory West	715	47.0	18.4	2.7	714	62.5	30.2	3.6	854	55.3	18.5	3.2	803	68.8	30.6	4.1
Junction 11	M23 Southbound off-slip (NE)	1191	56.6	17.2	4.8	1032	76.6	28.4	6.1	1213	57.7	17.4	4.9	1030	76.1	28.2	6.1
	Brighton Road (S)	1273	54.8	22.0	7.0	765	35.2	19.6	4.0	1285	55.0	22.1	7.0	759	34.9	19.6	4.0
	M23 Northbound off-slip (SW)	1165	32.2	9.9	2.9	656	19.3	9.1	1.8	1211	33.1	10.0	3.0	720	21.0	9.2	1.9
	A264 (W)	1055	48.1	21.1	5.8	802	35.1	19.6	4.0	1046	47.6	21.1	5.7	867	37.9	19.9	4.4
	A23 Brighton Road (N)	1016	45.2	13.7	3.5	2034	88.4	29.3	12.6	1053	46.6	14.1	3.7	2110	90.5	31.3	13.2
	Circulatory NE	1174	63.4	16.5	4.7	1989	74.0	11.8	5.0	1227	65.8	16.8	4.9	2099	77.3	12.5	5.4
	Circulatory South	2365	56.1	11.1	6.4	3021	67.8	13.0	9.3	2440	57.6	11.3	6.8	3129	69.6	13.4	9.9
	Circulatory SW	1142	98.1	57.6	6.5	941	78.5	24.9	4.8	1144	98.0	57.0	6.5	967	80.2	25.6	4.9
	Circulatory West	2307	66.2	59.1	16.8	1597	46.4	19.2	7.0	2355	67.1	62.0	19.1	1687	48.7	20.6	7.7
	Circulatory North	2804	86.0	17.3	10.9	2063	64.3	18.3	9.4	2816	85.6	17.1	10.7	2212	68.5	17.7	9.6

10.3.10 The table shows some RFCs in excess of 90%, however in most instances these are already present in Reference Case and not significantly added to in Scenario 5m5.

10.4 Identification of Junctions with Capacity Impacts

10.4.1 The same categorisation has been used previously in Scenario 5, detailed in Chapter 4.4 in respect of the WSCC Highway network.

10.4.2 The impact of development was assessed based on the National Planning Policy Framework (NPPF) using criteria agreed by MSDC and WSCC. These were derived using WSCC’s position statement in relation to the NPPF which sets out their interpretation of terms defining traffic impacts, namely “significant amount of movement” and “severe impacts”. In addition, a “showstopper” is defined as a location where the impacts do not have a reasonable prospect of being able to comply with NPPF paragraph 32.

10.4.3 An approach was devised with WSCC HA to identify junctions forecast to experience ‘severe’ impacts in the future due to the strategic developments. This uses appropriately selected criteria to reflect WSCC interpretation of the NPPF. A ‘severe’ impact is defined as a junction with any approach arm experiencing both of the following:

- a junction with an increase in ratio of flow to capacity (RFC) of **3%** or more to an RFC of **95%** or more in any peak, in any Scenario; and
- an increase in average delay of **30 seconds** or more to an average delay of **two minutes** or more in any peak hour, in any Scenario

10.4.4 A ‘significant’ impact is a junction with any approach arm experiencing the following:

- a junction with an increase in ratio of flow to capacity (RFC) of **3%** or more to an RFC of **85%** or more in any peak hour, in any Scenario

10.4.5 The criteria for defining and categorising capacity impact into Significant/Severe on the WSCC highway network have been agreed with West Sussex County Council.

10.4.6 Table 33 details the significant and severe of Scenario 5m5 with Mitigation.

Table 33. Scenario 5m5: 'Severe' and 'Significant' Junction Impacts

ID	Area	Junction	Scenario v Ref	'Severe' change in Ref v 2019 also?	Number of junction arms meeting 'Severe' criteria		Total over capacity demand where 'Severe' AM+PM	Average change in delay where 'Severe' (secs) AM+PM
					AM	PM		
N1	Copthorne	A264 / A2220 Copthorne	SIG.		0	0	0	0
N4	Copthorne	B2028 / B2037 Copthorne	SIG.		0	0	0	0
N6	East Grinstead	A22 / Imberhorne Lane	SIG.		0	0	0	0
N8	Turners Hill	B2110 / B2028 Turners Hill	SEVERE	YES	1	0	88	78
N10	West Hoathly	Selsfield Road / Vowels Lane	SIG.		0	0	0	0
N11	Crawley	A2220 / B2036 (CRAWLEY)	SIG.		0	0	0	0
N13	Crawley	A2220 Haslett Avenue / St. Mary's Drive (CRAWLEY)	SIG.		0	0	0	0
N13a	Crawley	A2220 Haslett Avenue / Station Hill (CRAWLEY)	SIG.		0	0	0	0
N14	Crawley	B2036 Balcombe Road / Worth Road (CRAWLEY)	SIG.		0	0	0	0
N15	Crawley	Gatwick Road / Manor Royal (CRAWLEY)	SIG.		0	0	0	0
N16	Crawley	B2036 Balcombe Rd / B2037 Antlands Ln (CRAWLEY)	SIG.		0	0	0	0
N17	Tandridge	Redehall Road / B2037 (TANDRIDGE DISTRICT)	SIG.		0	0	0	0
N18	Handcross	A23 / B2110 Northbound On-Slip	SIG.		0	0	0	0
N21	Balcombe	Haywards Heath Road / Bramble Hill	SIG.		0	0	0	0
N22	Balcombe	B2036 / B2110	SIG.		0	0	0	0
N25	Crawley	Hazlewick Avenue / Bycroft Way (CRAWLEY)	SIG.		0	0	0	0
N27	Handcross	B2114 / B2110 Handcross	SIG.		0	0	0	0
N29	Crawley	B2036 / Radford Road	SIG.		0	0	0	0
C5	Haywards Heath	B2114 / B2036 Whitemans Green	SIG.		0	0	0	0
C6	Cuckfield	B2036 / Ardingly Road, Whitemans Green	SIG.		0	0	0	0
C7	Ansty	A272 / B2036	SEVERE		0	1	96	64
C10	Bolney	A23 / A272 Bolney Road	SIG.		0	0	0	0
C10a	Bolney	London Road / A272 Cowfold Road	SIG.		0	0	0	0
C13	Haywards Heath	A272 Rocky Lane / B2112	SIG.		0	0	0	0
C15	Haywards Heath	B2272 / Bolnore Road	SIG.		0	0	0	0
C17	Haywards Heath	B2112 / B2272	SIG.		0	0	0	0
S1	Burgess Hill	A23 / A2300 Southbound On-Slip	SIG.		0	0	0	0
S3	Burgess Hill	A2300 / Cuckfield Road	SIG.		0	0	0	0
S5	Burgess Hill	A2300 / Northern Arc Spine Road	SIG.		0	0	0	0
S7	Hurstpierpoint	B2117 / B2116 Hurstpierpoint	SIG.		0	0	0	0
S8	Hassocks	A273 / B2116 Hassocks (Stonepound)	SEVERE	YES	1	0	31	96
S9	Pyecombe	A23 / A281 Southbound On-Slip	SIG.		0	0	0	0
S10	Ditchling	B2112 / B2116 Ditchling (LEWES DISTRICT)	SIG.		0	0	0	0
S21	Burgess Hill	B2112 / Green Road (LEWES DISTRICT)	SIG.		0	0	0	0
S22	Burgess Hill	Valebridge Road / Junction Road / Leylands Road	SIG.		0	0	0	0
S23	Burgess Hill	A273 / B2036 / Marchants Way	SIG.		0	0	0	0
S26	Burgess Hill	A273 / York Road	SIG.		0	0	0	0
S32	Burgess Hill	B2036 / Lower Church Road / Royal George Rd.	SIG.		0	0	0	0
S34	Burgess Hill	B2036 Cuckfield Road / A273 Isaacs Lane	SIG.		0	0	0	0
S35	Sayers Common	A23 / B2118 Sayers Common	SEVERE		1	0	71	137
S36	Burgess Hill	Wivelsfield Green (LEWES DISTRICT)	SIG.		0	0	0	0
S38	Burgess Hill	A23 / A2300 Western Roundabout	SIG.		0	0	0	0
S44	Burgess Hill	Valebridge Road / Janes Lane	SIG.		0	0	0	0
S45	Burgess Hill	A2300 / A273 Jane Murray Way	SIG.		0	0	0	0

10.4.7 Scenario 5m5 has 40 junctions that are considered significantly impacted and 4 that are severely impacted.

10.4.8 Severe Junctions:

- N8: B2110 / B2028 Turners Hill
- C7: A272 / B2036 Ansty
- S8: A273 / B2116 Hassocks (Stonepound)
- S35: A23 / B2118 Sayers Common

10.4.9 Figure 19 shows the locations of the significant and severely impacted junctions in Scenario 5m5

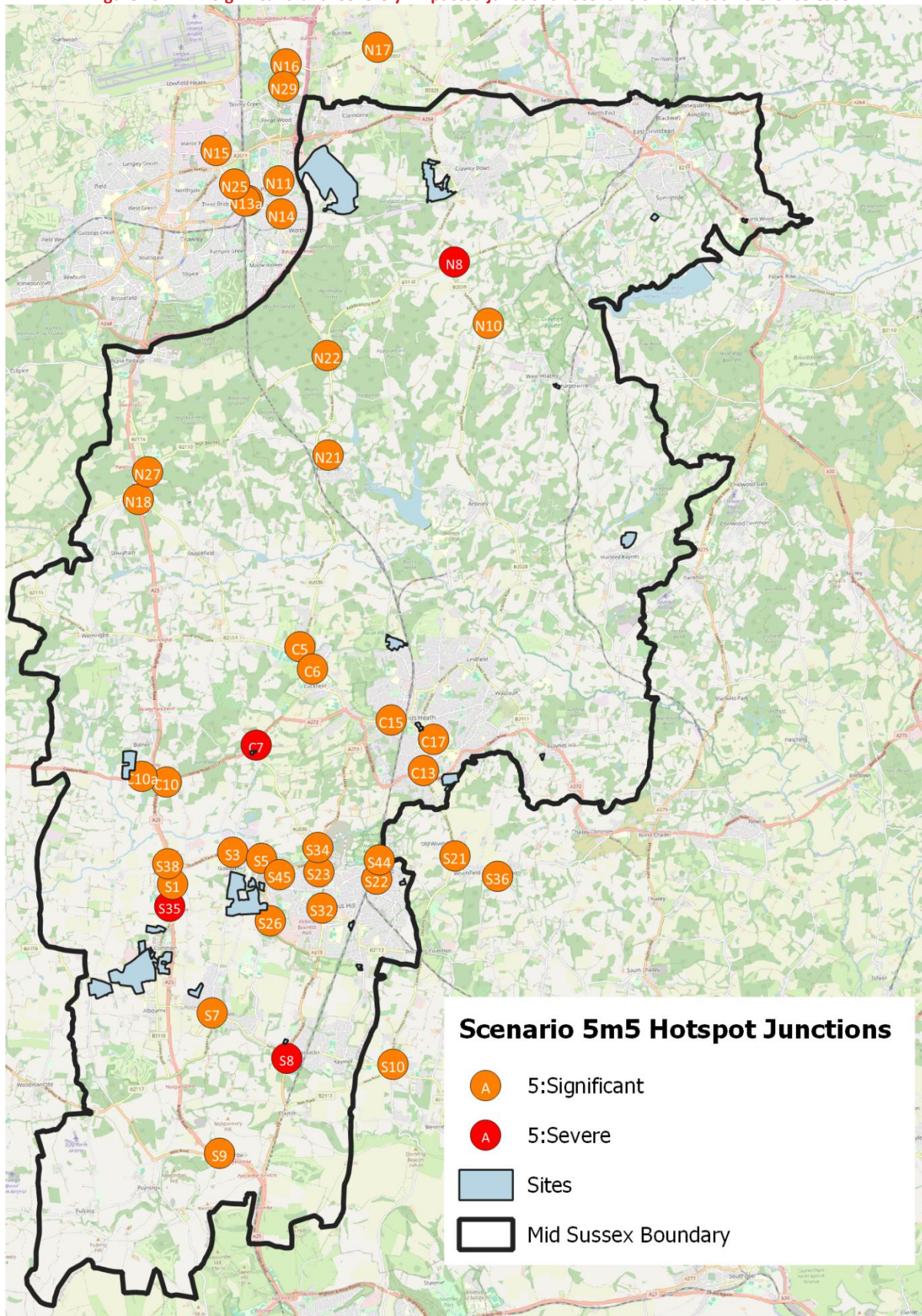
10.4.10 Appendix B1 shows summary results for all Scenarios (5, 5m2, 5m4, 5m5) and Appendix C shows detailed results by approach arm.

10.5 5m5 With Mitigation Scenario - Initial Conclusions

10.5.1 Initial forecasting indicates that the mitigated junctions have not resolved all issues with regards to encouraging mode shift away from the 3 'severe' identified locations in Scenario 5m4. In addition to this, the flow changes around the Hickstead Junction have pushed additional traffic on the A23, 'tipping over' a further junction to the 'severe' category, the A23 Northbound on-slip at Sayers Common A23 j/w the A2118 junction. Analysis suggests that prior to introducing the proposed mitigation (Scenario 5m2), some A23 northbound trips, accessing the local area are leaving the A23 at Muddleswood to use the B2117, avoiding the Hickstead junction. With the introduction of proposed mitigation (Scenario 5m5), these trips are now staying on the A23 northbound for longer and instead exiting at the Hickstead junction.

10.5.2 The flows on Twineham Lane and Hickstead Lane which are travelling from the Henfield/Small Dole/Woodmancote area, have increased in the Local Plan scenarios when compared to the Reference Case. In Scenario 5m5, increased flow around the Hickstead Western Roundabout, caused by additional traffic circulating the roundabout from the A23 northbound off-slip and the A2300 bridge is resulting in increased delay on the Hickstead Lane approach to the roundabout. The increase in delay has then deterred the use of the rural route via Twineham Lane and Hickstead Lane for access across the A23 at the Hickstead Junction.

Figure 19. 'Significant' and 'severely' impacted junctions - Scenario 5m5 versus Reference Case



11. NEXT STEPS – HIGHWAY MITIGATION

11.1 Highway Mitigation

11.1.1 The impact of the proposed highway mitigation will be further analysed to understand the modelling outputs in greater detail. As this Local Plan testing in an iterative process, ongoing discussions with MSDC, National Highways and WSCC will take place to further refine highway mitigation, including addressing the resultant severe impact at the A23 on-slip at Sayers Common.

12. NEXT STEPS - SAFETY IMPACTS

12.1 Introduction

12.1.1 The safety review will include a junction and road section based assessment of accident clusters, cross-referenced to national accident rates available from the Department for Transport and forecast traffic flow changes as a result of the Scenarios compared to the Reference Case. The tasks can be summarised as:

- 1) Acquire road accident data for Mid Sussex District for the latest five-year period.
- 2) Map collisions to help identify injury accident clusters of note according to number and severity of incidents.
- 3) Undertake analysis to correlate the identified cluster map to where significant traffic flow increases are forecasted to occur as a result of the Scenarios when compared the Reference Case.
- 4) Where locations with increased traffic flow from the Scenario include notable injury accident clusters, further assessment will be undertaken to identify already committed or proposed mitigation, or the need for safety mitigation to be considered.

12.2 Junction Identification

12.2.1 This section will assess the accident clusters at junctions which are forecast to have increased traffic flows due the Scenario, compared to the Reference Case.

12.2.2 To identify a priority list of junctions, criteria are required to set appropriate thresholds for the number of accidents in a cluster and the increase in traffic flow as a result of the Scenario. Junctions that meet both the cluster size and flow criteria will then be identified as priority locations for further analysis. Junctions that meet both the following criteria will be selected for the priority list:

- Five or more accidents at the junction in the five year period
- A traffic flow increase through the junction of 10% or more, in either AM or PM, in the Scenario compared to the Reference Case.

12.3 Road Section Identification

12.3.1 This section will assess the number of accidents on road sections which are forecast to have increased traffic flows due the Scenarios compared to the Reference Case.

12.3.2 To identify a priority list of road sections, criteria are required to inform appropriate thresholds for the number of accidents on the road section and the increase in traffic flow as a result of the Scenario. Road sections that meet both the number of accidents and flow criteria are then identified as priority locations for further analysis. Road sections that meet both the following criteria will be selected for the priority list:

- Five or more accidents on the road section in the five year period
- A traffic flow increase of 10% or more, or 100 vehicles or more, when averaged across the AM and PM peak hours, in the Scenario compared to the Reference Case.

12.3.3 The road sections that meet the criteria will be assessed against national accident rates available from the Department for Transport at the location below:

<https://www.gov.uk/government/statistical-data-sets/ras10-reported-road-accidents>

(Table RAS10002)

12.3.4 The national rates are provided annually as the number of accidents per billion vehicle kilometres for different road types. To enable comparison to these rates the traffic flows from the model will be converted to vehicle kilometres. For consistency with the national accident rates, estimates of annual vehicle kilometres will be calculated using the 2019 base model flows. The calculation of vehicle kilometres will also require an annualisation factor to be applied to the modelled peak hours, which is derived using data from permanent traffic counters.

12.4 Safety Mitigation

12.4.1 This section will review the existing junction and road layouts at the identified locations, the evidence base for capacity and safety concerns, the highways design to mitigate these concerns and calculate costings for the designed interventions.

12.4.2 This design stage will include:

- Development of the highway design using DMRB and Manual for Streets design standards as appropriate
- Swept path analysis, visibility and deflection checks
- Identification and design of suitable walking and cycling facilities as required

12.4.3 Highway boundary design consideration. It is assumed that proposed works should remain within the highway boundary.

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Appendix A1 – Reference Case Commitments

Mid Sussex District Council: Commitment Schedule as at 1st April 2023, large sites (5+ units) over Plan Period

Town / Parish (NP Area)	Ward	Site Address (sites of 6+ units)	Overall Total (Gross)	Overall Losses (Gross)	Overall Cmpts (Net)	Total Remaining (Net)	PP Ref #	Expiry Date	SHLAA ID#
Albourne		Former Hazelden Nursery London Road Albourne (Care/not communal)	84	0	0	84	DM22/2485	01/03/2024	58
Ansty & Staplefield		Bridge Hall, Cuckfield Road, Burgess Hill	35	0	0	35	DM21/1524	commenced	570
Ansty & Staplefield		Woodfield House, Isaacs Lane Burgess Hill	30	1	0	29	SA allocation		840
Ansty & Staplefield		Ansty Cross Garage Ansty	12	0	0	12	SA allocation		644
Andrady		Land west of Selsfield Road Andrady	35	0	0	35	DM22/1575	Pending s106	832
Ashurst Wood		Wealden House, Lewes Road, Ashurst Wood	54	0	0	54	DM19/1025	11/11/2023	470
Ashurst Wood		LIC, Wealden House, Lewes Road, Ashurst Wood	25	0	0	25	NP allocation		757
Ashurst Wood		Mount Pleasant Nursery Canston Lane Ashurst Wood	6	1	0	5	DM18/3242	REM submitted	208
Ashurst Wood		Land south of Hammead Road Ashurst Wood	12	0	0	12	SA allocation		138
Balcombe		Land adjacent Balcombe House Haywards Heath Road Balcombe	17	0	0	17	DM21/4235	04/08/2025	150
Balcombe		Land opposite Newlands, London Road, Balcombe	14	0	0	14	NP allocation		188
Bolney	Bolney	G&W Motors London Road Bolney	10	0	0	10	NP allocation		82
Bolney		Land opposite Queens Head (near cricket club), Bolney	30	0	0	30	DM17/4392	commenced	953
Bolney		Bolney House, London Road, Bolney	5	0	0	5	NP allocation		711
Burgess Hill		Northern Arc, Burgess Hill	2731	0	0	2731	DM18/5114	04/10/2022	493
Burgess Hill		Northern Arc, Burgess Hill (Care/not communal)	60	0	0	60	DM18/5114	04/10/2022	1125
Burgess Hill		Northern Arc, Burgess Hill (Bellway, P1.5 and P1.6)	249	0	0	249	DM21/3870	24/05/2025	493
Burgess Hill		Land west of Frieles Lane Burgess Hill (countryside/Vistry)	460	0	0	460	DM19/3845	commenced	969
Burgess Hill	Chantonbury Ward	Station yard/carp Burgess Hill	150	0	0	0	NP allocation*		83
Burgess Hill	Franklands Ward	The Oaks Centre Junction Road Burgess Hill	12	0	0	12	LP Allocated		84
Burgess Hill	Leylands Ward	North of Faulkners Way Burgess Hill	20	0	0	20	NP allocation		88
Burgess Hill	Leylands Ward	Aberville Park Fairbridge Way Burgess Hill	307	0	7	300	DM19/1895	Commenced	45
Burgess Hill		Keymer Tile Works Nye Road Burgess Hill phase 2	170	0	161	9	DM16/2718	Commenced	91
Burgess Hill	St Andrews Ward	Land East of Kingsway Burgess Hill, Phase 1	78	0	76	2	14/03208/REM	Commenced	233
Burgess Hill	St Andrews Ward	Land East of Kingsway Burgess Hill, Phase 4	237	0	0	237	DM20/0886	Pending s106	233
Burgess Hill		Open air market Burgess Hill	25	0	0	25	LP Allocated		92
Burgess Hill	Town Ward	Land at Victoria Road (north), Burgess Hill	51	0	0	51	NP Allocation		544
Burgess Hill		Burgess Hill Town Centre, Civic Way, Burgess Hill	172	0	0	172	DM19/3331	02/07/2025	528
Burgess Hill		The Brow, Burgess Hill	100	0	0	100	NP allocation		756
Burgess Hill		1 Cyprus Road Burgess Hill	10	0	0	10	DM20/2740	Commenced	447
Burgess Hill		Prospect House 1 -11 Junction Road Burgess Hill (Part GF - part overlap)	2	0	0	2	DM19/4670	Commenced	117
Burgess Hill		Prospect House 1 -11 Junction Road Burgess Hill (GF)	3	0	0	3	DM20/2157	Commenced	117
Burgess Hill		Prospect House 1 -11 Junction Road Burgess Hill (2nd floor extension)	3	0	0	3	DM21/0338	Commenced	117
Burgess Hill		Flat 5 and Flat 12 subdivision Prospect House 1 -11 Junction Road Burgess Hill	4	2	0	2	DM21/3487	Commenced	117
Burgess Hill		Victoria House 66 Victoria Road Burgess Hill	7	0	0	7	DM21/1991	07/04/2025	544
Burgess Hill		Americus House 273 London Road Burgess Hill	6	0	0	6	DM21/0688	Commenced	1089
Burgess Hill		66 Church Walk Burgess Hill	8	0	0	8	DM21/3503	10/05/2025	1108
Burgess Hill		60 - 64 Church Walk Burgess Hill	15	0	0	15	DM19/4077	20/09/2024	1109
Burgess Hill		Rear Of 62 - 64 Folders Lane Burgess Hill	18	1	0	17	DM22/0732	16/11/2025	1143
Burgess Hill		Land At Wintons And Wintons Fishery Folders Lane Burgess Hill	5	0	0	5	DM21/5311	14/11/2025	827
Burgess Hill		68 Folders Lane, Burgess Hill	40	0	0	40	SA allocation		976
Burgess Hill		Land south of Folders lane and East Keymer Road Burgess Hill	300	0	0	300	SA allocation		976
Burgess Hill		Land south of Selby Close Burgess Hill	12	0	0	12	SA allocation		904
Burgess Hill		St Wilfrids School Burgess Hill	200	0	0	200	SA allocation		345
Burgess Hill		Little Abbotford Islands Burgess Hill	9	0	0	9	DM19/0324	19/07/2025	1144
Burgess Hill		Land south of Southway Burgess Hill	30	0	0	30	SA allocation		594
Cuckfield		Land at Hanley Lane east of Ardingly Road Cuckfield	55	0	0	55	SA allocation		479
Cuckfield	Cuckfield	The Manor House, 14 Manor Drive, Cuckfield	15	0	0	5	NP allocation		177
Cuckfield	Cuckfield	Courtmeadow School, Hanley Lane, Cuckfield	13	0	0	13	DM21/3785	15/06/2025	480
Cuckfield		Horsgate House, Hanley Lane, Cuckfield	0	0	0	0	NP Allocation		649
East Grinstead	North Ward	Stonequary Woods East Grinstead	30	0	0	30	LP Allocated		96
East Grinstead		5 - 8A Whitehall Parade London Road East Grinstead	7	0	0	7	DM21/4105	17/10/2025	1145
East Grinstead	West Ward	Junction of Windmill Lane/London Road East Grinstead	40	5	0	0	Allocated		102
East Grinstead		Imberhome School, Windmill Lane, East Grinstead	20	0	0	20	NP allocation		811
East Grinstead		67 - 69 Railway Approach, East Grinstead	7	0	0	0	NP allocation		510
East Grinstead		Imberhome Lane Car Park, Imberhome Lane, East Grinstead	18	0	0	18	NP allocation		569
East Grinstead		Delivery Office, 76 London Road, East Grinstead	12	0	0	12	NP allocation		369
East Grinstead		Phoenix House, 53 -59 Lingfield Road, East Grinstead	9	0	0	9	DM20/3640	commenced	960
East Grinstead		Queensmens House, 49 Queens Road, East Grinstead	14	0	0	14	DM17/2722	commenced	872
East Grinstead		Hill Place Farm, Turners Hill Road, East Grinstead	200	98	0	102	DM19/1067	commenced	562
East Grinstead		Sussex House London Road East Grinstead	8	0	0	8	13/04040/FUL	Commenced	409
East Grinstead		Tower Car Sales, Tower Close East Grinstead	9	0	0	9	DM21/3534	07/03/2022	759
East Grinstead		11a Crawley Down Road, East Grinstead	32	1	0	31	DM19/3022	Commenced	821
East Grinstead		Vacant plot 70 - 72 London Road East Grinstead	6	0	0	6	DM19/0303	13/10/2023	1084
East Grinstead		Brookhurst Furze Lane East Grinstead	7	0	3	4	DM19/6211	28/09/2023	595
East Grinstead		Oakhurst Maypole Road East Grinstead	10	0	0	10	DM20/0015	Commenced	980
East Grinstead		Block B East Grinstead House Wood Street East Grinstead West Sussex RM19 1UJ	60	0	0	60	DM20/1369	03/06/2023	872
East Grinstead		Block F And G, East Grinstead House Wood Street East Grinstead West Sussex	67	0	0	67	DM20/1370	03/06/2023	872
East Grinstead		Block E Fifth Floor East Grinstead House Wood Street	15	0	0	15	DM21/0386	17/03/2024	872
East Grinstead		Pikfield Engineering factory Durkims road EG	8	0	0	8	DM20/1516	19/05/2024	1110
East Grinstead		Former East Grinstead Police Station East Grinstead	22	0	0	22	SA Allocation		847
East Grinstead		Land south Crawley Down Road, East Grinstead	200	0	0	198	SA Allocation		106
East Grinstead		Land south and west of Imberhome Upper School East Grinstead	550	0	0	550	SA Allocation		513
East Grinstead		Blackwell Farm Road East Grinstead	10	0	0	10	DM20/1333	04/03/2025	106
Hassocks	Hassocks Stonepound	Station Goods Yard Hassocks	54	0	0	54	SCHAD Allocated		36
Hassocks		Land adjacent to Station Goods Yard Hassocks	16	0	0	16	SCHAD Allocated		690
Hassocks		Hassocks Golf Club, London Road, Hassocks	165	0	155	10	DM18/2616	Commenced	753
Hassocks		Land north of Clayton Mills, Hassocks	500	0	4	496	DM21/2841	Commenced	753
Hassocks		land to rear of Friars Oak London Road Hassocks	130	0	0	130	DM21/2628	Commenced	121
Hassocks		4 Hassocks Road Hassocks	9	0	0	9	DM22/2188	Commenced	221
Haywards Heath	Ansty and Staplefield	Rookery Farm Rocky Lane Haywards Heath (phase 1)	234	0	215	19	DM19/1190	Commenced	84498
Haywards Heath		Rookery Farm Rocky Lane Haywards Heath (phase 2)	109	0	0	109	DM19/5207	Commenced	84497
Haywards Heath	Franklands Ward	North of 99 Reed Pond Walk Franklands Village Haywards Heath	24	0	0	24	DM22/1371	22/12/2025	531
Haywards Heath		Hurst Farm, Hurstwood Lane, Haywards Heath	350	0	0	350	NP allocation		246
Haywards Heath		Caru Hall, Bolnore Road, Haywards Heath	12	0	0	0	NP allocation		507
Haywards Heath		Land east of Devon Villas (The Colward), Western Road, Haywards Heath	9	0	0	9	DM20/0304	commenced	507
Haywards Heath		NCP Car Park, Harlands Road, Haywards Heath	40	0	0	40	DM17/2384	14/02/2023	744
Haywards Heath		The Priory, Sryesham Gardens, Haywards Heath	9	0	0	9	DM18/2237	Commenced	732
Haywards Heath		The Priory, Sryesham Gardens, Haywards Heath	2	0	0	2	DM18/2251	Commenced	732
Haywards Heath		Chester House Harlands Road Haywards Heath	76	0	0	76	DM21/1810	Commenced	1092
Haywards Heath		Maxwellton House 41 - 43 Bolnor Road Haywards Heath West Sussex	54	0	0	54	DM20/3516	20/12/2024	1090
Haywards Heath		Red Cross Hall 29 Paddockhill Road Haywards Heath West Sussex RH16 1HH	8	0	0	8	DM18/4841	Commenced	618
Haywards Heath		25 Bolnor Road Haywards Heath	7	1	0	6	DM20/2998	Commenced	1102
Haywards Heath		Workshop and Ganges North Road Haywards Heath	6	0	0	6	DM20/1470	13/01/2025	1112
Haywards Heath		Linden House Southdowns Park Haywards Heath	14	0	0	14	DM18/0421	02/06/2024	1113
Haywards Heath		2 - 6 The Broadway Haywards Heath	19	0	0	19	DM20/1388	commenced	1114
Haywards Heath		Lloyds Bank 31-33 Perymount Road Haywards Heath (PDOFF - roof extension)	30	0	0	30	DM22/0245	11/03/2025	1115
Haywards Heath		Lloyds Bank 31-33 Perymount Road Haywards Heath (PDOFF)	38	0	0	38	DM21/2679	13/09/2024	1115
Haywards Heath		1 and 2 Health Square Bolnor Road Haywards Heath	15	0	0	15	DM21/2676	13/12/2024	1116
Haywards Heath		14 - 16 Sussex Road Haywards Heath	8	0	0	8	DM20/1881	17/12/2024	1118
Haywards Heath		Land at Rogers Farm Haywards Heath	20	0	0	20	DM22/0733	21/10/2025	783
Haywards Heath		Downlands Park, Isaacs Lane, Haywards Heath (Care/not communal)	81	0	0	81	DM20/4159	05/05/2025	783
Horsted Keynes		Land south of The Old Police House Horsted Keynes	25	0	0	25	SA Allocation		807
Horsted Keynes		Land south of St Stephens Church Horsted Keynes	30	0	0	30	SA Allocation		184
Hurstpierpoint and Sayers Common		Kingsland Lanes Reeds Lane Sayers Common Hassocks Phase1	93	0	85	8	DM20/3927	Commenced	220
Hurstpierpoint and Sayers Common		Kingsland Lanes Reeds Lane Sayers Common Hassocks Phase 2	40	0	31	9	DM20/3927	Commenced	220
Hurstpierpoint and Sayers Common		Land to north of Lyndon Reeds Lane Sayers Common	36	0	0	36	DM22/0640	15/12/2022	829
Hurstpierpoint and Sayers Common		Land to north of Lyndon Reeds Lane Sayers Common (custom plots)	2	0	0	2	DM21/0640	15/12/2022	829
Linfield Rural		Land east of High Beech Lane Linfield	43	0	40	3	DM19/2845	Commenced	151
Linfield Rural		Land east of High Beech Lane Linfield (custom plots)	2	0	0	2	DM17/2271		151
Linfield Rural		Land east of High Beech Lane Linfield (custom plot A) (37 Town Wood Close)	1	0	0	1	DM22/3504	11/01/2026	151
Linfield Rural		Buxhalls Ardingly Road Linfield	35	19	0	16	DM20/0979	commenced	586
Linfield Rural		Land south of Scamps Hill Linfield	200	0	0	200	DM20/2763	Commenced	483
Linfield Rural		Springfield Farm Lewes Road Scaynes Hill	6	0	3	0	14/03160/PDOFF	Commenced	761
Linfield Rural		Land to the rear of Firlands, Church Road Scaynes Hill	20	0	0	20	SA Allocation		897
Slaugham		Slaugham Manor, Slaugham Place, Slaugham	25	0	18	7	DM16/2531	Commenced	765
Slaugham		Land east of Brighton Road, Phase 1	156	0	149	7	DM17/2534	commenced	666
Slaugham		Land east of Brighton Road, Pease Pottage phase 3	186	0	177	9	DM19/3549	Commenced	666
Slaugham		Land east of Brighton Road, Pease Pottage phase 4	136	0	29	107	DM19/4636	commenced	666
Slaugham		Land east of Brighton Road, Pease Pottage phase 5	141	0	58	83	DM19/4637	commenced	666
Slaugham		Land at St Martins Close (East Handcross)	30	0	0	30	NP allocation		1010
Slaugham		Land at St Martins Close (West Handcross)	35	0	0	35	SA Allocation		127
Turners Hill		Old Vic							

Hurstpierpoint	Care Accommodation	Land To West Of Goldcrest Drive Sayers Meadow Sayers Common	66	0	0	66	2	33	DM/22/2012	1126		24/01/2026
Care Accommodation Total			344					172				
Hurstpierpoint	Education	Hurstpierpoint College, College Lane & boardinf rooms and 2 flats					2.5	1	DM/22/3789	1132		
Hurstpierpoint	Education	St Johns House Hurstpierpoint College	2						DM/21/4020	1132		12/06/2025
Education Accommodation Total			2					1				

	Overall Total (Gross)	Overall Losses (Gross)	Overall Cmpltns (Net)	Total Remaining (Net)
Total (from large sites)	11419	132	1555	9594
Total (from small sites)				173
Total from Communal Accommodation (ratio applied)				173
Total Commitments (all sites)				9945

Appendix A2 – Employment Allocations

Employment Allocations - December 2019

SHLAAID	Address	Settlement	Area	Location	Revised Usage Split			Revised Area				
					B1 %	B2 %	B8 %	B1	B2	B8		
24	Land at Stairbridge Lane (South of Bolney Grange), Bolney	Bolney	5.5	BolneyGrange	33.33	33.33	33.33	1.83	1.83	1.83		
906	Undeveloped land (south) at Bolney Grange Business Park Stairbridge Lane Bolney	Bolney	0.6	BolneyGrange	33.33	33.33	33.33	0.20	0.20	0.20		
907	Undeveloped land (east) at Bolney Grange Business Park Stairbridge Lane Bolney	Bolney	0.2	BolneyGrange	33.33	33.33	33.33	0.07	0.07	0.07		
931	Extension (east) to Bolney Grange Business Park Stairbridge Lane Bolney	Bolney	0.7	BolneyGrange	33.33	33.33	33.33	0.23	0.23	0.23		
192	Pease Pottage Nurseries, Brighton Road, Pease Pottage	Pease Pottage	1	Other	33.33	33.33	33.33	0.33	0.33	0.33		
826	Burnside Centre, Victoria Road, Burgess Hill	Burgess Hill	0.96	Other	50	50	0	0.48	0.48	0.00		
864	Marylands Nursery, Cowfold Road, Bolney	Bolney	2.4	Other	0	0	100	0.00	0.00	2.40		
888	Cedars (Former Crawley Forest School) Brighton Road Pease Pottage	Slaugham	2.3	Other	33.33	33.33	33.33	0.77	0.77	0.77		
912	Site of Former KDG Victoria Road Burgess Hill	Burgess Hill	1.1	Other	50	50	0	0.55	0.55	0.00		
940	Land north of the A264 at Junction 10 of M23 (Employment Area)	Copthorne	2.7	Other	50	0	50	1.35	0.00	1.35		
								USE (ha)	5.81	4.46	7.18	17.46

Appendix A3 – DPR Transport Scenario 5

SHLAAID	Site	Settlement	Yield	Additional Uses
13	Land west of Kemps	Hurstpierpoint	90	C3 Residential
18	Crabbet Park	Cophorne	1500	1000 sqm commercial (Class E(g), 2FE Primary School, 4FE Secondary School
83	Burgess Hill Station (additional yield)	Burgess Hill	150	C3 Residential
198	Land off West Hoathly Road	East Grinstead	45	C3 Residential
210	Land rear of 2 Hurst Road (Land opposite Stanford Avenue) Hassocks	Hassocks	25	C3 Residential
508	Land at Junction of Hurstwood Lane and Colwell Lane	Haywards Heath	30	C3 Residential
556	Land east of Borde Hill Lane	Haywards Heath	60	C3 Residential
573	Batchelors Farm, Keymer Road	Burgess Hill	33	C3 Residential
601	Land at Coombe Farm, London Road	Sayers Common	210	C3 Residential
631	Challoners, Cuckfield Road	Ansty	37	C3 Residential
688	Land to west of Turners Hill Road	Crawley Down	350	Community centre
740	West of Burgess Hill	Burgess Hill	1400	2FE Primary school, up to 500m2 community hub - inc shops(s)/café/workspace (WeWork type), up to 3 x 100m2 (300m2) commercial (uses TBC) up to 200m2 pavilion/ community space
743	Hurst Farm, Turners Hill Road	Crawley Down	37	C3 Residential
748	Land to west of Marwick Close, Bolney Road	Ansty	45	C3 Residential
799	South of Reeds Lane	Sayers Common	1850	2000-4000 retail sqm retail/ community, 5000-9000sqm commercial (Class E(g)) - 2FE Primary and 4 FE Secondary school
830	Land to the west of Kings Business Centre, Reeds Lane	Sayers Common	100	C3 Residential
858	Land at Hurstwood Lane	Haywards Heath	45	C3 Residential
984	The Paddocks, Lewes Road	Ashurst Wood	8	C3 Residential
1003	Land to South of LVS Hassocks, London Road	Sayers Common	200	C3 Residential
1013	Land at Hoathly Hill	West Hoathly	18	C3 Residential
1020	Ham Lane Farm House, Ham Lane	Scaynes Hill	30	C3 Residential
1026	Land at Chesapeake and Meadow View, Reeds Lane	Sayers Common	33	C3 Residential
1030	Land at Hillbrow, Janes Lane, Burgess Hill	Burgess Hill	25	C3 Residential
1120	Land at Foxhole Farm	Bolney	200	C3 residential - community centre
1121	Orchards Shopping Centre	Haywards Heath	100	C3 Residential

Windfall and Brownfield Allowance

1488

Appendix B – Junction Hotspots Summary

Mid Sussex Transport Study: Results Summary

Note: Results in Grey Italics are comparisons of Reference Cases to 2017 (for context)



Junction Analysis

Note: Includes junctions identified in previous Mid Sussex Transport Study which, for consistency, are retained in the list even if no significant or severe impacts are identified in the Scenarios

Junctions with SIGNIFICANT or SEVERE impact in either AM or PM Peak Hour

ID	Area	Junction	Ref v 2019	2039 Scenario 5					2039 Scenario 5m4							
				Scenario v Ref	'Severe' change in Ref v 2019 also?	Number of junction arms meeting 'Severe' criteria		Total over capacity demand where 'Severe'	Average change in delay where 'Severe' (secs)	Scenario v Ref	'Severe' change in Ref v 2019 also?	Number of junction arms meeting 'Severe' criteria		Total over capacity demand where 'Severe'	Average change in delay where 'Severe' (secs)	
						AM	PM					AM	PM			
N1	Copthorne	A264 / A2220 Copthorne	SEVERE	SIG.		0	0	0	0	SIG.		0	0	0	0	
N2	Copthorne	A264 / B2028 Copthorne				0	0	0	0			0	0	0	0	
N4	Copthorne	B2028 / B2037 Copthorne	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0	
N6	East Grinstead	A22 / Imberhorne Lane	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0	
N7	Crawley Down	B2028 Turners Hill Road / Wallage Lane	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0	
N8	Turners Hill	B2110 / B2028 Turners Hill	SEVERE	SEVERE	YES	1	0	88	77	SEVERE	YES	1	0	90	78	
N9	Felbridge	A264 / A22 Felbridge	SEVERE			0	0	0	0			0	0	0	0	
N10	West Hoathly	Selsfield Road / Vowels Lane		SIG.		0	0	0	0	SIG.		0	0	0	0	
N11	Crawley	A2220 / B2036 (CRAWLEY)	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0	
N12	Crawley	A2220 Haslett Avenue / Worth Road (CRAWLEY)	SEVERE			0	0	0	0			0	0	0	0	
N13	Crawley	A2220 Haslett Avenue / St. Mary's Drive (CRAWLEY)	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0	
N13a	Crawley	A2220 Haslett Avenue / Station Hill (CRAWLEY)	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0	
N14	Crawley	B2036 Balcombe Road / Worth Road (CRAWLEY)	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0	
N15	Crawley	Gatwick Road / Manor Royal (CRAWLEY)	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0	
N16	Crawley	B2036 Balcombe Rd / B2037 Antlands Ln (CRAWLEY)	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0	
N17	Tandridge	Redehall Road / B2037 (TANDRIDGE DISTRICT)	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0	
N18	Handcross	A23 / B2110 Northbound On-Slip	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0	
N19	Handcross	B2114 / B2110	SEVERE			0	0	0	0			0	0	0	0	
N20	Handcross	A23 Southbound Off-Slip / B2114	SIG.			0	0	0	0			0	0	0	0	
N21	Balcombe	Haywards Heath Road / Bramble Hill	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0	
N22	Balcombe	B2036 / B2110		SIG.		0	0	0	0	SIG.		0	0	0	0	
N24	Pease Pottage	Horsham Road / B2114 Brighton Road	SIG.			0	0	0	0			0	0	0	0	
N25	Crawley	Hazlewick Avenue / Bycroft Way (CRAWLEY)		SIG.		0	0	0	0	SIG.		0	0	0	0	
N26	Crawley	M23 Junction 10 Southbound Merge (CRAWLEY)				0	0	0	0			0	0	0	0	
N27	Handcross	B2114 / B2110 Handcross	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0	
N28	Crawley	M23 / Junction 11 Southbound On-Slip				0	0	0	0			0	0	0	0	
N29	Crawley	B2036 / Radford Road	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0	
C1	Handcross	B2114 Junction, Handcross				0	0	0	0			0	0	0	0	
C2	Lower Beeding	B2110 / B2115 Leechpond Hill				0	0	0	0			0	0	0	0	
C3	Slough Green	B2115 Junction, Slough Green				0	0	0	0			0	0	0	0	
C4	Haywards Heath	Borde Hill Lane / Copyhold Lane				0	0	0	0			0	0	0	0	
C5	Haywards Heath	B2114 / B2036 Whitemans Green	SEVERE	SIG.		0	0	0	0	SIG.		0	0	0	0	
C6	Cuckfield	B2036 / Ardingly Road, Whitemans Green	SEVERE	SIG.		0	0	0	0	SIG.		0	0	0	0	
C6a	Cuckfield	B2036 / B2184, Cuckfield				0	0	0	0			0	0	0	0	
C7	Ansty	A272 / B2036	SIG.	SEVERE		0	1	104	80	SEVERE		0	1	97	67	
C8	Cowfold	A281 North Junction, Cowfold	SIG.			0	0	0	0			0	0	0	0	
C9	Cowfold	A281 South Junction, Cowfold	SIG.			0	0	0	0			0	0	0	0	
C10	Bolney	A23 / A272 Bolney Road	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0	
C10a	Bolney	London Road / A272 Cowfold Road	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0	
C11	North Chailey	A272 / A275 North Chailey	SEVERE	SIG.		0	0	0	0	SIG.		0	0	0	0	
C12	Haywards Heath	A273 / Isaac's Lane / Traustein Way	SIG.	SEVERE		1	0	123	73	SIG.		0	0	0	0	
C13	Haywards Heath	A272 Rocky Lane / B2112	SIG.			0	0	0	0	SIG.		0	0	0	0	
C14	Haywards Heath	A272 / Rocky Lane	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0	
C15	Haywards Heath	B2272 / Bolnore Road	SEVERE			0	0	0	0	SIG.		0	0	0	0	
C16	Haywards Heath	A272 / B2272	SEVERE			0	0	0	0			0	0	0	0	
C17	Haywards Heath	B2112 / B2272	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0	
C18	Cowfold	A272 Cowfold Road / Wineham Lane				0	0	0	0			0	0	0	0	
C19	Cowfold	A23 / A272 Northbound On-Slip				0	0	0	0			0	0	0	0	
C20	Cowfold	A23 / London Road Northbound On-Slip				0	0	0	0			0	0	0	0	
S1	Burgess Hill	A23 / A2300 Southbound On-Slip	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0	
S2	Burgess Hill	A23 / A2300 Eastern Roundabout	SEVERE	SEVERE	YES	1	0	251	60	SIG.		0	0	0	0	
S3	Burgess Hill	A2300 / Cuckfield Road	SIG.	SEVERE		1	0	89	126	SIG.		0	0	0	0	
S4	Burgess Hill	Cuckfield Road / The Hub		SIG.		0	0	0	0	SIG.		0	0	0	0	
S5	Burgess Hill	A2300 / Northern Arc Spine Road	SIG.			0	0	0	0	SIG.		0	0	0	0	
S6	Burgess Hill	Junction Road / B2113, Burgess Hill	SEVERE	SEVERE	YES	1	0	50	79	SIG.		0	0	0	0	
S7	Hurstpierpoint	B2117 / B2116 Hurstpierpoint		SIG.		0	0	0	0	SIG.		0	0	0	0	
S8	Hassocks	A273 / B2116 Hassocks (Stonepound)	SEVERE	SEVERE	YES	1	1	75	187	SEVERE	YES	1	0	22	55	
S9	Pyecombe	A23 / A281 Southbound On-Slip	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0	
S10	Ditchling	B2112 / B2116 Ditchling (LEWES DISTRICT)	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0	
S11	Burgess Hill	A2300 / Bishopstone Lane				0	0	0	0			0	0	0	0	
S12	Burgess Hill	Bishopstone Ln / Science & Tech Park Access (N)				0	0	0	0			0	0	0	0	
S13	Burgess Hill	Cuckfield Rd / Science & Tech Park Access (N)				0	0	0	0			0	0	0	0	
S14	Burgess Hill	A2300 / Science & Tech Park Access (S)				0	0	0	0			0	0	0	0	
S15	Burgess Hill	A272 Bolney Road / Bishopstone Lane				0	0	0	0			0	0	0	0	
S16	Burgess Hill	A2300 / Stairbridge Lane / Pookbourne Lane				0	0	0	0			0	0	0	0	
S17	Burgess Hill	Bishopstone Lane / Job's Lane				0	0	0	0			0	0	0	0	
S18	Hassocks	A273 / B2112	SIG.			0	0	0	0			0	0	0	0	
S19	Hassocks	B2112 / Lodge Lane		SIG.		0	0	0	0			0	0	0	0	
S20	Burgess Hill	Janes Lane / Manor Road				0	0	0	0			0	0	0	0	
S21	Burgess Hill	B2112 / Green Road (LEWES DISTRICT)		SEVERE		1	0	110	88	SIG.		0	0	0	0	
S22	Burgess Hill	Valebridge Road / Junction Road / Leylands Road	SIG.	SEVERE		1	0	46	65	SIG.		0	0	0	0	
S23	Burgess Hill	A273 / B2036 / Marchants Way	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0	
S24	Burgess Hill	A273 / Sussex Way	SIG.			0	0	0	0			0	0	0	0	
S25	Burgess Hill	West Street / Fairfield Road				0	0	0	0			0	0	0	0	
S26	Burgess Hill	A273 / York Road		SIG.		0	0	0	0			0	0	0	0	
S27	Burgess Hill	B2113 Keymer Road / Folders Lane				0	0	0	0			0	0	0	0	
S28	Burgess Hill	B2112 / Folders Lane (LEWES DISTRICT)				0	0	0	0			0	0	0	0	
S29	Burgess Hill	A273 Jane Murray Way / Malthouse Lane				0	0	0	0			0	0	0	0	
S30	Burgess Hill	B2036 London Road / West Street		SIG.		0	0	0	0			0	0	0	0	
S31	Burgess Hill	B2036 London Road / Victoria Way				0	0	0	0			0	0	0	0	
S32	Burgess Hill	B2036 / Lower Church Road / Royal George Rd.	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0	
S33	Burgess Hill	A273 Jane Murray Way / B2036 London Road	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0	
S34	Burgess Hill	B2036 Cuckfield Road / A273 Isaacs Lane	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0	
S35	Sayers Common	A23 / B2118 Sayers Common	SIG.	SEVERE		1	0	109	263	SIG.		0	0	0	0	
S36	Burgess Hill	Wivelsfield Green (LEWES DISTRICT)	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0	
S37	Poyning	A281 / Saddlescombe Road / Poyning Road				0	0	0	0			0	0	0	0	
S38	Burgess Hill	A23 / A2300 Western Roundabout	SIG.	SEVERE		1	0	5	240	SIG.		0	0	0	0	
S39	Burgess Hill	A23 / A2300 Northbound On-Slip	SIG.			0	0	0	0			0	0	0	0	
S40	Keymer	B2116 / Ockley Lane				0	0	0	0			0	0	0	0	
S41	Pyecombe	A23 / A273 Northbound On-Slip	SIG.			0	0	0	0			0	0	0	0	
S42	Pyecombe	A281 / A273				0	0	0	0			0	0	0	0	
S43	Ditchling	B2112 / B2116 Ditchling (LEWES DISTRICT)				0	0	0	0			0	0	0	0	
S44	Burgess Hill	Valebridge Road / Janes Lane	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0	
S45	Burgess Hill	A2300 / A273 Jane Murray Way	SIG.	SEVERE		1	0	154	71	SIG.		0	0	0	0	
S46	Burgess Hill	A23 / B2117 Southbound On-Slip	SEVERE	SIG.		0	0	0	0	SIG.		0	0	0	0	
S47	Burgess Hill	B2036 London Road / Dunstall Avenue / Maple Drive	SIG.	SIG.		0	0	0	0			0	0	0	0	
Number of Junction with SEVERE Impacts				14	12	4	11	2	1204	1410	3	2	2	1	209	199
Number of Junction with SIGNIFICANT impacts				47	41						39					

SEVERE= Increase in RFC of 3% or more to 95% or more
AND increase in delay of 1 min or more to 2 mins or more
SIGNIFICANT= Increase in RFC of 3% or more to 85% or more

Mid Sussex Transport Study: Results Summary

Note: Results in Grey Italics are comparisons of Reference Cases to 2017 (for context)



Junction Analysis

Note: Includes junctions identified in previous Mid Sussex Transport Study which, for consistency, are retained in the list even if no significant or severe impacts are identified in the Scenarios

Junctions with SIGNIFICANT or SEVERE impact in either AM or PM Peak Hour

ID	Area	Junction	Ref v 2019	Scenario 5m2					Scenario 5m5						
				Scenario v Ref	'Severe' change in Ref v 2019 also?	Number of junction arms meeting 'Severe' criteria		Total over capacity demand where 'Severe'	Average change in delay where 'Severe' (secs)	Scenario v Ref	'Severe' change in Ref v 2019 also?	Number of junction arms meeting 'Severe' criteria		Total over capacity demand where 'Severe'	Average change in delay where 'Severe' (secs)
						AM	PM					AM+PM	AM+PM		
N1	Copthorne	A264 / A2220 Copthorne	SEVERE	SIG.		0	0	0	0	SIG.		0	0	0	0
N2	Copthorne	A264 / B2028 Copthorne				0	0	0	0			0	0	0	0
N4	Copthorne	B2028 / B2037 Copthorne	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0
N6	East Grinstead	A22 / Imberhorne Lane	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0
N7	Crawley Down	B2028 Turners Hill Road / Wallage Lane	SIG.			0	0	0	0			0	0	0	0
N8	Turners Hill	B2110 / B2028 Turners Hill	SEVERE	SEVERE	YES	1	0	88	74	SEVERE	YES	1	0	88	78
N9	Felbridge	A264 / A22 Felbridge	SEVERE			0	0	0	0			0	0	0	0
N10	West Hoathly	Selsfield Road / Vowels Lane		SIG.		0	0	0	0	SIG.		0	0	0	0
N11	Crawley	A2220 / B2036 (CRAWLEY)	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0
N12	Crawley	A2220 Haslett Avenue / Worth Road (CRAWLEY)	SEVERE			0	0	0	0			0	0	0	0
N13	Crawley	A2220 Haslett Avenue / St. Mary's Drive (CRAWLEY)	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0
N13a	Crawley	A2220 Haslett Avenue / Station Hill (CRAWLEY)	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0
N14	Crawley	B2036 Balcombe Road / Worth Road (CRAWLEY)	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0
N15	Crawley	Gatwick Road / Manor Royal (CRAWLEY)	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0
N16	Crawley	B2036 Balcombe Rd / B2037 Antlands Ln (CRAWLEY)	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0
N17	Tandridge	Redehall Road / B2037 (TANDRIDGE DISTRICT)	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0
N18	Handcross	A23 / B2110 Northbound On-Slip	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0
N19	Handcross	B2114 / B2110	SEVERE			0	0	0	0			0	0	0	0
N20	Handcross	A23 Southbound Off-Slip / B2114	SIG.			0	0	0	0			0	0	0	0
N21	Balcombe	Haywards Heath Road / Bramble Hill	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0
N22	Balcombe	B2036 / B2110		SIG.		0	0	0	0	SIG.		0	0	0	0
N24	Pease Pottage	Horsham Road / B2114 Brighton Road	SIG.			0	0	0	0			0	0	0	0
N25	Crawley	Hazlewick Avenue / Bycroft Way (CRAWLEY)		SIG.		0	0	0	0	SIG.		0	0	0	0
N26	Crawley	M23 Junction 10 Southbound Merge (CRAWLEY)				0	0	0	0			0	0	0	0
N27	Handcross	B2114 / B2110 Handcross	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0
N28	Crawley	M23 / Junction 11 Southbound On-Slip				0	0	0	0			0	0	0	0
N29	Crawley	B2036 / Radford Road	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0
C1	Handcross	B2114 Junction, Handcross				0	0	0	0			0	0	0	0
C2	Lower Beeding	B2110 / B2115 Leechpond Hill				0	0	0	0			0	0	0	0
C3	Slough Green	B2115 Junction, Slough Green				0	0	0	0			0	0	0	0
C4	Haywards Heath	Borde Hill Lane / Copyhold Lane				0	0	0	0			0	0	0	0
C5	Haywards Heath	B2114 / B2036 Whitemans Green	SEVERE	SIG.		0	0	0	0	SIG.		0	0	0	0
C6	Cuckfield	B2036 / Ardingly Road, Whitemans Green	SEVERE	SIG.		0	0	0	0	SIG.		0	0	0	0
C6a	Cuckfield	B2036 / B2184, Cuckfield				0	0	0	0			0	0	0	0
C7	Ansty	A272 / B2036	SIG.	SEVERE		0	1	97	67	SEVERE		0	1	96	64
C8	Cowfold	A281 North Junction, Cowfold	SIG.			0	0	0	0			0	0	0	0
C9	Cowfold	A281 South Junction, Cowfold	SIG.			0	0	0	0			0	0	0	0
C10	Bolney	A23 / A272 Bolney Road	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0
C10a	Bolney	London Road / A272 Cowfold Road	SIG.			0	0	0	0	SIG.		0	0	0	0
C11	North Chailey	A272 / A275 North Chailey	SEVERE			0	0	0	0			0	0	0	0
C12	Haywards Heath	A273 / Isaac's Lane / Traustein Way	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0
C13	Haywards Heath	A272 Rocky Lane / B2112	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0
C14	Haywards Heath	A272 / Rocky Lane	SIG.			0	0	0	0			0	0	0	0
C15	Haywards Heath	B2272 / Bolnore Road	SEVERE	SIG.		0	0	0	0	SIG.		0	0	0	0
C16	Haywards Heath	A272 / B2272	SEVERE			0	0	0	0			0	0	0	0
C17	Haywards Heath	B2112 / B2272	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0
C18	Cowfold	A272 Cowfold Road / Wineham Lane				0	0	0	0			0	0	0	0
C19	Cowfold	A23 / A272 Northbound On-Slip				0	0	0	0			0	0	0	0
C20	Cowfold	A23 / London Road Northbound On-Slip				0	0	0	0			0	0	0	0
S1	Burgess Hill	A23 / A2300 Southbound On-Slip	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0
S2	Burgess Hill	A23 / A2300 Eastern Roundabout	SEVERE	SIG.		0	0	0	0	SIG.		0	0	0	0
S3	Burgess Hill	A2300 / Cuckfield Road	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0
S4	Burgess Hill	Cuckfield Road / The Hub				0	0	0	0			0	0	0	0
S5	Burgess Hill	A2300 / Northern Arc Spine Road	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0
S6	Burgess Hill	Junction Road / B2113, Burgess Hill	SEVERE			0	0	0	0			0	0	0	0
S7	Hurstpierpoint	B2117 / B2116 Hurstpierpoint		SIG.		0	0	0	0	SIG.		0	0	0	0
S8	Hassocks	A273 / B2116 Hassocks (Stonepound)	SEVERE	SEVERE	YES	1	0	22	56	SEVERE	YES	1	0	31	96
S9	Pyecombe	A23 / A281 Southbound On-Slip	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0
S10	Ditchling	B2112 / B2116 Ditchling (LEWES DISTRICT)	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0
S11	Burgess Hill	A2300 / Bishopstone Lane				0	0	0	0			0	0	0	0
S12	Burgess Hill	Bishopstone Ln / Science & Tech Park Access (N)				0	0	0	0			0	0	0	0
S13	Burgess Hill	Cuckfield Rd / Science & Tech Park Access (N)				0	0	0	0			0	0	0	0
S14	Burgess Hill	A2300 / Science & Tech Park Access (S)				0	0	0	0			0	0	0	0
S15	Burgess Hill	A272 Bolney Road / Bishopstone Lane				0	0	0	0			0	0	0	0
S16	Burgess Hill	A2300 / Stairbridge Lane / Pookbourne Lane				0	0	0	0			0	0	0	0
S17	Burgess Hill	Bishopstone Lane / Job's Lane				0	0	0	0			0	0	0	0
S18	Hassocks	A273 / B2112	SIG.			0	0	0	0			0	0	0	0
S19	Hassocks	B2112 / Lodge Lane				0	0	0	0			0	0	0	0
S20	Burgess Hill	Janes Lane / Manor Road				0	0	0	0			0	0	0	0
S21	Burgess Hill	B2112 / Green Road (LEWES DISTRICT)		SIG.		0	0	0	0	SIG.		0	0	0	0
S22	Burgess Hill	Valebridge Road / Junction Road / Leylands Road	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0
S23	Burgess Hill	A273 / B2036 / Marchants Way	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0
S24	Burgess Hill	A273 / Sussex Way	SIG.			0	0	0	0			0	0	0	0
S25	Burgess Hill	West Street / Fairfield Road				0	0	0	0			0	0	0	0
S26	Burgess Hill	A273 / York Road		SIG.		0	0	0	0	SIG.		0	0	0	0
S27	Burgess Hill	B2113 Keymer Road / Folders Lane				0	0	0	0			0	0	0	0
S28	Burgess Hill	B2112 / Folders Lane (LEWES DISTRICT)				0	0	0	0			0	0	0	0
S29	Burgess Hill	A273 Jane Murray Way / Malthouse Lane				0	0	0	0			0	0	0	0
S30	Burgess Hill	B2036 London Road / West Street				0	0	0	0			0	0	0	0
S31	Burgess Hill	B2036 London Road / Victoria Way				0	0	0	0			0	0	0	0
S32	Burgess Hill	B2036 / Lower Church Road / Royal George Rd.	SIG.			0	0	0	0	SIG.		0	0	0	0
S33	Burgess Hill	A273 Jane Murray Way / B2036 London Road	SIG.			0	0	0	0			0	0	0	0
S34	Burgess Hill	B2036 Cuckfield Road / A273 Isaacs Lane	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0
S35	Sayers Common	A23 / B2118 Sayers Common	SIG.	SIG.		0	0	0	0	SEVERE		1	0	71	137
S36	Burgess Hill	Wivelsfield Green (LEWES DISTRICT)	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0
S37	Poyning	A281 / Saddlescombe Road / Poyning Road				0	0	0	0			0	0	0	0
S38	Burgess Hill	A23 / A2300 Western Roundabout	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0
S39	Burgess Hill	A23 / A2300 Northbound On-Slip	SIG.			0	0	0	0			0	0	0	0
S40	Keymer	B2116 / Ockley Lane				0	0	0	0			0	0	0	0
S41	Pyecombe	A23 / A273 Northbound On-Slip	SIG.			0	0	0	0			0	0	0	0
S42	Pyecombe	A281 / A273				0	0	0	0			0	0	0	0
S43	Ditchling	B2112 / B2116 Ditchling (LEWES DISTRICT)				0	0	0	0			0	0	0	0
S44	Burgess Hill	Valebridge Road / Janes Lane	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0
S45	Burgess Hill	A2300 / A273 Jane Murray Way	SIG.	SIG.		0	0	0	0	SIG.		0	0	0	0
S46	Burgess Hill	A23 / B2117 Southbound On-Slip	SEVERE			0	0	0	0			0	0	0	0
S47	Burgess Hill	B2036 London Road / Dunstall Avenue / Maple Drive	SIG.			0	0	0	0			0	0	0	0
Number of Junction with SEVERE Impacts				3	2	2	1	208	197	4	2	3	1	285	375
Number of Junction with SIGNIFICANT impacts				40						40					

