

Appendix 60

SATURN Forecasting Report

Peel Hall Forecasting Report

SATNAM Millennium
(Under the instruction of Highgate Transportation)

January 2018

Quality information

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Revision History

Revision	Revision date	Details	Authorized	Name	Position
Revision A	28/09/2017		YES	Catherine Zoeflig	Associate Director
Revision B	04/01/2018		YES	Alistair Johnson	Principal Consultant

Distribution List

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1. Introduction

1.1 Background

This report summarises the methodology adopted in order to model and forecast the future impacts of the proposed Peel Hall development. The main objective of a Forecasting Report is to describe the development of the future year, SATURN based, traffic model to inform the operational and environmental evaluation of the proposed Peel Hall development. The evaluation has been undertaken through comparison of the Do-Minimum reference case and the Do-Something test case for each scenario.

1.2 Report Structure

Following this introductory section, this report has been prepared in the following structure:

- **Section 2** provides a background to the model and the approach to forecasting;
- **Section 3** discusses the future highway network conditions;
- **Section 4** discusses the forecast trip production matrix;
- **Section 5** discusses the impacts on journey times ;
- **Section 6** discusses the impacts on delay;
- **Section 7** focusses on queueing; and
- **Section 8** discusses volume to capacity.

2. Model Background

2.1 Modelled Time Periods

Two base year SATURN models have been developed for the following time periods:

- 2015, Morning Peak (08:00-09:00); and
- 2015, Evening Peak (17:00-18:00).

This is discussed further in the *Peel Hall SATURN Local Model Validation Report (AECOM 2017)*.

2.2 Vehicle Types and Trip Purposes

Demand matrices have been produced for five separate user classes. The first three represent car user classes split by journey purposes to reflect differing values of time and distance. The fourth and fifth user classes are for medium and heavy goods vehicles.

The input matrix structure is as follows:

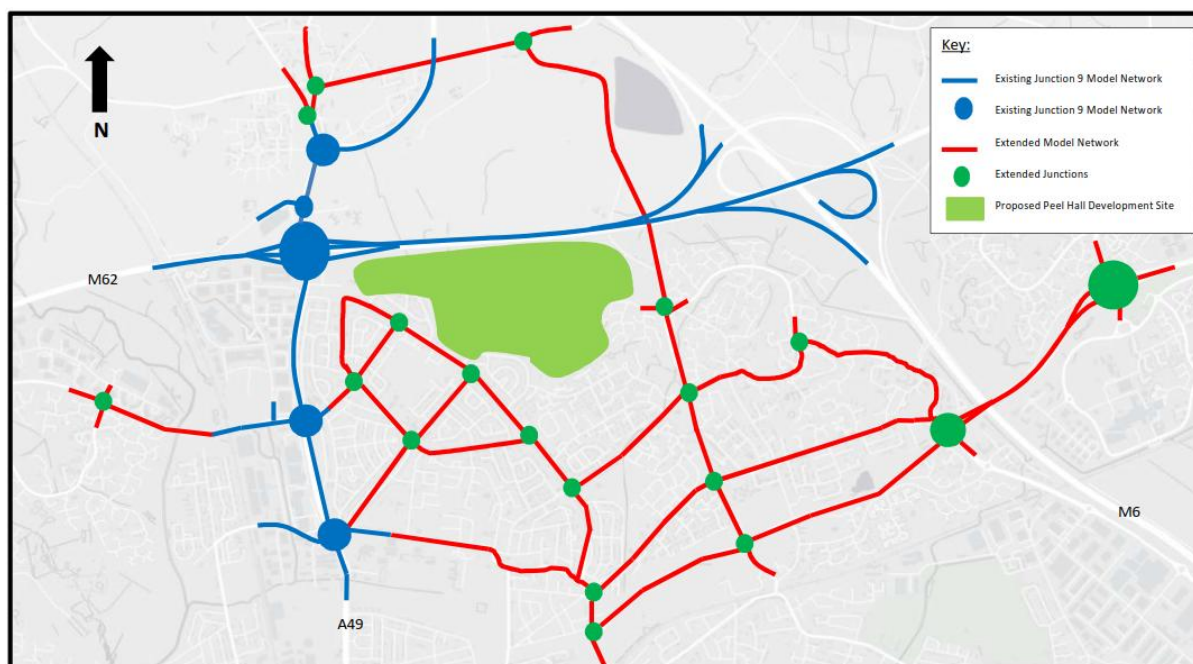
- User class 1 (cars – commuting);
- User class 2 (cars – business);
- User class 3 (cars – other);
- User class 4 (LGVs); and
- User class 5 (HGVs).

2.3 Geographical Extent of the Model

The overall study area is sufficient to ensure an accurate representation of strategic routes in proximity to the Peel Hall site. The study area is defined in **Figure 2.1** overleaf and in **Appendix A**. The study area includes the following key junctions;

- The M62 Junction 9;
- The A49 north from Warrington to Junction 9;
- The A50 east/west; and
- The A574 Birchwood.

Figure 2.1, Peel Hall Traffic Model Study Area



2.4 Zoning System

The zone system in the SATURN model is based upon the existing zoning system defined within the previous VISSIM model. Within the core study area, zones are defined by individual output areas, with aggregation of output area with distance from the scheme. This resulted in 71 zones in the base year models.

2.5 Network Description

The model consists entirely of simulation network. The simulation network is coded in detail using the junction based data in addition to link based data. The simulation area consists of Junction 9 of the M62, A49, A50, A574, Winwick Link Road, the minor road network surrounding the proposed Peel Hall site, and Blackbrook Avenue. This allows for delays and blocking back from the town centre and Junction 9 of the M62 to be replicated accurately across the network.

2.6 Model Validation

The *Peel Hall SATURN Model Local Model Validation Report* demonstrated that the base year Peel Hall SATURN model is a validated model which replicates the existing situation and is a suitable basis for forecasting.

2.7 Forecast Scenarios

The forecasting work has been undertaken in accordance with current WebTAG guidance.

Networks and trip matrices were developed for the following forecast years:

- 2025, Do-Minimum – Base year traffic flows + Background Traffic Growth + Committed Developments;
- 2025, Do-Something – Base year traffic flows + Background Traffic Growth + Committed Developments + Peel Hall Site Partial Build Out Traffic;
- 2030, Do-Minimum – Base year traffic flows + Background Traffic Growth + Committed Developments;
- 2030, Do-Something– Base year traffic flows + Background Traffic Growth + Committed Developments + Peel Hall site full build out traffic; and
- 2030, Through Route – Base year traffic flows + Background Traffic Growth + Committed Developments + Peel Hall site full build out traffic with a through route connecting to the A49.

3. Future Year Highway Networks

3.1 Do-Minimum Highway Networks

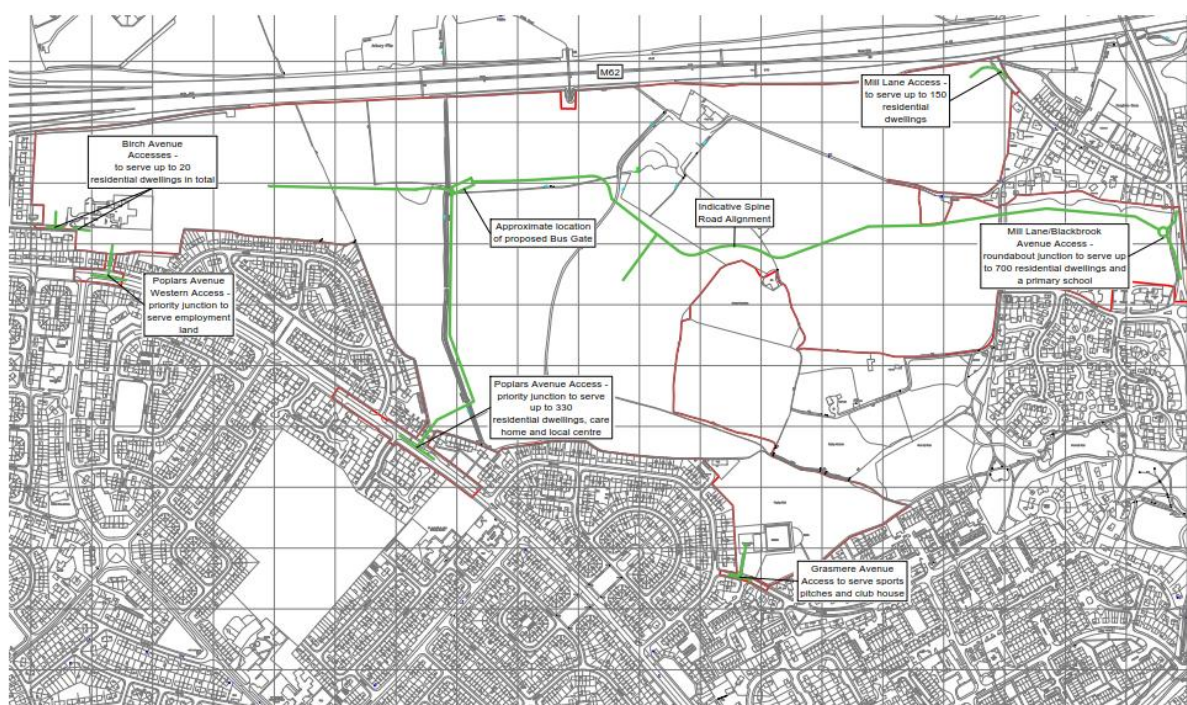
Information provided by HTP identified one committed highway scheme of significance in the modelled area; the signalised pinch point improvement scheme at Oakwood Gate roundabout.

To address queueing on the A574 Birchwood Way westbound, the A574 Birchwood Way approach to the Oakwood Gate junction and corresponding internal roundabout link were signalised in 2016. All future year models have been updated to reflect the set of traffic signals.

3.2 2025 Do-Something Highway Networks

Access arrangements for the proposed Peel Hall site in 2025, operating with a partial build out, were provided by Highgate Transportation. The proposed site layout and access points are detailed in Highgate's Technical Note HTP/1107/TN/19, a copy of this is presented **Figure 3.1** below and in **Appendix B** of this report.

Figure 3.1, Peel Hall Proposed Access Arrangements



In order to replicate the development proposals, 6 new zones and three new junctions were added to the network. These are detailed below;

- Birch Avenue Access – Zone added to the existing highway network;
- Poplars Avenue West Access – New Priority junction with Poplars Avenue added to the network;
- Poplars Avenue Central Access – New Priority junction with Poplars Avenue added to the network;
- Mill Lane Access – Zone added to the existing highway network;
- Grassmere Avenue – Zone added to the existing highway network; and
- Mill Lane / Blackbrook Road Access – New Roundabout junction added to the highway network.

3.3 2030 Do-Something Highway Networks

Access arrangements to the proposed Peel Hall site in 2030, operating with a full build out, were provided by Highgate Transportation. The proposed site layout and access points detailed in Highgate's Technical Note

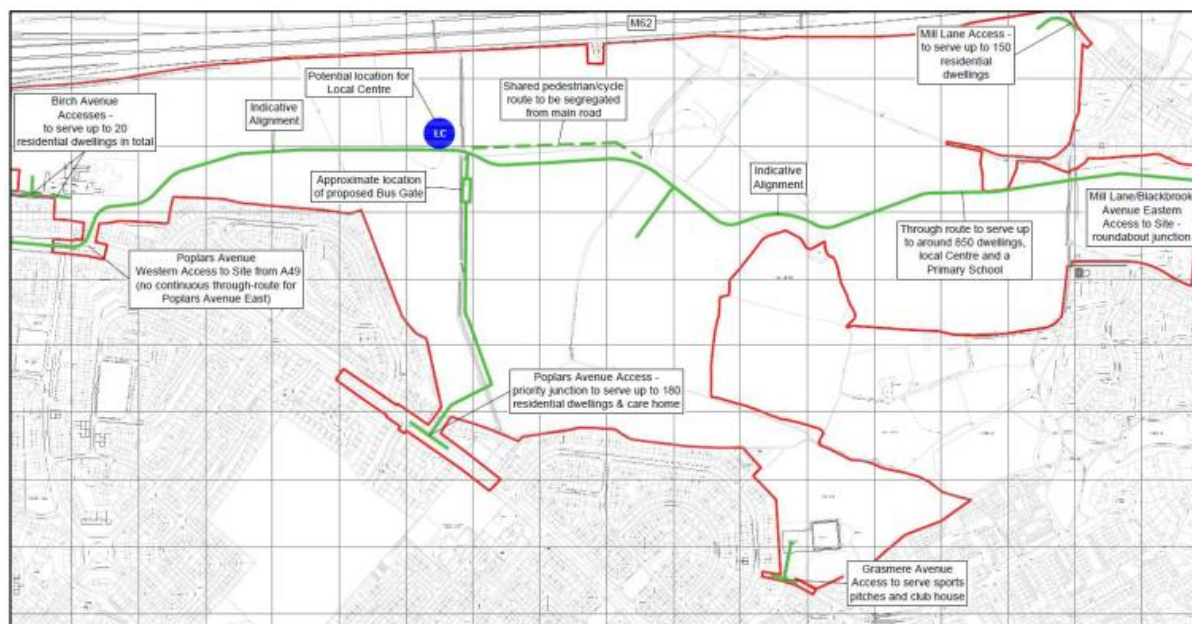
HTp/1107/TN/19 and section 3.2 above, a copy of this is presented in **Figure 3.1** above and in **Appendix B** of this report.

To replicate the full build out the same amendments as detailed in section 3.2 above have been coded into the SATURN model.

3.4 2030 Through Route Networks

Highgate Transportation provided an indicative plan of a Through Route option linking Blackbrook Avenue to the A49 through the proposed site. The proposed layout for the Through Route option is shown in **Figure 3.2** below and detailed in HTp's Technical Note HTp/1107/TN/21 attached to this report in **Appendix C**.

Figure 3.2, Peel Hall Proposed Access Arrangements for Through Route



The Through Route option proposes to stop up the northern section of Poplars Avenue to provide a direct through route from the A49 to the Mill Lane / Blackbrook Road junction. Cotswold Road and Lancing Avenue would be converted to one way with access from the south and egress via a left only turn onto the Through Route. A bus gate would be provided on the Poplars Avenue Central access road which would prevent through trips between the main Through Route and the Poplars Avenue for general traffic.

Highgate Transportation also provided an indicative junction layout for a proposed signalised junction on the A49 at the junction with Birch Avenue, this option was coded into the SATURN model.

In order to replicate the development proposals, seven new zones and five new junctions were added to the network. These are detailed below;

- Birch Avenue Access – Zone added to the existing highway network;
- Poplars Avenue West Access – Poplars Avenue western section will be extended eastwards to provide a through route connecting with the proposed Mill Lane / Blackbrook Road junction. At its junction with Cotswold Avenue the eastern section of Poplars Avenue will be stopped up;
- Cotswold Avenue – A new junction providing egress only onto the new Through Route has been added to the network;
- Lancing Avenue – A new junction providing egress only onto the new Through Route has been added to the network;
- Poplars Avenue Central Access – New Priority junction with Poplars Avenue added to the network;
- Mill Lane Access – Zone added to the existing highway network;
- Grasmere Avenue – Zone added to the existing highway network; and

- Mill Lane / Blackbrook Road Access – New Roundabout junction added to the highway network and linked by the through route to the Poplars Avenue west access.

4. Future Year Trip Matrix Development

4.1 Introduction

In order to replicate traffic growth in the future year scenarios, HTP provided information on background traffic growth and proposed committed developments in the study.

4.2 Background Traffic Growth

Motorway background traffic growth factors for all vehicle trips were provided by HTP as detailed in their Technical Note HTP/1107/TN/20. The growth factors taken from Table 2.1 of the aforementioned technical note, are detailed in **Table 4.1** below, the technical note is attached to this report as **Appendix D**.

Table 4.1: TEMPRO 7.2, Growth Factors

Time Period	Growth Rates	
	AM	PM
2015-2025	1.1749	1.1652
2015-2030	1.2211	1.2098

4.3 Committed Development

The committed developments included in all future year matrices are as per those detailed in HTP's Technical Note HTP/1107/TN/20 included in **Appendix D**. The committed developments are identified in **Table 4.2** below.

Table 4.2: Committed Developments included within all Future Year Traffic Models

Committed Development	Planning Reference
Land at Benson Road, Birchwood	Ref: 2015/26220
Birchwood Shopping Centre	Ref: 2015/25880

4.4 Proposed Developments

HTP provided the total forecast development trips to be generated by the Peel Hall development at the various access and egress points on the local highway network.

Detailed in HTP's Technical Note HTP/1107/TN/19, the forecast trip quantum's for the 2025 Do-Something scenario (partial build out) are presented in **Table 4.3** following.

Table 4.3: Summary of 2025 Peak Hour Vehicle Trips

Access	Quantum of Development	AM Arrival	AM Departure	PM Arrival	PM Departure
Poplars Avenue (Central)	145 Dwellings	33	76	72	45
	Care home	7	7	8	8
	Food Store	92	61	181	191
	Local Shops	30	29	36	39
	Family Pub	0	0	23	15
	Total		162	173	320
Poplars Avenue (West)	Employment Land	69	39	20	47
Mill Lane	150 Dwellings	34	79	74	46
Mill Lane/ Blackbrook Avenue	285 Dwellings	64	149	141	88
Birch Avenue	20 Dwellings	5	11	10	6

Grasmere Avenue	Community uses	10	5	7	8
TOTAL		344	456	572	493

The 2030 Do-Something (full build out and Through Route) forecast trip quanta for the Peel Hall development as provided by Highgate Transportation in TN/19 and TN/21 are presented in **Table 4.4** below.

Table 4.4: Summary of 2030 Peak Hour Vehicle Trips

Access	Quantum of Development	AM Arrival	AM Departure	PM Arrival	PM Departure
Poplars Avenue (Central)	330 Dwellings	74	173	163	101
	Care home	7	7	8	8
	Food Store	28	18	54	57
	Local Shops	0	0	0	0
	Family Pub	0	0	23	15
	Total		109	198	248
Poplars Avenue (West)	Employment Land	69	39	20	47
Mill Lane	150 Dwellings	34	79	74	46
Mill Lane/ Blackbrook Avenue	700 Dwellings	158	366	347	215
	Primary school	57	40	10	14
Birch Avenue	20 Dwellings	5	11	10	6
Grasmere Avenue	Community uses	10	5	7	8
TOTAL		592	849	888	703

4.5 Trip Distribution

The trip distribution for both committed developments and future year Peel Hall Development trips is based on the existing 2009 VISUM model zone structure, which provided the prior matrix for the original VISSIM model.

The validated SATURN base matrices were converted back to the more aggregated zone structure of the VISUM model and then the future year trips were assigned by existing trip volumes. The resulting matrices were then converted back to the disaggregated SATURN matrices and assigned in SATURN.

The trip distribution is detailed in AECOMs Technical Note “*Proposed Trip Distribution for Peel Hall Development*” which is included in **Appendix E** of this report.

4.6 Convergence Proximity

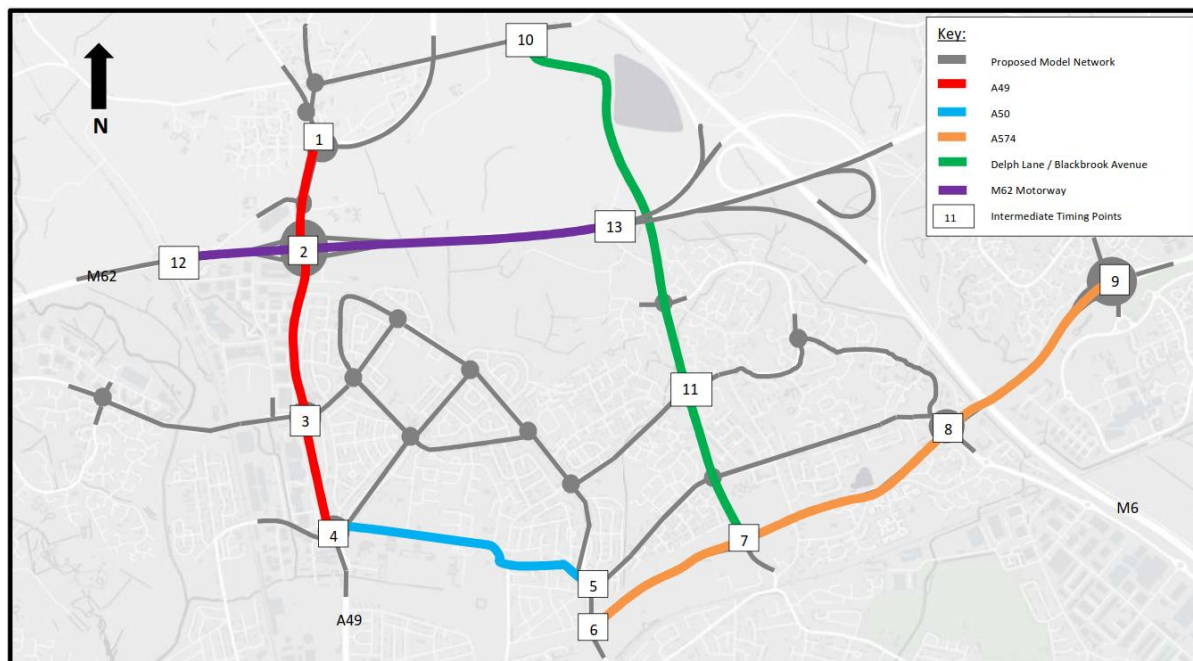
Delta values for each run have been checked to ensure that they are less than 1%. In most cases delta is significantly lower, typically around 0.15%.

5. Assessment of Impacts on Journey Times

5.1 Introduction

The journey times analysed in this section of the report are those used to validate the SATURN model, a plan of the journey times is provided in **Figure 5.1** below.

Figure 5.1, Journey Times used in the Analysis



5.2 2025 Do-Minimum Compared to 2025 Do-Something

5.2.1 AM

Table 5.2 below compares the modelled journey times in the AM peak for the 2025 Do-Minimum scenario and the 2025 Do-Something scenario-wherein the Peel Hall development is partially built out.

Table 5.2: AM 2025 Do-Minimum & Do-Something Journey Times

AM Journey Times (seconds)		2025		
		Do-Minimum	Do-Something	Difference
A49	Northbound	488	499	11
	Southbound	973	1,018	45
A50	Eastbound	192	192	0
	Westbound	290	294	4
Blackbrook Avenue/ Mill Lane	Northbound	336	346	10
	Southbound.	333	405	72
A574 Birchwood	Eastbound	275	315	40
	Westbound	233	226	-7
M62 Motorway	Eastbound	189	189	0
	Westbound	89	89	0

The proposed development is forecasted to increase journey times on the A49 in the northbound and southbound directions. The A49 northbound is forecast to experience an 11 second increase in journey times, whilst traffic routing southbound increases by 45 seconds.

Blackbrook Avenue southbound is forecast to experience an increase in average journey time of 72 seconds whilst the journey times northbound are forecasted increase by 10 seconds. The A574 eastbound is forecasted to experience an increase in journey times of 40 seconds, whilst traffic routeing westbound are forecast to experience a decrease of 7 seconds.

5.2.2 PM

Table 5.3 below compares the modelled journey times in the AM peak for the 2025 Do-Minimum scenario and the 2025 Do-Something scenario wherein the Peel Hall development is partially built out.

Table 5.3: PM 2025 Do-Minimum & Do-Something Journey Times

PM Journey Times (seconds)		2025		
		Do-Minimum	Do-Something	Difference
A49	Northbound	694	772	78
	Southbound	519	524	5
A50	Eastbound	209	207	-2
	Westbound	295	360	65
Blackbrook Avenue/ Mill Lane	Northbound	308	331	23
	Southbound	305	340	35
A574 Birchwood	Eastbound	210	218	8
	Westbound	326	379	53
M62 Motorway	Eastbound	99	99	0
	Westbound	89	90	1

In the PM peak period, the A49 is forecast to experience an increase in average journey time of 78 seconds in a northbound direction and 5 seconds southbound. The A50 is forecast to experience a decrease of 2 seconds in an eastbound direction and an increase of 65 seconds westbound. Additionally, the Blackbrook Avenue / Mill Lane junction is forecast to experience an increase of 23 seconds in a northbound direction and 35 seconds southbound.

The A574 Birchwood Way is also forecast to experience increases in average journey times, with an 8 second increase forecasted in an eastbound direction and 53 seconds westbound.

5.3 2030 Do-Minimum Compared to 2030 Do-Something

5.3.1 AM

Table 5.4 below compares the modelled journey times in the AM peak for the 2030 Do-Minimum scenario and the 2025 Do-Something scenario wherein the proposed Peel Hall development is fully built out.

Table 5.4: AM 2030 Do-Minimum & Do-Something Journey Times

AM Journey Times (seconds)		2030		
		Do-Minimum	Do-Something	Difference
A49	Northbound	571	581	10
	Southbound	1049	1136	87
A50	Eastbound	192	193	1
	Westbound	297	294	-3
Blackbrook Avenue / Mill Lane	Northbound	342	375	33
	Southbound	338	503	165
A574 Birchwood	Eastbound	318	392	74
	Westbound	237	236	-1
M62 Motorway	Eastbound	202	202	0
	Westbound	92	92	0

Once the Peel Hall development is fully built, the A49 is forecasted to experience an increase of 10 seconds northbound and 87 seconds southbound. Blackbrook Avenue/ Mill Lane is forecast to experience an increase in average journey times of 33 seconds northbound and 165 seconds southbound in the AM peak. Whilst the A574 eastbound is forecast to experience an increase in average journey times of 74 seconds eastbound and a decrease in 1 second westbound.

5.3.2 PM

Table 5.5 below compares the modelled journey times in the PM peak for the 2030 Do-Minimum scenario and the 2025 Do-Something scenario wherein the proposed Peel Hall development is fully built.

Table 5.5: PM 2030 Do-Minimum & Do-Something Journey Times

PM Journey Times (seconds)		2030		
		Do-Minimum	Do-Something	Difference
A49	Northbound	767	823	56
	Southbound	522	533	11
A50	Eastbound	209	208	-1
	Westbound	301	375	74
Blackbrook Avenue/ Mill Lane	Northbound	313	359	46
	Southbound	312	371	59
A574 Birchwood	Eastbound	213	221	8
	Westbound	349	412	63
M62 Motorway	Eastbound	103	103	0
	Westbound	94	94	0

During the PM peak, with Peel Hall fully constructed the A49 is forecast to experience an increase in journey times of 56 seconds northbound and 11 seconds southbound. There are varying impacts forecasted for the A50, whereby traffic routing eastbound is forecast to experience a decrease of a second, whilst alternatively the westbound average journey times are forecasted to increase by 74 seconds.

Blackbrook Avenue and Mill Lane experience a 46 second increase in average journey time northbound and 59 seconds southbound. Additionally, the A574 experiences an 8 second increase in average journey time eastbound towards Birchwood, and a 63 second increase in average journey time westbound.

5.4 2030 Through Route Option Comparisons

5.4.1 AM

Table 5.6 below compares the 2030 Through Route option against the 2030 Do-Minimum, and 2030 Do-Something fully built out scenarios, where no through route is provided.

Table 5.6: Comparison of Average Journey Times for the 2030 AM Through Route Scenario

AM Journey Times (seconds)		2030		
		Through Route	Difference to Do-Minimum	Difference Do-Something
A49	Northbound	568	-3	-13
	Southbound	1203	154	67
A50	Eastbound	193	1	0
	Westbound	295	-2	1
Blackbrook Avenue/ Mill Lane	Northbound	379	37	4
	Southbound	516	178	13

A574 Birchwood	Eastbound	428	110	36
	Westbound	231	-6	-5
M62 Motorway	Eastbound	202	0	0
	Westbound	92	0	0

The Through Route option is forecasted to decrease journey times on the A49 northbound by 3 seconds compared to the Do-Minimum scenario, and 13 seconds against the Do-Something. However the A49 southbound is forecast to experience an increase in journey times of 15 seconds and 67 seconds against the Do-Minimum and Do-Something respectively.

On the A50, the Through Route option is forecasted to increase journey times by 1 second eastbound compared to the Do-Minimum scenario and has no impact when compared to the Do-Something. The A50 westbound is forecast to experience a decrease of 2 seconds in journey time compared to the Do-Minimum and an increase of 1 second against the Do-Something.

Operating with the Through Route, Blackbrook Avenue, when compared against the Do-Minimum scenario is forecast to experience a 37 second increase in average journey times northbound, and 178 seconds southbound. When compared to the Do-Something with no through route, Blackbrook is forecast to experience an average journey time increase of 4 seconds northbound and 13 seconds southbound.

The A574 is forecast to experience an increase in average journey time eastbound of 110 seconds and a decrease in average journey times of 6 seconds westbound if the Through Route is provided compared to the Do-Minimum scenario. The Through Route option is forecast to experience a 36 second increase in average journey time eastbound and reduces average journey times by 5 seconds in a westbound direction compared to the Do-Something scenario.

5.4.2 PM

Table 5.7 below compares the 2030 'Through Route' option against the 2030 Do-Minimum and 2030 Do-Something scenarios where there is no 'Through Route'.

Table 5.7: Comparison of Journey Times for the PM 'Through Route' Scenario

PM Journey Times (seconds)		2030		
		Through Route	Do-Minimum Difference	Do-Something Difference
A49	Northbound	758	-9	-65
	Southbound	569	47	36
A50	Eastbound	206	-3	-2
	Westbound	327	26	-48
Blackbrook Avenue/ Mill Lane	Northbound	446	133	87
	Southbound	346	34	-25
A574 Birchwood	Eastbound	219	6	-2
	Westbound	367	18	-45
M62 Motorway	Eastbound	103	0	0
	Westbound	94	0	0

Providing a Through Route between the A49 and Blackbrook Avenue is forecast to result in a decrease in average journey time of 9 seconds northbound and increase average journey times by 47 seconds southbound on the A49 over the Do-Minimum scenario. Compared to the Do-Something scenario, the Through Route is forecast to result in a decrease in average journey times by 65 seconds in a northbound direction and increase journey times by 36 seconds southbound on the A49.

Compared to the Do-Minimum scenario, the A50 is forecast to experience a 3 second reduction in average journey times in an eastbound direction and a 26 second increase in journey times westbound. Compared to the Do-Something scenario the A50 eastbound is forecast to experience a 2 second reduction in average journey time in addition to a 48 second reduction in average journey time in a westbound direction.

Blackbrook Avenue is forecast to experience a 133 second increase in average journey time northbound and 34 second increase southbound if the Through Route is provided compared to the Do-Minimum scenario. Compared to the Do-Something scenario the Through Route is forecast to experience an increase in average journey time of 87 seconds northbound and a decrease of 25 seconds southbound.

The A574 eastbound is forecast to experience a 6 second increase in average journey time, whilst westbound traffic the average journey time is forecast to experience an increase of 18 seconds compared to the Do-Minimum scenario. Compared to the Do-Something, the eastbound average journey time is forecast to experience a decrease of 2 seconds, westbound average journey times are forecast to experience a greater decrease of 45 seconds.

6. Assessment of Impact on Delay

6.1 2025 Do-Minimum and 2025 Do-Something Total Delay Comparison

6.1.1 AM

Figure 6.1 below presents the differences in Total Delay between the 2025 AM Do-Minimum scenario compared against the 2025 AM Do-Something scenario. Links highlighted in green are forecasted to experience an increase in delay and blue a decrease.

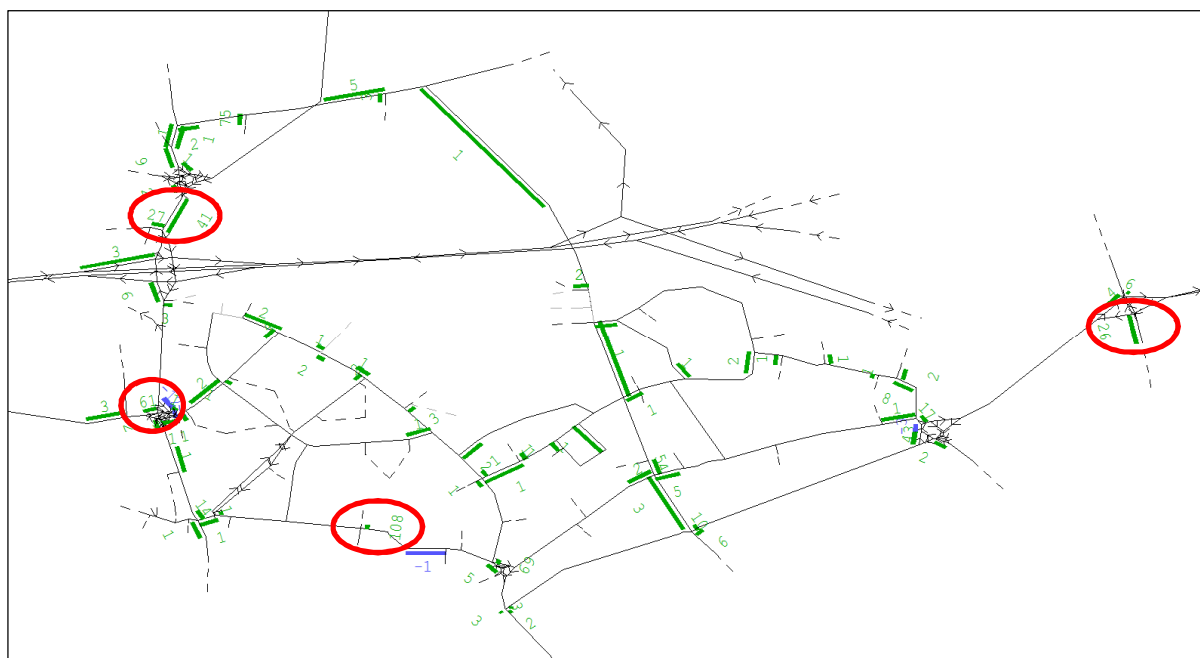


Figure 6.1: Comparison of Total Delay between the 2025 AM Do-Minimum and Do-Something Part Build Out

The Newton Road / A49 Newton Road / A49 Winwick Link Road junction is forecast to experience a small increase in Total Delay at the Newton Road southbound and A49 Newton Road northbound approach links of one and two seconds respectively.

During the AM peak period there is a forecast increase in Total Delay of 6 seconds on the A49 northbound approach to in the 2025 Do-Something scenario compared to 2025 Do-Minimum where the A49 joins Junction 9 of the M62, the eastbound off-slip is forecast to experience a 3 second increase in Total Delay, whilst the Westbound off-slip and A49 Southbound are forecast to not to experience an increase in Total Delay.

The A49 / Newton Road / Delph Lane Retail junction is a forecast to experience an increase in Total Delay of 41 seconds in the 2025 Do-Something scenario compared to the 2025 Do-Minimum on the A49 southbound approach to the junction. Northbound the A59 is forecast to experience no increase over the Do-Minimum scenario. Traffic exiting Delph Lane is forecast to experience a 27 second increase in Total Delay over the Do-Minimum scenario.

The Cromwell Avenue approach to the A49 / Cromwell Avenue / Sandy Lane signalised junction is forecast to experience a 61 second increase in Total Delay in the 2025 Do-Something part build out scenario compared to the 2025 Do-Minimum scenario. The A49 southbound to Sandy Lane West is forecast to experience a 12 second decrease in Total Delay. The Sandy Lane approach to the signalised roundabout is forecast to experience a one second increase in Total Delay. The A49 northbound approach to the junction is forecast to experience a two second increase in Total Delay.

The Crab Lane / Birchwood Way / Woolston Grange Avenue is forecast to experience an increase in Total Delay of 17 and 43 seconds on the Birchwood Way eastbound and Crab Lane Southbound approaches to the roundabout.

6.1.2 PM

Figure 6.2 below presents the differences in Total Delay between the 2025 PM Do-Minimum scenario compared against the 2025 PM Do-Something scenario.

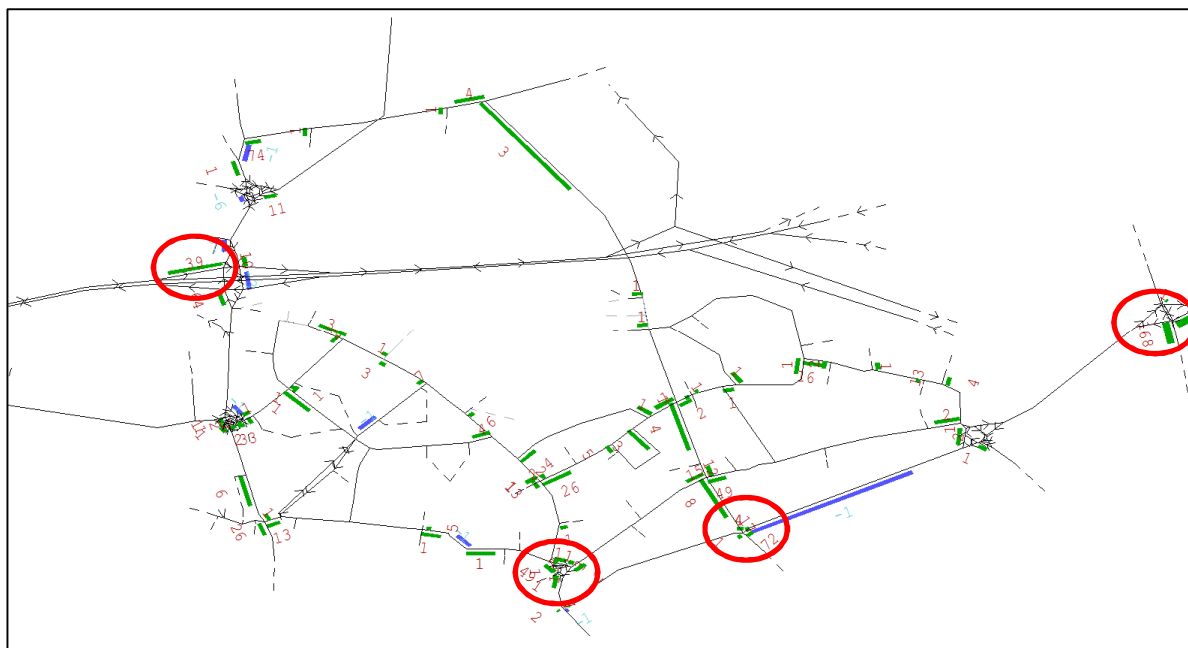


Figure 6.2: Comparison of Total Delay between the 2025 PM Do-Minimum and Do-Something Part Build Out

The PM peak is forecast to experience higher increases in delay compared to the AM.

The A49 northbound is forecast to experience a 64 second increase in delay where it joins Junction 9 in the 2025 PM peak Do-Something scenario compared to the 2025 PM Do-Minimum scenario. The A49 southbound approach to Junction 9 is forecast to experience a 10 second increase in delay compared to the Do-Minimum scenario. The eastbound off-slip at Junction 9 is forecast to experience a 39 second increase in delay, whilst the westbound off-slip is forecast to experience no increase in total delays.

Three of the four approaches to the A49 / Long Lane signalised junction are forecast to experience an increase in Total Delay over the Do-Minimum scenario. The highest forecast increase in delay of the approaches is the A49 northbound which is forecast to experience an increase in Total Delay of 26 seconds, an increase from 173 seconds.

The A50 westbound from the Hilden Road / Orford Road roundabout is forecast to experience an increase in delay of 49 seconds in the Do-Something scenario.

The A574 westbound approach to the roundabout junction with Blackbrook Avenue is forecast to experience an increase in Total Delay of 72 seconds. The southbound Blackbrook Avenue approach is forecast to experience a 17 second increase in Total Delay.

The Birchwood Way westbound approach and northbound Oakwood Gate approach to the Birchwood Way / Oakwood Gate junction is forecast to experience increases in Total Delay of 200 seconds and 168 seconds respectively.

6.2 2030 Do-Minimum and 2030 Do-Something Total Delay Comparison

6.2.1 AM

Figure 6.3 below presents the differences in Total Delay between the 2030 AM Do-Minimum and 2030 AM Do-Something scenario.

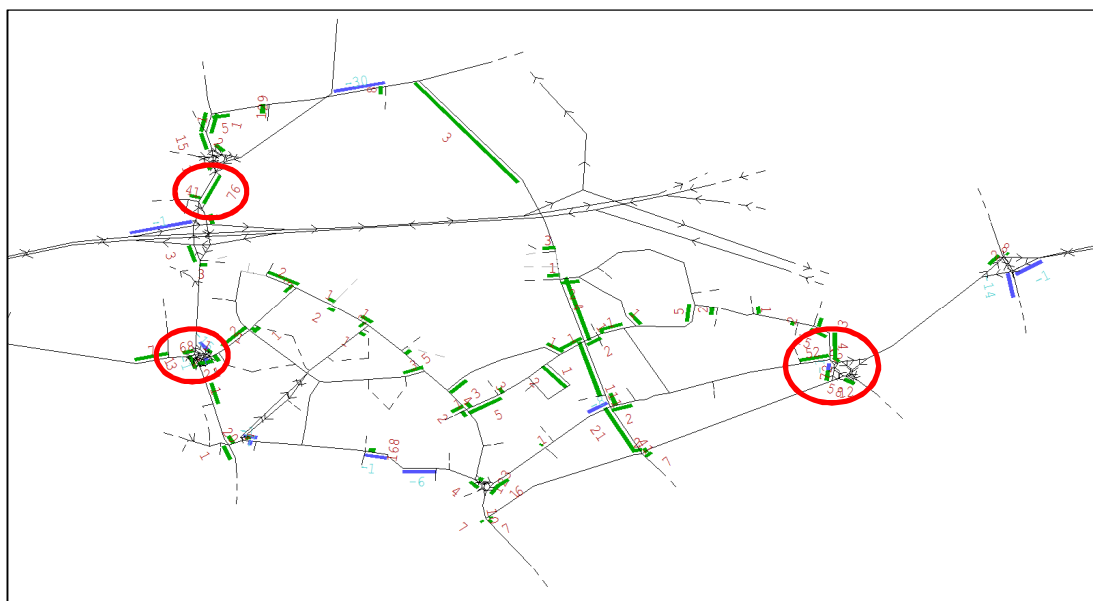


Figure 6.3: Comparison of Total Delay between the 2030 AM Do-Minimum and Do-Something Fully Built Out Scenario

In the AM peak period, a 76 second increase in Total Delay is forecast on Newton Road southbound at the signalised junction with the Delph Lane retail park when comparing the 2030 Do-Minimum and 2030 Do-Something scenarios. Traffic exiting the retail park is forecast to experience a 41 second increase in delay compared to the Do-Minimum scenario.

The A49 is forecast to experience similar levels of delay compared to the Do-Minimum scenario. A decrease in Total Delay of 11 seconds is forecast on the A49 southbound, at the signalised junction with Sandy Lane West, and an increase in Total Delay of 21 seconds on the A49 southbound at the signalised junction with the A50 compared to the Do-Minimum scenario. Cromwell Avenue is forecast to experience an increase of 68 seconds in Total Delay at the signalised junction with the A49 compared to the Do-Minimum scenario.

The A49 southbound approach at its junction with the A50 is forecast to experience an increase in delay of 20 seconds. An increase of 123 seconds in Total Delay is forecast on Poplars Avenue at its junction with the A50 as a result of the increase in traffic routing along Poplars Avenue.