SEVERE= Increase in RFC of 3% or more to 95% or more
AND increase in delay of 1 min or more to 2 mins or more
SIGNIFICANT= Increase in RFC of 3% or more to 85% or more

Appendix C – Junction Hotspots Detail

Mid Sussex Transport Study: Junction approach arm statistics for identified locations

ID	Area	Junction	Approach Arm	2019																2039 Reference Case																2039 Scenario 5																2039 Scenario 5m2															
				AM Dem (Veh)	AM RFC (%)	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	PM Delay (s)	PM Avg Q (pcu)	AM Dem (Veh)	AM RFC (%)	Diff to Base	Sig/Sev	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	Diff to Base	Sig/Sev	PM Delay (s)	PM Avg Q (pcu)	AM Dem (Veh)	AM RFC (%)	Diff to Ref	Sig/Sev	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	Diff to Ref	Sig/Sev	PM Delay (s)	PM Avg Q (pcu)	AM Dem (Veh)	AM RFC (%)	Diff to Ref	Sig/Sev	PM Delay (s)	PM Avg Q (pcu)																										
N27	Handcross	B2114 / B2110 Handcross	B2110 High Beeches Lane (E)	315	42.3	4.1	0.1	250	35.9	4.6	0.1	499	69.0	27		5.9	0.4	385	56.1	20		5.6	0.3	565	75.8	7		6.3	0	0.5	454	63.7	8		5.8	0	0.3	555	75.4	6		6.4	0	0.5	427	60.7	5		5.7	0	0.3																
N27			B2110 (S)	416	48.7	3.2	0.0	243	28.0	3.0	0.0	597	72.7	24		4.2	0.2	336	38.8	11		3.1	0.0	671	80.8	8		4.8	1	0.3	389	44.8	6		3.1	0	0.0	654	79.6	7		4.7	0	0.3	378	43.5	5		3.1	0	0.0																
N28	Crawley	M23 / Junction 11 Southbound On-Slip	A23 Southbound	1636	35.9	0.8	0.0	2717	56.5	1.8	0.0	2255	54.3	18		1.6	0.0	3393	77.4	21		3.5	0.0	2361	57.4	3		1.7	0	0.0	3497	79.9	3		3.8	0	0.0	2403	58.2	4		1.8	0	0.0	3479	79.5	2		3.8	0	0.0																
N28			Junction 11 Southbound on-Slip	865	46.3	4.2	0.0	1221	63.1	4.3	0.0	1483	75.5	29		4.9	0.3	1777	88.7	26	Sig	8.4	2.0	1558	78.9	3		5.2	0	0.4	1830	90.7	2		9.1	1	2.4	1538	78.1	3		5.1	0	0.3	1819	90.4	2		9.0	1	2.3																
N29	Crawley	B2036 / Radford Road	B2036 Balcombe Road (N)	842	65.4	5.1	0.4	794	42.4	2.1	0.0	1101	87.9	23	Sig	10.9	1.7	1025	49.7	7		2.3	0.0	1126	87.0	-1		10.2	-1	1.6	1017	47.2	-3		2.2	0	0.0	1113	87.7	0		10.7	0	1.6	1015	47.6	-2		2.2	0	0.0																
N29			B2036 Balcombe Road (S)	799	39.8	1.5	0.0	518	26.2	1.2	0.0	787	37.7	-2		1.5	0.0	111	5.6	-21		1.0	0.0	765	36.5	-1		1.4	0	0.0	134	6.6	1		1.0	0	0.0	777	37.2	0		1.5	0	0.0	131	6.5	1		1.0	0	0.0																
N29			Radford Road (W)	110	13.4	4.6	0.1	608	64.8	6.4	0.7	415	73.4	60		15.5	2.2	862	95.8	31	Sev	9.2	1.6	435	74.2	1		15.5	0	2.2	866	100.4	5	Sev	20.5	11	4.8	410	71.8	-2		14.0	-2	2.0	873	100.4	5	Sev	21.7	12	5.1																

Mid Sussex Transport Study: Junction approach arm statistics for identified locations

		2019										2039 Reference Case										2039 Scenario 5										2039 Scenario 5m2																								
ID	Area	Junction	Approach Arm	AM Dem (Veh)	AM RFC (%)	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	PM Delay (s)	PM Avg Q (pcu)	AM Dem (Veh)	AM RFC (%)	Diff to Base	Sig/Sev	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	Diff to Base	Sig/Sev	PM Delay (s)	PM Avg Q (pcu)	AM Dem (Veh)	AM RFC (%)	Diff to Ref	Sig/Sev	AM Delay (s)	Diff to Ref	Sig/Sev	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	Diff to Ref	Sig/Sev	PM Delay (s)	Diff to Ref	Sig/Sev	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	Diff to Ref	Sig/Sev	PM Delay (s)	Diff to Ref	Sig/Sev	PM Avg Q (pcu)									
CENTRAL																																																								
C1	Handcross	B2114 Junction, Handcross	B2110 High Street (N) (priority)	648	38.7	2.6	0.0	817	49.0	2.9	0.0	810	49.4	11		3.0	0.1	1005	58.8	10		3.1	0.1	823	49.7	0		3.0	0		0.1	1030	58.8	0		3.1	0		0.1	1016	58.5	0		3.1	0		0.1									
C1			B2114 (S) (priority)	239	12.3	1.0	0.0	167	8.8	1.0	0.0	177	9.3	2		1.1	0.0	177	9.3	1		1.0	0.0	178	9.4	0		1.1	0		0.0	178	9.4	0		1.1	0		0.0	178	9.4	0		1.0	0		0.0									
C2			B2110 (W)	427	58.1	3.4	0.0	262	36.6	3.4	0.0	591	79.8	22		4.0	0.2	352	49.5	13		3.6	0.1	644	84.6	5		4.1	0		0.2	408	57.2	8		3.6	0		0.1	635	84.4	5		4.0	0		0.2	395	55.3	6		3.6	0		0.1	
C2	Lower Beeding	B2110 / B2115 Leechpond Hill	B2110 (E)	501	32.6	3.0	0.0	589	32.5	2.0	0.0	609	35.6	3		2.7	0.0	744	41.7	9		2.3	0.0	634	37.2	2		2.8	0		0.0	734	41.0	-1		2.3	0		0.0	618	36.2	1		2.7	0		0.0	753	42.3	1		2.3	0		0.0	
C2			B2110 Leechpond Hill (S)	274	14.0	1.1	0.0	162	8.1	1.0	0.0	124	6.5	-7		1.0	0.0	319	15.7	8		1.1	0.0	179	9.1	3		1.0	0		0.0	328	16.0	0		1.1	0		0.0	150	7.7	1		1.0	0		0.0	326	15.9	0		1.1	0		0.0	
C3			B2115 (W)	268	39.6	4.0	0.1	334	46.9	3.6	0.1	553	75.2	36		4.0	0.2	479	72.1	25		5.3	0.3	487	68.3	-7		4.2	0		0.2	530	79.8	8		6.1	1		0.5	552	75.8	1		4.2	0		0.2	513	77.2	5		5.8	1		0.4	
C3	Slough Green	B2115 Junction, Slough Green	B2114 Cuckfield Road (N) (priority)	153	7.9	1.0	0.0	63	3.2	0.9	0.0	135	6.9	-1		1.0	0.0	74	3.8	1		1.0	0.0	112	5.7	-1		1.0	0		0.0	86	4.3	1		1.0	0		0.0	121	6.2	-1		1.0	0		0.0	84	4.2	0		1.0	0		0.0	
C3			B2114 (E) (priority)	593	28.9	1.3	0.0	386	19.3	1.1	0.0	695	30.8	2		1.3	0.0	592	29.4	10		1.3	0.0	740	31.7	1		1.3	0		0.0	670	32.8	3		1.4	0		0.0	730	31.8	1		1.3	0		0.0	663	32.6	3		1.4	0		0.0	
C3			B2115 Sloughgreen Lane (W)	316	47.3	4.1	0.1	336	46.3	3.6	0.1	470	69.1	22		4.6	0.2	539	74.1	27		4.3	0.2	562	79.9	11		5.2	1		0.3	564	77.5	3		4.6	0		0.2	534	76.1	2		4.5	0		0.3	553	76.1	2		4.4	0		0.2	
C4	Haywards Heath	Borde Hill Lane / Copyhold Lane	Borde Hill Lane (N)	425	21.7	1.2	0.0	589	29.4	1.3	0.0	508	25.6	4		1.2	0.0	802	39.5	10		1.5	0.0	592	29.8	4		1.3	0		0.0	906	43.9	4		1.6	0		0.0	556	28.1	3		1.3	0		0.0	890	43.3	4		1.6	0		0.0	
C4			Copyhold Lane (E)	134	23.6	4.9	0.1	151	26.0	5.1	0.1	130	26.3	3		6.1	0.1	154	30.3	4		6.4	0.1	138	29.5	3		6.9	1		0.1	166	34.7	4		7.3	1		0.2	138	29.2	3		6.7	1		0.1	166	34.3	4		7.2	1		0.2	
C4			Borde Hill Lane (S)	690	39.3	2.3	0.0	336	21.1	2.5	0.0	943	50.7	11		2.5	0.0	385	24.5	3		2.6	0.0	1038	54.9	4		2.6	0		0.1	445	29.5	5		3.0	0		0.1	1023	54.3	4		2.6	0		0.1	432	28.2	4		2.8	0		0.1	
C5	Haywards Heath	B2114 / B2036 Whitemans Green	B2036 (N)	264	37.1	4.2	0.1	296	39.4	4.0	0.1	286	42.4	5		4.6	0.1	295	44.2	5		4.8	0.2	260	38.9	-3		4.7	0		0.1	289	43.8	0		4.9	0		0.2	263	39.2	-3		4.7	0		0.1	294	44.4	0		4.8	0		0.2	
C5			B2036 (S)	887	101.7	42.3	10.0	543	62.3	3.2	0.0	982	107.2	5	Sev	141.1	35.4	803	92.1	29	Sig	3.8	0.2	1013	107.6	0		148.4	7		37.3	880	99.7	8	Sev	4.9	2	5		1.5	1000	107.5	0		145.7	5		36.6	876	99.5	7	Sev	8.5	5		1.3
C5			B2114 Staplefield Road (W)	469	61.4	4.3	0.2	399	48.9	3.6	0.1	605	77.6	16		4.8	0.3	612	75.6	27		4.5	0.3	673	84.5	7		5.4	1		0.4	649	79.7	4		4.8	0		0.3	654	82.3	5		5.1	0		0.4	636	78.4	3		4.7	0		0.3	
C6	Cuckfield	B2036 / Ardingly Road, Whitemans Green	B2036 Whitemans Green (N)	676	85.1	4.7	0.3	633	76.0	3.7	0.1	808	101.1	16	Sev	35.8	7.8	837	102.6	27	Sev	61.8	14.2	845	105.4	4	Sev	114.9	79		26.6	866	105.7	3	Sev	119.0	57		28.1	831	103.8	3		86.3	51		19.7	860	105.0	2		105.3	44		24.8	
C6			Ardingly Road (E)	364	47.8	4.1	0.1	387	52.8	4.7	0.2	592	74.0	26		4.9	0.3	585	79.1	26		6.4	0.6	724	87.2	13	Sev	5.8	1		0.5	717	94.7	16	Sev	11.6	5		1.7	691	91.5	12	Sig	9.3	3		6.1	1		1.2						
C6			B2036 London Road (S)	800	103.0	73.4	16.3	421	52.1	3.8	0.1	831	107.9	5	Sev	163.9	36.6	575	74.9	23		5.4	0.4	854	110.8	3	Sev	218.0	54	Sev	47.8	584	76.8	2	Sev	6.1	1		0.5	839	109.9	2		200.8	37	Sev	44.0	587	77.2	2		6.0	1		0.5	
C6a	Cuckfield	B2036 / B2184, Cuckfield	B2036 London Road (N)	442	52.5	3.0	0.0	624	71.7	3.0	0.0	545	63.0	11		3.0	0.0	656	74.4	3		3.0	0.0	564	62.3	-1		3.0	0		0.0	695	76.8	2		3.0	0		0.0	549	61.4	-2		3.0	0		0.0	677	75.3	1		3.0	0		0.0	
C6a			B2184 London Lane (E)	523	64.6	3.9	0.1	188	22.3	3.3	0.0	517	66.1	1		4.7	0.2	187	22.7	0		3.6	0.0	493	61.6	-4		4.6	0		0.2	197	23.6	1		3.7	0		0.0	494	62.3	-4		4.6	0		0.2	199	23.9	1		3.7	0		0.0	
C6a			B2036 High Street (S)	277	41.0	4.0	0.1	233	28.6	3.4	0.0	314	45.8	14		4.7	0.2	387	47.0	18		3.5	0.1	361	50.4	5		4.7	0		0.2	387	46.4	-1		3.5	0		0.1	345	48.9	3		4.7	0		0.2	388	46.7	0		3.5	0		0.0	
C7	Ansty	A272 / B2036	A272 (E)	659	87.2	6.3	0.6	778	101.1	41.8	8.5	891	105.4	14	Sev	46.7	11.2	927	103.1	2		76.7	19.0	928	103.6	2		87.0	40		21.5	949	104.1	1		96.3	20		23.9	919	103.5	2		85.3	39		21.1	955	104.0	1		92.8	16		23.2	
C7			B2036 (S)	605	85.9	8.2	0.9	308	47.2	5.5	0.2	477	70.4	-16		6.5	0.5	623	98.6	51	Sev	27.4	4.2	666	97.0	27	Sev	19.4	13		3.0	638	97.7	-1		24.0	-3		3.6	593	86.9	17	Sig	10.0	4		1.1	634	98.2	0		25.7	-2		3.9	
C7			A272 (W)	674	94.3	11.4	1.6	716	91.0	6.8	0.8	898	97.9	4	Sev	11.0	2.0	850	102.2	5	Sev	65.7	14.9	892	102.7	5	Sev	69.3	58		17.0	893	106.7	4	Sev	146.0	80	Sev	34.6	886	101.9	4	Sev	55.2	44		13.5	887	106.0	4	Sev	132.9	67	Sev	31.4	
C8	Cowfold	A281 North Junction, Cowfold	A281 (N)	233	34.2	4.7	0.1	583	83.1	7.7	0.8	284	42.1	8		5.2	0.2	717	100.8	18	Sev	40.0	7.5	303	43.7	2		5.1	0		0.2	719	99.4	-1		22.7	-17		3.9	279	41.0	-1		5.1	0		0.2	719	99.8	-1		24.6	-15		4.3	
C8			A281 (S)	812	98.4	7.0	0.9	773	101.2	43.9	9.0	817	100.9	2		29.8	6.4	785	101.4	0		48.7	9.7	836	101.0	0		30.6	1		6.7																									

Mid Sussex Transport Study: Junction approach arm statistics for identified locations

ID	Area	Junction	Approach Arm	2019										2039 Reference Case										2039 Scenario 5										2039 Scenario 5m2																					
				AM Dem (Veh)	AM RFC (%)	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	PM Delay (s)	PM Avg Q (pcu)	AM Dem (Veh)	AM RFC (%)	Diff to Base	Sig/Sev	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	Diff to Base	Sig/Sev	PM Delay (s)	PM Avg Q (pcu)	AM Dem (Veh)	AM RFC (%)	Diff to Ref	Sig/Sev	AM Delay (s)	Diff to Ref	Sig/Sev	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	Diff to Ref	Sig/Sev	AM Delay (s)	Diff to Ref	Sig/Sev	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	Diff to Ref	Sig/Sev	AM Delay (s)	Diff to Ref	Sig/Sev	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	Diff to Ref	Sig/Sev	AM Delay (s)	Diff to Ref	Sig/Sev	AM Avg Q (pcu)
SOUTH																																																							
S1	Burgess Hill	A23 / A2300 Southbound On-Slip	A23 Southbound On-Slip	195	13.7	2.7	0.0	199	23.1	5.1	0.1	769	37.5	24	1.5	0.0	766	37.5	14	1.5	0.0	773	36.4	-1	1.4	0	0.0	884	42.9	5	1.6	0	0.0	791	37.9	0	1.5	0	0.0	863	41.9	4	1.6	0	0.0	863	41.9	4	1.6	0	0.0				
S2	Burgess Hill	A23 / A2300 Eastern Roundabout	A23 Southbound Off-Slip	717	45.4	3.5	0.1	851	48.3	3.4	0.1	1497	107.5	62	15.7	60.3	1197	53.1	5	11.8	3.3	1586	110.8	3	217.3	60	84.2	1281	56.2	3	12.2	0	3.6	1513	109.8	2	198.0	41	75.1	1259	55.3	2	12.1	0	3.5										
S3	Burgess Hill	A2300 / Cuckfield Road	A2300 (E)	935	93.7	4.2	0.3	782	81.7	3.4	0.1	2484	92.2	-2	18.0	6.7	2512	83.1	1	8.3	3.2	2703	96.4	8	26.2	8	7.8	2579	84.5	1	8.8	0	3.4	2682	97.5	5	30.4	12	8.1	2583	84.7	2	8.9	1	3.5										
S4	Burgess Hill	Cuckfield Road / The Hub	Cuckfield Road (N)	98	11.9	4.3	0.0	118	14.7	4.6	0.1	505	67.5	56	29.1	3.1	1061	104.3	90	93.4	25.8	488	64.9	-3	28.4	-1	2.9	1132	104.0	0	87.7	-6	25.8	488	65.0	-2	28.4	-1	3.0	1100	103.9	0	86.4	-7	24.8										
S5	Burgess Hill	A2300 / Northern Arc Spine Road	A2300 (E)	1161	107.4	145.9	46.9	1082	101.5	41.9	12.3	2892	70.5	-37	1.0	0.0	1629	39.8	-62	0.7	0.0	3113	72.6	2	1.2	0	0.0	1885	89.0	49	7.6	7	0.0	3021	71.9	1	1.1	0	0.0	1833	89.4	50	8.1	7	0.0										
S6	Burgess Hill	Junction Road / B2113, Burgess Hill	B2113 Keymer Road (S)	202	26.5	4.5	0.1	176	20.7	4.3	0.1	660	68.7	42	25.3	3.7	726	83.5	63	31.8	4.4	992	104.0	35	151.1	126	24.7	867	99.3	16	76.9	45	5.5	935	97.4	29	61.6	36	5.8	830	95.1	12	64.0	32	7.7										
S7	Hurstpierpoint	B2117 / B2116 Hurstpierpoint	B2117 Brighton Road (S)	962	91.0	4.8	0.5	1027	94.2	5.6	0.7	2032	48.7	-42	0.9	0.0	1771	43.3	-51	0.8	0.0	2179	49.9	1	0.9	0	0.0	1748	49.9	1	1.0	0	0.0	1748	49.9	1	1.0	0	0.0	1748	49.9	1	1.0	0	0.0										
S8	Hassocks	A273 / B2116 Hassocks (Stonepound)	A273 London Road (N)	471	100.9	135.8	7.0	609	102.5	15.2	13.0	615	103.6	3	17.1	17.2	718	110.4	8	300.7	38.7	676	106.2	2	223.8	48	26.6	732	110.4	0	300.0	-12	38.7	641	105.4	2	208.3	32	22.9	728	110.4	0	300.1	-1	38.7										
S9	Pyecombe	A23 / A281 Southbound On-Slip	A23 Southbound	2217	60.5	8.8	0.0	3287	84.7	20.1	0.0	2951	84.6	24	17.5	0.0	4154	100.4	16	63.0	8.0	3226	92.9	8	23.7	6	0.0	4204	100.5	0	64.8	2	10.0	3234	92.1	8	23.3	6	0.0	4173	100.4	0	62.6	0	7.5										
S10	Ditchling	B2112 / B2116 Ditchling (LEWES DISTRICT)	B2116 (W)	229	32.4	4.3	0.1	164	21.1	3.7	0.0	340	51.3	19	5.5	0.2	106	14.4	-7	4.0	0.0	380	59.1	8	6.4	1	0.4	120	16.6	2	4.1	0	0.0	370	59.4	8	6.4	1	0.4	114	15.6	1	4.0	0	0.9										
S11	Burgess Hill	A2300 / Bishopstone Lane	A2300 (W)	552	69.5	4.1	0.2	596	72.0	3.7	0.1	791	101.4	32	44.3	9.4	865	100.1	28	13.9	2.6	797	102.5	1	66.0	22	14.2	891	102.7	3	59.9	46	14.2	789	102.2	1	59.9	16	12.8	885	102.0	2	47.1	33	11.0										
S12	Burgess Hill	Bishopstone Ln / Science & Tech Park Access (N)	Bishopstone Lane (N)	75	11.5	4.5	0.0	71	10.9	4.5	0.0	91	16.1	5	5.5	0.1	87	14.4	4	5.1	0.1	92	16.5	0	5.6	0	0.1	92	16.5	0	5.1	0	0.1	93	16.5	0	5.6	0	0.1	89	14.8	0	5.1	0	1.1										
S13	Burgess Hill	Cuckfield Rd / Science & Tech Park Access (N)	A2300 (E)	969	50.8	1.8	0.0	998	50.8	1.9	0.0	2032	47.9	-3	0.0	0.0	1771	42.8	-8	0.0	0.0	2179	49.0	1	0.0	0	0.0	1748	41.8	-1	0.0	0	0.0	2148	49.0	1	0.0	0	0.0	1758	42.1	-1	0.0	0	0.0										
S14	Burgess Hill	A2300 / Science & Tech Park Access (S)	A2300 (E)	124	41.5	14.3	0.4	117	34.7	11.6	0.3	2484	59.8	12	0.0	0.0	2512	60.0	18	0.0	0.0	2703	62.6	3	0.0	0	0.0	2579	61.0	1	0.0	0	0.0	2682	63.3	3	0.0	0	0.0	2583	61.2	1	0.0	0	0.0										
S15	Burgess Hill	A272 Bolney Road / Bishopstone Lane	A272 Bolney Road (W)	951	47.4	1.8	0.0	824	42.5	1.7	0.0	2484	59.8	10	0.0	0.0	2512	60.0	16	0.0	0.0	14	0.7	0	0.0	0	0.0	8	0.4	0	0.0	0	0.0	12	0.6	0	0.0	0	0.0	8	0.4	0	0.0	0	0.0										
S16	Burgess Hill	A2300 / Stairbridge Lane / Pookbourne Lane	A2300 (W)	610	31.8	1.3	0.0	671	34.0	1.4	0.0	866	44.0	12	1.6	0.0	826	40.9	7	1.5	0.0	875	44.4	0	1.6	0	0.0	857	42.3	1	1.6	0	0.0	867	44.5	1	1.6	0	0.0	853	42.2	1	1.6	0	0.0										
S17	Burgess Hill	Bishopstone Lane / Job's Lane	A272 Bolney Road (E)	682	35.2	1.4	0.0	671	33.5	1.4	0.0	812	40.8	6	1.5	0.0	817	39.0	6	1.5	0.0	931	44.9	4	1.7	0	0.0	828	38.6	0	1.7	0	0.0	872	42.5	2	1.6	0	0.0	835	39.1	0	1.5	0	0.0										
S18	Hassocks	A273 / B2112	Bishopstone Lane (S)	60	14.8	8.1	0.1	35	8.9	7.9	0.1	23	6.6	-8	8.8	0.0	48	10.2	1	6.3	0.0	7	1.6	-5	6.0	-3	0.0	123	26.5	16	7.1	1	0.1	7	1.6	-5	5.9	-3	0.0	101	22.4	12	7.1	1	0.1										
S19	Hassocks	B2112 / Lodge Lane	A2300 (E)	1003	38.0	1.2	0.0	1028	38.0	1.2	0.0	2074	38.8	1	0.6	0.0	1370	24.9	-13	0.4	0.0	2186	38.8	0	0.6	0	0.0	1425	25.7	1	0.5	0	0.0	2152	38.8	0	0.6	0	0.0	1410	25.5	1	0.5	0	0.0										
S20	Burgess Hill	Janes Lane / Manor Road	Stairbridge Lane	8	1.0	10.0	0.0	37	4.4	8.4	0.1	293	18.1	17	3.4	0.0	477	28.0	24	3.4	0.1	309	19.3	1	3.5	0	0.0	400	23.7	-4	3.4	0	0.1	309	19.2	1	4.7	0	0.0	546	25.0	-3	4.5	0	0.0										
S21	Burgess Hill	B2112 / Green Road (LEWES DISTRICT)	A2300 (E)	1026	50.2	0.0	0.0	873	44.1	0.0	0.0	2484	59.8	10	0.0	0.0	2512	60.0	16	0.0	0.0	N/A	N/A	0	0.0	0	0.0	N/A	N/A	0	0.0	0	0.0	N/A	N/A	0	0.0	0	0.0	N/A	N/A	0	0.0	0	0.0										
S22	Burgess Hill	Valebridge Road / Junction Road / Leylands Road	Pookbourne Lane	15	2.1	8.3	0.0	21	3.6	6.4	0.0	0	0.0	-2	4.5	0.0	0	0.0	-4	4.5	0.0	0	0.1	0	4.7	0	0.0	0	0.0	0	4.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0												
S23	Burgess Hill	A273 / B2036 / Marchants Way	Bishopstone Lane (N)	124	6.3	1.0	0.0	131	6.8	1.2	0.0	168	8.5	2	0.0	0.0	138	7.0	0	0.0	0.0	185	9.4	1	0.0	0	0.0	0.0	66	3.3	-4	0.0	0	0.0	185	9.3	1	0.0	0	0.0	87	4.4	-3	0.0	0	0.0									
S24	Burgess Hill	A273 / Sussex Way	Bishopstone Lane (S)	57	2.9	0.9	0.0	38	2.0	0.9	0.0	38	2.0	0.0	0.0	0.0	38	2.0	0.0	0.0	0.0	14	0.7	0	0.0	0	0.0	8	0.4	0	0.0	0	0.0	12	0.6	0	0.0	0	0.0	8	0.4	0	0.0	0	0.0										
S25	Burgess Hill	West Street / Fairfield Road	Job's Lane	0	0.0	3.4	0.0	0	0.0	3.2	0.0	23	1.2	1	0.0	0.0	23	1.1	0	0.0	0.0	23	1.1	0	0.0	0	0.0	21	1.1	0	0.0	0	0.0	24	1.2	0	0.0	0	0.0	21	1.1	0	0.0	0	0.0										
S26	Burgess Hill	A273 / York Road	Cuckfield Rd (N)	969	50.8	0.0	0.0	998	50.8	0.0	0.0	2032	47.9	-3	0.0	0.0	1771	42.8	-8	0.0	0.0	N/A	N/A	0	0.0	0	0.0	N/A	N/A	0	0.0	0	0.0	N/A	N/A	0	0.0	0	0.0	N/A	N/A	0	0.0	0	0.0										
S27	Burgess Hill	B2113 Keymer Road / Folders Lane	Cuckfield Rd (S)	124	41.5	14.3	0.4	117	34.7	11.6	0.3	2484	59.8	12	0.0	0.0	2512	60.0	18	0.0	0.0	14	0.7	0	0.0	0	0.0	8	0.4	0	0.0	0	0.0	12	0.6	0	0.0	0	0.0	8	0.4	0	0.0	0	0.0										
S28	Hassocks	A273 / B2112	Cuckfield Rd (S)	951	47.4	1.8	0.0	824	42.5	1.7	0.0	2484	59.8	12	0.0	0.0	2512																																						

Mid Sussex Transport Study: Junction approach arm statistics for identified locations

ID	Area	Junction	Approach Arm	2019				2039 Reference Case										2039 Scenario 5										2039 Scenario 5m4																							
				AM Dem (Veh)	AM RFC (%)	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	PM Delay (s)	PM Avg Q (pcu)	AM Dem (Veh)	AM RFC (%)	Diff to Base	Sig/Sev	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	Diff to Base	Sig/Sev	PM Delay (s)	PM Avg Q (pcu)	AM Dem (Veh)	AM RFC (%)	Diff to Ref	Sig/Sev	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	Diff to Ref	Sig/Sev	PM Delay (s)	PM Avg Q (pcu)	AM Dem (Veh)	AM RFC (%)	Diff to Ref	Sig/Sev	PM Delay (s)	PM Avg Q (pcu)										
N27	Handcross	B2114 / B2110 Handcross	B2110 High Beeches Lane (E)	315	42.3	4.1	0.1	250	35.9	4.6	0.1	499	69.0	27		5.9	0.4	385	56.1	20		5.6	0.3	565	75.8	7		6.3	0	0.5	454	63.7	8		5.8	0	0.3	557	75.4	6		6.3	0	0.5	427	60.6	4		5.7	0	0.3
N27			B2110 (S)	416	48.7	3.2	0.0	243	28.0	3.0	0.0	597	72.7	24		4.2	0.2	336	38.8	11		3.1	0.0	671	80.8	8		4.8	1	0.3	389	44.8	6		3.1	0	0.0	653	79.5	7		4.7	0	0.3	381	43.9	5		3.1	0	0.0
N28	Crawley	M23 / Junction 11 Southbound On-Slip	A23 Southbound	1636	35.9	0.8	0.0	2717	56.5	1.8	0.0	2255	54.3	18		1.6	0.0	3393	77.4	21		3.5	0.0	2361	57.4	3		1.7	0	0.0	3497	79.9	3		3.8	0	0.0	2399	58.1	4		1.8	0	0.0	3480	79.6	2		3.8	0	0.0
N28			Junction 11 Southbound on-Slip	865	46.3	4.2	0.0	1221	63.1	4.3	0.0	1483	75.5	29		4.9	0.3	1777	88.7	26	Sig	8.4	2.0	1558	78.9	3		5.2	0	0.4	1830	90.7	2		9.1	1	2.4	1543	78.3	3		5.1	0	0.4	1821	90.5	2		9.0	1	2.3
N29	Crawley	B2036 / Radford Road	B2036 Balcombe Road (N)	842	65.4	5.1	0.4	794	42.4	2.1	0.0	1101	87.9	23	Sig	10.9	1.7	1025	49.7	7		2.3	0.0	1126	87.0	-1		10.2	-1	1.6	1017	47.2	-3		2.2	0	0.0	1113	87.7	0		10.7	0	1.6	1016	47.7	-2		2.2	0	0.0
N29			B2036 Balcombe Road (S)	799	39.8	1.5	0.0	518	26.2	1.2	0.0	787	37.7	-2		1.5	0.0	111	5.6	-21		1.0	0.0	765	36.5	-1		1.4	0	0.0	134	6.6	1		1.0	0	0.0	780	37.4	0		1.5	0	0.0	131	6.5	1		1.0	0	0.0
N29			Radford Road (W)	110	13.4	4.6	0.1	608	64.8	6.4	0.7	415	73.4	60		15.5	2.2	862	95.8	31	Sev	9.2	1.6	435	74.2	1		15.5	0	2.2	866	100.4	5	Sev	20.5	11	4.8	408	71.4	-2		13.9	-2	1.9	873	100.4	5	Sev	21.6	12	5.1

Mid Sussex Transport Study: Junction approach arm statistics for identified locations

		2019												2039 Reference Case												2039 Scenario 5												2039 Scenario 5m4												
ID	Area	Junction	Approach Arm	AM Dem (Veh)	AM RFC (%)	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	PM Delay (s)	PM Avg Q (pcu)	Diff to Base	Sig/Sev	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	Diff to Base	Sig/Sev	PM Delay (s)	PM Avg Q (pcu)	AM Dem (Veh)	AM RFC (%)	Diff to Ref	Sig/Sev	AM Delay (s)	Diff to Ref	Sig/Sev	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	Diff to Ref	Sig/Sev	PM Delay (s)	Diff to Ref	Sig/Sev	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	Diff to Ref	Sig/Sev	PM Delay (s)	Diff to Ref	Sig/Sev	PM Avg Q (pcu)					
CENTRAL																																																		
C1	Handcross	B2114 Junction, Handcross	B2110 High Street (N) (priority)	648	38.7	2.6	0.0	817	49.0	2.9	0.0	810	49.4	11	3.0	0.1	1005	58.8	10	3.1	0.1	823	49.7	0	3.0	0	0.1	1030	58.8	0	3.1	0	0.1	828	50.0	1	3.0	0	0.1	1015	58.5	0	3.1	0	0.1					
C1			B2114 (S) (priority)	239	12.3	1.0	0.0	167	8.8	1.0	0.0	177	9.3	2	1.1	0.0	177	9.3	1	1.0	0.0	178	9.4	0	1.1	0	0.0	178	9.4	0	1.1	0	0.0	178	9.4	0	1.1	0	0.0	178	9.4	0	1.1	0	0.0					
C2			B2110 (W)	427	58.1	3.4	0.0	262	36.6	3.4	0.0	591	79.8	22	4.0	0.2	352	49.5	13	3.6	0.1	644	84.6	5	4.1	0	0.2	408	57.2	8	3.6	0	0.1	632	83.9	4	4.0	0	0.2	399	55.7	6	3.6	0	0.1					
C2	Lower Beeding	B2110 / B2115 Leechpond Hill	B2110 (E)	501	32.6	3.0	0.0	589	32.5	2.0	0.0	609	35.6	3	2.7	0.0	744	41.7	9	2.3	0.0	634	37.2	2	2.8	0	0.0	734	41.0	-1	2.3	0	0.0	630	36.3	1	2.7	0	0.0	753	42.3	1	2.3	0	0.0					
C2			B2110 Leechpond Hill (S)	274	14.0	1.1	0.0	162	8.1	1.0	0.0	124	6.5	-7	1.0	0.0	319	15.7	8	1.1	0.0	179	9.1	3	1.0	0	0.0	328	16.0	0	1.1	0	0.0	151	7.8	1	1.0	0	0.0	326	15.9	0	1.1	0	0.0					
C3			B2115 (W)	268	39.6	4.0	0.1	334	46.9	3.6	0.1	553	75.2	36	4.0	0.2	479	72.1	25	5.3	0.3	487	68.3	-7	4.2	0	0.2	530	79.8	8	6.1	1	0.5	523	75.9	1	4.2	0	0.2	512	77.1	5	4.2	0	0.2					
C3	Slough Green	B2115 Junction, Slough Green	B2114 Cuckfield Road (N) (priority)	153	7.9	1.0	0.0	63	3.2	0.9	0.0	135	6.9	-1	1.0	0.0	74	3.8	1	1.0	0.0	112	5.7	-1	1.0	0	0.0	86	4.3	1	1.0	0	0.0	121	6.2	-1	1.0	0	0.0	84	4.3	1	1.0	0	0.0					
C3			B2114 (E) (priority)	593	28.9	1.3	0.0	386	19.3	1.1	0.0	695	30.8	2	1.3	0.0	592	29.4	10	1.3	0.0	740	31.7	1	1.3	0	0.0	670	32.8	3	1.4	0	0.0	723	31.5	1	1.3	0	0.0	664	32.7	3	1.4	0	0.0					
C3			B2115 Sloughgreen Lane (W)	316	47.3	4.1	0.1	336	46.3	3.6	0.1	470	69.1	22	4.6	0.2	539	74.1	27	4.3	0.2	564	79.9	11	5.2	1	0.3	564	77.5	3	4.6	0	0.2	535	76.7	8	5.0	0	0.3	552	76.0	2	4.5	0	0.2					
C4	Haywards Heath	Borde Hill Lane / Copyhold Lane	Borde Hill Lane (N)	425	21.7	1.2	0.0	589	29.4	1.3	0.0	508	25.6	4	1.2	0.0	802	39.5	10	1.5	0.0	592	29.8	4	1.3	0	0.0	906	43.9	4	1.6	0	0.0	556	28.1	3	1.3	0	0.0	891	43.4	4	1.6	0	0.0					
C4			Copyhold Lane (E)	134	23.6	4.9	0.1	151	26.0	5.1	0.1	130	26.3	3	6.1	0.1	154	30.3	4	6.4	0.1	138	29.5	3	6.9	1	0.1	166	34.7	4	7.3	1	0.2	138	29.0	3	6.6	1	0.1	166	34.3	4	7.2	1	0.2					
C4			Borde Hill Lane (S)	690	39.3	2.3	0.0	336	21.1	2.5	0.0	943	50.7	11	2.5	0.0	385	24.5	3	2.6	0.0	1038	54.9	4	2.6	0	0.1	445	29.5	5	3.0	0	0.1	1014	54.0	3	2.6	0	0.1	434	28.4	4	2.8	0	0.1					
C5	Haywards Heath	B2114 / B2036 Whitemans Green	B2036 (N)	264	37.1	4.2	0.1	296	39.4	4.0	0.1	286	42.4	5	4.6	0.1	295	44.2	5	4.8	0.2	260	38.9	-3	4.7	0	0.1	289	43.8	0	4.9	0	0.2	263	39.2	-3	4.7	0	0.1	294	44.4	0	4.8	0	0.2					
C5			B2036 (S)	887	101.7	42.3	10.0	543	62.7	3.2	0.0	982	107.2	5	Sev	141.1	35.4	803	92.1	29	Sev	3.8	0.2	1013	107.6	0	148.4	7	37.3	880	99.7	8	Sev	9.2	5	1.5	1001	107.5	0	146.9	6	36.9	873	99.2	7	Sev	7.4	4	1.1	
C5			B2114 Staplefield Road (W)	469	61.4	4.3	0.2	399	48.9	3.6	0.1	605	77.6	16	4.8	0.3	612	75.6	27	4.5	0.3	673	84.5	7	5.4	1	0.4	649	79.7	4	4.8	0	0.3	655	82.6	5	5.2	0	0.4	636	78.2	3	4.7	0	0.3					
C6	Cuckfield	B2036 / Ardingly Road, Whitemans Green	B2036 Whitemans Green (N)	676	85.1	4.7	0.3	633	76.0	3.7	0.1	808	101.1	16	Sev	35.8	7.8	837	102.6	27	Sev	61.8	14.2	845	105.4	4	Sev	114.9	79	26.6	866	105.7	3	Sev	119.0	57	28.1	832	103.8	3	85.2	49	19.5	860	105.0	2	105.6	44	24.9	
C6			Ardingly Road (E)	364	47.8	4.1	0.1	387	52.8	4.7	0.2	592	74.0	26	4.9	0.3	585	79.1	26	6.4	0.6	724	87.2	13	Sev	5.8	1	0.5	717	94.7	16	Sev	11.6	5	1.7	692	84.1	10	5.4	1	0.4	693	91.7	13	Sev	9.4	3	1.2		
C6			B2036 London Road (S)	800	103.0	73.4	16.3	421	52.1	3.8	0.1	831	107.9	5	Sev	163.9	36.6	575	74.9	23	5.4	0.4	854	110.8	3	Sev	218.0	54	Sev	47.8	584	76.8	2	Sev	6.1	1	0.5	840	109.9	2	200.4	36	Sev	44.0	585	76.9	2	6.0	1	0.5
C6a	Cuckfield	B2036 / B2184, Cuckfield	B2036 London Road (N)	442	52.5	3.0	0.0	624	71.7	3.0	0.0	545	63.0	11	3.0	0.0	656	74.4	3	3.0	0.0	564	62.3	-1	3.0	0	0.0	695	76.8	2	3.0	0	0.0	551	61.7	-1	3.0	0	0.0	678	75.3	1	3.0	0	0.0					
C6a			B2184 London Lane (E)	523	64.6	3.9	0.1	188	22.3	3.3	0.0	517	66.1	1	4.7	0.2	187	22.7	0	4.7	0.2	197	23.6	1	4.6	0	0.2	197	23.6	1	4.7	0	0.0	494	62.4	-4	4.6	0	0.2	200	24.0	1	4.6	0	0.2					
C6a			B2036 High Street (S)	277	41.0	4.0	0.1	233	28.6	3.4	0.0	314	45.8	14	4.7	0.2	387	47.0	18	3.5	0.1	361	50.4	5	4.7	0	0.2	387	46.4	-1	3.5	0	0.1	346	49.2	3	4.7	0	0.2	385	46.4	-1	3.5	0	0.2					
C7	Ansty	A272 / B2036	A272 (E)	659	87.2	6.3	0.6	778	101.1	41.8	8.5	891	101.4	14	Sev	46.7	11.2	927	103.1	2	Sev	76.7	19.0	928	103.6	2	Sev	87.0	40	21.5	949	104.1	1	Sev	96.3	20	23.9	920	103.6	2	Sev	86.3	40	21.4	955	104.0	1	92.4	16	23.2
C7			B2036 (S)	605	85.9	8.2	0.9	308	47.2	5.5	0.2	477	70.4	-16	6.5	0.5	623	98.6	51	Sev	27.4	4.2	666	97.0	27	Sev	19.4	13	3.0	638	97.7	-1	Sev	24.0	-3	3.6	594	87.0	17	Sev	10.0	4	1.2	633	98.1	0	25.3	-2	3.9	
C7			A272 (W)	674	94.3	11.4	1.6	716	91.0	6.8	0.8	898	97.9	4	Sev	11.0	2.0	850	102.2	5	Sev	65.7	14.9	892	102.7	5	Sev	69.3	58	17.0	893	106.7	4	Sev	146.0	80	34.6	886	101.9	4	Sev	54.2	43	13.2	887	106.0	4	Sev	132.7	67
C8	Cowfold	A281 North Junction, Cowfold	A281 (N)	233	34.2	4.7	0.1	583	83.1	7.7	0.8	284	42.1	8	5.2	0.2	717	100.8	18	Sev	40.0	7.5	303	43.7	2	5.1	0	0.2	719	99.4	-1	22.7	-17	3.9	281	41.2	-1	5.1	0	0.2	719	99.9	-1	25.1	-15	4.4				
C8			A281 (S)	812	98.4	7.0	0.9	773	101.2	43.9	9.0	817	100.9	2	29.8	6.4	785	101.4	0	48.7	9.7	836	101.0	0	30.6	1	6.7	795	101.4	0	48.4	0	9.7	826	100.9	0	30.6	1	6.6	791	101.4	0	48.5	0	9.7					
C8			A272 Station Road (W)	753	101.7	51.4	10.8	651	78.4	3.9	0.2	780	102.2	1	59.3	12.8	803	94.8	16	Sev	5.4	0.5	782	102.0	0	56.2	-3	12.1	785	93.4	-1	5.4	0	0.5	780	102.2	0	59.1	0	12.7	790	93.9	-1	5.5	0	0.6				
C9	Cowfold	A281 South Junction, Cowfold	A281 (N)	781	93.4	4.5	0.3	831	100.9	30.0	6.4	841	101.3	8	Sev	37.6	8.4	890	101.7	1	41.9	9.7	831	100.7	-1	28.5	-9	6.0	894	101.7	0	42.0	0	9.7	828	100.3	-1	19.7	-18											

Mid Sussex Transport Study: Junction approach arm statistics for identified locations

		2019										2039 Reference Case										2039 Scenario 5										2039 Scenario 5m4																						
ID	Area	Junction	Approach Arm	AM Dem (Veh)	AM RFC (%)	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	PM Delay (s)	PM Avg Q (pcu)	AM Dem (Veh)	AM RFC (%)	Diff to Base	Sig/Sev	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	Diff to Base	Sig/Sev	PM Delay (s)	PM Avg Q (pcu)	AM Dem (Veh)	AM RFC (%)	Diff to Ref	Sig/Sev	AM Delay (s)	Diff to Ref	Sig/Sev	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	Diff to Ref	Sig/Sev	PM Delay (s)	Diff to Ref	Sig/Sev	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	Diff to Ref	Sig/Sev	PM Delay (s)	Diff to Ref	Sig/Sev	PM Avg Q (pcu)							
SOUTH																																																						
S1	Burgess Hill	A23 / A2300 Southbound On-Slip	A23 Southbound On-Slip	195	13.7	3.6	0.0	199	23.1	5.1	0.1	769	37.5	24	9	1.5	0.0	766	37.5	14	19	1.5	0.0	773	36.4	-1	2	1.4	0	0.0	884	42.9	5	6	1.6	0	0	0.0	793	38.1	1	1	1.5	0	0	0.0	863	41.9	4	5	1.6	0	0.0	
S2	Burgess Hill	A23 / A2300 Eastern Roundabout	A23 Southbound Off-Slip	717	45.4	3.5	0.1	851	48.3	3.4	0.1	1497	107.5	62	Sev	157.0	60.3	1197	53.1	5	5	11.8	3.3	1586	110.8	3	Sev	217.3	60	Sev	84.2	1281	56.2	3	12.2	0	0	3.6	1513	109.8	2	41	1.98.2	41	Sev	75.1	1260	55.4	2	12.1	0	3.5		
S3	Burgess Hill	A2300 / Cuckfield Road	A2300 (E)	935	93.7	4.2	0.3	782	81.7	3.4	0.1	2484	92.2	-2	18.0	6.7	2512	83.1	1	1	8.3	3.2	2703	96.4	8	Sev	26.2	8	Sev	7.8	2579	84.5	1	8.8	0	0	3.4	2683	97.6	2	8.1	2588	84.8	2	8.9	1	3.1	3.5						
S3	Burgess Hill	A2300 / Cuckfield Road	Cuckfield Road (N)	98	11.9	4.3	0.0	118	14.7	4.6	0.1	505	67.5	56	29.1	3.1	1061	104.3	90	Sev	93.4	25.8	488	64.9	-3	28.4	-1	2.9	1132	104.0	0	87.7	-6	25.8	484	64.5	-3	28.3	-1	2.9	1092	103.9	0	84.9	-9	24.2								
S3	Burgess Hill	A2300 / Cuckfield Road	A2300 (W)	1161	107.4	145.9	46.9	1082	101.5	41.9	12.3	2892	70.5	-37	1.0	0.0	1629	39.8	-62	0.7	0.0	3113	72.6	2	1.2	0	0.0	1885	89.0	49	Sev	7.6	7	0.0	3029	72.1	2	1.1	0.0	1851	44.7	5	0.8	0.0	0.0									
S3	Burgess Hill	A2300 / Cuckfield Road	Cuckfield Road (S)	202	26.5	4.5	0.1	176	20.7	4.3	0.1	660	68.7	42	25.3	3.7	726	83.5	63	31.8	4.4	992	104.0	35	Sev	151.1	126	Sev	24.7	867	99.3	16	Sev	76.9	45	5.5	934	97.3	29	Sev	60.8	36	5.8	829	95.0	11	63.6	32	7.7					
S3	Burgess Hill	A2300 / Cuckfield Road	A2300 (W)	962	91.0	4.8	0.5	1027	94.2	5.6	0.7	2032	48.7	-42	0.9	0.0	1771	43.3	-51	0.8	0.0	2179	49.9	1	0.9	0	0.0	1748	50.7	62	Sev	104.0	103	47.3	2147	49.8	1	0.9	0.0	1758	104.3	61	79.0	78	36.8									
S4	Burgess Hill	Cuckfield Road / The Hub	Cuckfield Road (N)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	758	19.6		0.6	0.0	402	17.2			1.0	0.0	1008	30.6	11	0.8	0	0.0	717	31.9	15	1.2	0	0.0	884	25.2	6	0.7	0	0.0	631	27.9	11	1.2	0	0.0								
S4	Burgess Hill	Cuckfield Road / The Hub	THE HUB	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	133	2.2		3.2	0.0	571	8.1			3.1	0.0	133	6.2	4	3.6	0	0.0	572	10.2	2	3.3	0	0.0	133	2.7	1	3.3	0	0.0	572	9.6	1	3.2	0	0.0								
S4	Burgess Hill	Cuckfield Road / The Hub	Cuckfield Road (S)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	570	28.2		1.3	0.0	200	10.6			1.0	0.0	918	99.1	71	Sev	49.5	48	0.1	346	18.0	7	1.1	0.0	0.0	857	42.6	14	1.6	0	0.0	304	15.9	5	1.1	0	0.0							
S5	Burgess Hill	A2300 / Northern Arc Spine Road	N Arc (N)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1182	58.5		5.0	0.6	328	17.6			4.2	0.1	1292	62.5	4	5.2	0	0.8	490	25.5	8	4.3	0	0.2	1284	62.8	4	5.2	0	0.8	449	23.3	6	4.3	0	0.2								
S5	Burgess Hill	A2300 / Northern Arc Spine Road	A2300 (E)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1240	69.1		6.5	1.2	402	17.6			4.3	0.2	1348	71.6	2	6.9	0	1.4	906	51.1	11	4.7	0	0.4	1273	69.5	0	6.7	0	1.2	881	49.7	9	4.6	0	0.4								
S5	Burgess Hill	A2300 / Northern Arc Spine Road	N Arc (S)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	987	33.0		4.0	0.3	973	32.7			3.6	0.2	979	30.9	-2	4.1	0	0.3	1082	36.0	3	3.7	0	0.2	993	32.4	-1	4.1	0	0.3	1050	35.1	2	3.7	0	0.2								
S5	Burgess Hill	A2300 / Northern Arc Spine Road	A2300 (W)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1732	97.4	Sev	7.2	0.9	1885	105.4		Sev	111.9	52.9	1851	100.2	-3	13.1	6	4.3	1960	104.0	-1	89.4	-23	42.0	1850	101.5	4	Sev	37.0	30	16.5	1940	104.3	-2	93.1	-19	43.8							
S6	Burgess Hill	Junction Road / B2113, Burgess Hill	Junction Road (N)	302	44.0	4.9	0.2	32	5.1	4.6	0.0	405	102.4	58	Sev	179.9	11.8	136	11.3	6	6	52.5	1.9	424	106.8	4	Sev	259.4	79	Sev	20.4	174	16.3	5	54.1	2	2.5	411	103.7	1	203.6	24	14.3	169	15.7	4	53.9	1	2.4					
S6	Burgess Hill	Junction Road / B2113, Burgess Hill	Silverdale Road	73	12.5	3.3	0.1	36	5.7	4.6	0.0	0	0.0	-12	122.1	0.0	0	0.0	-6	122.1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0									
S6	Burgess Hill	Junction Road / B2113, Burgess Hill	B2113 Keymer Road (E)	777	100.0	20.2	3.8	606	70.7	3.2	0.0	575	107.5	8	Sev	255.1	26.3	513	100.8	30	Sev	137.1	8.0	603	108.3	1	268.7	14	28.3	523	102.3	1	163.3	26	11.7	577	107.5	0	254.0	-1	26.1	520	101.9	1	157.2	20	10.8							
S6	Burgess Hill	Junction Road / B2113, Burgess Hill	B2113 Station Road (W)	749	91.2	5.4	0.5	801	95.5	6.0	0.7	486	103.1	12	Sev	181.3	12.9	750	105.9	10	Sev	208.7	27.5	504	104.6	2	208.9	28	16.5	767	107.6	2	239.4	31	33.5	495	103.9	1	196.5	15	14.9	760	106.7	1	224.2	15	30.5							
S7	Hurstpierpoint	B2117 / B2116 Hurstpierpoint	Cuckfield Road (N)	404	52.3	4.1	0.1	409	54.1	4.3	0.2	496	61.9	10	4.4	0.5	628	84.3	22	6.9	3	6.7	0.5	628	84.3	22	6.9	3	6.7	0.5	628	84.3	22	6.9	3	6.7	0.5	628	84.3	22	6.9	3	6.7	0.5	628	84.3	22	6.9	3	6.7				
S7	Hurstpierpoint	B2117 / B2116 Hurstpierpoint	B2116 Hassocks Road (E)	265	26.0	3.5	0.0	296	30.2	3.8	0.1	368	37.0	11	3.9	0.1	235	23.2	-7	3.7	0.0	415	46.0	9	4.7	1	0.2	275	29.3	6	4.2	1	0.1	440	47.3	10	4.5	1	0.2	267	28.3	5	4.1	0	0.1									
S7	Hurstpierpoint	B2117 / B2116 Hurstpierpoint	B2117 Brighton Road (S)	258	33.2	3.6	0.0	213	27.2	3.6	0.0	443	57.9	25	4.4	0.2	462	58.3	-3	4.0	0.1	382	54.0	-7	4.2	0	0.1	558	74.0	16	5.4	1	0.4	451	59.9	2	4.6	0	0.2	553	73.3	15	5.3	1	0.4									
S7	Hurstpierpoint	B2117 / B2116 Hurstpierpoint	B2116 Albourne Road (W)	174	17.8	3.5	0.0	222	21.4	3.4	0.0	207	23.3	6	4.0	0.1	355	38.5	17	4.2	0.1	367	39.8	16	4.1	0	0.1	532	60.7	22	5.4	1	0.4	327	37.0	14	4.2	0	0.1	525	59.7	21	5.3	1	0.3									
S8	Hassocks	A273 / B2116 Hassocks (Stonepound)	A273 London Road (N)	471	100.9	135.8	7.0	609	102.5	152.6	13.0	615	103.6	3	176.1	17.2	718	110.4	8	Sev	300.7	38.7	676	106.2	2	223.8	48	Sev	26.6	732	110.4	0	300.0	-1	38.7	641	105.5	2	209.9	34	Sev	23.2	728	110.4	0	300.1	-1	38.7						
S8	Hassocks	A273 / B2116 Hassocks (Stonepound)	B2116 Keymer Road (E)	327	91.4	84.0	4.1	364	96.9	116.2	4.7	432	102.9	11	Sev	184.5	11.7	449	101.6	5	Sev	159.5	9.2	440	104.5	2	213.5	29	15.2	455	102.3	1	171.5	12	10.7	435	103.6	1	197.1	13	13.3	454	102.3	1	170.7	11	10.6							
S8	Hassocks	A273 / B2116 Hassocks (Stonepound)	A273 Brighton Road (S)	405	93.4	87.8	5.2	446	95.9	89.7	4.6	421	101.4	8	Sev	157.1	8.7	333	104.9	9	Sev	236.5	12.7	430	103.1	2	187.2	30	Sev	12.4	338	106.4	1	262.0	26	15.1	427	102.6	1	179.0	22	11.4	336	106.0	1	254.8	18	14.4						
S8	Hassocks	A273 / B2116 Hassocks (Stonepound)	B2116 Hurst Road (W)	513	71.9	50.4	6.0	261	48.0	52.6	3.4	429	90.1	18	Sig	83.3	6.1	564	94.0	46	Sig	83.7	7.3	409	103.4	13	Sev	201.8	118	Sev	12.3	595	101.8	8	Sev	152.1	68	Sev	12.6	430	100.1	10	Sev	137.9	55	Sev	6.2	616	99.8	6	Sev	116.4	33	7.3
S9	Pyecombe	A23 / A281 Southbound On-Slip	A23 Southbound	2217	60.5	8.8	0.0	3287	84.7	20.1	0.0	2951	84.6	24	17.5	0.0																																						

Mid Sussex Transport Study: Junction approach arm statistics for identified locations

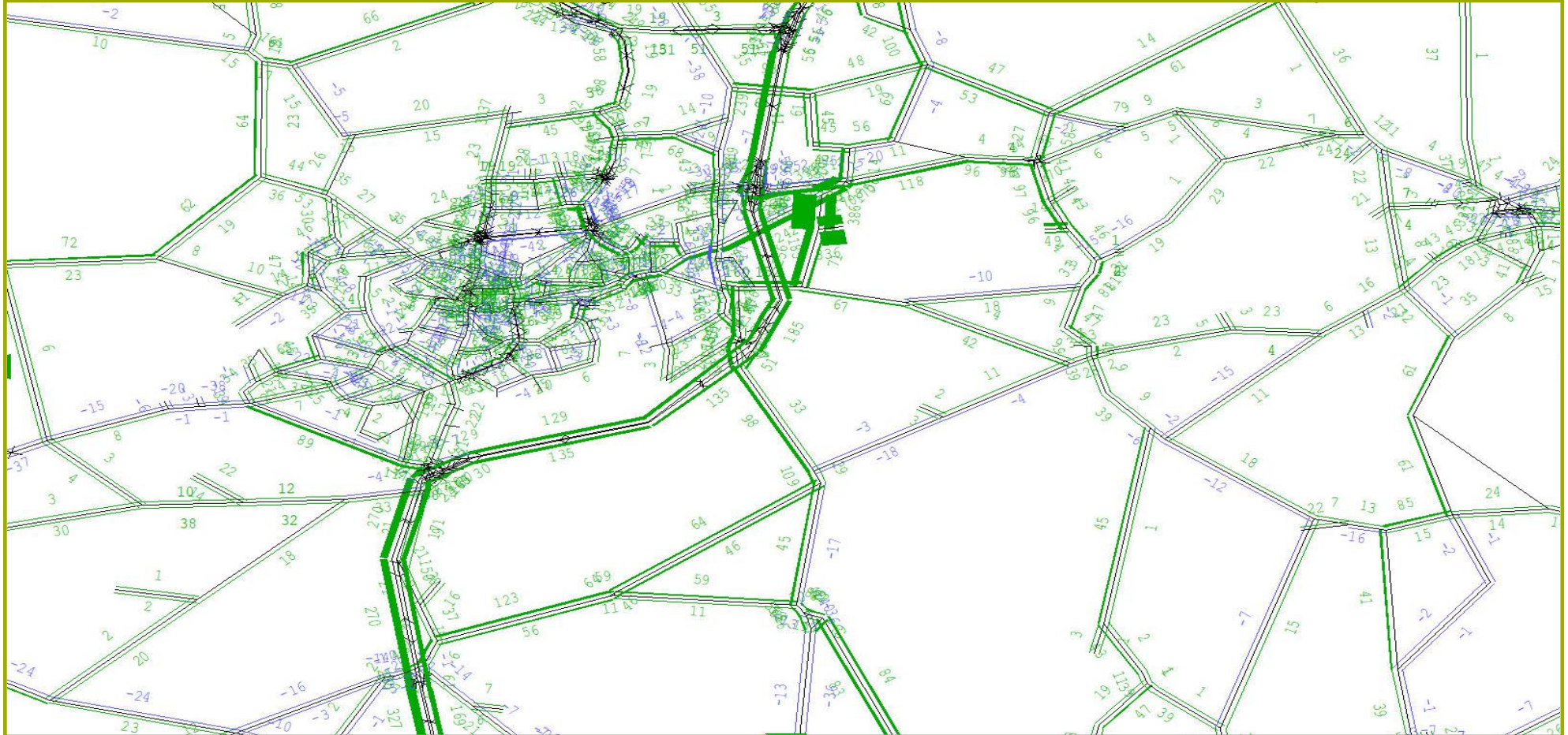
ID	Area	Junction	Approach Arm	2019				2039 Reference Case										2039 Scenario 5m2										2039 Scenario 5m5																							
				AM Dem (Veh)	AM RFC (%)	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	PM Delay (s)	PM Avg Q (pcu)	AM Dem (Veh)	AM RFC (%)	Diff to Base	Sig/Sev	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	Diff to Base	Sig/Sev	PM Delay (s)	PM Avg Q (pcu)	AM Dem (Veh)	AM RFC (%)	Diff to Ref	Sig/Sev	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	Diff to Ref	Sig/Sev	PM Delay (s)	PM Avg Q (pcu)	AM Dem (Veh)	AM RFC (%)	Diff to Ref	Sig/Sev	PM Delay (s)	PM Avg Q (pcu)										
N27	Handcross	B2114 / B2110 Handcross	B2110 High Beeches Lane (E)	315	42.3	4.1	0.1	250	35.9	4.6	0.1	499	69.0	27		5.9	0.4	385	56.1	20		5.6	0.3	555	75.4	6		6.4	0	0.5	427	60.7	5		5.7	0	0.3	559	76.3	7		6.5	1	0.5	417	59.2	3		5.6	0	0.3
N27			B2110 (S)	416	48.7	3.2	0.0	243	28.0	3.0	0.0	597	72.7	24		4.2	0.2	336	38.8	11		3.1	0.0	654	79.6	7		4.7	0	0.3	378	43.5	5		3.1	0	0.0	659	79.8	7		4.7	0	0.3	388	44.6	6		3.1	0	0.0
N28	Crawley	M23 / Junction 11 Southbound On-Slip	A23 Southbound	1636	35.9	0.8	0.0	2717	56.5	1.8	0.0	2255	54.3	18		1.6	0.0	3393	77.4	21		3.5	0.0	2403	58.2	4		1.8	0	0.0	3479	79.5	2		3.8	0	0.0	2397	58.2	4		1.8	0	0.0	3469	79.5	2		3.7	0	0.0
N28			Junction 11 Southbound on-Slip	865	46.3	4.2	0.0	1221	63.1	4.3	0.0	1483	75.5	29		4.9	0.3	1777	88.7	26	Sig	8.4	2.0	1538	78.1	3		5.1	0	0.3	1819	90.4	2		9.0	1	2.3	1555	78.9	3		5.2	0	0.4	1836	91.1	2		9.2	1	2.4
N29	Crawley	B2036 / Radford Road	B2036 Balcombe Road (N)	842	65.4	5.1	0.4	794	42.4	2.1	0.0	1101	87.9	23	Sig	10.9	1.7	1025	49.7	7		2.3	0.0	1113	87.7	0		10.7	0	1.6	1015	47.6	-2		2.2	0	0.0	1109	87.2	-1		10.5	0	1.6	1022	47.7	-2		2.2	0	0.0
N29			B2036 Balcombe Road (S)	799	39.8	1.5	0.0	518	26.2	1.2	0.0	787	37.7	-2		1.5	0.0	111	5.6	-21		1.0	0.0	777	37.2	0		1.5	0	0.0	131	6.5	1		1.0	0	0.0	782	37.4	0		1.5	0	0.0	111	5.5	0		1.0	0	0.0
N29			Radford Road (W)	110	13.4	4.6	0.1	608	64.8	6.4	0.7	415	73.4	60		15.5	2.2	862	95.8	31	Sev	9.2	1.6	410	71.8	-2		14.0	-2	2.0	873	100.4	5	Sev	21.7	12	5.1	396	69.2	-4		13.0	-3	1.8	886	100.1	4	Sev	14.5	5	3.2

Mid Sussex Transport Study: Junction approach arm statistics for identified locations

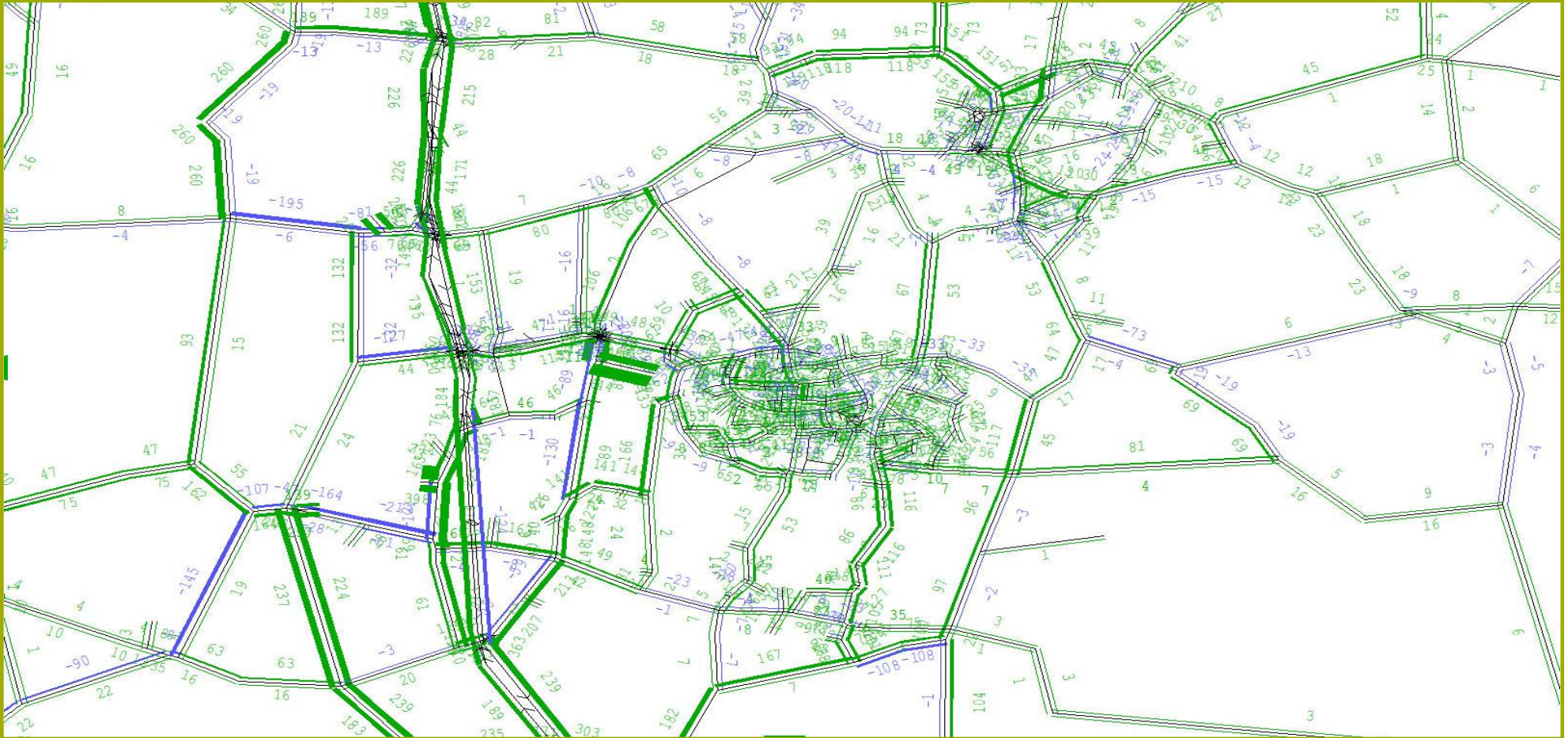
		2019												2039 Reference Case												2039 Scenario 5m2												2039 Scenario 5m5											
ID	Area	Junction	Approach Arm	AM Dem (Veh)	AM RFC (%)	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	PM Delay (s)	PM Avg Q (pcu)	Diff to Base	Sig/Sev	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	Diff to Base	Sig/Sev	PM Delay (s)	PM Avg Q (pcu)	AM Dem (Veh)	AM RFC (%)	Diff to Ref	Sig/Sev	AM Delay (s)	AM Avg Q (pcu)	PM Dem (Veh)	PM RFC (%)	Diff to Ref	Sig/Sev	PM Delay (s)	PM Avg Q (pcu)	AM Dem (Veh)	AM RFC (%)	Diff to Ref	Sig/Sev	PM Delay (s)	PM Avg Q (pcu)	AM Dem (Veh)	AM RFC (%)	Diff to Ref	Sig/Sev	PM Delay (s)	PM Avg Q (pcu)				
CENTRAL																																																	
C1	Handcross	B2114 Junction, Handcross	B2110 High Street (N) (priority)	648	38.7	2.6	0.0	817	49.0	2.9	0.0	810	49.4	11	3.0	0.1	1005	58.8	10	3.1	0.1	829	50.1	1	3.0	0	0.1	1016	58.5	0	3.1	0	0.1	848	51.1	2	3.0	0	0.1	1006	58.0	-1	3.1	0	0.1				
C1			B2114 (S) (priority)	239	12.3	1.0	0.0	167	8.8	1.0	0.0	177	9.3	2	1.1	0.0	177	9.3	1	1.0	0.0	178	9.4	0	1.1	0	0.0	178	9.4	0	1.1	0	0.0	178	9.4	0	1.1	0	0.0	178	9.4	0	1.1	0	0.0				
C1			B2110 (W)	427	58.1	3.4	0.0	262	36.6	3.4	0.0	591	79.8	22	4.0	0.2	352	49.5	13	3.6	0.1	635	84.4	5	4.0	0	0.2	395	55.3	6	3.6	0	0.1	638	84.5	5	4.0	0	0.2	405	56.5	7	3.6	0	0.1				
C2	Lower Beeding	B2110 / B2115 Leechpond Hill	B2110 (E)	501	32.6	3.0	0.0	589	32.5	2.0	0.0	609	35.6	3	2.7	0.0	744	41.7	9	2.3	0.0	618	36.2	1	2.7	0	0.0	753	42.3	1	2.3	0	0.0	630	36.3	1	2.7	0	0.0	705	42.3	1	2.3	0	0.0				
C2			B2110 Leechpond Hill (S)	274	14.0	1.1	0.0	162	8.1	1.0	0.0	124	6.5	-7	1.0	0.0	319	15.7	8	1.1	0.0	150	7.7	1	1.0	0	0.0	156	8.0	2	1.0	0	0.0	156	8.0	2	1.0	0	0.0	156	8.0	2	1.0	0	0.0				
C2			B2115 (W)	268	39.6	4.0	0.1	334	46.9	3.6	0.1	553	75.2	36	4.0	0.2	479	72.1	25	5.3	0.3	552	75.8	1	4.2	0	0.2	519	77.2	5	5.8	1	0.4	529	73.1	-2	4.2	0	0.2	515	77.5	5	5.8	1	0.4				
C3	Slough Green	B2115 Junction, Slough Green	B2114 Cuckfield Road (N) (priority)	153	7.9	1.0	0.0	63	3.2	0.9	0.0	135	6.9	-1	1.0	0.0	74	3.8	1	1.0	0.0	121	6.2	-1	1.0	0	0.0	84	4.2	0	1.0	0	0.0	122	6.2	-1	1.0	0	0.0	86	4.4	1	1.0	0	0.0				
C3			B2114 (E) (priority)	593	28.9	1.3	0.0	386	19.3	1.1	0.0	695	30.8	2	1.3	0.0	592	29.4	10	1.3	0.0	730	31.8	1	1.3	0	0.0	663	32.6	3	1.4	0	0.0	727	31.6	1	1.3	0	0.0	662	32.5	3	1.4	0	0.0				
C3			B2115 Sloughgreen Lane (W)	316	47.3	4.1	0.1	336	46.3	3.6	0.1	470	69.1	22	4.6	0.2	539	74.1	27	4.3	0.2	534	76.5	7	4.5	0	0.3	553	76.1	2	4.5	0	0.2	530	76.6	8	5.0	0	0.3	550	75.7	2	4.5	0	0.2				
C4	Haywards Heath	Borde Hill Lane / Copyhold Lane	Borde Hill Lane (N)	425	21.7	1.2	0.0	589	29.4	1.3	0.0	508	25.6	4	1.2	0.0	802	39.5	10	1.5	0.0	556	28.1	3	1.3	0	0.0	890	43.3	4	1.6	0	0.0	541	27.1	2	1.3	0	0.0	881	43.0	3	1.6	0	0.0				
C4			Copyhold Lane (E)	134	23.6	4.9	0.1	151	26.0	5.1	0.1	130	26.3	3	6.1	0.1	154	30.3	4	6.4	0.1	138	29.2	3	6.7	1	0.1	166	34.3	4	7.2	1	0.2	138	28.9	3	6.6	0	0.1	163	33.5	3	7.1	1	0.2				
C4			Borde Hill Lane (S)	690	39.3	2.3	0.0	336	21.1	2.5	0.0	943	50.7	11	2.5	0.0	385	24.5	3	2.6	0.0	1023	54.3	4	2.6	0	0.1	432	28.2	4	2.8	0	0.1	435	28.3	3	2.5	0	0.1	425	27.5	3	2.8	0	0.1				
C5	Haywards Heath	B2114 / B2036 Whitemans Green	B2036 (N)	264	37.1	4.2	0.1	296	39.4	4.0	0.1	286	42.4	5	4.6	0.1	295	44.2	5	4.8	0.2	263	39.2	-3	4.7	0	0.1	294	44.4	0	4.8	0	0.2	255	38.0	-4	4.7	0	0.1	297	44.8	1	4.9	0	0.2				
C5			B2036 (S)	887	101.7	42.3	10.0	543	62.7	3.2	0.0	602	107.2	5	Sev	141.1	35.4	803	92.1	29	3.8	0.2	1000	107.5	0	145.7	5	36.6	876	99.5	7	Sev	8.5	5	1.3	1000	107.6	0	147.3	6	37.0	875	99.5	7	Sev	4.9	0	1.2	
C5			B2114 Staplefield Road (W)	469	61.4	4.3	0.2	399	48.9	3.6	0.1	605	77.6	16	4.8	0.3	612	75.6	27	4.5	0.3	654	82.3	5	5.1	0	0.4	636	78.4	3	4.7	0	0.3	652	82.6	5	5.2	0	0.4	635	78.2	3	4.7	0	0.3				
C6	Cuckfield	B2036 / Ardingly Road, Whitemans Green	B2036 Whitemans Green (N)	676	85.1	4.7	0.3	633	76.0	3.7	0.1	808	101.1	16	Sev	35.8	7.8	837	102.6	27	Sev	61.8	14.2	831	103.8	3	86.3	51	19.7	860	105.0	2	105.3	44	24.8	820	102.8	2	68.5	33	15.5	862	104.9	2	103.6	42	24.4		
C6			Ardingly Road (E)	364	47.8	4.1	0.1	387	52.8	4.7	0.2	592	74.0	26	4.9	0.3	585	79.1	26	6.4	0.6	696	84.6	11	5.5	1	0.5	691	91.5	12	6.1	1	1.2	700	84.2	10	5.2	0	0.4	681	90.3	11	5.1	0	0.4				
C6			B2036 London Road (S)	800	103.0	73.4	16.3	421	52.1	3.8	0.1	831	107.9	5	Sev	163.9	36.6	575	74.9	23	5.4	0.4	839	109.9	2	200.8	37	Sev	44.0	587	77.2	2	6.1	1	0.5	838	110.6	3	212.6	49	Sev	46.7	580	76.2	1	6.0	1	0.5	
C6a	Cuckfield	B2036 / B2184, Cuckfield	B2036 London Road (N)	442	52.5	3.0	0.0	624	71.7	3.0	0.0	545	63.0	11	3.0	0.0	656	74.4	3	3.0	0.0	549	61.4	-2	3.0	0	0.0	677	75.3	1	3.0	0	0.0	524	58.8	-4	3.0	0	0.0	671	74.6	0	3.0	0	0.0				
C6a			B2184 London Lane (E)	523	64.6	3.9	0.1	188	22.3	3.3	0.0	517	66.1	1	4.7	0.2	187	22.7	0	3.6	0.0	494	62.3	-4	4.6	0	0.2	199	23.9	1	3.7	0	0.0	493	62.4	-4	4.6	0	0.2	199	23.9	1	4.6	0	0.2				
C6a			B2036 High Street (S)	277	41.0	4.0	0.1	233	28.6	3.4	0.0	314	45.8	5	4.7	0.2	387	47.0	18	3.5	0.1	345	48.9	3	4.7	0	0.2	388	46.7	0	3.5	0	0.1	345	49.5	4	4.7	0	0.2	381	45.9	-1	3.5	0	0.1				
C7	Ansty	A272 / B2036	A272 (E)	659	87.2	6.3	0.6	778	101.1	41.8	8.5	891	101.4	14	Sev	46.7	11.2	927	103.1	2	76.7	19.0	919	103.5	2	85.3	39	21.1	955	104.0	1	92.8	16	23.2	938	102.9	1	71.5	25	18.1	955	104.0	1	92.9	16	23.3			
C7			B2036 (S)	605	85.9	8.2	0.9	308	47.2	5.5	0.2	477	70.4	-16	6.5	0.5	623	98.6	51	Sev	27.4	4.2	593	86.9	17	10.0	4	1.1	634	98.2	0	25.7	-2	3.9	610	91.9	21	13.2	7	1.7	631	98.1	-1	25.3	-2	3.8			
C7			A272 (W)	674	94.3	11.4	1.6	716	91.0	6.8	0.8	898	97.9	4	Sev	11.0	2.0	850	102.2	11	Sev	65.7	14.9	886	101.9	4	55.2	44	13.5	887	106.0	4	Sev	132.9	67	31.4	846	97.5	0	2.5	887	105.8	4	Sev	129.3	64	Sev	30.6	
C8	Cowfold	A281 North Junction, Cowfold	A281 (N)	233	34.2	4.7	0.1	583	83.1	7.7	0.8	284	42.1	8	5.2	0.2	717	100.8	18	Sev	40.0	7.5	279	41.0	-1	5.1	0	0.2	719	99.8	-1	24.6	-15	4.3	284	41.4	-1	5.1	0	0.2	720	99.8	-1	24.9	-15	4.4			
C8			A281 (S)	812	98.4	7.0	0.9	773	101.2	43.9	9.0	817	100.9	2	29.8	6.4	785	101.4	0	48.7	9.7	826	100.9	0	30.3	1	6.6	791	101.4	0	48.5	0	9.7	828	101.0	0	31.6	2	6.9	792	101.4	0	48.5	0	9.7				
C8			A272 Station Road (W)	753	101.7	51.4	10.8	651	78.4	3.9	0.2	780	102.2	1	59.3	12.8	803	94.8	16	Sev	5.4	0.5	780	102.2	0	59.3	0	6.8	789	93.9	-1	5.5	0	0.6	788	102.1	0	57.5	-2	12.4	788	93.7	-1	5.5	0	0.5			
C9	Cowfold	A281 South Junction, Cowfold	A281 (N)	781	93.4	4.5	0.3	831	100.9	30.0	6.4	841	101.3	8	Sev	37.6	8.4	890	101.7	1	41.9	9.7	828	100.3	-1	19.8	-18	3.9	893	101.7	0	42.0	0	9.7	823	100.1	-1	17.4	-20	3.3	893	101.7	0	42.0	0	9.7			
C9			A272 Bolney Road (E)	781	94.3	5.1	0.5	815	97.0	7.4	1																																						

Appendix D – Flow Difference Maps

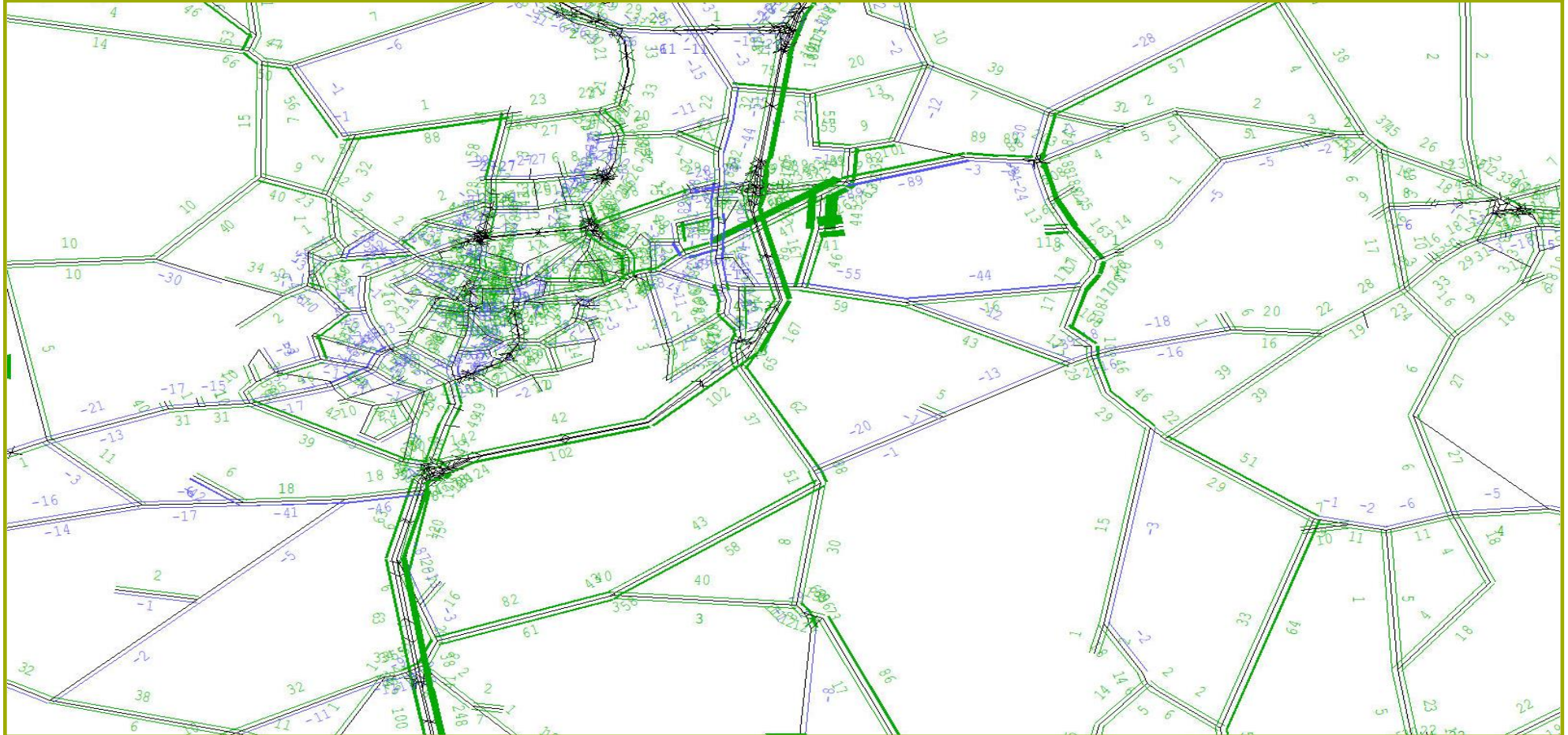
Mid Sussex Strategic Transport Model Flow Difference Plots - 2039 - Scenario 5 Vs Reference case AM North View



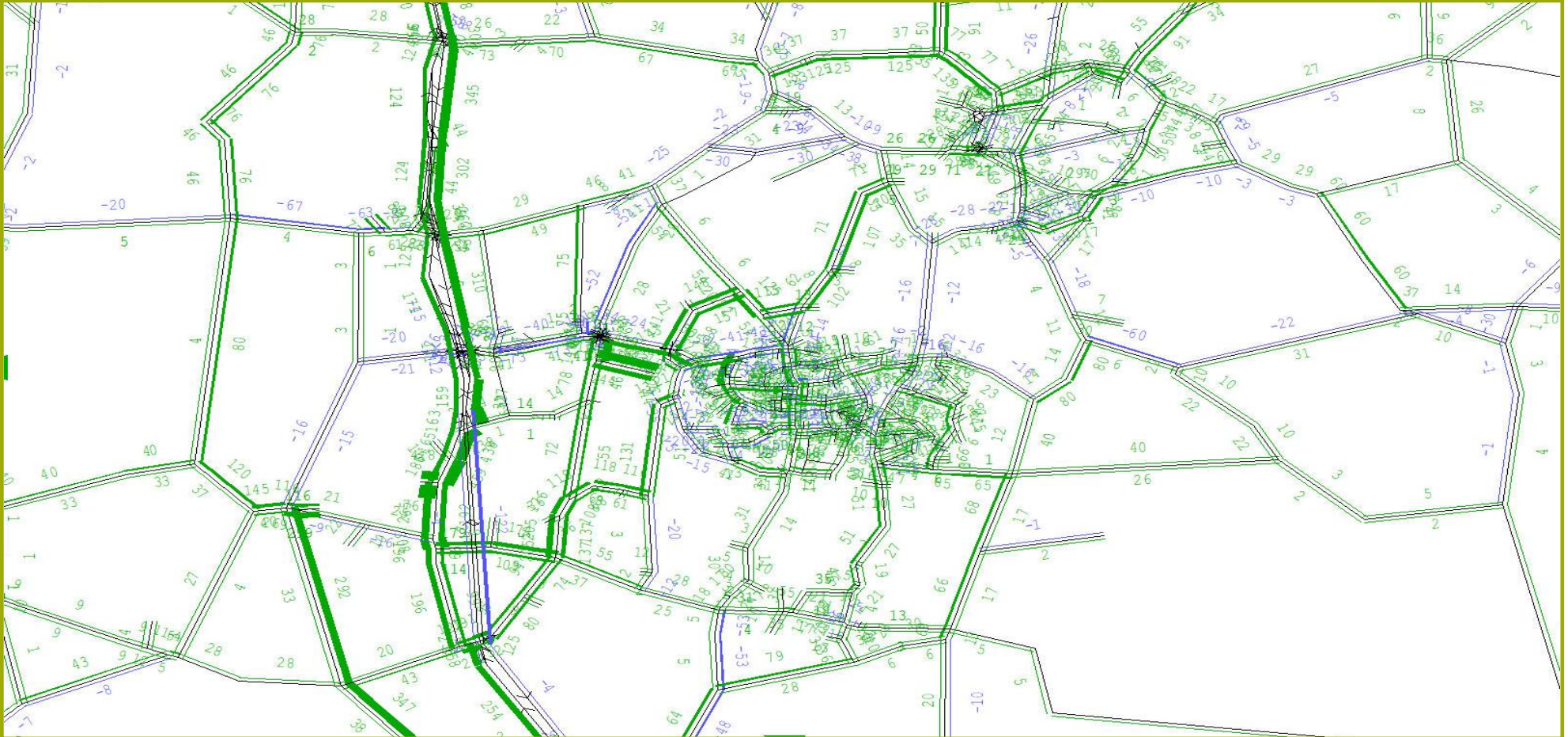
Mid Sussex Strategic Transport Model Flow Difference Plots - 2039 - Scenario 5 Vs Reference case AM South View



Mid Sussex Strategic Transport Model Flow Difference Plots - 2039 - Scenario 5 Vs Reference case PM North View



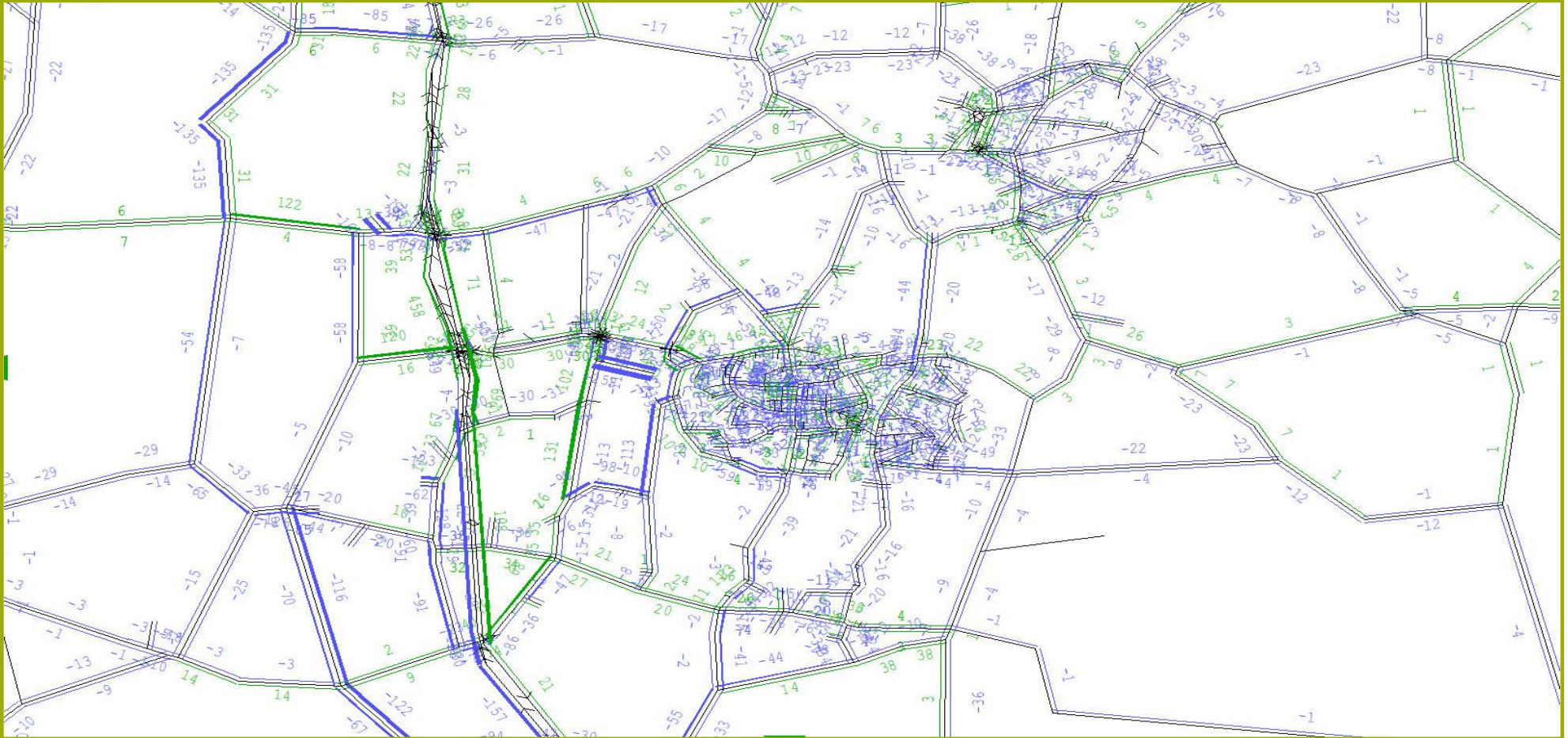
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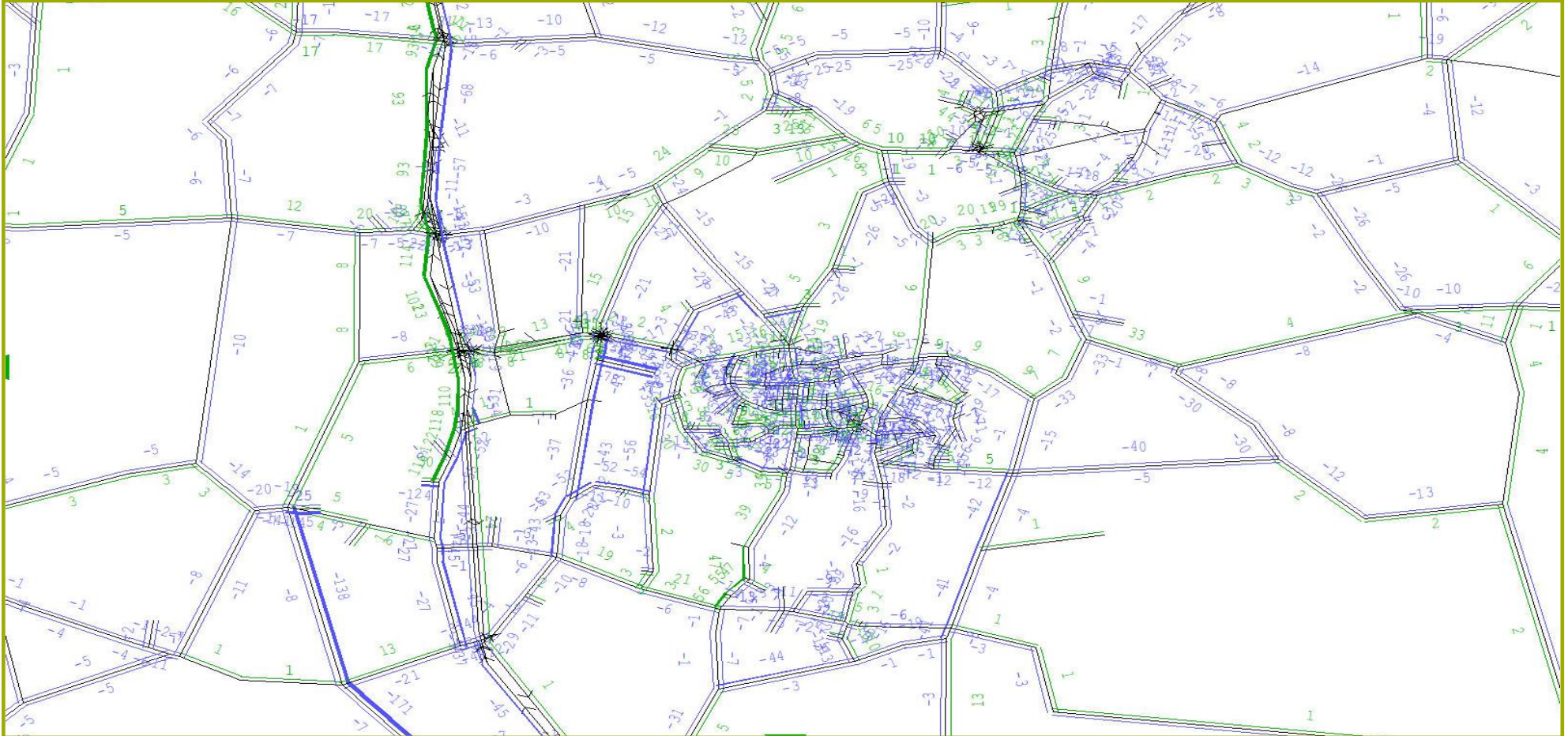
Mid Sussex Strategic Transport Model Flow Difference Plots - 2039 - Scenario 5M2 Vs Scenario 5 AM North View



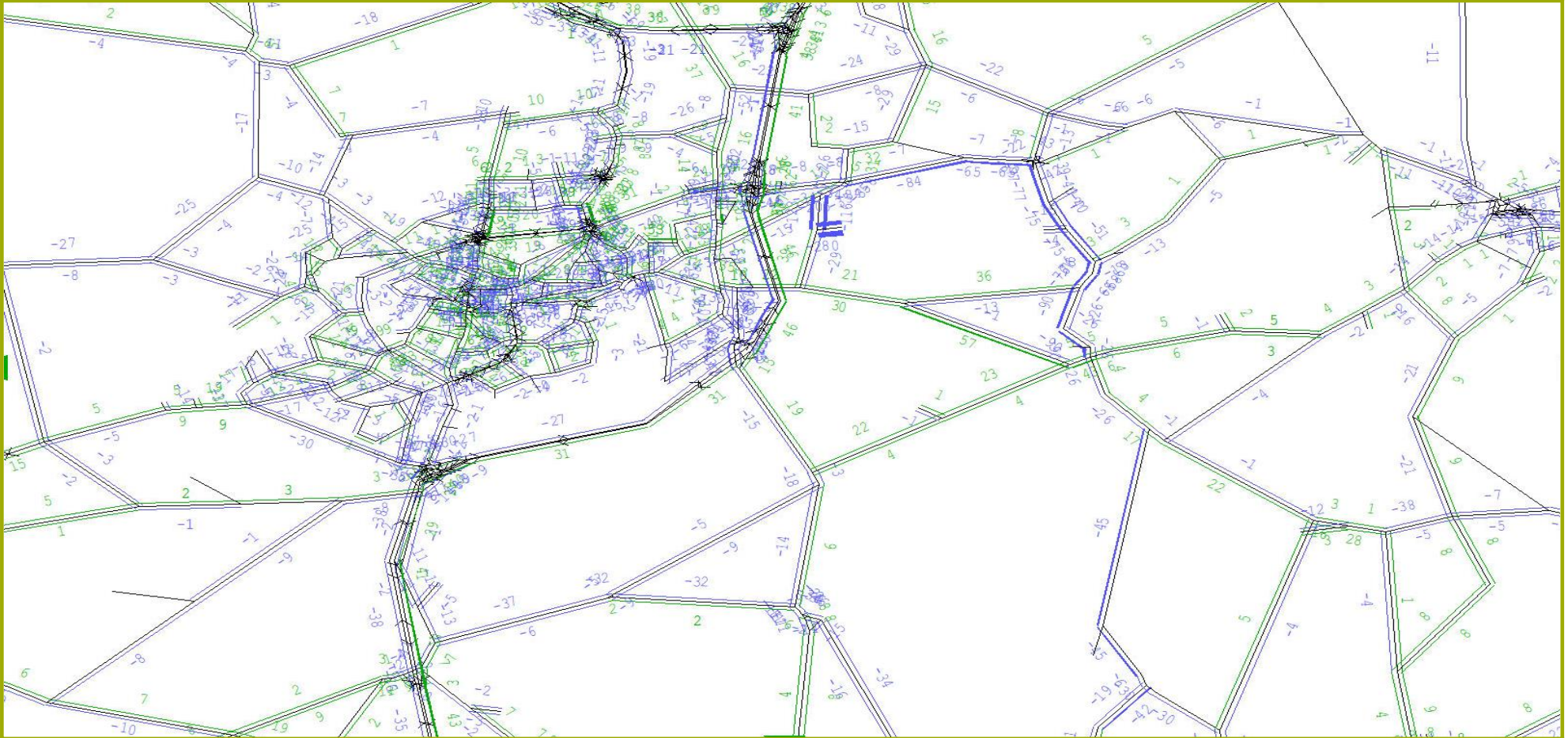
Mid Sussex Strategic Transport Model Flow Difference Plots - 2039 - Scenario 5M2 Vs Scenario 5 AM South View



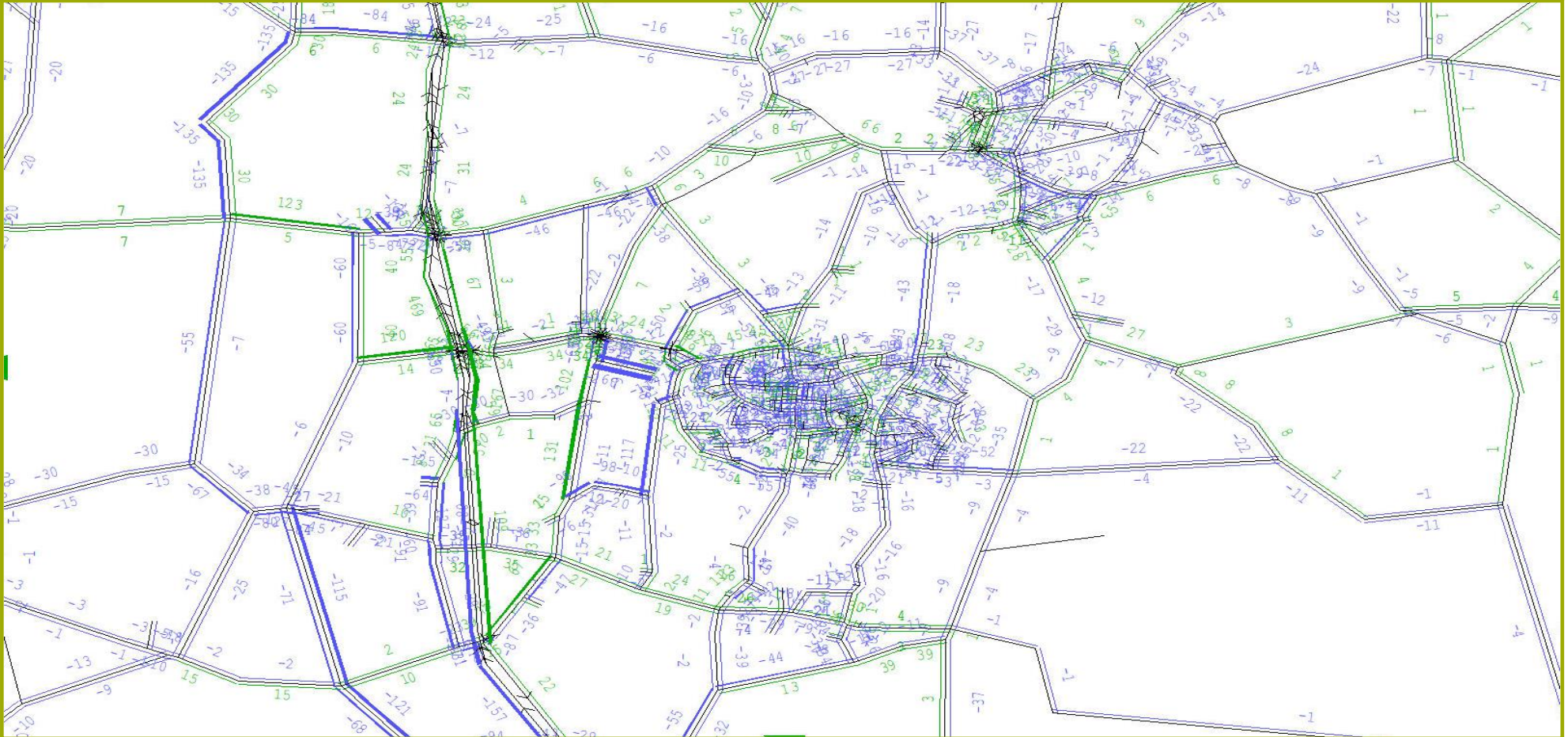
Mid Sussex Strategic Transport Model Flow Difference Plots - 2039 - Scenario 5M2 Vs Scenario 5 PM South View



Mid Sussex Strategic Transport Model Flow Difference Plots - 2039 - Scenario 5M4 Vs Scenario 5 AM North View



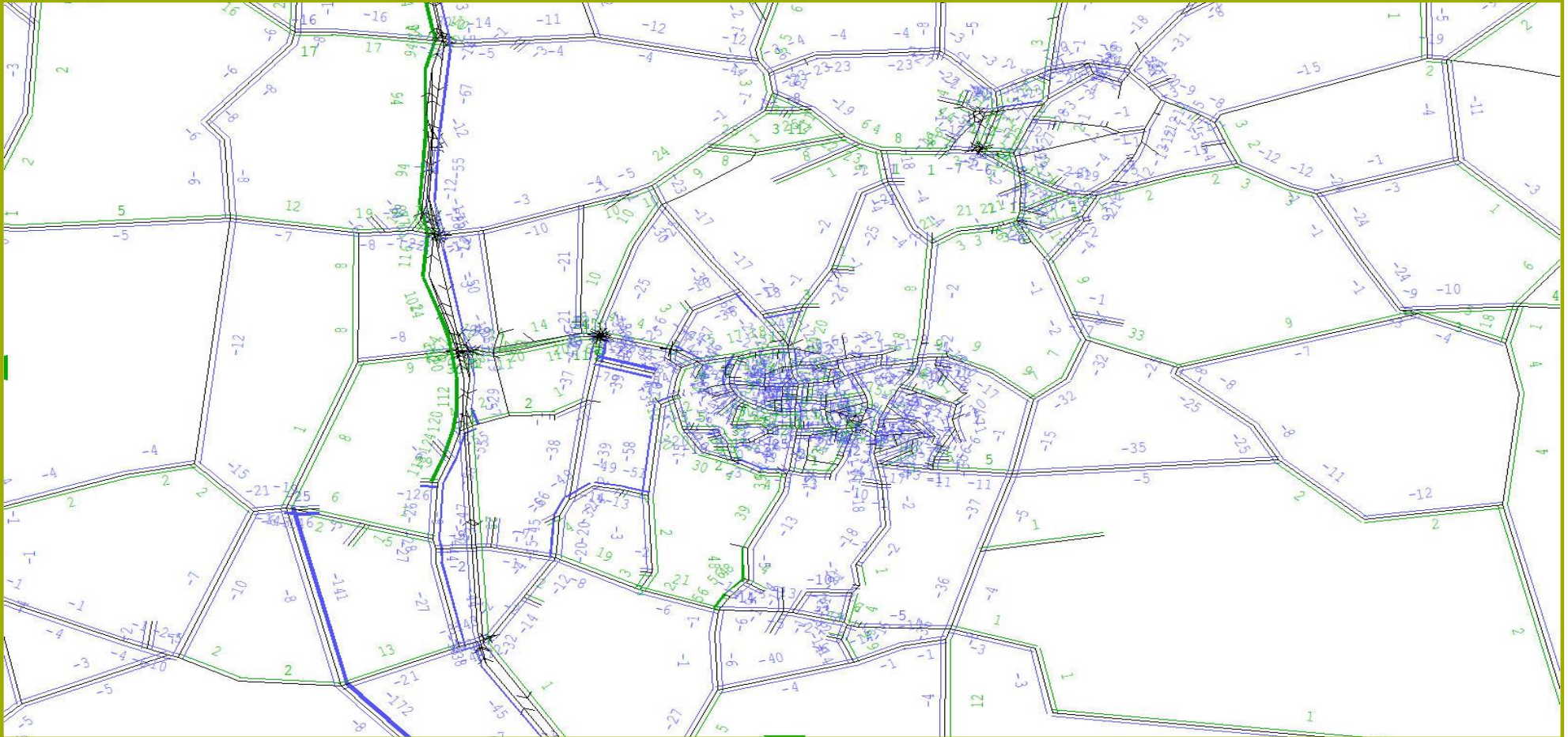
Mid Sussex Strategic Transport Model Flow Difference Plots - 2039 - Scenario 5M4 Vs Scenario 5 AM South View



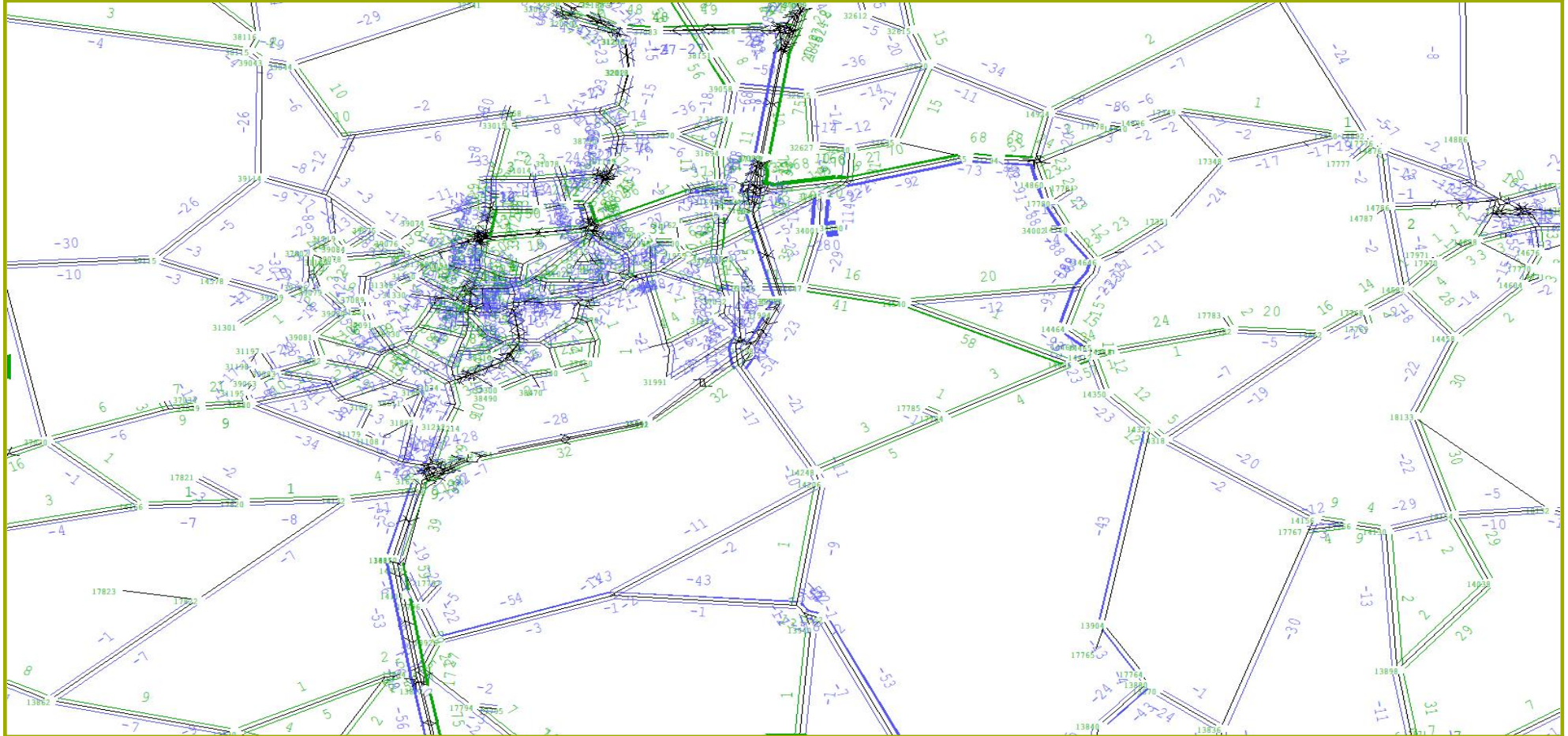
Mid Sussex Strategic Transport Model Flow Difference Plots - 2039 - Scenario 5M4 Vs Scenario 5 PM North View



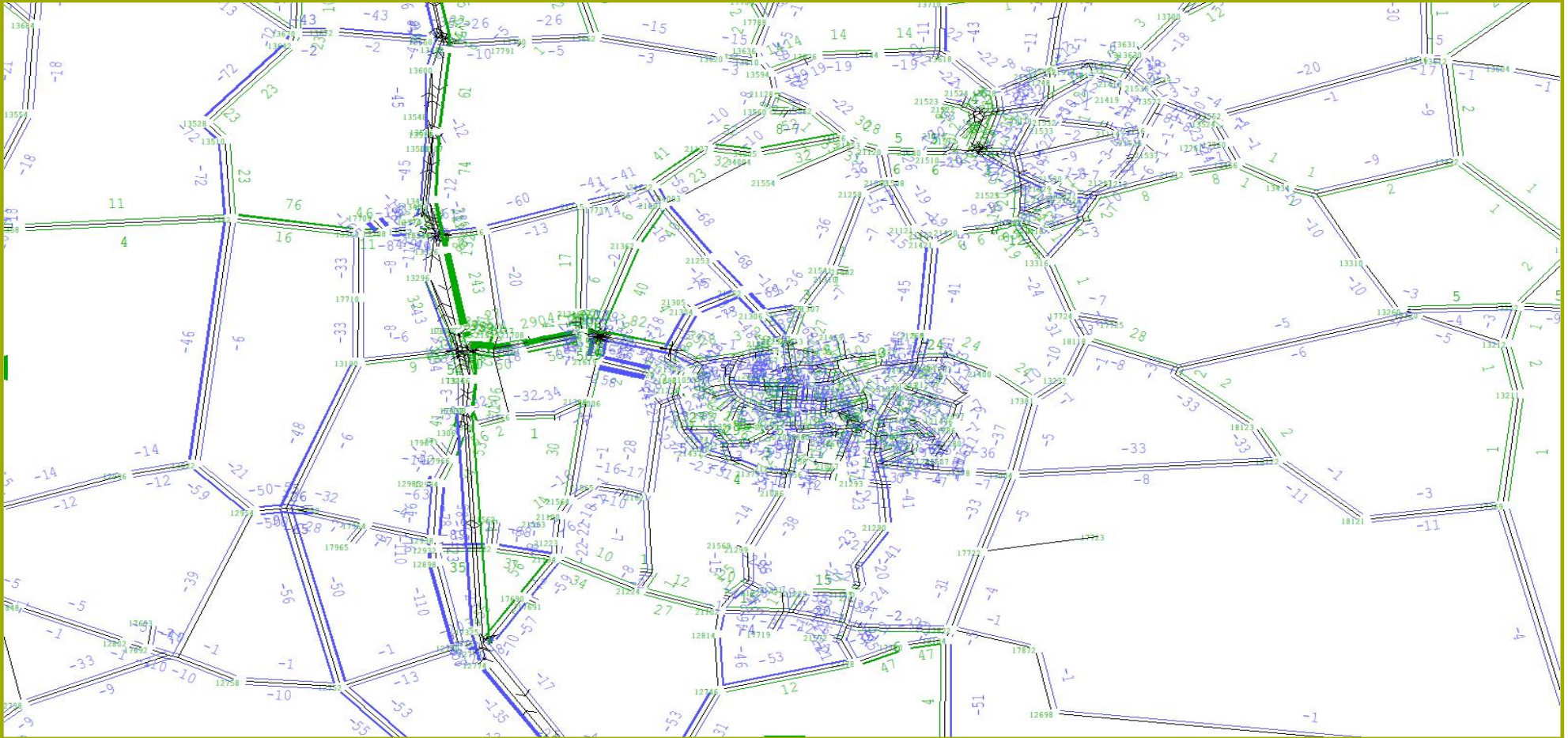
Mid Sussex Strategic Transport Model Flow Difference Plots - 2039 - Scenario 5M4 Vs Scenario 5 PM South View



Mid Sussex Strategic Transport Model Flow Difference Plots - 2039 - Scenario 5M5 Vs Scenario 5 AM North View



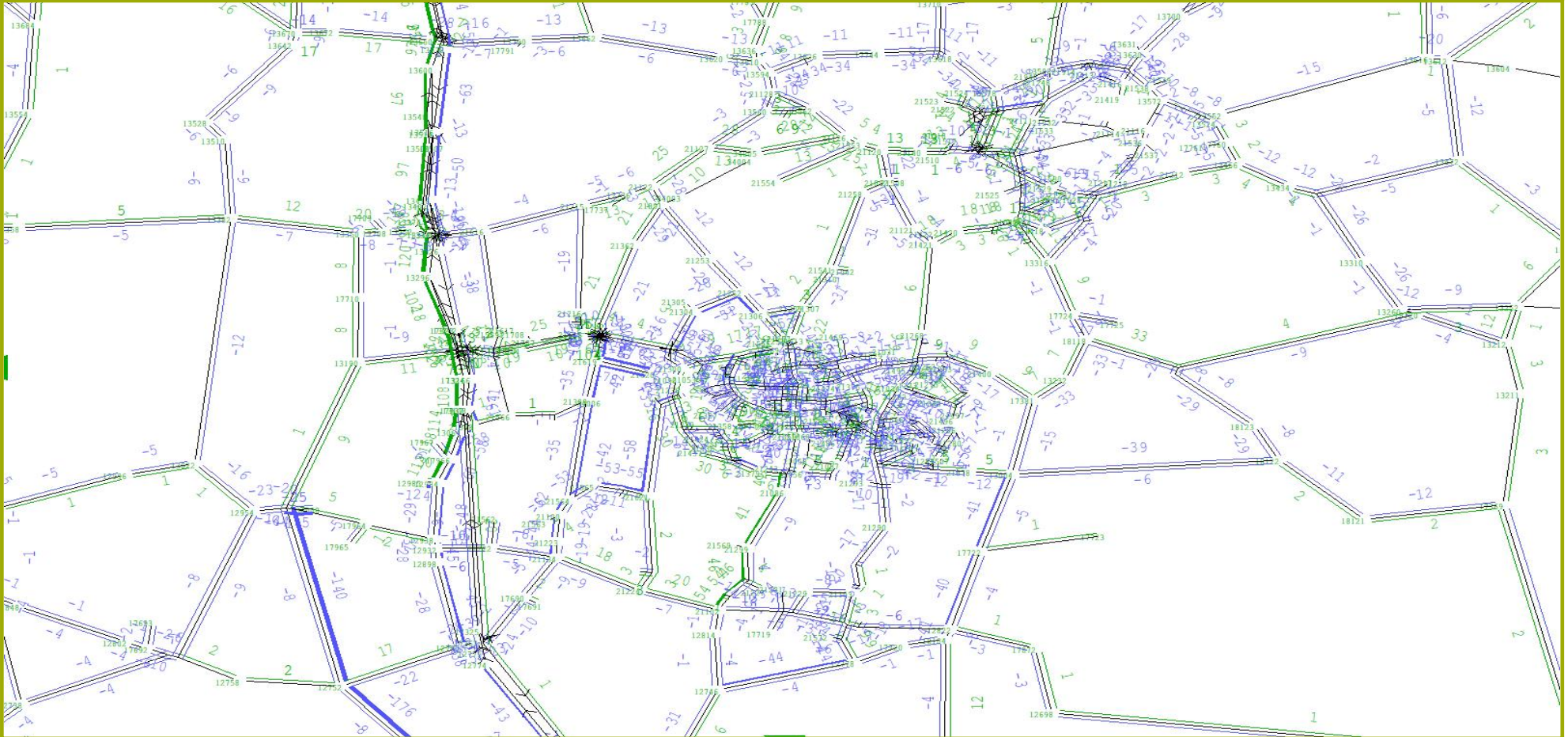
Mid Sussex Strategic Transport Model Flow Difference Plots - 2039 - Scenario 5M5Vs Scenario 5 AM South View



Mid Sussex Strategic Transport Model Flow Difference Plots - 2039 - Scenario 5M5 Vs Scenario 5 PM North View



Mid Sussex Strategic Transport Model Flow Difference Plots - 2039 - Scenario 5M5 Vs Scenario 5 PM South View



Appendix E – TRICs Outputs

Systra Ltd 15 Old Bailey London

Licence No: 700702

Filtering Summary

Land Use	03/M	RESIDENTIAL/MIXED PRIVATE/AFFORDABLE HOUSING
Selected Trip Rate Calculation Parameter Range	9-1412 DWELLS	
Actual Trip Rate Calculation Parameter Range	20-395 DWELLS	
Date Range	Minimum: 01/01/15	Maximum: 17/03/23
Parking Spaces Range	All Surveys Included	
Parking Spaces Per Dwelling Range:	All Surveys Included	
Bedrooms Per Dwelling Range:	All Surveys Included	
Percentage of dwellings privately owned:	All Surveys Included	
Days of the week selected	Monday	4
	Tuesday	7
	Wednesday	17
	Thursday	16
	Friday	7
Main Location Types selected	Town Centre	1
	Edge of Town Centre	3
	Suburban Area (PPS6 Out of Centre)	8
	Edge of Town	39
Inclusion of Servicing Vehicles Counts	Servicing vehicles Included	31 - Selected
	Servicing vehicles Excluded	35 - Selected
Population within 500m	All Surveys Included	
Population <1 Mile ranges selected	1,001 to 5,000	6
	5,001 to 10,000	18
	10,001 to 15,000	13
	15,001 to 20,000	2
	20,001 to 25,000	3
	25,001 to 50,000	9
Population <5 Mile ranges selected	5,001 to 25,000	5
	25,001 to 50,000	9
	50,001 to 75,000	11
	75,001 to 100,000	5
	100,001 to 125,000	3
	125,001 to 250,000	12
	250,001 to 500,000	5
	500,001 or More	1
Car Ownership <5 Mile ranges selected	0.6 to 1.0	6
	1.1 to 1.5	40
	1.6 to 2.0	5
PTAL Rating	No PTAL Present	50
	0 None	1

Calculation Reference: AUDIT-700702-230901-0934

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST	
	BH BRIGHTON & HOVE	1 days
	ES EAST SUSSEX	8 days
	HC HAMPSHIRE	7 days
	HF HERTFORDSHIRE	1 days
	KC KENT	2 days
	OX OXFORDSHIRE	1 days
	RE READING	1 days
	SC SURREY	3 days
	SP SOUTHAMPTON	1 days
	WS WEST SUSSEX	8 days
03	SOUTH WEST	
	BA BATH & NORTH EAST SOMERSET	1 days
	DC DORSET	1 days
	DV DEVON	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	NF NORFOLK	10 days
06	WEST MIDLANDS	
	WK WARWICKSHIRE	2 days
09	NORTH	
	CU CUMBERLAND	1 days
	TW TYNE & WEAR	1 days

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

Primary Filtering selection:

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

Parameter: No of Dwellings
 Actual Range: 20 to 395 (units:)
 Range Selected by User: 9 to 1412 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/15 to 17/03/23

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

Selected survey days:

Monday	4 days
Tuesday	7 days
Wednesday	17 days
Thursday	16 days
Friday	7 days

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

Selected survey types:

Manual count	51 days
Directional ATC Count	0 days

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

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
Residential Zone	40
Built-Up Zone	1
Out of Town	3
High Street	1
No Sub Category	5

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

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	31 days - Selected
Servicing vehicles Excluded	35 days - Selected

Secondary Filtering selection:

Use Class:

C3	51 days
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This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS@.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,001 to 5,000	6 days
5,001 to 10,000	18 days
10,001 to 15,000	13 days
15,001 to 20,000	2 days
20,001 to 25,000	3 days
25,001 to 50,000	9 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	5 days
25,001 to 50,000	9 days
50,001 to 75,000	11 days
75,001 to 100,000	5 days
100,001 to 125,000	3 days
125,001 to 250,000	12 days
250,001 to 500,000	5 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	6 days
1.1 to 1.5	40 days
1.6 to 2.0	5 days

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

Travel Plan:

Yes	40 days
No	11 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	50 days
0 None	1 days

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

LIST OF SITES relevant to selection parameters

Site(1):	BA-03-M-01	Site area:	4.00 hect
Development Name:	NELSON WARD DRIVE	No of Dwellings:	141
Location:	RADSTOCK	Housing density:	86
Postcode:	BA3 3DS	Total Bedrooms:	381
Main Location Type:	Edge of Town Centre	Survey Date:	02/10/18
Sub-Location Type:	No Sub Category	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	255
Site(2):	BH-03-M-01	Site area:	8.80 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	125
Location:	PORTSLADE	Housing density:	31
Postcode:	BN41 2AJ	Total Bedrooms:	310
Main Location Type:	Edge of Town	Survey Date:	09/03/23
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	228
Site(3):	CA-03-M-01	Site area:	1.75 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	52
Location:	WATERBEACH	Housing density:	32
Postcode:	CB25 9GJ	Total Bedrooms:	165
Main Location Type:	Edge of Town	Survey Date:	20/06/18
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	60
Site(4):	CU-03-M-04	Site area:	0.46 hect
Development Name:	SEMI-DETACHED & TERRACED	No of Dwellings:	20
Location:	CARLISLE	Housing density:	56
Postcode:	CA2 7BP	Total Bedrooms:	48
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	24/06/16
Sub-Location Type:	Residential Zone	Survey Day:	Friday
PTAL:	n/a	Parking Spaces:	15
Site(5):	DC-03-M-02	Site area:	0.71 hect
Development Name:	TERRACED & BUNGALOWS	No of Dwellings:	37
Location:	DORCHESTER	Housing density:	77
Postcode:	DT1 1NW	Total Bedrooms:	107
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	16/09/16
Sub-Location Type:	Residential Zone	Survey Day:	Friday
PTAL:	n/a	Parking Spaces:	72
Site(6):	DV-03-M-02	Site area:	2.01 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	90
Location:	TOTNES	Housing density:	136
Postcode:	TQ9 5WY	Total Bedrooms:	237
Main Location Type:	Edge of Town	Survey Date:	29/03/19
Sub-Location Type:	Residential Zone	Survey Day:	Friday
PTAL:	n/a	Parking Spaces:	122
Site(7):	ES-03-M-07	Site area:	4.95 hect
Development Name:	MIXED HOUSING	No of Dwellings:	188
Location:	PEACEHAVEN	Housing density:	43
Postcode:	BN10 8SA	Total Bedrooms:	496
Main Location Type:	Edge of Town	Survey Date:	12/11/15
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	307
Site(8):	ES-03-M-10	Site area:	4.60 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	108
Location:	POLEGATE	Housing density:	47
Postcode:	BN26 6FB	Total Bedrooms:	306
Main Location Type:	Edge of Town	Survey Date:	11/07/16
Sub-Location Type:	Residential Zone	Survey Day:	Monday
PTAL:	n/a	Parking Spaces:	257
Site(9):	ES-03-M-11	Site area:	18.68 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	354
Location:	HAILSHAM	Housing density:	53
Postcode:	BN27 3UB	Total Bedrooms:	1118
Main Location Type:	Edge of Town	Survey Date:	13/07/16
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	657

LIST OF SITES relevant to selection parameters (Cont.)