Blackbrook Avenue is forecast to experience increases in Total Delay of 41 seconds in a southbound direction at its junction with the A574 Birchwood Way.

The Birchwood Way/ Oakwood Gate junction is forecast to experience a decrease in Total Delay of 1 second on Birchwood Way westbound, and 14 seconds from Oakwood Gate northbound.

6.2.2 PM

Figure 6.4 below presents the differences in Total Delay between the 2030 PM Do-Minimum and the 2030 PM-Do Something scenario.

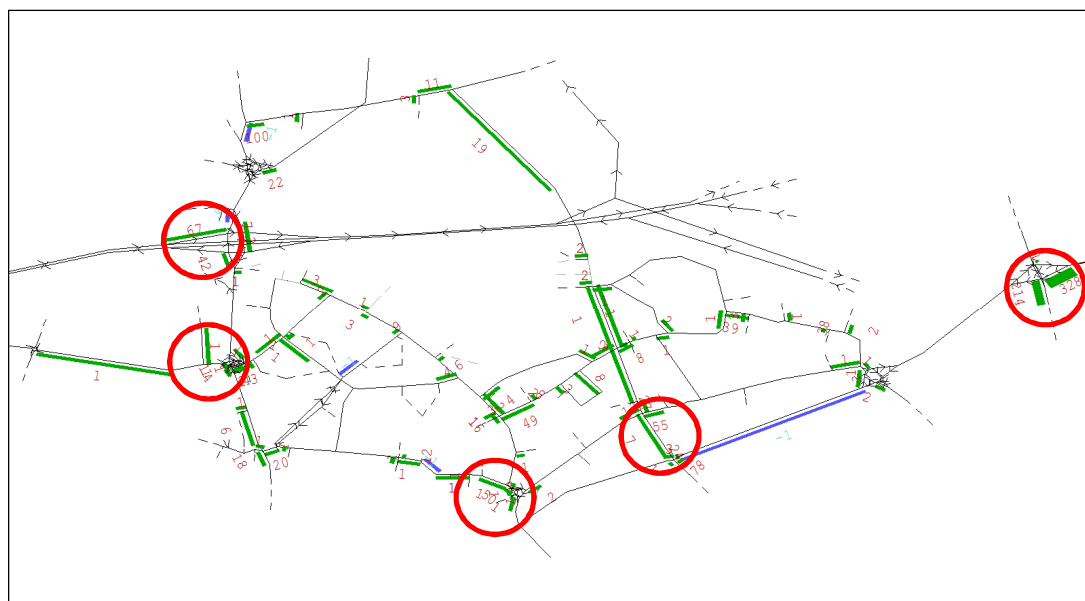


Figure 6.4: Comparison of Total Delay between the 2030 PM Do-Minimum and Do-Something Fully Built Out Scenario

With the development fully built out there is a forecast increase of 42 seconds in Total Delay on the A49 northbound approach to Junction 9 of the M62. The M62 Eastbound off-slip is forecast to experience an increase of in Total Delay of 67 seconds.

The A49 Winwick Link Road approach to the Newton Road / A49 Newton Road / A49 Winwick Link Road junction is forecast to experience a 22 second increase in Total Delay compared to the Do-Minimum scenario. The other approaches to the junction are forecast not to experience an increase in Total Delay as a result of the development proposals.

The A49 northbound approach to its signalised junction with the A50 is forecast to experience an increase in delay of 18 seconds. The A50 westbound approach at the same junction is forecast to experience a 20 second increase in Total Delay.

The A574 Birchwood Way westbound approach to the Oakwood Gate Junction is forecast to experience a 328 second increase in Total Delay, whilst traffic approaching the junction on Oakwood Gate is forecast to experience an increase in Total Delay of 214 seconds.

6.3 2030 Through Route Delay Comparison

6.3.1 AM

Figures 6.5 & 6.6 overleaf present the forecast Total Delay for the AM 2030 Do Something scenarios with and without the Through Route option. Due to the structural changes required to build the 'Through Route' into the SATURN model, a comparison overlay could not be clearly presented, therefore two separate plots have been presented.

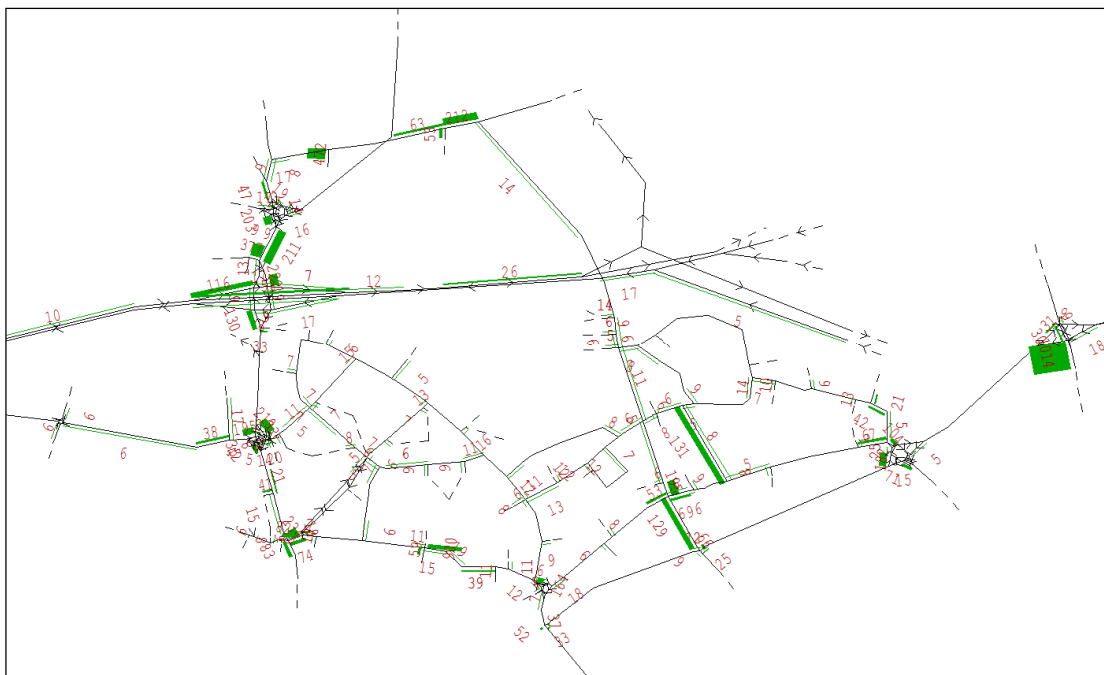


Figure 6.5: 2030 AM Do-Something Total Delay

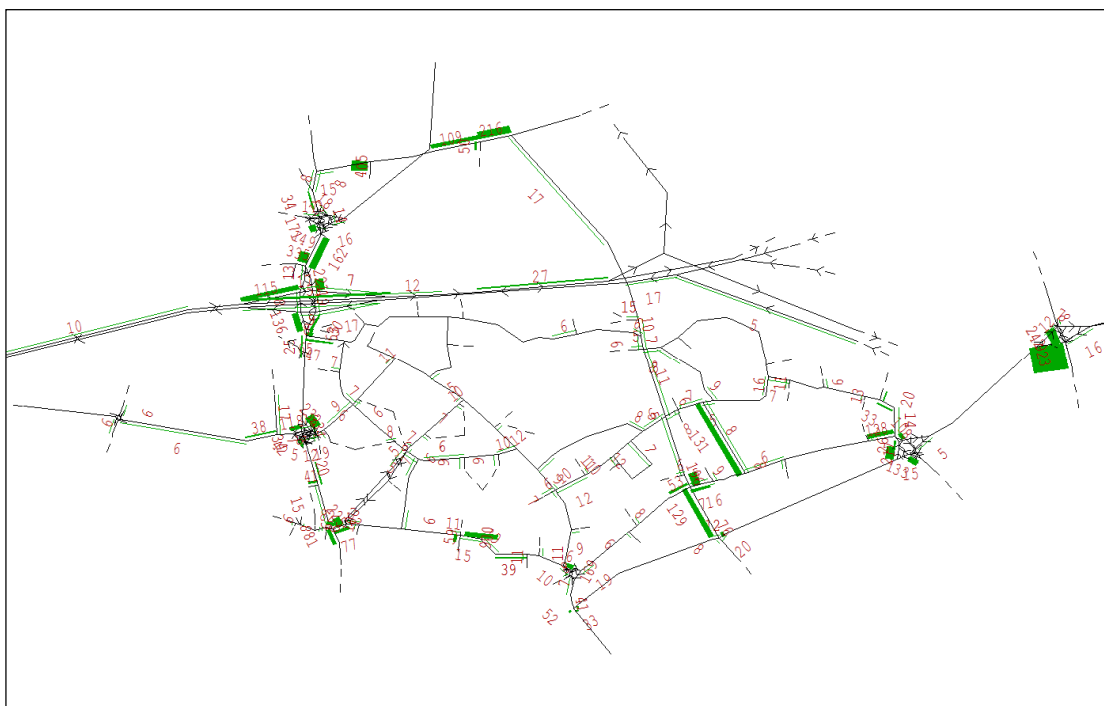


Figure 6.6: AM Do-Something 'Through Route' Total Delay

The proposed signalised junction, provided on the A49 to connect the Through Route is forecast to experience 25 seconds delay on the A49 northbound approach. In addition the A49 northbound approach to Junction 9 of the M62 is forecast to experience a 6 second increase in delay over the 2030 Do-Something scenario.

The Through Route approach arm to the A49 signalised junction is forecast to experience an increase in Total Delay of 47 seconds. Vehicles heading southbound from Junction 9 are forecast to experience an increase in delay of 63 seconds at the new signalised junction of the A49/ Through Route.

Delays on the minor road network, such as Poplars Avenue, Cotswold Way and Sandy Lane West are forecast to experience small reductions in Total Delay compared to the 2030 Do-Something no Through Route scenario as a result of fewer vehicles traversing these roads.

There is a forecast decrease in Total Delay of 49 seconds on the A49 southbound approach to the A49 / Delph Lane junction as a result of traffic rerouting and using the Through Route. This is also evident with forecast small reductions in Total Delay on Golbourne Road and Myddleton Road.

The junction of the A49 / Sandy Lane West / Cromwell Avenue is forecast to experience an increase in Total Delay of 13 seconds for vehicles routeing southbound through the junction on the A49. Vehicle movements from Cromwell Avenue approach arm are forecast to experience a decrease in Total Delay of 77 seconds compared to the 2030 Do-Something with no Through Route scenario, as a result of less traffic routing through the signalised roundabout junction.

The Through Route option is forecast to experience a decrease in Total Delay of 10 seconds for traffic approaching the A49 / A50 junction on the A49 southbound approach. Vehicles entering the A49 / A50 junction from the other arms are forecast to experience similar delays to those forecast as part of the 2030 Do-Something option.

6.3.2 PM

Figures 6.7 & 6.8 below and overleaf present the forecast Total Delay within the PM 2030 Do-Something scenarios with and without the Through Route option. Due to the structural changes required to build the Through Route into the SATURN model a comparison overlay could not be clearly presented, therefore two separate plots have been presented.

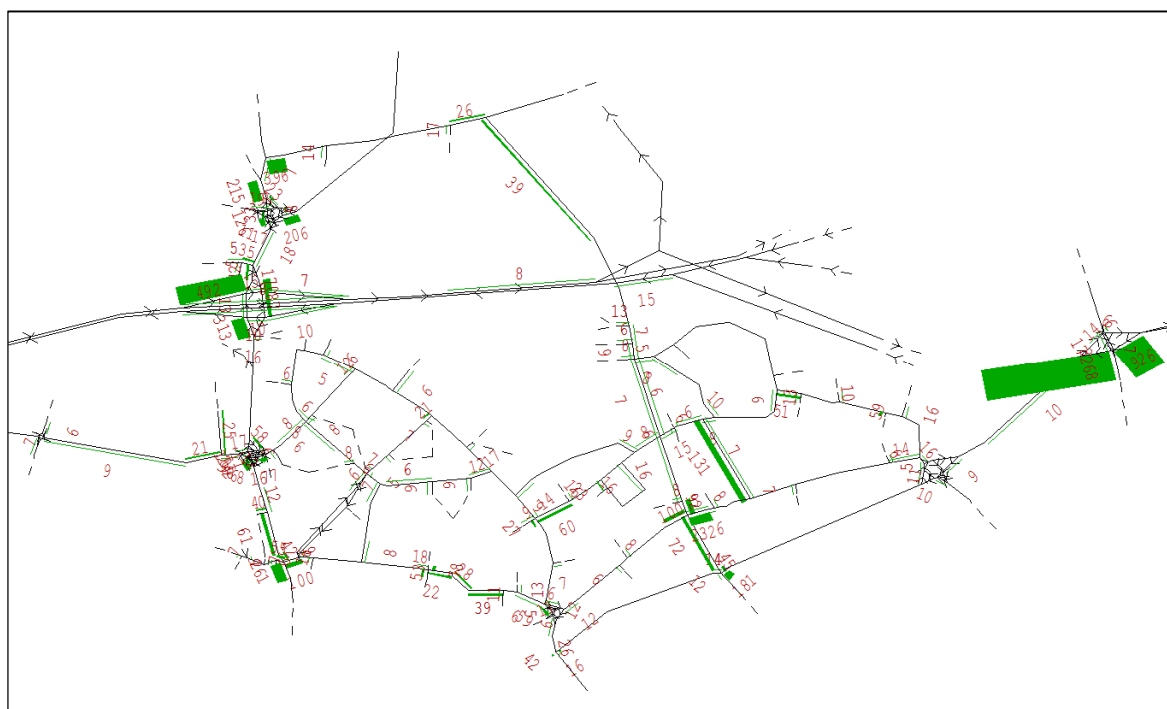


Figure 6.7: 2030 PM Do-Something Total Delay

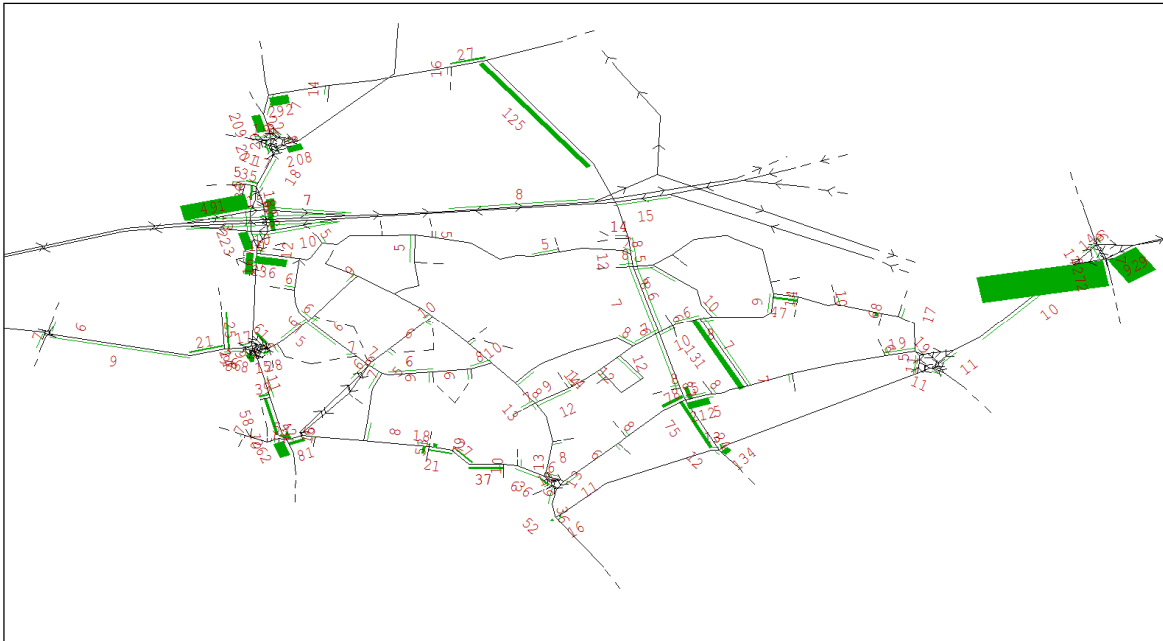


Figure 6.8: 2030 PM Do-Something Through Route Total Delay

In the PM Peak, the Through Route from the Peel Hall development is forecast to experience 236 seconds of Total Delay for traffic attempting to join the A49 at the proposed signalised junction. At the same junction the A49 northbound approach is forecast to experience 167 seconds of Total Delay.

Southbound movements from Junction 9 to the proposed signalised junction, (which provides the connection to the Through Route) are forecast to experience an increased Total Delay on the A49 of 12 seconds.

The A49 northbound approach to Junction 9 of the M62 is forecast to experience a 90 second decrease in Total Delay. Whilst some of this reduction is as a result of providing the new signalised junction a short distance to the south of the approach, it is also as a result of traffic transferring to the Through Route. This is evidence for trips heading to Myddleton Lane and Southworth Lane as they now use the Through Route and transfer to Delph Lane. As a result the Delph Lane northbound approach to its junction with the aforementioned roads is forecast to experience an increase in Total Delay of 86 seconds.

The Through Route option is forecast to result in a decrease in delay from Sandy Lane West to Cromwell Avenue of 49 seconds. The other arms at this junction remain consistent with the 2030 Do-Something no Through Route Option.

Delay at the A49 / A50 signalised junction decreases by 19 seconds on the A50 westbound approach to the signalised junction, however remains consistent on all other approach arms of the junction.

6.4 Total Delay Comparison for All Scenarios

Table 6.1 overleaf presents the AM total delay for all scenarios in PCU hours. The 2025 Do Something scenario, whereby the Peel Hall development is partially built is forecasted to experience an increase in total delay of 163 PCU hours compared to the 2025 Do Minimum. The 2030 AM Do Something scenario, whereby the Peel Hall Development is expected to be fully built increases total delay by 291 PCU hours compared to the 2030 Do Minimum. The Through Route option in the 2030 AM period is forecasted to experience a further increase of 67 PCU hours taking total delay on the network to 358 PCU hours.

AM TOTAL DELAY			
PCU Hours	Do Minimum 2025	Do-Something 2025	Difference to Do-Min
		1,331	1,494
PCU Hours	Do-Minimum 2030	Do-Something 2030	Difference to Do-Min
	1,623	1,914	291
		Through Route	Difference to Do-Min
		1,981	358
Difference to Do-Something No Through Route			
		67	

Table 6.1: AM Total Delay Comparison for all Scenarios

Table 6.2 below presents PM total delay for all scenarios in PCU hours. The 2025 Do Something scenario, whereby the Peel Hall development is partially built is forecasted to experience an increase in total delay of 426 PCU hours compared to the 2025 Do Minimum. The 2030 AM Do Something scenario, whereby the Peel Hall Development is expected to be fully built increases total delay by 636 PCU hours compared to the 2030 Do Minimum. The Through Route option in the 2030 AM period is forecasted to experience a decrease of 64 PCU hours taking total delay on the network to 572 PCU hours.

PM TOTAL DELAY			
PCU Hours	Do-Minimum 2025	Do-Something 2025	Difference to Do-Min
		2,152	2578
PCU Hours	Do-Minimum 2030	Do-Something 2030	Difference to Do-Min
	2,512	3,148	636
		Through Route	Difference to Do-Min
		3,084	572
Difference to Do-Something No Through Route			
		-64	

Table 6.2: 2030 PM Total Delay Comparison for all Scenarios

7. Assessment of Impact on Queueing

7.1 Introduction

This section will provide a summary of the key changes in Average Queue lengths for each scenario. This section is supported by **Appendix G** which provides outputs of Average Queue lengths for each scenario modelling in SATURN.

7.2 2025 Do-Minimum and 2025 Do-Something Part Build Out Queue Length Comparison

7.2.1 AM

The most significant differences in average queues between the 2025 Do-Minimum AM Peak and 2025 Do-Something Part Build Out AM Peak scenarios are highlighted below;

- A forecast increase in Average Queue length of 17 PCUs for the A49 southbound approach to the A49 / Delph Lane signalised junction;
- A forecast increase in Average Queue length of 3 PCUs on the A49 northbound at Junction 9 of the M62;
- Cromwell Avenue and A49 Northbound are forecast to experience an increase of 24 PCUs and 4 PCUs respectively at the A49 / Sandy Lane / Cromwell Avenue signalised junction; and
- The A49 southbound approach to the A49 / A50 traffic signalised junction is forecast to experience an increase in Average Queue of 7 PCUs.

7.2.2 PM

The most significant differences in average queues between the 2025 Do-Minimum PM Peak and 2025 Do-Something Part Build Out PM Peak scenarios are highlighted below;

- The A49 northbound approach to Junction 9 of the M62 Stump Cross roundabout is forecast to experience an increase in Average Queue of 34 PCUs;
- The eastbound off-slip at Junction 9 of the M62 junction is forecast to experience an increase in Average Queue of 11 PCUs;
- The A49 northbound at the signalised junction of the A49 / A50 is forecast to experience an increase in Average Queue of 14 PCUs; and
- The A574 Birchwood Way is forecast to experience an increase in Average Queue of 42 PCUs in a westbound direction towards the Oakwood Gate junction, whilst northbound traffic joining the same junction from Oakwood Gate is forecast to experience an increase Average Queue of 23 PCUs.

7.3 2030 Do-Minimum and 2030 Do-Something Full Build Out Queue Length Comparison

7.3.1 AM

The most significant differences in Average Queues between the 2030 Do-Minimum AM Peak and 2030 Do-Something full build out AM Peak scenarios are highlighted below;

- The A49 Newton Road southbound approach at the A49 / Delph Lane signalised junction is forecasted to experience an increase in Average Queue length of 31 PCUs;
- A decrease in Average Queue length of 5 PCUs is forecast on the A49 southbound at the junction with Sandy Lane west;

- The A49 southbound at the signalised junction with the A50 is forecast to experience an increase in Average Queue length of 10 PCUs;
- The Cromwell Avenue approach to its junction with the A49 is forecast to experience an increase in Average Queue length of 26PCUs. The remainder of the A49 remains relatively consistent with the Do-Minimum scenario; and
- The A574 Birchwood Way northbound approach to the Oakwood Gate junction is forecast to experience a minor decrease in Average Queue length of 1 PCU. There are no further changes in average queues forecasted for the Oakwood Gate junction.

7.3.2 PM

The most significant differences in Average Queues between the 2030 Do-Minimum PM Peak and 2030 Do-Something full build out PM Peak scenarios are highlighted below;

- The A49 northbound approach to Junction 9 of the M62 is forecast to experience an increase in Average Queue length of 22 PCUs;
- The eastbound off-slip approach to Junction 9 of the M62 is forecast to experience an increase in Average Queue of 19 PCUs;
- The A49 northbound approach to the A49 / A50 signalised junction is forecasted to experience an increase in average queues of 10 PCUs, the remainder of the A49 is not forecasted to experience increases in the Do Something scenario; and
- The A574 Birchwood way northbound approach to the Oakwood Gate junction is forecast to experience an increase in queue length of 59 PCUs. The A574 Birchwood Way westbound approach to Oakwood Gate junction is forecast to experience an increase in queue length of 39 PCUs compared to the Do-Minimum scenario.

7.4 2030 Through Route Option Queue Length Comparison

7.4.1 AM

In the following section, the proposed Through Route option is compared against the 2030 Do Something scenario.

The introduction of the Through Route scenario is forecasted to create additional queueing at the proposed signalised junction on the A49. The proposed junction is forecast to experience an Average Queue of 5 PCUs on the A49 northbound approach and 15 PCUs on the A49 southbound approach, in addition to an Average Queue of 2 PCUS from the proposed through route.

The Through Route is forecast to result in the reduction of Average Queues on the Cromwell Avenue approach to the A49 / Sandy Lane West signalised junction, a reduction from 60 PCUs in the 2030 Do-Something scenario to 32 PCUs with the Through Route. Queues on the remaining approaches to the junction are forecast to remain of a similar magnitude to the Do-Minimum option.

Queues northbound towards the Oakwood Gate junction on the Oakwood Gate approach are forecast to decrease by 9 PCUs compared to the Do-Minimum scenario.

7.4.2 PM

The introduction of the Through Route and associated signalised junction on the A49, to serve the Peel Hall development, is forecast to result in an Average Queue of 71 PCUs on the A49 northbound approach and 4 PCUs on the A49 southbound approach. The Through Route approach is forecast to experience an Average Queue of 13 PCUs in the PM peak period.

The Through Route is not forecasted to increase average queues on Mill Lane / Blackbrook Avenue.

The A547 Birchwood Way is forecast to operate in the Through Route scenario with the same queues as forecast in the 2030 Do-Something scenario.

8. Assessment of Impact on Volume over Capacity (%)

8.1 Introduction

This section will provide a summary of the key changes in Volume over Capacity (VoC) for each scenario. This section is supported by **Appendix H** which provides VoC outputs for each scenario modelled in SATURN.

8.2 2025 Do-Minimum and 2025 Do-Something Part Build Out

8.2.1 AM

The most noticeable increases in VoC in the 2025 AM Do-Something Scenario are forecast on the minor road network in proximity to the Peel Hall development. The highest increase in the vicinity of the development is 14% up from 62% on Cleveland Road in an eastbound direction at its approach to the junction with Poplars Avenue.

Poplars Lane is forecast to experience an average increase in VoC of 10%, however the increase is from a low VoC, 20%, in the Do-Minimum scenario.

Sandy Lane West is forecast to experience an increase in VoC of 12% eastbound towards the proposed Peel Hall development, an increase from 58% to 70%.

The A49 in both the north and southbound directions is forecast to experience an average increase of 1% in VoC. The majority of links along the A49 operate in the Do-Minimum scenario with a VoC of between 40 and 50%. However, the A49 southbound approach to the A50 Long Lane and Delph Lane signalised junctions are forecast to operate with a VoC% of 100 and 103%, therefore, whilst the increases in VoC remain low, less than 1%, they may have a more profound impact.

8.2.2 PM

Similarly to the AM scenario, the A49 is forecast to experience minor increases in VoC, the largest increase of 5% is forecast on the A49 northbound approach to Junction 9 of the M62, an increase up from 101% to 105%.

The Sandy Lane West approach to its signalised junction with the A49 is forecast to experience an increase in VoC of 17%, an increase from 80% to 97%, highlighting that the junction is approaching capacity.

The minor road network in the vicinity of the proposed Peel Hall development is also forecast to experience an increase in VoC. Sandy Lane West is forecast to experience an increase of between 8% and 9% in a southbound direction, an increase from 33% to 41% and 35% to 44%. The Cleveland Road approach is forecast to experience an increase of 16% from 48% to 64% at the roundabout junction with Sandy Lane, Sandy Lane West and Cotswold Road.

Poplars Avenue is forecast to experience an increase of 18% in VoC in proximity to the proposed central Peel Hall access, whilst the remainder of Poplars Avenue experiences a maximum increase of 13% from 30% to 43%.

8.3 2030 Do-Minimum and 2030 Do-Something Full Build Out

8.3.1 AM

The A49 in the AM 2030 Do-Something scenario is forecast to experience minor increases of between 1 and 2% to 43% northbound and 55% southbound.

The signalised roundabout with Sandy Lane West is forecast an increase in VoC of 9% to 68%, and 11% to 53% from Sandy Lane West onto the A49 roundabout.

As a result of the additional traffic the minor road network surrounding the proposed Peel Hall development is also forecast to experience an increase in VoC. An increase of 11% in VoC is forecast on Sandy Lane West, increasing it to 75%. Cleveland Road at its junction with Poplars Avenue is forecast to experience a VoC of 75%, an increase of 16%. Poplars Avenue is forecast to experience an increase in VoC of 9% in proximity to the proposed Peel Hall central access with the remainder of Poplars Avenue forecast to experience a maximum increase of 14% in VoC. However, the average VoC is approximately 25% along Poplars Avenue in the 2030 Do-Minimum scenario, so the increase is not as significant.

8.3.2 PM

In the PM 2030 Do-Something scenario the A49 northbound approach to Junction 9 of the M62 is forecast to experience a maximum increase in VoC of 3%, to 107%. The A49 northbound is forecast to experience an increase of 2% to 57% northbound and 1% to 41% southbound.

Traffic routing towards Sandy Lane West through the signalised junction is forecast to experience an increase in VoC of approximately 5% to 50%, whilst traffic routing from Sandy Lane West to the A49 is forecast to experience an increase in VoC of 13% to 99% when approach the signalised junction.

The minor road network surrounding the proposed Peel Hall development is forecast to experience an increase in VoC. A maximum increase in VoC of 8% is forecast to be experienced on Sandy Lane West northbound, an increase to 56%. Cleveland Road is forecast to experience an increase in VoC of 15% to 63% at its junction with Poplars Avenue.

Poplars Avenue is forecast to experience an increase in VoC of 15% in close proximity to the proposed Peel Hall central access point, whilst the remainder of Poplars Avenue is forecast to experience a maximum increase in VoC of 13% to a maximum of 42% VoC.

Howson Road northbound is forecasted to experience an increase of 35% to 59% VoC at its junction with Poplars Avenue.

Blackbrook Avenue is forecast to experience an increase in VoC of 25% northbound to a VoC of 65% and 16% southbound to 51% VoC at its junction with the proposed Peel Hall access.

8.4 2030 Through Route Option

8.4.1 AM

The A49 northbound approach to the proposed signalised junction is forecast to experience a VoC of 71%. Southbound the junction is forecast to experience a VoC of 101%, identifying the junction operates over capacity in the 2030 PM peak. The remainder of the A49 mainline remains consistent with the A49 Do-Something scenario.

The forecast modelling, encompassing provision of the Through Route, identifies a positive impact on Sandy Lane West reducing the forecast VoC by 6% in an eastbound direction and 13% in a westbound direction compared to the 2030 Do-Something scenario. Further reductions in VoC compared to the 2030 Do-Something scenario are forecast on the minor road network in proximity to the proposed Peel Hall development. Cleveland Road at its junction with Poplars Avenue is forecast to experience a 20% reduction in in VoC compared to the 2030 Do-Something scenario.

Poplars Avenue is forecast to experience a decrease in VoC compared to the 2030 Do-Something scenario, a reduction averaging 10%. Howson Road at its junction with Poplars Avenue is forecast to experience a reduction in VoC of 7% compared to the 2030 DO-Something Scenario. Blackbrook Avenue and the junction with the proposed Through Route is forecast to experience an increase in VoC of 3%.

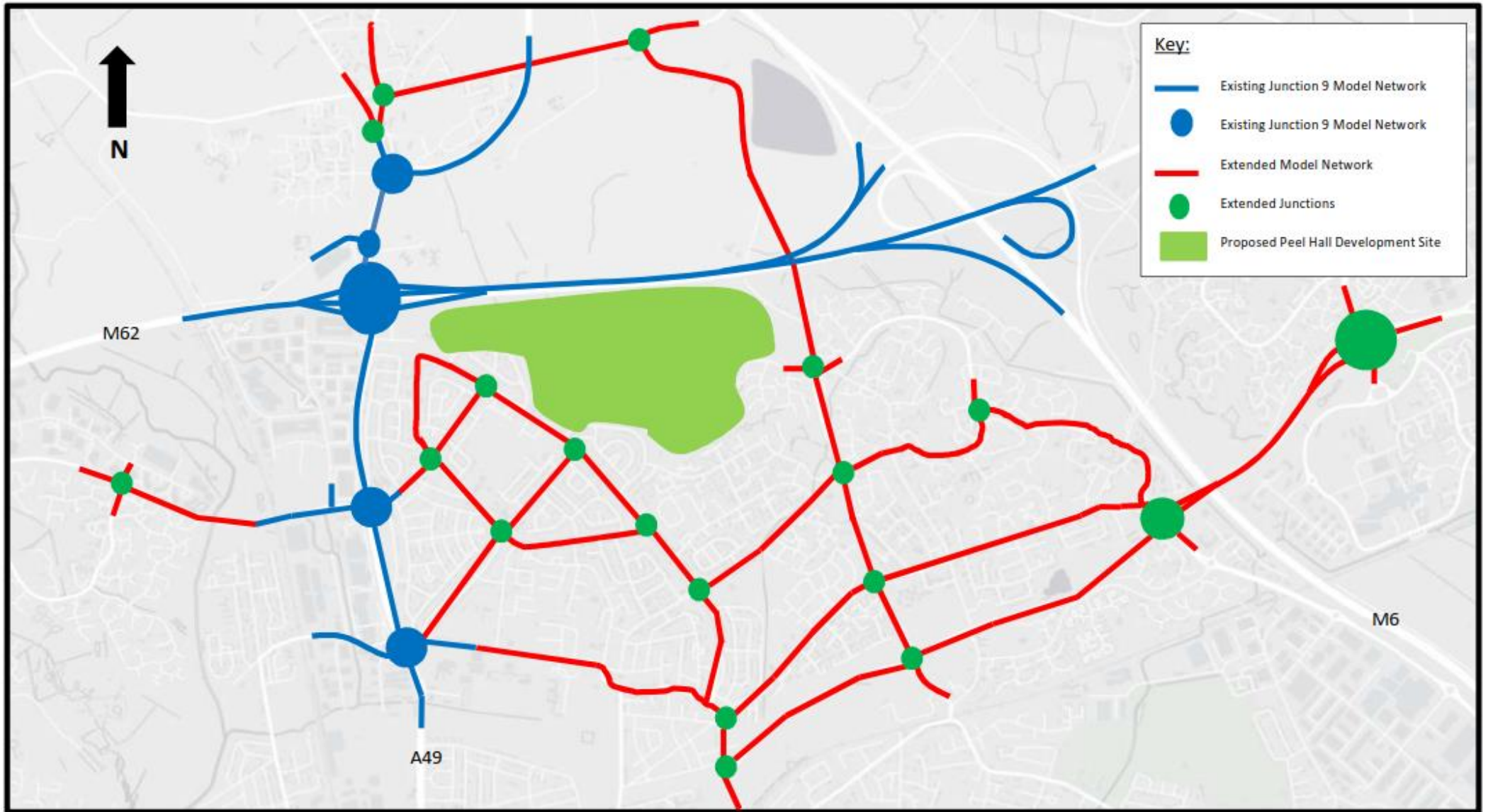
8.4.2 PM

The A49 approaches to the proposed signalised junction for the Through Route is forecast to experience a VoC of 97% northbound and 76% southbound. The remainder of the A49 remains relatively consistent with the 2030 Do-Something scenario.

As per in the AM, the Through Route is forecast to result in the reduction in the volume of traffic traversing Sandy Lane West in both directions. The reduction in traffic results in the forecast VoC values reducing by 10% in an eastbound direction and 24% in a westbound direction for Sandy Lane West compared to the 2030 Do-Something scenario.

Further reductions in VoC are forecast on the minor road network in proximity to the proposed Peel Hall development compared to the 2030 Do-Something scenario. Sandy Lane West is forecast to experience an average decrease of 10% in both directions. Cleveland Road is forecasted to experience a reduction of 24% at the junction with Poplars Avenue, whilst Howson Road at its junction with Poplars Avenue is forecast to experience a reduction of 41% compared to the 2030 Do-Something scenario.

Appendix A Study Area



Appendix A, Figure 2.1 – 2025 AM Do Minimum Do Something Delay Comparison

Appendix B Technical Note HTp/1107/TN19

Highgate *Transportation*

Land at Peel Hall, Warrington

Technical Note

Peel Hall Vehicular Trips

(HTp/1107/TN/19)

May 2017

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Figures

Figure 1.1 Peel Hall Network 2025 Pre-Spine Road Link to Local Centre

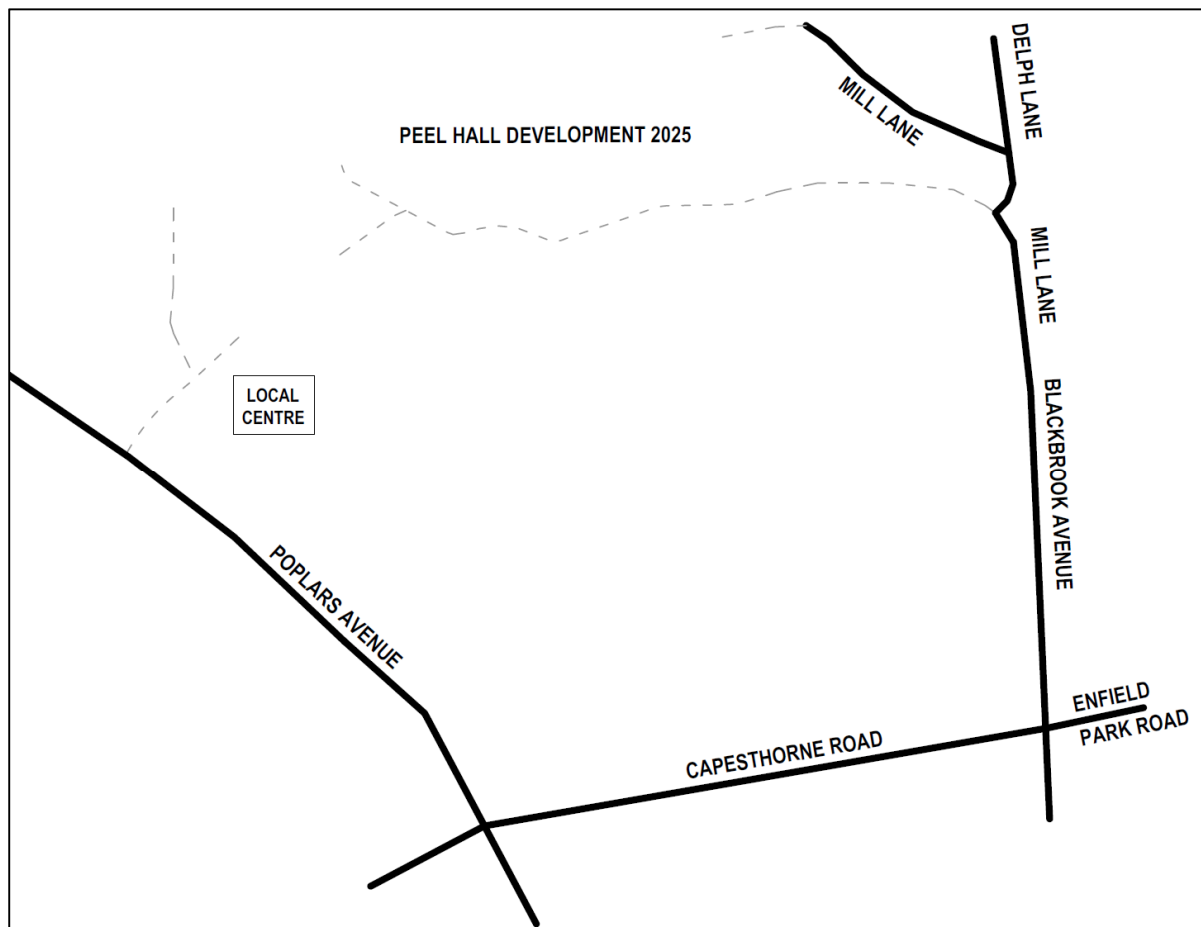
Appendices

Appendix 1 Access Strategy Plan
Appendix 2 Peel Hall Indicative Highways Build Out Table and Plan
Appendix 3 Proposed Local Centre Car Park

1.0 Introduction

- 1.1 Following the refusal of application ref: 2016/28492, the opportunity has been taken to review the years of assessment, build out programme and application of trip rate discounts.
- 1.2 This Technical Note has been prepared by Highgate Transportation Limited to confirm the trip rates used for each land use and to also set out the trip discounting assumptions. This information is then used to summarise the level of vehicular trips at each access point of the proposed Peel Hall development for an intermediate build out year of 2025 and a final year of 2030, as agreed with officers at Warrington Borough Council at a meeting on 22nd March 2017.
- 1.3 The assessment for a future year of 2025 will be for 600 residential dwellings, the care home, employment land and local centre as well as the relocation of the sports pitches. However, there will be no connecting through-route for dwellings accessed from the Mill Lane/Blackbrook Avenue access point (48% of the 600 dwellings), which is scheduled by the end of that year.
- 1.4 The opening of a link to the local centre from both sides will provide internal vehicular access to and from the main areas of the site, negating the need for residents to drive around the outside of the site on the local highway network. This link is not anticipated to be a through-route across the site, as the local centre car park is intended to be split with a physical barrier to car traffic provided; this barrier could however also provide the required infrastructure for an initial bus route to be brought through the site in 2025.

Figure 1.1 - Peel Hall network 2025 pre-spine road link to local centre



- 1.5 The assessment for a future year of 2030 will be for the full development. The local centre traffic will be discounted as a result of the internal accessibility across the site.
- 1.6 The application is for an outline scheme and the Peel Hall development can be summarised as:
- i. Up to 1,200 residential dwellings. This will include a mix of market and affordable homes as well as houses and apartments. The houses are expected to be a mix of two, three and four bedroomed houses and one and two bedroomed apartments. It is anticipated that up to 60 of these dwellings will be provided as a retirement home development.
 - ii. A 100 bedroom care home.
 - iii. An area of employment land comprising up to 7,500sqm Gross Floor Area (GFA) of light industrial units.

- iv. A local centre comprising a food store of up to 2,000sqm GFA plus up to a further 600sqm GFA of local centre type facilities (such as A1-A5 and D1) plus a family pub and restaurant of up to 800sqm GFA. The local centre car park will be located so that it can also be conveniently used as a school drop off facility.
 - v. Up to a two form entry primary school with a maximum of up to 420 pupils.
 - vi. Relocating and upgrading of existing sports pitches to provide like-for-like replacement in terms of number of pitches and the provision of ancillary facilities, which are expected to include changing facilities for up to four teams at any one time and a function room that can be used for local community uses such as a mother and toddler group.
- 1.7 As a guide, the contents of each section of this report are as follows:
- i. **Section 2.0 – Access Strategy**
This section provides an overview of the Peel Hall access strategy, including the locations of the accesses, quantum of development from each access and the proposed local centre car park arrangement that provides an overarching through-route for all traffic being created, whilst also negating the need for vehicle trips from the residential dwellings accessed from the Mill Lane/Blackbrook Avenue access junction to leave the site and travel on the local highway network.
 - ii. **Section 3.0 – Trip Rates Summary**
This section sets out the trip rates that have been used to assess the level of traffic likely to be generated by the different land uses proposed on the Peel Hall site.
 - iii. **Section 4.0 – Vehicular Trips 2025**
This section provides a summary of the number of vehicular trips from each access point in the future year of 2025, based on the trip rates set out in **Section 3.0**, with justification of the appropriate level of trip discounting to be used in the assessment.
 - iv. **Section 5.0 – Vehicular Trips 2030**
This section provides a summary of the number of vehicular trips from each access point in the future year of 2030, based on the trip rates set out in **Section 3.0**, with justification of the appropriate level of trip discounting to be used in this assessment for the anticipated year of completion.
- 1.8 The information in this Technical Note is intended to inform the SATURN modelling and has been provided following a review of the Warrington Borough Council consultation response to application 2016/28492, various meetings held with the Council between January 2016 and March 2017 and correspondence since January 2016 regarding the highways and transportation elements of the scheme.