Site(10):	ES-03-M-14	Site area:	3.34 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	119
Location:	EASTBOURNE	Housing density:	114
Postcode:	BN21 2BH	Total Bedrooms:	316
Main Location Type:	Edge of Town	Survey Date:	15/11/18
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	240
Site(11):	ES-03-M-15	Site area:	2.85 hect
Development Name:	MIXED HOUSES	No of Dwellings:	80
Location:	MARESFIELD	Housing density:	39
Postcode:	TN22 2DJ	Total Bedrooms:	222
Main Location Type:	Edge of Town	Survey Date:	13/03/19
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	145
Site(12):	ES-03-M-16	Site area:	5.53 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	119
Location:	BEXHILL	Housing density:	33
Postcode:	TN39 4JX	Total Bedrooms:	277
Main Location Type:	Edge of Town	Survey Date:	10/07/19
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	343
Site(13):	ES-03-M-19	Site area:	11.47 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	149
Location:	HAILSHAM	Housing density:	25
Postcode:	BN27 1PA	Total Bedrooms:	484
Main Location Type:	Edge of Town	Survey Date:	17/06/21
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	411
Site(14):	ES-03-M-21	Site area:	20.57 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	392
Location:	HAILSHAM	Housing density:	28
Postcode:	BN27 4FR	Total Bedrooms:	1136
Main Location Type:	Edge of Town	Survey Date:	28/03/22
Sub-Location Type:	Residential Zone	Survey Day:	Monday
PTAL:	n/a	Parking Spaces:	994
Site(15):	HC-03-M-06	Site area:	11.00 hect
Development Name:	HOUSES & FLATS	No of Dwellings:	328
Location:	NEAR FAREHAM	Housing density:	42
Postcode:	PO14 4PB	Total Bedrooms:	773
Main Location Type:	Edge of Town	Survey Date:	04/11/15
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	578
Site(16):	HC-03-M-08	Site area:	3.55 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	279
Location:	BASINGSTOKE	Housing density:	195
Postcode:	RG21 6AF	Total Bedrooms:	554
Main Location Type:	Edge of Town Centre	Survey Date:	16/06/16
Sub-Location Type:	Built-Up Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	326
Site(17):	HC-03-M-11	Site area:	9.64 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	238
Location:	BASINGSTOKE	Housing density:	56
Postcode:	RG24 9FD	Total Bedrooms:	726
Main Location Type:	Edge of Town	Survey Date:	07/03/19
Sub-Location Type:	No Sub Category	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	569
Site(18):	HC-03-M-14	Site area:	7.32 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	200
Location:	WINCHESTER	Housing density:	54
Postcode:	SO22 5QN	Total Bedrooms:	579
Main Location Type:	Edge of Town	Survey Date:	26/05/21
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	462

LIST OF SITES relevant to selection parameters (Cont.)

Site(19):	HC-03-M-15	Site area:	5.23 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	150
Location:	YATELEY	Housing density:	33
Postcode:	GU46 7AU	Total Bedrooms:	438
Main Location Type:	Edge of Town	Survey Date:	16/05/22
Sub-Location Type:	Residential Zone	Survey Day:	Monday
PTAL:	n/a	Parking Spaces:	596
Site(20):	HC-03-M-17	Site area:	12.18 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	275
Location:	ALTON	Housing density:	33
Postcode:	GU34 2FR	Total Bedrooms:	781
Main Location Type:	Edge of Town	Survey Date:	12/10/22
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	719
Site(21):	HC-03-M-18	Site area:	4.09 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	149
Location:	HAVANT	Housing density:	59
Postcode:	PO9 3FP	Total Bedrooms:	369
Main Location Type:	Edge of Town	Survey Date:	17/03/23
Sub-Location Type:	Residential Zone	Survey Day:	Friday
PTAL:	n/a	Parking Spaces:	326
Site(22):	HF-03-M-03	Site area:	3.80 hect
Development Name:	TERRACED & DETACHED	No of Dwellings:	80
Location:	SAWBRIDGEWORTH	Housing density:	26
Postcode:	CM21 0DW	Total Bedrooms:	242
Main Location Type:	Edge of Town	Survey Date:	03/11/22
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	195
Site(23):	KC-03-M-03	Site area:	6.32 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	140
Location:	MAIDSTONE	Housing density:	47
Postcode:	ME16 0FQ	Total Bedrooms:	490
Main Location Type:	Edge of Town	Survey Date:	22/05/18
Sub-Location Type:	Residential Zone	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	215
Site(24):	KC-03-M-04	Site area:	9.30 hect
Development Name:	MIXED HOUSES AND FLATS	No of Dwellings:	250
Location:	MAIDSTONE	Housing density:	34
Postcode:	ME16 9DZ	Total Bedrooms:	765
Main Location Type:	Edge of Town	Survey Date:	10/06/21
Sub-Location Type:	No Sub Category	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	644
Site(25):	NF-03-M-02	Site area:	7.71 hect
Development Name:	MIXED HOUSES	No of Dwellings:	250
Location:	AYLSHAM	Housing density:	36
Postcode:	NR11 6FA	Total Bedrooms:	714
Main Location Type:	Edge of Town	Survey Date:	17/09/19
Sub-Location Type:	Out of Town	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	622
Site(26):	NF-03-M-03	Site area:	1.98 hect
Development Name:	MIXED HOUSES	No of Dwellings:	70
Location:	NORTH WALSHAM	Housing density:	40
Postcode:	NR28 0FW	Total Bedrooms:	217
Main Location Type:	Edge of Town	Survey Date:	18/09/19
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	165
Site(27):	NF-03-M-04	Site area:	2.71 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	70
Location:	HUNSTANTON	Housing density:	27
Postcode:	PE36 5PS	Total Bedrooms:	202
Main Location Type:	Edge of Town	Survey Date:	19/09/19
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	166

LIST OF SITES relevant to selection parameters (Cont.)

Site(28):	NF-03-M-14	Site area:	12.09 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	321
Location:	WYMONDHAM	Housing density:	36
Postcode:	NR18 0UE	Total Bedrooms:	944
Main Location Type:	Edge of Town	Survey Date:	19/09/19
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	658
Site(29):	NF-03-M-39	Site area:	1.90 hect
Development Name:	MIXED HOUSES	No of Dwellings:	61
Location:	ATTLEBOROUGH	Housing density:	48
Postcode:	NR17 1FF	Total Bedrooms:	153
Main Location Type:	Edge of Town	Survey Date:	14/10/20
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	126
Site(30):	NF-03-M-46	Site area:	23.00 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	338
Location:	NORWICH	Housing density:	26
Postcode:	NR5 OUT	Total Bedrooms:	1021
Main Location Type:	Edge of Town	Survey Date:	15/09/21
Sub-Location Type:	No Sub Category	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	918
Site(31):	NF-03-M-51	Site area:	3.80 hect
Development Name:	MIXED HOUSES	No of Dwellings:	120
Location:	HARLESTON	Housing density:	34
Postcode:	IP20 9GE	Total Bedrooms:	341
Main Location Type:	Edge of Town	Survey Date:	29/09/21
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	166
Site(32):	NF-03-M-59	Site area:	6.63 hect
Development Name:	MIXED HOUSES	No of Dwellings:	153
Location:	WYMONDHAM	Housing density:	30
Postcode:	NR18 OGB	Total Bedrooms:	441
Main Location Type:	Edge of Town	Survey Date:	29/09/22
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	361
Site(33):	NF-03-M-62	Site area:	7.71 hect
Development Name:	MIXED HOUSES	No of Dwellings:	250
Location:	AYLSHAM	Housing density:	36
Postcode:	NR11 6FA	Total Bedrooms:	714
Main Location Type:	Edge of Town	Survey Date:	21/09/22
Sub-Location Type:	Out of Town	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	622
Site(34):	NF-03-M-63	Site area:	4.45 hect
Development Name:	MIXED HOUSES	No of Dwellings:	100
Location:	NORTH WALSHAM	Housing density:	34
Postcode:	NR28 0FW	Total Bedrooms:	268
Main Location Type:	Edge of Town	Survey Date:	21/09/22
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	256
Site(35):	OX-03-M-01	Site area:	5.98 hect
Development Name:	MIXED HOUSES	No of Dwellings:	100
Location:	THAME	Housing density:	24
Postcode:	OX9 3SD	Total Bedrooms:	288
Main Location Type:	Edge of Town	Survey Date:	28/06/18
Sub-Location Type:	Industrial Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	89
Site(36):	RE-03-M-02	Site area:	0.55 hect
Development Name:	TERRACED HOUSES & FLATS	No of Dwellings:	37
Location:	READING	Housing density:	71
Postcode:	RG1 8EN	Total Bedrooms:	79
Main Location Type:	Edge of Town Centre	Survey Date:	07/06/22
Sub-Location Type:	No Sub Category	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	33

LIST OF SITES relevant to selection parameters (Cont.)

Site(37):	SC-03-M-09	Site area:	2.82 hect
Development Name:	BLOCKS OF FLATS	No of Dwellings:	195
Location:	ASHFORD	Housing density:	89
Postcode:	TW15 2EA	Total Bedrooms:	347
Main Location Type:	Town Centre	Survey Date:	11/11/21
Sub-Location Type:	High Street	Survey Day:	Thursday
PTAL:	0 None	Parking Spaces:	259
Site(38):	SC-03-M-10	Site area:	2.86 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	108
Location:	GODALMING	Housing density:	38
Postcode:	GU7 2FL	Total Bedrooms:	249
Main Location Type:	Edge of Town	Survey Date:	09/06/22
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	224
Site(39):	SC-03-M-13	Site area:	3.85 hect
Development Name:	DETACHED HOUSES & FLATS	No of Dwellings:	168
Location:	OXTED	Housing density:	52
Postcode:	RH8 9BF	Total Bedrooms:	479
Main Location Type:	Edge of Town	Survey Date:	22/11/22
Sub-Location Type:	Residential Zone	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	337
Site(40):	SP-03-M-02	Site area:	18.90 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	181
Location:	NEAR SOUTHAMPTON	Housing density:	
Postcode:	SO31 1ET	Total Bedrooms:	530
Main Location Type:	Edge of Town	Survey Date:	23/10/19
Sub-Location Type:	Out of Town	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	357
Site(41):	TW-03-M-02	Site area:	2.07 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	108
Location:	NEWCASTLE UPON TYNE	Housing density:	70
Postcode:	NE7 7FS	Total Bedrooms:	271
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	19/10/18
Sub-Location Type:	Residential Zone	Survey Day:	Friday
PTAL:	n/a	Parking Spaces:	161
Site(42):	WK-03-M-01	Site area:	6.80 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	395
Location:	STRATFORD UPON AVON	Housing density:	70
Postcode:	CV37 0TF	Total Bedrooms:	707
Main Location Type:	Edge of Town	Survey Date:	29/06/18
Sub-Location Type:	Residential Zone	Survey Day:	Friday
PTAL:	n/a	Parking Spaces:	980
Site(43):	WK-03-M-02	Site area:	5.49 hect
Development Name:	MIXED HOUSES	No of Dwellings:	130
Location:	STRATFORD UPON AVON	Housing density:	34
Postcode:	CV37 0RJ	Total Bedrooms:	430
Main Location Type:	Edge of Town	Survey Date:	29/06/18
Sub-Location Type:	Residential Zone	Survey Day:	Friday
PTAL:	n/a	Parking Spaces:	604
Site(44):	WS-03-M-06	Site area:	2.54 hect
Development Name:	SEMI DETACHED/DETACHED	No of Dwellings:	67
Location:	CHICHESTER	Housing density:	36
Postcode:	PO19 8SR	Total Bedrooms:	186
Main Location Type:	Edge of Town	Survey Date:	27/01/15
Sub-Location Type:	Residential Zone	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	164
Site(45):	WS-03-M-12	Site area:	3.74 hect
Development Name:	HOUSES & FLATS	No of Dwellings:	192
Location:	SHOREHAM BY SEA	Housing density:	89
Postcode:	BN43 6TQ	Total Bedrooms:	466
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	27/04/16
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	282

LIST OF SITES relevant to selection parameters (Cont.)

Site(46):	WS-03-M-13	Site area:	0.64 hect
Development Name:	TERRACED & FLATS	No of Dwellings:	23
Location:	WORTHING	Housing density:	66
Postcode:	BN15 9NY	Total Bedrooms:	58
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	21/06/16
Sub-Location Type:	Residential Zone	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	32
Site(47):	WS-03-M-16	Site area:	6.50 hect
Development Name:	MIXED FLATS & HOUSES	No of Dwellings:	252
Location:	CHICHESTER	Housing density:	50
Postcode:	PO19 6BU	Total Bedrooms:	694
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	21/03/18
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	355
Site(48):	WS-03-M-18	Site area:	2.16 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	86
Location:	BOGNOR REGIS	Housing density:	62
Postcode:	PO21 5GB	Total Bedrooms:	233
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	17/10/19
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	168
Site(49):	WS-03-M-19	Site area:	0.75 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	32
Location:	BOGNOR REGIS	Housing density:	107
Postcode:	PO21 5GA	Total Bedrooms:	73
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	17/10/19
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	56
Site(50):	WS-03-M-22	Site area:	3.92 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	91
Location:	CRAWLEY	Housing density:	38
Postcode:	RH11 OLN	Total Bedrooms:	300
Main Location Type:	Edge of Town	Survey Date:	19/10/20
Sub-Location Type:	Residential Zone	Survey Day:	Monday
PTAL:	n/a	Parking Spaces:	242
Site(51):	WS-03-M-25	Site area:	4.80 hect
Development Name:	MIXED HOUSES	No of Dwellings:	110
Location:	BRACKLESHAM BAY	Housing density:	30
Postcode:	PO20 8JB	Total Bedrooms:	296
Main Location Type:	Edge of Town	Survey Date:	24/11/21
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	278

MANUALLY DESELECTED SURVEYS

Site Ref	Survey Date	Reason for Deselection
CA-03-M-02	26/05/21	Covid

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 1.80

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	51	158	0.075	51	158	0.289	51	158	0.364
08:00 - 09:00	51	158	0.134	51	158	0.367	51	158	0.501
09:00 - 10:00	51	158	0.132	51	158	0.156	51	158	0.288
10:00 - 11:00	51	158	0.120	51	158	0.141	51	158	0.261
11:00 - 12:00	51	158	0.125	51	158	0.136	51	158	0.261
12:00 - 13:00	51	158	0.148	51	158	0.133	51	158	0.281
13:00 - 14:00	51	158	0.149	51	158	0.148	51	158	0.297
14:00 - 15:00	51	158	0.140	51	158	0.176	51	158	0.316
15:00 - 16:00	51	158	0.264	51	158	0.164	51	158	0.428
16:00 - 17:00	51	158	0.264	51	158	0.147	51	158	0.411
17:00 - 18:00	51	158	0.315	51	158	0.162	51	158	0.477
18:00 - 19:00	51	158	0.281	51	158	0.162	51	158	0.443
19:00 - 20:00	1	119	0.126	1	119	0.008	1	119	0.134
20:00 - 21:00	1	119	0.101	1	119	0.017	1	119	0.118
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.374			2.206			4.580

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

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

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Parameter summary

Trip rate parameter range selected:	20 - 395 (units:)
Survey date date range:	01/01/15 - 17/03/23
Number of weekdays (Monday-Friday):	52
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	15
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL TAXIS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	51	158	0.003	51	158	0.004	51	158	0.007
08:00 - 09:00	51	158	0.006	51	158	0.006	51	158	0.012
09:00 - 10:00	51	158	0.003	51	158	0.002	51	158	0.005
10:00 - 11:00	51	158	0.002	51	158	0.002	51	158	0.004
11:00 - 12:00	51	158	0.002	51	158	0.002	51	158	0.004
12:00 - 13:00	51	158	0.002	51	158	0.002	51	158	0.004
13:00 - 14:00	51	158	0.002	51	158	0.002	51	158	0.004
14:00 - 15:00	51	158	0.002	51	158	0.002	51	158	0.004
15:00 - 16:00	51	158	0.005	51	158	0.006	51	158	0.011
16:00 - 17:00	51	158	0.003	51	158	0.003	51	158	0.006
17:00 - 18:00	51	158	0.002	51	158	0.002	51	158	0.004
18:00 - 19:00	51	158	0.003	51	158	0.002	51	158	0.005
19:00 - 20:00	1	119	0.000	1	119	0.000	1	119	0.000
20:00 - 21:00	1	119	0.000	1	119	0.000	1	119	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.035			0.035			0.070

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL OGVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	51	158	0.001	51	158	0.001	51	158	0.002
08:00 - 09:00	51	158	0.002	51	158	0.001	51	158	0.003
09:00 - 10:00	51	158	0.002	51	158	0.003	51	158	0.005
10:00 - 11:00	51	158	0.003	51	158	0.002	51	158	0.005
11:00 - 12:00	51	158	0.002	51	158	0.002	51	158	0.004
12:00 - 13:00	51	158	0.001	51	158	0.001	51	158	0.002
13:00 - 14:00	51	158	0.001	51	158	0.002	51	158	0.003
14:00 - 15:00	51	158	0.001	51	158	0.001	51	158	0.002
15:00 - 16:00	51	158	0.001	51	158	0.001	51	158	0.002
16:00 - 17:00	51	158	0.000	51	158	0.000	51	158	0.000
17:00 - 18:00	51	158	0.000	51	158	0.000	51	158	0.000
18:00 - 19:00	51	158	0.000	51	158	0.000	51	158	0.000
19:00 - 20:00	1	119	0.000	1	119	0.000	1	119	0.000
20:00 - 21:00	1	119	0.000	1	119	0.000	1	119	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.014			0.014			0.028

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING
 MULTI-MODAL PSVS
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	51	158	0.001	51	158	0.001	51	158	0.002
08:00 - 09:00	51	158	0.001	51	158	0.001	51	158	0.002
09:00 - 10:00	51	158	0.000	51	158	0.000	51	158	0.000
10:00 - 11:00	51	158	0.000	51	158	0.000	51	158	0.000
11:00 - 12:00	51	158	0.000	51	158	0.000	51	158	0.000
12:00 - 13:00	51	158	0.000	51	158	0.000	51	158	0.000
13:00 - 14:00	51	158	0.000	51	158	0.000	51	158	0.000
14:00 - 15:00	51	158	0.000	51	158	0.000	51	158	0.000
15:00 - 16:00	51	158	0.001	51	158	0.001	51	158	0.002
16:00 - 17:00	51	158	0.000	51	158	0.001	51	158	0.001
17:00 - 18:00	51	158	0.000	51	158	0.000	51	158	0.000
18:00 - 19:00	51	158	0.000	51	158	0.000	51	158	0.000
19:00 - 20:00	1	119	0.000	1	119	0.000	1	119	0.000
20:00 - 21:00	1	119	0.000	1	119	0.000	1	119	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.003			0.004			0.007

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING
 MULTI-MODAL CYCLISTS
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	51	158	0.002	51	158	0.009	51	158	0.011
08:00 - 09:00	51	158	0.003	51	158	0.014	51	158	0.017
09:00 - 10:00	51	158	0.004	51	158	0.005	51	158	0.009
10:00 - 11:00	51	158	0.003	51	158	0.003	51	158	0.006
11:00 - 12:00	51	158	0.003	51	158	0.004	51	158	0.007
12:00 - 13:00	51	158	0.003	51	158	0.004	51	158	0.007
13:00 - 14:00	51	158	0.003	51	158	0.003	51	158	0.006
14:00 - 15:00	51	158	0.005	51	158	0.005	51	158	0.010
15:00 - 16:00	51	158	0.012	51	158	0.005	51	158	0.017
16:00 - 17:00	51	158	0.007	51	158	0.006	51	158	0.013
17:00 - 18:00	51	158	0.012	51	158	0.005	51	158	0.017
18:00 - 19:00	51	158	0.007	51	158	0.005	51	158	0.012
19:00 - 20:00	1	119	0.000	1	119	0.000	1	119	0.000
20:00 - 21:00	1	119	0.000	1	119	0.000	1	119	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.064			0.068			0.132

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL VEHICLE OCCUPANTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	51	158	0.084	51	158	0.407	51	158	0.491
08:00 - 09:00	51	158	0.162	51	158	0.630	51	158	0.792
09:00 - 10:00	51	158	0.162	51	158	0.219	51	158	0.381
10:00 - 11:00	51	158	0.149	51	158	0.194	51	158	0.343
11:00 - 12:00	51	158	0.163	51	158	0.184	51	158	0.347
12:00 - 13:00	51	158	0.195	51	158	0.176	51	158	0.371
13:00 - 14:00	51	158	0.200	51	158	0.199	51	158	0.399
14:00 - 15:00	51	158	0.190	51	158	0.226	51	158	0.416
15:00 - 16:00	51	158	0.456	51	158	0.224	51	158	0.680
16:00 - 17:00	51	158	0.396	51	158	0.213	51	158	0.609
17:00 - 18:00	51	158	0.452	51	158	0.231	51	158	0.683
18:00 - 19:00	51	158	0.404	51	158	0.227	51	158	0.631
19:00 - 20:00	1	119	0.168	1	119	0.017	1	119	0.185
20:00 - 21:00	1	119	0.151	1	119	0.017	1	119	0.168
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.332			3.164			6.496

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING
 MULTI-MODAL PEDESTRIANS
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	51	158	0.022	51	158	0.050	51	158	0.072
08:00 - 09:00	51	158	0.047	51	158	0.169	51	158	0.216
09:00 - 10:00	51	158	0.047	51	158	0.033	51	158	0.080
10:00 - 11:00	51	158	0.027	51	158	0.030	51	158	0.057
11:00 - 12:00	51	158	0.028	51	158	0.033	51	158	0.061
12:00 - 13:00	51	158	0.041	51	158	0.034	51	158	0.075
13:00 - 14:00	51	158	0.037	51	158	0.035	51	158	0.072
14:00 - 15:00	51	158	0.039	51	158	0.055	51	158	0.094
15:00 - 16:00	51	158	0.145	51	158	0.054	51	158	0.199
16:00 - 17:00	51	158	0.072	51	158	0.043	51	158	0.115
17:00 - 18:00	51	158	0.062	51	158	0.043	51	158	0.105
18:00 - 19:00	51	158	0.049	51	158	0.042	51	158	0.091
19:00 - 20:00	1	119	0.008	1	119	0.008	1	119	0.016
20:00 - 21:00	1	119	0.000	1	119	0.000	1	119	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.624			0.629			1.253

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING
MULTI-MODAL BUS/TRAM PASSENGERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	51	158	0.002	51	158	0.024	51	158	0.026
08:00 - 09:00	51	158	0.002	51	158	0.021	51	158	0.023
09:00 - 10:00	51	158	0.003	51	158	0.006	51	158	0.009
10:00 - 11:00	51	158	0.004	51	158	0.007	51	158	0.011
11:00 - 12:00	51	158	0.005	51	158	0.007	51	158	0.012
12:00 - 13:00	51	158	0.006	51	158	0.007	51	158	0.013
13:00 - 14:00	51	158	0.006	51	158	0.006	51	158	0.012
14:00 - 15:00	51	158	0.008	51	158	0.006	51	158	0.014
15:00 - 16:00	51	158	0.019	51	158	0.007	51	158	0.026
16:00 - 17:00	51	158	0.016	51	158	0.007	51	158	0.023
17:00 - 18:00	51	158	0.014	51	158	0.005	51	158	0.019
18:00 - 19:00	51	158	0.013	51	158	0.004	51	158	0.017
19:00 - 20:00	1	119	0.000	1	119	0.000	1	119	0.000
20:00 - 21:00	1	119	0.000	1	119	0.000	1	119	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.098			0.107			0.205

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING
MULTI-MODAL TOTAL RAIL PASSENGERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	51	158	0.000	51	158	0.010	51	158	0.010
08:00 - 09:00	51	158	0.000	51	158	0.007	51	158	0.007
09:00 - 10:00	51	158	0.000	51	158	0.002	51	158	0.002
10:00 - 11:00	51	158	0.000	51	158	0.002	51	158	0.002
11:00 - 12:00	51	158	0.001	51	158	0.001	51	158	0.002
12:00 - 13:00	51	158	0.001	51	158	0.001	51	158	0.002
13:00 - 14:00	51	158	0.001	51	158	0.001	51	158	0.002
14:00 - 15:00	51	158	0.001	51	158	0.001	51	158	0.002
15:00 - 16:00	51	158	0.003	51	158	0.000	51	158	0.003
16:00 - 17:00	51	158	0.005	51	158	0.000	51	158	0.005
17:00 - 18:00	51	158	0.006	51	158	0.000	51	158	0.006
18:00 - 19:00	51	158	0.006	51	158	0.002	51	158	0.008
19:00 - 20:00	1	119	0.000	1	119	0.000	1	119	0.000
20:00 - 21:00	1	119	0.000	1	119	0.000	1	119	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.024			0.027			0.051

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL COACH PASSENGERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	51	158	0.000	51	158	0.001	51	158	0.001
08:00 - 09:00	51	158	0.000	51	158	0.002	51	158	0.002
09:00 - 10:00	51	158	0.000	51	158	0.000	51	158	0.000
10:00 - 11:00	51	158	0.000	51	158	0.000	51	158	0.000
11:00 - 12:00	51	158	0.000	51	158	0.000	51	158	0.000
12:00 - 13:00	51	158	0.000	51	158	0.000	51	158	0.000
13:00 - 14:00	51	158	0.000	51	158	0.000	51	158	0.000
14:00 - 15:00	51	158	0.000	51	158	0.000	51	158	0.000
15:00 - 16:00	51	158	0.003	51	158	0.000	51	158	0.003
16:00 - 17:00	51	158	0.001	51	158	0.000	51	158	0.001
17:00 - 18:00	51	158	0.000	51	158	0.000	51	158	0.000
18:00 - 19:00	51	158	0.000	51	158	0.000	51	158	0.000
19:00 - 20:00	1	119	0.000	1	119	0.000	1	119	0.000
20:00 - 21:00	1	119	0.000	1	119	0.000	1	119	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.004			0.003			0.007

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING
MULTI-MODAL PUBLIC TRANSPORT USERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	51	158	0.002	51	158	0.035	51	158	0.037
08:00 - 09:00	51	158	0.003	51	158	0.030	51	158	0.033
09:00 - 10:00	51	158	0.003	51	158	0.008	51	158	0.011
10:00 - 11:00	51	158	0.004	51	158	0.009	51	158	0.013
11:00 - 12:00	51	158	0.005	51	158	0.009	51	158	0.014
12:00 - 13:00	51	158	0.007	51	158	0.008	51	158	0.015
13:00 - 14:00	51	158	0.007	51	158	0.007	51	158	0.014
14:00 - 15:00	51	158	0.009	51	158	0.007	51	158	0.016
15:00 - 16:00	51	158	0.025	51	158	0.007	51	158	0.032
16:00 - 17:00	51	158	0.022	51	158	0.008	51	158	0.030
17:00 - 18:00	51	158	0.019	51	158	0.005	51	158	0.024
18:00 - 19:00	51	158	0.019	51	158	0.006	51	158	0.025
19:00 - 20:00	1	119	0.000	1	119	0.000	1	119	0.000
20:00 - 21:00	1	119	0.000	1	119	0.000	1	119	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.125			0.139			0.264

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 1.80

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	51	158	0.111	51	158	0.501	51	158	0.612
08:00 - 09:00	51	158	0.214	51	158	0.842	51	158	1.056
09:00 - 10:00	51	158	0.216	51	158	0.265	51	158	0.481
10:00 - 11:00	51	158	0.183	51	158	0.237	51	158	0.420
11:00 - 12:00	51	158	0.199	51	158	0.231	51	158	0.430
12:00 - 13:00	51	158	0.247	51	158	0.222	51	158	0.469
13:00 - 14:00	51	158	0.248	51	158	0.245	51	158	0.493
14:00 - 15:00	51	158	0.242	51	158	0.293	51	158	0.535
15:00 - 16:00	51	158	0.638	51	158	0.290	51	158	0.928
16:00 - 17:00	51	158	0.497	51	158	0.270	51	158	0.767
17:00 - 18:00	51	158	0.546	51	158	0.284	51	158	0.830
18:00 - 19:00	51	158	0.479	51	158	0.281	51	158	0.760
19:00 - 20:00	1	119	0.176	1	119	0.025	1	119	0.201
20:00 - 21:00	1	119	0.151	1	119	0.017	1	119	0.168
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.147			4.003			8.150

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL CARS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	51	158	0.058	51	158	0.246	51	158	0.304
08:00 - 09:00	51	158	0.110	51	158	0.332	51	158	0.442
09:00 - 10:00	51	158	0.110	51	158	0.130	51	158	0.240
10:00 - 11:00	51	158	0.091	51	158	0.112	51	158	0.203
11:00 - 12:00	51	158	0.099	51	158	0.108	51	158	0.207
12:00 - 13:00	51	158	0.123	51	158	0.108	51	158	0.231
13:00 - 14:00	51	158	0.122	51	158	0.122	51	158	0.244
14:00 - 15:00	51	158	0.118	51	158	0.155	51	158	0.273
15:00 - 16:00	51	158	0.232	51	158	0.135	51	158	0.367
16:00 - 17:00	51	158	0.226	51	158	0.127	51	158	0.353
17:00 - 18:00	51	158	0.277	51	158	0.143	51	158	0.420
18:00 - 19:00	51	158	0.256	51	158	0.146	51	158	0.402
19:00 - 20:00	1	119	0.126	1	119	0.008	1	119	0.134
20:00 - 21:00	1	119	0.101	1	119	0.017	1	119	0.118
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.049			1.889			3.938

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING
 MULTI-MODAL LGVS
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	51	158	0.011	51	158	0.035	51	158	0.046
08:00 - 09:00	51	158	0.014	51	158	0.025	51	158	0.039
09:00 - 10:00	51	158	0.017	51	158	0.020	51	158	0.037
10:00 - 11:00	51	158	0.023	51	158	0.024	51	158	0.047
11:00 - 12:00	51	158	0.021	51	158	0.023	51	158	0.044
12:00 - 13:00	51	158	0.021	51	158	0.021	51	158	0.042
13:00 - 14:00	51	158	0.022	51	158	0.021	51	158	0.043
14:00 - 15:00	51	158	0.018	51	158	0.018	51	158	0.036
15:00 - 16:00	51	158	0.022	51	158	0.020	51	158	0.042
16:00 - 17:00	51	158	0.032	51	158	0.015	51	158	0.047
17:00 - 18:00	51	158	0.032	51	158	0.014	51	158	0.046
18:00 - 19:00	51	158	0.020	51	158	0.012	51	158	0.032
19:00 - 20:00	1	119	0.000	1	119	0.000	1	119	0.000
20:00 - 21:00	1	119	0.000	1	119	0.000	1	119	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.253			0.248			0.501

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL MOTOR CYCLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	51	158	0.001	51	158	0.003	51	158	0.004
08:00 - 09:00	51	158	0.000	51	158	0.002	51	158	0.002
09:00 - 10:00	51	158	0.001	51	158	0.001	51	158	0.002
10:00 - 11:00	51	158	0.000	51	158	0.001	51	158	0.001
11:00 - 12:00	51	158	0.000	51	158	0.001	51	158	0.001
12:00 - 13:00	51	158	0.001	51	158	0.001	51	158	0.002
13:00 - 14:00	51	158	0.001	51	158	0.001	51	158	0.002
14:00 - 15:00	51	158	0.001	51	158	0.001	51	158	0.002
15:00 - 16:00	51	158	0.001	51	158	0.001	51	158	0.002
16:00 - 17:00	51	158	0.002	51	158	0.001	51	158	0.003
17:00 - 18:00	51	158	0.003	51	158	0.002	51	158	0.005
18:00 - 19:00	51	158	0.002	51	158	0.001	51	158	0.003
19:00 - 20:00	1	119	0.000	1	119	0.000	1	119	0.000
20:00 - 21:00	1	119	0.000	1	119	0.000	1	119	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.013			0.016			0.029

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.

Systra Ltd 15 Old Bailey London

Licence No: 700702

Filtering Summary

Land Use	03/M	RESIDENTIAL/MIXED PRIVATE/AFFORDABLE HOUSING
Selected Trip Rate Calculation Parameter Range	9-1412 DWELLS	
Actual Trip Rate Calculation Parameter Range	20-279 DWELLS	
Date Range	Minimum: 01/01/15	Maximum: 17/03/23
Parking Spaces Range	All Surveys Included	
Parking Spaces Per Dwelling Range:	All Surveys Included	
Bedrooms Per Dwelling Range:	All Surveys Included	
Percentage of dwellings privately owned:	All Surveys Included	
Days of the week selected	Tuesday	3
	Wednesday	2
	Thursday	4
	Friday	3
Main Location Types selected	Town Centre	1
	Edge of Town Centre	3
	Suburban Area (PPS6 Out of Centre)	8
Inclusion of Servicing Vehicles Counts	Servicing vehicles Included	10 - Selected
	Servicing vehicles Excluded	8 - Selected
Population within 500m	All Surveys Included	
Population <1 Mile ranges selected	5,001 to 10,000	1
	10,001 to 15,000	2
	20,001 to 25,000	1
	25,001 to 50,000	8
Population <5 Mile ranges selected	25,001 to 50,000	1
	50,001 to 75,000	2
	75,001 to 100,000	1
	100,001 to 125,000	3
	125,001 to 250,000	2
	250,001 to 500,000	2
	500,001 or More	1
Car Ownership <5 Mile ranges selected	0.6 to 1.0	2
	1.1 to 1.5	9
	1.6 to 2.0	1
PTAL Rating	No PTAL Present	11
	0 None	1

Calculation Reference: AUDIT-700702-230829-0818

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST		
	HC HAMPSHIRE		1 days
	RE READING		1 days
	SC SURREY		1 days
	WS WEST SUSSEX		5 days
03	SOUTH WEST		
	BA BATH & NORTH EAST SOMERSET		1 days
	DC DORSET		1 days
09	NORTH		
	CU CUMBERLAND		1 days
	TW TYNE & WEAR		1 days

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

Primary Filtering selection:

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

Parameter: No of Dwellings
 Actual Range: 20 to 279 (units:)
 Range Selected by User: 9 to 1412 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/15 to 17/03/23

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

Selected survey days:

Tuesday	3 days
Wednesday	2 days
Thursday	4 days
Friday	3 days

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

Selected survey types:

Manual count	12 days
Directional ATC Count	0 days

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

Selected Locations:

Town Centre	1
Edge of Town Centre	3
Suburban Area (PPS6 Out of Centre)	8

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

Selected Location Sub Categories:

Residential Zone	8
Built-Up Zone	1
High Street	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.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	10 days - Selected
Servicing vehicles Excluded	8 days - Selected

Secondary Filtering selection:

Use Class:

C3	12 days
----	---------

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

Population within 500m Range:

All Surveys Included

Population within 1 mile:

5,001 to 10,000	1 days
10,001 to 15,000	2 days
20,001 to 25,000	1 days
25,001 to 50,000	8 days

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

Population within 5 miles:

25,001 to 50,000	1 days
50,001 to 75,000	2 days
75,001 to 100,000	1 days
100,001 to 125,000	3 days
125,001 to 250,000	2 days
250,001 to 500,000	2 days
500,001 or More	1 days

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

Car ownership within 5 miles:

0.6 to 1.0	2 days
1.1 to 1.5	9 days
1.6 to 2.0	1 days

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

Travel Plan:

Yes	6 days
No	6 days

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

PTAL Rating:

No PTAL Present	11 days
0 None	1 days

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

LIST OF SITES relevant to selection parameters

Site(1):	BA-03-M-01	Site area:	4.00 hect
Development Name:	NELSON WARD DRIVE	No of Dwellings:	141
Location:	RADSTOCK	Housing density:	86
Postcode:	BA3 3DS	Total Bedrooms:	381
Main Location Type:	Edge of Town Centre	Survey Date:	02/10/18
Sub-Location Type:	No Sub Category	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	255
Site(2):	CU-03-M-04	Site area:	0.46 hect
Development Name:	SEMI-DETACHED & TERRACED	No of Dwellings:	20
Location:	CARLISLE	Housing density:	56
Postcode:	CA2 7BP	Total Bedrooms:	48
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	24/06/16
Sub-Location Type:	Residential Zone	Survey Day:	Friday
PTAL:	n/a	Parking Spaces:	15
Site(3):	DC-03-M-02	Site area:	0.71 hect
Development Name:	TERRACED & BUNGALOWS	No of Dwellings:	37
Location:	DORCHESTER	Housing density:	77
Postcode:	DT1 1NW	Total Bedrooms:	107
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	16/09/16
Sub-Location Type:	Residential Zone	Survey Day:	Friday
PTAL:	n/a	Parking Spaces:	72
Site(4):	HC-03-M-08	Site area:	3.55 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	279
Location:	BASINGSTOKE	Housing density:	195
Postcode:	RG21 6AF	Total Bedrooms:	554
Main Location Type:	Edge of Town Centre	Survey Date:	16/06/16
Sub-Location Type:	Built-Up Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	326
Site(5):	RE-03-M-02	Site area:	0.55 hect
Development Name:	TERRACED HOUSES & FLATS	No of Dwellings:	37
Location:	READING	Housing density:	71
Postcode:	RG1 8EN	Total Bedrooms:	79
Main Location Type:	Edge of Town Centre	Survey Date:	07/06/22
Sub-Location Type:	No Sub Category	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	33
Site(6):	SC-03-M-09	Site area:	2.82 hect
Development Name:	BLOCKS OF FLATS	No of Dwellings:	195
Location:	ASHFORD	Housing density:	89
Postcode:	TW15 2EA	Total Bedrooms:	347
Main Location Type:	Town Centre	Survey Date:	11/11/21
Sub-Location Type:	High Street	Survey Day:	Thursday
PTAL:	0 None	Parking Spaces:	259
Site(7):	TW-03-M-02	Site area:	2.07 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	108
Location:	NEWCASTLE UPON TYNE	Housing density:	70
Postcode:	NE7 7FS	Total Bedrooms:	271
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	19/10/18
Sub-Location Type:	Residential Zone	Survey Day:	Friday
PTAL:	n/a	Parking Spaces:	161
Site(8):	WS-03-M-12	Site area:	3.74 hect
Development Name:	HOUSES & FLATS	No of Dwellings:	192
Location:	SHOREHAM BY SEA	Housing density:	89
Postcode:	BN43 6TQ	Total Bedrooms:	466
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	27/04/16
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	282
Site(9):	WS-03-M-13	Site area:	0.64 hect
Development Name:	TERRACED & FLATS	No of Dwellings:	23
Location:	WORTHING	Housing density:	66
Postcode:	BN15 9NY	Total Bedrooms:	58
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	21/06/16
Sub-Location Type:	Residential Zone	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	32

LIST OF SITES relevant to selection parameters (Cont.)

Site(10):	WS-03-M-16	Site area:	6.50 hect
Development Name:	MIXED FLATS & HOUSES	No of Dwellings:	252
Location:	CHICHESTER	Housing density:	50
Postcode:	PO19 6BU	Total Bedrooms:	694
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	21/03/18
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	355
Site(11):	WS-03-M-18	Site area:	2.16 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	86
Location:	BOGNOR REGIS	Housing density:	62
Postcode:	PO21 5GB	Total Bedrooms:	233
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	17/10/19
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	168
Site(12):	WS-03-M-19	Site area:	0.75 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	32
Location:	BOGNOR REGIS	Housing density:	107
Postcode:	PO21 5GA	Total Bedrooms:	73
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	17/10/19
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	56

MANUALLY DESELECTED SURVEYS

Site Ref	Survey Date	Reason for Deselection
CA-03-M-02	26/05/21	Undertaken during Covid

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 2.04

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	117	0.060	12	117	0.257	12	117	0.317
08:00 - 09:00	12	117	0.111	12	117	0.340	12	117	0.451
09:00 - 10:00	12	117	0.121	12	117	0.138	12	117	0.259
10:00 - 11:00	12	117	0.105	12	117	0.129	12	117	0.234
11:00 - 12:00	12	117	0.123	12	117	0.127	12	117	0.250
12:00 - 13:00	12	117	0.144	12	117	0.131	12	117	0.275
13:00 - 14:00	12	117	0.163	12	117	0.141	12	117	0.304
14:00 - 15:00	12	117	0.134	12	117	0.159	12	117	0.293
15:00 - 16:00	12	117	0.222	12	117	0.151	12	117	0.373
16:00 - 17:00	12	117	0.212	12	117	0.131	12	117	0.343
17:00 - 18:00	12	117	0.307	12	117	0.149	12	117	0.456
18:00 - 19:00	12	117	0.267	12	117	0.145	12	117	0.412
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.969			1.998			3.967

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

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

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Parameter summary

Trip rate parameter range selected: 20 - 279 (units:)
Survey date date range: 01/01/15 - 17/03/23
Number of weekdays (Monday-Friday): 13
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 6
Surveys manually removed from selection: 0

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING
 MULTI-MODAL TAXIS
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	117	0.003	12	117	0.004	12	117	0.007
08:00 - 09:00	12	117	0.006	12	117	0.006	12	117	0.012
09:00 - 10:00	12	117	0.002	12	117	0.002	12	117	0.004
10:00 - 11:00	12	117	0.001	12	117	0.001	12	117	0.002
11:00 - 12:00	12	117	0.003	12	117	0.003	12	117	0.006
12:00 - 13:00	12	117	0.002	12	117	0.002	12	117	0.004
13:00 - 14:00	12	117	0.004	12	117	0.004	12	117	0.008
14:00 - 15:00	12	117	0.004	12	117	0.004	12	117	0.008
15:00 - 16:00	12	117	0.003	12	117	0.002	12	117	0.005
16:00 - 17:00	12	117	0.004	12	117	0.004	12	117	0.008
17:00 - 18:00	12	117	0.001	12	117	0.002	12	117	0.003
18:00 - 19:00	12	117	0.004	12	117	0.004	12	117	0.008
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.037			0.038			0.075

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

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TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING
 MULTI-MODAL OGVS
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	117	0.001	12	117	0.001	12	117	0.002
08:00 - 09:00	12	117	0.002	12	117	0.001	12	117	0.003
09:00 - 10:00	12	117	0.001	12	117	0.002	12	117	0.003
10:00 - 11:00	12	117	0.004	12	117	0.003	12	117	0.007
11:00 - 12:00	12	117	0.001	12	117	0.003	12	117	0.004
12:00 - 13:00	12	117	0.001	12	117	0.000	12	117	0.001
13:00 - 14:00	12	117	0.001	12	117	0.001	12	117	0.002
14:00 - 15:00	12	117	0.001	12	117	0.001	12	117	0.002
15:00 - 16:00	12	117	0.001	12	117	0.001	12	117	0.002
16:00 - 17:00	12	117	0.000	12	117	0.000	12	117	0.000
17:00 - 18:00	12	117	0.000	12	117	0.000	12	117	0.000
18:00 - 19:00	12	117	0.000	12	117	0.000	12	117	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.013			0.013			0.026

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

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TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING
 MULTI-MODAL PSVS
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	117	0.001	12	117	0.001	12	117	0.002
08:00 - 09:00	12	117	0.000	12	117	0.000	12	117	0.000
09:00 - 10:00	12	117	0.000	12	117	0.000	12	117	0.000
10:00 - 11:00	12	117	0.000	12	117	0.000	12	117	0.000
11:00 - 12:00	12	117	0.000	12	117	0.000	12	117	0.000
12:00 - 13:00	12	117	0.000	12	117	0.000	12	117	0.000
13:00 - 14:00	12	117	0.000	12	117	0.000	12	117	0.000
14:00 - 15:00	12	117	0.000	12	117	0.000	12	117	0.000
15:00 - 16:00	12	117	0.001	12	117	0.001	12	117	0.002
16:00 - 17:00	12	117	0.000	12	117	0.000	12	117	0.000
17:00 - 18:00	12	117	0.000	12	117	0.000	12	117	0.000
18:00 - 19:00	12	117	0.000	12	117	0.000	12	117	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.002			0.002			0.004

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING
 MULTI-MODAL CYCLISTS
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	117	0.004	12	117	0.015	12	117	0.019
08:00 - 09:00	12	117	0.004	12	117	0.020	12	117	0.024
09:00 - 10:00	12	117	0.009	12	117	0.010	12	117	0.019
10:00 - 11:00	12	117	0.007	12	117	0.006	12	117	0.013
11:00 - 12:00	12	117	0.007	12	117	0.007	12	117	0.014
12:00 - 13:00	12	117	0.007	12	117	0.009	12	117	0.016
13:00 - 14:00	12	117	0.009	12	117	0.005	12	117	0.014
14:00 - 15:00	12	117	0.007	12	117	0.010	12	117	0.017
15:00 - 16:00	12	117	0.014	12	117	0.007	12	117	0.021
16:00 - 17:00	12	117	0.010	12	117	0.011	12	117	0.021
17:00 - 18:00	12	117	0.023	12	117	0.009	12	117	0.032
18:00 - 19:00	12	117	0.009	12	117	0.005	12	117	0.014
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.110			0.114			0.224

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING
 MULTI-MODAL VEHICLE OCCUPANTS
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	117	0.061	12	117	0.335	12	117	0.396
08:00 - 09:00	12	117	0.118	12	117	0.556	12	117	0.674
09:00 - 10:00	12	117	0.147	12	117	0.173	12	117	0.320
10:00 - 11:00	12	117	0.133	12	117	0.172	12	117	0.305
11:00 - 12:00	12	117	0.155	12	117	0.170	12	117	0.325
12:00 - 13:00	12	117	0.188	12	117	0.159	12	117	0.347
13:00 - 14:00	12	117	0.210	12	117	0.175	12	117	0.385
14:00 - 15:00	12	117	0.175	12	117	0.200	12	117	0.375
15:00 - 16:00	12	117	0.360	12	117	0.203	12	117	0.563
16:00 - 17:00	12	117	0.292	12	117	0.179	12	117	0.471
17:00 - 18:00	12	117	0.404	12	117	0.211	12	117	0.615
18:00 - 19:00	12	117	0.352	12	117	0.205	12	117	0.557
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.595			2.738			5.333

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL PEDESTRIANS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	117	0.022	12	117	0.076	12	117	0.098
08:00 - 09:00	12	117	0.079	12	117	0.255	12	117	0.334
09:00 - 10:00	12	117	0.071	12	117	0.067	12	117	0.138
10:00 - 11:00	12	117	0.049	12	117	0.060	12	117	0.109
11:00 - 12:00	12	117	0.061	12	117	0.064	12	117	0.125
12:00 - 13:00	12	117	0.076	12	117	0.047	12	117	0.123
13:00 - 14:00	12	117	0.072	12	117	0.053	12	117	0.125
14:00 - 15:00	12	117	0.066	12	117	0.096	12	117	0.162
15:00 - 16:00	12	117	0.235	12	117	0.094	12	117	0.329
16:00 - 17:00	12	117	0.111	12	117	0.084	12	117	0.195
17:00 - 18:00	12	117	0.140	12	117	0.073	12	117	0.213
18:00 - 19:00	12	117	0.073	12	117	0.055	12	117	0.128
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.055			1.024			2.079

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING
MULTI-MODAL BUS/TRAM PASSENGERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	117	0.004	12	117	0.032	12	117	0.036
08:00 - 09:00	12	117	0.004	12	117	0.026	12	117	0.030
09:00 - 10:00	12	117	0.004	12	117	0.011	12	117	0.015
10:00 - 11:00	12	117	0.007	12	117	0.009	12	117	0.016
11:00 - 12:00	12	117	0.009	12	117	0.009	12	117	0.018
12:00 - 13:00	12	117	0.011	12	117	0.011	12	117	0.022
13:00 - 14:00	12	117	0.007	12	117	0.005	12	117	0.012
14:00 - 15:00	12	117	0.007	12	117	0.015	12	117	0.022
15:00 - 16:00	12	117	0.034	12	117	0.009	12	117	0.043
16:00 - 17:00	12	117	0.015	12	117	0.012	12	117	0.027
17:00 - 18:00	12	117	0.017	12	117	0.006	12	117	0.023
18:00 - 19:00	12	117	0.016	12	117	0.001	12	117	0.017
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.135			0.146			0.281

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL TOTAL RAIL PASSENGERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	117	0.000	12	117	0.029	12	117	0.029
08:00 - 09:00	12	117	0.002	12	117	0.026	12	117	0.028
09:00 - 10:00	12	117	0.001	12	117	0.008	12	117	0.009
10:00 - 11:00	12	117	0.000	12	117	0.006	12	117	0.006
11:00 - 12:00	12	117	0.003	12	117	0.003	12	117	0.006
12:00 - 13:00	12	117	0.004	12	117	0.002	12	117	0.006
13:00 - 14:00	12	117	0.003	12	117	0.004	12	117	0.007
14:00 - 15:00	12	117	0.002	12	117	0.003	12	117	0.005
15:00 - 16:00	12	117	0.011	12	117	0.001	12	117	0.012
16:00 - 17:00	12	117	0.010	12	117	0.000	12	117	0.010
17:00 - 18:00	12	117	0.019	12	117	0.001	12	117	0.020
18:00 - 19:00	12	117	0.017	12	117	0.004	12	117	0.021
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.072			0.087			0.159

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING
 MULTI-MODAL COACH PASSENGERS
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	117	0.000	12	117	0.004	12	117	0.004
08:00 - 09:00	12	117	0.000	12	117	0.000	12	117	0.000
09:00 - 10:00	12	117	0.000	12	117	0.000	12	117	0.000
10:00 - 11:00	12	117	0.000	12	117	0.000	12	117	0.000
11:00 - 12:00	12	117	0.000	12	117	0.000	12	117	0.000
12:00 - 13:00	12	117	0.000	12	117	0.000	12	117	0.000
13:00 - 14:00	12	117	0.000	12	117	0.000	12	117	0.000
14:00 - 15:00	12	117	0.000	12	117	0.000	12	117	0.000
15:00 - 16:00	12	117	0.003	12	117	0.000	12	117	0.003
16:00 - 17:00	12	117	0.000	12	117	0.000	12	117	0.000
17:00 - 18:00	12	117	0.000	12	117	0.000	12	117	0.000
18:00 - 19:00	12	117	0.000	12	117	0.000	12	117	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.003			0.004			0.007

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL PUBLIC TRANSPORT USERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	117	0.004	12	117	0.064	12	117	0.068
08:00 - 09:00	12	117	0.006	12	117	0.053	12	117	0.059
09:00 - 10:00	12	117	0.005	12	117	0.019	12	117	0.024
10:00 - 11:00	12	117	0.007	12	117	0.015	12	117	0.022
11:00 - 12:00	12	117	0.011	12	117	0.012	12	117	0.023
12:00 - 13:00	12	117	0.014	12	117	0.014	12	117	0.028
13:00 - 14:00	12	117	0.010	12	117	0.009	12	117	0.019
14:00 - 15:00	12	117	0.009	12	117	0.018	12	117	0.027
15:00 - 16:00	12	117	0.047	12	117	0.010	12	117	0.057
16:00 - 17:00	12	117	0.025	12	117	0.012	12	117	0.037
17:00 - 18:00	12	117	0.036	12	117	0.008	12	117	0.044
18:00 - 19:00	12	117	0.034	12	117	0.006	12	117	0.040
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.208			0.240			0.448

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 2.04

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	117	0.091	12	117	0.490	12	117	0.581
08:00 - 09:00	12	117	0.208	12	117	0.884	12	117	1.092
09:00 - 10:00	12	117	0.232	12	117	0.269	12	117	0.501
10:00 - 11:00	12	117	0.197	12	117	0.253	12	117	0.450
11:00 - 12:00	12	117	0.235	12	117	0.253	12	117	0.488
12:00 - 13:00	12	117	0.286	12	117	0.229	12	117	0.515
13:00 - 14:00	12	117	0.301	12	117	0.243	12	117	0.544
14:00 - 15:00	12	117	0.258	12	117	0.324	12	117	0.582
15:00 - 16:00	12	117	0.657	12	117	0.314	12	117	0.971
16:00 - 17:00	12	117	0.438	12	117	0.287	12	117	0.725
17:00 - 18:00	12	117	0.602	12	117	0.302	12	117	0.904
18:00 - 19:00	12	117	0.467	12	117	0.270	12	117	0.737
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.972			4.118			8.090

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL CARS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	117	0.046	12	117	0.225	12	117	0.271
08:00 - 09:00	12	117	0.090	12	117	0.307	12	117	0.397
09:00 - 10:00	12	117	0.103	12	117	0.118	12	117	0.221
10:00 - 11:00	12	117	0.078	12	117	0.103	12	117	0.181
11:00 - 12:00	12	117	0.098	12	117	0.097	12	117	0.195
12:00 - 13:00	12	117	0.121	12	117	0.114	12	117	0.235
13:00 - 14:00	12	117	0.135	12	117	0.116	12	117	0.251
14:00 - 15:00	12	117	0.113	12	117	0.136	12	117	0.249
15:00 - 16:00	12	117	0.197	12	117	0.127	12	117	0.324
16:00 - 17:00	12	117	0.187	12	117	0.113	12	117	0.300
17:00 - 18:00	12	117	0.274	12	117	0.133	12	117	0.407
18:00 - 19:00	12	117	0.244	12	117	0.132	12	117	0.376
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.686			1.721			3.407

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL LGVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	117	0.007	12	117	0.024	12	117	0.031
08:00 - 09:00	12	117	0.012	12	117	0.023	12	117	0.035
09:00 - 10:00	12	117	0.014	12	117	0.015	12	117	0.029
10:00 - 11:00	12	117	0.022	12	117	0.023	12	117	0.045
11:00 - 12:00	12	117	0.020	12	117	0.023	12	117	0.043
12:00 - 13:00	12	117	0.019	12	117	0.015	12	117	0.034
13:00 - 14:00	12	117	0.021	12	117	0.018	12	117	0.039
14:00 - 15:00	12	117	0.016	12	117	0.016	12	117	0.032
15:00 - 16:00	12	117	0.017	12	117	0.019	12	117	0.036
16:00 - 17:00	12	117	0.019	12	117	0.014	12	117	0.033
17:00 - 18:00	12	117	0.029	12	117	0.013	12	117	0.042
18:00 - 19:00	12	117	0.019	12	117	0.009	12	117	0.028
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.215			0.212			0.427

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL MOTOR CYCLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	117	0.001	12	117	0.002	12	117	0.003
08:00 - 09:00	12	117	0.000	12	117	0.004	12	117	0.004
09:00 - 10:00	12	117	0.001	12	117	0.001	12	117	0.002
10:00 - 11:00	12	117	0.000	12	117	0.000	12	117	0.000
11:00 - 12:00	12	117	0.001	12	117	0.001	12	117	0.002
12:00 - 13:00	12	117	0.001	12	117	0.000	12	117	0.001
13:00 - 14:00	12	117	0.001	12	117	0.001	12	117	0.002
14:00 - 15:00	12	117	0.000	12	117	0.002	12	117	0.002
15:00 - 16:00	12	117	0.002	12	117	0.001	12	117	0.003
16:00 - 17:00	12	117	0.003	12	117	0.000	12	117	0.003
17:00 - 18:00	12	117	0.003	12	117	0.001	12	117	0.004
18:00 - 19:00	12	117	0.001	12	117	0.000	12	117	0.001
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.014			0.013			0.027

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.*

Systra Ltd 15 Old Bailey London

Licence No: 700702

Filtering Summary

Land Use	03/M	RESIDENTIAL/MIXED PRIVATE/AFFORDABLE HOUSING
Selected Trip Rate Calculation Parameter Range	9-1412 DWELLS	
Actual Trip Rate Calculation Parameter Range	52-395 DWELLS	
Date Range	Minimum: 01/01/15	Maximum: 17/03/23
Parking Spaces Range	All Surveys Included	
Parking Spaces Per Dwelling Range:	All Surveys Included	
Bedrooms Per Dwelling Range:	All Surveys Included	
Percentage of dwellings privately owned:	All Surveys Included	
Days of the week selected	Monday	4
	Tuesday	4
	Wednesday	15
	Thursday	12
	Friday	4
Main Location Types selected	Edge of Town	39
Inclusion of Servicing Vehicles Counts	Servicing vehicles Included	21 - Selected
	Servicing vehicles Excluded	27 - Selected
Population within 500m	All Surveys Included	
Population <1 Mile ranges selected	1,001 to 5,000	6
	5,001 to 10,000	17
	10,001 to 15,000	11
	15,001 to 20,000	2
	20,001 to 25,000	2
	25,001 to 50,000	1
Population <5 Mile ranges selected	5,001 to 25,000	5
	25,001 to 50,000	8
	50,001 to 75,000	9
	75,001 to 100,000	4
	125,001 to 250,000	10
	250,001 to 500,000	3
Car Ownership <5 Mile ranges selected	0.6 to 1.0	4
	1.1 to 1.5	31
	1.6 to 2.0	4
PTAL Rating	No PTAL Present	39

Calculation Reference: AUDIT-700702-230829-0823

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST	
	BH BRIGHTON & HOVE	1 days
	ES EAST SUSSEX	8 days
	HC HAMPSHIRE	6 days
	HF HERTFORDSHIRE	1 days
	KC KENT	2 days
	OX OXFORDSHIRE	1 days
	SC SURREY	2 days
	SP SOUTHAMPTON	1 days
	WS WEST SUSSEX	3 days
03	SOUTH WEST	
	DV DEVON	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	NF NORFOLK	10 days
06	WEST MIDLANDS	
	WK WARWICKSHIRE	2 days

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

Primary Filtering selection:

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

Parameter: No of Dwellings
 Actual Range: 52 to 395 (units:)
 Range Selected by User: 9 to 1412 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/15 to 17/03/23

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

Selected survey days:

Monday	4 days
Tuesday	4 days
Wednesday	15 days
Thursday	12 days
Friday	4 days

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

Selected survey types:

Manual count	39 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town 39

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.

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

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	21 days - Selected
Servicing vehicles Excluded	27 days - Selected

Secondary Filtering selection:

Use Class:

C3	39 days
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This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,001 to 5,000	6 days
5,001 to 10,000	17 days
10,001 to 15,000	11 days
15,001 to 20,000	2 days
20,001 to 25,000	2 days
25,001 to 50,000	1 days

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

Population within 5 miles:

5,001 to 25,000	5 days
25,001 to 50,000	8 days
50,001 to 75,000	9 days
75,001 to 100,000	4 days
125,001 to 250,000	10 days
250,001 to 500,000	3 days

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

Car ownership within 5 miles:

0.6 to 1.0	4 days
1.1 to 1.5	31 days
1.6 to 2.0	4 days

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

Travel Plan:

Yes	34 days
No	5 days

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

PTAL Rating:

No PTAL Present	39 days
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This data displays the number of selected surveys with PTAL Ratings.

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

Site(1):	BH-03-M-01	Site area:	8.80 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	125
Location:	PORTSLADE	Housing density:	31
Postcode:	BN41 2AJ	Total Bedrooms:	310
Main Location Type:	Edge of Town	Survey Date:	09/03/23
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	228
Site(2):	CA-03-M-01	Site area:	1.75 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	52
Location:	WATERBEACH	Housing density:	32
Postcode:	CB25 9GJ	Total Bedrooms:	165
Main Location Type:	Edge of Town	Survey Date:	20/06/18
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	60
Site(3):	DV-03-M-02	Site area:	2.01 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	90
Location:	TOTNES	Housing density:	136
Postcode:	TQ9 5WY	Total Bedrooms:	237
Main Location Type:	Edge of Town	Survey Date:	29/03/19
Sub-Location Type:	Residential Zone	Survey Day:	Friday
PTAL:	n/a	Parking Spaces:	122
Site(4):	ES-03-M-07	Site area:	4.95 hect
Development Name:	MIXED HOUSING	No of Dwellings:	188
Location:	PEACEHAVEN	Housing density:	43
Postcode:	BN10 8SA	Total Bedrooms:	496
Main Location Type:	Edge of Town	Survey Date:	12/11/15
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	307
Site(5):	ES-03-M-10	Site area:	4.60 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	108
Location:	POLEGATE	Housing density:	47
Postcode:	BN26 6FB	Total Bedrooms:	306
Main Location Type:	Edge of Town	Survey Date:	11/07/16
Sub-Location Type:	Residential Zone	Survey Day:	Monday
PTAL:	n/a	Parking Spaces:	257
Site(6):	ES-03-M-11	Site area:	18.68 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	354
Location:	HAILSHAM	Housing density:	53
Postcode:	BN27 3UB	Total Bedrooms:	1118
Main Location Type:	Edge of Town	Survey Date:	13/07/16
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	657
Site(7):	ES-03-M-14	Site area:	3.34 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	119
Location:	EASTBOURNE	Housing density:	114
Postcode:	BN21 2BH	Total Bedrooms:	316
Main Location Type:	Edge of Town	Survey Date:	15/11/18
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	240
Site(8):	ES-03-M-15	Site area:	2.85 hect
Development Name:	MIXED HOUSES	No of Dwellings:	80
Location:	MARESFIELD	Housing density:	39
Postcode:	TN22 2DJ	Total Bedrooms:	222
Main Location Type:	Edge of Town	Survey Date:	13/03/19
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	145
Site(9):	ES-03-M-16	Site area:	5.53 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	119
Location:	BEXHILL	Housing density:	33
Postcode:	TN39 4JX	Total Bedrooms:	277
Main Location Type:	Edge of Town	Survey Date:	10/07/19
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	343

LIST OF SITES relevant to selection parameters (Cont.)

Site(10):	ES-03-M-19	Site area:	11.47 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	149
Location:	HAILSHAM	Housing density:	25
Postcode:	BN27 1PA	Total Bedrooms:	484
Main Location Type:	Edge of Town	Survey Date:	17/06/21
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	411
Site(11):	ES-03-M-21	Site area:	20.57 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	392
Location:	HAILSHAM	Housing density:	28
Postcode:	BN27 4FR	Total Bedrooms:	1136
Main Location Type:	Edge of Town	Survey Date:	28/03/22
Sub-Location Type:	Residential Zone	Survey Day:	Monday
PTAL:	n/a	Parking Spaces:	994
Site(12):	HC-03-M-06	Site area:	11.00 hect
Development Name:	HOUSES & FLATS	No of Dwellings:	328
Location:	NEAR FAREHAM	Housing density:	42
Postcode:	PO14 4PB	Total Bedrooms:	773
Main Location Type:	Edge of Town	Survey Date:	04/11/15
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	578
Site(13):	HC-03-M-11	Site area:	9.64 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	238
Location:	BASINGSTOKE	Housing density:	56
Postcode:	RG24 9FD	Total Bedrooms:	726
Main Location Type:	Edge of Town	Survey Date:	07/03/19
Sub-Location Type:	No Sub Category	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	569
Site(14):	HC-03-M-14	Site area:	7.32 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	200
Location:	WINCHESTER	Housing density:	54
Postcode:	SO22 5QN	Total Bedrooms:	579
Main Location Type:	Edge of Town	Survey Date:	26/05/21
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	462
Site(15):	HC-03-M-15	Site area:	5.23 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	150
Location:	YATELEY	Housing density:	33
Postcode:	GU46 7AU	Total Bedrooms:	438
Main Location Type:	Edge of Town	Survey Date:	16/05/22
Sub-Location Type:	Residential Zone	Survey Day:	Monday
PTAL:	n/a	Parking Spaces:	596
Site(16):	HC-03-M-17	Site area:	12.18 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	275
Location:	ALTON	Housing density:	33
Postcode:	GU34 2FR	Total Bedrooms:	781
Main Location Type:	Edge of Town	Survey Date:	12/10/22
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	719
Site(17):	HC-03-M-18	Site area:	4.09 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	149
Location:	HAVANT	Housing density:	59
Postcode:	PO9 3FP	Total Bedrooms:	369
Main Location Type:	Edge of Town	Survey Date:	17/03/23
Sub-Location Type:	Residential Zone	Survey Day:	Friday
PTAL:	n/a	Parking Spaces:	326
Site(18):	HF-03-M-03	Site area:	3.80 hect
Development Name:	TERRACED & DETACHED	No of Dwellings:	80
Location:	SAWBRIDGEWORTH	Housing density:	26
Postcode:	CM21 0DW	Total Bedrooms:	242
Main Location Type:	Edge of Town	Survey Date:	03/11/22
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	195

LIST OF SITES relevant to selection parameters (Cont.)

Site(19):	KC-03-M-03	Site area:	6.32 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	140
Location:	MAIDSTONE	Housing density:	47
Postcode:	ME16 0FQ	Total Bedrooms:	490
Main Location Type:	Edge of Town	Survey Date:	22/05/18
Sub-Location Type:	Residential Zone	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	215
Site(20):	KC-03-M-04	Site area:	9.30 hect
Development Name:	MIXED HOUSES AND FLATS	No of Dwellings:	250
Location:	MAIDSTONE	Housing density:	34
Postcode:	ME16 9DZ	Total Bedrooms:	765
Main Location Type:	Edge of Town	Survey Date:	10/06/21
Sub-Location Type:	No Sub Category	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	644
Site(21):	NF-03-M-02	Site area:	7.71 hect
Development Name:	MIXED HOUSES	No of Dwellings:	250
Location:	AYLSHAM	Housing density:	36
Postcode:	NR11 6FA	Total Bedrooms:	714
Main Location Type:	Edge of Town	Survey Date:	17/09/19
Sub-Location Type:	Out of Town	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	622
Site(22):	NF-03-M-03	Site area:	1.98 hect
Development Name:	MIXED HOUSES	No of Dwellings:	70
Location:	NORTH WALSHAM	Housing density:	40
Postcode:	NR28 0FW	Total Bedrooms:	217
Main Location Type:	Edge of Town	Survey Date:	18/09/19
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	165
Site(23):	NF-03-M-04	Site area:	2.71 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	70
Location:	HUNSTANTON	Housing density:	27
Postcode:	PE36 5PS	Total Bedrooms:	202
Main Location Type:	Edge of Town	Survey Date:	19/09/19
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	166
Site(24):	NF-03-M-14	Site area:	12.09 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	321
Location:	WYMONDHAM	Housing density:	36
Postcode:	NR18 0UE	Total Bedrooms:	944
Main Location Type:	Edge of Town	Survey Date:	19/09/19
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	658
Site(25):	NF-03-M-39	Site area:	1.90 hect
Development Name:	MIXED HOUSES	No of Dwellings:	61
Location:	ATTLEBOROUGH	Housing density:	48
Postcode:	NR17 1FF	Total Bedrooms:	153
Main Location Type:	Edge of Town	Survey Date:	14/10/20
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	126
Site(26):	NF-03-M-46	Site area:	23.00 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	338
Location:	NORWICH	Housing density:	26
Postcode:	NR5 0UT	Total Bedrooms:	1021
Main Location Type:	Edge of Town	Survey Date:	15/09/21
Sub-Location Type:	No Sub Category	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	918
Site(27):	NF-03-M-51	Site area:	3.80 hect
Development Name:	MIXED HOUSES	No of Dwellings:	120
Location:	HARLESTON	Housing density:	34
Postcode:	IP20 9GE	Total Bedrooms:	341
Main Location Type:	Edge of Town	Survey Date:	29/09/21
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	166

LIST OF SITES relevant to selection parameters (Cont.)

Site(28):	NF-03-M-59	Site area:	6.63 hect
Development Name:	MIXED HOUSES	No of Dwellings:	153
Location:	WYMONDHAM	Housing density:	30
Postcode:	NR18 0GB	Total Bedrooms:	441
Main Location Type:	Edge of Town	Survey Date:	29/09/22
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	361
Site(29):	NF-03-M-62	Site area:	7.71 hect
Development Name:	MIXED HOUSES	No of Dwellings:	250
Location:	AYLSHAM	Housing density:	36
Postcode:	NR11 6FA	Total Bedrooms:	714
Main Location Type:	Edge of Town	Survey Date:	21/09/22
Sub-Location Type:	Out of Town	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	622
Site(30):	NF-03-M-63	Site area:	4.45 hect
Development Name:	MIXED HOUSES	No of Dwellings:	100
Location:	NORTH WALSHAM	Housing density:	34
Postcode:	NR28 0FW	Total Bedrooms:	268
Main Location Type:	Edge of Town	Survey Date:	21/09/22
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	256
Site(31):	OX-03-M-01	Site area:	5.98 hect
Development Name:	MIXED HOUSES	No of Dwellings:	100
Location:	THAME	Housing density:	24
Postcode:	OX9 3SD	Total Bedrooms:	288
Main Location Type:	Edge of Town	Survey Date:	28/06/18
Sub-Location Type:	Industrial Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	89
Site(32):	SC-03-M-10	Site area:	2.86 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	108
Location:	GODALMING	Housing density:	38
Postcode:	GU7 2FL	Total Bedrooms:	249
Main Location Type:	Edge of Town	Survey Date:	09/06/22
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	224
Site(33):	SC-03-M-13	Site area:	3.85 hect
Development Name:	DETACHED HOUSES & FLATS	No of Dwellings:	168
Location:	OXTED	Housing density:	52
Postcode:	RH8 9BF	Total Bedrooms:	479
Main Location Type:	Edge of Town	Survey Date:	22/11/22
Sub-Location Type:	Residential Zone	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	337
Site(34):	SP-03-M-02	Site area:	18.90 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	181
Location:	NEAR SOUTHAMPTON	Housing density:	
Postcode:	SO31 1ET	Total Bedrooms:	530
Main Location Type:	Edge of Town	Survey Date:	23/10/19
Sub-Location Type:	Out of Town	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	357
Site(35):	WK-03-M-01	Site area:	6.80 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	395
Location:	STRATFORD UPON AVON	Housing density:	70
Postcode:	CV37 0TF	Total Bedrooms:	707
Main Location Type:	Edge of Town	Survey Date:	29/06/18
Sub-Location Type:	Residential Zone	Survey Day:	Friday
PTAL:	n/a	Parking Spaces:	980
Site(36):	WK-03-M-02	Site area:	5.49 hect
Development Name:	MIXED HOUSES	No of Dwellings:	130
Location:	STRATFORD UPON AVON	Housing density:	34
Postcode:	CV37 0RJ	Total Bedrooms:	430
Main Location Type:	Edge of Town	Survey Date:	29/06/18
Sub-Location Type:	Residential Zone	Survey Day:	Friday
PTAL:	n/a	Parking Spaces:	604

LIST OF SITES relevant to selection parameters (Cont.)

Site(37):	WS-03-M-06	Site area:	2.54 hect
Development Name:	SEMI DETACHED/DETACHED	No of Dwellings:	67
Location:	CHICHESTER	Housing density:	36
Postcode:	PO19 8SR	Total Bedrooms:	186
Main Location Type:	Edge of Town	Survey Date:	27/01/15
Sub-Location Type:	Residential Zone	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	164
Site(38):	WS-03-M-22	Site area:	3.92 hect
Development Name:	MIXED HOUSES & FLATS	No of Dwellings:	91
Location:	CRAWLEY	Housing density:	38
Postcode:	RH11 OLN	Total Bedrooms:	300
Main Location Type:	Edge of Town	Survey Date:	19/10/20
Sub-Location Type:	Residential Zone	Survey Day:	Monday
PTAL:	n/a	Parking Spaces:	242
Site(39):	WS-03-M-25	Site area:	4.80 hect
Development Name:	MIXED HOUSES	No of Dwellings:	110
Location:	BRACKLESHAM BAY	Housing density:	30
Postcode:	PO20 8JB	Total Bedrooms:	296
Main Location Type:	Edge of Town	Survey Date:	24/11/21
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	278

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 1.75

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	39	171	0.078	39	171	0.296	39	171	0.374
08:00 - 09:00	39	171	0.139	39	171	0.373	39	171	0.512
09:00 - 10:00	39	171	0.135	39	171	0.160	39	171	0.295
10:00 - 11:00	39	171	0.123	39	171	0.144	39	171	0.267
11:00 - 12:00	39	171	0.125	39	171	0.138	39	171	0.263
12:00 - 13:00	39	171	0.148	39	171	0.133	39	171	0.281
13:00 - 14:00	39	171	0.146	39	171	0.149	39	171	0.295
14:00 - 15:00	39	171	0.142	39	171	0.180	39	171	0.322
15:00 - 16:00	39	171	0.272	39	171	0.166	39	171	0.438
16:00 - 17:00	39	171	0.275	39	171	0.151	39	171	0.426
17:00 - 18:00	39	171	0.316	39	171	0.164	39	171	0.480
18:00 - 19:00	39	171	0.284	39	171	0.165	39	171	0.449
19:00 - 20:00	1	119	0.126	1	119	0.008	1	119	0.134
20:00 - 21:00	1	119	0.101	1	119	0.017	1	119	0.118
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.410			2.244			4.654

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

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

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Parameter summary

Trip rate parameter range selected: 52 - 395 (units:)
 Survey date date range: 01/01/15 - 17/03/23
 Number of weekdays (Monday-Friday): 39
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 9
 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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL TAXIS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	39	171	0.004	39	171	0.004	39	171	0.008
08:00 - 09:00	39	171	0.006	39	171	0.006	39	171	0.012
09:00 - 10:00	39	171	0.003	39	171	0.003	39	171	0.006
10:00 - 11:00	39	171	0.002	39	171	0.002	39	171	0.004
11:00 - 12:00	39	171	0.002	39	171	0.002	39	171	0.004
12:00 - 13:00	39	171	0.002	39	171	0.002	39	171	0.004
13:00 - 14:00	39	171	0.002	39	171	0.002	39	171	0.004
14:00 - 15:00	39	171	0.002	39	171	0.002	39	171	0.004
15:00 - 16:00	39	171	0.006	39	171	0.006	39	171	0.012
16:00 - 17:00	39	171	0.003	39	171	0.002	39	171	0.005
17:00 - 18:00	39	171	0.002	39	171	0.002	39	171	0.004
18:00 - 19:00	39	171	0.002	39	171	0.002	39	171	0.004
19:00 - 20:00	1	119	0.000	1	119	0.000	1	119	0.000
20:00 - 21:00	1	119	0.000	1	119	0.000	1	119	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.036			0.035			0.071

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING
 MULTI-MODAL OGVS
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	39	171	0.001	39	171	0.001	39	171	0.002
08:00 - 09:00	39	171	0.002	39	171	0.001	39	171	0.003
09:00 - 10:00	39	171	0.002	39	171	0.003	39	171	0.005
10:00 - 11:00	39	171	0.003	39	171	0.002	39	171	0.005
11:00 - 12:00	39	171	0.002	39	171	0.002	39	171	0.004
12:00 - 13:00	39	171	0.001	39	171	0.001	39	171	0.002
13:00 - 14:00	39	171	0.001	39	171	0.002	39	171	0.003
14:00 - 15:00	39	171	0.001	39	171	0.001	39	171	0.002
15:00 - 16:00	39	171	0.001	39	171	0.001	39	171	0.002
16:00 - 17:00	39	171	0.000	39	171	0.001	39	171	0.001
17:00 - 18:00	39	171	0.001	39	171	0.000	39	171	0.001
18:00 - 19:00	39	171	0.000	39	171	0.000	39	171	0.000
19:00 - 20:00	1	119	0.000	1	119	0.000	1	119	0.000
20:00 - 21:00	1	119	0.000	1	119	0.000	1	119	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.015			0.015			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.*

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL PSVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	39	171	0.000	39	171	0.000	39	171	0.000
08:00 - 09:00	39	171	0.001	39	171	0.001	39	171	0.002
09:00 - 10:00	39	171	0.000	39	171	0.000	39	171	0.000
10:00 - 11:00	39	171	0.000	39	171	0.000	39	171	0.000
11:00 - 12:00	39	171	0.000	39	171	0.000	39	171	0.000
12:00 - 13:00	39	171	0.000	39	171	0.000	39	171	0.000
13:00 - 14:00	39	171	0.000	39	171	0.000	39	171	0.000
14:00 - 15:00	39	171	0.000	39	171	0.000	39	171	0.000
15:00 - 16:00	39	171	0.001	39	171	0.001	39	171	0.002
16:00 - 17:00	39	171	0.000	39	171	0.001	39	171	0.001
17:00 - 18:00	39	171	0.000	39	171	0.000	39	171	0.000
18:00 - 19:00	39	171	0.000	39	171	0.000	39	171	0.000
19:00 - 20:00	1	119	0.000	1	119	0.000	1	119	0.000
20:00 - 21:00	1	119	0.000	1	119	0.000	1	119	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.002			0.003			0.005

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING
 MULTI-MODAL CYCLISTS
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	39	171	0.002	39	171	0.008	39	171	0.010
08:00 - 09:00	39	171	0.003	39	171	0.012	39	171	0.015
09:00 - 10:00	39	171	0.003	39	171	0.004	39	171	0.007
10:00 - 11:00	39	171	0.003	39	171	0.003	39	171	0.006
11:00 - 12:00	39	171	0.002	39	171	0.004	39	171	0.006
12:00 - 13:00	39	171	0.003	39	171	0.003	39	171	0.006
13:00 - 14:00	39	171	0.002	39	171	0.003	39	171	0.005
14:00 - 15:00	39	171	0.004	39	171	0.004	39	171	0.008
15:00 - 16:00	39	171	0.011	39	171	0.004	39	171	0.015
16:00 - 17:00	39	171	0.006	39	171	0.004	39	171	0.010
17:00 - 18:00	39	171	0.010	39	171	0.005	39	171	0.015
18:00 - 19:00	39	171	0.006	39	171	0.005	39	171	0.011
19:00 - 20:00	1	119	0.000	1	119	0.000	1	119	0.000
20:00 - 21:00	1	119	0.000	1	119	0.000	1	119	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.055			0.059			0.114

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING
 MULTI-MODAL VEHICLE OCCUPANTS
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	39	171	0.089	39	171	0.422	39	171	0.511
08:00 - 09:00	39	171	0.171	39	171	0.645	39	171	0.816
09:00 - 10:00	39	171	0.165	39	171	0.228	39	171	0.393
10:00 - 11:00	39	171	0.152	39	171	0.199	39	171	0.351
11:00 - 12:00	39	171	0.164	39	171	0.188	39	171	0.352
12:00 - 13:00	39	171	0.196	39	171	0.179	39	171	0.375
13:00 - 14:00	39	171	0.199	39	171	0.204	39	171	0.403
14:00 - 15:00	39	171	0.193	39	171	0.232	39	171	0.425
15:00 - 16:00	39	171	0.477	39	171	0.228	39	171	0.705
16:00 - 17:00	39	171	0.418	39	171	0.220	39	171	0.638
17:00 - 18:00	39	171	0.462	39	171	0.235	39	171	0.697
18:00 - 19:00	39	171	0.415	39	171	0.232	39	171	0.647
19:00 - 20:00	1	119	0.168	1	119	0.017	1	119	0.185
20:00 - 21:00	1	119	0.151	1	119	0.017	1	119	0.168
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.420			3.246			6.666

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING
 MULTI-MODAL PEDESTRIANS
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	39	171	0.022	39	171	0.045	39	171	0.067
08:00 - 09:00	39	171	0.040	39	171	0.151	39	171	0.191
09:00 - 10:00	39	171	0.042	39	171	0.026	39	171	0.068
10:00 - 11:00	39	171	0.022	39	171	0.024	39	171	0.046
11:00 - 12:00	39	171	0.021	39	171	0.027	39	171	0.048
12:00 - 13:00	39	171	0.034	39	171	0.031	39	171	0.065
13:00 - 14:00	39	171	0.030	39	171	0.031	39	171	0.061
14:00 - 15:00	39	171	0.033	39	171	0.047	39	171	0.080
15:00 - 16:00	39	171	0.126	39	171	0.046	39	171	0.172
16:00 - 17:00	39	171	0.064	39	171	0.034	39	171	0.098
17:00 - 18:00	39	171	0.046	39	171	0.036	39	171	0.082
18:00 - 19:00	39	171	0.045	39	171	0.040	39	171	0.085
19:00 - 20:00	1	119	0.008	1	119	0.008	1	119	0.016
20:00 - 21:00	1	119	0.000	1	119	0.000	1	119	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.533			0.546			1.079

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING
MULTI-MODAL BUS/TRAM PASSENGERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	39	171	0.001	39	171	0.022	39	171	0.023
08:00 - 09:00	39	171	0.002	39	171	0.020	39	171	0.022
09:00 - 10:00	39	171	0.003	39	171	0.005	39	171	0.008
10:00 - 11:00	39	171	0.004	39	171	0.006	39	171	0.010
11:00 - 12:00	39	171	0.004	39	171	0.007	39	171	0.011
12:00 - 13:00	39	171	0.005	39	171	0.006	39	171	0.011
13:00 - 14:00	39	171	0.006	39	171	0.006	39	171	0.012
14:00 - 15:00	39	171	0.008	39	171	0.004	39	171	0.012
15:00 - 16:00	39	171	0.016	39	171	0.006	39	171	0.022
16:00 - 17:00	39	171	0.017	39	171	0.006	39	171	0.023
17:00 - 18:00	39	171	0.013	39	171	0.004	39	171	0.017
18:00 - 19:00	39	171	0.012	39	171	0.004	39	171	0.016
19:00 - 20:00	1	119	0.000	1	119	0.000	1	119	0.000
20:00 - 21:00	1	119	0.000	1	119	0.000	1	119	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.091			0.096			0.187

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING
MULTI-MODAL TOTAL RAIL PASSENGERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	39	171	0.000	39	171	0.006	39	171	0.006
08:00 - 09:00	39	171	0.000	39	171	0.002	39	171	0.002
09:00 - 10:00	39	171	0.000	39	171	0.001	39	171	0.001
10:00 - 11:00	39	171	0.000	39	171	0.001	39	171	0.001
11:00 - 12:00	39	171	0.000	39	171	0.001	39	171	0.001
12:00 - 13:00	39	171	0.001	39	171	0.001	39	171	0.002
13:00 - 14:00	39	171	0.000	39	171	0.000	39	171	0.000
14:00 - 15:00	39	171	0.000	39	171	0.001	39	171	0.001
15:00 - 16:00	39	171	0.001	39	171	0.000	39	171	0.001
16:00 - 17:00	39	171	0.004	39	171	0.001	39	171	0.005
17:00 - 18:00	39	171	0.003	39	171	0.000	39	171	0.003
18:00 - 19:00	39	171	0.004	39	171	0.001	39	171	0.005
19:00 - 20:00	1	119	0.000	1	119	0.000	1	119	0.000
20:00 - 21:00	1	119	0.000	1	119	0.000	1	119	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.013			0.015			0.028

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL COACH PASSENGERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	39	171	0.000	39	171	0.001	39	171	0.001
08:00 - 09:00	39	171	0.000	39	171	0.003	39	171	0.003
09:00 - 10:00	39	171	0.000	39	171	0.000	39	171	0.000
10:00 - 11:00	39	171	0.000	39	171	0.000	39	171	0.000
11:00 - 12:00	39	171	0.000	39	171	0.000	39	171	0.000
12:00 - 13:00	39	171	0.000	39	171	0.000	39	171	0.000
13:00 - 14:00	39	171	0.000	39	171	0.000	39	171	0.000
14:00 - 15:00	39	171	0.000	39	171	0.000	39	171	0.000
15:00 - 16:00	39	171	0.003	39	171	0.000	39	171	0.003
16:00 - 17:00	39	171	0.001	39	171	0.000	39	171	0.001
17:00 - 18:00	39	171	0.000	39	171	0.000	39	171	0.000
18:00 - 19:00	39	171	0.000	39	171	0.000	39	171	0.000
19:00 - 20:00	1	119	0.000	1	119	0.000	1	119	0.000
20:00 - 21:00	1	119	0.000	1	119	0.000	1	119	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.004			0.004			0.008

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING
MULTI-MODAL PUBLIC TRANSPORT USERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	39	171	0.002	39	171	0.029	39	171	0.031
08:00 - 09:00	39	171	0.002	39	171	0.025	39	171	0.027
09:00 - 10:00	39	171	0.003	39	171	0.006	39	171	0.009
10:00 - 11:00	39	171	0.004	39	171	0.008	39	171	0.012
11:00 - 12:00	39	171	0.004	39	171	0.008	39	171	0.012
12:00 - 13:00	39	171	0.006	39	171	0.007	39	171	0.013
13:00 - 14:00	39	171	0.007	39	171	0.007	39	171	0.014
14:00 - 15:00	39	171	0.008	39	171	0.005	39	171	0.013
15:00 - 16:00	39	171	0.021	39	171	0.006	39	171	0.027
16:00 - 17:00	39	171	0.021	39	171	0.007	39	171	0.028
17:00 - 18:00	39	171	0.016	39	171	0.004	39	171	0.020
18:00 - 19:00	39	171	0.015	39	171	0.006	39	171	0.021
19:00 - 20:00	1	119	0.000	1	119	0.000	1	119	0.000
20:00 - 21:00	1	119	0.000	1	119	0.000	1	119	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.109			0.118			0.227

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 1.75

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	39	171	0.115	39	171	0.503	39	171	0.618
08:00 - 09:00	39	171	0.216	39	171	0.833	39	171	1.049
09:00 - 10:00	39	171	0.213	39	171	0.264	39	171	0.477
10:00 - 11:00	39	171	0.181	39	171	0.233	39	171	0.414
11:00 - 12:00	39	171	0.192	39	171	0.226	39	171	0.418
12:00 - 13:00	39	171	0.239	39	171	0.220	39	171	0.459
13:00 - 14:00	39	171	0.237	39	171	0.245	39	171	0.482
14:00 - 15:00	39	171	0.239	39	171	0.287	39	171	0.526
15:00 - 16:00	39	171	0.635	39	171	0.285	39	171	0.920
16:00 - 17:00	39	171	0.510	39	171	0.266	39	171	0.776
17:00 - 18:00	39	171	0.534	39	171	0.280	39	171	0.814
18:00 - 19:00	39	171	0.481	39	171	0.283	39	171	0.764
19:00 - 20:00	1	119	0.176	1	119	0.025	1	119	0.201
20:00 - 21:00	1	119	0.151	1	119	0.017	1	119	0.168
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.119			3.967			8.086

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL CARS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	39	171	0.061	39	171	0.250	39	171	0.311
08:00 - 09:00	39	171	0.114	39	171	0.337	39	171	0.451
09:00 - 10:00	39	171	0.112	39	171	0.133	39	171	0.245
10:00 - 11:00	39	171	0.094	39	171	0.114	39	171	0.208
11:00 - 12:00	39	171	0.099	39	171	0.110	39	171	0.209
12:00 - 13:00	39	171	0.123	39	171	0.107	39	171	0.230
13:00 - 14:00	39	171	0.119	39	171	0.123	39	171	0.242
14:00 - 15:00	39	171	0.119	39	171	0.158	39	171	0.277
15:00 - 16:00	39	171	0.239	39	171	0.137	39	171	0.376
16:00 - 17:00	39	171	0.234	39	171	0.130	39	171	0.364
17:00 - 18:00	39	171	0.278	39	171	0.145	39	171	0.423
18:00 - 19:00	39	171	0.259	39	171	0.149	39	171	0.408
19:00 - 20:00	1	119	0.126	1	119	0.008	1	119	0.134
20:00 - 21:00	1	119	0.101	1	119	0.017	1	119	0.118
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.078			1.918			3.996

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING
 MULTI-MODAL LGVS
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	39	171	0.012	39	171	0.037	39	171	0.049
08:00 - 09:00	39	171	0.015	39	171	0.025	39	171	0.040
09:00 - 10:00	39	171	0.018	39	171	0.021	39	171	0.039
10:00 - 11:00	39	171	0.024	39	171	0.024	39	171	0.048
11:00 - 12:00	39	171	0.022	39	171	0.022	39	171	0.044
12:00 - 13:00	39	171	0.021	39	171	0.022	39	171	0.043
13:00 - 14:00	39	171	0.023	39	171	0.021	39	171	0.044
14:00 - 15:00	39	171	0.019	39	171	0.018	39	171	0.037
15:00 - 16:00	39	171	0.023	39	171	0.020	39	171	0.043
16:00 - 17:00	39	171	0.034	39	171	0.015	39	171	0.049
17:00 - 18:00	39	171	0.033	39	171	0.015	39	171	0.048
18:00 - 19:00	39	171	0.020	39	171	0.012	39	171	0.032
19:00 - 20:00	1	119	0.000	1	119	0.000	1	119	0.000
20:00 - 21:00	1	119	0.000	1	119	0.000	1	119	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.264			0.252			0.516

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL MOTOR CYCLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

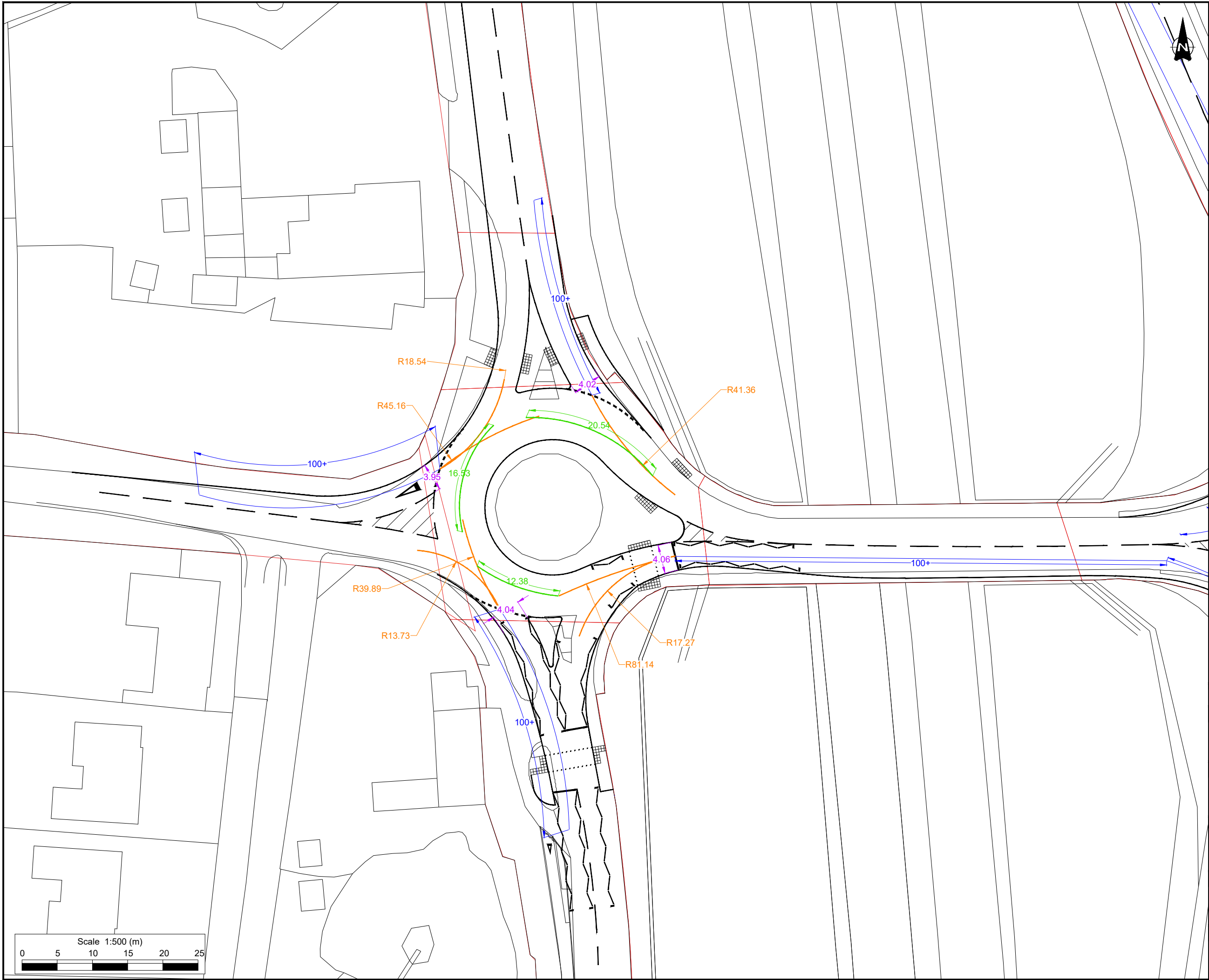
Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	39	171	0.001	39	171	0.003	39	171	0.004
08:00 - 09:00	39	171	0.001	39	171	0.002	39	171	0.003
09:00 - 10:00	39	171	0.001	39	171	0.001	39	171	0.002
10:00 - 11:00	39	171	0.000	39	171	0.001	39	171	0.001
11:00 - 12:00	39	171	0.000	39	171	0.001	39	171	0.001
12:00 - 13:00	39	171	0.001	39	171	0.001	39	171	0.002
13:00 - 14:00	39	171	0.001	39	171	0.001	39	171	0.002
14:00 - 15:00	39	171	0.001	39	171	0.001	39	171	0.002
15:00 - 16:00	39	171	0.001	39	171	0.001	39	171	0.002
16:00 - 17:00	39	171	0.002	39	171	0.001	39	171	0.003
17:00 - 18:00	39	171	0.003	39	171	0.002	39	171	0.005
18:00 - 19:00	39	171	0.003	39	171	0.001	39	171	0.004
19:00 - 20:00	1	119	0.000	1	119	0.000	1	119	0.000
20:00 - 21:00	1	119	0.000	1	119	0.000	1	119	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.015			0.016			0.031

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 F – Junction Geometries





- Notes:
1. Do not scale from this drawing. If in doubt refer to the project manager for clarification.
 2. All dimensions are shown in metres unless otherwise stated.
 3. This drawing forms part of a design pack and should be read in conjunction with all drawings listed on the project drawing register.
 4. Layout based on Ordnance Survey MasterMap, © Crown Copyright 2018. All rights reserved. Licence number 100022432.

- Key:
- OS survey
 - Proposed Road Markings
 - Highway Boundary
 - Lane Length
 - Entry Width
 - External Turning Radius
 - Inner Circularity Length

PO	20/12/23	Initial issue	BG	CS	NL	NL
Rev	Date	Revision details	Drawn	Check.	Review	Approv

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Client
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Project
Mid Sussex Local Strategic Transport Plan

Title
**Junction 1 - Hickstead
 Western Junction
 Geometries**

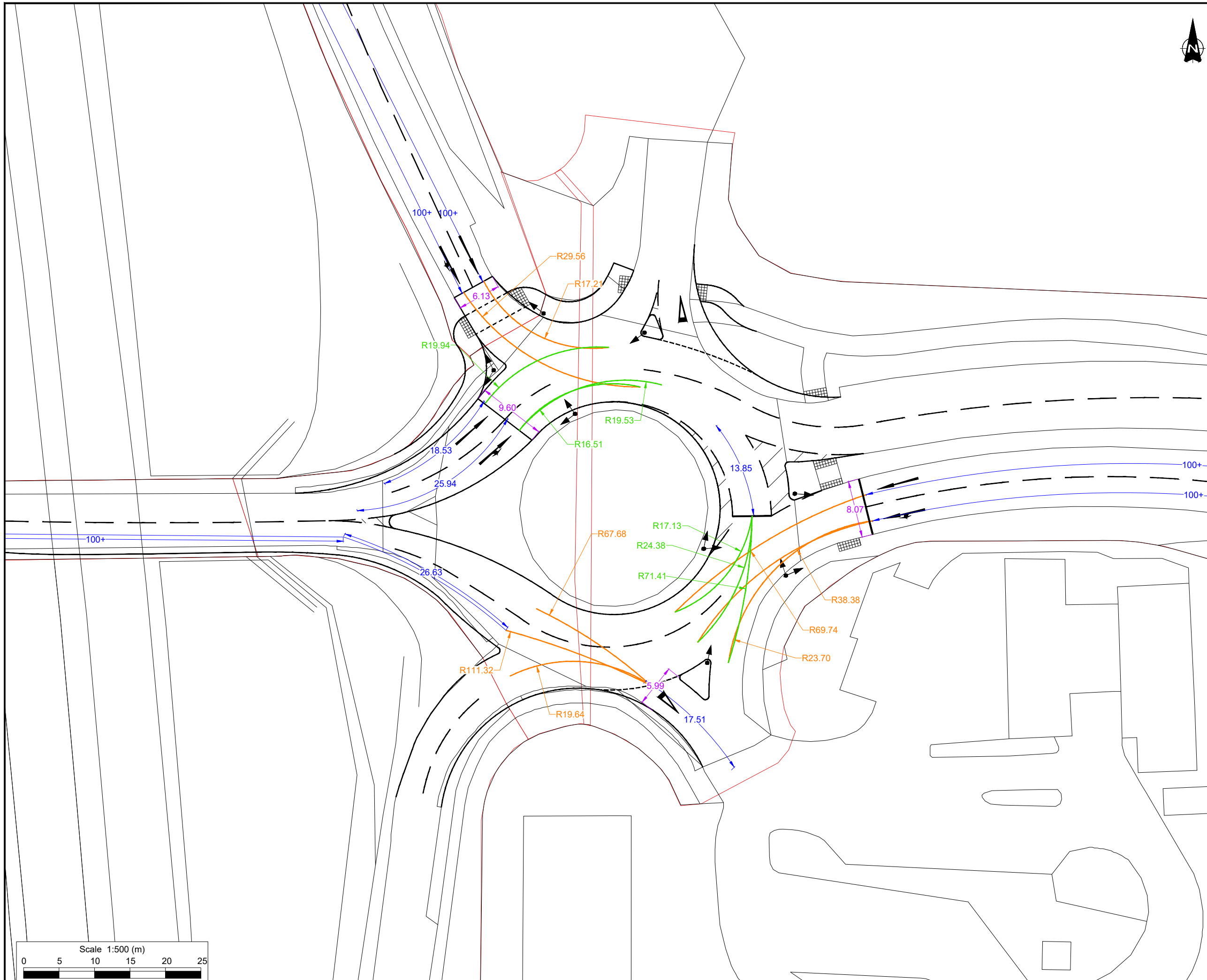
Drawn	BG	Checked	CS	Reviewed	NL	Approved	NL	
Original drg. size	A3	Date	20/12/2023	Scale	1:500	Drawing Status	Preliminary	
Drawing Number	GB01T23G40-dwg-100-01.1						Rev	P0



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Key:

- OS survey
- Proposed Road Markings
- Highway Boundary
- Lane Length
- Entry Width
- External Turning Radius
- Inner Turning Radius



PO	20/12/23	Initial issue	BG	CS	NL	NL
Rev	Date	Revision details	Drawn	Check.	Review	Approv

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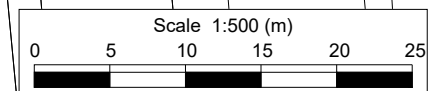
Client
Mid Sussex District Council

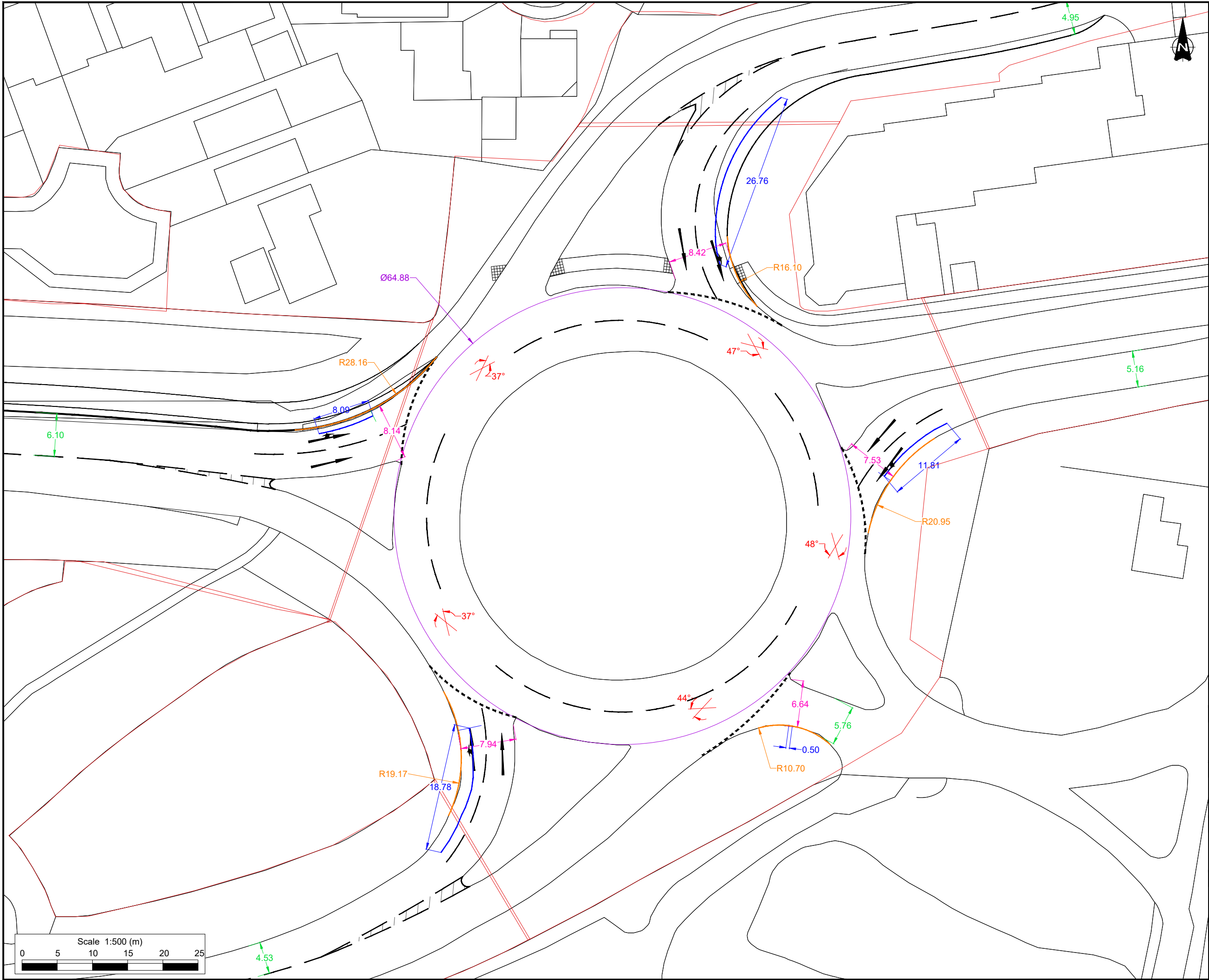
Project
Mid Sussex Local Strategic Transport Plan

Title
**Junction 1 - Hickstead
 Eastern Junction
 Geometries**

Drawn	BG	Checked	CS	Reviewed	NL	Approved	NL
Original drg. size	A3	Date	20/12/2023	Scale	1:500	Drawing Status	Preliminary

Drawing Number	GB01T23G40-dwg-100-02.1	Rev	P0
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- Notes:
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- Key:
- OS survey
 - Proposed Road Markings
 - Highway Boundary
 - Inscribed Circular Diameter
 - Approach Road Half Width
 - Effective Flare Length
 - Entry Width
 - Turning Radius

PO	20/12/23	Initial issue	BG	CS	NL	NL
Rev	Date	Revision details	Drawn	Check.	Review	Approv

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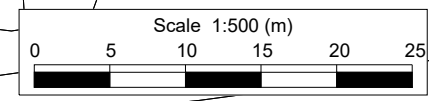
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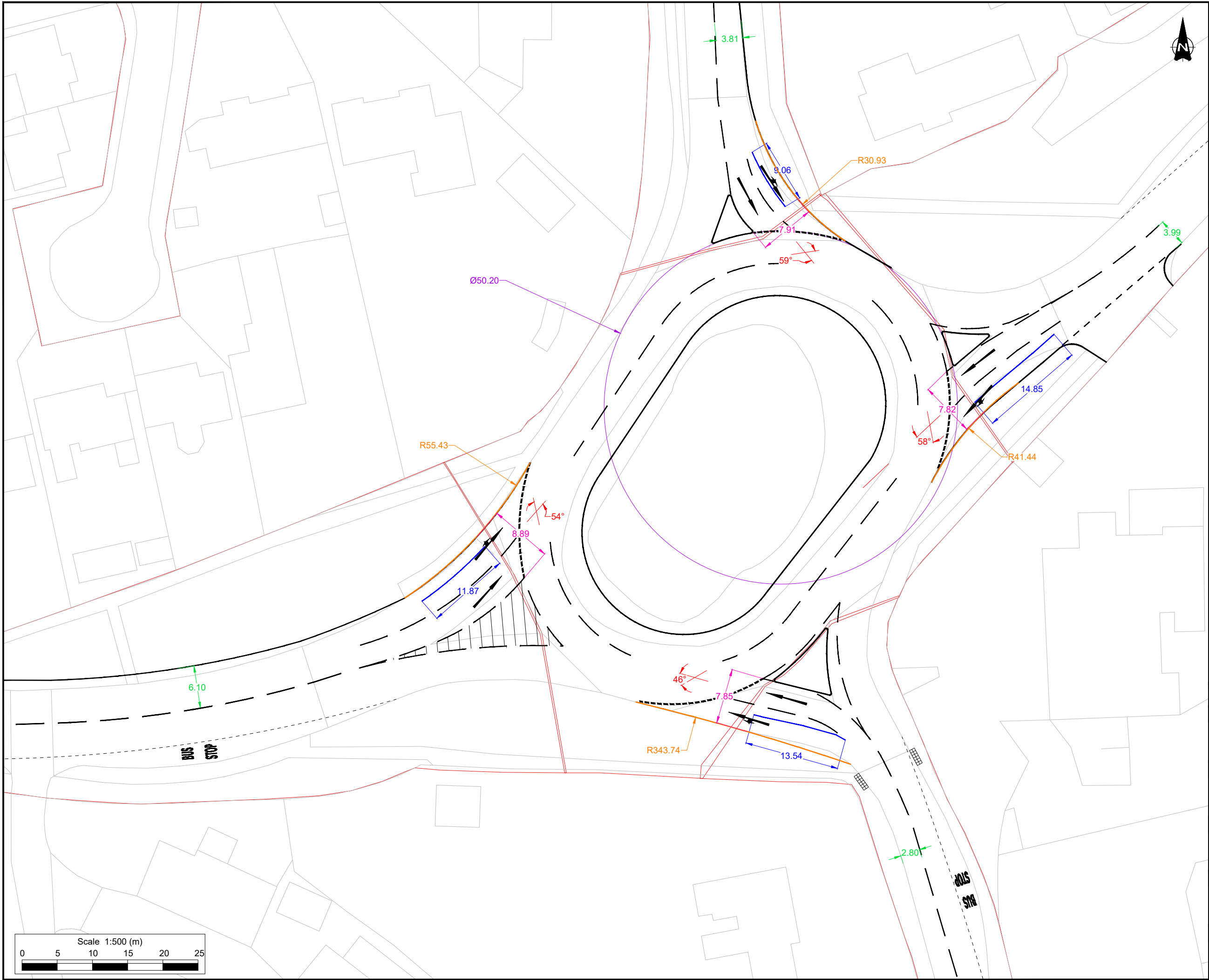
Client
Mid Sussex District Council

Project
Mid Sussex Local Strategic Transport Plan

Title
Junction 2 - Cophorne Geometries

Drawn	Checked	Reviewed	Approved
BG	CS	NL	NL
Original drg. size	Date	Scale	Drawing Status
A3	20/12/2023	1:500	Preliminary
Drawing Number	Rev		
GB01T23G40-dwg-100-03.1	P0		





- Notes:
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- Key:
- OS survey
 - Proposed Road Markings
 - Highway Boundary
 - Inscribed Circular Diameter
 - Approach Road Half Width
 - Effective Flare Length
 - Entry Width
 - Turning Radius

PO	Date	Revision details	Drawn	Check.	Review	Approv
P0	20/12/23	Initial issue	BG	CS	NL	NL

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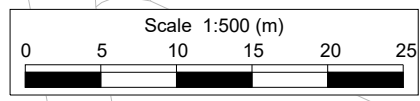
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Project
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Title
Junction 3 - Dukes Head Geometries

Drawn	Checked	Reviewed	Approved
BG	CS	NL	NL
Original drg. size	Date	Scale	Drawing Status
A3	20/12/2023	1:500	Preliminary
Drawing Number	Rev		
GB01T23G40-dwg-100-04.1	P0		



Appendix G – Local Junction Model Output Reports

Junctions 10
ARCADY 10 - Roundabout Module
Version: 10.1.0.1820 © Copyright TRL Software Limited, 2023
For sales and distribution information, program advice and maintenance, contact TRL Software: +44 (0)1344 379777 software@trl.co.uk trlsoftware.com
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: Hickstead Junction (Left) Validation (Service Station Update).j10
Path: \\londonfile\ProjectData\## Mid Sussex LP\5. Technical\5. Modelling\Hickstead Junction\West Junction
Report generation date: 21/12/2023 17:07:08

- »2019 Base, AM
- »2019 Base, PM
- »2039 Reference Case, AM
- »2039 Reference Case, PM
- »2039 DM, AM
- »2039 DM, PM

Summary of junction performance

		AM				PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2019 Base										
Arm A	D1	0.2	7.49	0.14	A	D2	0.1	5.41	0.12	A
Arm B		0.0	0.00	0.00	A		0.0	0.00	0.00	A
Arm C		4.0	17.23	0.79	C		2.1	10.48	0.65	B
Arm D		1.7	18.08	0.64	C		0.5	8.48	0.32	A
2039 Reference Case										
Arm A	D3	1.2	15.86	0.53	C	D4	0.3	8.21	0.19	A
Arm B		0.0	0.00	0.00	A		0.0	0.00	0.00	A
Arm C		471.1	1513.73	1.53	F		690.6	2176.39	1.69	F
Arm D		1.3	20.26	0.56	C		0.2	10.53	0.15	B
2039 DM										
Arm A	D5	2.0	24.71	0.67	C	D6	0.4	9.12	0.27	A
Arm B		0.1	5.22	0.06	A		0.0	0.00	0.00	A
Arm C		693.9	2186.72	1.70	F		687.2	2166.27	1.69	F
Arm D		2.6	30.91	0.72	D		0.3	11.31	0.20	B

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

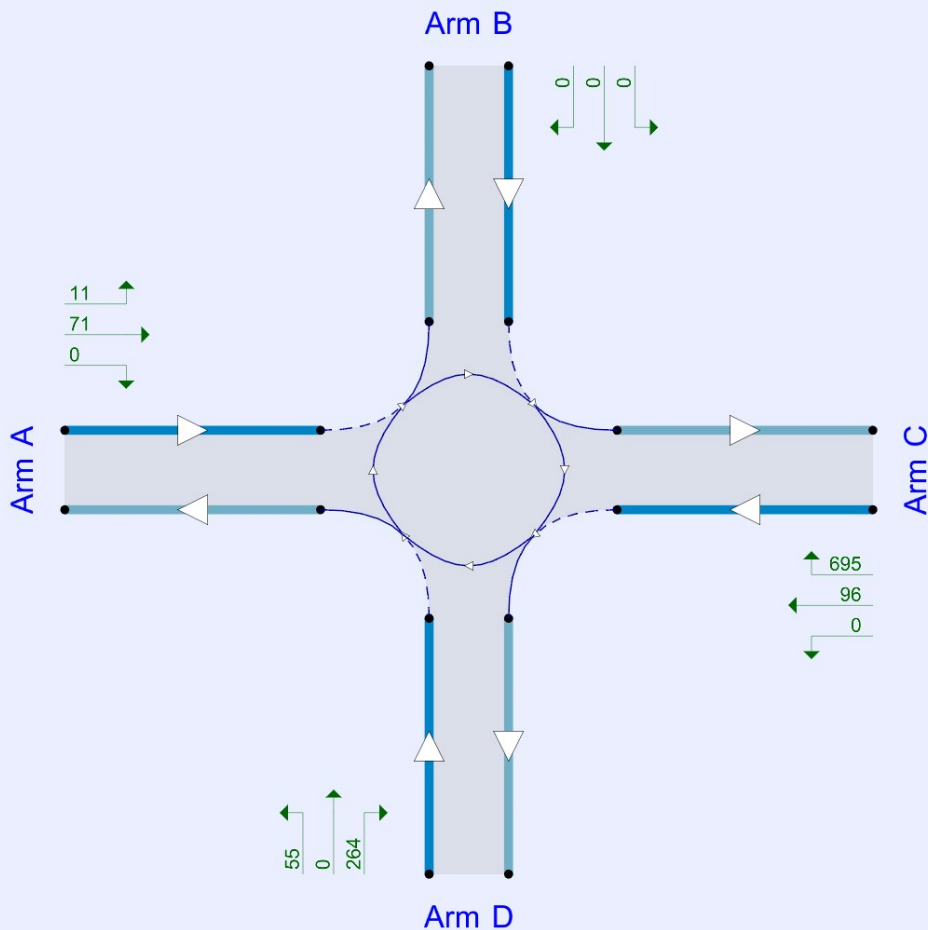
File summary

File Description

Title	
Location	
Site number	
Date	30/11/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADSYSTRA\thodgson
Description	

Units

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



Flows show original traffic demand (PCU/hr).

The junction diagram reflects the last run of Junctions.