2.0 Access Strategy

- 2.1 The access strategy currently proposed has not changed from that previously set out, in that whilst the whole site will be fully permeable for pedestrians and cyclists the parcels of land for residential development correspond directly to a single point of vehicular access only. This is set out in **Table 2.1** below and on the Access Strategy Plan contained in **Appendix 1**.

Table 2.1 – Quantum of development served off each access

Access	Units/sqm
Mill Lane	150 Dwellings
Mill Lane/ Blackbrook Avenue	700 Dwellings
	Primary School (up to 420 pupils)
Poplars Ave. (Central)	330 Dwellings
	Food Store (2,000sqm)
	Local Centre (600sqm)
	Family Pub/ Restaurant (1,600sqm)
	100-Bed Care Home
Poplars Ave. (West)	Employment (7,500sqm)
Birch Avenue	20 Dwellings
Grasmere Avenue	Sports Pitches and Community Facilities

- 2.2 For assessment purposes it is assumed that first occupation will be in 2021, with 120 dwellings being occupied per year through to 2030. This has been agreed with officers at Warrington Borough Council.
- 2.3 The indicative highways build out programme is set out in the table contained at **Appendix 2** and on the accompanying plan, and this has informed the 2025 assessment in terms of the loading of development traffic (and for which land uses) at each respective access point from the existing local highway network (see **Section 4.0**).
- 2.4 It is proposed that the local centre car park will be split into two sections with a physical barrier as set out in **paragraph 1.3**. This is intended to prevent through-traffic between both sections of the site, whilst facilitating access from both Poplars Avenue in the south and Blackbrook Avenue/Mill Lane in the east. This arrangement results in 86% of the 1,200 dwellings having vehicular access to the local centre and as such will be contained within the Peel Hall site i.e. not travelling onto the local highway network. An indicative layout of the local centre car park is shown on the plan contained at **Appendix 3** of this report.
- 2.5 Warrington Borough Council have requested that a sensitivity test is also carried out to assess the impact of traffic across the network if a through-route was created across the Peel Hall site to carry traffic between the A49 in the west and Blackbrook Avenue in the east; i.e. the creation of a distributor road through the peel Hall site. This is set out further in Technical Note TN/21 to inform the SATURN modelling sensitivity test for a future year assessment of 2030.

- 2.6 Technical note TN/20 is provided to set out the growth rates for background traffic growth in both future year models of 2025 and 2030.

3.0 Trip Rates Summary

- 3.1 The trips rates used for assessing the impact of the Peel Hall development have previously been set out in Technical Notes TN/02/A (March 2016) and TN/12 (April 2016). These trip rates were further substantiated in TN/13 (July 2016).
- 3.2 Data for the AM and PM peak hours of 0800-0900 and 1700-1800 hours respectively is required for the SATURN modelling work, and this has been taken from the TRICS database output files previously used.
- 3.3 A summary of the peak hour trip rate data to be used and the resultant trips for each land use are set out below (taken from TN/02/A) as follows:

Table 3.1 – Residential Vehicular Trip Rate and Generation Summary

Development Traffic	AM Peak Hour		PM Peak Hour	
	Arrival	Departure	Arrival	Departure
85 th Percentile Trip Rates (per unit)	0.225	0.523	0.495	0.307
Residential Trips (1,200 units)	270	628	594	368

Table 3.2 – Care Home Vehicular Trip Rates and Attraction Summary

Development Traffic	AM Peak Hour		PM Peak Hour	
	Arrival	Departure	Arrival	Departure
Trip Rates (per bedroom)	0.068	0.068	0.083	0.113
Retirement Flat Trips (100-beds)	7	7	8	8

Table 3.3 – Employment Vehicular Trip Rates and Attraction Summary

Development Traffic	AM Peak Hour		PM Peak Hour	
	Arrival	Departure	Arrival	Departure
Trip Rates (per 100sqm GFA)	0.919	0.514	0.260	0.621
Employment Trips (7,500sqm GFA)	69	39	20	47
HGV %Proportion	7%	10%	10%	4%

Table 3.4 – Food Store Vehicular Trip Rate and Attraction Summary

Development Traffic	AM Peak Hour		PM Peak Hour	
	Arrival	Departure	Arrival	Departure
Trip Rates (per 100sqm GFA)	4.615	3.030	9.056	9.550
Food Store Trips (2,000sqm GFA)	92	61	181	191

Table 3.5 – Local Centre Vehicular Trip Rate and Attraction Summary

Development Traffic	AM Peak Hour		PM Peak Hour	
	Arrival	Departure	Arrival	Departure
Trip Rates (per 100sqm GFA)	5.025	4.780	6.039	6.495
Local Centre Trips (600sqm GFA)	30	29	36	39

Table 3.6 – Primary School Vehicular Trip Rate and Attraction Summary

Development Traffic	AM Peak Hour		PM Peak Hour	
	Arrival	Departure	Arrival	Departure
Trip Rates (per pupil)	0.269	0.189	0.045	0.063
Primary School Trips (all 420 pupils)	113	79	19	27

- 3.4 The proposed development at Peel Hall will include the existing open space and local authority community buildings and sports area on the land off Windermere Avenue and Grasmere Avenue to the southeast of the site. This will be linked to the site and new sports pitches will be provided to replace those currently located on the HCA land to the east of the site, off Mill Lane.
- 3.5 The facilities will likely include full-sized grass pitches, a multi-use games area, junior grass pitches and changing facilities for up to four teams. The expectation is that these proposals will also include a clubhouse/function room for community use.
- 3.6 The sports pitches will predominantly be used at the weekends and it was agreed at the 2013 Public Inquiry (Appeal ref: APP/M0655/A/13/2192076) that this element of the development proposals would not need to be included within the weekday modelling. Furthermore there will be an offset in trip generation from the current on-site uses at the existing location and from the sports pitches on the HCA land, which are to be relocated.

3.4 It is likely that the proposed clubhouse facilities will be used by the local community, for example, by a mother and toddler group, and also that the sports pitches may be used during the evening after 1800 hours. Therefore it was agreed at the 2013 Inquiry that the clubhouse facilities for local community use may attract up to 15 car movements over two-hour time slots during the day between the hours of 0900 and 1800. As this is cannot be accurately modelled within our one hour peak AM and PM time periods, the 15 movements have been concentrated into each peak hour. This is set out on **Table 3.7** below.

Table 3.7 – Sports Pitches and Ancillary Facilities Vehicular Trip Rate and Attraction Summary

Development Traffic	AM Peak Hour		PM Peak Hour	
	Arrival	Departure	Arrival	Departure
Community Use Trips	10	5	7	8

3.7 The size of the family pub was changed in April 2016 as the scheme evolved, reducing to 800sqm GFA. The change in floor area was set out in Technical Note TN/12 and the resulting trips are represented in **Table 3.8** below.

Table 3.8 – Family Pub/Restaurant Vehicular Trip Rate and Attraction Summary

Development Traffic	AM Peak Hour		PM Peak Hour	
	Arrival	Departure	Arrival	Departure
Trip Rates (per 100sqm GFA)	-	-	2.847	1.845
Family Pub/Restaurant Trips (800sqm GFA)	-	-	23	15

3.8 In summary, the vehicle trips associated with each land use are tabulated below for ease of reference in **Table 3.9**. Please note that no discount has been applied to these figures.

Table 3.9 – Peel Hall Vehicular Trip Generation Summary

Development Traffic	AM Peak Hour		PM Peak Hour	
	Arrival	Departure	Arrival	Departure
Residential Trips	270	628	594	368
Care Home Trips	7	7	8	8
Employment Trips*	69	39	20	47
Food Store Trips	92	61	181	191
Local Centre Shop Trips	30	29	36	39
Primary School Trips	113	79	19	27
Community Uses	10	5	7	8
Family Pub/Restaurant Trips	-	-	23	15
Total Trips	591	848	888	703

* See Table 3.3 for HGV proportion of peak hour traffic

4.0 Vehicular Trips 2025

4.1 The table contained in **Appendix 2** sets out the anticipated number of dwellings coming forward in each year from each part of the development, and hence off each access point. The table also demonstrates when the other land uses such as the local centre, school and employment land will come forward for development. It can be seen from this table that:

- i. The sports pitches will be relocated to the land off Grasmere Avenue in year 1 (i.e. 2021).
- ii. The local centre and care home will come forward in year 2 (i.e. 2022).
- iii. Employment land may come forward in year 3 (i.e. 2023).
- iv. There will be circa 600 dwellings occupied by 2025, as follows:
 - Blackbrook Avenue/Mill Lane – 285 dwellings (main site access).
 - Poplars Avenue – 145 dwellings (local centre access).
 - Mill Lane – 150 dwellings.
 - Birch Avenue – 20 dwellings.

4.2 It has been agreed with Warrington Borough Council that an intermediate year of 2025 will be assessed in terms of the traffic impact on the local highway network before the internal link to the local centre is created. As such, all dwellings taking access from the Mill Lane/Blackbrook Avenue access will have to drive onto the surrounding local highway network in order to access the local centre by car. It is agreed that this will present a worst case intermediate build out scenario.

4.3 Therefore, based on the number of dwellings and other land uses coming forward by 2025 as set out above in **paragraph 4.1**, the number of vehicle trips at each access point are provided in **Table 4.1** using the trip rates set out in **Section 3.0**.

Table 4.1 – Summary of 2025 Peak Hour Vehicle Trip Numbers at Each Access Location

Access	Quantum of Development	AM Arrival	AM Departure	PM Arrival	PM Departure
Poplars Avenue (Central)	145 dwellings	33	76	72	45
	care home	7	7	8	8
	food store	92	61	181	191
	local shops	30	29	36	39
	family pub	0	0	23	15
	<i>Total</i>		<i>162</i>	<i>173</i>	<i>320</i>
Poplars Avenue (West)	employment land	69	39	20	47
Mill Lane	150 dwellings	34	79	74	46
Mill Lane/Blackbrook Avenue	285 dwellings	64	149	141	88
Birch Avenue	20 dwellings	5	11	10	6
Grasmere Avenue	community uses	10	5	7	8
Total		344	456	572	493

- 4.4 It can be seen from the above that when considering the total number of vehicle trips at each access location there may be up to around 800 vehicle movements arising from the Peel Hall development profile in AM peak hour and 1,065 in the PM peak hour.
- 4.5 No trip discounting for any of the land uses has been carried out for this intermediate build out assessment, and no pass-by trips have been taken into account for the food store and other local centre uses. Furthermore, no discounting for internal trips to the local centre facilities have been made to account for those dwellings accessed from Poplars Avenue (145 dwellings) or linked trips between the non-residential land uses. It is therefore considered that this is a robust assessment.

5.0 Vehicular Trips 2030

- 5.1 It is agreed acceptable to model the impact of the Peel Hall development on the local highway network as fully built out and occupied by 2030.
- 5.2 Therefore, the number of vehicle trips at each access point has been provided below in **Table 5.1** using the trip rates set out in **Section 3.0** for the whole Peel Hall development. No discounts have been applied to these figures.

Table 5.1 – Summary of 2030 Peak Hour Vehicle Trip Numbers at Each Access Location

Access	Quantum of Development	AM Arrival	AM Departure	PM Arrival	PM Departure
Poplars Avenue (Central)	330 dwellings	74	173	163	101
	care home	7	7	8	8
	food store	92	61	181	191
	local shops	30	29	36	39
	family pub	0	0	23	15
	<i>Total</i>		<i>203</i>	<i>270</i>	<i>411</i>
Poplars Avenue (West)	employment land	69	39	20	47
Mill Lane	150 dwellings	34	79	74	46
Mill Lane/Blackbrook Avenue	700 dwellings	158	366	347	215
	primary school	113	79	19	27
Birch Avenue	20 dwellings	5	11	10	6
Grasmere Avenue	community uses	10	5	7	8
Total		592	849	888	703

- 5.3 It can be seen from the above that when considering the total number of vehicle trips at each access location there may be up to around 1,441 vehicle movements arising from the Peel Hall development profile in AM peak hour and 1,591 in the PM peak hour, with no adjustments made for internal trips or discounting.

- 5.4 However, it is appropriate to apply a trip discount to these figures, as the above represents double counting of vehicular trips when considering, for example, that the vehicular trip associated with a resident travelling to the local centre will be represented as both a trip departing from the dwellings and a trip arriving at the local centre.
- 5.5 It is proposed that no discounting of trips will occur with the residential, care home, community uses, and family pub/restaurant or employment trips.
- 5.6 The food store trips are to be discounted by 100% in the SATURN modelling, with 30% of these trips being redistributed from existing traffic on the network passing by the Poplars Avenue access. These pass-by trips will have no material impact on the operation of the wider highway network.
- 5.7 Furthermore, it has previously been set out in TN/13 that the proposed primary school is not intended as a replacement and that primary school trip discounts should be based on internal trip containment; the number of pupils expected to be generated by the development based on the calculation factor supplied by Warrington Borough Council, and comparing this to the number of children expected in a school with up to two-form entry i.e. up to 30 children in each class (therefore 60 children per year group from reception to year 6 i.e. 420 children).
- 5.8 The information for primary school places issued by WBC was based on census data and the following calculation:

0.3 pupil places per dwelling x number of dwellings

0.3 x 1,200 = 360 (85% of 420 primary school places)

- 5.9 The calculation indicates that the development will generate 360 primary school places and therefore it is considered appropriate to apply a 50% discount.
- 5.10 Therefore trip discounts can be summarised as follows for both the AM and PM peak hours:
- i. Residential 0%
 - ii. Care Home 0%
 - iii. Employment 0%
 - iv. Food Store 100% (70% discount and 30% pass-by)
 - v. Local Centre 100%
 - vi. Family Pub/Restaurant 0%
 - vii. Primary School 50%
 - viii. Community uses 0%
- 5.11 These discounts have been applied to the figures contained in **Table 5.1** and a revised summary of the proposed Peel Hall development trips is set out on **Table 5.2** below.

Table 5.2 – Summary of 2030 Peak Hour Vehicle Trip Numbers at Each Access Location (with discounts applied)

Access	Quantum of Development	AM Arrival	AM Departure	PM Arrival	PM Departure
Poplars Avenue (Central)	330 dwellings	74	173	163	101
	care home	7	7	8	8
	food store*	28	18	54	57
	local shops	0	0	0	0
	family pub	0	0	23	15
	<i>Total</i>		<i>109</i>	<i>198</i>	<i>248</i>
Poplars Avenue (West)	employment land	69	39	20	47
Mill Lane	150 dwellings	34	79	74	46
Mill Lane/Blackbrook Avenue	700 dwellings	158	366	347	215
	primary school	57	40	10	14
Birch Avenue	20 dwellings	5	11	10	6
Grasmere Avenue	community uses	10	5	7	8
Total		442	738	716	517

* pass-by trips only

5.12 It can be seen from the above that when considering the total number of vehicle trips at each access location there may be up to around 1,180 vehicle movements arising from the Peel Hall development profile in AM peak hour and 1,233 in the PM peak hour.

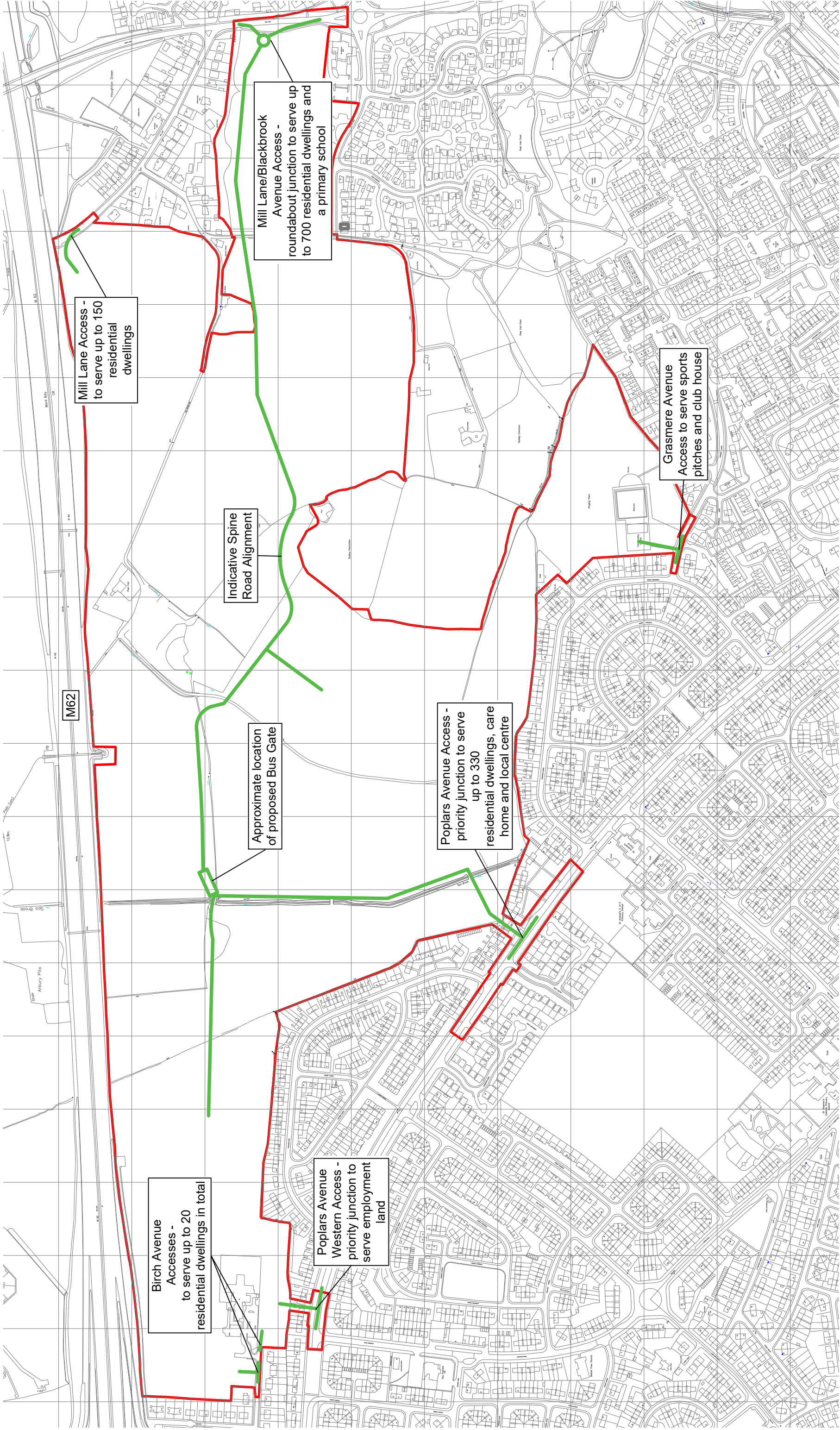
5.13 These figures from **Table 5.2** are to be used in the SATURN modelling.

6.0 Summary

- 6.1 Following the refusal of application ref: 2016/28492, the opportunity has been taken to review the years of assessment, build out programme and application of trip rate discounts.
- 6.2 This Technical Note has been prepared by Highgate Transportation to confirm the trip rates used for each land use and set out the trip discounting assumptions. This information has been used to summarise the level of vehicular trips at each access point of the proposed Peel Hall development for an intermediate build out year of 2025 and a final year of 2030 as agreed with officers at Warrington Borough Council at a meeting on 22nd March 2017.
- 6.3 The information in this Technical Note is intended to inform the SATURN modelling and has been provided following a review of the Warrington Borough Council consultation response to application 2016/28492, various meetings held with the Council between January 2016 and March 2017 and correspondence since January 2016 regarding the highways and transportation elements of the scheme.
- 6.4 The vehicular trips contained in **Table 4.1** and **Table 5.2** are to be used to inform the SATURN modelling for future years of 2025 and 2030 respectively.

Appendix 1

Access Strategy Plan



NOTES:
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1005/17	Amendment to annotation	DATE	
1005/16	Amendment to annotations	CHECKED:	DT
04/05/16	Amendment to bus gate location	DRAWN BY:	FB
04/03/16	Alteration to dwelling numbers at access points	DATE	12/01/15
19/02/16	Reduction in number of dwellings shown off Birch Avenue	REASON FOR REVISION	

PROJECT:	PEEL HALL, WARRINGTON
CLIENT:	SATNAM

TITLE:	PROPOSED ACCESS POINTS AND INDICATIVE SPINE ROAD
PROJECT REFERENCE:	1107
DRAWING NUMBER:	19
SCALE:	Not to scale

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Appendix 2

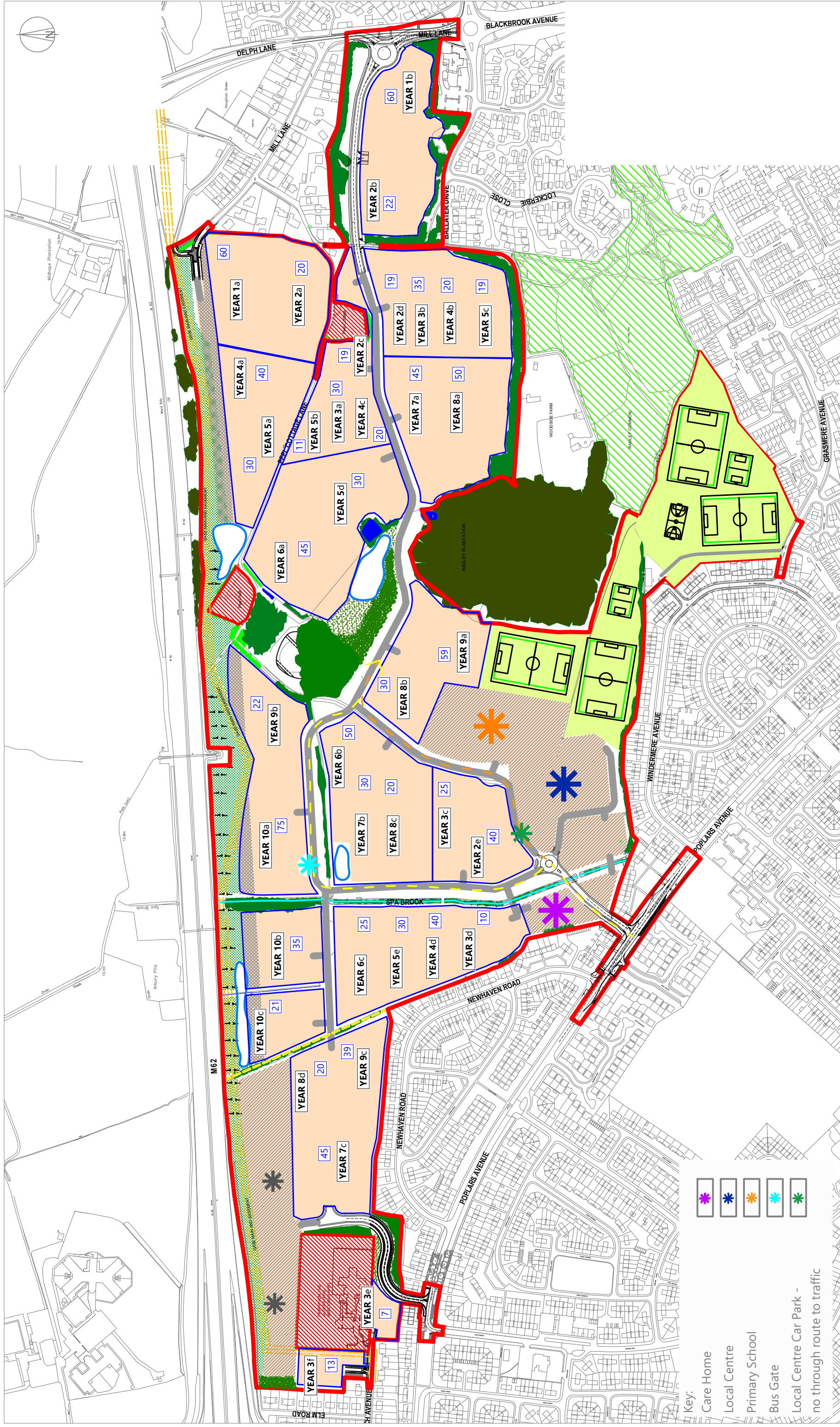
Peel Hall Indicative Highways Build Out Table and Plan

Year End	Number of Residential Units off Each Access										Indicative Highways Build Out (number of properties sold at year end)
	Distributor Road Blackbrook Ave		Distributor Road Poplars Ave		Mill Lane		Birch Ave		Cumulative Total		
	New	Cum.	New	Cum.	New	Cum.	New	Cum.			
1	60	60	0	0	60	60	0	0	120	1a 60 1b 60	
										Relocated sports pitches	
2	60	120	40	40	20	80	0	0	240	2a 20 2b 22 2c 19 2d 19 2e 40	
										Temporary emergency link to be via Radley Lane (north). Need first part of distributor road from east and turning area for bus service	
3	65	185	35	75	0	80	20	20	360	3a 30 3b 35 3c 25 3d 10 3e 7 3f 13	
										Local Centre and Care Home off Poplars Ave Employment Land off Poplars Ave (west) with temporary emergency link through to Elm Walk	

Peel Hall Indicative Highways Build Out Table

Year End	Number of Residential Units off Each Access								Indicative Highways Build Out (number of properties sold at year end)	
	Distributor Road Blackbrook Ave		Distributor Road Poplars Ave		Mill Lane		Birch Ave			Cumulative Total
	New	Cum.	New	Cum.	New	Cum.	New	Cum.		
4	40	225	40	115	40	120	0	20	480	4a 40 4b 20 4c 20 4d 40
5	60	285	30	145	30	150	0	20	600	Requires a temporary emergency link through to Peel Cottage Lane 5a 30 5b 11 5c 19 5d 30 5 e 30
6	95	380	25	170	0	150	0	20	720	Potential for initial bus link through Local Centre and connecting to eastern spine road Emergency link through Local Centre created 6a 45 6b 50 6c 25
7	75	455	45	215	0	150	0	20	840	7a 45 7b 30 7c 45 Provision of temporary emergency access through to employment spine road

Year End	Number of Residential Units off Each Access										Indicative Highways Build Out (number of properties sold at year end)
	Distributor Road Blackbrook Ave		Distributor Road Poplars Ave		Mill Lane		Birch Ave		Cumulative Total		
	New	Cum.	New	Cum.	New	Cum.	New	Cum.			
8	100	555	20	235	0	150	0	20	960		8a 50 8b 30 8c 20 8d 20 Primary School Completion of spine road for full bus service
9	70	625	50	285	0	150	0	20	1,080		9a 59 9b 22 9c 39
10	75	700	45	330	0	150	0	20	1,200		10a 64 10b 35 10c 21 Provision of final emergency access through to employment spine road



- Key:
- Care Home
 - Local Centre
 - Primary School
 - Bus Gate
 - Local Centre Car Park - no through route to traffic

NOTES:
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 KEY:
 Indicative Year Numbering
 Indicative Number of units Completed at Year End
 Initial Bus Link
 End Bus Link

Phasing subject to detailed phasing plan to be submitted at Reserved Matters stage

ISSUE	REASON FOR REVISION	DRAWN BY:	CHECKED:	DATE
		FB	FB	11/05/17

PROJECT: **PEEL HALL, WARRINGTON**
 CLIENT: **SATNAM MILLENNIUM LTD**

TITLE: **INDICATIVE HIGHWAYS BUILD OUT PLAN**
 PROJECT REFERENCE: **1107**
 DRAWING NUMBER: **27/G**
 SCALE: **NOT TO SCALE**

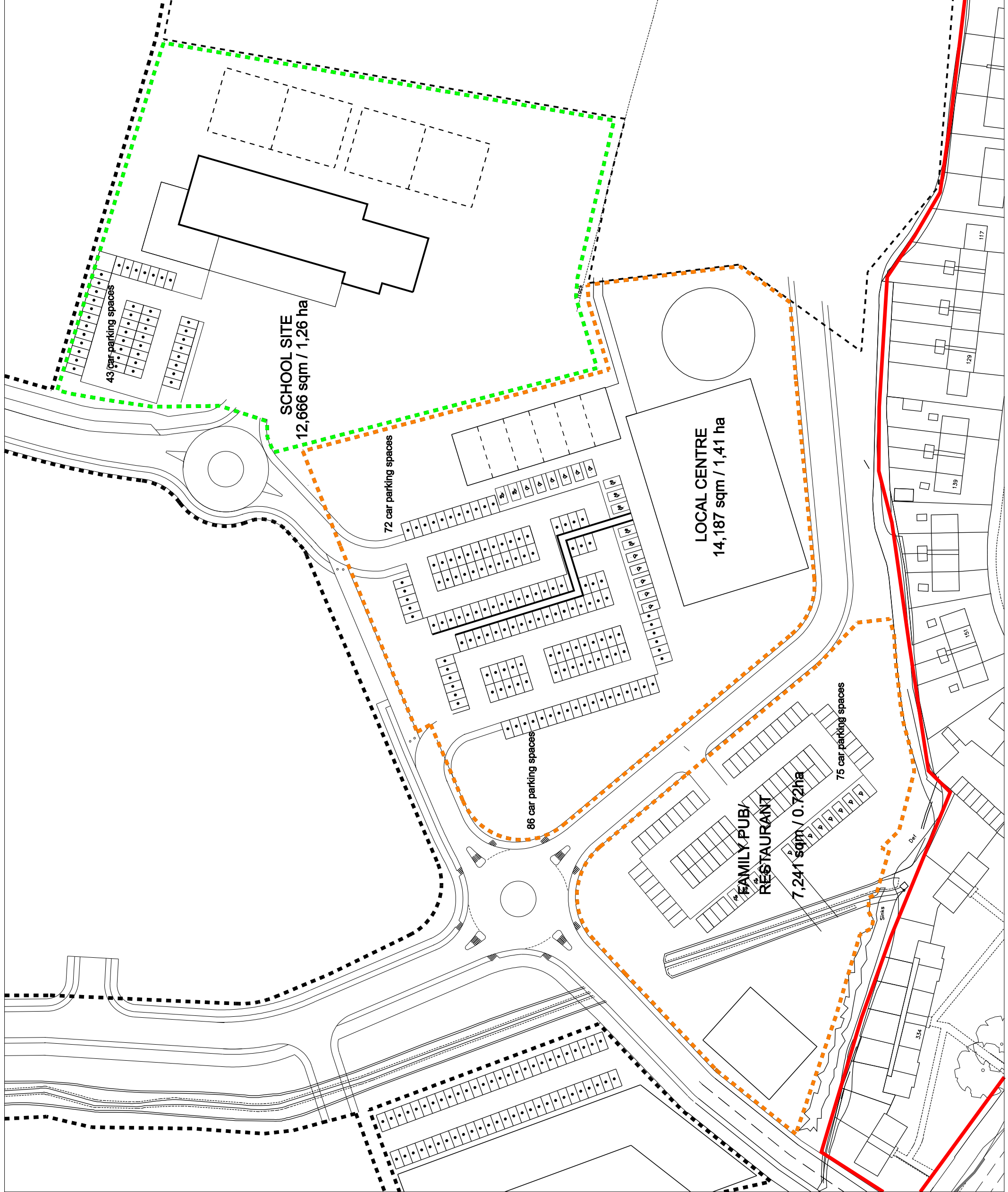
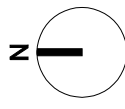
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Appendix 3

Proposed Local Centre Car Park

Notes

Do not scale from this drawing.
All dimensions are to be checked prior to construction and any discrepancies are to be identified to the Architect.
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A 07.07.16 Issued for comments JHD

ISSUED FOR PLANNING

Revisions

Client
Satnam Millennium Ltd

Project
Peel Hall Masterplan

Title
Illustrative Local Centre, Family Pub & School Layout

Scale Size Date Drawn Checked
1:1000 A3 July'16 JHD DB

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Partnerships Sustainability

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Rev. A

Appendix C Technical Note HTp/1107/TN21

Highgate *Transportation*

**Land at Peel Hall, Warrington
Technical Note – Through Route Scenario**

(HTp/1107/TN/21)

July 2017

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3.0 Traffic Flows	6

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Figure 1.1	Site Location Plan
Figure 2.1	Extract of Indicative Through Route Alignment
Figure 2.2	Extract of Proposed Alignment for Through Route at A49
Figure 2.3	Extract of Main Site Access at Blackbrook Avenue

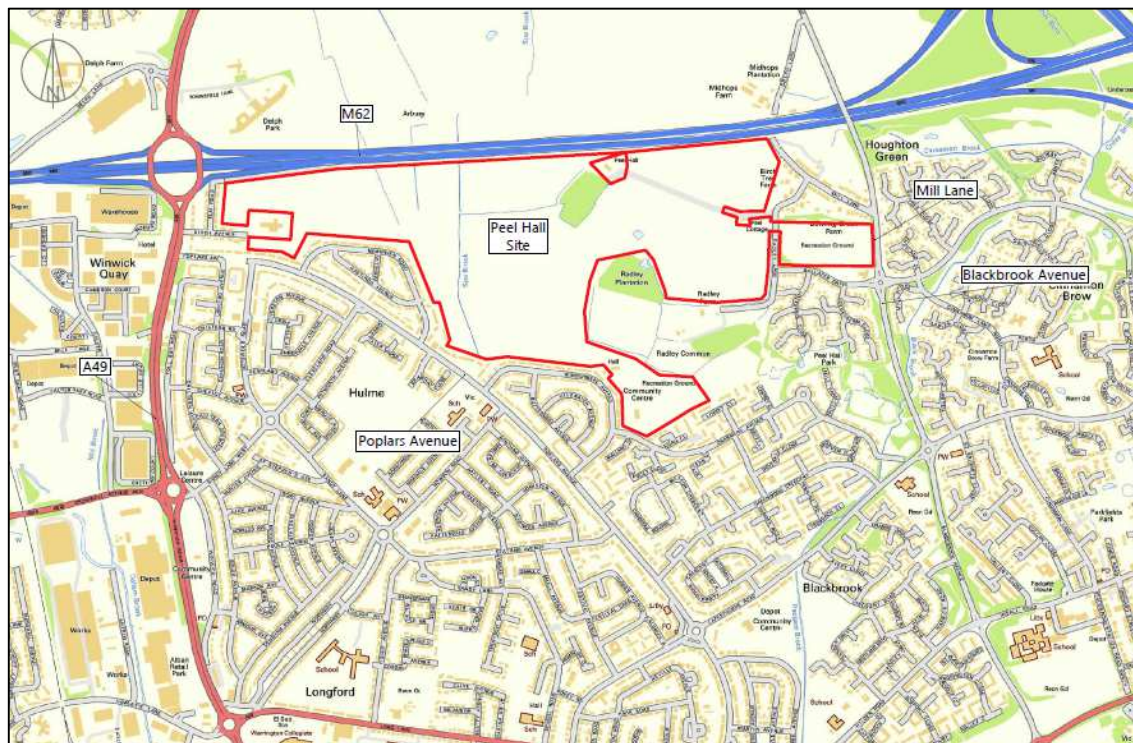
Appendices

Appendix 1	Indicative Through Route Alignment
Appendix 2	Peel Hall Proposed Alignment for Through Route to A49
Appendix 3	Proposed Main Site Access at Blackbrook Avenue

1.0 Introduction

1.1 This Technical Note has been prepared by Highgate Transportation Limited to set out the proposed alignment for a potential through route for all vehicles to be created from the A49 to the west of the Peel Hall site, through the site to Mill Lane/Blackbrook Avenue in the east. The site location is illustrated in **Figure 1.1** below.

Figure 1.1 – Site location plan



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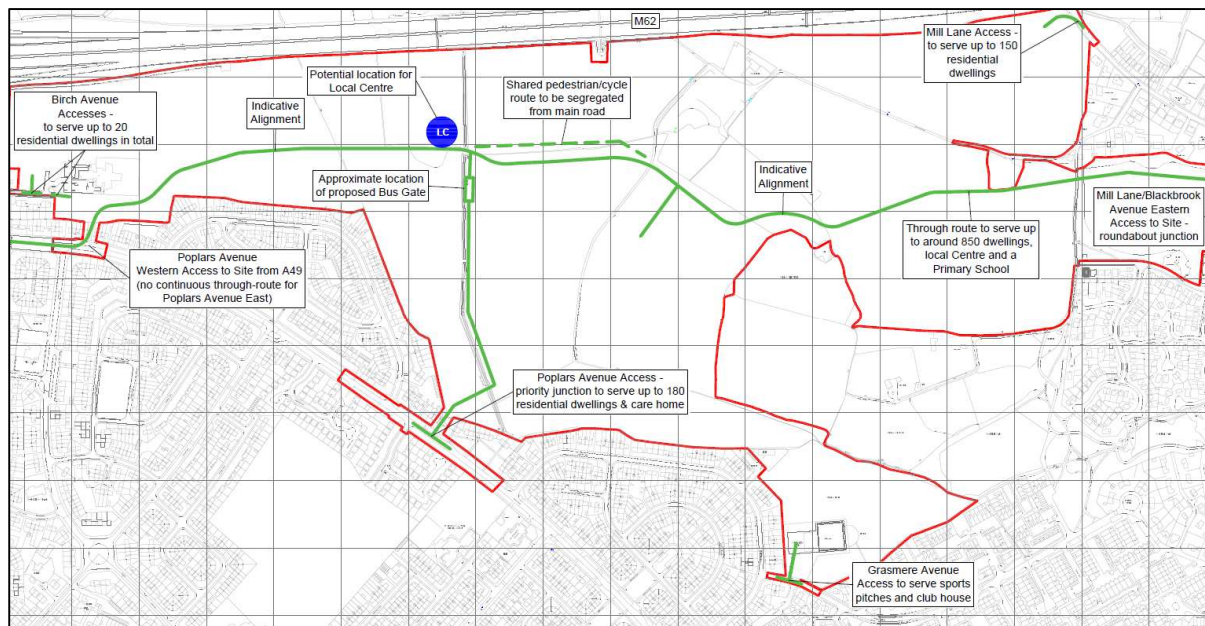
- 1.2 The through route has been proposed as a sensitivity test at the request of the Warrington Borough Council (WBC) highway officers. The through route scenario is to be tested in the Peel Hall SATURN model for a full development profile build-out in the future year of 2030.
- 1.3 The application is for an outline scheme, with access for determination. The Peel Hall development can be summarised as:
- i. Up to 1,200 residential dwellings.
 - ii. A 100 bedroom care home.
 - iii. An area of employment land comprising up to 7,500sqm Gross Floor Area (GFA) of light industrial units.
 - iv. A local centre comprising a food store of up to 2,000sqm GFA plus up to a further 600sqm GFA of local centre type facilities (such as A1-A5 and D1) plus a family pub and restaurant of up to 800sqm GFA.
 - v. Up to a two form entry primary school with a maximum of up to 420 pupils.

- vi. Relocating and upgrading of existing sports pitches to provide like-for-like replacement in terms of number of pitches and the provision of ancillary facilities, which are expected to include changing facilities for up to four teams at any one time and a function room that can be used for local community uses such as a mother and toddler group.
- 1.4 The alignment of the proposed all-vehicle through route and the preliminary proposed junction arrangement with the A49 is set out in **Section 2.0** of this report, which also includes details of the main site access junction to the east of the Peel Hall site from Blackbrook Avenue at Mill Lane. The Blackbrook Avenue junction is a three-arm roundabout as per the original Peel Hall access strategy (2016 application, updated to reflect Road Safety Audit comments).
- 1.5 The 2030 development trip rates are taken from Section 5.0 of the HTP Technical Note TN/19 (dated May 2017) for the purposes of this assessment, and are set out in **Section 3.0** of this report in relation to the vehicular trips forecast to be associated with the through route sensitivity test.

2.0 Through Route

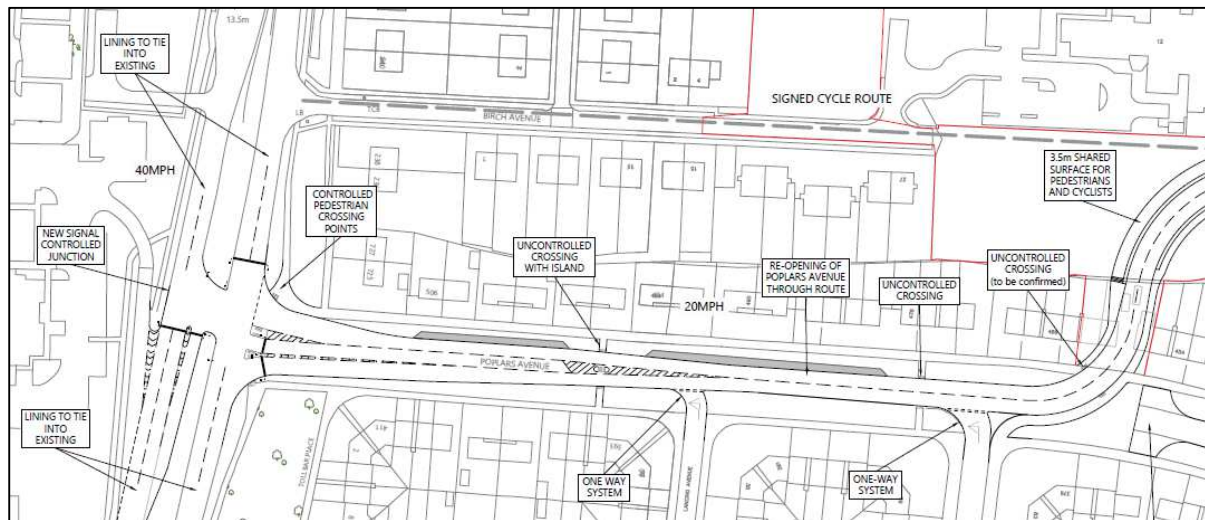
- 2.1 The through route will act as a local distributor road between the A49 in the east and Blackbrook Avenue through Mill Lane to the west. The alignment will pass through the centre of the site.
- 2.2 The carriageway will be 7.3 metres wide, with a 3.5 metres shared surface footway-cycleway to one side and a 2.0 metre footway to the other side. The through route is illustrated in **Figure 2.1** below and the full plan is contained at **Appendix 1**.

Figure 2.1 - Extract of indicative through route alignment



- 2.3 The through route will require a new signalised junction with the A49 and for Poplars Avenue to be reopened west of Cotswold Road (east of Lancing Avenue). This will enable traffic from the development to access the A49 without the need to travel through the existing residential area to the south of the site.
- 2.4 The access to the site from Poplars Avenue West will be a continuation of the Poplars Avenue link with the A49. An extract of this is shown in **Figure 2.2** below and the full plan is contained at **Appendix 2**.

Figure 2.2 - Extract of proposed alignment for through route at A49



- 2.5 The new signalised junction will enable development traffic to travel north or south on the A49 and for A49 traffic from the north and the south to access the development and travel through the development to the wider highway network east of the site (and vice versa) via the proposed Blackbrook Avenue site access.
- 2.6 To ensure that the existing residential areas surrounding the site are protected from development traffic the following measures are proposed:
- i. Lancing Avenue one way northbound with a left-turn out only manoeuvre allowed at poplars Avenue.
 - ii. Cotswold Road one way northbound with a left-turn out only manoeuvre allowed at poplars Avenue.
 - iii. Poplars Avenue stopped up west of Cotswold Avenue and the proposed access road.
 - iv. A bus gate provided to prevent traffic from the development travelling to and from the area of Poplars Avenue to the south (see **Figure 2.1**).
- 2.7 The Blackbrook Avenue access will be as per the original access strategy, with a three arm roundabout from Mill Lane (south) linking to the existing Blackbrook Avenue roundabout. An extract of this is shown in **Figure 2.3** below and the full plan is contained at **Appendix 3**.