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	2019 Base	AM	ONE HOUR	07:45	09:15	15	✓
D2	2019 Base	PM	ONE HOUR	16:45	18:15	15	✓
D3	2039 Reference Case	AM	ONE HOUR	07:45	09:15	15	✓
D4	2039 Reference Case	PM	ONE HOUR	16:45	18:15	15	✓
D5	2039 DM	AM	ONE HOUR	07:45	09:15	15	✓
D6	2039 DM	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2019 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	16.79	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	16.79	C

Arms

Arms

Arm	Name	Description	No give-way line
A	Hickstead Lane (W)		
B	A2300 (N)		
C	A2300 (E)		
D	A2300 (S)		

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
A	3.07	5.09	6.2	33.8	30.0	42.0		
B	3.18	3.50	14.3	38.1	30.0	41.0		
C	3.22	3.22	0.0	13.1	30.0	49.0		
D	2.60	3.93	6.4	18.9	30.0	42.0		

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Percentage intercept adjustment (%)
A	None		
B	None		
C	Percentage		125.00
D	None		

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.550	1204
B	0.518	1038
C	0.463	1108
D	0.498	984

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	82	100.000
B		ONE HOUR	✓	0	100.000
C		ONE HOUR	✓	791	100.000
D		ONE HOUR	✓	319	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	11	71	0
	B	0	0	0	0
	C	96	695	0	0
	D	55	0	264	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To			
		A	B	C	D
From	A	0	0	13	0
	B	0	0	0	0
	C	33	12	0	0
	D	3	4	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.14	7.49	0.2	A	75	113
B	0.00	0.00	0.0	A	0	0
C	0.79	17.23	4.0	C	726	1089
D	0.64	18.08	1.7	C	293	439

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	62	15	715	811	0.076	61	113	0.0	0.1	5.334	A
B	0	0	250	909	0.000	0	527	0.0	0.0	0.000	A
C	595	149	0	1108	0.537	590	250	0.0	1.3	7.889	A
D	240	60	590	691	0.348	238	0	0.0	0.5	7.977	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	74	18	858	732	0.100	73	136	0.1	0.1	6.069	A
B	0	0	300	883	0.000	0	632	0.0	0.0	0.000	A
C	711	178	0	1108	0.642	708	300	1.3	2.0	10.244	B
D	287	72	708	632	0.454	286	0	0.5	0.8	10.442	B

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	90	23	1046	629	0.143	90	165	0.1	0.2	7.413	A
B	0	0	366	849	0.000	0	770	0.0	0.0	0.000	A
C	871	218	0	1108	0.786	863	366	2.0	3.9	16.343	C
D	352	88	863	555	0.634	348	0	0.8	1.7	17.274	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	90	23	1055	624	0.144	90	167	0.2	0.2	7.486	A
B	0	0	368	848	0.000	0	776	0.0	0.0	0.000	A
C	871	218	0	1108	0.786	870	368	3.9	4.0	17.231	C
D	352	88	870	551	0.638	351	0	1.7	1.7	18.078	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	74	18	871	725	0.101	74	138	0.2	0.1	6.145	A
B	0	0	304	881	0.000	0	641	0.0	0.0	0.000	A
C	711	178	0	1108	0.642	719	304	4.0	2.1	10.794	B
D	287	72	719	627	0.458	290	0	1.7	0.9	10.888	B

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	62	15	725	805	0.076	62	115	0.1	0.1	5.381	A
B	0	0	253	907	0.000	0	534	0.0	0.0	0.000	A
C	595	149	0	1108	0.537	598	253	2.1	1.4	8.142	A
D	240	60	598	686	0.350	242	0	0.9	0.5	8.171	A

2019 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	9.62	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	9.62	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)	Run automatically
D2	2019 Base	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	85	100.000
B		ONE HOUR	✓	0	100.000
C		ONE HOUR	✓	658	100.000
D		ONE HOUR	✓	181	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	A	B	C	D	
From	A	0	16	70	0
	B	0	0	0	0
	C	92	566	0	0
	D	26	0.00	155	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
	A	B	C	D	
From	A	0	0	2	0
	B	0	0	0	0
	C	17	11	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.12	5.41	0.1	A	78	118
B	0.00	0.00	0.0	A	0	0
C	0.65	10.48	2.1	B	604	906
D	0.32	8.48	0.5	A	166	249

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	64	16	539	908	0.071	64	88	0.0	0.1	4.323	A
B	0	0	168	951	0.000	0	435	0.0	0.0	0.000	A
C	495	124	0	1108	0.447	492	168	0.0	0.9	6.495	A
D	136	34	492	740	0.184	135	0	0.0	0.2	5.955	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	77	19	647	849	0.091	77	105	0.1	0.1	4.726	A
B	0	0	202	934	0.000	0	522	0.0	0.0	0.000	A
C	591	148	0	1108	0.534	590	202	0.9	1.3	7.748	A
D	162	41	590	691	0.235	162	0	0.2	0.3	6.814	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	94	24	791	769	0.122	94	129	0.1	0.1	5.399	A
B	0	0	247	910	0.000	0	638	0.0	0.0	0.000	A
C	724	181	0	1108	0.654	721	247	1.3	2.0	10.320	B
D	199	50	721	625	0.318	198	0	0.3	0.5	8.428	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	94	24	794	768	0.123	94	129	0.1	0.1	5.415	A
B	0	0	248	910	0.000	0	640	0.0	0.0	0.000	A
C	724	181	0	1108	0.654	724	248	2.0	2.1	10.480	B
D	199	50	724	624	0.319	199	0	0.5	0.5	8.482	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	77	19	652	846	0.091	77	106	0.1	0.1	4.746	A
B	0	0	203	933	0.000	0	526	0.0	0.0	0.000	A
C	591	148	0	1108	0.534	595	203	2.1	1.3	7.886	A
D	162	41	595	688	0.236	163	0	0.5	0.3	6.870	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	64	16	545	905	0.071	64	89	0.1	0.1	4.341	A
B	0	0	170	950	0.000	0	439	0.0	0.0	0.000	A
C	495	124	0	1108	0.447	497	170	1.3	0.9	6.603	A
D	136	34	497	737	0.185	136	0	0.3	0.2	6.006	A

2039 Reference Case, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	1167.58	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1167.58	F

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	2039 Reference Case	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	242	100.000
B		ONE HOUR	✓	0	100.000
C		ONE HOUR	✓	1541	100.000
D		ONE HOUR	✓	222	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
From		A	B	C	D
	A	0	17	225	0
	B	0	0	0	0
	C	38	1381	122	0
	D	40	0	182	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To			
From		A	B	C	D
	A	0	4	3	0
	B	0	0	0	0
	C	2	6	0	0
	D	5	0	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.53	15.86	1.2	C	222	333
B	0.00	0.00	0.0	A	0	0
C	1.53	1513.73	471.1	F	1414	2121
D	0.56	20.26	1.3	C	204	306

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	182	46	1171	560	0.325	180	56	0.0	0.5	9.709	A
B	0	0	387	838	0.000	0	965	0.0	0.0	0.000	A
C	1160	290	0	1108	1.047	1062	387	0.0	24.5	53.454	F
D	167	42	1062	456	0.367	165	0	0.0	0.6	13.053	B

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	218	54	1241	522	0.417	217	63	0.5	0.7	12.118	B
B	0	0	452	804	0.000	0	1006	0.0	0.0	0.000	A
C	1385	346	0	1108	1.250	1106	452	24.5	94.3	203.164	F
D	200	50	1106	434	0.460	198	0	0.6	0.9	16.177	C

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	266	67	1280	501	0.532	265	71	0.7	1.1	15.604	C
B	0	0	533	762	0.000	0	1011	0.0	0.0	0.000	A
C	1697	424	0	1108	1.531	1108	533	94.3	241.5	551.746	F
D	244	61	1108	433	0.565	243	0	0.9	1.3	19.921	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	266	67	1281	500	0.533	266	71	1.1	1.2	15.859	C
B	0	0	536	761	0.000	0	1012	0.0	0.0	0.000	A
C	1697	424	0	1108	1.531	1108	536	241.5	388.7	1028.693	F
D	244	61	1108	433	0.565	244	0	1.3	1.3	20.262	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	218	54	1246	519	0.419	219	64	1.2	0.8	12.415	B
B	0	0	456	802	0.000	0	1008	0.0	0.0	0.000	A
C	1385	346	0	1108	1.250	1108	456	388.7	458.0	1380.018	F
D	200	50	1108	433	0.461	201	0	1.3	0.9	16.638	C

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	182	46	1218	534	0.341	183	58	0.8	0.5	10.586	B
B	0	0	396	833	0.000	0	1006	0.0	0.0	0.000	A
C	1160	290	0	1108	1.047	1108	396	458.0	471.1	1513.726	F
D	167	42	1108	433	0.386	168	0	0.9	0.7	14.514	B

2039 Reference Case, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	1986.21	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1986.21	F

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	2039 Reference Case	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	105	100.000
B		ONE HOUR	✓	0	100.000
C		ONE HOUR	✓	1705	100.000
D		ONE HOUR	✓	59	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	34	71	0
	B	0	0	0	0
	C	93	1612	0	0
	D	20	0	39	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To			
		A	B	C	D
From	A	0	41	1	0
	B	0	0	0	0
	C	0	4	0	0
	D	0	0	12	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.19	8.21	0.3	A	96	145
B	0.00	0.00	0.0	A	0	0
C	1.69	2176.39	690.6	F	1565	2347
D	0.15	10.53	0.2	B	54	81

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	79	20	1055	624	0.127	78	74	0.0	0.2	7.352	A
B	0	0	82	996	0.000	0	1052	0.0	0.0	0.000	A
C	1284	321	0	1108	1.158	1085	82	0.0	49.6	91.237	F
D	44	11	1085	444	0.100	44	0	0.0	0.1	9.678	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	94	24	1082	609	0.155	94	78	0.2	0.2	7.792	A
B	0	0	99	987	0.000	0	1078	0.0	0.0	0.000	A
C	1533	383	0	1108	1.383	1108	99	49.6	155.9	341.289	F
D	53	13	1108	433	0.122	53	0	0.1	0.1	10.191	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	116	29	1090	605	0.191	115	82	0.2	0.3	8.199	A
B	0	0	121	976	0.000	0	1085	0.0	0.0	0.000	A
C	1877	469	0	1108	1.694	1108	121	155.9	348.2	823.989	F
D	65	16	1108	433	0.150	65	0	0.1	0.2	10.526	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	116	29	1091	605	0.191	116	82	0.3	0.3	8.208	A
B	0	0	121	976	0.000	0	1085	0.0	0.0	0.000	A
C	1877	469	0	1108	1.694	1108	121	348.2	540.5	1448.028	F
D	65	16	1108	433	0.150	65	0	0.2	0.2	10.534	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	94	24	1083	609	0.155	95	78	0.3	0.2	7.810	A
B	0	0	99	987	0.000	0	1078	0.0	0.0	0.000	A
C	1533	383	0	1108	1.383	1108	99	540.5	646.7	1932.667	F
D	53	13	1108	433	0.123	53	0	0.2	0.2	10.212	B

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	79	20	1077	612	0.129	79	76	0.2	0.2	7.538	A
B	0	0	83	995	0.000	0	1073	0.0	0.0	0.000	A
C	1284	321	0	1108	1.158	1108	83	646.7	690.6	2176.386	F
D	44	11	1108	433	0.103	45	0	0.2	0.1	9.985	A

2039 DM, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	1622.75	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1622.75	F

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	2039 DM	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	280	100.000
B		ONE HOUR	✓	41	100.000
C		ONE HOUR	✓	1707	100.000
D		ONE HOUR	✓	282	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
From		A	B	C	D
	A	0	46	234	0
	B	0	0	41	0
	C	33	1585	89	0
	D	35	1	246	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To			
From		A	B	C	D
	A	0	4	3	0
	B	0	0	0	0
	C	2	6	0	0
	D	5	0	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.67	24.71	2.0	C	257	385
B	0.06	5.22	0.1	A	38	56
C	1.70	2186.72	693.9	F	1567	2350
D	0.72	30.91	2.6	D	259	388

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	211	53	1247	519	0.406	208	47	0.0	0.7	11.850	B
B	31	8	413	824	0.037	31	1042	0.0	0.0	4.535	A
C	1285	321	0	1108	1.160	1085	444	0.0	50.1	92.235	F
D	212	53	1085	444	0.478	209	0	0.0	0.9	16.012	C

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	252	63	1307	486	0.518	250	52	0.7	1.1	15.648	C
B	37	9	487	786	0.047	37	1070	0.0	0.0	4.804	A
C	1535	384	0	1108	1.385	1108	524	50.1	156.9	343.992	F
D	254	63	1108	433	0.586	252	0	0.9	1.4	20.867	C

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	308	77	1355	459	0.671	305	59	1.1	2.0	23.497	C
B	45	11	580	738	0.061	45	1080	0.0	0.1	5.197	A
C	1880	470	0	1108	1.697	1108	626	156.9	349.9	828.624	F
D	311	78	1108	433	0.718	307	0	1.4	2.4	29.342	D

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	308	77	1359	457	0.674	308	60	2.0	2.0	24.706	C
B	45	11	586	735	0.061	45	1080	0.1	0.1	5.220	A
C	1880	470	0	1108	1.697	1108	631	349.9	542.9	1454.800	F
D	311	78	1108	433	0.718	310	0	2.4	2.6	30.915	D

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	252	63	1312	483	0.521	255	53	2.0	1.2	16.559	C
B	37	9	496	781	0.047	37	1071	0.1	0.0	4.836	A
C	1535	384	0	1108	1.385	1108	533	542.9	649.6	1941.385	F
D	254	63	1108	433	0.586	258	0	2.6	1.6	22.305	C

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	211	53	1275	503	0.419	212	48	1.2	0.8	12.822	B
B	31	8	423	819	0.038	31	1064	0.0	0.0	4.566	A
C	1285	321	0	1108	1.160	1108	454	649.6	693.9	2186.721	F
D	212	53	1108	433	0.491	215	0	1.6	1.1	17.702	C

2039 DM, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	1914.67	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1914.67	F

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	2039 DM	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	146	100.000
B		ONE HOUR	✓	0	100.000
C		ONE HOUR	✓	1703	100.000
D		ONE HOUR	✓	79	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
From		A	B	C	D
	A	0	33	113	0
	B	0	0	0	0
	C	78	1625	0	0
	D	21	0.00	58	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To			
From		A	B	C	D
	A	0	41	1	0
	B	0	0	0	0
	C	0	4	0	0
	D	0	0	12	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.27	9.12	0.4	A	134	200
B	0.00	0.00	0.0	A	0	0
C	1.69	2166.27	687.2	F	1562	2343
D	0.20	11.31	0.3	B	73	109

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	110	27	1079	611	0.179	109	65	0.0	0.2	7.745	A
B	0	0	128	972	0.000	0	1060	0.0	0.0	0.000	A
C	1282	320	0	1108	1.157	1085	128	0.0	49.1	90.604	F
D	60	15	1085	444	0.134	59	0	0.0	0.2	10.130	B

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	131	33	1109	594	0.220	131	69	0.2	0.3	8.398	A
B	0	0	154	959	0.000	0	1086	0.0	0.0	0.000	A
C	1531	383	0	1108	1.381	1108	154	49.1	154.9	339.067	F
D	71	18	1108	433	0.165	71	0	0.2	0.2	10.790	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	160	40	1122	588	0.273	160	73	0.3	0.4	9.103	A
B	0	0	188	941	0.000	0	1093	0.0	0.0	0.000	A
C	1875	469	0	1108	1.692	1108	188	154.9	346.5	819.750	F
D	87	22	1108	433	0.202	87	0	0.2	0.3	11.293	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	160	40	1122	587	0.273	160	73	0.4	0.4	9.121	A
B	0	0	189	941	0.000	0	1093	0.0	0.0	0.000	A
C	1875	469	0	1108	1.692	1108	189	346.5	538.2	1441.574	F
D	87	22	1108	433	0.202	87	0	0.3	0.3	11.309	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	131	33	1110	594	0.220	131	69	0.4	0.3	8.431	A
B	0	0	155	958	0.000	0	1087	0.0	0.0	0.000	A
C	1531	383	0	1108	1.381	1108	155	538.2	643.8	1924.203	F
D	71	18	1108	433	0.165	71	0	0.3	0.2	10.824	B

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	110	27	1102	599	0.183	110	66	0.3	0.2	7.978	A
B	0	0	129	971	0.000	0	1082	0.0	0.0	0.000	A
C	1282	320	0	1108	1.157	1108	129	643.8	687.2	2166.270	F
D	60	15	1108	433	0.138	60	0	0.2	0.2	10.484	B

Junctions 10
ARCADY 10 - Roundabout Module
Version: 10.1.0.1820 © Copyright TRL Software Limited, 2023
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Filename: Hickstead Junction (Right) Validation (Service Station Update) AM.j10
Path: \\londonfile\ProjectData\## Mid Sussex LP\5. Technical\5. Modelling\Hickstead Junction\East Junction
Report generation date: 21/12/2023 17:07:53

- »2019 Base, AM
- »2039 Reference Case, AM
- »2039 Do Minimum, AM

Summary of junction performance

AM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2019 Base					
Arm A	D1	0.4	3.61	0.28	A
Arm B		1.5	5.80	0.56	A
Arm C		36.3	124.00	1.04	F
Arm D		0.1	4.91	0.11	A
2039 Reference Case					
Arm A	D2	0.8	4.64	0.43	A
Arm B		127.0	255.63	1.15	F
Arm C		1965.3	6566.68	2.77	F
Arm D		0.1	4.91	0.11	A
2039 Do Minimum					
Arm A	D3	0.9	4.90	0.45	A
Arm B		135.5	281.77	1.17	F
Arm C		1585.2	5309.64	2.46	F
Arm D		0.1	4.90	0.11	A

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

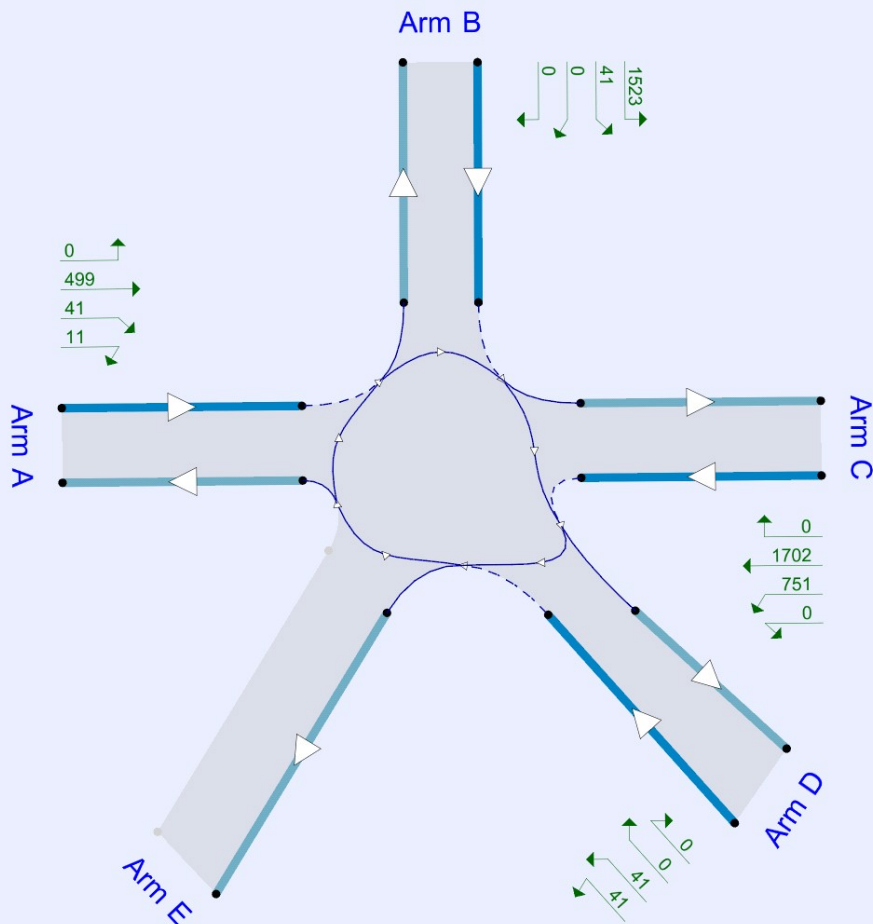
File summary

File Description

Title	
Location	
Site number	
Date	30/11/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADSYSTRA\thodgson
Description	

Units

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



Flows show original traffic demand (PCU/hr).

The junction diagram reflects the last run of Junctions.

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	2019 Base	AM	ONE HOUR	07:45	09:15	15	✓
D2	2039 Reference Case	AM	ONE HOUR	07:45	09:15	15	✓
D3	2039 Do Minimum	AM	ONE HOUR	07:45	09:15	15	✓

Analysis Set Details

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

2019 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	54.86	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	54.86	F

Arms

Arms

Arm	Name	Description	No give-way line
A	A2300 (W)		
B	A23 Slip (N)		
C	A3200 (E)		
D	Service Station		
E	A23 Slip (S)		

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
A	3.72	5.41	6.6	20.9	49.6	28.0		
B	6.56	9.56	1.7	13.1	49.6	55.0		
C	7.97	7.97	0.0	19.6	49.6	52.0		
D	4.94	4.94	0.0	13.9	40.6	44.0		
E								✓

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Percentage intercept adjustment (%)
A	None		
B	None		
C	Percentage		48.10
D	None		
E			

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.560	1422
B	0.612	1882
C	0.688	1072
D	0.558	1392
E		

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	361	100.000
B		ONE HOUR	✓	826	100.000
C		ONE HOUR	✓	913	100.000
D		ONE HOUR	✓	82	100.000
E					

Origin-Destination Data

Demand (PCU/hr)

	To					
	A	B	C	D	E	
From	A	0	0	305	41	15
	B	45	0	741	41	0
	C	746	0	0	0	167
	D	41	0	0	0	41
	E	0	0	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To					
	A	B	C	D	E	
From	A	0	0	3	0	0
	B	72	0	16	0	0
	C	12	0	0	0	0
	D	0	0	0	0	0
	E	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.28	3.61	0.4	A	331	497
B	0.56	5.80	1.5	A	758	1138
C	1.04	124.00	36.3	F	838	1257
D	0.11	4.91	0.1	A	75	113
E						

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	272	68	0	1422	0.191	271	619	0.0	0.2	3.206	A
B	622	156	271	1716	0.363	620	0	0.0	0.7	3.847	A
C	688	172	106	999	0.689	678	784	0.0	2.3	11.973	B
D	62	15	723	988	0.062	61	61	0.0	0.1	3.882	A
E			619				166				

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	325	81	0	1422	0.228	325	740	0.2	0.3	3.365	A
B	743	186	325	1683	0.441	742	0	0.7	0.9	4.487	A
C	821	205	127	984	0.834	811	939	2.3	4.8	21.528	C
D	74	18	865	910	0.081	74	74	0.1	0.1	4.306	A
E			740				199				

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	398	99	0	1422	0.280	397	856	0.3	0.4	3.605	A
B	910	227	397	1639	0.555	908	0	0.9	1.4	5.770	A
C	1006	251	156	964	1.043	933	1149	4.8	23.1	68.242	F
D	90	23	998	835	0.108	90	90	0.1	0.1	4.834	A
E			856				232				

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	398	99	0	1422	0.280	398	873	0.4	0.4	3.605	A
B	910	227	398	1638	0.555	910	0	1.4	1.5	5.804	A
C	1006	251	156	964	1.043	953	1151	23.1	36.3	124.003	F
D	90	23	1019	824	0.110	90	90	0.1	0.1	4.908	A
E			873				236				

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	325	81	0	1422	0.228	325	843	0.4	0.3	3.368	A
B	743	186	325	1683	0.442	745	0	1.5	0.9	4.518	A
C	821	205	128	984	0.835	937	942	36.3	7.3	83.708	F
D	74	18	991	839	0.088	74	74	0.1	0.1	4.704	A
E			843				222				

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	272	68	0	1422	0.191	272	642	0.3	0.2	3.215	A
B	622	156	272	1715	0.363	623	0	0.9	0.7	3.875	A
C	688	172	107	998	0.689	707	789	7.3	2.5	14.306	B
D	62	15	752	972	0.063	62	62	0.1	0.1	3.955	A
E			642				171				

2039 Reference Case, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	3600.47	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3600.47	F

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	2039 Reference Case	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	551	100.000
B		ONE HOUR	✓	1564	100.000
C		ONE HOUR	✓	2531	100.000
D		ONE HOUR	✓	82	100.000
E					

Origin-Destination Data

Demand (PCU/hr)

		To				
		A	B	C	D	E
From	A	0	0	499	41	11
	B	0	0	1523	41	0
	C	1702	0	78	0	751
	D	41	0	0	0	41
	E	0	0	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

From	To				
	A	B	C	D	E
A	0	0	3	0	0
B	72	0	16	0	0
C	12	0	0	0	0
D	0	0	0	0	0
E	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.43	4.64	0.8	A	506	758
B	1.15	255.63	127.0	F	1435	2153
C	2.77	6566.68	1965.3	F	2322	3484
D	0.11	4.91	0.1	A	75	113
E						

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	415	104	31	1404	0.295	413	716	0.0	0.4	3.727	A
B	1177	294	445	1610	0.731	1165	0	0.0	3.0	9.152	A
C	1905	476	70	1024	1.861	1019	1540	0.0	221.6	397.164	F
D	62	15	1027	819	0.075	61	61	0.0	0.1	4.750	A
E			747				341				

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	495	124	31	1405	0.353	495	719	0.4	0.6	4.067	A
B	1406	352	526	1560	0.901	1384	0	3.0	8.5	21.443	C
C	2275	569	83	1015	2.242	1015	1827	221.6	536.8	1358.521	F
D	74	18	1025	820	0.090	74	73	0.1	0.1	4.821	A
E			750				348				

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	607	152	31	1405	0.432	606	721	0.6	0.8	4.628	A
B	1722	430	637	1492	1.154	1480	0	8.5	69.0	104.790	F
C	2787	697	96	1006	2.771	1006	2021	536.8	982.0	2722.742	F
D	90	23	1018	824	0.110	90	84	0.1	0.1	4.905	A
E			752				356				

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	607	152	31	1405	0.432	607	721	0.8	0.8	4.637	A
B	1722	430	638	1491	1.155	1490	0	69.0	127.0	242.016	F
C	2787	697	96	1006	2.771	1006	2031	982.0	1427.3	4282.966	F
D	90	23	1018	824	0.110	90	84	0.1	0.1	4.904	A
E			752				356				

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	495	124	31	1405	0.353	496	717	0.8	0.6	4.077	A
B	1406	352	527	1559	0.902	1545	0	127.0	92.3	255.632	F
C	2275	569	87	1012	2.249	1012	1985	1427.3	1743.2	5619.569	F
D	74	18	1022	822	0.090	74	77	0.1	0.1	4.813	A
E			748				347				

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	415	104	31	1404	0.295	415	715	0.6	0.4	3.745	A
B	1177	294	447	1608	0.732	1532	0	92.3	3.7	100.249	F
C	1905	476	79	1017	1.873	1017	1899	1743.2	1965.3	6566.681	F
D	62	15	1025	820	0.075	62	71	0.1	0.1	4.749	A
E			746				341				

2039 Do Minimum, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	2774.25	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2774.25	F

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	2039 Do Minimum	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	579	100.000
B		ONE HOUR	✓	1561	100.000
C		ONE HOUR	✓	2257	100.000
D		ONE HOUR	✓	82	100.000
E					

Origin-Destination Data

Demand (PCU/hr)

		To					
		A	B	C	D	E	
From	A	0	0	530	41	8	
	B	0	0	1520	41	0	
	C	1638	0	80	0	539	
	D	41	0	0	0	41	
	E	0	0	0	0	0	

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

From	To				
	A	B	C	D	E
A	0	0	4	0	0
B	0	0	8	0	0
C	6	0	0	0	0
D	0	0	0	0	0
E	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.45	4.90	0.9	A	532	797
B	1.17	281.77	135.5	F	1432	2148
C	2.46	5309.64	1585.2	F	2071	3106
D	0.11	4.90	0.1	A	75	113
E						

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	436	109	36	1402	0.311	434	770	0.0	0.5	3.862	A
B	1175	294	470	1594	0.737	1163	0	0.0	2.9	8.776	A
C	1699	425	67	1025	1.657	1019	1566	0.0	169.9	305.682	F
D	62	15	1025	820	0.075	61	61	0.0	0.1	4.744	A
E			806				280				

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	521	130	36	1402	0.371	520	774	0.5	0.6	4.242	A
B	1403	351	556	1541	0.910	1380	0	2.9	8.6	21.506	C
C	2029	507	80	1016	1.996	1016	1856	169.9	423.0	1060.409	F
D	74	18	1024	821	0.090	74	73	0.1	0.1	4.818	A
E			810				287				

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	638	159	36	1402	0.455	637	777	0.6	0.9	4.885	A
B	1718	430	672	1470	1.169	1461	0	8.6	73.0	110.419	F
C	2484	621	92	1008	2.464	1008	2041	423.0	792.1	2172.893	F
D	90	23	1017	824	0.110	90	83	0.1	0.1	4.903	A
E			812				295				

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	638	159	36	1402	0.455	638	777	0.9	0.9	4.897	A
B	1718	430	673	1470	1.169	1469	0	73.0	135.5	259.715	F
C	2484	621	93	1008	2.465	1008	2049	792.1	1161.2	3470.869	F
D	90	23	1017	825	0.110	90	84	0.1	0.1	4.902	A
E			812				295				

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	521	130	36	1402	0.371	522	772	0.9	0.6	4.257	A
B	1403	351	557	1540	0.911	1528	0	135.5	104.1	281.770	F
C	2029	507	84	1014	2.001	1014	2001	1161.2	1414.9	4563.558	F
D	74	18	1021	822	0.090	74	77	0.1	0.1	4.810	A
E			808				287				

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	436	109	36	1402	0.311	437	770	0.6	0.5	3.882	A
B	1175	294	473	1592	0.738	1573	0	104.1	4.6	128.413	F
C	1699	425	78	1018	1.669	1018	1967	1414.9	1585.2	5309.636	F
D	62	15	1024	821	0.075	62	72	0.1	0.1	4.744	A
E			805				280				

Junctions 10
ARCADY 10 - Roundabout Module
Version: 10.1.0.1820 © Copyright TRL Software Limited, 2023
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Filename: Hickstead Junction (Right) Validation (Service Station Update) PM.j10
Path: \\londonfile\ProjectData\## Mid Sussex LP\5. Technical\5. Modelling\Hickstead Junction\East Junction
Report generation date: 21/12/2023 17:09:22

- »2019 Base, PM
- »2039 Reference Case, PM
- »2039 Do Minimum, PM

Summary of junction performance

PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2019 Base					
Arm A	D2	0.3	3.19	0.20	A
Arm B		1.5	5.51	0.59	A
Arm C		0.8	3.11	0.41	A
Arm D		0.1	4.63	0.10	A
2039 Reference Case					
Arm A	D3	0.2	3.02	0.15	A
Arm B		3.5	9.63	0.77	A
Arm C		352.4	570.91	1.27	F
Arm D		0.9	39.26	0.50	E
2039 Do Minimum					
Arm A	D4	0.2	3.09	0.13	A
Arm B		4.0	10.41	0.80	B
Arm C		390.3	625.96	1.30	F
Arm D		1.0	39.33	0.50	E

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

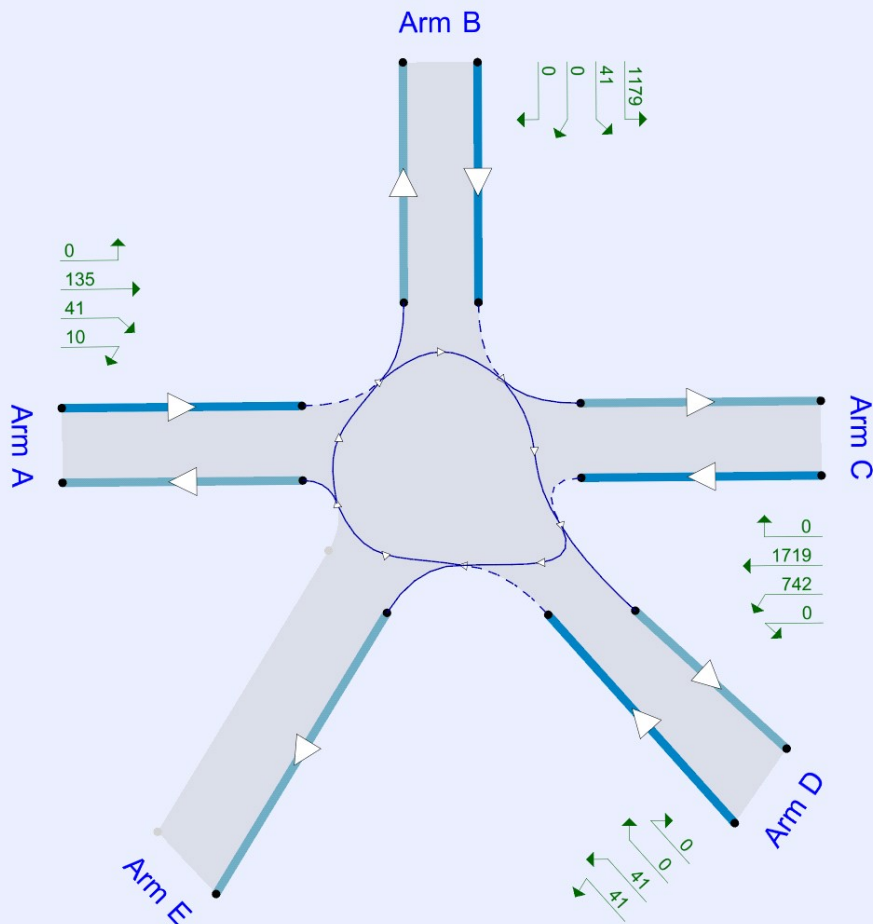
File summary

File Description

Title	
Location	
Site number	
Date	30/11/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADSYSTRA\thodgson
Description	

Units

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



Flows show original traffic demand (PCU/hr).

The junction diagram reflects the last run of Junctions.

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	2019 Base	PM	ONE HOUR	16:45	18:15	15	✓
D3	2039 Reference Case	PM	ONE HOUR	16:45	18:15	15	✓
D4	2039 Do Minimum	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2019 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	4.25	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.25	A

Arms

Arms

Arm	Name	Description	No give-way line
A	A2300 (W)		
B	A23 Slip (N)		
C	A3200 (E)		
D	Service Station		
E	A23 Slip (S)		

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
A	3.72	5.41	6.6	20.9	49.6	28.0		
B	6.56	9.56	1.7	13.1	49.6	55.0		
C	7.97	7.97	0.0	19.6	49.6	52.0		
D	4.94	4.94	0.0	13.9	40.6	44.0		
E								✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.560	1422
B	0.612	1882
C	0.688	2228
D	0.558	1392
E		

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	2019 Base	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	263	100.000
B		ONE HOUR	✓	917	100.000
C		ONE HOUR	✓	798	100.000
D		ONE HOUR	✓	82	100.000
E					

Origin-Destination Data

Demand (PCU/hr)

From	To					
	A	B	C	D	E	
A	0	0	211	41	10	
B	45	0	831	41	0.01	
C	614	0	0	0	184	
D	41	0	0	0	41	
E	0	0	0	0	0	

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

From	To					
	A	B	C	D	E	
A	0	0	1	0	0	
B	34	0	6	0	0	
C	10	0	0	0	0	
D	0	0	0	0	0	
E	0	0	0	0	0	

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.20	3.19	0.3	A	241	362
B	0.59	5.51	1.5	A	841	1262
C	0.41	3.11	0.8	A	732	1099
D	0.10	4.63	0.1	A	75	113
E						

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	198	49	0	1422	0.139	197	525	0.0	0.2	2.951	A
B	690	173	197	1761	0.392	687	0	0.0	0.7	3.559	A
C	601	150	103	2157	0.279	599	781	0.0	0.4	2.486	A
D	62	15	641	1034	0.060	61	62	0.0	0.1	3.700	A
E			525				177				

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	236	59	0	1422	0.166	236	629	0.2	0.2	3.049	A
B	824	206	236	1737	0.474	823	0	0.7	1.0	4.184	A
C	718	179	123	2143	0.335	717	936	0.4	0.5	2.718	A
D	74	18	767	964	0.076	74	74	0.1	0.1	4.042	A
E			629				212				

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	289	72	0	1422	0.203	289	770	0.2	0.3	3.192	A
B	1009	252	289	1705	0.592	1007	0	1.0	1.5	5.472	A
C	879	220	151	2124	0.414	878	1145	0.5	0.8	3.109	A
D	90	23	939	868	0.104	90	90	0.1	0.1	4.627	A
E			770				259				

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	289	72	0	1422	0.203	289	771	0.3	0.3	3.192	A
B	1009	252	289	1705	0.592	1009	0	1.5	1.5	5.507	A
C	879	220	151	2124	0.414	879	1147	0.8	0.8	3.112	A
D	90	23	940	868	0.104	90	90	0.1	0.1	4.630	A
E			771				259				

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	236	59	0	1422	0.166	236	630	0.3	0.2	3.050	A
B	824	206	236	1737	0.474	826	0	1.5	1.0	4.216	A
C	718	179	124	2143	0.335	718	939	0.8	0.5	2.722	A
D	74	18	768	963	0.077	74	74	0.1	0.1	4.049	A
E			630				212				

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	198	49	0	1422	0.139	198	527	0.2	0.2	2.954	A
B	690	173	198	1761	0.392	691	0	1.0	0.7	3.585	A
C	601	150	104	2157	0.279	601	786	0.5	0.4	2.492	A
D	62	15	643	1033	0.060	62	62	0.1	0.1	3.705	A
E			527				178				

2039 Reference Case, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	361.70	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	361.70	F

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	2039 Reference Case	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	186	100.000
B		ONE HOUR	✓	1220	100.000
C		ONE HOUR	✓	2499	100.000
D		ONE HOUR	✓	82	100.000
E					

Origin-Destination Data

Demand (PCU/hr)

		To				
From		A	B	C	D	E
	A	0	0	135	41	10
	B	0	0	1179	41	0
	C	1719	0	38	0	742
	D	41	0	0	0	41
	E	0	0	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

From	To				
	A	B	C	D	E
A	0	0	1	0	0
B	34	0	6	0	0
C	10	0	0	0	0
D	0	0	0	0	0
E	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.15	3.02	0.2	A	171	257
B	0.77	9.63	3.5	A	1119	1679
C	1.27	570.91	352.4	F	2293	3440
D	0.50	39.26	0.9	E	75	113
E						

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	140	35	28	1406	0.100	140	1308	0.0	0.1	2.855	A
B	918	230	168	1779	0.516	914	0	0.0	1.1	4.366	A
C	1881	470	69	2181	0.863	1857	1013	0.0	6.1	11.161	B
D	62	15	1865	352	0.176	61	61	0.0	0.2	12.353	B
E			1336				590				

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	168	42	32	1404	0.119	167	1498	0.1	0.1	2.923	A
B	1097	274	200	1760	0.623	1094	0	1.1	1.7	5.683	A
C	2247	562	83	2171	1.035	2125	1211	6.1	36.4	45.206	E
D	74	18	2135	201	0.367	72	74	0.2	0.6	27.722	D
E			1530				677				

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	205	51	33	1404	0.146	205	1528	0.1	0.2	3.015	A
B	1343	336	238	1736	0.774	1336	0	1.7	3.4	9.325	A
C	2751	688	101	2158	1.275	2157	1473	36.4	185.0	190.385	F
D	90	23	2168	182	0.496	89	90	0.6	0.9	38.000	E
E			1561				696				

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	205	51	33	1404	0.146	205	1530	0.2	0.2	3.015	A
B	1343	336	238	1736	0.774	1343	0	3.4	3.5	9.630	A
C	2751	688	102	2158	1.275	2158	1479	185.0	333.4	435.169	F
D	90	23	2170	181	0.498	90	90	0.9	0.9	39.262	E
E			1562				697				

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	168	42	33	1404	0.119	168	1530	0.2	0.1	2.927	A
B	1097	274	201	1759	0.624	1104	0	3.5	1.8	5.852	A
C	2247	562	83	2171	1.035	2170	1221	333.4	352.4	570.907	F
D	74	18	2180	176	0.419	74	74	0.9	0.8	35.842	E
E			1563				691				

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	140	35	33	1404	0.100	140	1526	0.1	0.1	2.864	A
B	918	230	173	1776	0.517	921	0	1.8	1.1	4.453	A
C	1881	470	70	2180	0.863	2174	1025	352.4	279.3	523.501	F
D	62	15	2182	175	0.353	62	62	0.8	0.6	32.302	D
E			1560				685				

2039 Do Minimum, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	395.50	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	395.50	F

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	2039 Do Minimum	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	169	100.000
B		ONE HOUR	✓	1271	100.000
C		ONE HOUR	✓	2539	100.000
D		ONE HOUR	✓	82	100.000
E					

Origin-Destination Data

Demand (PCU/hr)

		To				
From		A	B	C	D	E
	A	0	0	117	41	11
	B	0.01	0	1230	41	0.12
	C	1687	0	38	0	814
	D	41	0	0	0	41
	E	0	0	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

From	To				
	A	B	C	D	E
A	0	0	7	0	0
B	17	0	1	0	11
C	3	0	0	0	0
D	0	0	0	0	0
E	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.13	3.09	0.2	A	155	233
B	0.80	10.41	4.0	B	1167	1750
C	1.30	625.96	390.3	F	2330	3495
D	0.50	39.33	1.0	E	75	113
E						

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	127	32	28	1406	0.090	127	1283	0.0	0.1	2.940	A
B	957	239	155	1787	0.536	953	0	0.0	1.2	4.346	A
C	1912	478	70	2180	0.877	1885	1038	0.0	6.5	11.630	B
D	62	15	1894	335	0.184	61	61	0.0	0.2	13.070	B
E			1311				643				

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	152	38	32	1404	0.108	152	1456	0.1	0.1	3.003	A
B	1143	286	183	1770	0.646	1140	0	1.2	1.8	5.770	A
C	2283	571	83	2171	1.051	2136	1240	6.5	43.1	50.780	F
D	74	18	2146	195	0.379	72	74	0.2	0.6	29.115	D
E			1487				731				

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	186	47	32	1404	0.133	186	1478	0.1	0.2	3.088	A
B	1400	350	218	1748	0.801	1392	0	1.8	3.9	9.993	A
C	2796	699	102	2158	1.295	2157	1507	43.1	202.8	210.259	F
D	90	23	2169	182	0.497	89	90	0.6	0.9	38.218	E
E			1510				748				

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	186	47	32	1404	0.133	186	1479	0.2	0.2	3.088	A
B	1400	350	218	1748	0.801	1399	0	3.9	4.0	10.415	B
C	2796	699	102	2158	1.296	2158	1515	202.8	362.2	473.680	F
D	90	23	2170	181	0.498	90	90	0.9	1.0	39.328	E
E			1511				749				

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	152	38	32	1404	0.108	152	1479	0.2	0.1	3.007	A
B	1143	286	184	1769	0.646	1151	0	4.0	1.9	5.977	A
C	2283	571	84	2171	1.052	2170	1252	362.2	390.3	625.959	F
D	74	18	2180	176	0.420	74	74	1.0	0.8	35.919	E
E			1511				743				

18:00 - 18:15

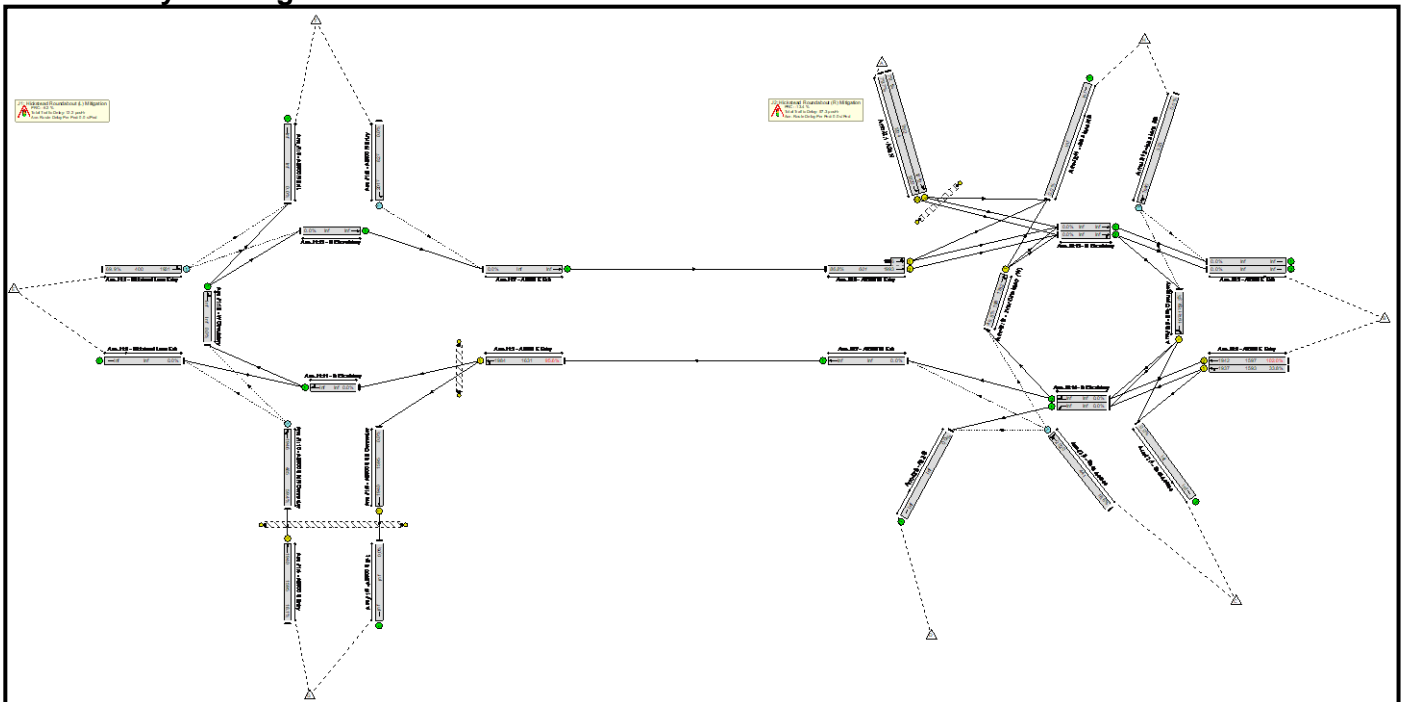
Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	127	32	32	1404	0.091	127	1476	0.1	0.1	2.949	A
B	957	239	159	1784	0.536	960	0	1.9	1.2	4.439	A
C	1912	478	70	2180	0.877	2174	1049	390.3	324.6	592.100	F
D	62	15	2183	174	0.354	62	62	0.8	0.6	32.465	D
E			1508				737				

Basic Results Summary
Basic Results Summary

User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	Hickstead Junction Mitigation - Science Park Model - Combined.lsg3x
Author:	
Company:	
Address:	

Scenario 1: '2039 DM AM' (FG1: '2039 DM AM', Plan 1: 'Network Control Plan 1')
Network Layout Diagram



Basic Results Summary

Network Results

Basic Results Summary

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Item
Network	-	-	-		-	-	-	-	-	-	102.0%	650	0	0	69.5	-	-	Network
J1: Hickstead Roundabout (L) Mitigation	-	-	-		-	-	-	-	-	-	95.6%	568	0	0	12.2	-	-	J1: Hickstead Roundabout (L) Mitigation
1/1	Hickstead Lane Entry Left Ahead	O	-		-	-	-	280	1931	400	69.9%	280	0	0	1.1	14.7	1.1	1/1
2/1	A2300 N Entry Left	O	-		-	-	-	0	2017	827	0.0%	0	0	0	0.0	0.0	0.0	2/1
3/1	A2300 E Entry Left Ahead	U	D		1	73	-	1590	1984	1631	95.6%	-	-	-	10.0	23.2	28.6	3/1
4/1	A2300 S Entry Ahead	U	H		1	73	-	288	1940	1595	18.1%	-	-	-	0.2	3.1	1.6	4/1
9/1	A2300 S SB Connector Ahead	U	F		1	73	-	0	1940	1595	0.0%	-	-	-	0.0	0.0	0.0	9/1
10/1	A2300 S MN Connector Left Ahead	O	-		-	-	-	288	1946	485	59.4%	288	0	0	0.8	9.4	2.7	10/1
Ped Link: P1	A2300 E Ped Crossing	-	E		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P1
Ped Link: P2	A2300 S Ped Crossing	-	G		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P2
J2: Hickstead Roundabout (R) Mitigation	-	-	-		-	-	-	-	-	-	102.0%	82	0	0	57.3	-	-	J2: Hickstead Roundabout (R) Mitigation
1/1	A23 N U-Turn Left	U	B		1	46	-	761	1842	962	79.1%	-	-	-	5.6	26.3	17.3	1/1
1/2	A23 N Left	U	B		1	46	-	800	1923	1004	79.7%	-	-	-	5.8	26.2	18.1	1/2

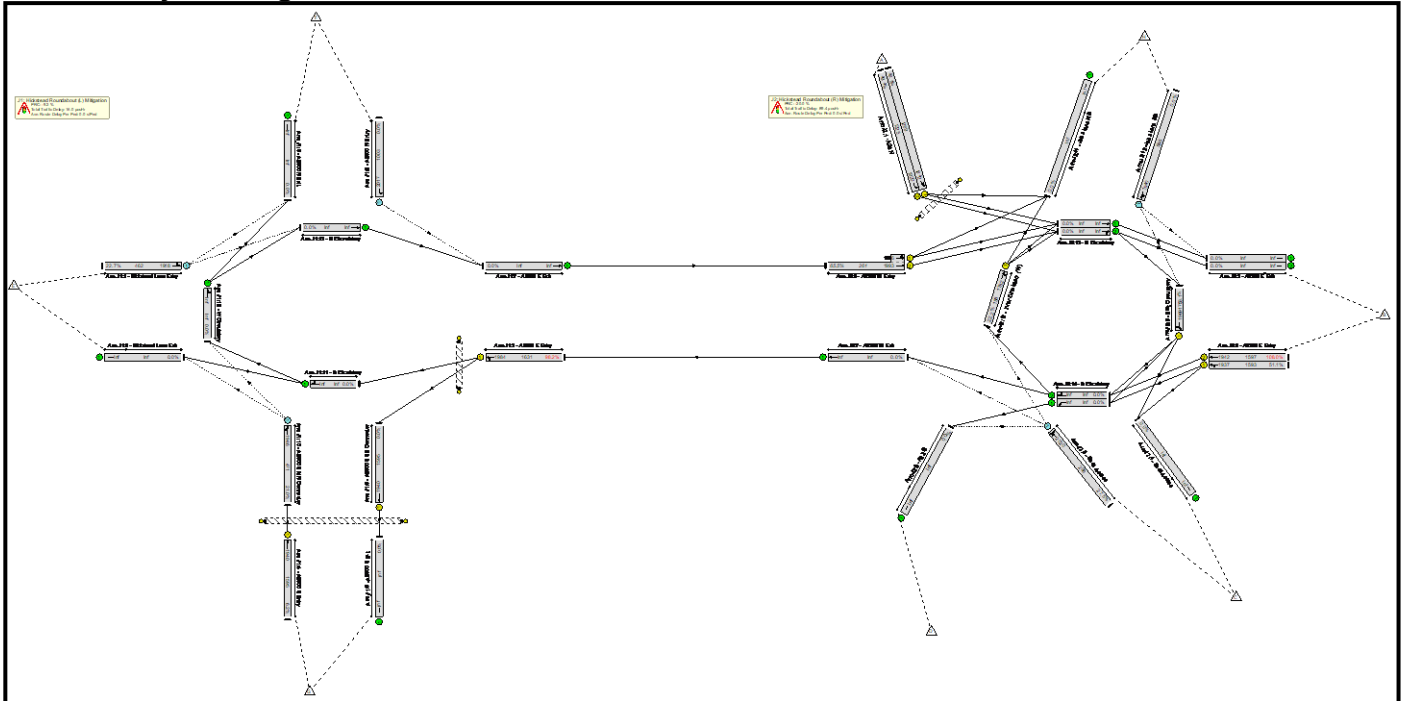
Basic Results Summary

2/1	A2300 E Entry Left Ahead	U	C		1	73	-	539	1937	1593	33.8%	-	-	-	0.6	3.7	3.5	2/1
2/2	A2300 E Entry Ahead	U	C		1	73	-	1629	1942	1597	102.0%	-	-	-	35.2	77.8	71.3	2/2
5/1	Shell Access Left Left2 Right	O	-		-	-	-	82	2020	441	18.6%	82	0	0	0.1	5.0	0.1	5/1
8/2+8/1	A2300 W Entry Left Ahead	U	A		1	22	-	522	1993:1896	601	86.8%	-	-	-	7.3	50.4	12.9	8/2+8/1
9/1	East Circulatory Ahead Right	U	K		1	7	-	90	1974	175	51.3%	-	-	-	1.3	51.9	2.6	9/1
10/1	Inner Circulatory (W) Ahead Right	U	J		1	7	-	80	1782	158	49.5%	-	-	-	1.4	64.7	2.3	10/1
12/1	Jobs Lane SB Left Ahead	O	-		-	-	-	0	1940	323	0.0%	0	0	0	0.0	0.0	0.0	12/1
Ped Link: P1	A3 N Ped Crossing	-	I		1	22	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P1
		C1	Stream: 1 PRC for Signalled Lanes (%):		3.6		Total Delay for Signalled Lanes (pcuHr):		20.10		Cycle Time (s):		90					
		C1	Stream: 2 PRC for Signalled Lanes (%):		-6.2		Total Delay for Signalled Lanes (pcuHr):		10.05		Cycle Time (s):		90					
		C1	Stream: 3 PRC for Signalled Lanes (%):		398.5		Total Delay for Signalled Lanes (pcuHr):		0.24		Cycle Time (s):		90					
		C1	Stream: 4 PRC for Signalled Lanes (%):		-13.4		Total Delay for Signalled Lanes (pcuHr):		37.08		Cycle Time (s):		90					
			PRC Over All Lanes (%):		-13.4		Total Delay Over All Lanes(pcuHr):		69.48									

Basic Results Summary

Scenario 2: '2039 DM PM' (FG2: '2039 DM PM', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Basic Results Summary

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Item
Network	-	-	-		-	-	-	-	-	-	108.0%	286	0	0	105.4	-	-	Network
J1: Hickstead Roundabout (L) Mitigation	-	-	-		-	-	-	-	-	-	98.2%	204	0	0	16.0	-	-	J1: Hickstead Roundabout (L) Mitigation
1/1	Hickstead Lane Entry Left Ahead	O	-		-	-	-	105	1918	462	22.7%	105	0	0	0.1	5.0	0.1	1/1
2/1	A2300 N Entry Left	O	-		-	-	-	0	2017	1003	0.0%	0	0	0	0.0	0.0	0.0	2/1
3/1	A2300 E Entry Left Ahead	U	D		1	73	-	1728	1984	1631	98.2%	-	-	-	15.7	35.2	40.0	3/1
4/1	A2300 S Entry Ahead	U	H		1	73	-	99	1940	1595	6.2%	-	-	-	0.1	2.7	0.5	4/1
9/1	A2300 S SB Connector Ahead	U	F		1	73	-	0	1940	1595	0.0%	-	-	-	0.0	0.0	0.0	9/1
10/1	A2300 S MN Connector Left Ahead	O	-		-	-	-	99	1946	471	21.0%	99	0	0	0.1	4.9	0.5	10/1
Ped Link: P1	A2300 E Ped Crossing	-	E		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P1
Ped Link: P2	A2300 S Ped Crossing	-	G		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P2
J2: Hickstead Roundabout (R) Mitigation	-	-	-		-	-	-	-	-	-	108.0%	82	0	0	89.4	-	-	J2: Hickstead Roundabout (R) Mitigation
1/1	A23 N U-Turn Left	U	B		1	61	-	616	1842	1269	48.5%	-	-	-	1.6	9.3	7.7	1/1
1/2	A23 N Left	U	B		1	61	-	655	1923	1325	49.4%	-	-	-	1.7	9.3	8.1	1/2

Basic Results Summary

2/1	A2300 E Entry Left Ahead	U	C		1	73	-	814	1937	1593	51.1%	-	-	-	1.1	4.8	6.6	2/1
2/2	A2300 E Entry Ahead	U	C		1	73	-	1725	1942	1597	108.0%	-	-	-	80.2	167.3	116.6	2/2
5/1	Shell Access Left Left2 Right	O	-		-	-	-	82	2020	298	27.5%	82	0	0	0.2	8.3	0.2	5/1
8/2+8/1	A2300 W Entry Left Ahead	U	A		1	7	-	171	1993:1896	261	65.5%	-	-	-	2.7	57.9	3.3	8/2+8/1
9/1	East Circulatory Ahead Right	U	K		1	7	-	93	1969	175	53.1%	-	-	-	1.4	54.4	2.8	9/1
10/1	Inner Circulatory (W) Ahead Right	U	J		1	7	-	38	1782	158	22.2%	-	-	-	0.5	50.6	1.0	10/1
12/1	Jobs Lane SB Left Ahead	O	-		-	-	-	0	1940	586	0.0%	0	0	0	0.0	0.0	0.0	12/1
Ped Link: P1	A3 N Ped Crossing	-	I		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P1
		C1	Stream: 1 PRC for Signalled Lanes (%):		37.3		Total Delay for Signalled Lanes (pcuHr):		6.52		Cycle Time (s):		90					
		C1	Stream: 2 PRC for Signalled Lanes (%):		-9.2		Total Delay for Signalled Lanes (pcuHr):		15.67		Cycle Time (s):		90					
		C1	Stream: 3 PRC for Signalled Lanes (%):		1350.1		Total Delay for Signalled Lanes (pcuHr):		0.07		Cycle Time (s):		90					
		C1	Stream: 4 PRC for Signalled Lanes (%):		-20.0		Total Delay for Signalled Lanes (pcuHr):		82.65		Cycle Time (s):		90					
			PRC Over All Lanes (%):		-20.0		Total Delay Over All Lanes(pcuHr):		105.39									

Basic Results Summary

Network Results

Basic Results Summary

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Item
Network	-	-	-		-	-	-	-	-	-	102.5%	504	0	0	68.0	-	-	Network
J1: Hickstead Roundabout (L) Mitigation	-	-	-		-	-	-	-	-	-	95.7%	422	0	0	11.4	-	-	J1: Hickstead Roundabout (L) Mitigation
1/1	Hickstead Lane Entry Left Ahead	O	-		-	-	-	189	1938	419	45.1%	189	0	0	0.4	7.8	0.4	1/1
2/1	A2300 N Entry Left	O	-		-	-	-	0	2017	866	0.0%	0	0	0	0.0	0.0	0.0	2/1
3/1	A2300 E Entry Left Ahead	U	D		1	73	-	1600	1984	1631	95.7%	-	-	-	10.3	23.7	28.3	3/1
4/1	A2300 S Entry Ahead	U	H		1	73	-	233	1940	1595	14.6%	-	-	-	0.2	2.9	1.3	4/1
9/1	A2300 S SB Connector Ahead	U	F		1	73	-	0	1940	1595	0.0%	-	-	-	0.0	0.0	0.0	9/1
10/1	A2300 S MN Connector Left Ahead	O	-		-	-	-	233	1946	484	48.1%	233	0	0	0.5	7.4	1.8	10/1
Ped Link: P1	A2300 E Ped Crossing	-	E		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P1
Ped Link: P2	A2300 S Ped Crossing	-	G		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P2
J2: Hickstead Roundabout (R) Mitigation	-	-	-		-	-	-	-	-	-	102.5%	82	0	0	56.6	-	-	J2: Hickstead Roundabout (R) Mitigation
1/1	A23 N U-Turn Left	U	B		1	51	-	761	1842	1064	71.5%	-	-	-	4.1	19.6	14.8	1/1
1/2	A23 N Left	U	B		1	51	-	803	1923	1111	72.3%	-	-	-	4.4	19.6	15.8	1/2

Basic Results Summary

2/1	A2300 E Entry Left Ahead	U	C		1	73	-	751	1937	1593	47.2%	-	-	-	0.9	4.5	5.9	2/1
2/2	A2300 E Entry Ahead	U	C		1	73	-	1637	1942	1597	102.5%	-	-	-	38.5	84.8	74.6	2/2
5/1	Shell Access Left Left2 Right	O	-		-	-	-	82	2020	348	23.6%	82	0	0	0.2	6.8	0.2	5/1
8/2+8/1	A2300 W Entry Left Ahead	U	A		1	17	-	406	1993:1896	492	82.5%	-	-	-	5.8	51.8	9.4	8/2+8/1
9/1	East Circulatory Ahead Right	U	K		1	7	-	90	1974	175	51.3%	-	-	-	1.3	52.1	2.6	9/1
10/1	Inner Circulatory (W) Ahead Right	U	J		1	7	-	78	1782	158	48.0%	-	-	-	1.4	64.2	2.2	10/1
12/1	Jobs Lane SB Left Ahead	O	-		-	-	-	0	1940	355	0.0%	0	0	0	0.0	0.0	0.0	12/1
Ped Link: P1	A3 N Ped Crossing	-	I		1	17	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P1
		C1	Stream: 1 PRC for Signalled Lanes (%):		9.1		Total Delay for Signalled Lanes (pcuHr):		15.70		Cycle Time (s):		90					
		C1	Stream: 2 PRC for Signalled Lanes (%):		-6.4		Total Delay for Signalled Lanes (pcuHr):		10.30		Cycle Time (s):		90					
		C1	Stream: 3 PRC for Signalled Lanes (%):		516.1		Total Delay for Signalled Lanes (pcuHr):		0.19		Cycle Time (s):		90					
		C1	Stream: 4 PRC for Signalled Lanes (%):		-13.9		Total Delay for Signalled Lanes (pcuHr):		40.78		Cycle Time (s):		90					
			PRC Over All Lanes (%):		-13.9		Total Delay Over All Lanes(pcuHr):		68.00									

Basic Results Summary

Network Results

Basic Results Summary

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Item
Network	-	-	-		-	-	-	-	-	-	110.0%	303	0	0	123.3	-	-	Network
J1: Hickstead Roundabout (L) Mitigation	-	-	-		-	-	-	-	-	-	98.3%	221	0	0	16.2	-	-	J1: Hickstead Roundabout (L) Mitigation
1/1	Hickstead Lane Entry Left Ahead	O	-		-	-	-	126	1925	467	27.0%	126	0	0	0.2	5.3	0.2	1/1
2/1	A2300 N Entry Left	O	-		-	-	-	0	2017	996	0.0%	0	0	0	0.0	0.0	0.0	2/1
3/1	A2300 E Entry Left Ahead	U	D		1	73	-	1760	1984	1631	98.3%	-	-	-	15.8	35.4	40.7	3/1
4/1	A2300 S Entry Ahead	U	H		1	73	-	95	1940	1595	6.0%	-	-	-	0.1	2.7	0.5	4/1
9/1	A2300 S SB Connector Ahead	U	F		1	73	-	0	1940	1595	0.0%	-	-	-	0.0	0.0	0.0	9/1
10/1	A2300 S MN Connector Left Ahead	O	-		-	-	-	95	1946	471	20.2%	95	0	0	0.1	4.8	0.4	10/1
Ped Link: P1	A2300 E Ped Crossing	-	E		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P1
Ped Link: P2	A2300 S Ped Crossing	-	G		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P2
J2: Hickstead Roundabout (R) Mitigation	-	-	-		-	-	-	-	-	-	110.0%	82	0	0	107.1	-	-	J2: Hickstead Roundabout (R) Mitigation
1/1	A23 N U-Turn Left	U	B		1	60	-	591	1842	1248	47.3%	-	-	-	1.6	9.6	7.3	1/1
1/2	A23 N Left	U	B		1	60	-	629	1923	1303	48.3%	-	-	-	1.7	9.6	8.0	1/2

Basic Results Summary

2/1	A2300 E Entry Left Ahead	U	C		1	73	-	742	1937	1593	46.6%	-	-	-	0.9	4.4	5.6	2/1
2/2	A2300 E Entry Ahead	U	C		1	73	-	1757	1942	1597	110.0%	-	-	-	97.9	200.6	133.2	2/2
5/1	Shell Access Left Left2 Right	O	-		-	-	-	82	2020	333	24.7%	82	0	0	0.2	7.2	0.2	5/1
8/2+8/1	A2300 W Entry Left Ahead	U	A		1	8	-	192	1993:1896	288	66.6%	-	-	-	3.0	56.0	3.5	8/2+8/1
9/1	East Circulatory Ahead Right	U	K		1	7	-	93	1969	175	53.1%	-	-	-	1.4	53.4	2.7	9/1
10/1	Inner Circulatory (W) Ahead Right	U	J		1	7	-	38	1782	158	21.8%	-	-	-	0.5	56.9	0.9	10/1
12/1	Jobs Lane SB Left Ahead	O	-		-	-	-	0	1940	545	0.0%	0	0	0	0.0	0.0	0.0	12/1
Ped Link: P1	A3 N Ped Crossing	-	I		1	8	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P1
		C1	Stream: 1 PRC for Signalled Lanes (%):		35.1		Total Delay for Signalled Lanes (pcuHr):		6.79		Cycle Time (s):		90					
		C1	Stream: 2 PRC for Signalled Lanes (%):		-9.2		Total Delay for Signalled Lanes (pcuHr):		15.78		Cycle Time (s):		90					
		C1	Stream: 3 PRC for Signalled Lanes (%):		1411.2		Total Delay for Signalled Lanes (pcuHr):		0.07		Cycle Time (s):		90					
		C1	Stream: 4 PRC for Signalled Lanes (%):		-22.3		Total Delay for Signalled Lanes (pcuHr):		100.17		Cycle Time (s):		90					
			PRC Over All Lanes (%):		-22.3		Total Delay Over All Lanes(pcuHr):		123.29									

Basic Results Summary

Network Results

Basic Results Summary

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Item
Network	-	-	-		-	-	-	-	-	-	103.8%	604	46	0	69.0	-	-	Network
J1: Hickstead Roundabout (L) Mitigation	-	-	-		-	-	-	-	-	-	103.8%	522	46	0	47.7	-	-	J1: Hickstead Roundabout (L) Mitigation
1/1	Hickstead Lane Entry Left Ahead	O	-		-	-	-	280	1931	436	64.2%	234	46	0	0.9	11.4	0.9	1/1
2/1	A2300 N Entry Left	O	-		-	-	-	0	2017	802	0.0%	0	0	0	0.0	0.0	0.0	2/1
3/1	A2300 E Entry Left Ahead	U	E		1	72	-	1670	1984	1609	103.8%	-	-	-	45.8	98.6	83.9	3/1
4/1	A2300 S Entry Ahead	U	I		1	73	-	288	1965	1616	17.8%	-	-	-	0.2	3.0	1.5	4/1
9/1	A2300 S SB Connector Ahead	U	G		1	72	-	0	1940	1574	0.0%	-	-	-	0.0	0.0	0.0	9/1
10/1	A2300 S MN Connector Left Ahead	O	-		-	-	-	288	1946	469	61.5%	288	0	0	0.8	10.0	2.5	10/1
Ped Link: P1	A2300 E Ped Crossing	-	F		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P1
Ped Link: P2	A2300 S Ped Crossing	-	H		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P2
J2: Hickstead Roundabout (R) Mitigation	-	-	-		-	-	-	-	-	-	83.7%	82	0	0	21.3	-	-	J2: Hickstead Roundabout (R) Mitigation
1/1	A23 N Left Left2	U	B		1	52	-	764	1768	1041	73.4%	-	-	-	4.2	19.8	15.2	1/1
1/2	A23 N Left	U	B		1	52	-	797	1829	1077	74.0%	-	-	-	4.4	19.8	15.8	1/2

Basic Results Summary

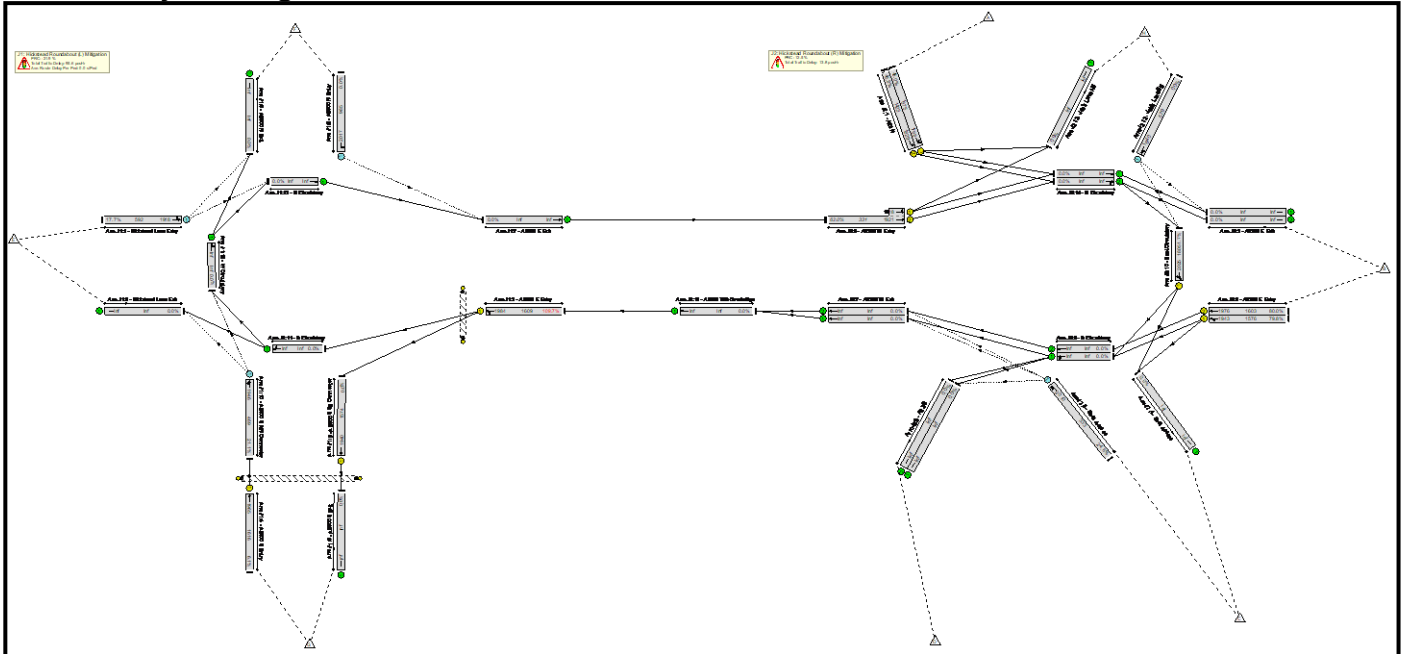
2/1	A2300 E Entry Left Ahead	U	C		1	72	-	1073	1943	1576	68.1%	-	-	-	2.1	7.1	12.1	2/1
2/2	A2300 E Entry Ahead	U	C		1	72	-	1095	1976	1603	68.3%	-	-	-	2.2	7.1	12.6	2/2
5/1	Shell Access Left Left2	O	-		-	-	-	82	2010	492	16.7%	82	0	0	0.1	5.5	0.5	5/1
8/2+8/1	A2300 W Entry Left Ahead	U	A		1	27	-	602	1921:1948	716	83.7%	-	-	-	6.8	40.9	12.9	8/2+8/1
10/1	East Circulatory Ahead Right	U	D		1	7	-	90	2028	180	49.9%	-	-	-	1.4	57.5	2.6	10/1
13/1	Job's Lane SB Left Ahead	O	-		-	-	-	0	1940	313	0.0%	0	0	0	0.0	0.0	0.0	13/1

C1	Stream: 1 PRC for Signalled Lanes (%):	7.5	Total Delay for Signalled Lanes (pcuHr):	15.40	Cycle Time (s):	90
C1	Stream: 2 PRC for Signalled Lanes (%):	31.7	Total Delay for Signalled Lanes (pcuHr):	5.74	Cycle Time (s):	90
C1	Stream: 3 PRC for Signalled Lanes (%):	-15.3	Total Delay for Signalled Lanes (pcuHr):	45.76	Cycle Time (s):	90
C1	Stream: 4 PRC for Signalled Lanes (%):	404.9	Total Delay for Signalled Lanes (pcuHr):	0.24	Cycle Time (s):	90
	PRC Over All Lanes (%):	-15.3	Total Delay Over All Lanes(pcuHr):	68.96		

Basic Results Summary

Scenario 2: '2039 DM PM' (FG4: '2039 DM PM', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Basic Results Summary

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Item
Network	-	-	-		-	-	-	-	-	-	109.7%	253	33	0	109.3	-	-	Network
J1: Hickstead Roundabout (L) Mitigation	-	-	-		-	-	-	-	-	-	109.7%	171	33	0	95.6	-	-	J1: Hickstead Roundabout (L) Mitigation
1/1	Hickstead Lane Entry Left Ahead	O	-		-	-	-	105	1918	592	17.7%	72	33	0	0.1	3.7	0.1	1/1
2/1	A2300 N Entry Left	O	-		-	-	-	0	2017	985	0.0%	0	0	0	0.0	0.0	0.0	2/1
3/1	A2300 E Entry Left Ahead	U	E		1	72	-	1766	1984	1609	109.7%	-	-	-	95.2	194.2	131.7	3/1
4/1	A2300 S Entry Ahead	U	I		1	73	-	99	1965	1616	6.1%	-	-	-	0.1	2.7	0.5	4/1
9/1	A2300 S SB Connector Ahead	U	G		1	72	-	0	1940	1574	0.0%	-	-	-	0.0	0.0	0.0	9/1
10/1	A2300 S MN Connector Left Ahead	O	-		-	-	-	99	1946	469	21.1%	99	0	0	0.1	4.9	0.1	10/1
Ped Link: P1	A2300 E Ped Crossing	-	F		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P1
Ped Link: P2	A2300 S Ped Crossing	-	H		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P2
J2: Hickstead Roundabout (R) Mitigation	-	-	-		-	-	-	-	-	-	80.0%	82	0	0	13.8	-	-	J2: Hickstead Roundabout (R) Mitigation
1/1	A23 N Left Left2	U	B		1	69	-	619	1768	1375	45.0%	-	-	-	1.0	5.8	5.6	1/1
1/2	A23 N Left	U	B		1	69	-	652	1829	1423	45.8%	-	-	-	1.0	5.8	6.0	1/2

Basic Results Summary

2/1	A2300 E Entry Left Ahead	U	C		1	72	-	1257	1943	1576	79.8%	-	-	-	3.5	10.1	18.7	2/1
2/2	A2300 E Entry Ahead	U	C		1	72	-	1282	1976	1603	80.0%	-	-	-	3.6	10.1	19.1	2/2
5/1	Shell Access Left Left2	O	-		-	-	-	82	2010	333	24.6%	82	0	0	0.3	14.3	1.1	5/1
8/2+8/1	A2300 W Entry Left Ahead	U	A		1	10	-	209	1921:1948	331	62.0%	-	-	-	2.9	51.1	3.5	8/2+8/1
10/1	East Circulatory Ahead Right	U	D		1	7	-	93	2025	180	51.7%	-	-	-	1.3	52.0	2.7	10/1
13/1	Job's Lane SB Left Ahead	O	-		-	-	-	0	1940	579	0.0%	0	0	0	0.0	0.0	0.0	13/1

C1	Stream: 1 PRC for Signalled Lanes (%):	45.1	Total Delay for Signalled Lanes (pcuHr):	4.96	Cycle Time (s):	90
C1	Stream: 2 PRC for Signalled Lanes (%):	12.5	Total Delay for Signalled Lanes (pcuHr):	8.48	Cycle Time (s):	90
C1	Stream: 3 PRC for Signalled Lanes (%):	-21.9	Total Delay for Signalled Lanes (pcuHr):	95.25	Cycle Time (s):	90
C1	Stream: 4 PRC for Signalled Lanes (%):	1368.8	Total Delay for Signalled Lanes (pcuHr):	0.07	Cycle Time (s):	90
	PRC Over All Lanes (%):	-21.9	Total Delay Over All Lanes(pcuHr):	109.33		

Junctions 10
ARCADY 10 - Roundabout Module
Version: 10.1.0.1820 © Copyright TRL Software Limited, 2023
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Filename: Copthorne Common Existing Validation.j10
Path: \\Londonfile\ProjectData\## Mid Sussex LP\5. Technical\5. Modelling\Copthorne Common Roundabout
Report generation date: 20/12/2023 12:09:20

- » Copthorne Roundabout - 2019 Base, AM
- » Copthorne Roundabout - 2019 Base, PM
- » Copthorne Roundabout - 2039 Reference Case, AM
- » Copthorne Roundabout - 2039 Reference Case, PM
- » Copthorne Roundabout - 2039 Do Minimum, AM
- » Copthorne Roundabout - 2039 Do Minimum, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
Copthorne Roundabout - 2019 Base										
Arm A	D1	6.4	15.71	0.86	C	D2	2.0	5.62	0.65	A
Arm B		1.0	9.59	0.46	A		1.4	8.33	0.57	A
Arm C		0.9	4.33	0.46	A		2.4	7.20	0.71	A
Arm D		0.1	4.20	0.06	A		0.1	5.48	0.10	A
Arm E		1.6	6.25	0.61	A		0.9	5.04	0.47	A
Copthorne Roundabout - 2039 Reference Case										
Arm A	D3	55.8	113.72	1.05	F	D4	3.2	8.46	0.76	A
Arm B		1.7	14.16	0.60	B		13.2	56.65	0.96	F
Arm C		0.8	4.34	0.44	A		5.2	15.03	0.84	C
Arm D		0.1	4.28	0.08	A		0.2	7.38	0.15	A
Arm E		2.8	8.41	0.74	A		1.9	8.48	0.66	A
Copthorne Roundabout - 2039 Do Minimum										
Arm A	D5	80.9	165.93	1.10	F	D6	5.2	13.51	0.84	B
Arm B		2.3	17.00	0.67	C		103.5	337.54	1.24	F
Arm C		1.0	4.87	0.48	A		4.5	13.48	0.82	B
Arm D		0.1	4.63	0.09	A		0.2	7.46	0.15	A
Arm E		24.8	55.69	0.99	F		6.5	21.23	0.88	C

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

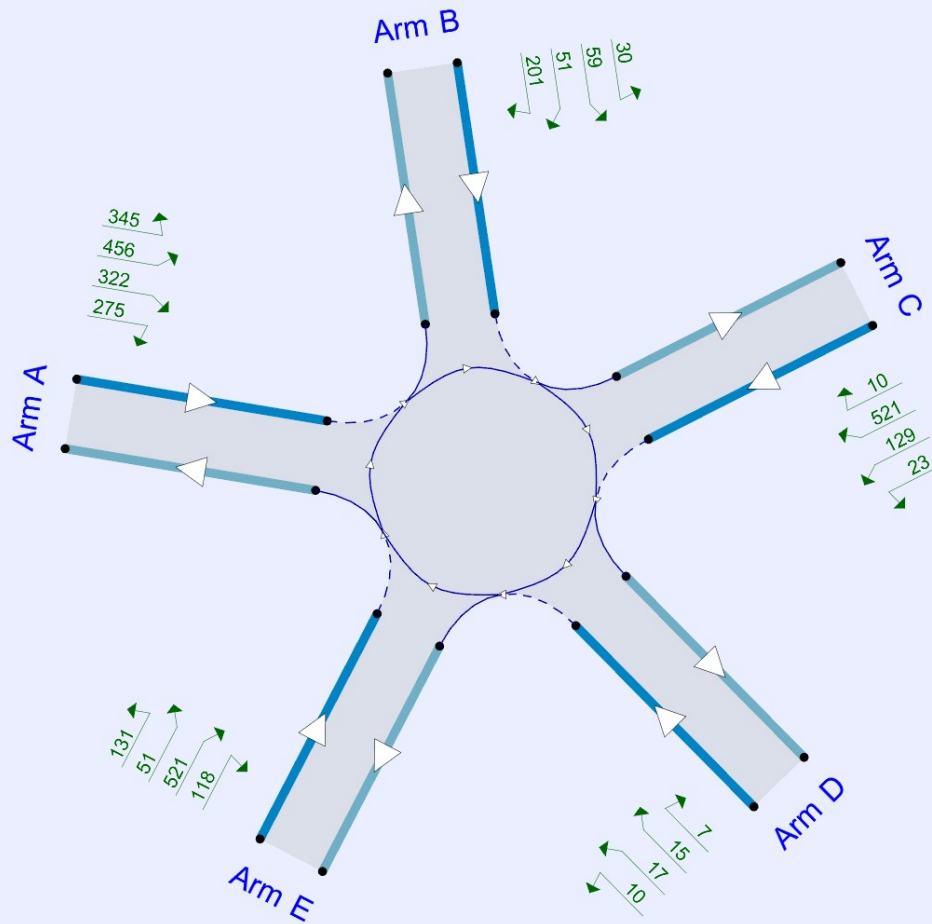
File summary

File Description

Title	
Location	
Site number	
Date	30/11/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADSYSTRA\thodgson
Description	

Units

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



Flows show original traffic demand (PCU/hr).

The junction diagram reflects the last run of Junctions.

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	2019 Base	AM	ONE HOUR	07:45	09:15	15	✓
D2	2019 Base	PM	ONE HOUR	16:45	18:15	15	✓
D3	2039 Reference Case	AM	ONE HOUR	07:45	09:15	15	✓
D4	2039 Reference Case	PM	ONE HOUR	16:45	18:15	15	✓
D5	2039 Do Minimum	AM	ONE HOUR	07:45	09:15	15	✓
D6	2039 Do Minimum	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

Copthorne Roundabout - 2019 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	10.18	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	10.18	B

Arms

Arms

Arm	Name	Description	No give-way line
A	A264 (W)		
B	Brookhill Road		
C	A264 (E)		
D	Copthorne Way (SE)		
E	A2220 (SW)		

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
A	5.21	7.93	11.3	25.9	64.9	37.0		
B	3.79	7.84	22.8	23.3	64.9	47.0		
C	5.16	7.53	11.8	21.0	64.9	48.0		
D	5.76	6.64	0.5	10.7	64.9	44.0		
E	4.53	7.94	18.8	19.2	64.9	37.0		

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Percentage intercept adjustment (%)
A	None		
B	None		
C	None		
D	Percentage		100.00
E	None		

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.579	2017
B	0.539	1831
C	0.545	1880
D	0.495	1623
E	0.569	1973

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

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
A	Percentage		115.00
C	Percentage		130.00

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1398	100.000
B		ONE HOUR	✓	340	100.000
C		ONE HOUR	✓	683	100.000
D		ONE HOUR	✓	49	100.000
E		ONE HOUR	✓	821	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A	B	C	D	E
From	A	0	345	456	322	275
	B	201	0	30	59	51
	C	521	10	0	23	129
	D	17	15	7	0	10
	E	131	51	521	118	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To				
		A	B	C	D	E
From	A	0	12	17	11	4
	B	27	0	3	17	7
	C	8	7	0	6	4
	D	13	6	5	0	3
	E	0	8	1	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.86	15.71	6.4	C	1283	1925
B	0.46	9.59	1.0	A	312	468
C	0.46	4.33	0.9	A	627	940
D	0.06	4.20	0.1	A	45	68
E	0.61	6.25	1.6	A	753	1130

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1053	263	541	1959	0.537	1048	653	0.0	1.3	4.377	A
B	256	64	1274	1144	0.224	255	315	0.0	0.3	4.828	A
C	514	129	768	1900	0.271	513	760	0.0	0.4	2.784	A
D	37	9	890	1183	0.031	37	391	0.0	0.0	3.384	A
E	618	155	578	1644	0.376	616	348	0.0	0.6	3.551	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1257	314	647	1888	0.666	1253	781	1.3	2.2	6.288	A
B	306	76	1524	1009	0.303	305	377	0.3	0.5	6.100	A
C	614	154	920	1793	0.343	614	910	0.4	0.6	3.275	A
D	44	11	1065	1096	0.040	44	468	0.0	0.0	3.686	A
E	738	184	692	1579	0.467	737	417	0.6	0.9	4.344	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1540	385	792	1792	0.859	1524	956	2.2	6.1	14.207	B
B	375	94	1857	830	0.451	373	458	0.5	1.0	9.371	A
C	752	188	1120	1650	0.456	751	1110	0.6	0.9	4.290	A
D	54	14	1301	979	0.055	54	571	0.0	0.1	4.192	A
E	904	226	846	1491	0.606	901	508	0.9	1.5	6.182	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1540	385	794	1790	0.860	1538	958	6.1	6.4	15.713	C
B	375	94	1870	823	0.455	374	462	1.0	1.0	9.588	A
C	752	188	1128	1645	0.457	752	1116	0.9	0.9	4.330	A
D	54	14	1306	977	0.056	54	575	0.1	0.1	4.204	A
E	904	226	849	1490	0.607	904	512	1.5	1.6	6.248	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1257	314	651	1886	0.667	1274	785	6.4	2.3	6.725	A
B	306	76	1542	999	0.306	308	382	1.0	0.5	6.231	A
C	614	154	931	1785	0.344	616	919	0.9	0.6	3.311	A
D	44	11	1073	1092	0.041	44	474	0.1	0.0	3.700	A
E	738	184	695	1577	0.468	741	422	1.6	0.9	4.392	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1053	263	544	1957	0.538	1057	656	2.3	1.3	4.474	A
B	256	64	1283	1139	0.225	257	317	0.5	0.3	4.879	A
C	514	129	774	1896	0.271	515	766	0.6	0.4	2.802	A
D	37	9	895	1180	0.031	37	394	0.0	0.0	3.395	A
E	618	155	581	1642	0.376	619	351	0.9	0.6	3.587	A

Copthorne Roundabout - 2019 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	6.46	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.46	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)	Run automatically
D2	2019 Base	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1152	100.000
B		ONE HOUR	✓	549	100.000
C		ONE HOUR	✓	1127	100.000
D		ONE HOUR	✓	66	100.000
E		ONE HOUR	✓	577	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A	B	C	D	E
From	A	0	223	702	189	38
	B	282	0	18	27	223
	C	625	13	0	30	459
	D	37	15	7	0	7
	E	99	113	239	127	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To					
	A	B	C	D	E	
From	A	0	13	2	10	3
	B	7	0	4	12	2
	C	4	3	0	1	1
	D	0	0	0	0	0
	E	3	2	0	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.65	5.62	2.0	A	1057	1585
B	0.57	8.33	1.4	A	504	756
C	0.71	7.20	2.4	A	1034	1551
D	0.10	5.48	0.1	A	61	91
E	0.47	5.04	0.9	A	530	795

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	867	217	385	2063	0.420	864	782	0.0	0.8	3.156	A
B	414	103	976	1304	0.317	412	273	0.0	0.5	4.222	A
C	848	212	664	1974	0.430	845	725	0.0	0.8	3.269	A
D	50	12	1229	1014	0.049	50	279	0.0	0.1	3.731	A
E	435	109	734	1555	0.279	433	545	0.0	0.4	3.249	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1035	259	461	2012	0.515	1034	935	0.8	1.1	3.872	A
B	494	123	1169	1201	0.411	493	326	0.5	0.7	5.328	A
C	1013	253	794	1881	0.538	1011	867	0.8	1.2	4.243	A
D	60	15	1471	895	0.067	60	334	0.1	0.1	4.310	A
E	519	130	878	1473	0.352	518	653	0.4	0.5	3.821	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1268	317	564	1943	0.652	1265	1143	1.1	1.9	5.560	A
B	605	151	1429	1060	0.571	602	399	0.7	1.4	8.204	A
C	1240	310	971	1756	0.706	1235	1061	1.2	2.4	7.038	A
D	73	18	1798	733	0.100	73	409	0.1	0.1	5.450	A
E	636	159	1073	1362	0.467	634	798	0.5	0.9	5.005	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1268	317	565	1943	0.653	1268	1148	1.9	2.0	5.619	A
B	605	151	1433	1058	0.572	605	400	1.4	1.4	8.327	A
C	1240	310	974	1754	0.707	1240	1063	2.4	2.4	7.197	A
D	73	18	1805	730	0.100	73	410	0.1	0.1	5.481	A
E	636	159	1077	1360	0.467	636	801	0.9	0.9	5.039	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1035	259	463	2011	0.515	1039	941	2.0	1.1	3.914	A
B	494	123	1174	1198	0.412	496	328	1.4	0.7	5.405	A
C	1013	253	799	1878	0.539	1018	871	2.4	1.2	4.323	A
D	60	15	1481	890	0.067	60	336	0.1	0.1	4.338	A
E	519	130	884	1470	0.353	520	657	0.9	0.6	3.849	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	867	217	387	2061	0.421	868	786	1.1	0.8	3.185	A
B	414	103	981	1302	0.318	415	274	0.7	0.5	4.264	A
C	848	212	668	1971	0.430	850	728	1.2	0.8	3.303	A
D	50	12	1237	1011	0.049	50	281	0.1	0.1	3.746	A
E	435	109	738	1553	0.280	435	549	0.6	0.4	3.267	A

Copthorne Roundabout - 2039 Reference Case, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	50.42	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	50.42	F

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	2039 Reference Case	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1463	100.000
B		ONE HOUR	✓	401	100.000
C		ONE HOUR	✓	625	100.000
D		ONE HOUR	✓	71	100.000
E		ONE HOUR	✓	1095	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A	B	C	D	E
From	A	0	403	463	280	317
	B	190	0	27	58	126
	C	274	16	0	38	297
	D	20	21	10	0	19
	E	67	201	643	184	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To					
	A	B	C	D	E	
From	A	0	12	18	15	3
	B	32	0	4	19	3
	C	12	7	0	4	2
	D	12	4	4	0	2
	E	5	2	1	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	1.05	113.72	55.8	F	1342	2014
B	0.60	14.16	1.7	B	368	552
C	0.44	4.34	0.8	A	574	860
D	0.08	4.28	0.1	A	65	97
E	0.74	8.41	2.8	A	1005	1507

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1101	275	806	1782	0.618	1094	413	0.0	1.8	5.819	A
B	302	76	1420	1065	0.284	300	480	0.0	0.5	5.522	A
C	471	118	864	1832	0.257	469	857	0.0	0.4	2.807	A
D	53	13	914	1171	0.046	53	419	0.0	0.1	3.408	A
E	824	206	398	1746	0.472	821	569	0.0	0.9	3.938	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1315	329	965	1676	0.785	1307	494	1.8	3.9	10.706	B
B	361	90	1698	915	0.394	359	574	0.5	0.8	7.601	A
C	562	140	1033	1712	0.328	561	1024	0.4	0.5	3.324	A
D	64	16	1093	1082	0.059	64	501	0.1	0.1	3.740	A
E	984	246	477	1701	0.579	982	680	0.9	1.4	5.074	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1611	403	1179	1533	1.050	1494	604	3.9	33.1	55.742	F
B	442	110	2000	753	0.587	438	673	0.8	1.6	13.324	B
C	688	172	1220	1580	0.435	687	1219	0.5	0.8	4.281	A
D	78	19	1314	973	0.080	78	593	0.1	0.1	4.257	A
E	1206	301	583	1641	0.735	1200	809	1.4	2.7	8.196	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1611	403	1184	1530	1.053	1520	606	33.1	55.8	113.722	F
B	442	110	2023	740	0.597	441	681	1.6	1.7	14.160	B
C	688	172	1234	1570	0.438	688	1231	0.8	0.8	4.341	A
D	78	19	1323	968	0.081	78	599	0.1	0.1	4.279	A
E	1206	301	585	1640	0.735	1205	816	2.7	2.8	8.407	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1315	329	972	1671	0.787	1520	497	55.8	4.6	48.884	E
B	361	90	1858	829	0.435	364	634	1.7	0.9	9.153	A
C	562	140	1125	1647	0.341	563	1096	0.8	0.6	3.534	A
D	64	16	1144	1057	0.060	64	544	0.1	0.1	3.839	A
E	984	246	480	1700	0.579	990	728	2.8	1.4	5.189	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1101	275	812	1778	0.619	1112	416	4.6	1.9	6.166	A
B	302	76	1438	1056	0.286	304	486	0.9	0.5	5.644	A
C	471	118	876	1824	0.258	471	866	0.6	0.4	2.831	A
D	53	13	923	1166	0.046	53	424	0.1	0.1	3.422	A
E	824	206	401	1744	0.473	826	575	1.4	0.9	3.993	A

Copthorne Roundabout - 2039 Reference Case, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	19.85	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	19.85	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	2039 Reference Case	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1247	100.000
B		ONE HOUR	✓	802	100.000
C		ONE HOUR	✓	1191	100.000
D		ONE HOUR	✓	76	100.000
E		ONE HOUR	✓	760	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A	B	C	D	E
From	A	0	201	812	167	67
	B	306	0	23	68	405
	C	747	12	0	29	403
	D	48	6	8	0	14
	E	102	182	336	140	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To					
	A	B	C	D	E	
From	A	0	12	2	11	4
	B	6	0	3	4	2
	C	4	3	0	2	1
	D	0	0	0	0	0
	E	0	6	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.76	8.46	3.2	A	1144	1716
B	0.96	56.65	13.2	F	736	1104
C	0.84	15.03	5.2	C	1093	1639
D	0.15	7.38	0.2	A	70	105
E	0.66	8.48	1.9	A	697	1046

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	939	235	513	1978	0.475	935	901	0.0	0.9	3.601	A
B	604	151	1147	1212	0.498	600	301	0.0	1.0	6.045	A
C	897	224	863	1833	0.489	893	884	0.0	1.0	3.924	A
D	57	14	1453	904	0.063	57	303	0.0	0.1	4.250	A
E	572	143	844	1492	0.383	570	666	0.0	0.6	3.979	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1121	280	614	1910	0.587	1119	1078	0.9	1.5	4.749	A
B	721	180	1373	1091	0.661	717	360	1.0	2.0	9.879	A
C	1071	268	1032	1713	0.625	1068	1058	1.0	1.7	5.718	A
D	68	17	1738	763	0.090	68	362	0.1	0.1	5.183	A
E	683	171	1010	1398	0.489	682	796	0.6	1.0	5.128	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1373	343	750	1820	0.755	1366	1303	1.5	3.1	8.197	A
B	883	221	1677	927	0.953	849	439	2.0	10.4	37.956	E
C	1311	328	1235	1569	0.836	1299	1291	1.7	4.8	13.135	B
D	84	21	2094	587	0.143	83	440	0.1	0.2	7.150	A
E	837	209	1220	1279	0.654	833	957	1.0	1.9	8.191	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1373	343	753	1818	0.755	1373	1319	3.1	3.2	8.459	A
B	883	221	1684	923	0.957	872	441	10.4	13.2	56.652	F
C	1311	328	1258	1553	0.845	1310	1298	4.8	5.2	15.027	C
D	84	21	2124	572	0.146	84	444	0.2	0.2	7.377	A
E	837	209	1235	1270	0.659	837	972	1.9	1.9	8.484	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1121	280	618	1907	0.588	1128	1108	3.2	1.5	4.875	A
B	721	180	1383	1085	0.664	765	363	13.2	2.1	13.217	B
C	1071	268	1081	1678	0.638	1084	1067	5.2	1.8	6.377	A
D	68	17	1797	734	0.093	69	369	0.2	0.1	5.415	A
E	683	171	1039	1382	0.494	687	827	1.9	1.0	5.327	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	939	235	516	1975	0.475	941	910	1.5	1.0	3.653	A
B	604	151	1155	1208	0.500	608	303	2.1	1.0	6.255	A
C	897	224	873	1826	0.491	900	890	1.8	1.0	4.016	A
D	57	14	1468	896	0.064	57	305	0.1	0.1	4.292	A
E	572	143	852	1488	0.385	574	673	1.0	0.6	4.032	A

Copthorne Roundabout - 2039 Do Minimum, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	80.47	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	80.47	F

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	2039 Do Minimum	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1415	100.000
B		ONE HOUR	✓	449	100.000
C		ONE HOUR	✓	664	100.000
D		ONE HOUR	✓	74	100.000
E		ONE HOUR	✓	1480	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A	B	C	D	E
From	A	0	379	402	268	366
	B	190	0	27	57	174
	C	270	11	0	39	344
	D	21	21	10	0	22
	E	264	305	708	203	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To					
	A	B	C	D	E	
From	A	0	12	18	15	3
	B	32	0	4	19	3
	C	12	7	0	4	2
	D	12	4	4	0	2
	E	5	2	1	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	1.10	165.93	80.9	F	1298	1947
B	0.67	17.00	2.3	C	412	617
C	0.48	4.87	1.0	A	609	913
D	0.09	4.63	0.1	A	68	102
E	0.99	55.69	24.8	F	1358	2037

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1065	266	942	1692	0.630	1058	557	0.0	1.9	6.267	A
B	338	84	1464	1042	0.324	335	536	0.0	0.6	5.890	A
C	500	125	941	1778	0.281	498	859	0.0	0.4	2.977	A
D	56	14	1015	1121	0.050	55	424	0.0	0.1	3.573	A
E	1114	279	392	1750	0.637	1107	678	0.0	1.8	5.653	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1272	318	1126	1569	0.811	1261	667	1.9	4.5	12.657	B
B	403	101	1748	889	0.454	402	640	0.6	0.9	8.537	A
C	596	149	1124	1648	0.362	596	1026	0.4	0.6	3.625	A
D	66	17	1213	1022	0.065	66	506	0.1	0.1	3.981	A
E	1330	333	469	1706	0.780	1324	811	1.8	3.5	9.439	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1558	389	1337	1428	1.091	1403	806	4.5	43.1	72.407	F
B	494	123	2005	750	0.659	489	735	0.9	2.1	15.719	C
C	731	183	1303	1521	0.480	729	1191	0.6	1.0	4.810	A
D	81	20	1446	907	0.090	81	586	0.1	0.1	4.610	A
E	1629	407	573	1647	0.990	1570	955	3.5	18.2	34.316	D

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1558	389	1364	1410	1.104	1407	814	43.1	80.9	165.927	F
B	494	123	2028	738	0.669	493	743	2.1	2.3	17.004	C
C	731	183	1313	1514	0.483	731	1208	1.0	1.0	4.871	A
D	81	20	1452	904	0.090	81	592	0.1	0.1	4.626	A
E	1629	407	575	1645	0.990	1603	958	18.2	24.8	55.690	F

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1272	318	1201	1519	0.837	1499	686	80.9	24.2	129.899	F
B	403	101	1977	765	0.527	407	722	2.3	1.3	11.772	B
C	596	149	1247	1560	0.382	598	1137	1.0	0.7	3.969	A
D	66	17	1281	989	0.067	67	564	0.1	0.1	4.127	A
E	1330	333	472	1704	0.781	1414	875	24.8	3.8	16.111	C

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1065	266	954	1683	0.633	1154	563	24.2	2.0	8.945	A
B	338	84	1544	999	0.338	341	565	1.3	0.6	6.368	A
C	500	125	991	1742	0.287	500	894	0.7	0.4	3.076	A
D	56	14	1046	1105	0.050	56	445	0.1	0.1	3.629	A
E	1114	279	395	1748	0.638	1122	707	3.8	1.8	5.941	A

Copthorne Roundabout - 2039 Do Minimum, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	81.95	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	81.95	F

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	2039 Do Minimum	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1305	100.000
B		ONE HOUR	✓	927	100.000
C		ONE HOUR	✓	1129	100.000
D		ONE HOUR	✓	80	100.000
E		ONE HOUR	✓	1059	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A	B	C	D	E
From	A	0	192	781	162	169
	B	345	0	25	89	468
	C	670	12	0	20	427
	D	40	14	9	0	17
	E	265	214	446	134	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To					
	A	B	C	D	E	
From	A	0	12	2	11	4
	B	6	0	3	4	2
	C	4	3	0	2	1
	D	0	0	0	0	0
	E	0	6	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.84	13.51	5.2	B	1197	1796
B	1.24	337.54	103.5	F	850	1276
C	0.82	13.48	4.5	B	1036	1554
D	0.15	7.46	0.2	A	73	110
E	0.88	21.23	6.5	C	972	1458

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	982	246	621	1905	0.516	978	988	0.0	1.1	4.035	A
B	698	174	1275	1144	0.610	691	324	0.0	1.6	8.132	A
C	850	212	1022	1720	0.494	846	944	0.0	1.0	4.214	A
D	60	15	1564	849	0.071	60	304	0.0	0.1	4.564	A
E	797	199	816	1509	0.529	793	808	0.0	1.1	5.090	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1173	293	743	1824	0.643	1170	1179	1.1	1.9	5.730	A
B	833	208	1525	1009	0.826	822	388	1.6	4.4	18.915	C
C	1015	254	1217	1582	0.642	1012	1130	1.0	1.8	6.453	A
D	72	18	1866	699	0.103	72	363	0.1	0.1	5.735	A
E	952	238	974	1419	0.671	949	964	1.1	2.0	7.734	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1437	359	901	1719	0.836	1425	1369	1.9	4.9	12.308	B
B	1020	255	1854	831	1.227	823	471	4.4	53.8	140.454	F
C	1243	311	1308	1517	0.819	1233	1368	1.8	4.3	12.585	B
D	88	22	2117	575	0.153	88	424	0.1	0.2	7.387	A
E	1166	292	1120	1335	0.873	1150	1085	2.0	6.0	18.379	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1437	359	912	1712	0.839	1436	1378	4.9	5.2	13.514	B
B	1020	255	1871	822	1.241	821	476	53.8	103.5	337.544	F
C	1243	311	1312	1515	0.820	1242	1381	4.3	4.5	13.477	B
D	88	22	2127	570	0.155	88	427	0.2	0.2	7.464	A
E	1166	292	1126	1332	0.875	1164	1089	6.0	6.5	21.233	C

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1173	293	758	1814	0.647	1186	1252	5.2	1.9	6.116	A
B	833	208	1550	995	0.837	986	395	103.5	65.4	305.483	F
C	1015	254	1383	1464	0.693	1023	1152	4.5	2.4	8.549	A
D	72	18	2023	622	0.116	72	383	0.2	0.1	6.556	A
E	952	238	1042	1380	0.690	969	1054	6.5	2.3	9.258	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	982	246	628	1901	0.517	986	1092	1.9	1.1	4.128	A
B	698	174	1286	1138	0.613	953	327	65.4	1.7	60.662	F
C	850	212	1279	1538	0.553	854	960	2.4	1.3	5.448	A
D	60	15	1802	731	0.082	60	331	0.1	0.1	5.372	A
E	797	199	918	1450	0.550	802	945	2.3	1.3	5.687	A

Junctions 10
ARCADY 10 - Roundabout Module
Version: 10.1.0.1820 © Copyright TRL Software Limited, 2023
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Filename: Copthorne Common Mitigation.j10
Path: \\Londonfile\ProjectData\## Mid Sussex LP\5. Technical\5. Modelling\Copthorne Common Roundabout
Report generation date: 20/12/2023 11:24:09

- »2039 DM, AM
- »2039 DM, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2039 DM										
Arm A	D1	31.3	70.35	1.01	F	D2	3.5	8.89	0.77	A
Arm B		1.5	11.01	0.57	B		25.5	87.70	1.01	F
Arm C		1.0	5.04	0.49	A		7.1	21.81	0.89	C
Arm D		0.1	4.70	0.09	A		0.2	8.72	0.18	A
Arm E		24.9	55.82	0.99	F		7.8	25.47	0.90	D

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

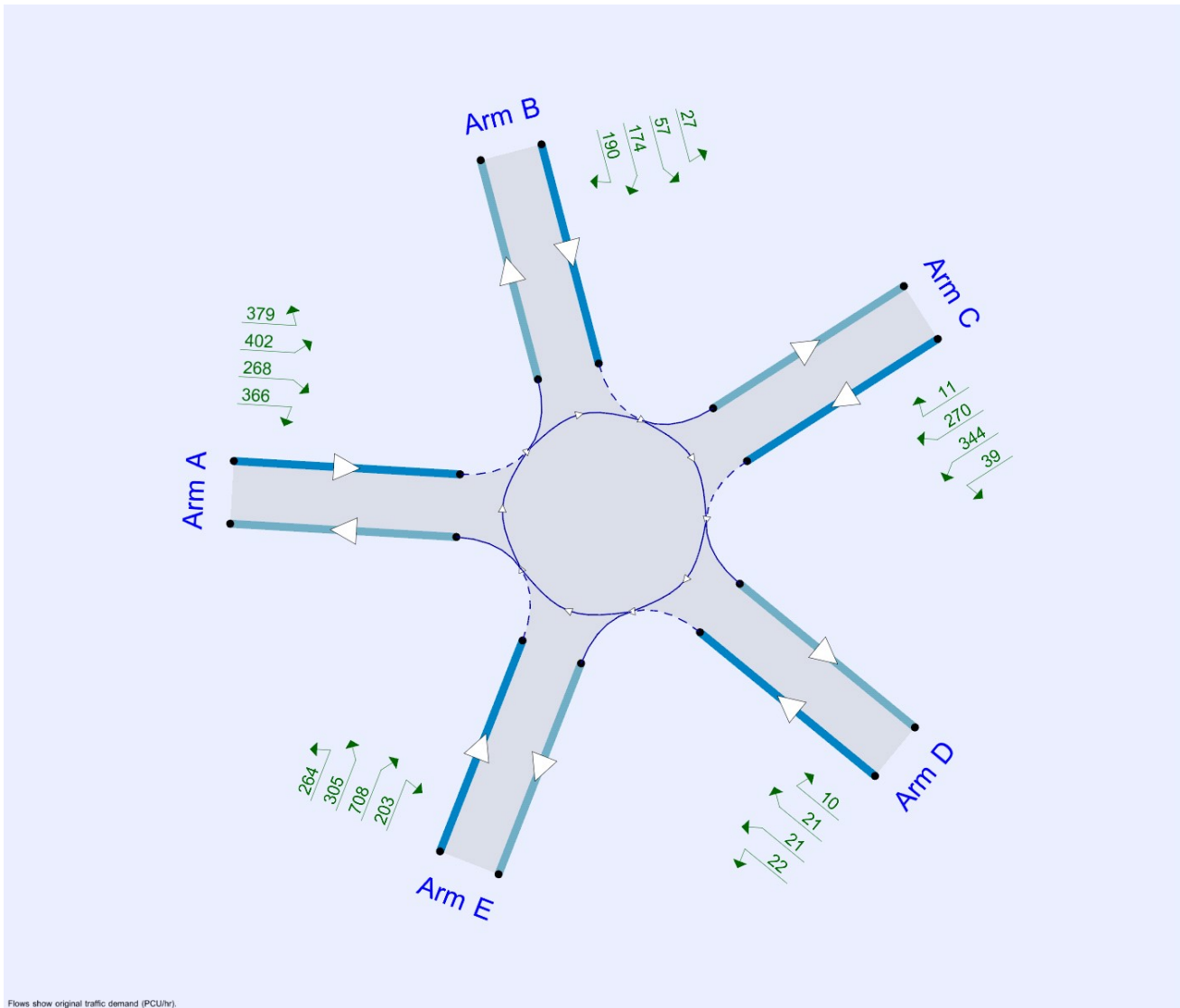
File summary

File Description

Title	
Location	
Site number	
Date	15/12/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADSYSTRA\thodgson
Description	

Units

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



Flows show original traffic demand (PCU/hr).
The junction diagram reflects the last run of Junctions.

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	2039 DM	AM	ONE HOUR	07:45	09:15	15	✓
D2	2039 DM	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2039 DM, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	46.75	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	46.75	E

Arms

Arms

Arm	Name	Description	No give-way line
A	A264 W		
B	Brookhill Road		
C	Copthorne Common Rd		
D	Copthorne Way SE		
E	A2220 SW		

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
A	6.10	8.14	8.1	27.3	64.9	37.0		
B	4.95	8.42	26.8	16.1	64.9	47.0		
C	5.16	7.53	11.8	21.0	64.9	48.0		
D	5.76	6.64	0.5	10.7	64.9	44.0		
E	4.53	7.94	18.8	19.2	64.9	37.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.604	2166
B	0.576	2084
C	0.545	1880
D	0.495	1623
E	0.569	1973

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

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
A	Percentage		115.00
C	Percentage		130.00

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	2039 DM	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1415	100.000
B		ONE HOUR	✓	448	100.000
C		ONE HOUR	✓	664	100.000
D		ONE HOUR	✓	74	100.000
E		ONE HOUR	✓	1480	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A	B	C	D	E
From	A	0	379	402	268	366
	B	190	0	27	57	174
	C	270	11	0	39	344
	D	21	21	10	0	22
	E	264	305	708	203	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To				
		A	B	C	D	E
From	A	0	12	18	15	3
	B	32	0	4	19	3
	C	12	7	0	4	0
	D	12	4	4	0	2
	E	5	2	1	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	1.01	70.35	31.3	F	1298	1948
B	0.57	11.01	1.5	B	411	617
C	0.49	5.04	1.0	A	609	914
D	0.09	4.70	0.1	A	68	102
E	0.99	55.82	24.9	F	1358	2037

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1065	266	941	1836	0.580	1059	558	0.0	1.5	5.132	A
B	337	84	1465	1240	0.272	336	536	0.0	0.4	4.600	A
C	500	125	942	1777	0.281	498	858	0.0	0.4	2.950	A
D	56	14	1016	1120	0.050	55	424	0.0	0.1	3.567	A
E	1114	279	392	1750	0.637	1107	679	0.0	1.8	5.658	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1272	318	1125	1708	0.745	1266	668	1.5	3.1	8.946	A
B	403	101	1750	1076	0.374	402	641	0.4	0.7	6.179	A
C	597	149	1126	1646	0.363	596	1026	0.4	0.6	3.595	A
D	67	17	1215	1022	0.065	66	507	0.1	0.1	3.977	A
E	1330	333	469	1706	0.780	1324	812	1.8	3.5	9.449	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1558	389	1336	1562	0.998	1490	808	3.1	20.1	38.675	E
B	493	123	2068	893	0.553	490	758	0.7	1.4	10.298	B
C	731	183	1344	1492	0.490	729	1215	0.6	1.0	4.943	A
D	81	20	1470	895	0.091	81	603	0.1	0.1	4.668	A
E	1630	407	574	1646	0.990	1570	978	3.5	18.3	34.405	D

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1558	389	1363	1543	1.010	1513	815	20.1	31.3	70.348	F
B	493	123	2106	871	0.566	493	771	1.4	1.5	11.014	B
C	731	183	1361	1480	0.494	731	1238	1.0	1.0	5.044	A
D	81	20	1480	890	0.092	81	612	0.1	0.1	4.695	A
E	1630	407	576	1645	0.990	1603	986	18.3	24.9	55.818	F

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1272	318	1200	1656	0.768	1382	687	31.3	3.9	20.177	C
B	403	101	1891	995	0.405	405	690	1.5	0.8	7.110	A
C	597	149	1194	1598	0.374	598	1103	1.0	0.6	3.786	A
D	67	17	1250	1004	0.066	67	542	0.1	0.1	4.053	A
E	1330	333	472	1704	0.781	1415	845	24.9	3.8	16.135	C

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1065	266	954	1828	0.583	1075	563	3.9	1.6	5.401	A
B	337	84	1485	1229	0.275	339	543	0.8	0.4	4.693	A
C	500	125	954	1768	0.283	501	870	0.6	0.4	2.980	A
D	56	14	1025	1116	0.050	56	430	0.1	0.1	3.583	A
E	1114	279	395	1748	0.637	1122	686	3.8	1.8	5.945	A

2039 DM, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	32.27	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	32.27	D

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	2039 DM	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1304	100.000
B		ONE HOUR	✓	927	100.000
C		ONE HOUR	✓	1129	100.000
D		ONE HOUR	✓	80	100.000
E		ONE HOUR	✓	1059	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A	B	C	D	E
From	A	0	192	781	162	169
	B	345	0	25	89	468
	C	670	12	0	20	427
	D	40	14	9	0	17
	E	265	214	446	134	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To				
From		A	B	C	D	E
	A	0	12	2	11	4
	B	6	0	3	4	2
	C	4	3	0	2	1
	D	0	0	0	0	0
	E	0	6	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.77	8.89	3.5	A	1197	1795
B	1.01	87.70	25.5	F	851	1276
C	0.89	21.81	7.1	C	1036	1554
D	0.18	8.72	0.2	A	73	110
E	0.90	25.47	7.8	D	972	1458

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	982	245	621	2059	0.477	978	988	0.0	0.9	3.475	A
B	698	174	1275	1350	0.517	694	324	0.0	1.1	5.652	A
C	850	212	1023	1719	0.494	846	945	0.0	1.0	4.219	A
D	60	15	1566	848	0.071	60	303	0.0	0.1	4.569	A
E	797	199	816	1508	0.529	793	810	0.0	1.1	5.077	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1172	293	742	1975	0.594	1170	1182	0.9	1.5	4.671	A
B	833	208	1525	1205	0.691	829	387	1.1	2.2	9.789	A
C	1015	254	1223	1577	0.643	1012	1131	1.0	1.8	6.504	A
D	72	18	1872	696	0.103	72	363	0.1	0.1	5.762	A
E	952	238	976	1417	0.672	948	968	1.1	2.0	7.733	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1436	359	898	1866	0.769	1428	1416	1.5	3.4	8.463	A
B	1021	255	1856	1015	1.006	963	470	2.2	16.7	48.399	E
C	1243	311	1445	1421	0.875	1226	1374	1.8	6.2	17.587	C
D	88	22	2233	518	0.170	88	437	0.1	0.2	8.368	A
E	1166	291	1168	1308	0.891	1147	1153	2.0	6.8	20.546	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1436	359	910	1858	0.773	1435	1437	3.4	3.5	8.890	A
B	1021	255	1870	1007	1.014	985	475	16.7	25.5	87.695	F
C	1243	311	1470	1403	0.886	1239	1386	6.2	7.1	21.810	C
D	88	22	2268	501	0.176	88	442	0.2	0.2	8.724	A
E	1166	291	1185	1299	0.898	1162	1171	6.8	7.8	25.475	D

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1172	293	762	1961	0.598	1180	1238	3.5	1.6	4.870	A
B	833	208	1548	1193	0.699	925	394	25.5	2.5	18.971	C
C	1015	254	1323	1507	0.674	1035	1150	7.1	2.2	8.153	A
D	72	18	1981	642	0.112	72	377	0.2	0.1	6.316	A
E	952	238	1026	1389	0.685	974	1027	7.8	2.3	9.249	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	982	245	628	2054	0.478	984	1000	1.6	1.0	3.531	A
B	698	174	1285	1344	0.519	703	327	2.5	1.1	5.879	A
C	850	212	1036	1710	0.497	855	953	2.2	1.0	4.348	A
D	60	15	1584	839	0.072	60	306	0.1	0.1	4.624	A
E	797	199	826	1503	0.530	802	819	2.3	1.2	5.246	A

Junctions 10
ARCADY 10 - Roundabout Module
Version: 10.1.0.1820 © Copyright TRL Software Limited, 2023
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Filename: Dukes Head Roundabout Validation (AM Model).j10
Path: \\Londonfile\ProjectData\## Mid Sussex LP\5. Technical\5. Modelling\Dukes Head Roundabout
Report generation date: 20/12/2023 12:47:57

- »Dukes Head Roundabout - 2019 Base, AM
- »Dukes Head Roundabout - 2039 Ref Case, AM
- »Dukes Head Roundabout - 2039 Do Minimum, AM

Summary of junction performance

AM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
Dukes Head Roundabout - 2019 Base					
Arm A	D1	19.4	69.96	0.98	F
Arm B		0.3	4.49	0.20	A
Arm C		0.7	5.35	0.38	A
Arm D		0.6	5.28	0.36	A
Dukes Head Roundabout - 2039 Ref Case					
Arm A	D2	116.5	416.44	1.22	F
Arm B		0.5	4.90	0.33	A
Arm C		0.4	5.07	0.26	A
Arm D		1.8	8.50	0.64	A
Dukes Head Roundabout - 2039 Do Minimum					
Arm A	D3	114.8	411.08	1.22	F
Arm B		0.6	5.16	0.37	A
Arm C		0.4	5.24	0.28	A
Arm D		2.0	9.34	0.67	A

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

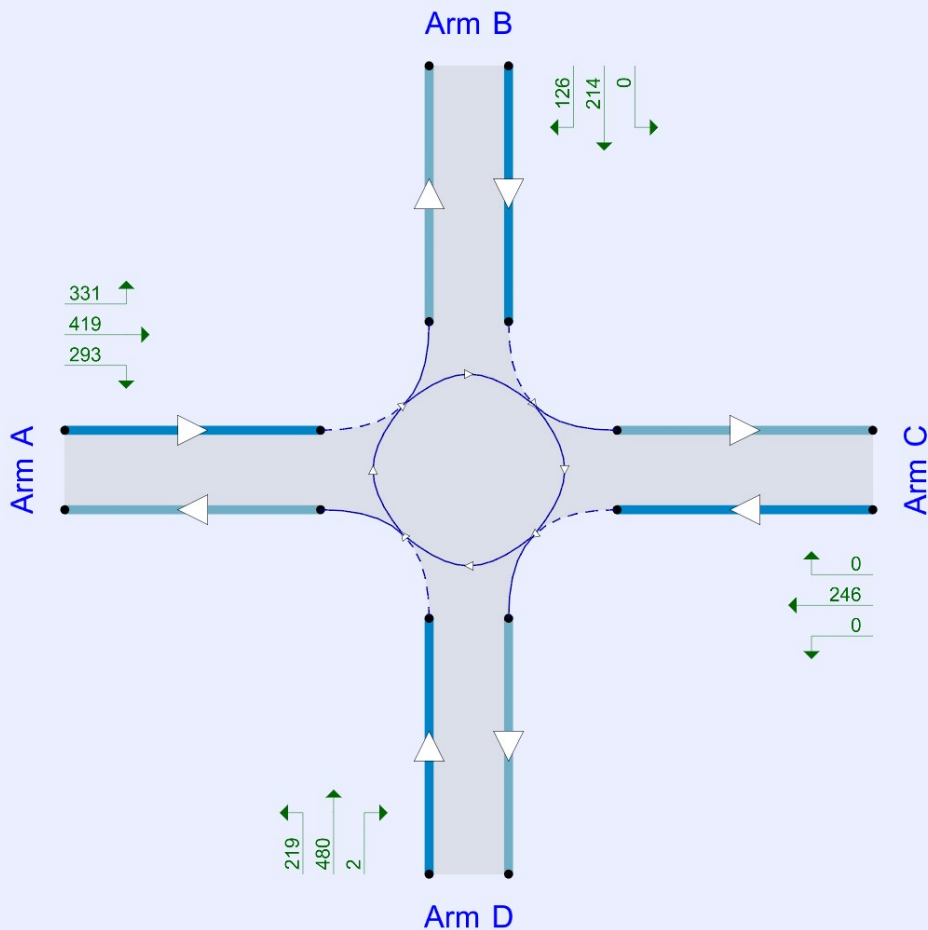
File summary

File Description

Title	
Location	
Site number	
Date	30/11/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADSYSTRA\thodgson
Description	

Units

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



Flows show original traffic demand (PCU/hr).

The junction diagram reflects the last run of Junctions.

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	2019 Base	AM	ONE HOUR	07:45	09:15	15	✓
D2	2039 Ref Case	AM	ONE HOUR	07:45	09:15	15	✓
D3	2039 Do Minimum	AM	ONE HOUR	07:45	09:15	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Dukes Head Roundabout	✓	100.000	100.000

Dukes Head Roundabout - 2019 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	37.03	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	37.03	E

Arms

Arms

Arm	Name	Description	No give-way line
A	Copthorne Common Road		
B	Turners Hill Road (N)		
C	A264 (E)		
D	Turners Hill Road (S)		

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
A	4.79	7.53	19.4	46.5	49.0	57.0		
B	3.81	6.64	9.5	24.3	49.0	49.0		
C	4.37	4.83	16.8	22.9	49.0	46.0		
D	2.78	6.74	12.8	100.3	49.0	44.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.630	1890
B	0.559	1503
C	0.538	1381
D	0.559	1432

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

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
A	Percentage		60.50

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	933	100.000
B		ONE HOUR	✓	201	100.000
C		ONE HOUR	✓	405	100.000
D		ONE HOUR	✓	358	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	253	518	163
	B	135	0	0	66
	C	405	0	0	0
	D	126	230	2	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To			
		A	B	C	D
From	A	0	3	10	13
	B	6	0	11	13
	C	7	0	0	13
	D	6	2	11	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.98	69.96	19.4	F	857	1285
B	0.20	4.49	0.3	A	184	276
C	0.38	5.35	0.7	A	372	557
D	0.36	5.28	0.6	A	329	493

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	703	176	174	1077	0.653	695	499	0.0	2.0	10.020	B
B	151	38	508	1219	0.124	150	361	0.0	0.2	3.650	A
C	305	76	271	1235	0.247	303	387	0.0	0.3	4.141	A
D	270	67	404	1206	0.224	269	171	0.0	0.3	3.967	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	839	210	209	1064	0.789	832	598	2.0	3.7	16.343	C
B	180	45	608	1163	0.155	180	432	0.2	0.2	3.971	A
C	364	91	325	1206	0.302	364	463	0.3	0.5	4.583	A
D	322	81	484	1161	0.277	322	204	0.3	0.4	4.433	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1028	257	255	1046	0.983	985	732	3.7	14.5	45.607	E
B	221	55	720	1101	0.201	221	520	0.2	0.3	4.434	A
C	446	111	392	1170	0.381	445	548	0.5	0.7	5.323	A
D	395	99	593	1100	0.359	394	244	0.4	0.6	5.263	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1028	257	256	1046	0.983	1009	733	14.5	19.4	69.963	F
B	221	55	737	1091	0.203	221	527	0.3	0.3	4.485	A
C	446	111	397	1167	0.382	446	562	0.7	0.7	5.351	A
D	395	99	594	1100	0.359	395	248	0.6	0.6	5.277	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	839	210	209	1063	0.789	899	600	19.4	4.5	29.751	D
B	180	45	657	1136	0.159	181	451	0.3	0.2	4.086	A
C	364	91	337	1199	0.304	365	500	0.7	0.5	4.631	A
D	322	81	486	1160	0.278	323	216	0.6	0.4	4.448	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	703	176	175	1076	0.653	712	502	4.5	2.1	10.975	B
B	151	38	521	1212	0.125	151	367	0.2	0.2	3.682	A
C	305	76	275	1233	0.247	305	397	0.5	0.4	4.168	A
D	270	67	407	1205	0.224	270	174	0.4	0.3	3.987	A

Dukes Head Roundabout - 2039 Ref Case, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	190.23	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	190.23	F

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	2039 Ref Case	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1043	100.000
B		ONE HOUR	✓	340	100.000
C		ONE HOUR	✓	246	100.000
D		ONE HOUR	✓	701	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	331	419	293
	B	126	0	0	214
	C	246	0	0	0
	D	219	480	2	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To			
		A	B	C	D
From	A	0	3	10	9
	B	6	0	0	4
	C	8	2	0	21
	D	4	1	9	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	1.22	416.44	116.5	F	957	1436
B	0.33	4.90	0.5	A	312	468
C	0.26	5.07	0.4	A	226	339
D	0.64	8.50	1.8	A	643	965

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	785	196	361	1006	0.781	771	443	0.0	3.5	15.666	C
B	256	64	528	1208	0.212	255	604	0.0	0.3	3.953	A
C	185	46	471	1127	0.164	184	311	0.0	0.2	4.121	A
D	528	132	279	1276	0.414	525	377	0.0	0.7	4.866	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	938	234	432	978	0.958	906	530	3.5	11.5	41.286	E
B	306	76	620	1156	0.264	305	718	0.3	0.4	4.428	A
C	221	55	560	1080	0.205	221	366	0.2	0.3	4.526	A
D	630	158	334	1245	0.506	629	447	0.7	1.0	5.941	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1148	287	529	942	1.219	937	649	11.5	64.4	158.529	F
B	374	94	642	1144	0.327	374	824	0.4	0.5	4.890	A
C	271	68	637	1038	0.261	270	378	0.3	0.4	5.063	A
D	772	193	409	1203	0.641	769	498	1.0	1.8	8.386	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1148	287	531	941	1.220	940	651	64.4	116.5	351.535	F
B	374	94	644	1143	0.328	374	827	0.5	0.5	4.905	A
C	271	68	638	1037	0.261	271	380	0.4	0.4	5.072	A
D	772	193	410	1203	0.642	772	500	1.8	1.8	8.502	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	938	234	435	977	0.959	968	533	116.5	108.8	416.443	F
B	306	76	663	1132	0.270	306	741	0.5	0.4	4.566	A
C	221	55	578	1070	0.207	222	391	0.4	0.3	4.585	A
D	630	158	335	1245	0.506	633	465	1.8	1.1	6.030	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	785	196	364	1005	0.782	995	446	108.8	56.4	301.211	F
B	256	64	681	1123	0.228	256	678	0.4	0.3	4.353	A
C	185	46	536	1093	0.170	185	401	0.3	0.2	4.288	A
D	528	132	280	1275	0.414	529	441	1.1	0.7	4.926	A

Dukes Head Roundabout - 2039 Do Minimum, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	181.43	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	181.43	F

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	2039 Do Minimum	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1036	100.000
B		ONE HOUR	✓	390	100.000
C		ONE HOUR	✓	256	100.000
D		ONE HOUR	✓	721	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
From		A	B	C	D
	A	0	354	416	265
	B	147	0	0	243
	C	254	0	0	2
	D	227	490	4	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To			
From		A	B	C	D
	A	0	2	10	9
	B	5	0	4	4
	C	8	0	0	1
	D	3	1	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	1.22	411.08	114.8	F	951	1426
B	0.37	5.16	0.6	A	358	537
C	0.28	5.24	0.4	A	235	352
D	0.67	9.34	2.0	A	662	993

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	780	195	370	1002	0.778	766	470	0.0	3.5	15.505	C
B	294	73	507	1220	0.241	292	629	0.0	0.3	4.043	A
C	193	48	488	1118	0.172	192	311	0.0	0.2	4.181	A
D	543	136	300	1264	0.429	540	380	0.0	0.8	5.034	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	931	233	443	974	0.956	900	564	3.5	11.2	40.643	E
B	351	88	596	1170	0.300	350	747	0.3	0.4	4.579	A
C	230	57	581	1068	0.215	230	365	0.2	0.3	4.620	A
D	648	162	360	1231	0.527	647	450	0.8	1.1	6.254	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1141	285	542	937	1.217	932	689	11.2	63.4	156.906	F
B	429	107	617	1158	0.371	429	856	0.4	0.6	5.145	A
C	282	70	667	1022	0.276	281	379	0.3	0.4	5.229	A
D	794	198	441	1186	0.670	790	508	1.1	2.0	9.179	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1141	285	544	936	1.219	935	691	63.4	114.8	348.277	F
B	429	107	620	1156	0.371	429	859	0.6	0.6	5.163	A
C	282	70	669	1021	0.276	282	380	0.4	0.4	5.241	A
D	794	198	441	1185	0.670	794	509	2.0	2.0	9.343	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	931	233	447	973	0.957	964	566	114.8	106.6	411.080	F
B	351	88	638	1146	0.306	351	773	0.6	0.5	4.724	A
C	230	57	598	1059	0.217	230	391	0.4	0.3	4.679	A
D	648	162	361	1230	0.527	652	467	2.0	1.1	6.367	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	780	195	373	1001	0.779	991	474	106.6	53.8	293.609	F
B	294	73	655	1137	0.258	294	709	0.5	0.4	4.458	A
C	193	48	548	1086	0.177	193	401	0.3	0.2	4.340	A
D	543	136	302	1263	0.430	544	438	1.1	0.8	5.106	A

Junctions 10
ARCADY 10 - Roundabout Module
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Filename: Dukes Head Roundabout Validation (Mitigated AM Final BG geoms for Meeting).j10
Path: \\Londonfile\ProjectData\## Mid Sussex LP\5. Technical\5. Modelling\Dukes Head Roundabout
Report generation date: 20/12/2023 10:27:19

«Dukes Head Roundabout (Mitigation) - 2039 Do Minimum, AM

- »Junction Network
- »Arms
- »Traffic Demand
- »Origin-Destination Data
- »Vehicle Mix
- »Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
Dukes Head Roundabout (Mitigation) - 2039 Do Minimum				
Arm A	32.6	99.29	1.03	F
Arm B	0.6	5.39	0.38	A
Arm C	0.3	3.81	0.22	A
Arm D	1.7	7.63	0.62	A

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

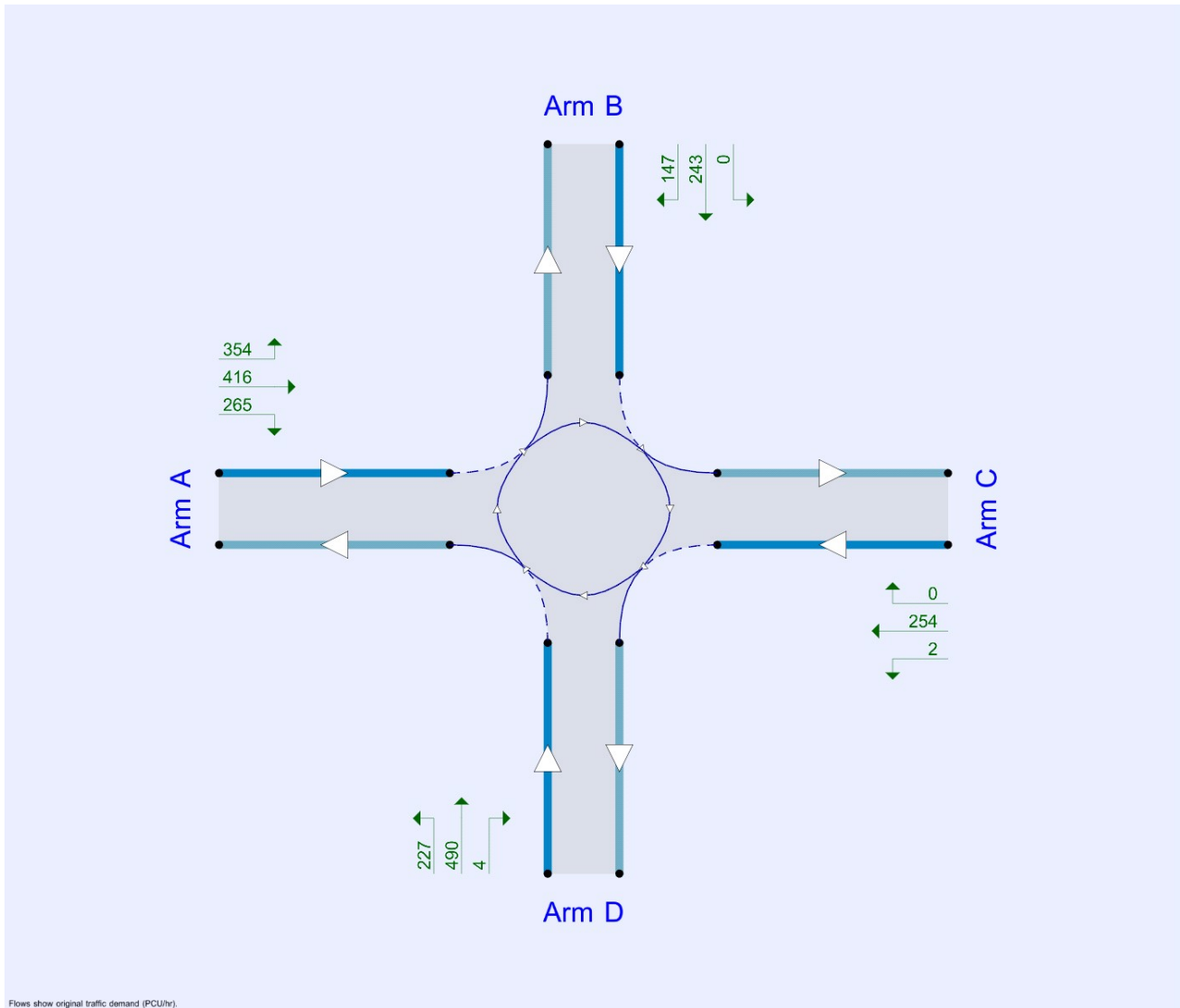
File summary

File Description

Title	
Location	
Site number	
Date	30/11/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADSYSTRA\thodgson
Description	

Units

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



Flows show original traffic demand (PCU/hr).