Figure 2.3 - Extract of main site access at Blackbrook Avenue



3.0 Traffic Flows

Development Profile

3.1 The through route will carry local traffic as well as serve to facilitate access to the following elements of the development profile:

- i. Up to around 850 dwellings.
- ii. Local centre (comprising a food store of up to 2,000sqm GFA plus up to a further 600sqm GFA of local centre type facilities plus a family pub and restaurant of up to 800sqm GFA).
- iii. Up to two-form entry primary school.
- iv. An area of employment land comprising up to 7,500sqm GFA of light industrial units.

3.2 For reference, the remaining development profile is proposed to be served as follows:

- i. Up to 20 dwellings off Birch Avenue.
- ii. Up to 180 dwellings and a 100 bedroomed care home off Poplars Avenue (Central); with a bus gate to prevent general vehicular traffic travelling further north onto the through route.
- iii. Up to 150 dwellings off Mill Lane (north).
- iv. Sports pitches and community uses served from Grasmere Avenue.

Traffic Flows

3.3 Section 3.0 of Technical Note TN/19 (May 2017) is repeated below for ease of reference.

3.4 A summary of the peak hour trip rate data to be used and the resultant trips for each land use are set out below (taken from TN/02/A) as follows:

Table 3.1 – Residential Vehicular Trip Rate and Generation Summary

Development Traffic	AM Peak Hour		PM Peak Hour	
	Arrival	Departure	Arrival	Departure
85 th Percentile Trip Rates (per unit)	0.225	0.523	0.495	0.307
Residential Trips (1,200 units)	270	628	594	368

Table 3.2 – Care Home Vehicular Trip Rates and Attraction Summary

Development Traffic	AM Peak Hour		PM Peak Hour	
	Arrival	Departure	Arrival	Departure
Trip Rates (per bedroom)	0.068	0.068	0.083	0.113
Care Home Trips (100-beds)	7	7	8	8

Table 3.3 – Employment Vehicular Trip Rates and Attraction Summary

Development Traffic	AM Peak Hour		PM Peak Hour	
	Arrival	Departure	Arrival	Departure
Trip Rates (per 100sqm GFA)	0.919	0.514	0.260	0.621
Employment Trips (7,500sqm GFA)	69	39	20	47
HGV %Proportion	7%	10%	10%	4%

Table 3.4 – Food Store Vehicular Trip Rate and Attraction Summary

Development Traffic	AM Peak Hour		PM Peak Hour	
	Arrival	Departure	Arrival	Departure
Trip Rates (per 100sqm GFA)	4.615	3.030	9.056	9.550
Food Store Trips (2,000sqm GFA)	92	61	181	191

Table 3.5 – Local Centre Vehicular Trip Rate and Attraction Summary

Development Traffic	AM Peak Hour		PM Peak Hour	
	Arrival	Departure	Arrival	Departure
Trip Rates (per 100sqm GFA)	5.025	4.780	6.039	6.495
Local Centre Trips (600sqm GFA)	30	29	36	39

Table 3.6 – Primary School Vehicular Trip Rate and Attraction Summary

Development Traffic	AM Peak Hour		PM Peak Hour	
	Arrival	Departure	Arrival	Departure
Trip Rates (per pupil)	0.269	0.189	0.045	0.063
Primary School Trips (all 420 pupils)	113	79	19	27

- 3.5 The proposed development at Peel Hall will include the existing open space and local authority community buildings and sports area on the land off Windermere Avenue and Grasmere Avenue to the southeast of the site. This will be linked to the site and new sports pitches will be provided to replace those currently located on the HCA land to the east of the site, off Mill Lane.
- 3.6 The facilities will likely include full-sized grass pitches, a multi-use games area, junior grass pitches and changing facilities for up to four teams. The expectation is that these proposals will also include a clubhouse/function room for community use.
- 3.7 The sports pitches will predominantly be used at the weekends and it was agreed at the 2013 Public Inquiry (Appeal ref: APP/M0655/A/13/2192076) that this element of the development proposals would not need to be included within the weekday modelling. Furthermore there will be an offset in trip generation from the current on-site uses at the existing location and from the sports pitches on the HCA land, which are to be relocated.
- 3.5 It is likely that the proposed clubhouse facilities will be used by the local community, for example, by a mother and toddler group, and also that the sports pitches may be used during the evening after 1800 hours. Therefore it was agreed at the 2013 Inquiry that the clubhouse facilities for local community use may attract up to 15 car movements over two-hour time slots during the day between the hours of 0900 and 1800. As this is cannot be accurately modelled within our one hour peak AM and PM time periods, the 15 movements have been concentrated into each peak hour. This is set out on **Table 3.7** below.

Table 3.7 – Sports Pitches and Ancillary Facilities Vehicular Trip Rate and Attraction Summary

Development Traffic	AM Peak Hour		PM Peak Hour	
	Arrival	Departure	Arrival	Departure
Community Use Trips	10	5	7	8

- 3.8 The size of the family pub was changed in April 2016 as the scheme evolved, reducing to 800sqm GFA. The change in floor area was set out in Technical Note TN/12 and the resulting trips are represented in **Table 3.8** below.

Table 3.8 – Family Pub/Restaurant Vehicular Trip Rate and Attraction Summary

Development Traffic	AM Peak Hour		PM Peak Hour	
	Arrival	Departure	Arrival	Departure
Trip Rates (per 100sqm GFA)	-	-	2.847	1.845
Family Pub/Restaurant Trips (800sqm GFA)	-	-	23	15

3.9 In summary, the vehicle trips associated with each land use are tabulated below for ease of reference in **Table 3.9**. Please note that no discount has been applied to these figures.

Table 3.9 – Peel Hall Vehicular Trip Generation Summary

Development Traffic	AM Peak Hour		PM Peak Hour	
	Arrival	Departure	Arrival	Departure
Residential Trips	270	628	594	368
Care Home Trips	7	7	8	8
Employment Trips*	69	39	20	47
Food Store Trips	92	61	181	191
Local Centre Shop Trips	30	29	36	39
Primary School Trips	113	79	19	27
Community Uses	10	5	7	8
Family Pub/Restaurant Trips	-	-	23	15
Total Trips	591	848	888	703

* See Table 3.3 for HGV proportion of peak hour traffic

2030 Traffic Flows

- 3.6 It has been agreed that the through route is to be tested in the future year of 2030.
- 3.7 The development trips set out in **Table 3.9** above are to be discounted in line with TN/19 (Section 5.0) as follows for the AM and PM peak hours:
- i. Residential 0%
 - ii. Care Home 0%
 - iii. Employment 0%
 - iv. Food Store 100% (70% discount and 30% pass-by)
 - v. Local Centre 100%
 - vi. Family Pub/Restaurant 0%
 - vii. Primary School 50%
 - viii. Community uses 0%
- 3.8 These discounts have been applied to the figures contained in **Table 3.9** and a revised summary of the proposed Peel Hall development trips for 2030 with a through route is set out on **Table 3.10** below for the relevant access locations.

Table 3.10 – Summary of 2030 Peak Hour Vehicle Trip Numbers at Each Access Location (with discounts applied)

Access	Quantum of Development	AM Arrival	AM Departure	PM Arrival	PM Departure
Poplars Avenue (Central)	180 dwellings	41	94	89	55
	care home	7	7	8	8
	<i>Total</i>	<i>48</i>	<i>101</i>	<i>97</i>	<i>63</i>
Poplars Avenue (West) through to A49 & Mill Lane/Blackbrook Avenue	food store*	28	18	54	57
	local shops	0	0	0	0
	family pub	0	0	23	15
	850 dwellings	191	445	421	261
	primary school	57	40	10	14
	employment land	69	39	20	47
	<i>Total</i>	<i>345</i>	<i>542</i>	<i>528</i>	<i>394</i>
Mill Lane	150 dwellings	34	79	74	46
Birch Avenue	20 dwellings	5	11	10	6
Grasmere Avenue	community uses	10	5	7	8
Total		442	738	716	517

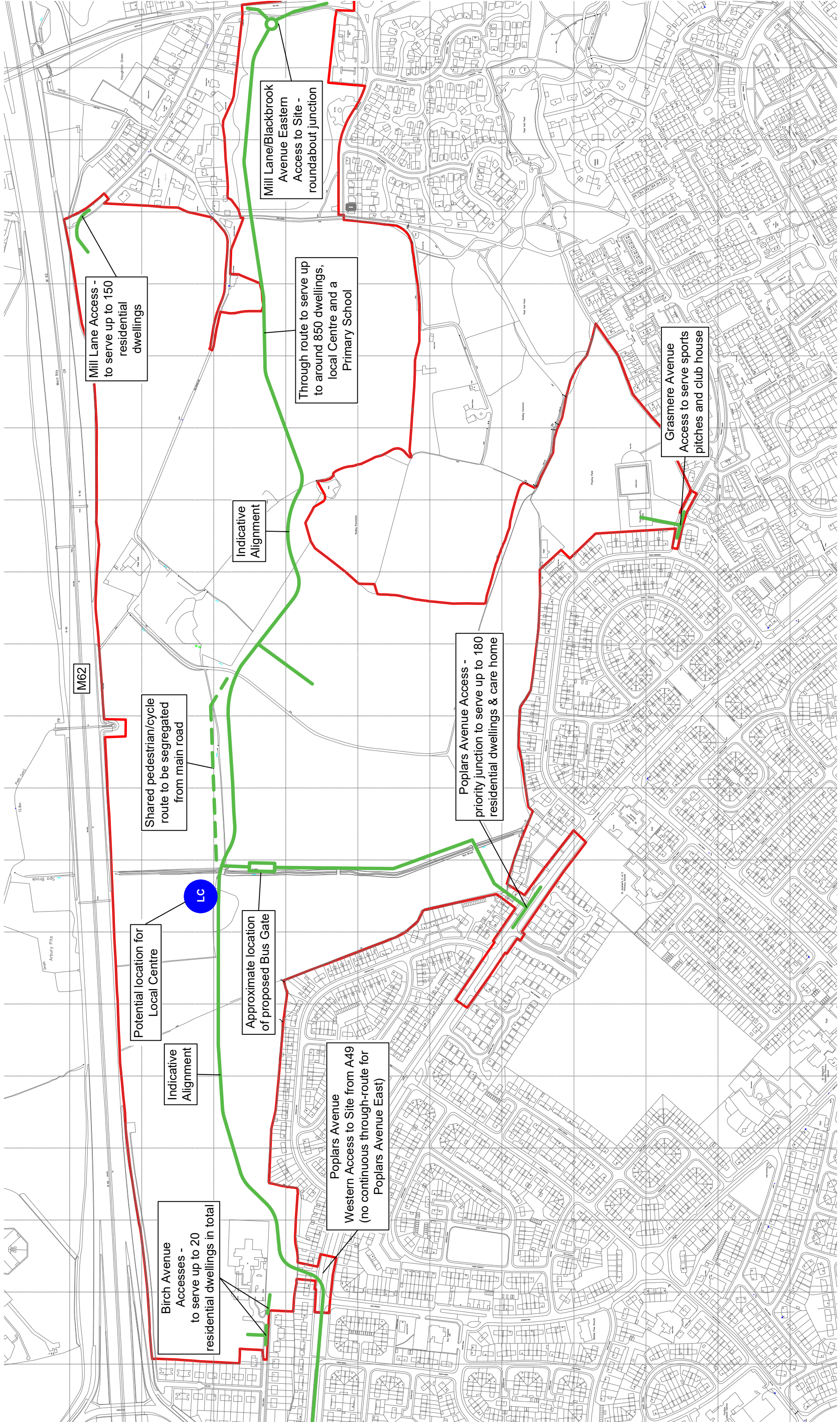
* pass-by trips only

3.9 The through route scenario test for the Peel Hall SATURN model can be carried out with the above vehicle trips and loading.

3.10 It can be seen from **Table 3.10** that there will be up to around an additional 1,200 vehicle trips on the local highway network in each of the weekday peak hours as a result of the Peel Hall development.

Appendix 1

Indicative Through Route Alignment



Mill Lane Access -
to serve up to 150
residential
dwellings

Mill Lane/Blackbrook
Avenue Eastern
Access to Site -
roundabout junction

Through route to serve up
to around 850 dwellings,
to a local Centre and a
Primary School

Grasmere Avenue
Access to serve sports
pitches and club house

Poplars Avenue Access -
priority junction to serve up to 180
residential dwellings & care home

Shared pedestrian/cycle
route to be segregated
from main road

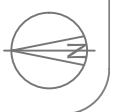
Potential location for
Local Centre

Approximate location
of proposed Bus Gate

Poplars Avenue
Western Access to Site from A49
(no continuous through-route for
Poplars Avenue East)

Birch Avenue
Accesses -
to serve up to 20
residential dwellings in total

NOTES:
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PROJECT: PEEL HALL, WARRINGTON
CLIENT: SATNAM MILLENNIUM LTD

TITLE: INDICATIVE THROUGH ROUTE AND ACCESS POINTS
PROJECT REFERENCE: 1107
DRAWING NUMBER: 43
SCALE: Not to scale

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		FB	DT	01/07/17

Appendix 2

Peel Hall Proposed Alignment for Through Route to A49

NOTES:

Drawing based on Appletons Opportunities & Constraints plan 1820_21 dated 21/10/14.

PRELIMINARY

KEY

- New on-street parking bays
- Red line boundary

ISSUE	REASON FOR REVISION	DATE

PROJECT:

PEEL HALL, WARRINGTON

CLIENT:

SATNAM MILLENNIUM LTD

PROJECT REFERENCE:
1107

DRAWING NUMBER:
52/A

SCALE:
1:1,250 @ A3

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TITLE:

PEEL HALL PROPOSED ALIGNMENT FOR THROUGH ROUTE TO A49

DATE:

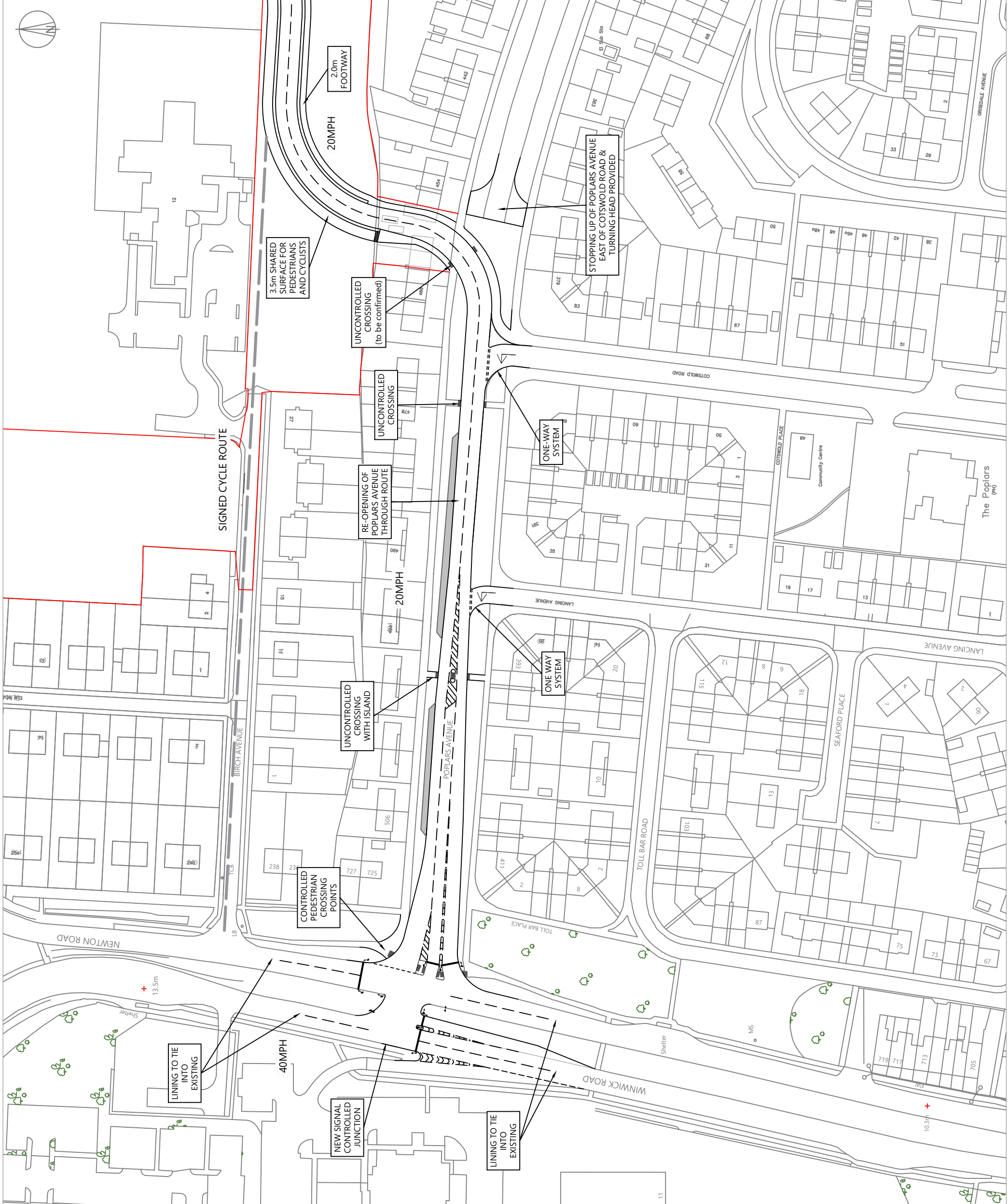
13/06/17

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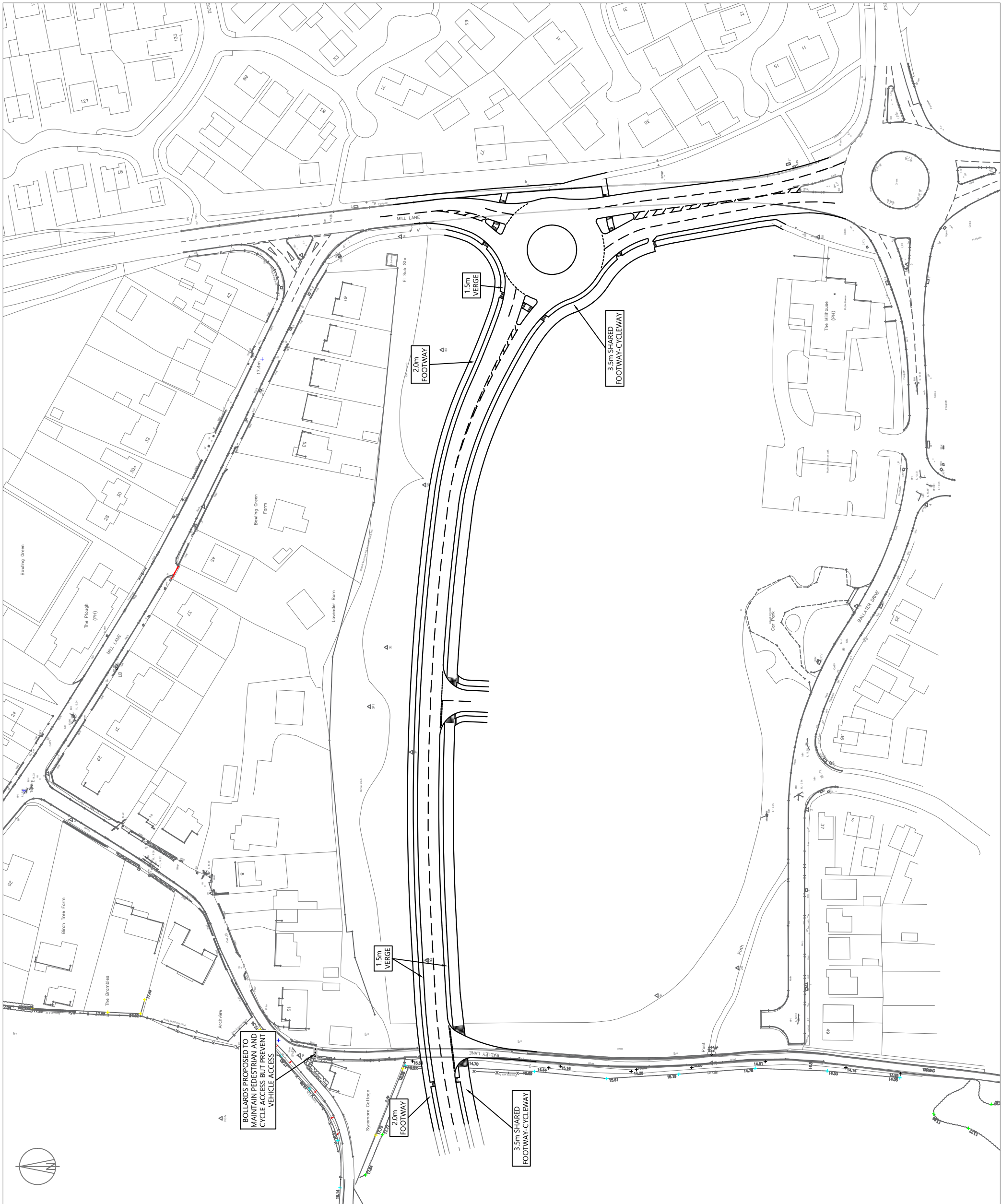
CHECKED:

DT



Appendix 3

Proposed Main Site Access at Blackbrook Avenue



NOTES: Drawing based on Powers & Tiltman topographical survey 6297/01 dated 25/07/11 and Geomatic Surveys Ltd topographical survey 01532/01 dated 27/07/15. © Crown copyright and database rights 2015 OS Licence 100035409.	ISSUE	REASON FOR REVISION	DATE

PROJECT: PEEL HALL, WARRINGTON	CLIENT: SATNAM MILLENNIUM LTD	PROJECT REFERENCE: 1107	DRAWING NUMBER: 10/L	SCALE: 1:1,250 @ A3
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HighgateTransportation www.highgatetransportation.co.uk Box 13, 42 Triangle West Park Street, Bristol BS8 1ES 07973 375 937 / 07595 892 217 © Highgate Transportation Limited	TITLE: PROPOSED MAIN SITE ACCESS AT BLACKBROOK AVENUE	DATE: 03/02/17	DRAWN BY: FB	CHECKED: DT
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Appendix D Technical Note HTP/1107/TN20

Highgate *Transportation*

**Land at Peel Hall, Warrington
Technical Note on Traffic Growth**

(HTp/1107/TN/20)

May 2017

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Figures

Figure 2.1	Census 2011 Data, Warrington 006
Figure 2.2	Census 2011 Data, Warrington Super Output Areas

Appendices

Appendix 1	TEMPRO Screen Captures
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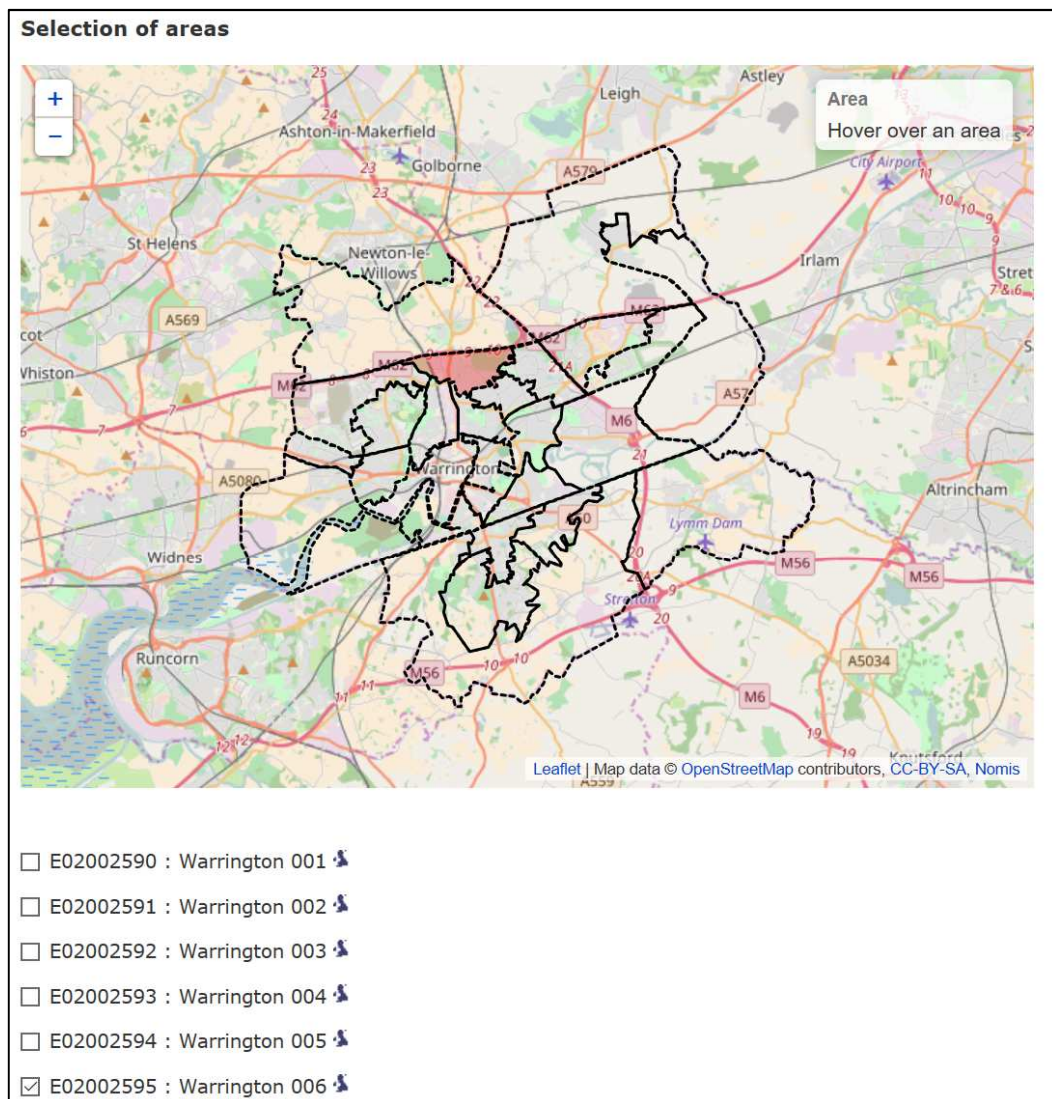
1.0 Introduction

- 1.1 This Technical Note has been prepared by Highgate Transportation Limited further to Technical Note TN/07/Addendum on Traffic Growth (October 2016), to update the growth rates used for modelling the traffic impact of the proposed Peel Hall development in the future years of 2025 and 2030.
- 1.2 Previously TEMPRO 6 (version 6.2) was used. However, now that the modelling is being revised the opportunity has been taken to use TEMPRO 7. The latest version currently available is version 7.2, which has been used for this exercise.
- 1.3 Technical Note TN/07 on Growth Rates dated May 2016 set out that there was an agreement to use Motorway growth rates for the modelling. It should be noted that this represents an over-estimate for the traffic growth over much of the model network because it is the highest growth factor from this dataset in the TEMPRO programme; it will nevertheless provide confidence in the modelling results as well as account for trips from the OMEGA development.

2.0 Growth Rates

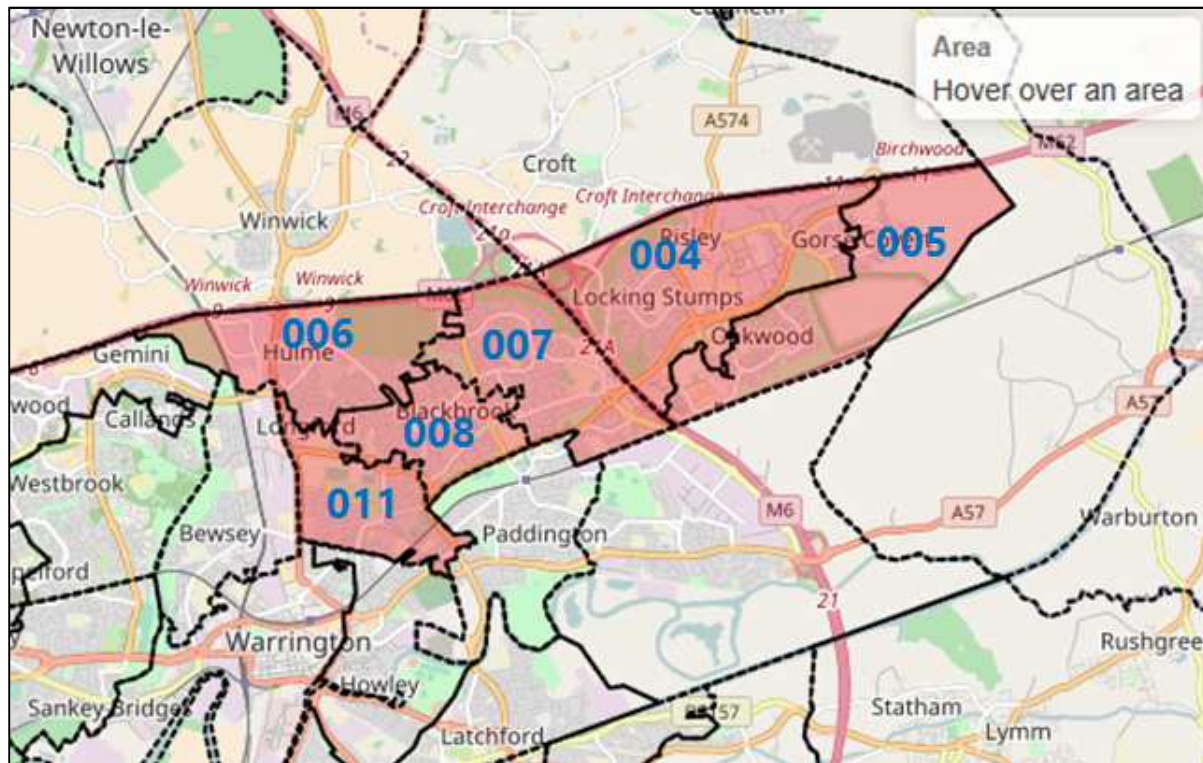
- 2.1 The TEMPRO database version 7.2 has been reviewed for the appropriate growth factors to apply to the 2015 base model flows to forecast traffic in the future years of 2025 and 2030.
- 2.2 TEMPRO version 7 uses census 2011 Super Output Areas (mid layer) data. The Peel Hall site is located in the Hulme area, as indicated in **Figure 2.1** below, which is Warrington 006 (E02002595), see below.

Figure 2.1 – Census 2011 Data, Warrington 006



- 2.3 The other areas classified by the census data that are covered within the area-wide modelling for the Peel Hall site are illustratively shown in **Figure 2.2** below for ease of reference.

Figure 2.2 – Census 2011 Data, Warrington Super Output Areas



2.4 The census reference numbers for the areas shown above are as follows:

- i. 007, E02002596
- ii. 004, E02002593
- iii. 005, E02002594
- iv. 008, E02002597
- v. 011, E02002600

2.5 Therefore the Warrington 006 are will be selected for calculating the growth rate for the Peel Hall assessments.

2.6 Using Urban Motorway roads to forecast 2025 and 2030 traffic growth the resultant growth factors are set out in **Table 2.1** below. The TEMPRO data is contained in **Appendix 1** for reference.

Table 2.1 – Growth rates

	AM	PM
2015-2025	1.1749	1.1652
2015-2030	1.2211	1.2098

2.7 For reference, the above growth rates are higher than any of the other areas also highlighted in **Figure 2.1** and **paragraph 2.4** above, as set out below for reference (for 2015-2030):

- i. Selecting 004 gives growth rates of AM 1.1921, PM 1.1798.
- ii. Selecting 005 gives growth rates of AM 1.1886, PM 1.1842.
- iii. Selecting 007 gives growth rates of AM 1.1693, PM 1.1536.
- iv. Selecting 008 gives growth rates of AM 1.2010, PM 1.1986.
- v. Selecting 011 gives growth rates of AM 1.1882, PM 1.1857.
- vi. Selecting Warrington (Authority) gives AM 1.1838, PM 1.1765.

2.8 Therefore it is considered that the use of the Warrington 006 growth rates are appropriate for the Peel Hall area-wide modelling.

Employment

2.9 As previously set out in Technical Note TN/07/Addendum on Traffic Growth (October 2016) and agreed with highway officers, two of the employment sites identified as committed developments; Calver Park (ref: 2015/26685 and 2013/22533) and Birchwood Park (ref: 2015/26044, 214/23358 and 2008/12744), are included in the Local Plan.

2.10 Therefore it can reasonably be assumed that an estimation of the volume of trips these developments would generate will have been provided by Warrington and feed into TEMPRO, and as such these committed developments have not been added again in the future years.

2.11 Furthermore, highway officers have confirmed that the Winwick B&Q proposals can be excluded from the list of committed developments as it is agreed that any additional traffic is insignificant.

2.12 In summary, the committed developments added to the Peel Hall modelling can be summarised as follows:

- i. Land at Benson Road, Birchwood (ref: 2015/26220).
- ii. Birchwood Shopping Centre (ref: 2015/25880).

1107 Peel Hall
 TEMPRO 7.2
 2015-2025

Motorway Growth

Warrington 006 – AM Peak Hour

Results

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

Area Description	Name	Origin	All Purposes	Destination
Level	Warrington	1.0158		1.0099
Authority	Warrington 006	<i>1.1</i>		<i>1.1</i>

NTM Traffic Growth Calculations

1: Select NTM Dataset:

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

2: Select Areas to make up the geographic region:

- Warrington
- Warrington 006 (E02002995)

3: Select area type:

- Urban
- Rural
- All

4: Select road type:

- Motorway
- Trunk
- Principal
- Minor
- All

5: Select which area it serves:

- Region
- England

Calculate the adjusted local growth figure

Results

Level	Area	Local Growth Figure
Authority	Warrington	1.1453
E02002995	Warrington 006	1.1749

Warrington 006 – PM Peak Hour

Results

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

Area Description	Name	Origin	All Purposes	Destination
Level	Warrington	1.0775		1.0547
Authority	Warrington 006	<i>1.0915</i>		<i>1.0804</i>

NTM Traffic Growth Calculations

1: Select NTM Dataset:

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

2: Select Areas to make up the geographic region:

- Warrington
- Warrington 006 (E02002995)

3: Select area type:

- Urban
- Rural
- All

4: Select road type:

- Motorway
- Trunk
- Principal
- Minor
- All

5: Select which area it serves:

- Region
- England

Calculate the adjusted local growth figure

Results

Level	Area	Local Growth Figure
Authority	Warrington	1.1387
E02002995	Warrington 006	1.1652

1107 Peel Hall
 TEMPRO 7.2
 2015-2025

AM Peak Hour – displaying years of 2015-2025

Results

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

NTM Traffic Growth Calculations

1: Select NTM Dataset:

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

2. Select Areas to make up the geographic region:

- Warrington
- Warrington 006 (E02002595)

3. Select area type:

- Urban
- Rural
- All

4. Select road type:

- Motorway
- Trunk
- Principal
- Minor
- All

5. Select which area it serves:

- Region
- England

Calculate the adjusted local growth figure

Results

Level	Area	Local Growth Figure
Authority	Warrington	1.1453
E02002595	Warrington 006	1.1749

Appendix 1

TEMPRO Screen Capture

1107 Peel Hall
 TEMPRO 7.2
 2015-2030

Motorway Growth

Warrington 006 – AM Peak Hour

Results

NTM Traffic Growth Calculations

1: Select NTM Dataset:

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

2: Select Areas to make up the geographic region:
 Warrington
 Warrington 006 (E02002595)

3: Select area type:
 Urban
 Rural
 All

4: Select road type:
 Motorway
 Trunk
 Principal
 Minor
 All

5: Select which area it serves:
 Region
 England

Results

Level	Area	Local Growth Figure
Authority	Warrington	1.1838
E02002595	Warrington 006	1.2211

Warrington 006 – PM Peak Hour

Results

NTM Traffic Growth Calculations

1: Select NTM Dataset:

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

2: Select Areas to make up the geographic region:
 Warrington
 Warrington 006 (E02002595)

3: Select area type:
 Urban
 Rural
 All

4: Select road type:
 Motorway
 Trunk
 Principal
 Minor
 All

5: Select which area it serves:
 Region
 England

Results

Level	Area	Local Growth Figure
Authority	Warrington	1.1765
E02002595	Warrington 006	1.2098

1107 Peel Hall
 TEMPRO 7.2
 2015-2030

AM Peak Hour – displaying years of 2015-2030

The screenshot displays the TEMPRO 7.2 software interface. The main window is titled 'Results' and shows a table of traffic growth data. A 'Results' window is open in the foreground, showing the 'NTM Traffic Growth Calculations' dialog box. The dialog box has five sections: 1. Select NTH Dataset, 2. Select Areas to make up the geographic region, 3. Select area type, 4. Select road type, and 5. Select which area it serves. Below the dialog box, a 'Results' table is visible.

Level	Area	Local Growth Figure
Authority	Warrington	1.838
E02002595	Warrington 006	1.221

Appendix E Technical Note of Trip Distribution

Draft Technical Note

Project:	Peel Hall SATURN Model Assessment	Job No:	60337714
Subject:	Proposed Trip Distribution for Future Year Development Trips		
Prepared by:	Alistair Johnson	Date:	06/09/2017
Checked by:	Chris Peachey	Date:	06/09/2017
Approved by:	Catherine Zoeflig	Date:	06/09/2017

Introduction

As part of a commission to produce a package of SATURN models to support the planning application for Peel Hall, Warrington, AECOM have developed a proposed trip distribution for the development.

This Technical Note details the exercise, and provides an evidence base for Highgate Transportation (working on behalf of Satnam Developments Ltd) to enable the proposed distribution to be agreed with Warrington Borough Council (WBC).

The volume of trips to and from the proposed development for each modelled time period was provided by Highgate Transportation in their Technical Note listed below:

- HTp/1107/TN/19 – Peel Hall Vehicular Trips

Methodology

The distribution of trips was calculated at the zoning level (**Appendix A, Figure 2**) derived from the Warrington Multi Modal Transport Model (WMMTM).

Development trips were grouped into three categories:

- Residential;
- Employment; and
- Other.

For each trip purpose, existing zones, of similar land uses within the modelled area were selected to act as a proxy for the distribution of trips to and from the new development. The zones used were:

- For residential, zones 21 (Callands) and 69 (Hulme);
- For employment, zone 226 (Winwick Quay); and
- For other developments, zone 152 (Warrington Collegiate).

The proposed land uses within the Peel Hall development were each then categorised within one of the trip types identified above; these are presented in **Table 1** overleaf.

Table 1, Trip Type for each Land Use

Trip Type	Proposed Land Use
Employment	Employment
Residential	150 Dwellings
	700 Dwellings
	330 Dwellings
	20 Dwellings
Other	Primary School
	Food Store
	Local Centre
	Family Pub
	100-Bed Care Home
	Sports and Community Facilities

The 2015 SATURN matrices were originally developed from the WMMTM and were updated utilising new traffic counts and matrix estimation techniques within VISUM (TFlowFuzzy) and ultimately SATURN ME2 module.

Once the matrices were validated in the 2015 SATURN models, using the three aforementioned zones as proxies, the proportion of trips from and too the new development within the modelled area, and the proportion of trips and directions of travel from and too zones outside the modelled area were calculated for the AM and PM peak periods on the basis of the updated 2015 SATURN trip matrices proportions.

These proportions were applied to the trip numbers supplied by Highgate Transportation to produce origin-destination matrices of development trips for both AM and PM peak time periods.

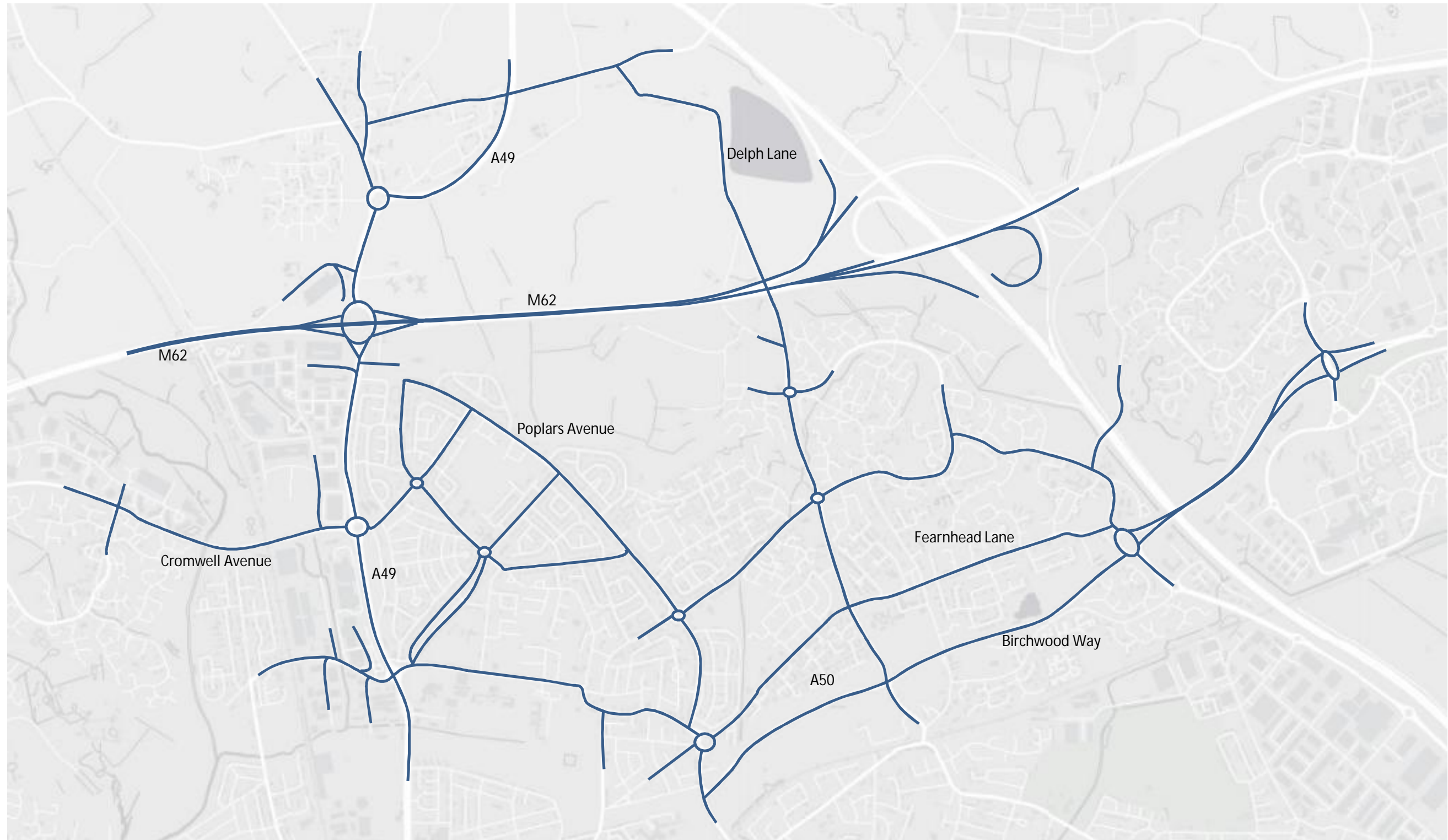
The final trip distributions split by trip type and all together are presented in **Appendix B, Figures 1 – 16**.

Appendix C, Figures 1 – 16 present the volume of trips split by land use and total trips for each model time period.

As per Highgate Transportation TN/19 – “Peel Hall Vehicular Trips”, the proposed development will benefit from six entrance and exit points to the network. The trip distribution (Production and Attraction Factors) presented in **Appendix B, Figure 1 - 16** will be applied to the appropriate development for each of the three trip purposes, and loaded into the SATURN model for it to assign the traffic on the model network via the six proposed access points.

Appendix A

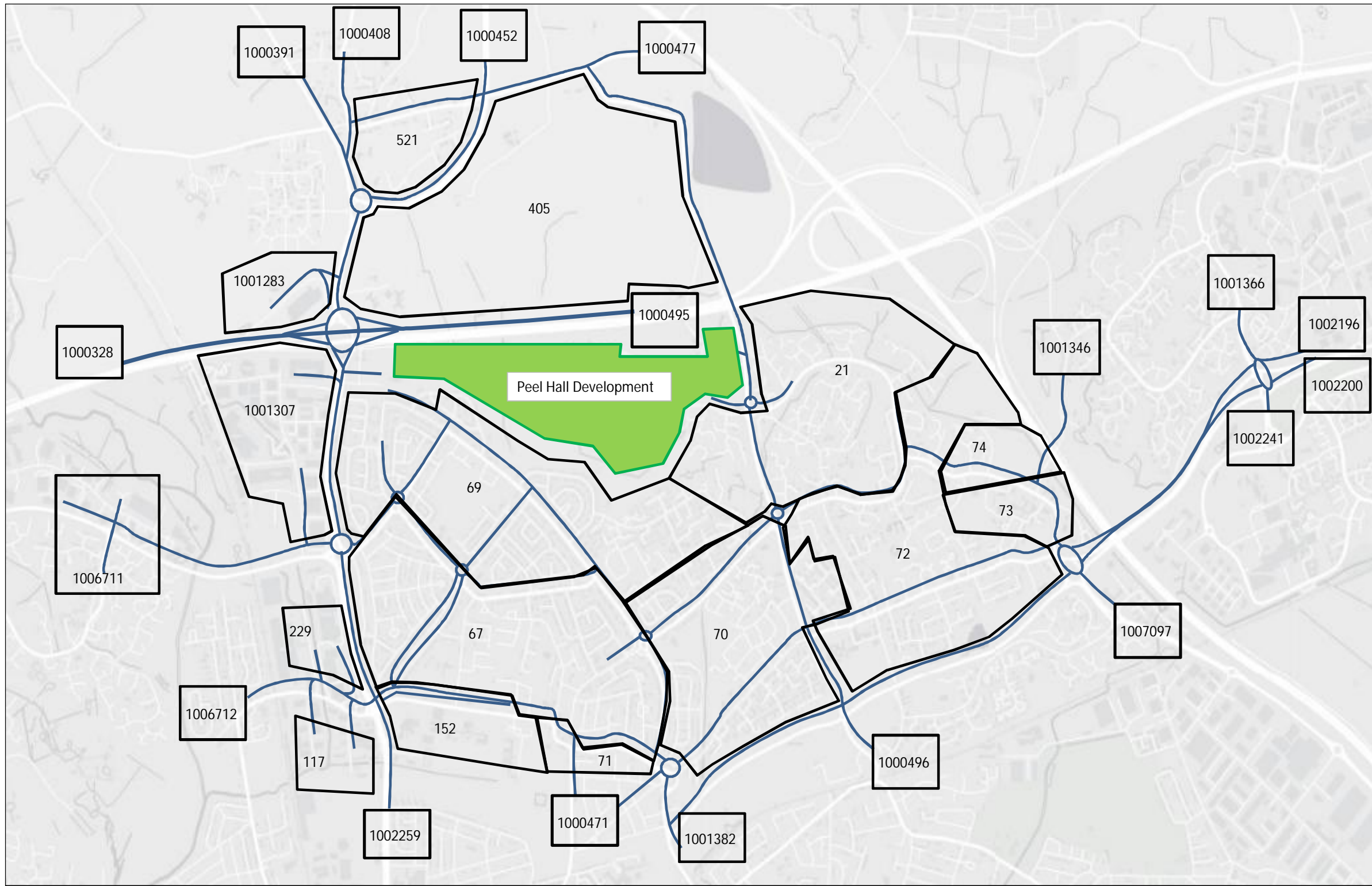
Model Network and Zone Structure



Peel Hall SATURN Model - Trip
Distribution

Appendix A, Figure 1, Model Network





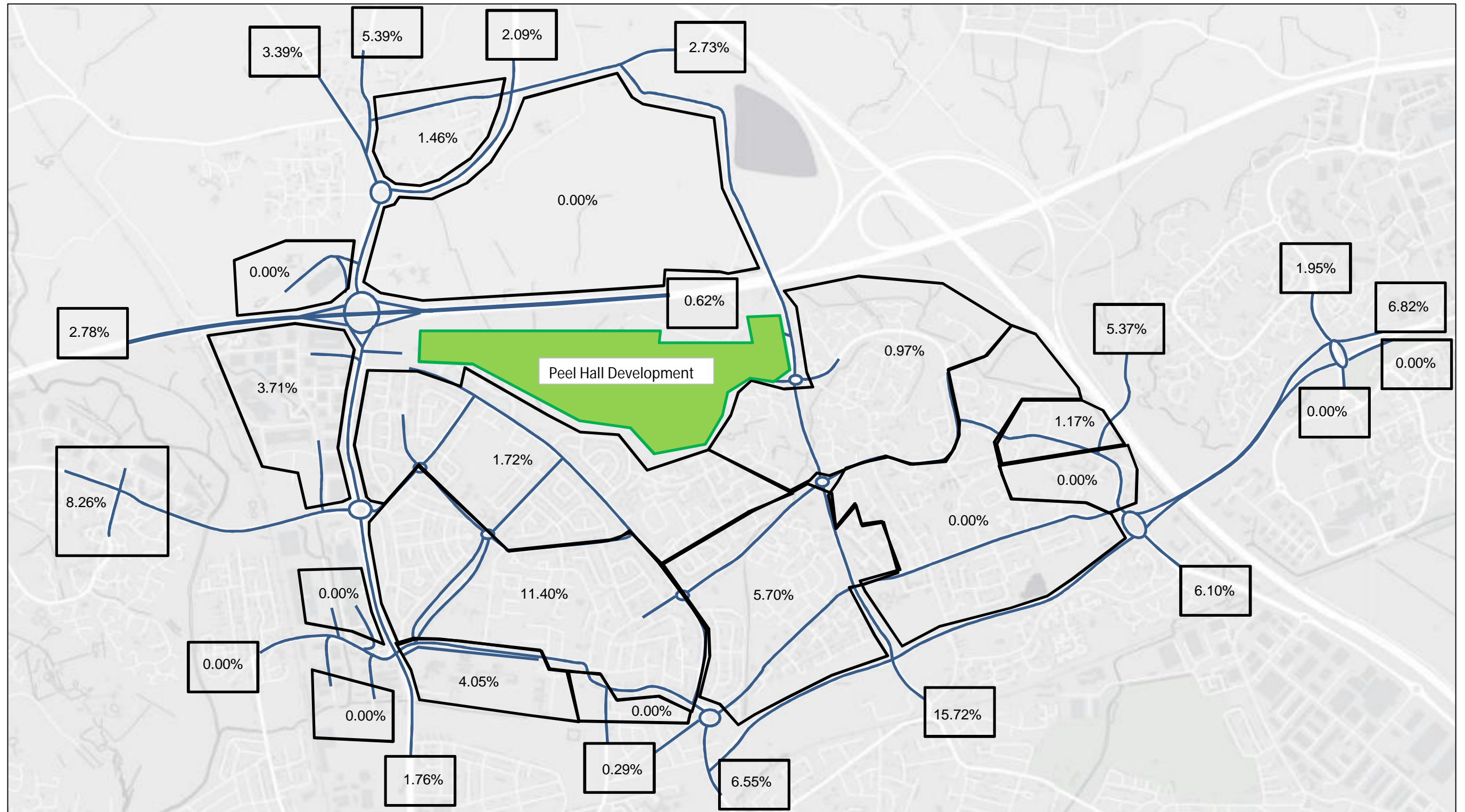
Peel Hall SATURN Model - Trip Distribution

Appendix A, Figure 2, Zone Plan



Appendix B

Proposed Trip Distribution Percentages

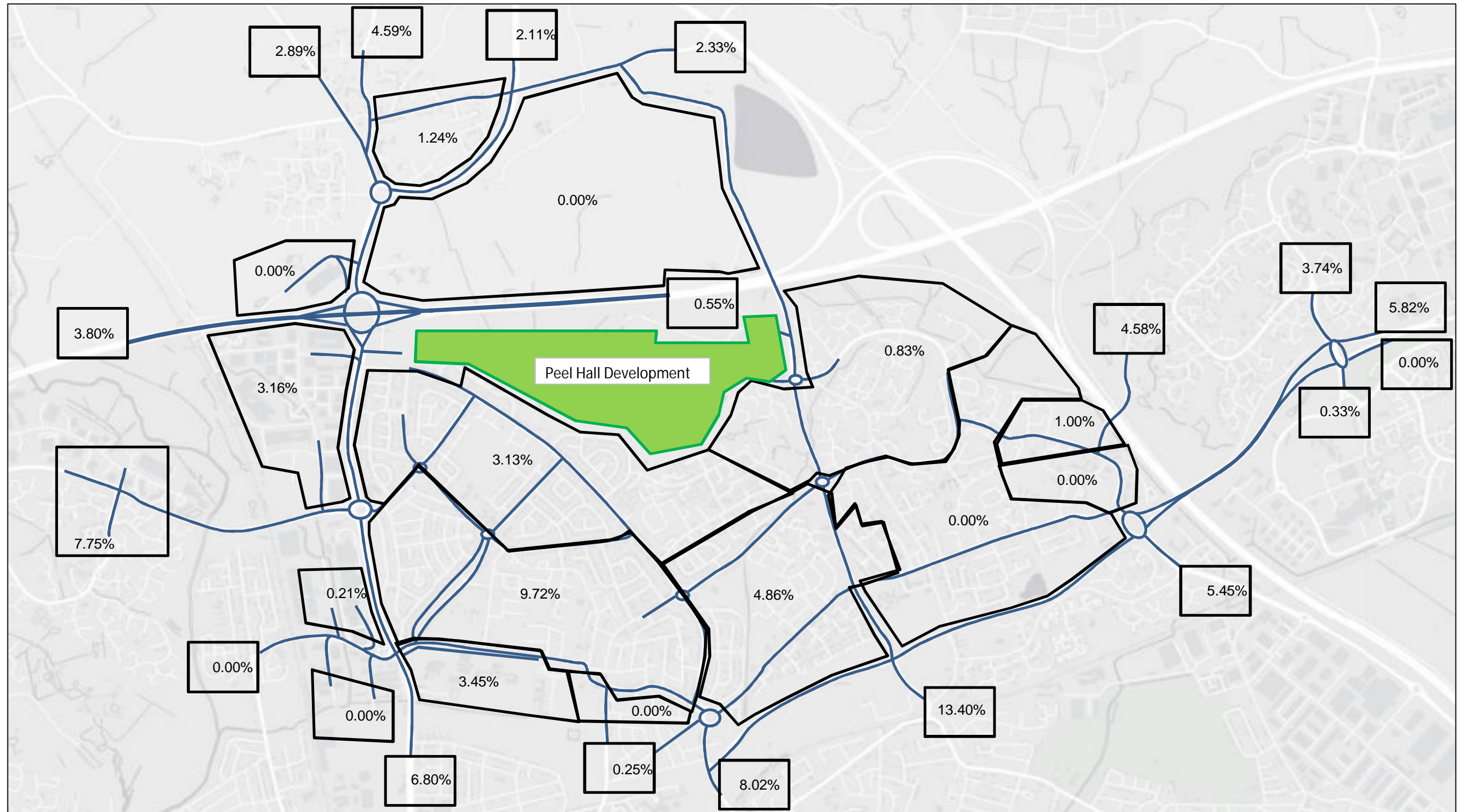


** Due to rounding to nearest number within Excel, percentages presented might not fully add to 100%

Peel Hall SATURN Model - Trip Distribution

Appendix B, Figure 1, AM Percentage Distribution for Residential Trips from Peel Hall Development



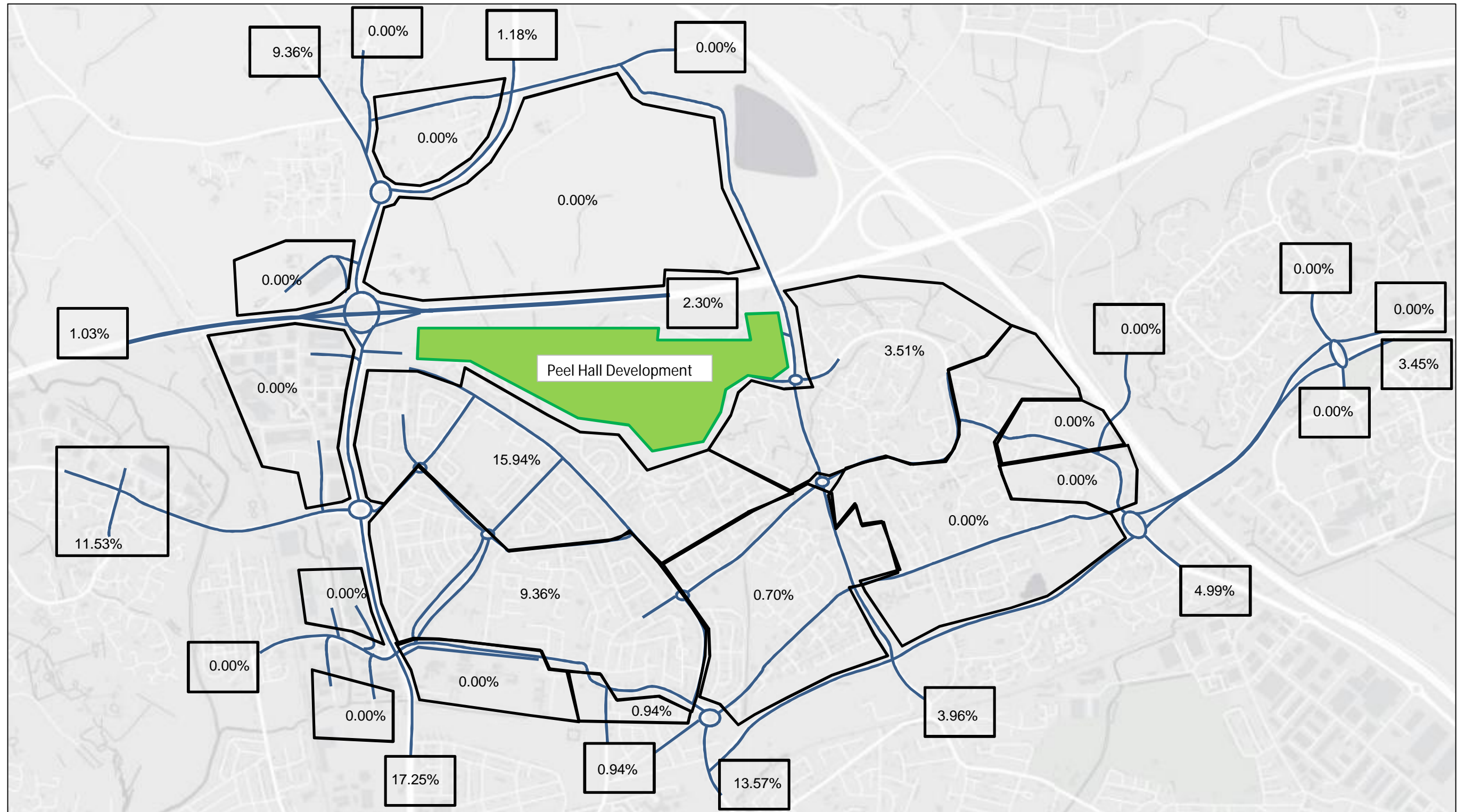


** Due to rounding to nearest number within Excel, percentages presented might not fully add to 100%

Peel Hall SATURN Model - Trip Distribution

Appendix B, Figure 4, AM Percentage Distribution for All Trips from Peel Hall Development



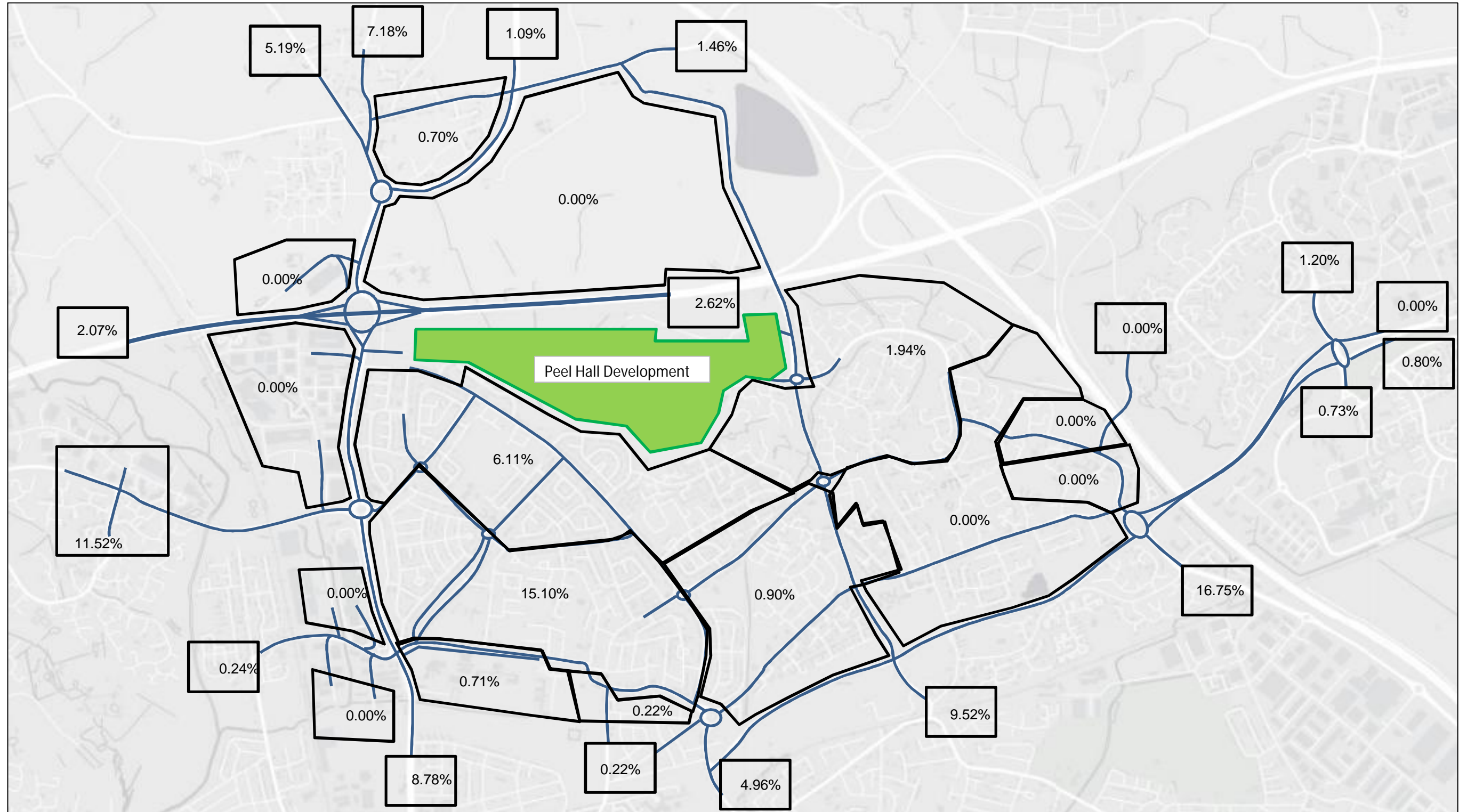


** Due to rounding to nearest number within Excel, percentages presented might not fully add to 100%

Peel Hall SATURN Model - Trip Distribution

Appendix B, Figure 7, AM Percentage Distribution for Other Trips to Peel Hall Development



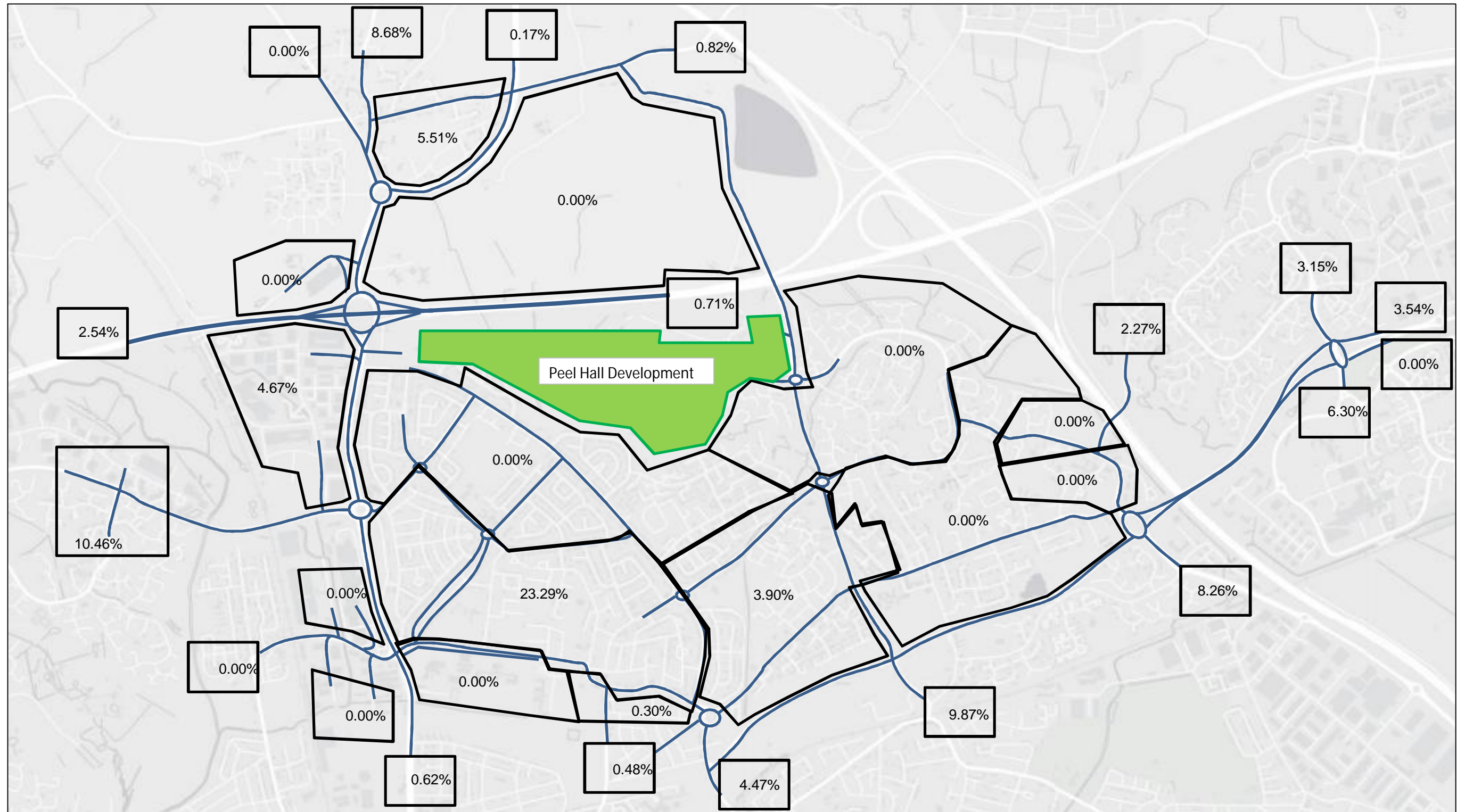


** Due to rounding to nearest number within Excel, percentages presented might not fully add to 100%

Peel Hall SATURN Model - Trip Distribution

Appendix B, Figure 8, AM Percentage Distribution for All Trips to Peel Hall Development



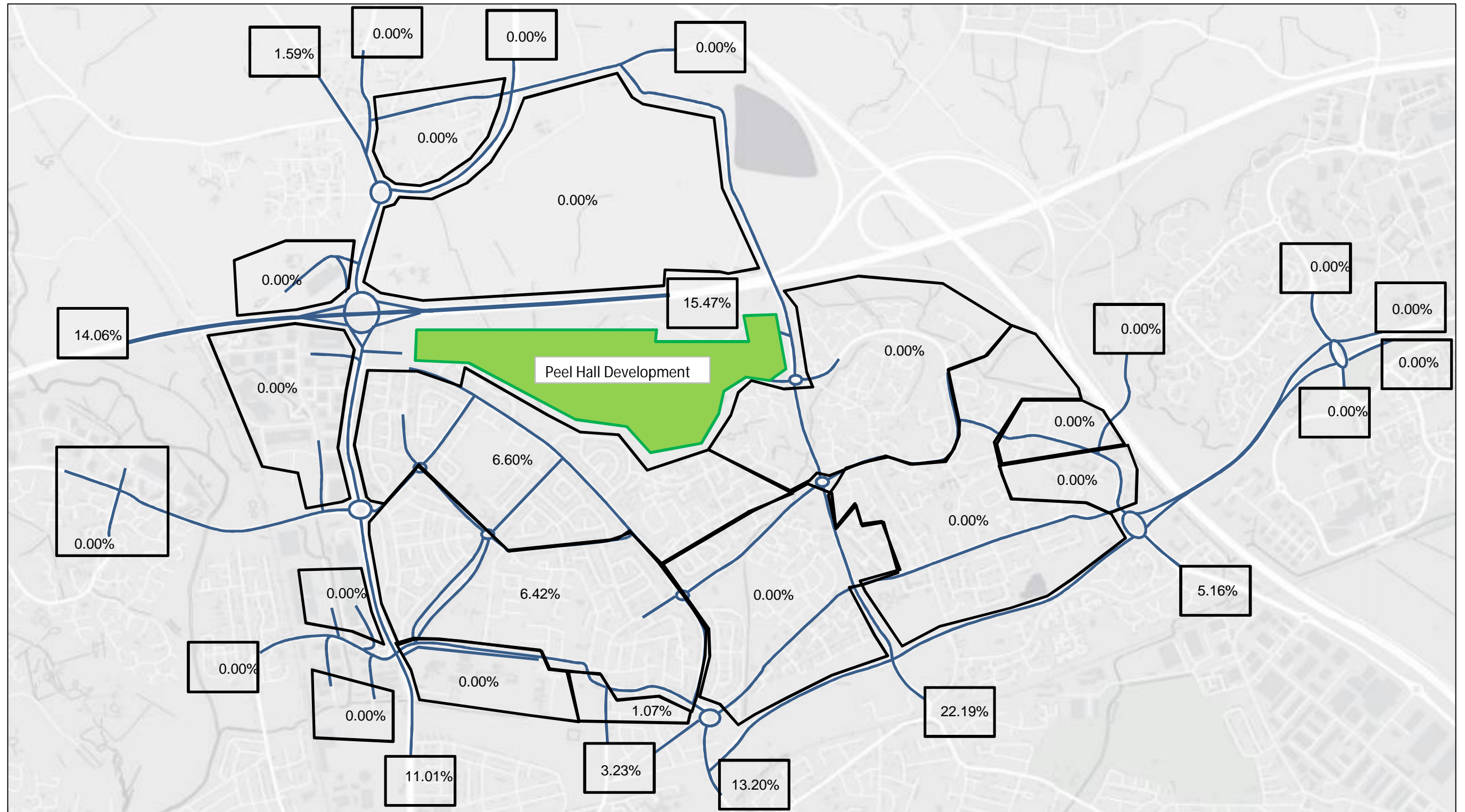


** Due to rounding to nearest number within Excel, percentages presented might not fully add to 100%

Peel Hall SATURN Model - Trip Distribution

Appendix B, Figure 9, PM Percentage Distribution for Residential Trips from Peel Hall Development



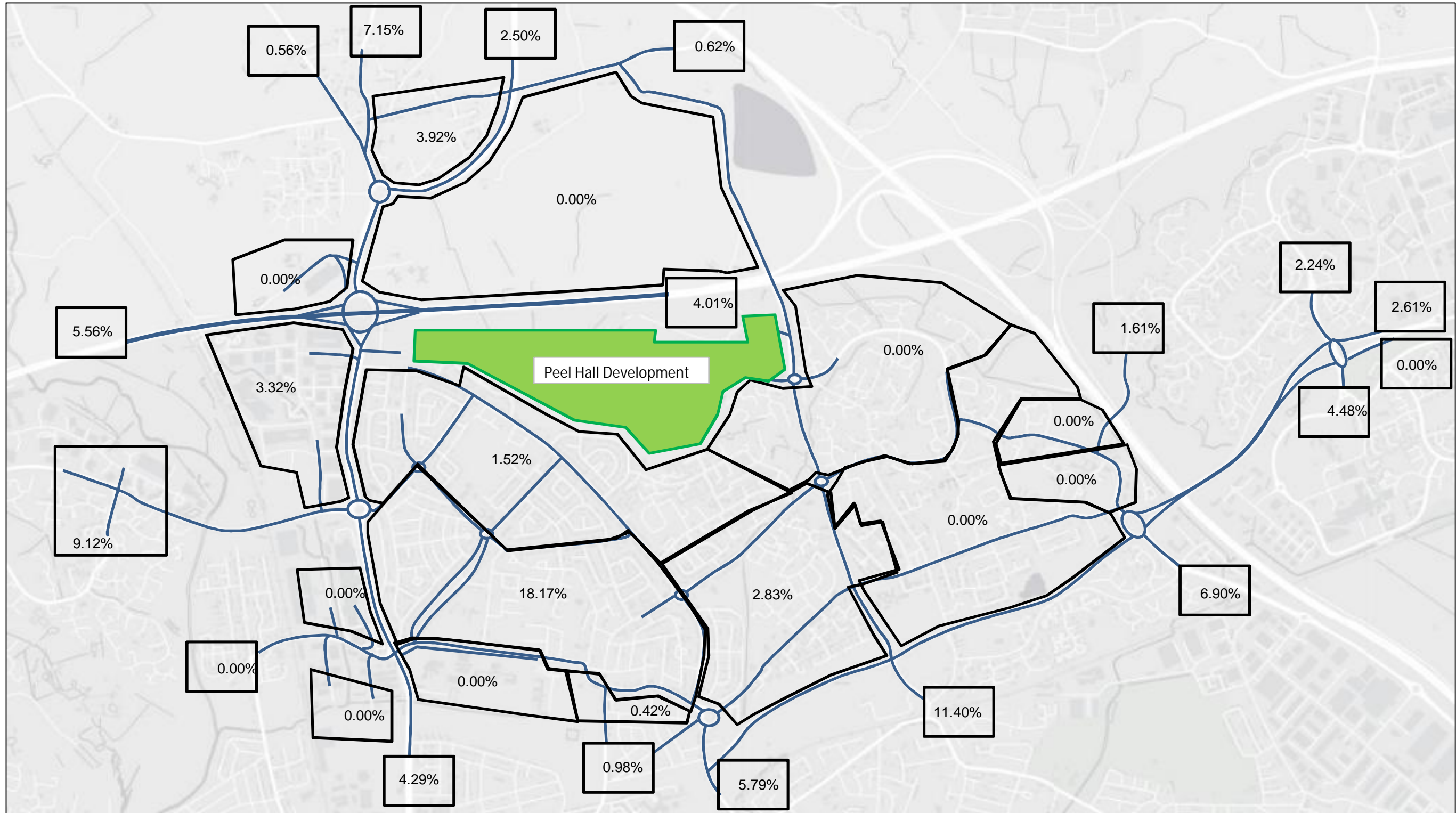


** Due to rounding to nearest number within Excel, percentages presented might not fully add to 100%

Peel Hall SATURN Model - Trip Distribution

Appendix B, Figure 11, PM Percentage Distribution for Other Trips from Peel Hall Development



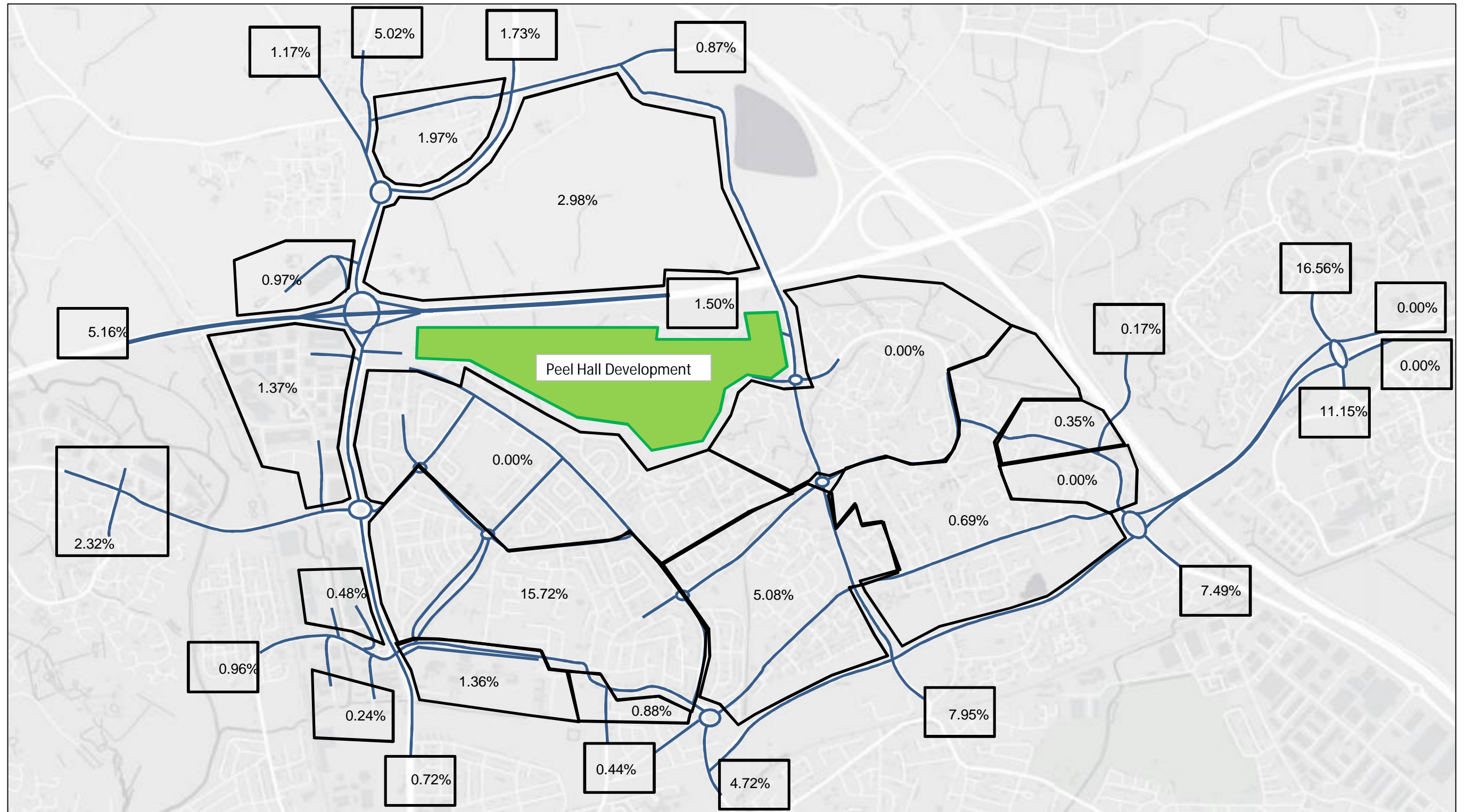


** Due to rounding to nearest number within Excel, percentages presented might not fully add to 100%

Peel Hall SATURN Model - Trip Distribution

Appendix B, Figure 12, PM Percentage Distribution for All Trips from Peel Hall Development



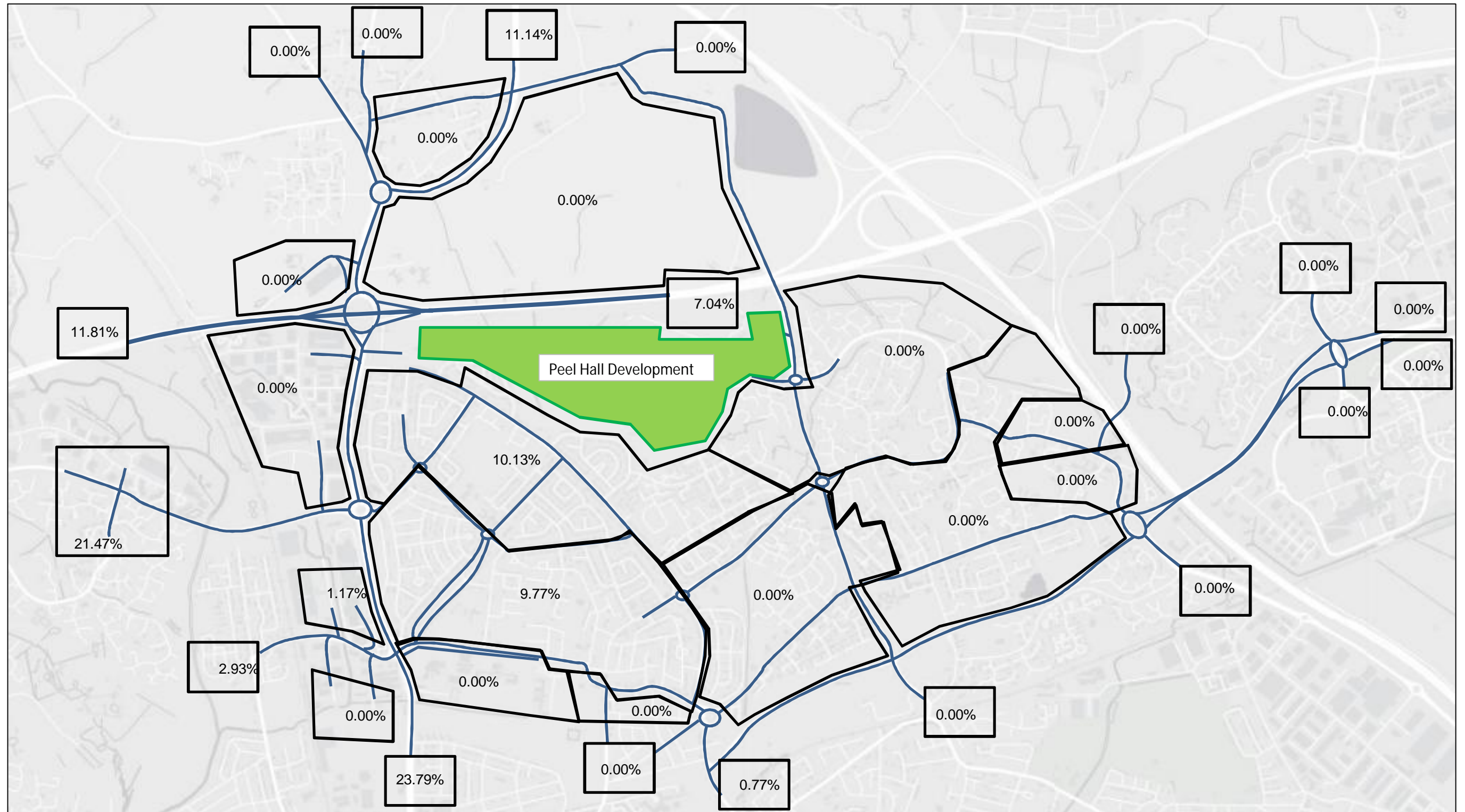


** Due to rounding to nearest number within Excel, percentages presented might not fully add to 100%

Peel Hall SATURN Model - Trip Distribution

Appendix B, Figure 13, PM Percentage Distribution for Residential Trips to Peel Hall Development



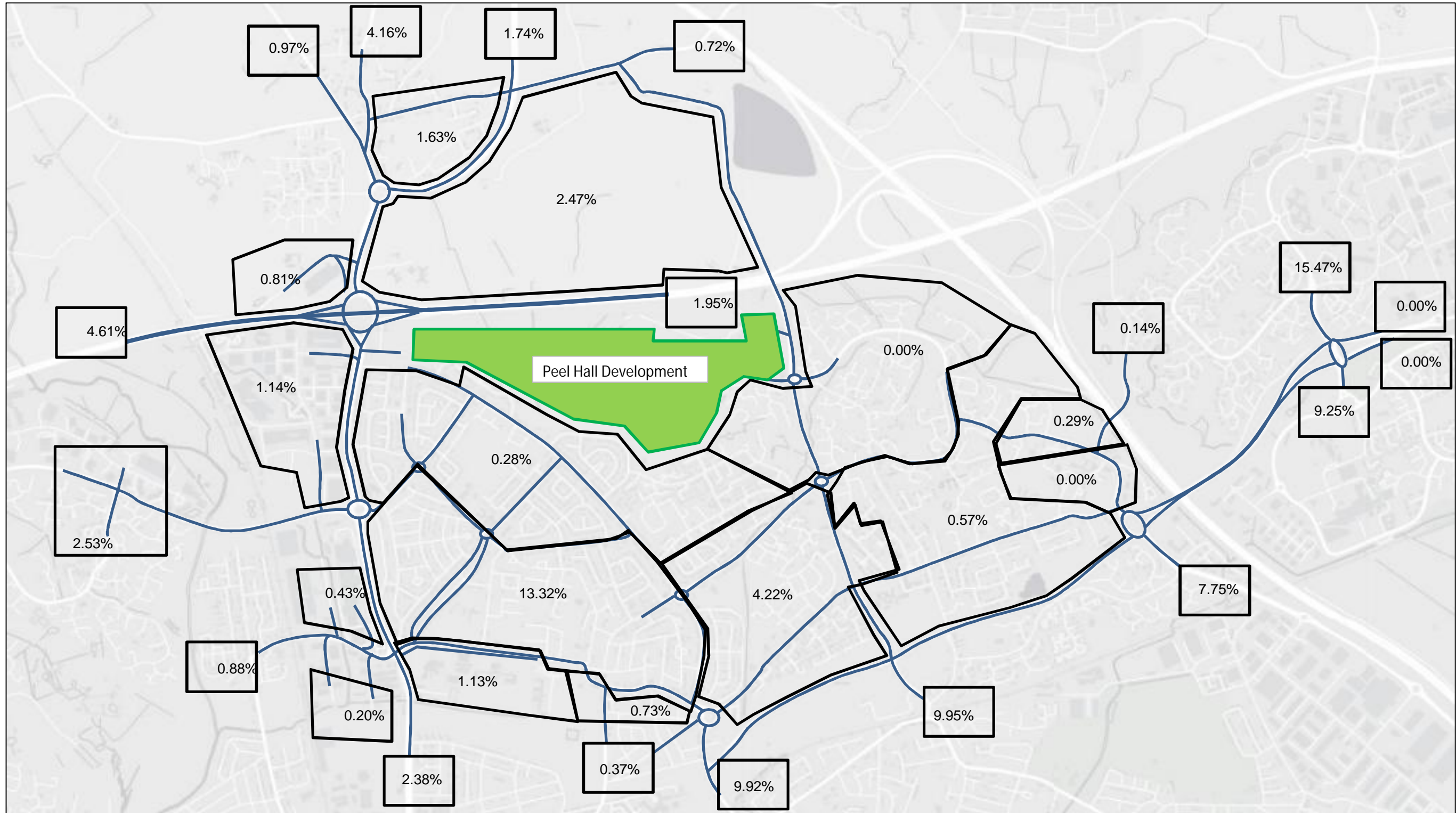


** Due to rounding to nearest number within Excel, percentages presented might not fully add to 100%

Peel Hall SATURN Model - Trip Distribution

Appendix B, Figure 14, PM Percentage Distribution for Work Trips to Peel Hall Development