The junction diagram reflects the last run of Junctions.

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

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Dukes Head Roundabout (Mitigation)	✓	100.000	100.000

Dukes Head Roundabout (Mitigation) - 2039 Do Minimum, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	46.38	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	46.38	E

Arms

Arms

Arm	Name	Description	No give-way line
A	Copthorne Common Road		
B	Turners Hill Road (N)		
C	A264 (E)		
D	Turners Hill Road (S)		

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
A	6.10	8.94	11.9	55.4	50.2	54.0		
B	3.81	7.94	9.1	30.9	50.2	59.0		
C	3.99	7.87	14.9	41.4	50.2	58.0		
D	2.80	7.77	13.5	343.7	50.2	46.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.690	2214
B	0.551	1525
C	0.590	1716
D	0.572	1526

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

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
A	Percentage		60.50

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	2039 Do Minimum	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1036	100.000
B		ONE HOUR	✓	390	100.000
C		ONE HOUR	✓	256	100.000
D		ONE HOUR	✓	721	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	354	416	265
	B	147	0	0	243
	C	254	0	0	2
	D	227	490	4	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To			
		A	B	C	D
From	A	0	2	10	9
	B	5	0	4	4
	C	8	0	0	1
	D	3	1	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	1.03	99.29	32.6	F	951	1426
B	0.38	5.39	0.6	A	358	537
C	0.22	3.81	0.3	A	235	352
D	0.62	7.63	1.7	A	662	993

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	780	195	370	1185	0.658	772	471	0.0	2.0	9.151	A
B	294	73	511	1243	0.236	292	631	0.0	0.3	3.943	A
C	193	48	490	1427	0.135	192	313	0.0	0.2	3.136	A
D	543	136	301	1354	0.401	540	381	0.0	0.7	4.483	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	931	233	443	1155	0.807	923	564	2.0	4.1	16.048	C
B	351	88	611	1188	0.295	350	755	0.3	0.4	4.477	A
C	230	57	586	1370	0.168	230	375	0.2	0.2	3.397	A
D	648	162	360	1320	0.491	647	456	0.7	1.0	5.428	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1141	285	542	1113	1.024	1071	690	4.1	21.4	55.676	F
B	429	107	709	1134	0.379	429	904	0.4	0.6	5.316	A
C	282	70	703	1301	0.216	281	435	0.2	0.3	3.799	A
D	794	198	441	1274	0.623	791	544	1.0	1.6	7.540	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1141	285	544	1113	1.025	1096	691	21.4	32.6	99.287	F
B	429	107	725	1125	0.382	429	914	0.6	0.6	5.394	A
C	282	70	710	1297	0.217	282	445	0.3	0.3	3.814	A
D	794	198	441	1274	0.623	794	550	1.6	1.7	7.625	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	931	233	446	1153	0.807	1041	566	32.6	5.2	48.945	E
B	351	88	688	1146	0.306	351	798	0.6	0.5	4.730	A
C	230	57	618	1352	0.170	230	422	0.3	0.2	3.458	A
D	648	162	361	1320	0.491	651	487	1.7	1.0	5.497	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	780	195	373	1184	0.659	792	473	5.2	2.1	10.112	B
B	294	73	524	1236	0.238	294	641	0.5	0.3	3.989	A
C	193	48	497	1423	0.135	193	321	0.2	0.2	3.150	A
D	543	136	302	1353	0.401	544	388	1.0	0.7	4.530	A

Junctions 10
ARCADY 10 - Roundabout Module
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Filename: Dukes Head Roundabout Validation (Mitigated PM Final BG geoms for Meeting).j10
Path: \\Londonfile\ProjectData\## Mid Sussex LP\5. Technical\5. Modelling\Dukes Head Roundabout
Report generation date: 20/12/2023 10:37:58

«Dukes Head Roundabout (Mitigation) - 2039 Do Minimum, PM

- »Junction Network
- »Arms
- »Traffic Demand
- »Origin-Destination Data
- »Vehicle Mix
- »Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
Dukes Head Roundabout (Mitigation) - 2039 Do Minimum				
Arm A	21.2	55.64	0.98	F
Arm B	8.5	39.95	0.92	E
Arm C	1.7	13.68	0.62	B
Arm D	1.0	7.29	0.50	A

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

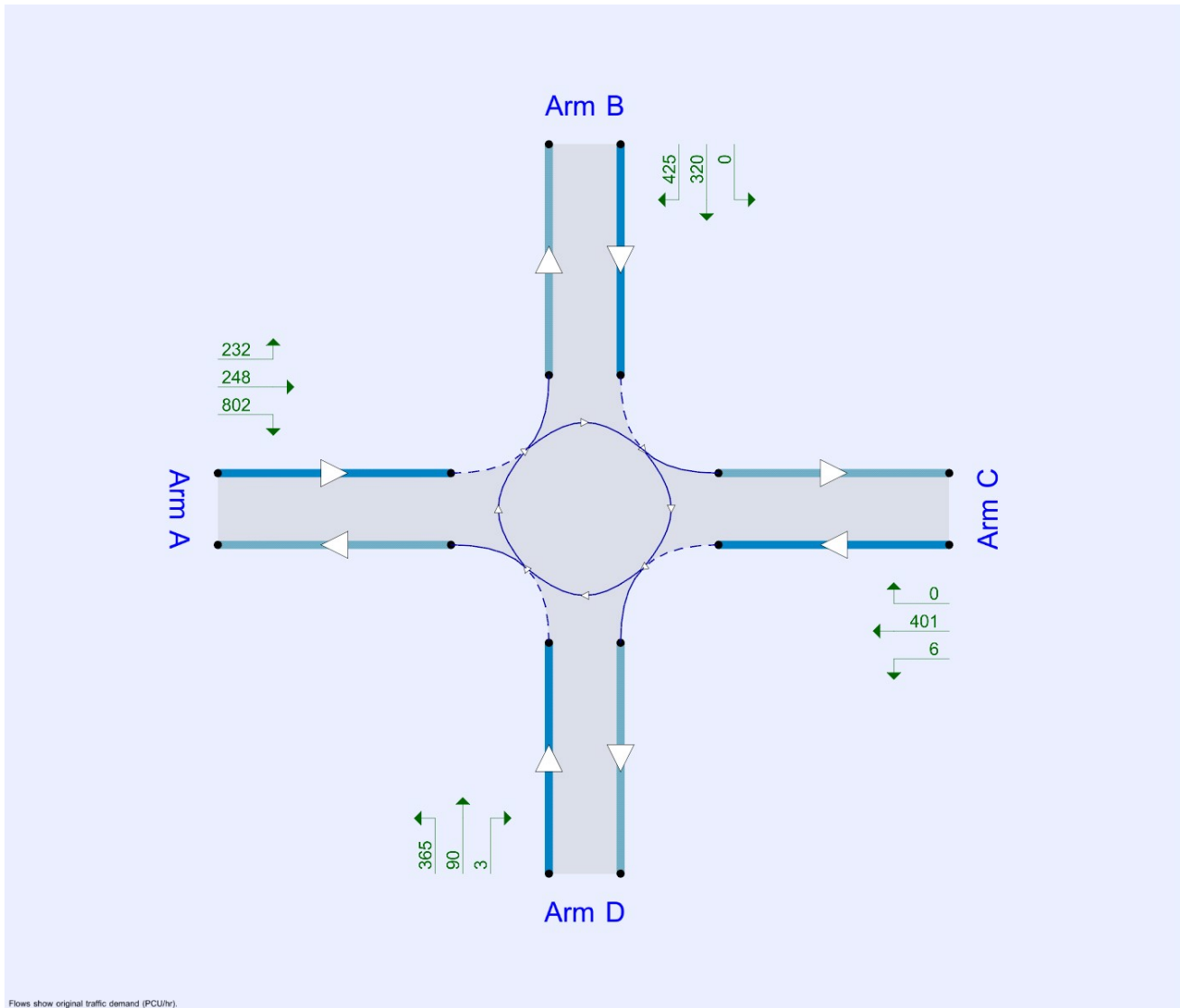
File summary

File Description

Title	
Location	
Site number	
Date	30/11/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADSYSTRA\thodgson
Description	

Units

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



Flows show original traffic demand (PCU/hr).

The junction diagram reflects the last run of Junctions.

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

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Dukes Head Roundabout (Mitigation)	✓	100.000	100.000

Dukes Head Roundabout (Mitigation) - 2039 Do Minimum, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	38.05	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	38.05	E

Arms

Arms

Arm	Name	Description	No give-way line
A	Copthorne Common Road		
B	Turners Hill Road (N)		
C	A264 (E)		
D	Turners Hill Road (S)		

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
A	6.10	8.94	11.9	55.4	50.2	54.0		
B	3.81	7.94	9.1	30.9	50.2	59.0		
C	3.99	7.87	14.9	41.4	50.2	58.0		
D	2.80	7.77	13.5	343.7	50.2	46.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.690	2214
B	0.551	1525
C	0.590	1716
D	0.572	1526

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

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
A	Percentage		67.00

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	2039 Do Minimum	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1283	100.000
B		ONE HOUR	✓	745	100.000
C		ONE HOUR	✓	407	100.000
D		ONE HOUR	✓	457	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	232	248	802
	B	425	0	0	320
	C	401	0	0	6
	D	365	90	3	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To			
		A	B	C	D
From	A	0	0	4	0
	B	1	0	0	1
	C	5	0	0	0
	D	3	1	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.98	55.64	21.2	F	1177	1766
B	0.92	39.95	8.5	E	684	1026
C	0.62	13.68	1.7	B	373	560
D	0.50	7.29	1.0	A	420	629

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	966	241	69	1452	0.665	958	891	0.0	2.0	7.257	A
B	561	140	787	1092	0.514	557	240	0.0	1.0	6.724	A
C	306	77	1156	1034	0.296	305	188	0.0	0.4	5.148	A
D	344	86	618	1173	0.293	343	843	0.0	0.4	4.428	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1153	288	83	1445	0.798	1146	1067	2.0	3.8	11.871	B
B	670	167	941	1006	0.666	666	288	1.0	1.9	10.539	B
C	366	91	1383	900	0.406	365	224	0.4	0.7	7.018	A
D	411	103	739	1103	0.373	410	1009	0.4	0.6	5.311	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1412	353	101	1437	0.983	1363	1295	3.8	16.0	35.995	E
B	820	205	1120	908	0.903	800	345	1.9	7.0	29.339	D
C	448	112	1653	741	0.605	445	267	0.7	1.5	12.571	B
D	503	126	894	1015	0.496	502	1203	0.6	1.0	7.166	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1412	353	102	1437	0.983	1392	1307	16.0	21.2	55.640	F
B	820	205	1143	895	0.916	814	350	7.0	8.5	39.948	E
C	448	112	1685	722	0.620	448	273	1.5	1.7	13.677	B
D	503	126	905	1008	0.499	503	1227	1.0	1.0	7.293	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1153	288	83	1445	0.798	1221	1089	21.2	4.3	20.279	C
B	670	167	1002	973	0.689	695	302	8.5	2.3	14.087	B
C	366	91	1458	856	0.427	369	239	1.7	0.8	7.794	A
D	411	103	760	1092	0.377	413	1067	1.0	0.6	5.439	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	966	241	70	1451	0.665	975	901	4.3	2.1	7.769	A
B	561	140	800	1084	0.517	566	244	2.3	1.1	7.057	A
C	306	77	1175	1023	0.300	308	191	0.8	0.5	5.276	A
D	344	86	626	1168	0.295	345	857	0.6	0.4	4.481	A

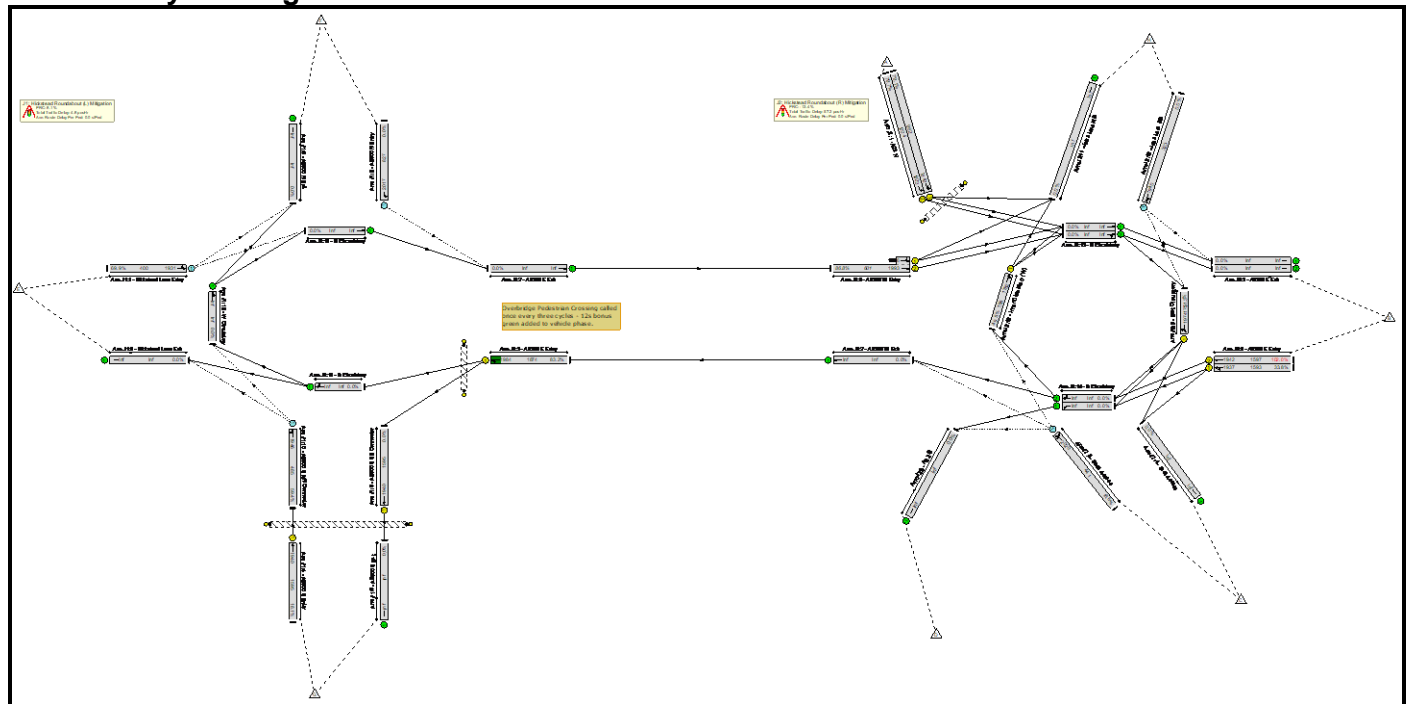
Basic Results Summary
Basic Results Summary

User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	Hickstead Junction Mitigation - Science Park Model - ST.lsg3x
Author:	
Company:	
Address:	

Scenario 1: '2039 DM AM' (FG1: '2039 DM AM', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	102.0%	650	0	0	62.0	-	-
J1: Hickstead Roundabout (L) Mitigation	-	-	-		-	-	-	-	-	-	83.2%	568	0	0	4.8	-	-
1/1	Hickstead Lane Entry Left Ahead	O	-		-	-	-	280	1931	400	69.9%	280	0	0	1.1	14.7	1.1
2/1	A2300 N Entry Left	O	-		-	-	-	0	2017	827	0.0%	0	0	0	0.0	0.0	0.0
3/1	A2300 E Entry Left Ahead	U	D		1	72	-	1590	1984	1874	83.2%	-	-	-	2.6	6.0	7.0
4/1	A2300 S Entry Ahead	U	H		1	73	-	288	1940	1595	18.1%	-	-	-	0.2	3.1	1.6
9/1	A2300 S SB Connector Ahead	U	F		1	73	-	0	1940	1595	0.0%	-	-	-	0.0	0.0	0.0
10/1	A2300 S MN Connector Left Ahead	O	-		-	-	-	288	1946	485	59.4%	288	0	0	0.8	10.2	3.2
Ped Link: P1	A2300 E Ped Crossing	-	E		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	A2300 S Ped Crossing	-	G		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
J2: Hickstead Roundabout (R) Mitigation	-	-	-		-	-	-	-	-	-	102.0%	82	0	0	57.2	-	-
1/1	A23 N U-Turn Left	U	B		1	46	-	761	1842	962	79.1%	-	-	-	5.6	26.3	17.3
1/2	A23 N Left	U	B		1	46	-	800	1923	1004	79.7%	-	-	-	5.8	26.2	18.1
2/1	A2300 E Entry Left Ahead	U	C		1	73	-	539	1937	1593	33.8%	-	-	-	0.6	3.7	3.5
2/2	A2300 E Entry Ahead	U	C		1	73	-	1629	1942	1597	102.0%	-	-	-	35.2	77.8	71.3

Basic Results Summary

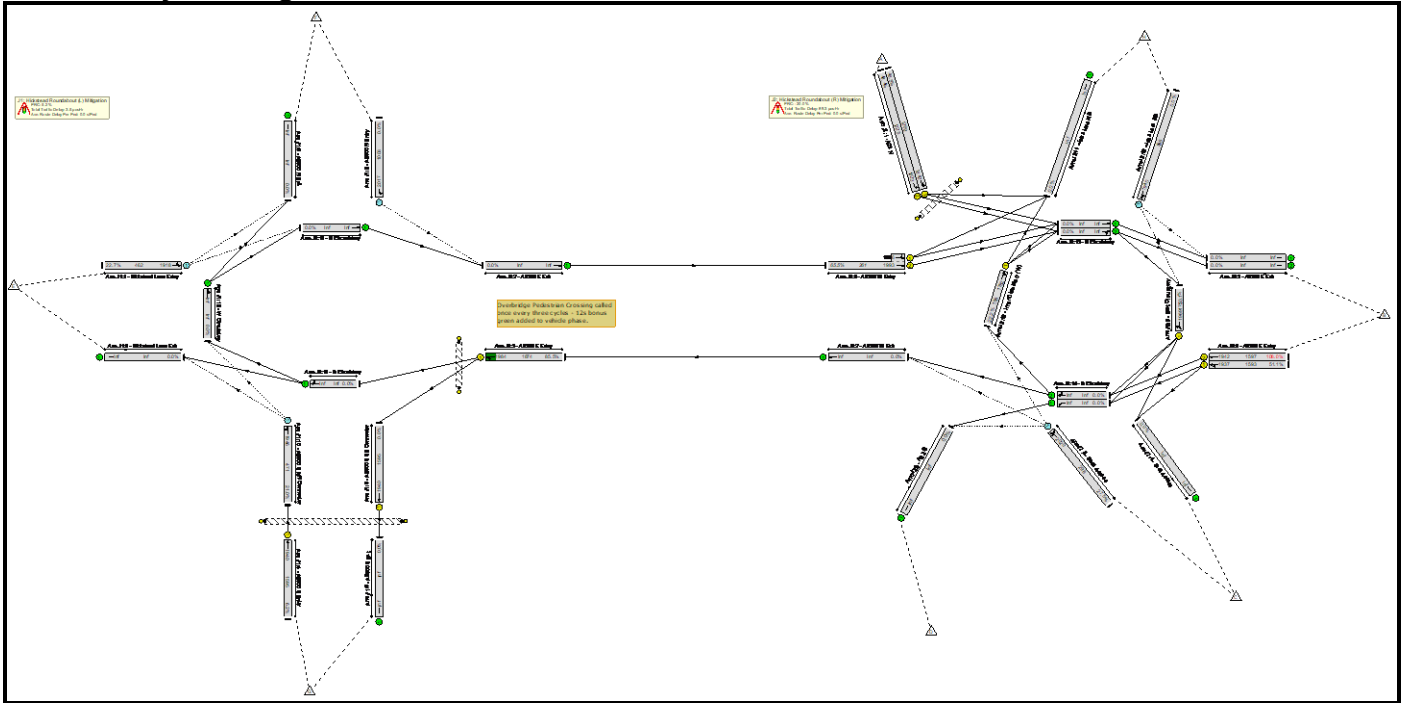
5/1	Shell Access Left Left2 Right	O	-	-	-	-	82	2020	441	18.6%	82	0	0	0.1	5.0	0.1	
8/2+8/1	A2300 W Entry Left Ahead	U	A		1	22	-	522	1993:1896	601	86.8%	-	-	-	7.2	49.9	12.9
9/1	East Circulatory Ahead Right	U	K		1	7	-	90	1974	175	51.3%	-	-	-	1.3	52.1	2.6
10/1	Inner Circulatory (W) Ahead Right	U	J		1	7	-	80	1782	158	49.5%	-	-	-	1.4	65.3	2.3
12/1	Jobs Lane SB Left Ahead	O	-		-	-	-	0	1940	323	0.0%	0	0	0	0.0	0.0	0.0
Ped Link: P1	A3 N Ped Crossing	-	I		1	22	-	0	-	0	0.0%	-	-	-	-	-	-

C1	Stream: 1 PRC for Signalled Lanes (%)	3.6	Total Delay for Signalled Lanes (pcuHr)	20.05	Cycle Time (s)	90
C1	Stream: 2 PRC for Signalled Lanes (%)	8.1	Total Delay for Signalled Lanes (pcuHr)	2.60	Cycle Time (s)	90
C1	Stream: 3 PRC for Signalled Lanes (%)	398.5	Total Delay for Signalled Lanes (pcuHr)	0.24	Cycle Time (s)	90
C1	Stream: 4 PRC for Signalled Lanes (%)	-13.4	Total Delay for Signalled Lanes (pcuHr)	37.04	Cycle Time (s)	90
	PRC Over All Lanes (%)	-13.4	Total Delay Over All Lanes(pcuHr)	62.01		

Basic Results Summary

Scenario 2: '2039 DM PM' (FG2: '2039 DM PM', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	108.0%	286	0	0	92.8	-	-
J1: Hickstead Roundabout (L) Mitigation	-	-	-		-	-	-	-	-	-	85.5%	204	0	0	3.5	-	-
1/1	Hickstead Lane Entry Left Ahead	O	-		-	-	-	105	1918	462	22.7%	105	0	0	0.1	5.0	0.1
2/1	A2300 N Entry Left	O	-		-	-	-	0	2017	1003	0.0%	0	0	0	0.0	0.0	0.0
3/1	A2300 E Entry Left Ahead	U	D		1	72	-	1728	1984	1874	85.5%	-	-	-	3.1	7.0	9.0
4/1	A2300 S Entry Ahead	U	H		1	73	-	99	1940	1595	6.2%	-	-	-	0.1	2.7	0.5
9/1	A2300 S SB Connector Ahead	U	F		1	73	-	0	1940	1595	0.0%	-	-	-	0.0	0.0	0.0
10/1	A2300 S MN Connector Left Ahead	O	-		-	-	-	99	1946	471	21.0%	99	0	0	0.1	5.0	0.6
Ped Link: P1	A2300 E Ped Crossing	-	E		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	A2300 S Ped Crossing	-	G		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
J2: Hickstead Roundabout (R) Mitigation	-	-	-		-	-	-	-	-	-	108.0%	82	0	0	89.3	-	-
1/1	A23 N U-Turn Left	U	B		1	61	-	616	1842	1269	48.5%	-	-	-	1.6	9.3	7.7
1/2	A23 N Left	U	B		1	61	-	655	1923	1325	49.4%	-	-	-	1.7	9.3	8.1
2/1	A2300 E Entry Left Ahead	U	C		1	73	-	814	1937	1593	51.1%	-	-	-	1.1	4.8	6.6
2/2	A2300 E Entry Ahead	U	C		1	73	-	1725	1942	1597	108.0%	-	-	-	80.1	167.2	116.6

Basic Results Summary

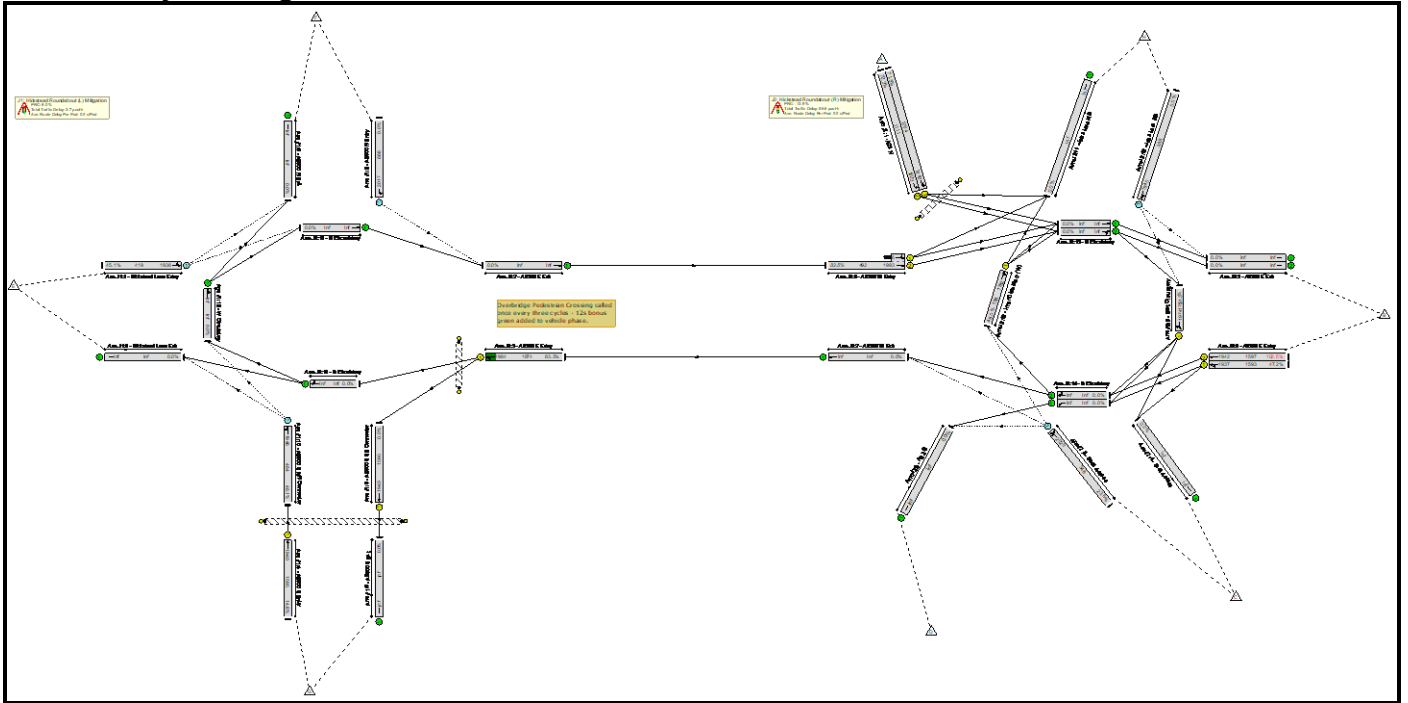
5/1	Shell Access Left Left2 Right	O	-	-	-	-	82	2020	298	27.5%	82	0	0	0.2	8.3	0.2
8/2+8/1	A2300 W Entry Left Ahead	U	A	1	7	-	171	1993:1896	261	65.5%	-	-	-	2.7	57.9	3.3
9/1	East Circulatory Ahead Right	U	K	1	7	-	93	1969	175	53.1%	-	-	-	1.4	54.7	2.8
10/1	Inner Circulatory (W) Ahead Right	U	J	1	7	-	38	1782	158	22.2%	-	-	-	0.5	49.4	1.0
12/1	Jobs Lane SB Left Ahead	O	-	-	-	-	0	1940	586	0.0%	0	0	0	0.0	0.0	0.0
Ped Link: P1	A3 N Ped Crossing	-	I	1	7	-	0	-	0	0.0%	-	-	-	-	-	-

C1	Stream: 1 PRC for Signalled Lanes (%)	37.3	Total Delay for Signalled Lanes (pcuHr):	6.51	Cycle Time (s):	90
C1	Stream: 2 PRC for Signalled Lanes (%)	5.2	Total Delay for Signalled Lanes (pcuHr):	3.12	Cycle Time (s):	90
C1	Stream: 3 PRC for Signalled Lanes (%)	1350.1	Total Delay for Signalled Lanes (pcuHr):	0.07	Cycle Time (s):	90
C1	Stream: 4 PRC for Signalled Lanes (%)	-20.0	Total Delay for Signalled Lanes (pcuHr):	82.59	Cycle Time (s):	90
	PRC Over All Lanes (%)	-20.0	Total Delay Over All Lanes(pcuHr):	92.76		

Basic Results Summary

Scenario 3: '2039 Ref Case AM' (FG3: '2939 Ref Case AM', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	102.5%	504	0	0	60.3	-	-
J1: Hickstead Roundabout (L) Mitigation	-	-	-		-	-	-	-	-	-	83.3%	422	0	0	3.7	-	-
1/1	Hickstead Lane Entry Left Ahead	O	-		-	-	-	189	1938	419	45.1%	189	0	0	0.4	7.8	0.4
2/1	A2300 N Entry Left	O	-		-	-	-	0	2017	866	0.0%	0	0	0	0.0	0.0	0.0
3/1	A2300 E Entry Left Ahead	U	D		1	72	-	1600	1984	1874	83.3%	-	-	-	2.6	6.0	7.0
4/1	A2300 S Entry Ahead	U	H		1	73	-	233	1940	1595	14.6%	-	-	-	0.2	2.9	1.3
9/1	A2300 S SB Connector Ahead	U	F		1	73	-	0	1940	1595	0.0%	-	-	-	0.0	0.0	0.0
10/1	A2300 S MN Connector Left Ahead	O	-		-	-	-	233	1946	484	48.1%	233	0	0	0.5	7.8	2.2
Ped Link: P1	A2300 E Ped Crossing	-	E		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	A2300 S Ped Crossing	-	G		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
J2: Hickstead Roundabout (R) Mitigation	-	-	-		-	-	-	-	-	-	102.5%	82	0	0	56.6	-	-
1/1	A23 N U-Turn Left	U	B		1	51	-	761	1842	1064	71.5%	-	-	-	4.1	19.6	14.8
1/2	A23 N Left	U	B		1	51	-	803	1923	1111	72.3%	-	-	-	4.4	19.6	15.8
2/1	A2300 E Entry Left Ahead	U	C		1	73	-	751	1937	1593	47.2%	-	-	-	0.9	4.5	5.9
2/2	A2300 E Entry Ahead	U	C		1	73	-	1637	1942	1597	102.5%	-	-	-	38.5	84.7	74.6

Basic Results Summary

5/1	Shell Access Left Left2 Right	O	-	-	-	-	82	2020	348	23.6%	82	0	0	0.2	6.8	0.2	
8/2+8/1	A2300 W Entry Left Ahead	U	A		1	17	-	406	1993:1896	492	82.5%	-	-	-	5.8	51.5	9.4
9/1	East Circulatory Ahead Right	U	K		1	7	-	90	1974	175	51.3%	-	-	-	1.3	51.9	2.6
10/1	Inner Circulatory (W) Ahead Right	U	J		1	7	-	78	1782	158	48.0%	-	-	-	1.4	64.4	2.2
12/1	Jobs Lane SB Left Ahead	O	-		-	-	-	0	1940	355	0.0%	0	0	0	0.0	0.0	0.0
Ped Link: P1	A3 N Ped Crossing	-	I		1	17	-	0	-	0	0.0%	-	-	-	-	-	-
		C1	Stream: 1 PRC for Signalled Lanes (%)		9.1		Total Delay for Signalled Lanes (pcuHr):		15.67		Cycle Time (s):		90				
		C1	Stream: 2 PRC for Signalled Lanes (%)		8.0		Total Delay for Signalled Lanes (pcuHr):		2.62		Cycle Time (s):		90				
		C1	Stream: 3 PRC for Signalled Lanes (%)		516.1		Total Delay for Signalled Lanes (pcuHr):		0.19		Cycle Time (s):		90				
		C1	Stream: 4 PRC for Signalled Lanes (%)		-13.9		Total Delay for Signalled Lanes (pcuHr):		40.76		Cycle Time (s):		90				
			PRC Over All Lanes (%)		-13.9		Total Delay Over All Lanes(pcuHr):		60.32								

Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	110.0%	303	0	0	109.3	-	-
J1: Hickstead Roundabout (L) Mitigation	-	-	-		-	-	-	-	-	-	85.6%	221	0	0	3.5	-	-
1/1	Hickstead Lane Entry Left Ahead	O	-		-	-	-	126	1925	467	27.0%	126	0	0	0.2	5.3	0.2
2/1	A2300 N Entry Left	O	-		-	-	-	0	2017	996	0.0%	0	0	0	0.0	0.0	0.0
3/1	A2300 E Entry Left Ahead	U	D		1	72	-	1760	1984	1874	85.6%	-	-	-	3.1	6.9	8.0
4/1	A2300 S Entry Ahead	U	H		1	73	-	95	1940	1595	6.0%	-	-	-	0.1	2.7	0.5
9/1	A2300 S SB Connector Ahead	U	F		1	73	-	0	1940	1595	0.0%	-	-	-	0.0	0.0	0.0
10/1	A2300 S MN Connector Left Ahead	O	-		-	-	-	95	1946	471	20.2%	95	0	0	0.1	4.9	0.6
Ped Link: P1	A2300 E Ped Crossing	-	E		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	A2300 S Ped Crossing	-	G		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
J2: Hickstead Roundabout (R) Mitigation	-	-	-		-	-	-	-	-	-	110.0%	82	0	0	105.8	-	-
1/1	A23 N U-Turn Left	U	B		1	60	-	591	1842	1248	47.3%	-	-	-	1.6	9.6	7.3
1/2	A23 N Left	U	B		1	60	-	629	1923	1303	48.3%	-	-	-	1.7	9.6	8.0
2/1	A2300 E Entry Left Ahead	U	C		1	73	-	742	1937	1593	46.6%	-	-	-	0.9	4.4	5.6
2/2	A2300 E Entry Ahead	U	C		1	73	-	1757	1942	1597	110.0%	-	-	-	96.6	198.0	133.2

Basic Results Summary

5/1	Shell Access Left Left2 Right	O	-	-	-	-	82	2020	333	24.7%	82	0	0	0.2	7.2	0.2	
8/2+8/1	A2300 W Entry Left Ahead	U	A	1	8	-	192	1993:1896	288	66.6%	-	-	-	3.0	56.0	3.5	
9/1	East Circulatory Ahead Right	U	K	1	7	-	93	1969	175	53.1%	-	-	-	1.4	55.1	2.8	
10/1	Inner Circulatory (W) Ahead Right	U	J	1	7	-	38	1782	158	21.8%	-	-	-	0.5	48.9	1.0	
12/1	Jobs Lane SB Left Ahead	O	-	-	-	-	0	1940	545	0.0%	0	0	0	0.0	0.0	0.0	
Ped Link: P1	A3 N Ped Crossing	-	I	1	8	-	0	-	0	0.0%	-	-	-	-	-	-	
		C1	Stream: 1 PRC for Signalled Lanes (%):				35.1	Total Delay for Signalled Lanes (pcuHr):				6.71	Cycle Time (s):				90
		C1	Stream: 2 PRC for Signalled Lanes (%):				5.2	Total Delay for Signalled Lanes (pcuHr):				3.09	Cycle Time (s):				90
		C1	Stream: 3 PRC for Signalled Lanes (%):				1411.2	Total Delay for Signalled Lanes (pcuHr):				0.07	Cycle Time (s):				90
		C1	Stream: 4 PRC for Signalled Lanes (%):				-22.3	Total Delay for Signalled Lanes (pcuHr):				98.97	Cycle Time (s):				90
			PRC Over All Lanes (%):				-22.3	Total Delay Over All Lanes(pcuHr):				109.32					

Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	89.1%	604	46	0	27.6	-	-
J1: Hickstead Roundabout (L) Mitigation	-	-	-		-	-	-	-	-	-	89.1%	522	46	0	6.2	-	-
1/1	Hickstead Lane Entry Left Ahead	O	-		-	-	-	280	1931	419	66.8%	234	46	0	1.0	12.8	1.0
2/1	A2300 N Entry Left	O	-		-	-	-	0	2017	801	0.0%	0	0	0	0.0	0.0	0.0
3/1	A2300 E Entry Left Ahead	U	E		1	72	-	1670	1984	1874	89.1%	-	-	-	4.1	8.8	8.4
4/1	A2300 S Entry Ahead	U	I		1	73	-	288	1965	1616	17.8%	-	-	-	0.2	3.0	1.5
9/1	A2300 S SB Connector Ahead	U	G		1	72	-	0	1940	1574	0.0%	-	-	-	0.0	0.0	0.0
10/1	A2300 S MN Connector Left Ahead	O	-		-	-	-	288	1946	449	64.2%	288	0	0	0.9	11.7	2.8
Ped Link: P1	A2300 E Ped Crossing	-	F		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	A2300 S Ped Crossing	-	H		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
J2: Hickstead Roundabout (R) Mitigation	-	-	-		-	-	-	-	-	-	84.1%	82	0	0	21.3	-	-
1/1	A23 N Left Left2	U	B		1	52	-	764	1768	1041	73.4%	-	-	-	4.2	19.8	15.2
1/2	A23 N Left	U	B		1	52	-	797	1829	1077	74.0%	-	-	-	4.4	19.8	15.8
2/1	A2300 E Entry Left Ahead	U	C		1	72	-	1072	1943	1576	68.0%	-	-	-	2.1	7.1	12.1
2/2	A2300 E Entry Ahead	U	C		1	72	-	1096	1976	1603	68.4%	-	-	-	2.2	7.1	12.6
5/1	Shell Access Left Left2	O	-		-	-	-	82	2010	492	16.7%	82	0	0	0.1	5.5	0.5

Basic Results Summary

8/2+8/1	A2300 W Entry Left Ahead	U	A		1	27	-	602	1921:1948	716	84.1%	-	-	-	6.9	41.1	13.2
10/1	East Circulatory Ahead Right	U	D		1	7	-	90	2028	180	49.9%	-	-	-	1.4	57.6	2.6
13/1	Job's Lane SB Left Ahead	O	-		-	-	-	0	1940	312	0.0%	0	0	0	0.0	0.0	0.0
		C1	Stream: 1 PRC for Signalled Lanes (%)		7.0		Total Delay for Signalled Lanes (pcuHr)		15.48		Cycle Time (s)		90				
		C1	Stream: 2 PRC for Signalled Lanes (%)		31.6		Total Delay for Signalled Lanes (pcuHr)		5.74		Cycle Time (s)		90				
		C1	Stream: 3 PRC for Signalled Lanes (%)		1.0		Total Delay for Signalled Lanes (pcuHr)		4.07		Cycle Time (s)		90				
		C1	Stream: 4 PRC for Signalled Lanes (%)		404.9		Total Delay for Signalled Lanes (pcuHr)		0.24		Cycle Time (s)		90				
			PRC Over All Lanes (%)		1.0		Total Delay Over All Lanes(pcuHr)		27.59								

Basic Results Summary

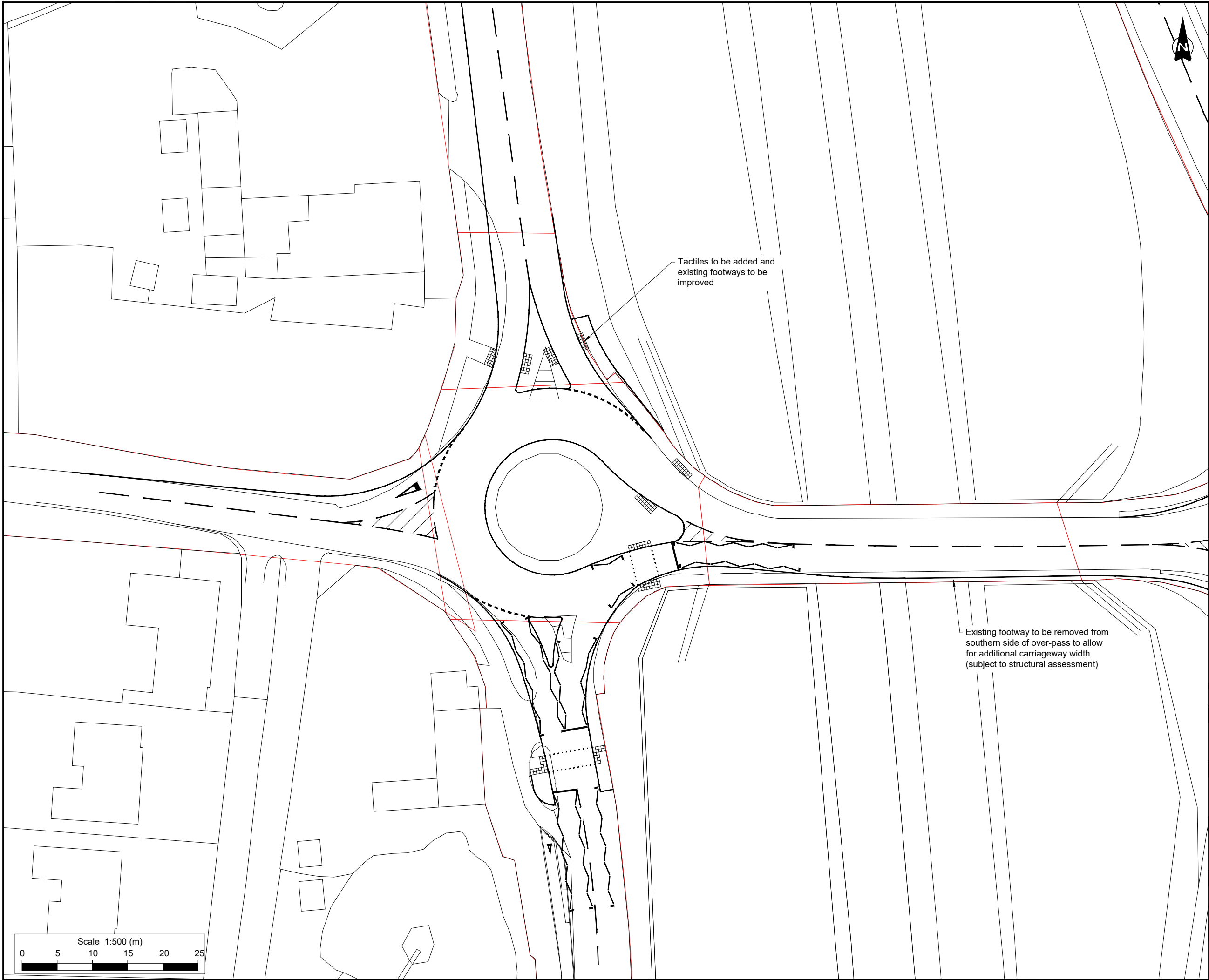
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	94.2%	253	33	0	21.7	-	-
J1: Hickstead Roundabout (L) Mitigation	-	-	-		-	-	-	-	-	-	94.2%	171	33	0	7.9	-	-
1/1	Hickstead Lane Entry Left Ahead	O	-		-	-	-	105	1918	540	19.4%	72	33	0	0.1	4.1	0.1
2/1	A2300 N Entry Left	O	-		-	-	-	0	2017	984	0.0%	0	0	0	0.0	0.0	0.0
3/1	A2300 E Entry Left Ahead	U	E		1	72	-	1766	1984	1874	94.2%	-	-	-	7.6	15.4	33.7
4/1	A2300 S Entry Ahead	U	I		1	73	-	99	1965	1616	6.1%	-	-	-	0.1	2.7	0.5
9/1	A2300 S SB Connector Ahead	U	G		1	72	-	0	1940	1574	0.0%	-	-	-	0.0	0.0	0.0
10/1	A2300 S MN Connector Left Ahead	O	-		-	-	-	99	1946	417	23.7%	99	0	0	0.2	5.9	0.7
Ped Link: P1	A2300 E Ped Crossing	-	F		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	A2300 S Ped Crossing	-	H		1	7	-	0	-	0	0.0%	-	-	-	-	-	-
J2: Hickstead Roundabout (R) Mitigation	-	-	-		-	-	-	-	-	-	80.0%	82	0	0	13.8	-	-
1/1	A23 N Left Left2	U	B		1	69	-	618	1768	1375	44.9%	-	-	-	1.0	5.8	5.6
1/2	A23 N Left	U	B		1	69	-	653	1829	1423	45.9%	-	-	-	1.1	5.8	6.0
2/1	A2300 E Entry Left Ahead	U	C		1	72	-	1257	1943	1576	79.8%	-	-	-	3.5	10.1	18.7
2/2	A2300 E Entry Ahead	U	C		1	72	-	1282	1976	1603	80.0%	-	-	-	3.6	10.1	19.1
5/1	Shell Access Left Left2	O	-		-	-	-	82	2010	333	24.6%	82	0	0	0.3	14.3	1.1

Basic Results Summary

8/2+8/1	A2300 W Entry Left Ahead	U	A		1	10	-	209	1921:1948	331	63.1%	-	-	-	2.9	50.1	3.6
10/1	East Circulatory Ahead Right	U	D		1	7	-	93	2025	180	51.7%	-	-	-	1.4	53.6	2.8
13/1	Job's Lane SB Left Ahead	O	-		-	-	-	0	1940	578	0.0%	0	0	0	0.0	0.0	0.0
		C1	Stream: 1 PRC for Signalled Lanes (%)		42.7	Total Delay for Signalled Lanes (pcuHr):		4.96	Cycle Time (s):		90						
		C1	Stream: 2 PRC for Signalled Lanes (%)		12.5	Total Delay for Signalled Lanes (pcuHr):		8.52	Cycle Time (s):		90						
		C1	Stream: 3 PRC for Signalled Lanes (%)		-4.7	Total Delay for Signalled Lanes (pcuHr):		7.56	Cycle Time (s):		90						
		C1	Stream: 4 PRC for Signalled Lanes (%)		1368.8	Total Delay for Signalled Lanes (pcuHr):		0.07	Cycle Time (s):		90						
			PRC Over All Lanes (%)		-4.7	Total Delay Over All Lanes (pcuHr):		21.72									

Appendix H – Proposed Mitigation Options

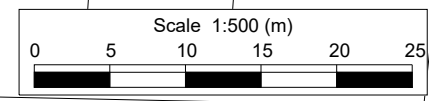


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- Key:
- OS survey
 - Proposed Road Markings
 - Highway Boundary

Tactiles to be added and existing footways to be improved

Existing footway to be removed from southern side of over-pass to allow for additional carriageway width (subject to structural assessment)



PO	20/12/23	Initial issue	BG	CS	NL	NL
Rev	Date	Revision details	Drawn	Check.	Review	Approv

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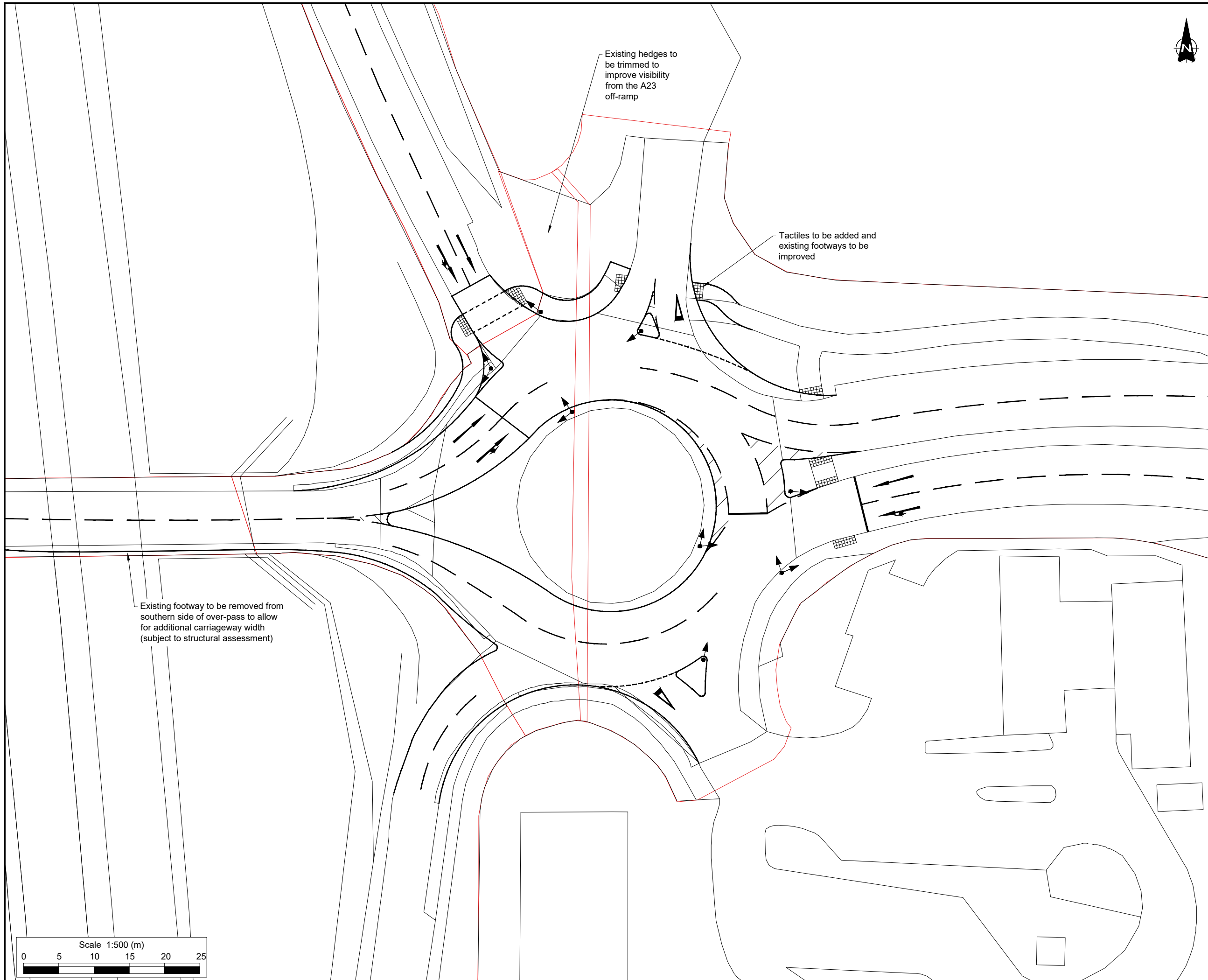
Title
Junction 1 - Hickstead Western Junction

Drawn	BG	Checked	CS	Reviewed	NL	Approved	NL	
Original drg. size	A3	Date	20/12/2023	Scale	1:500	Drawing Status	Preliminary	
Drawing Number	GB01T23G40-dwg-100-01						Rev	P0



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- Key:
- OS survey
 - Proposed Road Markings
 - Highway Boundary



PO	Date	Revision details	Drawn	Check.	Review	Approv
P0	20/12/23	Initial issue	BG	CS	NL	NL

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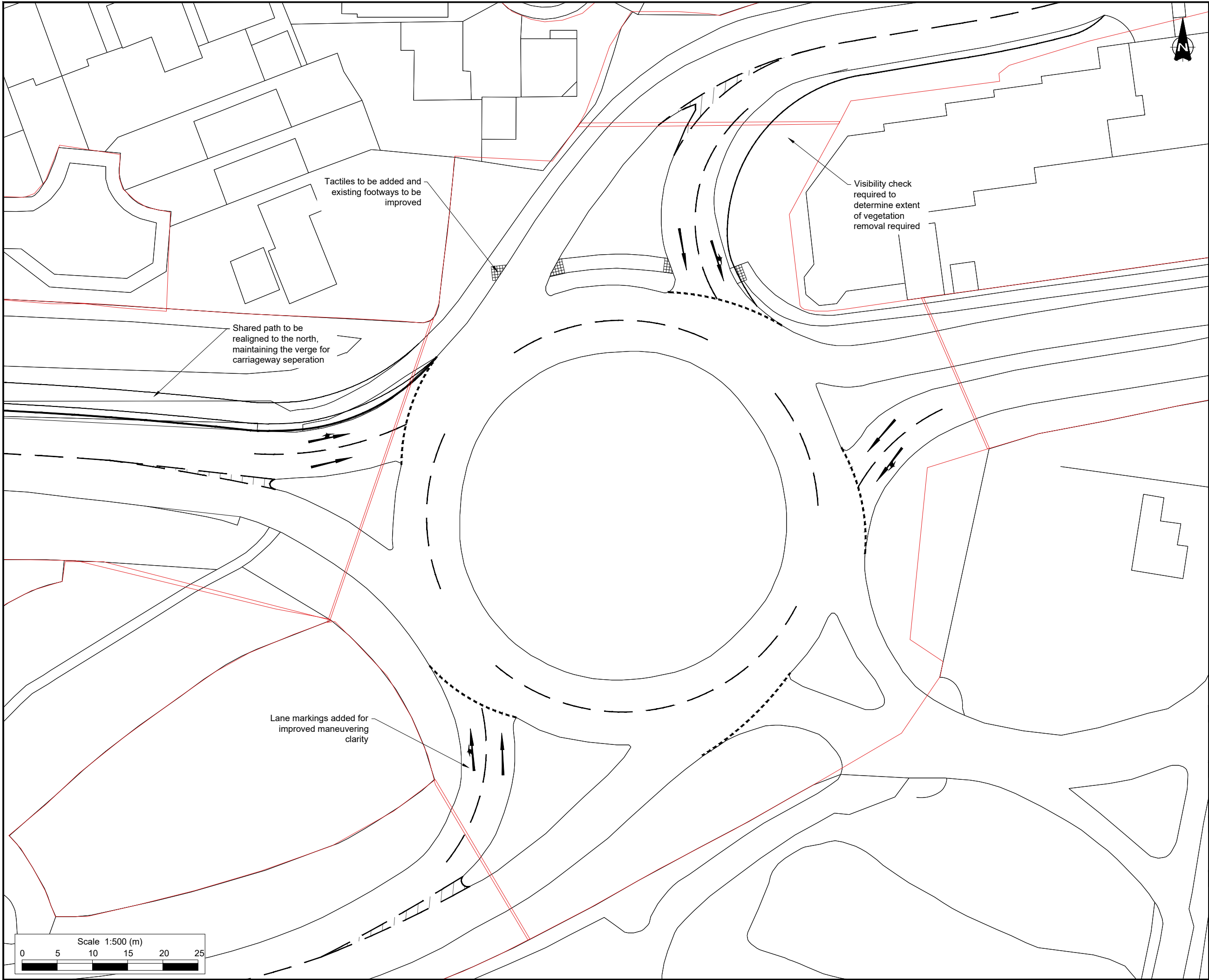
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Title
Junction 1 - Hickstead Eastern Junction

Drawn	Checked	Reviewed	Approved
BG	CS	NL	NL
Original drg. size	Date	Scale	Drawing Status
A3	20/12/2023	1:500	Preliminary
Drawing Number	Rev		
GB01T23G40-dwg-100-02	P0		



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Key:

- OS survey
- Proposed Road Markings
- Highway Boundary

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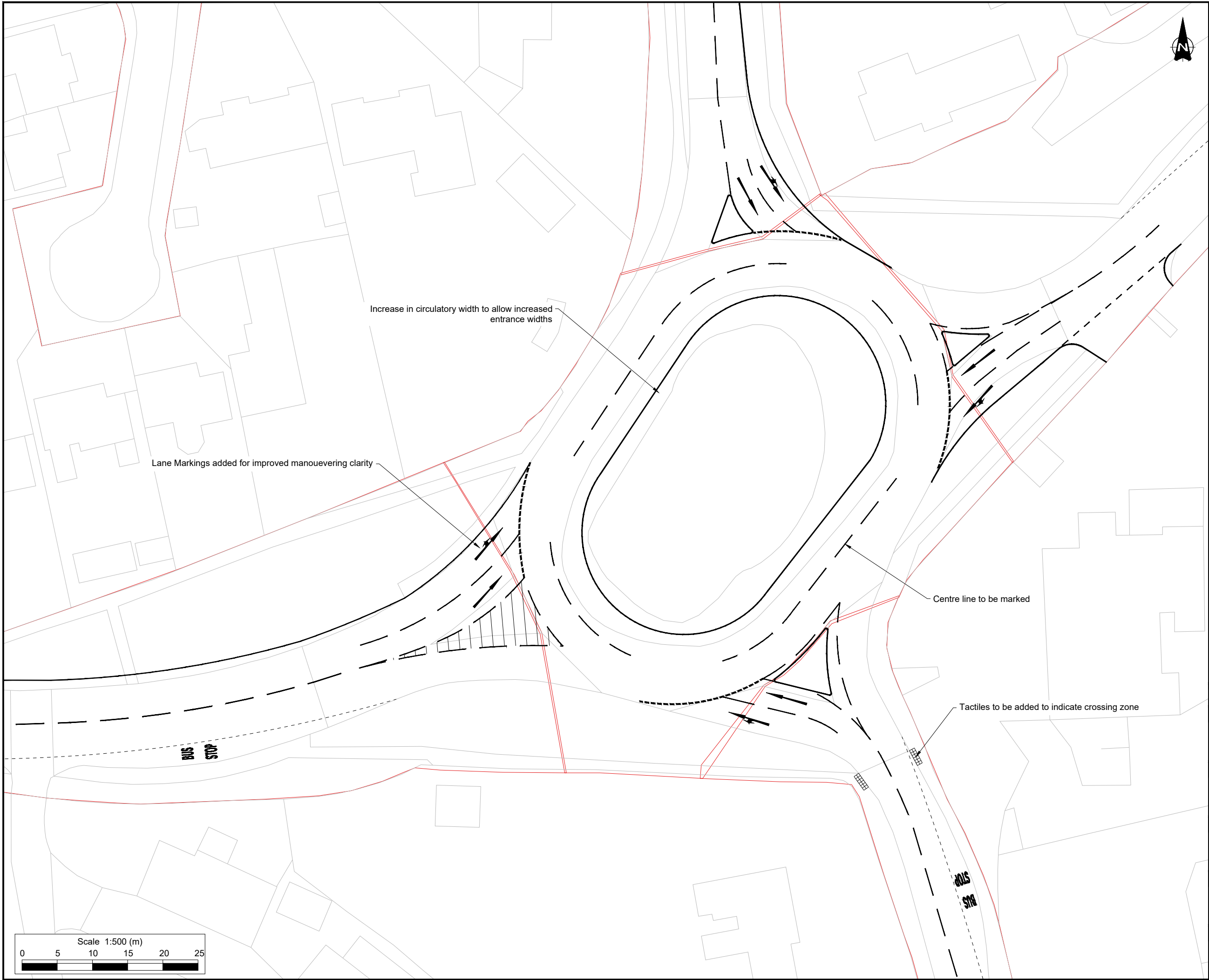
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Title
Junction 2 - Copthorne

Drawn	Checked	Reviewed	Approved
BG	CS	NL	NL
Original dwg. size	Date	Scale	Drawing Status
A3	20/12/2023	1:500	Preliminary
Drawing Number	Rev.		
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Key:

	OS survey
	Proposed Road Markings
	Highway Boundary

PO	Date	Revision details	Drawn	Check	Review	Approv
P0	20/12/23	Initial issue	BG	CS	NL	NL

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Title
Junction 3 - Dukes Head

Drawn	BG	Checked	CS	Reviewed	NL	Approved	NL	
Original drg. size	A3	Date	20/12/2023	Scale	1:500	Drawing Status	Preliminary	
Drawing Number	GB01T23G40-dwg-100-04						Rev	P0

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