** Due to rounding to nearest number within Excel, percentages presented might not fully add to 100%

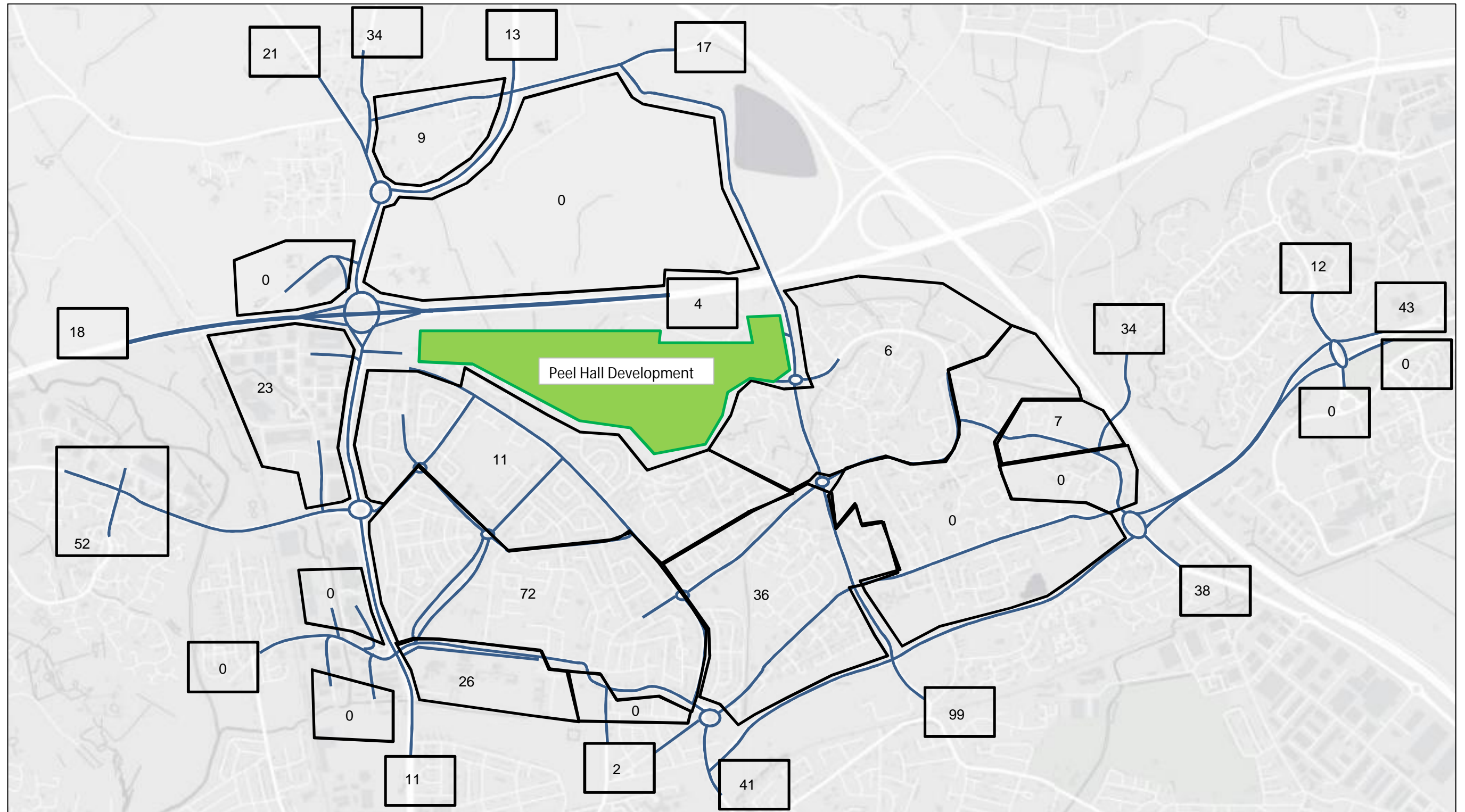
Peel Hall SATURN Model - Trip Distribution

Appendix B, Figure 16, PM Percentage Distribution for All Trips to Peel Hall Development



Appendix C

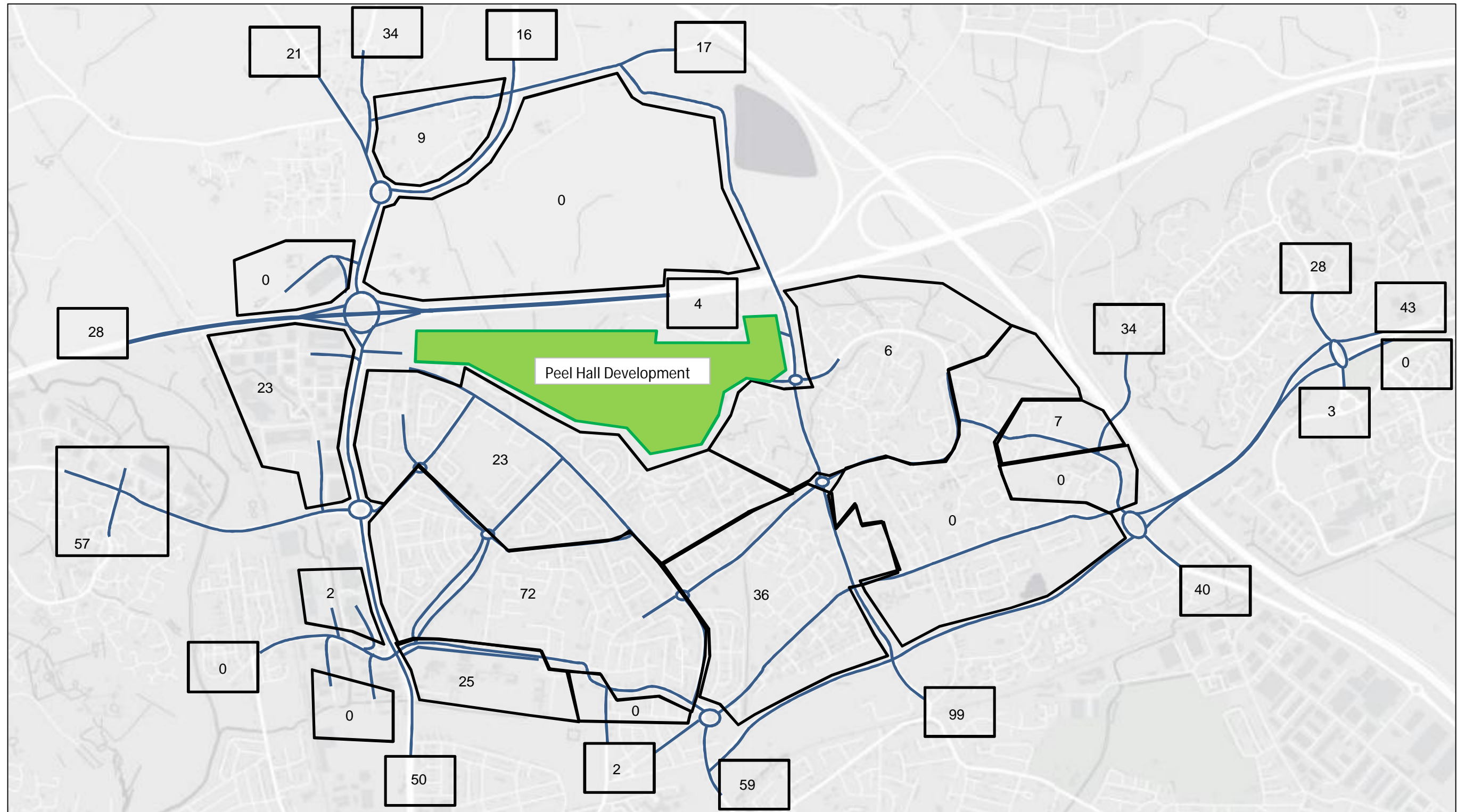
Total Proposed Trips per Time Period



Peel Hall SATURN Model - Trip Distribution

Appendix C, Figure 1, AM (0800-0900)
Residential Trips from Peel Hall Development

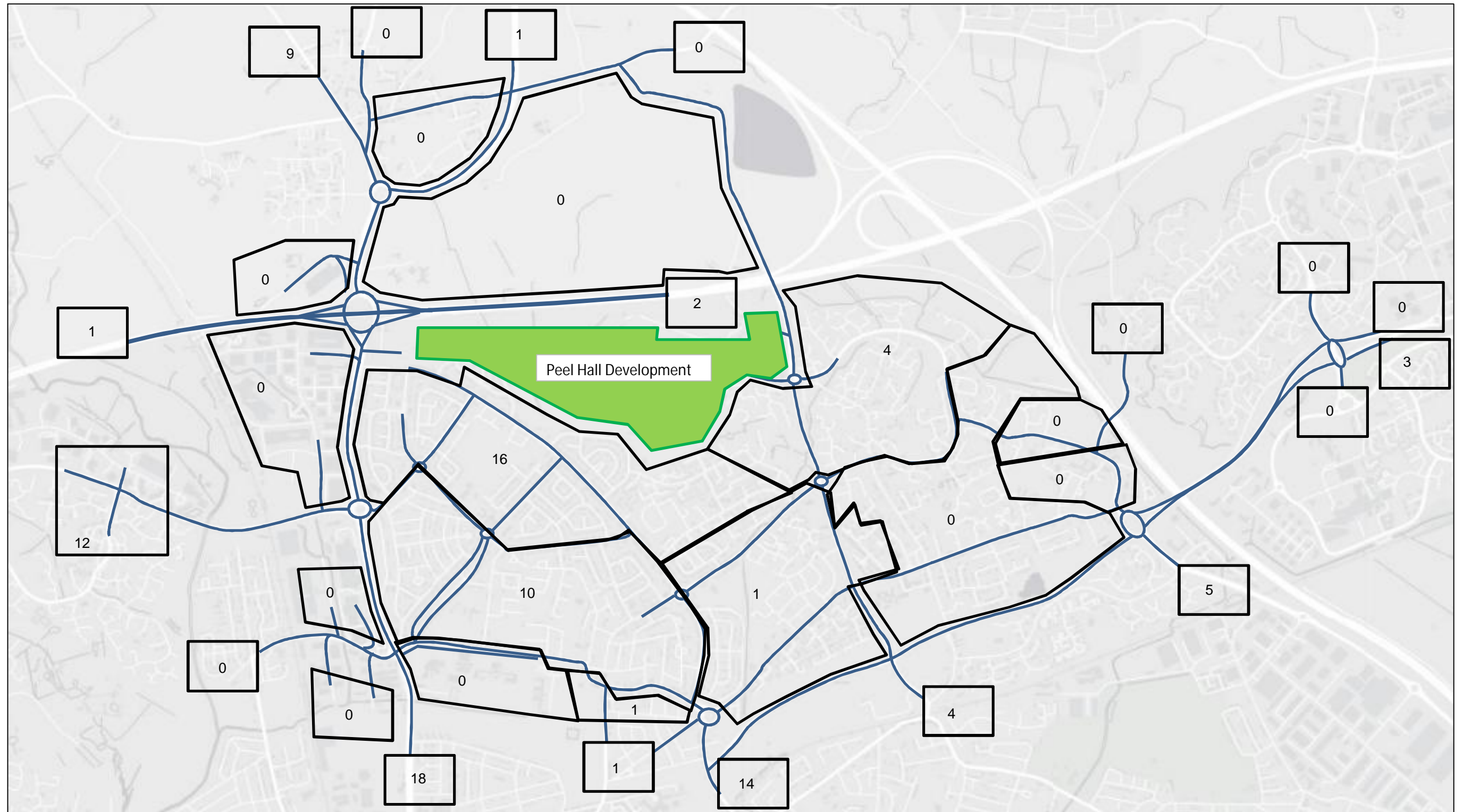




Peel Hall SATURN Model - Trip Distribution

Appendix C, Figure 4, AM (0800-0900)
Total Trips from Peel Hall Development

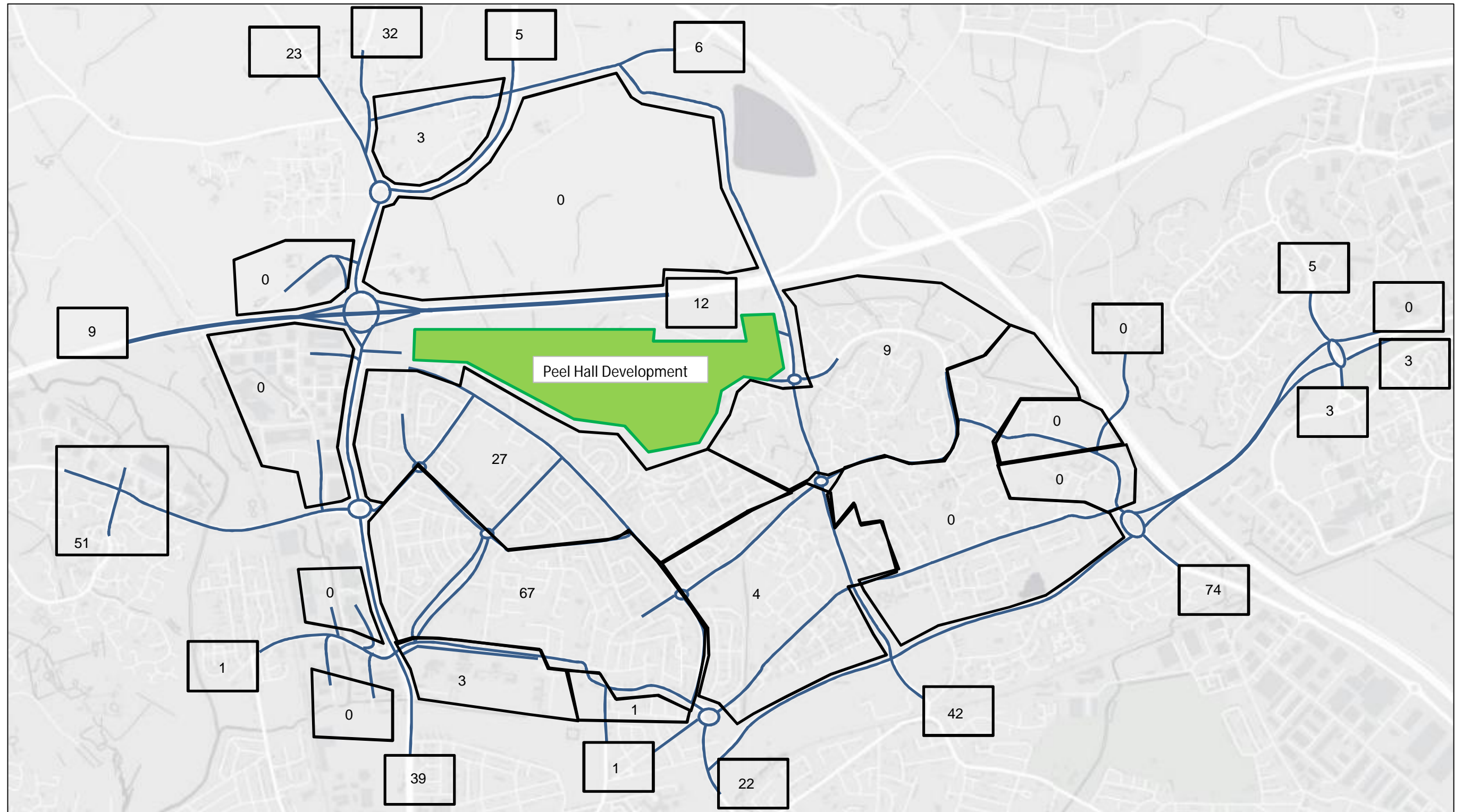




Peel Hall SATURN Model - Trip Distribution

Appendix C, Figure 7, AM (0800-0900)
Other Trips to Peel Hall Development

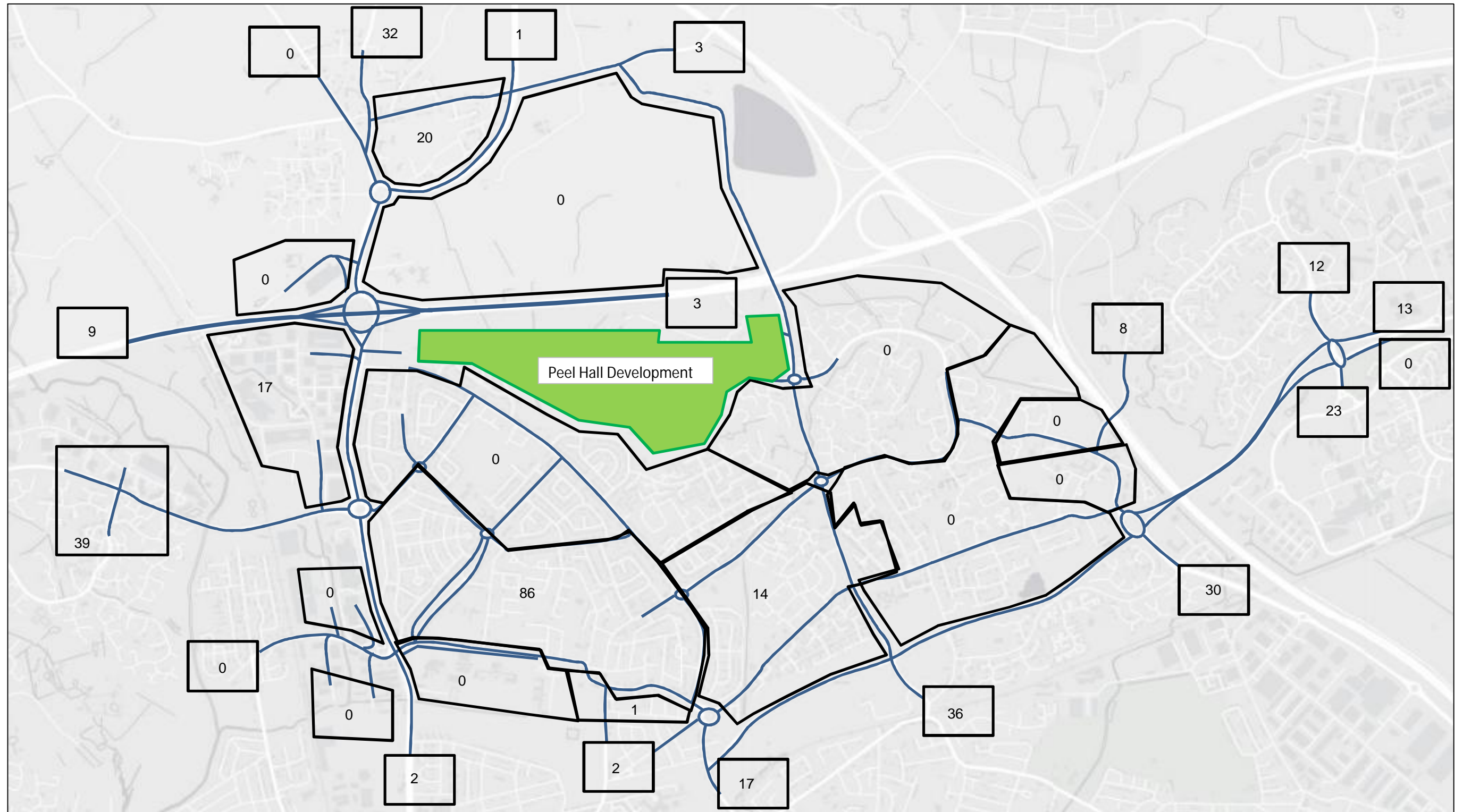




Peel Hall SATURN Model - Trip Distribution

Appendix C, Figure 8, AM (0800-0900)
Total Trips to Peel Hall Development

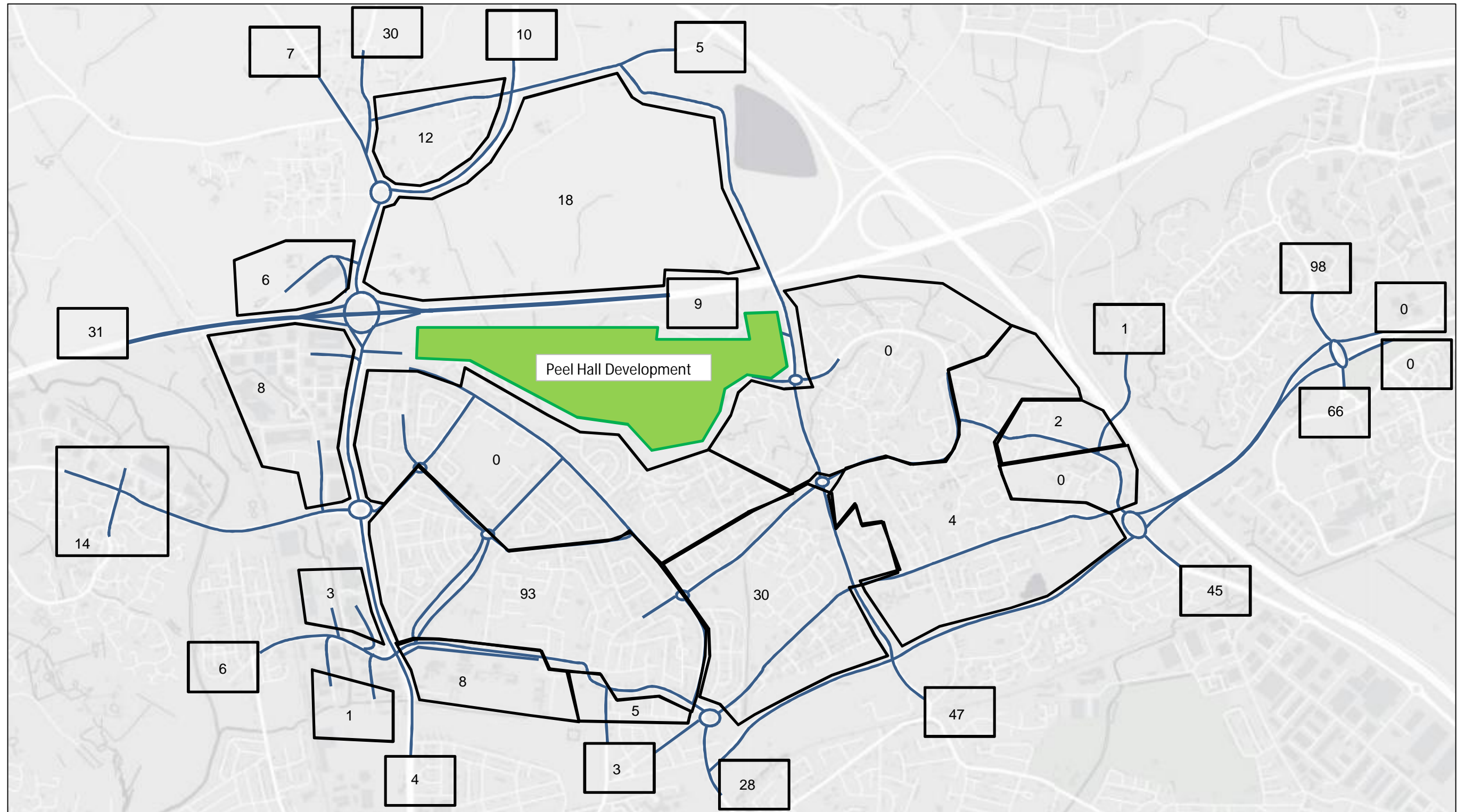




Peel Hall SATURN Model - Trip Distribution

Appendix C, Figure 9, PM (1700-1800)
Residential Trips from Peel Hall Development

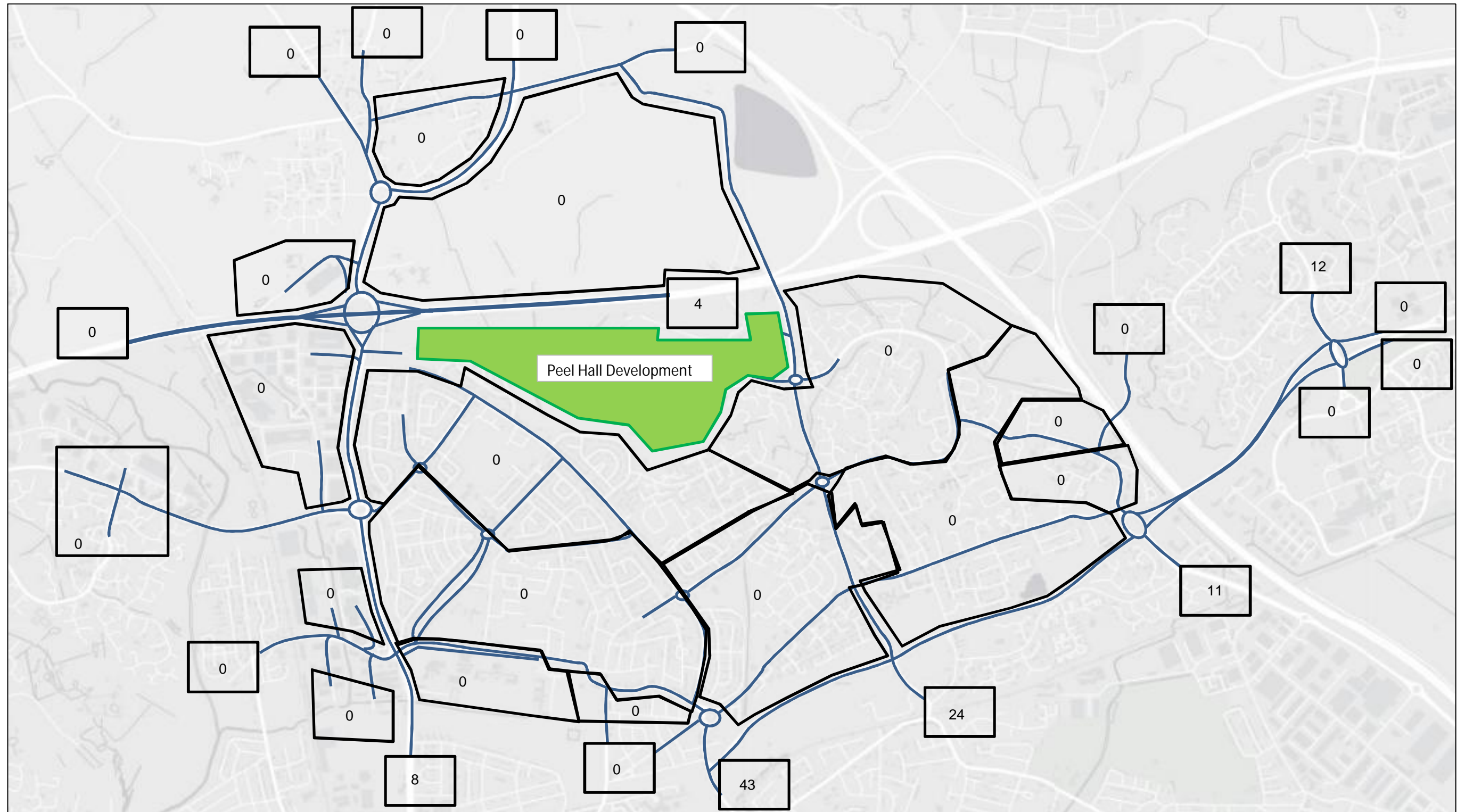




Peel Hall SATURN Model - Trip Distribution

Appendix C, Figure 13, PM (1700-1800)
Residential Trips to Peel Hall Development

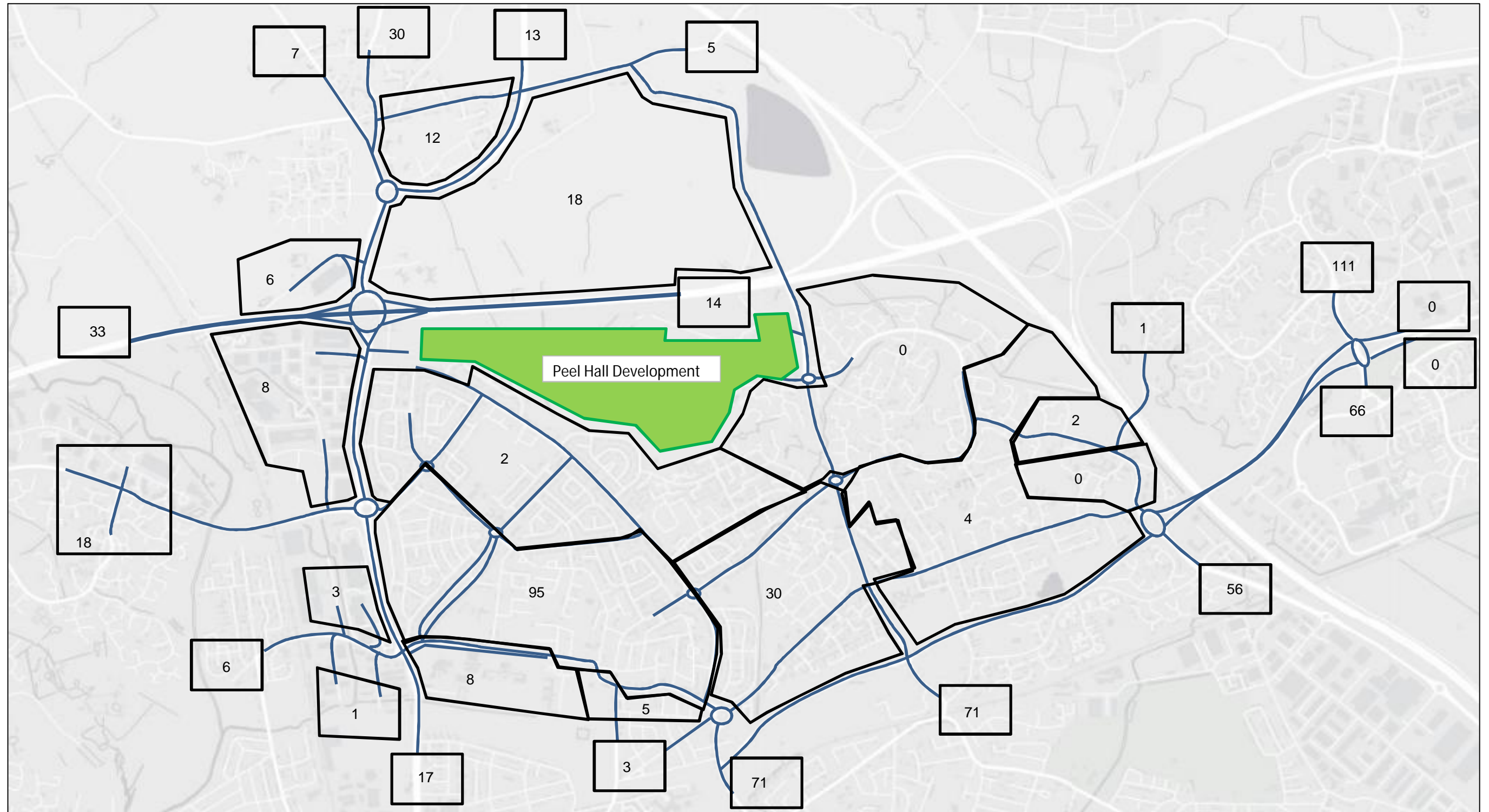




Peel Hall SATURN Model - Trip Distribution

Appendix C, Figure 15, PM (1700-1800)
Other Trips to Peel Hall Development



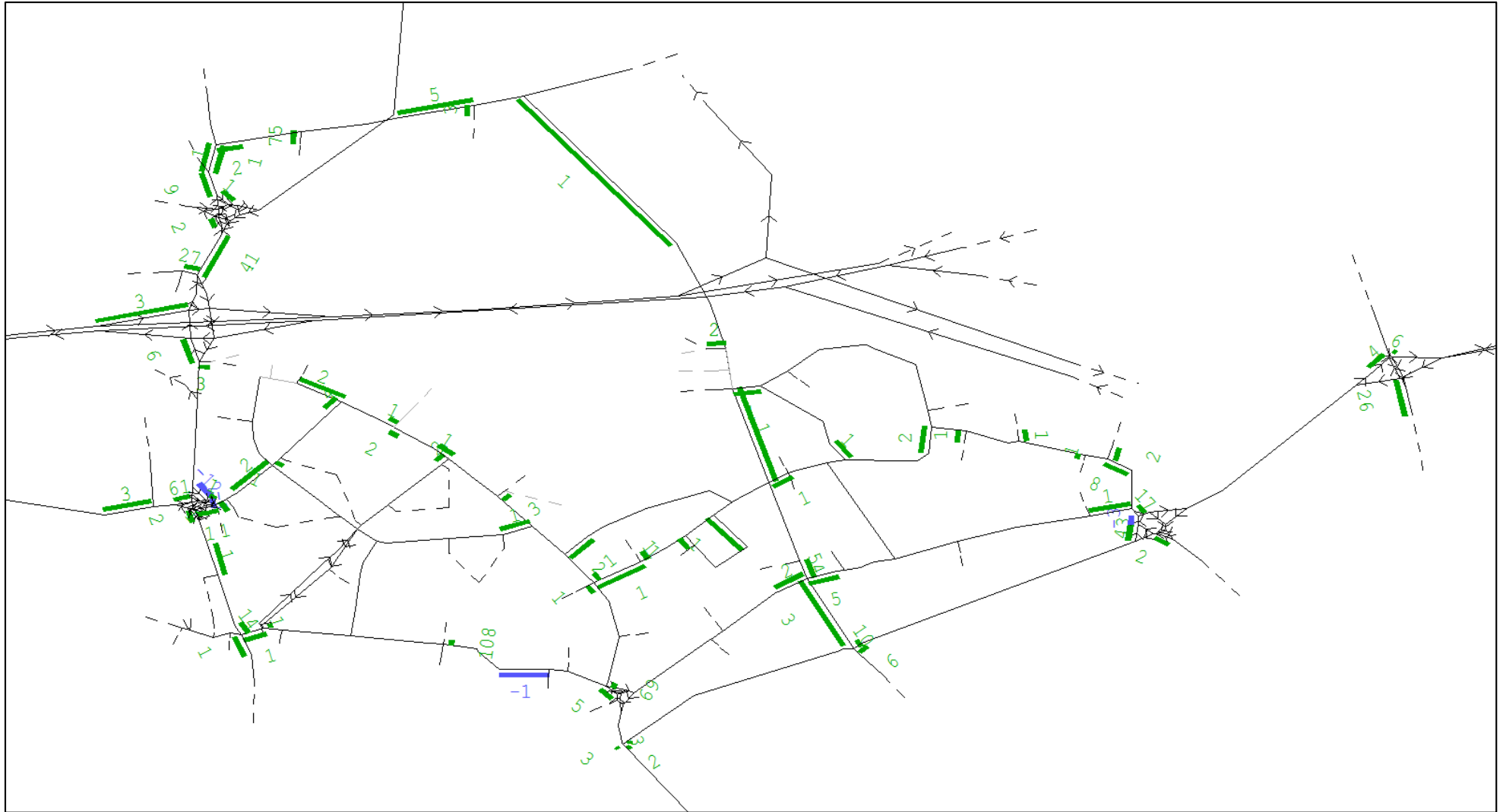


Peel Hall SATURN Model - Trip Distribution

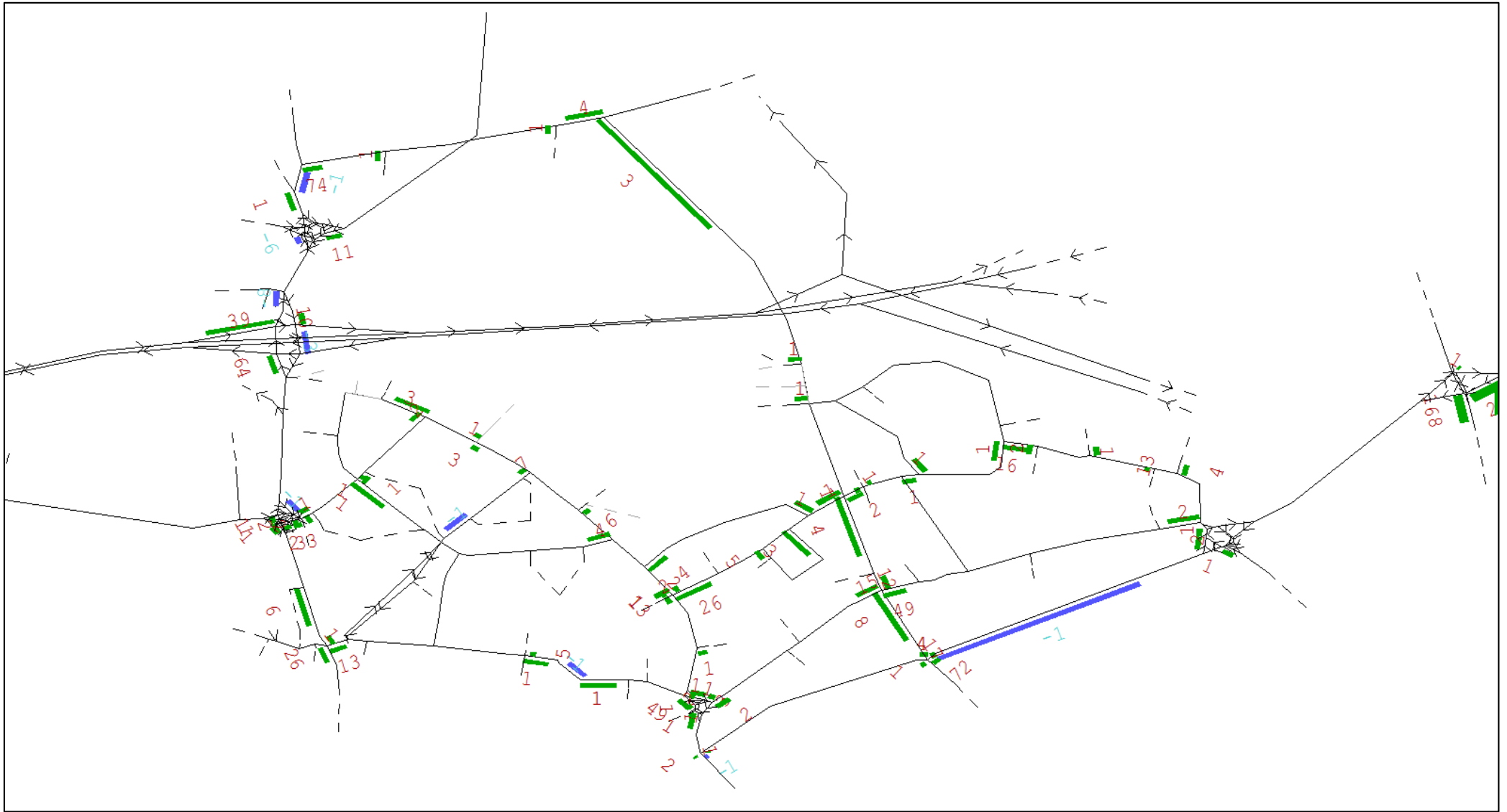
Appendix C, Figure 16, PM (1700-1800)
Total Trips to Peel Hall Development



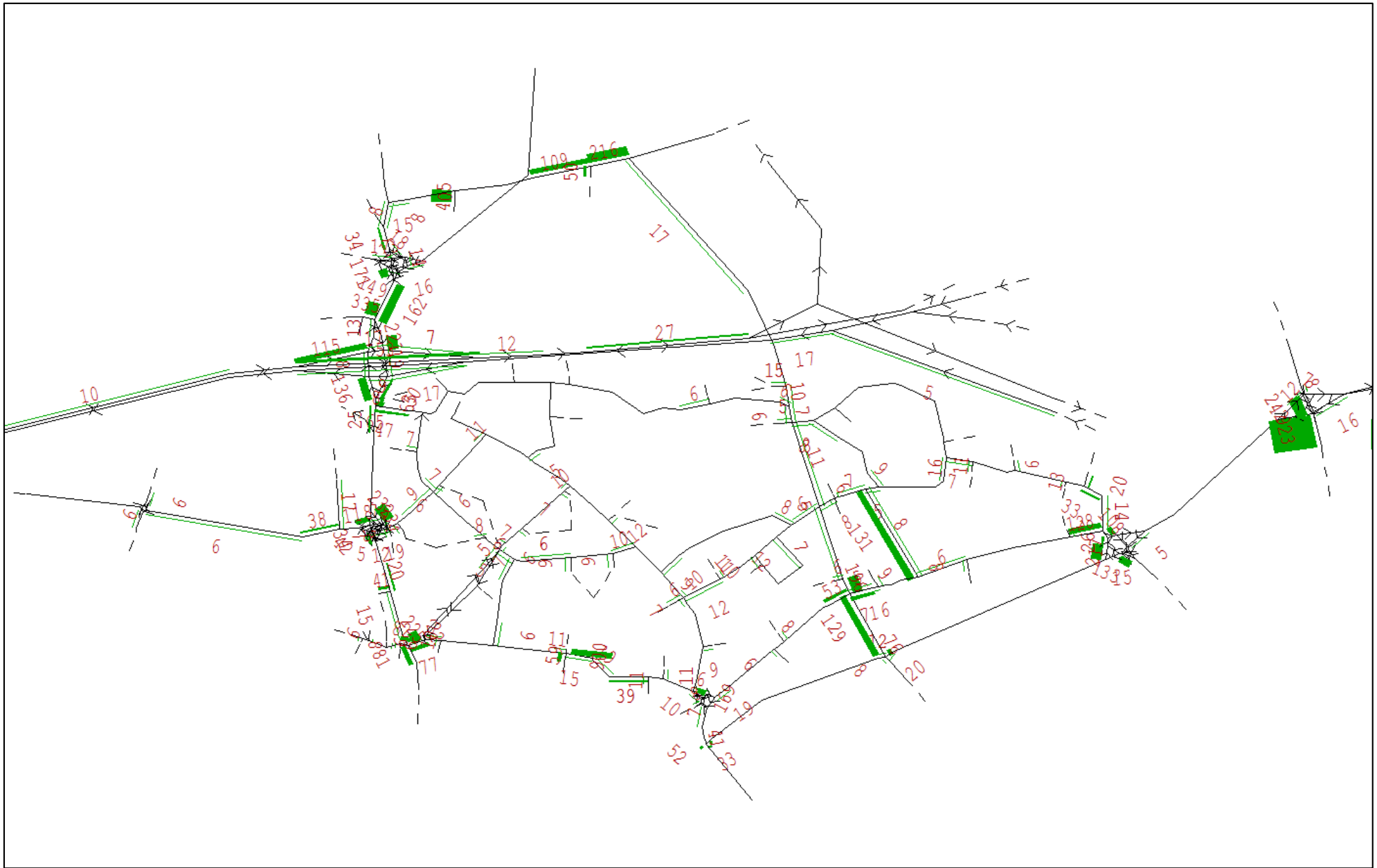
Appendix F Evidence Base for Delay Per Link



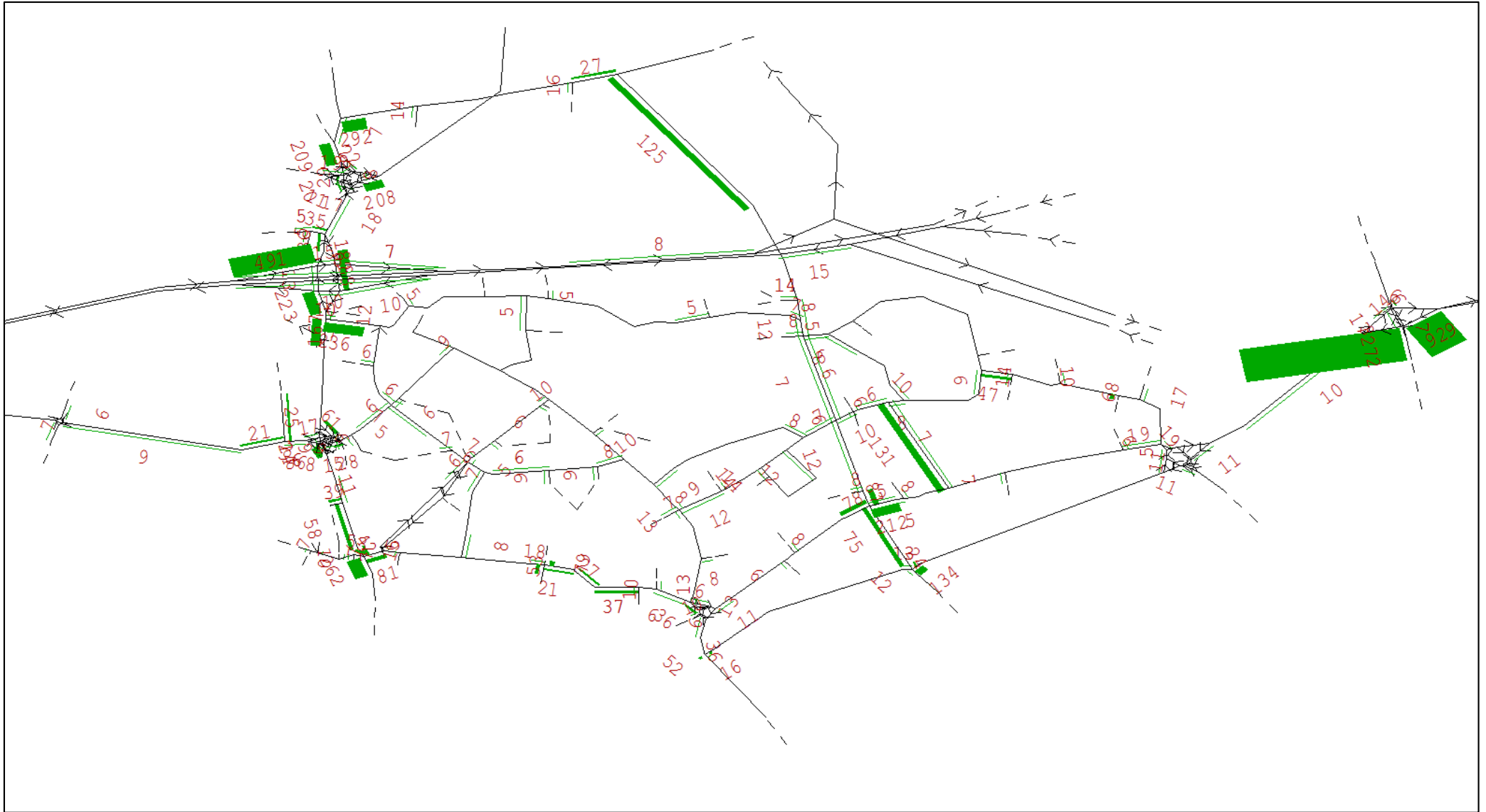
Appendix F, Figure 6.1 – 2025 AM Do Minimum Do Something Delay Comparison



Appendix F, Figure 6.2 – 2025 PM Do Minimum Do Something Delay Comparison

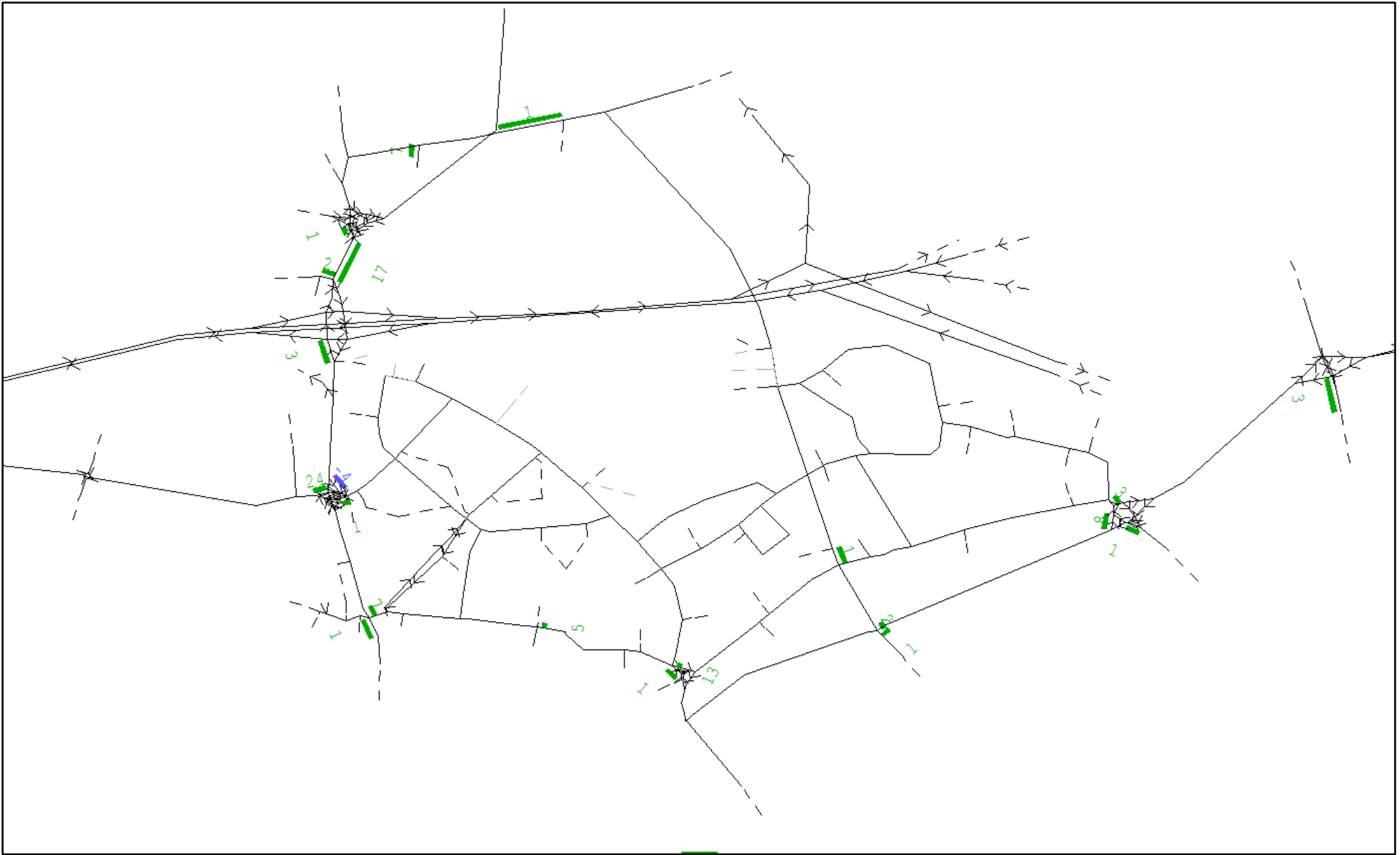


Appendix F, Figure 6.6 – 2030 AM Through Route Total Delay

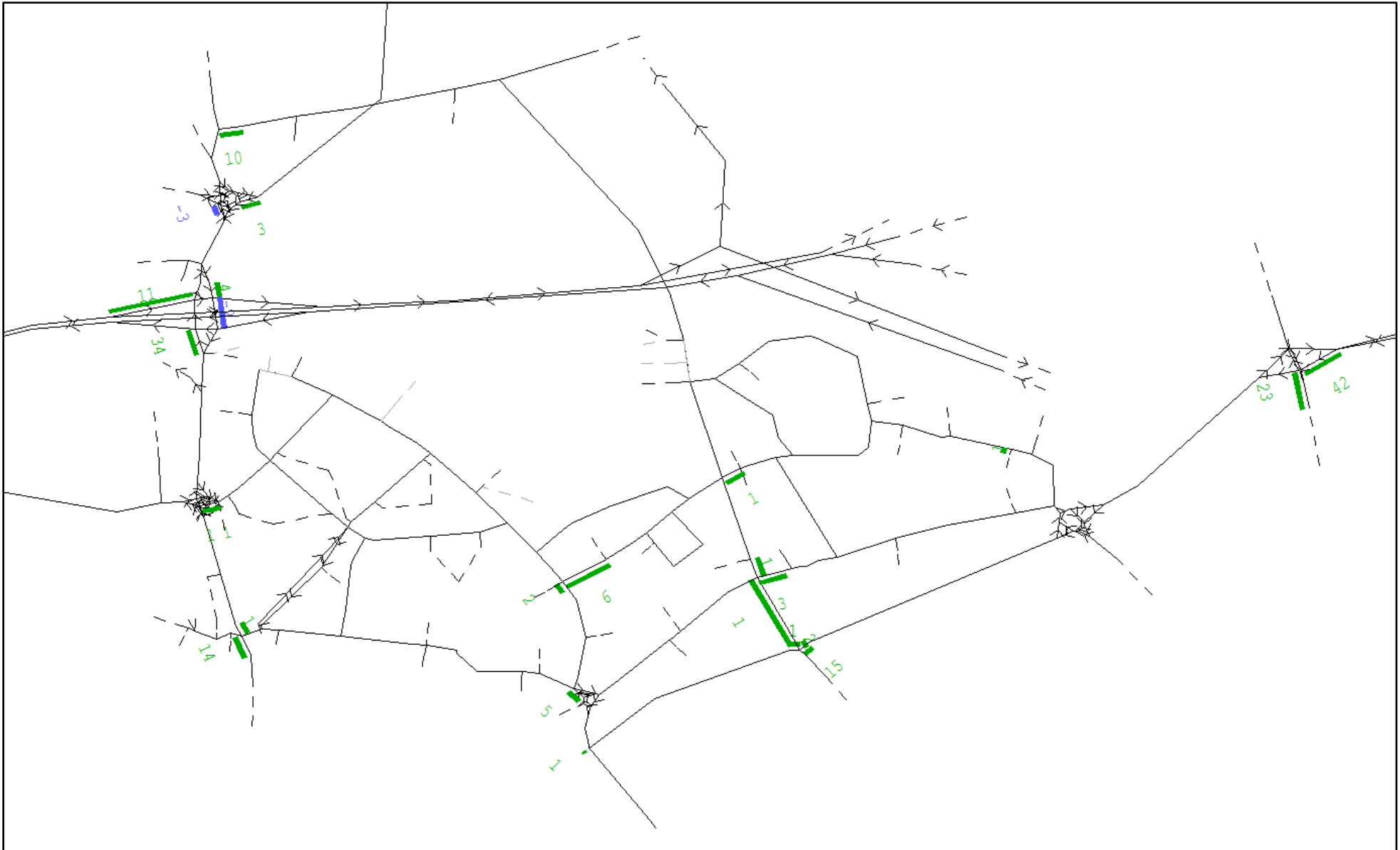


Appendix F, Figure 6.8 – 2030 PM Through Route Total Delay

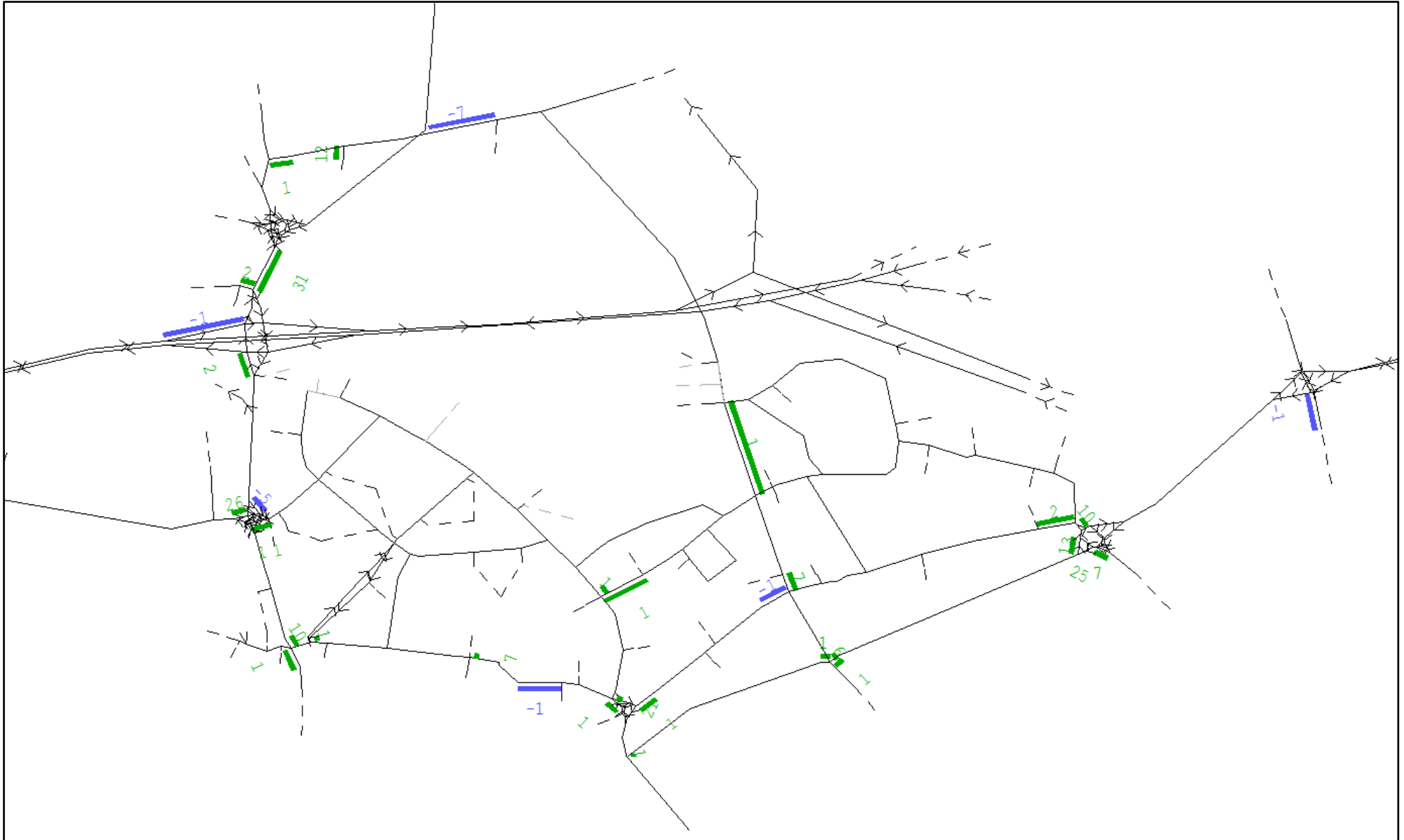
Appendix G Evidence Base For Forecast Queue Lengths



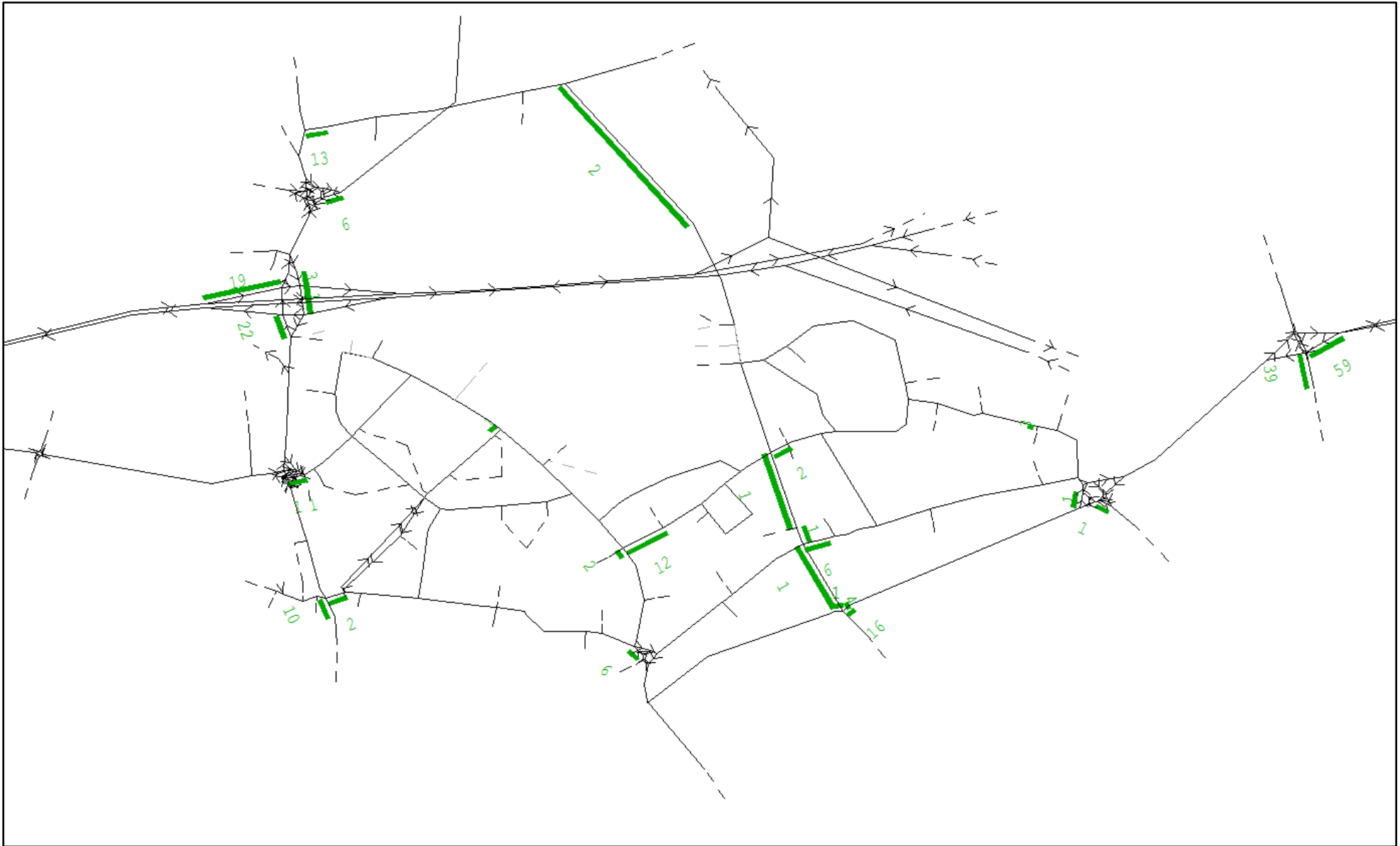
Appendix G, 2025 AM Do Minimum vs Do Something Average
Queue Comparisons



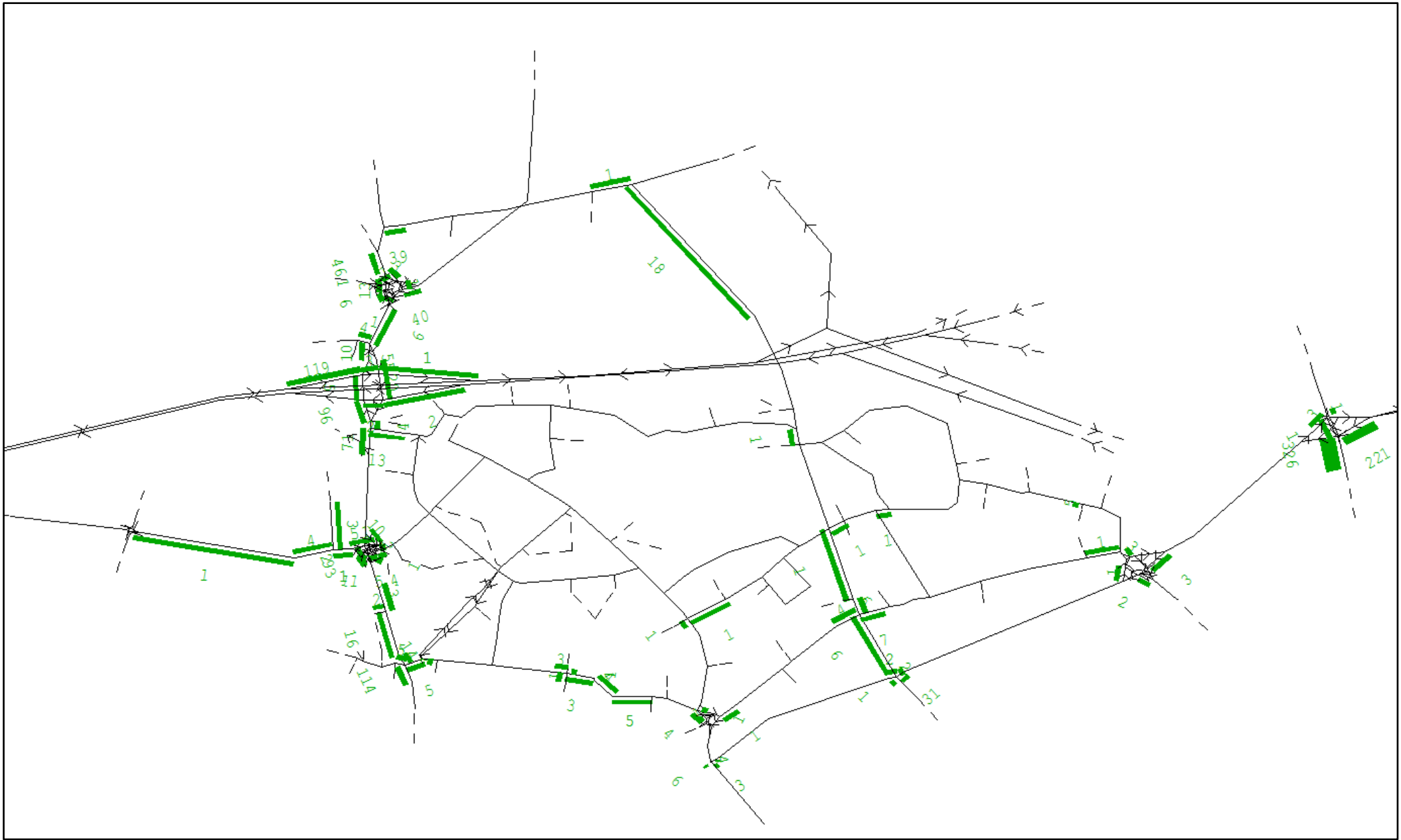
Appendix G, 2025 PM Do Minimum vs Do Something Average Queue Comparisons



Appendix G, 2030 AM Do Minimum vs Do Something Average
Queue Comparisons

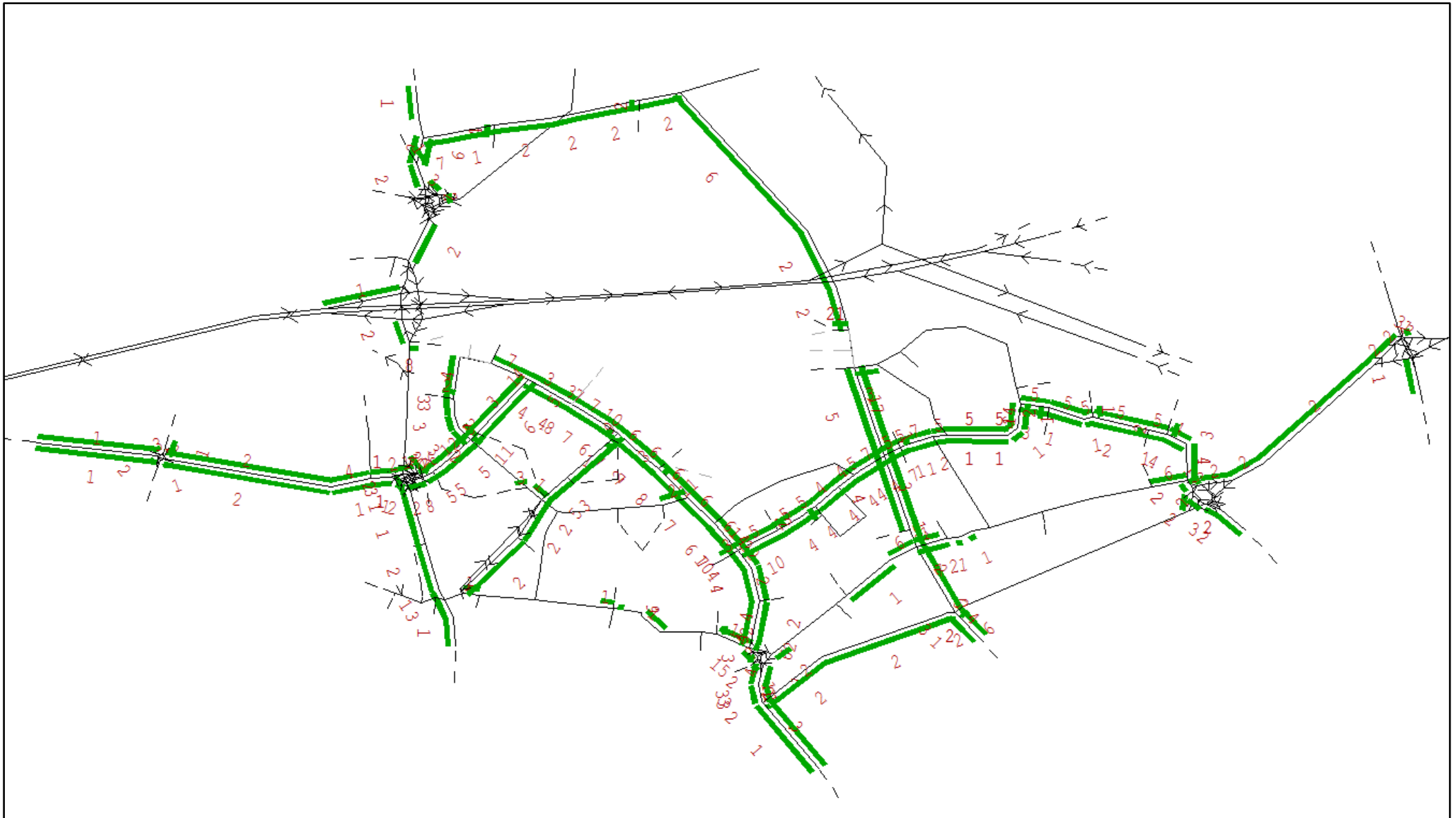


Appendix G, 2030 PM Do Minimum vs Do Something Average Queue Comparisons

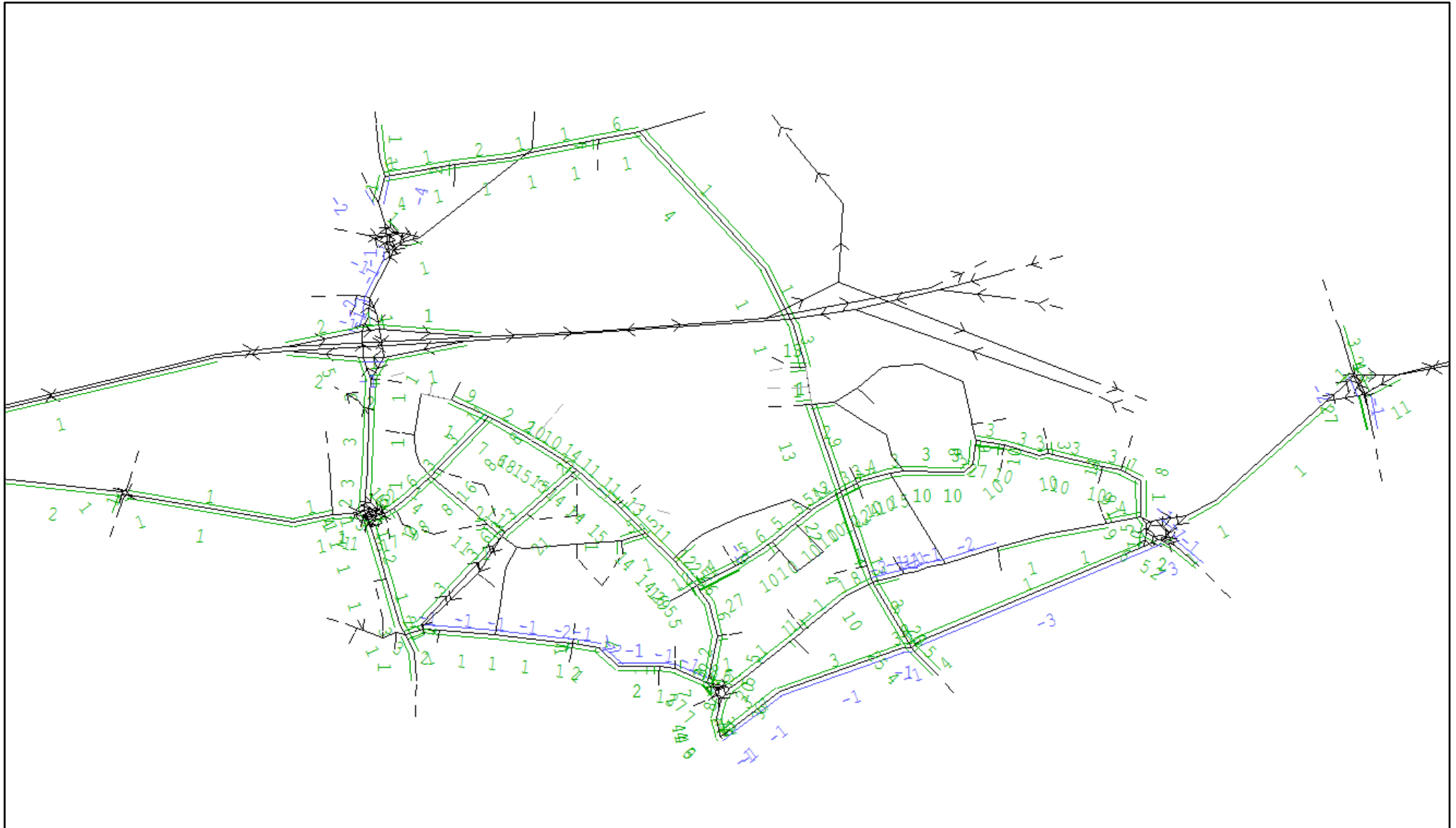


Appendix G, 2030 AM Through Route Total Average Queue

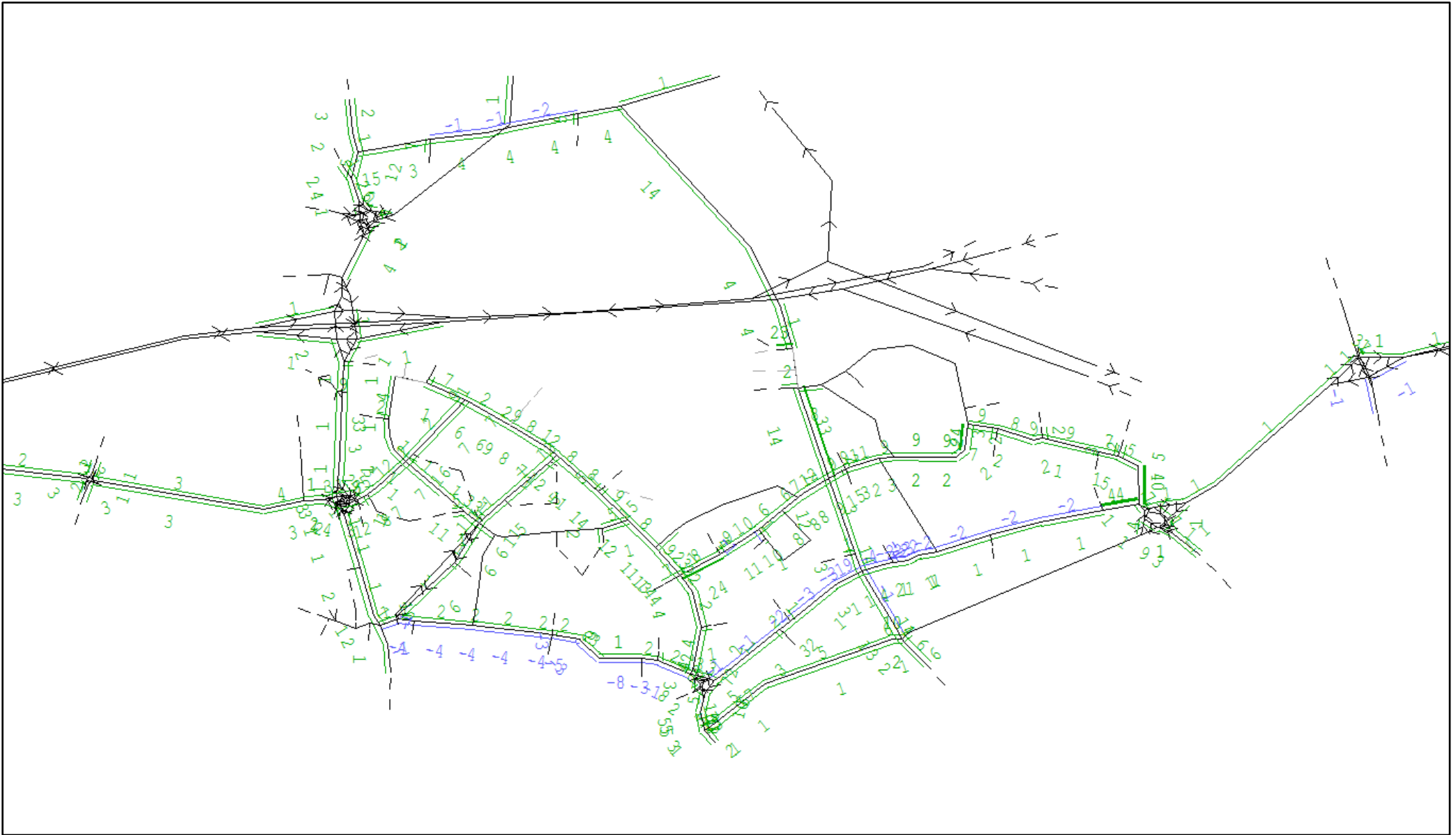
Appendix H evidence Base for Volume to Capacity



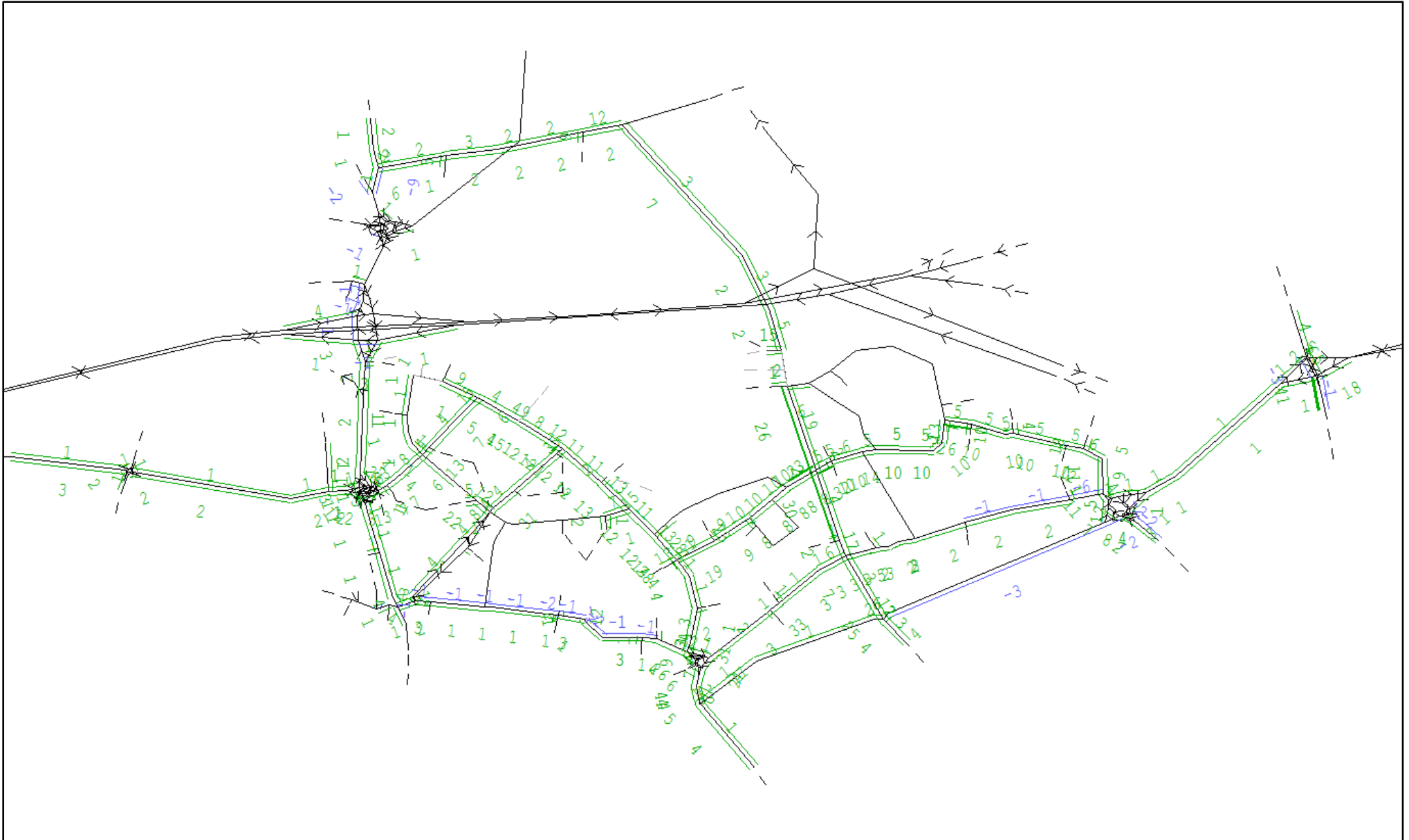
Appendix H, 2025 AM Do Minimum vs Do Something Volume of Capacity (%) Comparisons



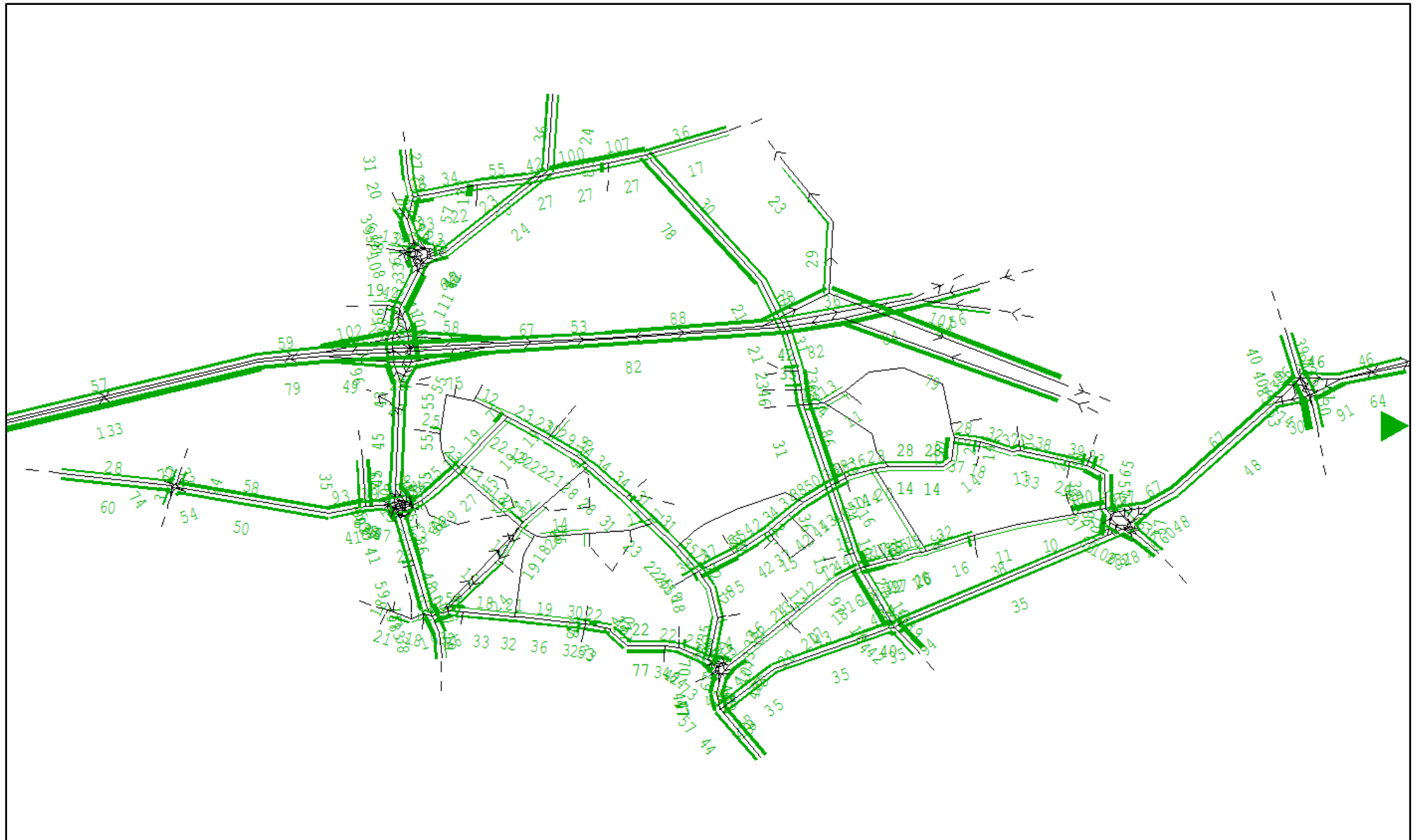
Appendix H, 2025 PM Do Minimum vs Do Something Volume of Capacity (%) Comparisons



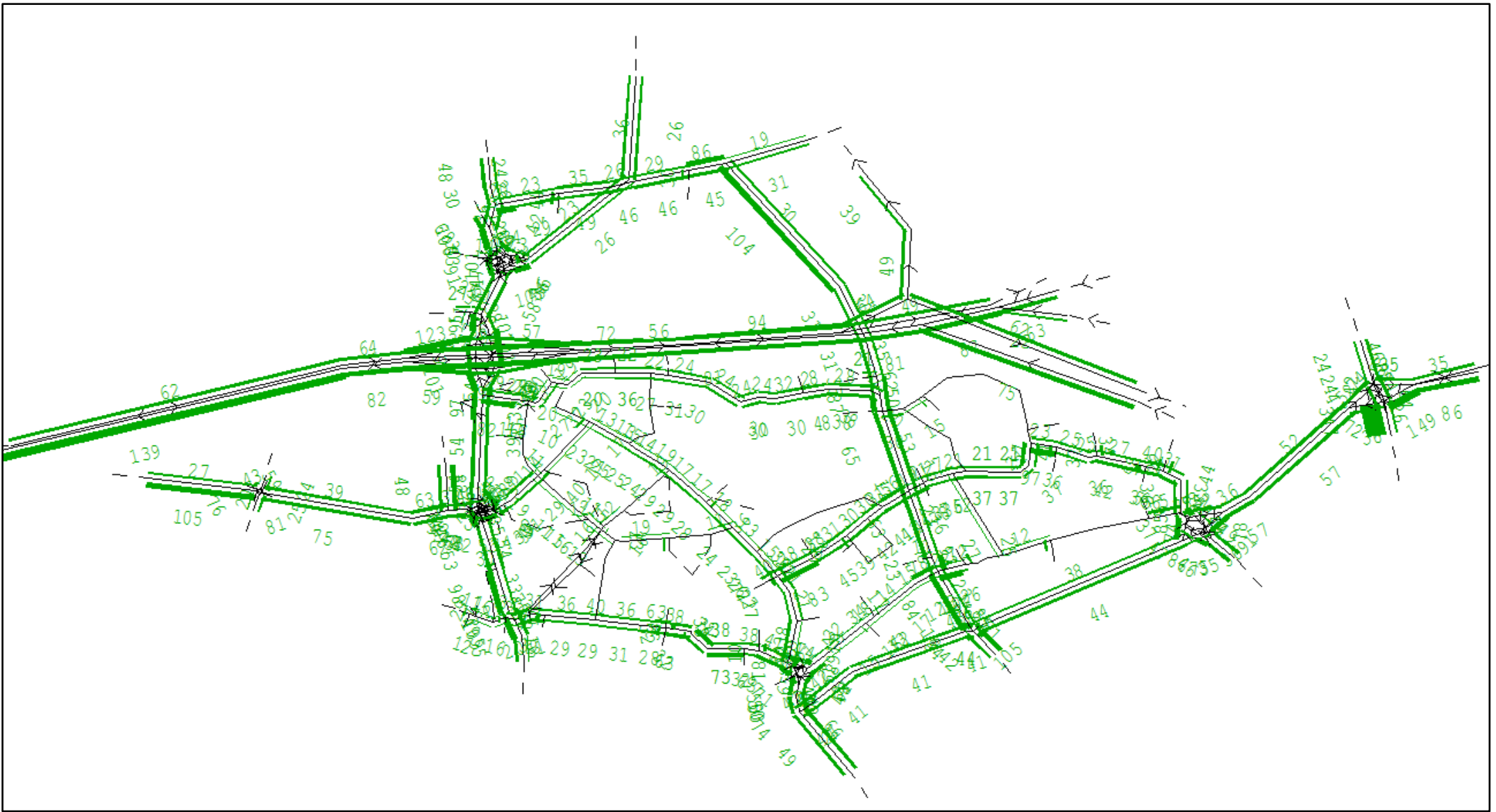
Appendix H, 2030 AM Do Minimum vs Do Something Volume of Capacity (%) Comparisons



Appendix H, 2030 PM Do Minimum vs Do Something Volume of Capacity (%) Comparisons



Appendix H, 2030 AM Do Something Total Volume of Capacity (%)



Appendix H, 2030 PM Through Route Total Volume of Capacity (%)

Appendix 61

WSP Review of SATURN Forecasting Report and HTP Response



MEMO

TO	Mike Taylor, WBC	FROM	Colin Wright / Andy Carpenter, WSP
DATE	27 November 2017	CONFIDENTIALITY	Confidential
SUBJECT	Peel Hall Farm – Forecasting Report Review		

Introduction

WSP have been commissioned by Warrington Borough Council (WBC) to review a suite of modelling documents that have been submitted to WBC as part of the planning application for a major residential development at Peel Hall Farm.

The Planning Application was submitted by Satnam Group in 2016 and rejected by WBC on the grounds of insufficient information relating to highway matters, namely a functioning traffic model and a set of mitigation measures to cope with the development traffic.

The following documents have been submitted to WBC in order to address the shortcoming of the planning application. These are:

- Local Model Validation Report (LMVR), Aecom, September 2017;
- Peel Hall Forecasting Report, Aecom, September 2017;
- Technical Note – Impact Summary, Highgate Transportation, September 2017.

The proposed method of review by WSP is to produce a short summary “memo style” report for each of the above documents. This document will review the information provided within the Peel Hall Forecasting Report. The purpose of this report is to summarise the key points of the Forecasting Report and raise queries where additional information may need to be sought.

Overview

The forecast modelling report details the scenarios modelled and methodology applied. It reports on the SATURN model outputs from the forecast models, comparing with and without scheme.

A total of five forecast scenarios were modelled:

- 2025 Do Minimum – Base traffic flow + Background growth+ Committed developments;
- 2025 Do Something – Base traffic flow + Background growth+ Committed developments + Peel Hall partial build out;
- 2030 – Do Minimum – Base traffic flow + Background growth+ Committed developments;
- 2030 Do Something – Base traffic flow + Background growth+ Committed developments + Peel Hall full build out;
- 2030 Do Something with through route – Base traffic flow + Background growth+ Committed developments + Peel Hall full build out + spine road connecting Mill Lane to A49.

Future Year Highway Networks

The Do Minimum network contains one committed scheme, the part signalisation of the Birchwood Way EB approach to Oakwood Gate roundabout.

The Do Something network contains the access arrangements for the Peel Hall development. These are:

- 6 new zones for development traffic; and
- Three new junctions tying into the existing network – two priority junctions on Poplars Avenue (one for employment, one for 330 residential (in 2030)) and a roundabout at Mill Lane / Blackbrook Avenue (for 700 residential (in 2030)).

The Do Minimum and Do Something networks do not change between 2025 and 2030.

A variation of the Do Something network was coded with a through route connecting A49 to Mill Lane / Blackbrook Avenue. A signalised junction permitting all movements was coded to allow access to/from the through route via Birch Avenue onto A49. A total of 7 new zones were added (compared to Do Minimum) for development traffic. The zone serving Poplars Avenue central now represents 180 residential units. Three zones load directly onto the through route (this is inferred from the SATURN plots in the appendices).

- 1. Provide detail regarding the level of development represented by the three zones along the through route. The location of the trip loading point may have an influence on where it accesses onto the existing highway network.**
- 2. Can confirmation be made that signal timings are consistent between Do Minimum and Do Something options and signal optimisation has not been applied?**

Future Year Trip Matrix Development

Background Growth

Background traffic growth is detailed in Technical Note HTp/1107/TN/20. A single growth factor has been calculated for each forecast year and time period using the NTM functionality in TEMPRO. The single growth factor has been based on car driver growth for Warrington 006 MSOA, with the NTM road type selected being Urban Motorway. It is stated that the combination of Warrington 006 MSOA and Urban Motorway has been selected as it produces the highest growth factors and “represents an over-estimate for traffic growth over much of the model network”.

- 3. What is the benefit for over predicting the background growth? If anything this may dilute the impact of the development trips.**
- 4. The forecasting methodology, specifically the use of the NTM function, is not normally applied when forecasting from a strategic model. Typically TEMPRO OD factors for each trip type would be used for the fully observed trips and NTM for trips that have an origin or destination in the external area.**
- 5. TEMPRO and NTM will only provide growth factors for cars. How has LGV and HGV growth been defined?**

Two employment sites are listed as committed developments:

- Land at Benson Road, Birchwood; and
- Birchwood Shopping Centre.

It is assumed that these developments are included within TEMPRO forecasts, so no additional account is made for them within forecasting.

6. Are these developments small enough to exclude from explicit modelling?
7. Comparison of the number of jobs each site will create and the growth predicted by TEMPRO for the relevant MSOA should be provided. Then a decision should be made on whether they are accounted for within TEMPRO.
8. Neither of these sites are in Warrington 006. The current forecasting methodology will not model any changes in trip patterns brought about by these developments.

Trip Generation

The trips generated by the developments at Peel Hall are detailed in Technical Note HTP/1107/TN/19 and summarised in the Peel Hall Forecasting Report.

The trip rates have been derived using the TRICS database and the TRICS outputs are contained in HTP/1107/TN02 Revision A. The trip rates and selected sites in the TRICS outputs appear to be suitable. However, it should be noted the date range selected for surveys for the food store was between 01/01/07 to 19/07/13 and only 3 sites were used in calculating the trip rate.

A summary of the 2030 peak hour trip generation set out in the report (Table 4.3) is summarised in Table 1.

Table 1: Summary of 2030 Vehicle Trip Generation (Source: HTP/1107/TN/19 and Peel Hall Forecasting Report)

Access	Quantum of Development	AM Arrival	AM Departure	PM Arrival	PM Departure
Poplars Avenue (Central)	330 dwellings	74	173	163	101
	care home	7	7	8	8
	food store	92	61	181	191
	local shops	30	29	36	39
	family pub	0	0	23	15
	<i>Total</i>		203	270	411
Poplars Avenue (West)	employment land	69	39	20	47
Mill Lane	150 dwellings	34	79	74	46
Mill Lane/Blackbrook Avenue	700 dwellings	158	366	347	215
	primary school	113	79	19	27
Birch Avenue	20 dwellings	5	11	10	6
Grasmere Avenue	community uses	10	5	7	8
Total		592	849	888	703

A number of discounts have applied to the values shown in Table 1. The discount rates are as follows with the discounted development trips shown in Table 2.

- Residential 0%
- Care Home 0%
- Employment 0%
- Food Store 100% (70% discount and 30% pass-by)
- Local Centre 100%

- Family Pub/Restaurant 0%
- Primary School 50%
- Community uses 0%

Table 2: Summary of 2030 discounted Vehicle Trip Generation (Source: HTP/1107/TN/19)

Access	Quantum of Development	AM Arrival	AM Departure	PM Arrival	PM Departure
Poplars Avenue (Central)	330 dwellings	74	173	163	101
	care home	7	7	8	8
	food store*	28	18	54	57
	local shops	0	0	0	0
	family pub	0	0	23	15
	<i>Total</i>		<i>109</i>	<i>198</i>	<i>248</i>
Poplars Avenue (West)	employment land	69	39	20	47
Mill Lane	150 dwellings	34	79	74	46
Mill Lane/Blackbrook Avenue	700 dwellings	158	366	347	215
	primary school	57	40	10	14
Birch Avenue	20 dwellings	5	11	10	6
Grasmere Avenue	community uses	10	5	7	8
Total		442	738	716	517

* pass-by trips only

Technical Note HTP/1107/TN/19 states that food store trips will be discounted by 100% in the Saturn Model, with the 30% of pass-by trips being re-distributed from existing traffic on the network passing by Poplars Avenue.

- 9. The re-distribution of the traffic may change the turning proportions at the junction which may affect the operation of Poplars Avenue. No evidence has been provided to demonstrate no impact due to pass-by trips. Are these pass by trips modelled in the SATURN model?**
- 10. The 30% by-pass trip rate has been derived by assuming the same trip reduction as the Omega development. Can a justification for the 30% reduction be provided based on current best practice? 'TRICS Research Report 14/1: Pass-By & Diverted Trips Report' states that a standard trip rate reduction for pass-by and converted trips is no longer considered applicable and that a first principles approach should be undertaken. No evidence has been provided to suggest this is the case.**
- 11. No account for has been provided for transferred or diverted trips. For example traffic may divert from the A49 which may impact upon the operation of the local network. Can more information be provided to explain why these trip types have not been included in the analysis?**

It is assumed that 100% of trips to the local centre will be internal and that there will be no external trips generated.

- 12. Technical Note HTP/1107/TN/13 which is the applicant's response to the HE contradicts this and states that 30% of trips will be pass-by (Table 6-1). More information should be provided to explain**

the inconsistencies between the discounting rates between the applicant's response to the HE and Technical Note HTP/1107/TN/19.

An internalisation discount of 50% has been applied to the primary school trips based on an estimation that 85% of pupils will be from the development site.

- 13. More information should be provided on the rationale for the 50% value as there appears to be no evidence submitted to substantiate this proportion.**
- 14. Are trips from the 330 dwellings accessed via Poplars Avenue to the west of the site included in the internalisation discount? Access to the primary school from these 330 dwellings will be restricted due to the proposed bus gate and the vehicle trips will have to travel on the local highway network to access the school. Has this been accounted for in the modelling?**

Tables 4.2 and 4.3 summarise the final trips generated by the Peel Hall development for 2025 and 2030 respectively.

- 15. Table 4.3 represents undiscounted trips from 2030 scenario without through route. The discounted trips should be shown as this is the number of trips that are loaded onto the network. The correct tables are Table 5.2 (HTP/1107/TN/19, without through route) and Table 3.10 (HTP/1107/TN/21, with through route).**
- 16. At this stage of the report, it would be beneficial to present some matrix totals. This would show base year and forecast years with and without developments.**

Trip Distribution

The trip distribution applied for the development trips is detailed in AECOM's Technical Note "Proposed Distribution for Peel Hall Development" included in Appendix E. Parent zones have been chosen for distribution depending on land use type, i.e. residential, employment or other. Distribution percentages for the Peel Hall developments are shown based on the original zone structure in Figures 1-20.

- 17. Can the trips groupings be defined? Are they:
 - a. Residential – all trips to/from a residential property (including commuting)**
 - b. Employment – employers business trips (non-home based only?)**
 - c. Other – other trips (non-home based only?)****
- 18. Do the parent zones provide a realistic distribution? Looking at Fig 4 (AM from PH), Fig 8 (AM to PH), Fig 12 (PM from PH) and Fig 16 (PM to PH) it can be seen that roughly 20% of the trips stay within Hulme and Orford (original model zones 67, 69, 70 and 152).**
- 19. Census JTW information for Warrington 006 and 007 (included in Appendix A) shows largest proportions are to Warrington town centre, Birchwood and Woolston Grange industrial park? The AM Residential from PH and PM Employment to PH distribution plots should reflect this.**
- 20. Zone 405 (land north of M62 bounded by Winwick Link) shows trips in Fig 13 Residential trips to Peel Hall. Is this correct? There are no development trips at any other time period or trip type.**
- 21. The distributions are taken from the multi modal model with full zone structure. Has any change in routing for forecast Do Minimum scenarios been taken in to account? There are quite a number of routes to Warrington town centre, the distribution may change, e.g. increase of traffic on A49 transferring trips to A50.**

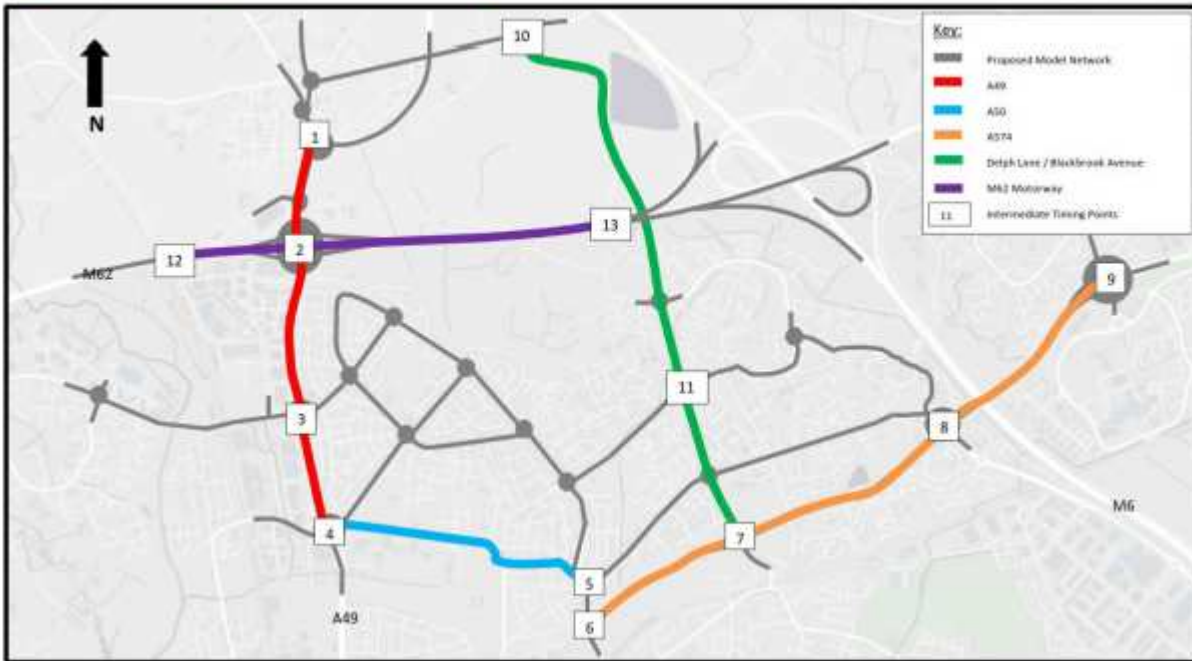
Covergence is stated to be satisfactory, with delta round 0.15%.

- 22. Can the convergence statistics be provided, in line with DfT WebTAG Unit M3.1 Table 4.**

Assessment of Impact on Journey Times

The journey times assessed are given in Figure 5.1. This is shown below.

Figure 5.1, Journey Times used in the Analysis



The analysis is then presented without the journey times on the M62.

23. Provide explanation for omission of M62 journey route from analysis.

24. Analysis of the residential access roads, e.g. Poplars Avenue, would have been useful especially with regard to through route analysis.

The addition of the development traffic results in increases in journey times along the four routes assessed. Biggest increases 2030 no through route (DS-DM) are:

- Mill Lane SB AM +165secs,
- A49 SB AM +87 secs,
- Birchwood Way EB AM +74secs,
- A50 WB PM +74secs,
- Birchwood Way WB PM +63secs

Addition of the through route relieves A50 and A574 (partially) but increases on Mill Lane & A49.

25. Can a narrative be provided to explain why the journey times are changing, e.g. is it link capacity, green times, opposing turning movements etc. How are the development trips and their distribution impacting on journey times?

26. The through route decreases journey time NB on A49, this seems counter intuitive as a new signalised junction will add delay. Can this be explained?

Impacts on Delay

Difference plots of delay from the SATURN model are presented for all scenarios without the through route. A difference plot for the through route was not produced due to structural changes between the networks with the through route and those without the through route. For each scenario comparison link delays are stated at key junctions.

- 27. As with the journey times section, can a narrative be provided explaining the increases and how development trips influence changes in link delay? The same junctions are mentioned for each scenario yet there are other links with increases in delay greater than 40 seconds that are not discussed.**
- 28. The total delay plots provided for the through route assessment reveal very large delays entering the model at Oakwood Gate (AM and PM), Birchwood Way (PM) and M62 J9 EB off slip (PM). This could have an effect on model stability and result in trips not being able to enter the network. The calibration and coding in these areas should be reviewed.**

The total delay time for each model is also presented. Logically the Do Something models have more delay than the Do Minimum models.

- 29. The total delay in the PM models is about 50% higher than the AM models. Is this solely due to the delay identified above at Oakwood Gate / Birchwood Way junction. It would be expected that the models carry similar amounts of delay.**
- 30. The introduction of the through route increases delay in the AM model but reduces delay in the PM when compared to the Do Something models without the link road. Can a narrative be provided to explain this?**

Queuing

Similar to the delay assessment, queue lengths are compared between Do Minimum and Do Something scenarios. Compared to the delay assessment there are not many areas of queue length change. The changes in queue length are concentrated around the major junctions; M62 J9, A49 / Cromwell Avenue, College Place Roundabout and Oakwood Gate roundabout.

- 31. As with journey times and delay can an explanatory narrative be provided?**
- 32. The through route total queue length plots show large queues (greater than 100 pcus) in the PM on the approaches to Oakwood Gate roundabout, M6 J9 EB off slip and A49 NB approach to Long Lane junction? Are these realistic? Is all traffic getting through the network? Total queue length plots would be useful for Do Minimum and Do Something without through route.**

Assessment of Impact of Volume over Capacity

Link Volume over Capacity is compared between Do Minimum and Do Something scenarios. The increases due to the development seem low and overall there are not too many links with V/C greater than 85%. Difference plots and total V/C plots have been provided.

- 33. Again can a narrative be provided?**
- 34. What is the capacity of each link? Is it appropriate for the link type? No flows have been provided so cannot infer what increase in 13% V/C on Poplars Avenue means for flow.**
- 35. Large V/C occur M62 WB after J9 merge, M62 J9 EB off slip, and the approaches to Oakwood Gate roundabout. Coding should be checked in these areas.**

36. The difference plots are difficult to read with many labels overlapping especially around multi-node junctions. Can there appearance be improved? Also all plots are labelled Volume of Capacity, should be Volume over Capacity.

Other

37. It would be beneficial to see some flow plots, both total and difference. Also select link analysis plots to show the routing to and from the developments, and also to identify the non-development traffic using the through route.

Summary

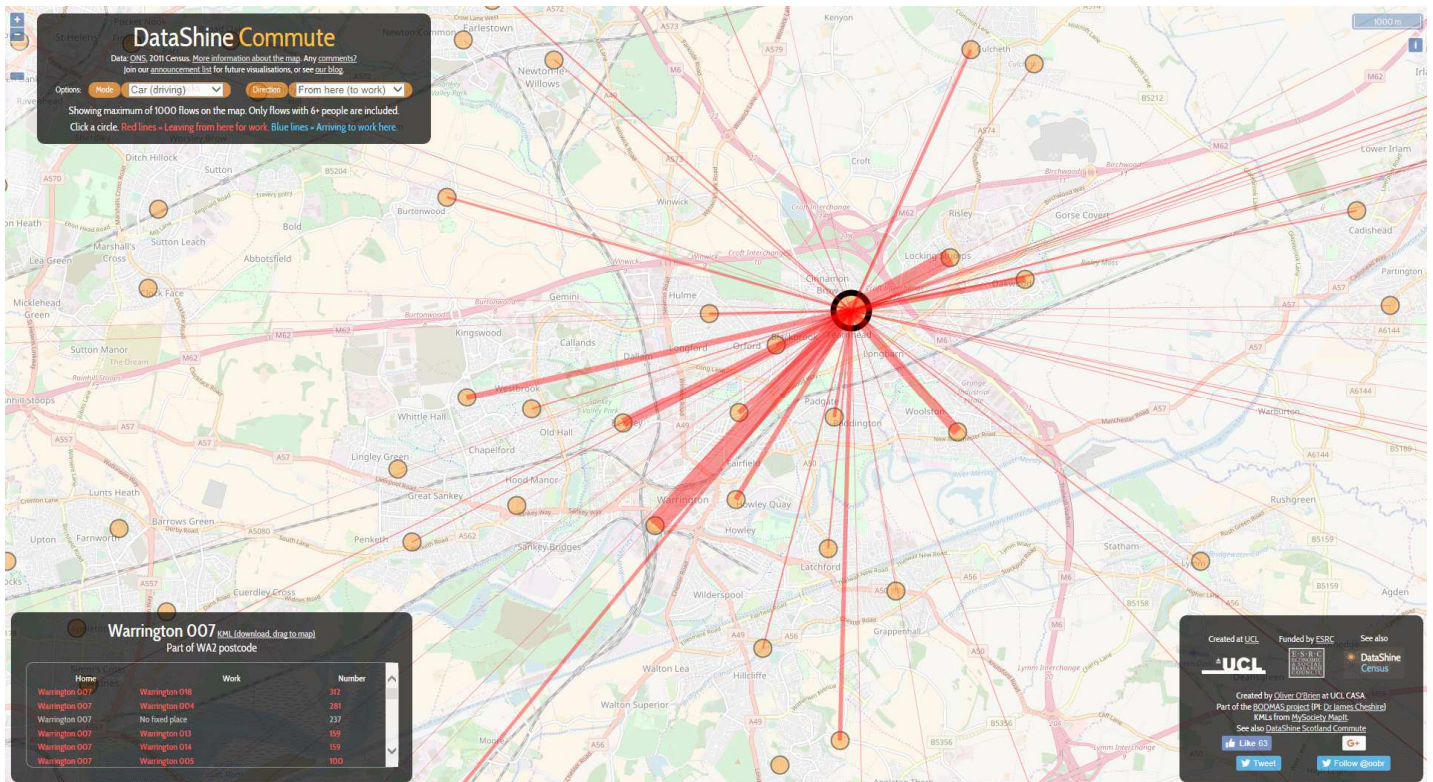
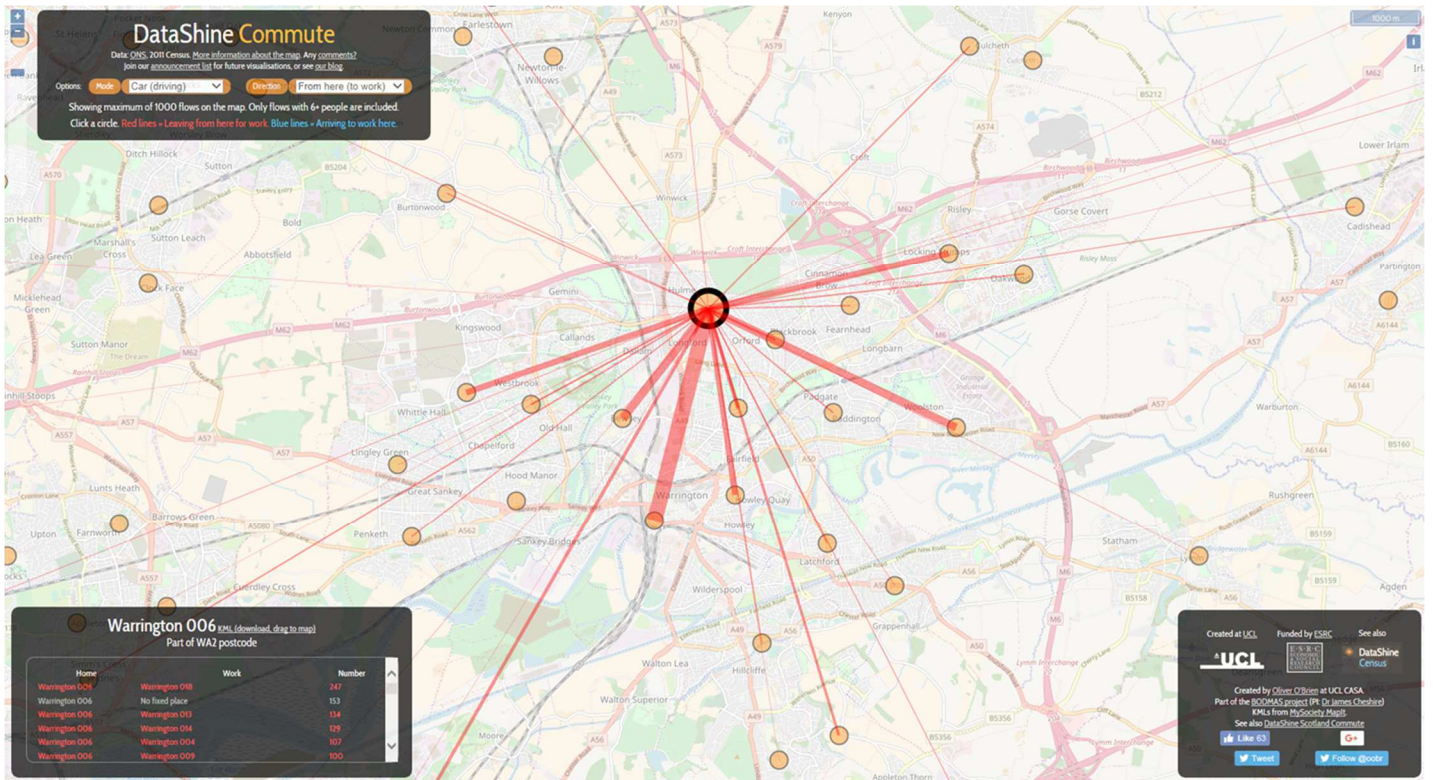
The SATURN model of the area around Peel Hall Farm has been used to provide with and without development models for 2025 (partial development build out) and 2030 (full build out). An additional 2030 scenario was tested with full build out and a through route connecting the A49 and Mill Lane / Blackbrook Avenue.

A summary of the main issues that require further attention are:

- Background growth – has an appropriate level of background growth been applied for all trip purposes and vehicle types. Have committed developments been modelled correctly?
- Trip distribution – are the parent zones selected suitable (actual modelled distribution and age of OD data)? Comparison with census JTW data would suggest that the distribution is not wide reaching enough, with 20% of development trips going to / from other residential areas in Hulme and Orford.
- Trip rates – the assumptions and evidence base behind the discounting, internalisation, pass-by and transfer needs to be made clearer. The trips rates themselves seem reasonable, though for some land use type the number and age of surveys may be questioned.
- Model stability – the delays, queues and V/C information all highlighted a problem around Oakwood Gate roundabout, on the Oakwood Gate and Birchwood Way WB approaches, and at other areas where traffic enters the model. The PM model had 50% more delay than the AM model. Links operating way over 100% V/C can cause the model to be unstable as small changes in flow lead to big changes in delay.
- Reporting – a descriptive narrative is required to explain exactly what is causing changes to journey times, delays, queues and V/C rather than just reporting the change itself. How does the development traffic interact with existing traffic? Also flow plots would be beneficial.

Colin Wright
Principal Transport Planner

Appendix A



RESPONSE TO WSP FORECASTING REPORT REVIEW (Rev. A)

PROJECT: Peel Hall, Warrington

REVIEW DATE: 27 November 2017

REF.: APP/M0655/W/17/3178530

Land at Peel Hall, Warrington

Outline application for a new residential neighbourhood including C2 and C3 uses; local employment (B1 uses); local centre including food store up to 2,000m², A1-A5 (inclusive) and D1 use class units of up to 600m² total (with no single unit of more than 200m²) and family restaurant/pub of up to 800m² (A3/A4 use); site for primary school; open space including sports pitches with ancillary facilities; means of access and supporting infrastructure at Peel Hall, Warrington.

Future Year Highway Networks

1. Provide detail regarding the level of development represented by the three zones along the through route. The location of the trip loading point may have an influence on where it accesses onto the existing highway network.?

The through route has been constructed within the SATURN model based on the masterplan. The loading points are as per Technical Note HTP/TN/21 with the addition of splitting the 850 dwellings which load onto the through route equally into two zones, one to the east and one to the west of the through route.

An annotated screen shot of the through route in SATURN is contained in Appendix 1.

2. Can confirmation be made that signal timings are consistent between Do Minimum and Do Something options and signal optimisation has not been applied?

Signal timing are not optimised in any of the future year scenarios and remain consistent between the Do Something and the Do Minimum.

Future Year Trip Matrix Development

Background Growth

3. What is the benefit for over predicting the background growth? If anything this may dilute the impact of the development trips?

This is as per previous agreements from 2016, and was reduced twice; once in terms of committed developments and once in terms of updated NTEM data.

4. The forecasting methodology, specifically the use of the NTM function, is not normally applied when forecasting from a strategic model. Typically TEMPRO OD factors for each trip type would be used for the fully observed trips and NTM for trips that have an origin or destination in the external area.

Data used as per previously agreed strategy.

5. TEMPRO and NTM will only provide growth factors for cars. How has LGV and HGV growth been defined?

Scope agreed early 2016.

6. Are these developments small enough to exclude from explicit modelling?

This is as per agreement with WBC and HE, and set out in HTp/TN/07/Addendum.

7. Comparison of the number of jobs each site will create and the growth predicted by TEMPRO for the relevant MSOA should be provided. Then a decision should be made on whether they are accounted for within TEMPRO.

Previous methodology agreed.

8. Neither of these sites are in Warrington 006. The current forecasting methodology will not model any changes in trip patterns brought about by these developments.

Previous methodology agreed.

Trip Generation

9. The re-distribution of the traffic may change the turning proportions at the junction which may affect the operation of Poplars Avenue. No evidence has been provided to demonstrate no impact due to pass-by trips. Are these pass by trips modelled in the SATURN model?

Pass-by as per previous agreed strategy.

Our stand alone site access modelling to account for impact of pass-by trips and the pass-by trips are accounted for in the SATURN model.

10. The 30% by-pass trip rate has been derived by assuming the same trip reduction as the Omega development. Can a justification for the 30% reduction be provided based on current best practice? 'TRICS Research Report 14/1: Pass-By & Diverted Trips Report' states that a standard trip rate reduction for pass-by and converted trips is no longer considered applicable and that a first principles approach should be undertaken. No evidence has been provided to suggest this is the case.

As per agreed strategy dating from 2016.

11. No account for has been provided for transferred or diverted trips. For example traffic may divert from the A49 which may impact upon the operation of the local network. Can more information be provided to explain why these trip types have not been included in the analysis?

Approach already agreed.

12. Technical Note HTp/1107/TN/13 which is the applicant's response to the HE contradicts this and states that 30% of trips will be pass-by (Table 6-1). More information should be provided to explain the inconsistencies between the discounting rates between the applicant's response to the HE and Technical Note HTp/1107/TN/19.

HTp/TN/13 dated July 2016 was superseded by responding to WBC December 2016 consultation comments on trip discounting.

13. More information should be provided on the rationale for the 50% value as there appears to be no evidence submitted to substantiate this proportion.

Response in HTp/TN/13.

14. Are trips from the 330 dwellings accessed via Poplars Avenue to the west of the site included in the internalisation discount? Access to the primary school from these 330 dwellings will be restricted due to the proposed bus gate and the vehicle trips will have to travel on the local highway network to access the school. Has this been accounted for in the modelling?

The local centre car park can be reached from both the Poplars Avenue central access junction and the Birchwood Avenue/Mill Lane main site access junction. It was agreed with highway officers at WBC in March 2016 meeting that this was acceptable.

15. Table 4.3 represents undiscounted trips from 2030 scenario without through route. The discounted trips should be shown as this is the number of trips that are loaded onto the network. The correct tables are Table 5.2 (HTp/1107/TN/19, without through route) and Table 3.10 (HTp/1107/TN/21, with through route).

It has been confirmed that the correct discounted trips were loaded into the model. Table 4.3 of the forecasting report has been updated accordingly with these discounted values and an updated Forecasting Report provided.

16. At this stage of the report, it would be beneficial to present some matrix totals. This would show base year and forecast years with and without developments.

This can be provided going forward.

Trip Distribution

17. Can the trips groupings be defined? Are they:
- a. Residential – all trips to/from a residential property (including commuting)
 - b. Employment – employers business trips (non-home based only?)

- c. Other – other trips (non-home based only?)

This is confirmed; the trips have been split out in SATURN to provide an improved response to routing within the model.

18. Do the parent zones provide a realistic distribution? Looking at Fig 4 (AM from PH), Fig 8 (AM to PH), Fig 12 (PM from PH) and Fig 16 (PM to PH) it can be seen that roughly 20% of the trips stay within Hulme and Orford (original model zones 67, 69, 70 and 152).

The distribution was carried through from the WS VISUM model, into the VISSIM and subsequently the SATURN model. Zone locations from the VISSIM model remain in the same locations, but where required have been disaggregated.

19. Census JTW information for Warrington 006 and 007 (included in Appendix A) shows largest proportions are to Warrington town centre, Birchwood and Woolston Grange industrial park? The AM Residential from PH and PM Employment to PH distribution plots should reflect this.

The approach and gravity model has already been agreed back in 2016; however consideration can be given to updating this and providing a sensitivity test in a future run of the SATURN model.

20. Zone 405 (land north of M62 bounded by Winwick Link) shows trips in Fig 13 Residential trips to Peel Hall. Is this correct? There are no development trips at any other time period or trip type.

Trip distribution Taken from the gravity model.

21. The distributions are taken from the multi modal model with full zone structure. Has any change in routing for forecast Do Minimum scenarios been taken in to account? There are quite a number of routes to Warrington town centre, the distribution may change, e.g. increase of traffic on A49 transferring trips to A50.

No change in routing for forecast Do Minimum scenarios has been taken into account.

22. Can the convergence statistics be provided, in line with DfT WebTAG Unit M3.1 Table 4.

Yes, this will be provided going forward.

23. Provide explanation for omission of M62 journey route from analysis.

The M62 journey time information is provided in the updated Forecasting Report (eastbound and westbound directions).

24. Analysis of the residential access roads, e.g. Poplars Avenue, would have been useful especially with regard to through route analysis.

This can be provided going forward.

25. Can a narrative be provided to explain why the journey times are changing, e.g. is it link capacity, green times, opposing turning movements etc. How are the development trips and their distribution impacting on journey times?

Almost all journey times are forecast to experience an increase as a result of the additional development trips upon the network. Traffic signal timings have remained the same between the Do-Minimum and Do-Something. So as the volume of development trips increases through junctions, delays also increase, since it takes vehicles longer to traverse the network.

The largest impact on journey times is experienced during the AM peak along Blackbrook Avenue / Mill Lane because the route has a number of roundabout junctions and a single signalised junction. Roundabout junctions are more sensitive to changes in traffic flows and so a greater increase in delays is forecast compared to other routes such as the A49, which is predominately signal controlled.

26. The through route decreases journey time NB on A49, this seems counter intuitive as a new signalised junction will add delay. Can this be explained?

The quicker journey times forecast along the A49 in the 'Through Route' models compared to the 'Do-Something' models are a direct result of the reduction in traffic on the A49 north of the M62. The reduction in traffic results in less delay on the A49 Newton Road northbound approach to its junction with the A49 Winwick Link Road and the link to the north of the roundabout up to its junction with Golborne Road.

Providing the 'Through Route' opens up an alternative route from the A49 south of the M62 to destinations accessed off Myddleton Lane and the A573 Golborne Road. Traffic is forecast to transfer to the through route, and route via Delph Lane, consequently reducing delays to vehicles waiting at the northbound stop line of the A49 Newton Road, traffic signals at the A49 Winwick Link Road roundabout junction, and those completing the right turn to Golbourne Road from the A49 Newton Road.

Impacts on Delay

27. As with the journey times section, can a narrative be provided explaining the increases and how development trips influence changes in link delay? The same junctions are mentioned for each scenario yet there are other links with increases in delay greater than 40 seconds that are not discussed.

AECOM to review/as above.

28. The total delay plots provided for the through route assessment reveal very large delays entering the model at Oakwood Gate (AM and PM), Birchwood Way (PM) and M62 J9 EB off slip (PM). This could have an effect on model stability and result in trips not being able to enter the network. The calibration and coding in these areas should be reviewed.

It is recognised that the junction was forecast to experience large queues within the VISSIM model also, which were confirmed by observations made during site visits. As the traffic flows increase in the forecast years, the queues increase.

We consider the model is more than adequate to assess the development impact.

29. The total delay in the PM models is about 50% higher than the AM models. Is this solely due to the delay identified above at Oakwood Gate / Birchwood Way junction. It would be expected that the models carry similar amounts of delay.

The forecast delays at Oakwood Gate accounts for almost all of the additional 50% in the AM peak hour model.

30. The introduction of the through route increases delay in the AM model but reduces delay in the PM when compared to the Do Something models without the link road. Can a narrative be provided to explain this?

To be provided in more detail going forward – attributed to tidal nature of traffic flows entering and leaving Warrington on this route.

Queuing

31. As with journey times and delay can an explanatory narrative be provided?

As above/to be reviewed going forward.

32. The through route total queue length plots show large queues (greater than 100 pcus) in the PM on the approaches to Oakwood Gate roundabout, M6 J9 EB off slip and A49 NB approach to Long Lane junction? Are these realistic? Is all traffic getting through the network? Total queue length plots would be useful for Do Minimum and Do Something without through route.

Difference in Queue length plots have been provided as part of Appendix F of the Forecasting Report, these are supported by total queue length plots also provided in Appendix 2 of this document.

The Oakwood Gate junction currently experiences significant delays and queueing in the PM peak on the eastbound Birchwood Way approach and northbound Oakwood Gate approach, so it is expected delays at the junction would be significant in the future year models. The forecast year VISSIM models predict similar queue lengths and delays across the junction.

In reality it is likely drivers may reroute to avoid the Oakwood Gate junction if delays of such magnitude were realised. However, as this forms the edge of the study area, and the alternative routes fall outside of the study area the model does not reflect this behaviour and so the demand remains fixed.

Checks between demand and actual flows at Oakwood Gate are forecast to experience minor differences suggesting all trips are getting through the network.

Given the level of queueing across the existing network within the the study area, the forecast queue lengths are believed to be reasonable in the future years of 2025 and 2030.

Assessment of Impact of Volume over Capacity

33. Again can a narrative be provided?

As above/to be reviewed going forward.

34. What is the capacity of each link? Is it appropriate for the link type? No flows have been provided so cannot infer what increase in 13% V/C on Poplars Avenue means for flow.

The calculated link capacities have been extracted from SATURN and placed alongside the actual flows in the supporting spreadsheet.

35. Large V/C occur M62 WB after J9 merge, M62 J9 EB off slip, and the approaches to Oakwood Gate roundabout. Coding should be checked in these areas.

The coding of Junction 9 and the M62 motorway has been checked and is believed to be representative of the existing motorway layout. V/C values above 90% are forecast on the M62 mainline in a westbound direction underneath Junction 9. The eastbound direction M62 mainline is forecast to experience V/Cs approaching 90%.

These values do not differ between the Do-Minimum and Do-Something models.

Westbound on and off slips are forecast to experience a small 1% increase in V/C between the Do-Minimum and Do-Something models, however forecast V/C values are all forecast to be lower than 61%. Eastbound the forecast increases in V/C on the off slip to the M62 is a 4% increase from 119% in the Do-Nothing scenario, highlighting the approach is already at capacity and the development traffic has a minimal impact.

The high V/C values on the eastbound M62 link are because it is coded as an external link and should benefit from the same / higher than the preceding link as the section of motorway benefits from an additional lane. The coding of the motorway link to avoid the high V/C will be updated within the sensitivity test models.

It should be noted the eastbound motorway link is forecast to experience a V/C of 139% in the Do-Minimum, and 140% in the Do-Something scenarios, highlighting that the development traffic is forecast to have a small impact on the motorway network.

The coding of Oakwood Gate roundabout has been checked and is believed to be representative of the existing junction layout. Sporadic hostile driver behaviour has been observed at the junction, where drivers were observed utilising the hatched areas to access the circulatory lanes, however the junction has not been coded to reflect this behaviour, since it is considered not to be consistent.

36. The difference plots are difficult to read with many labels overlapping especially around multi-node junctions. Can there appearance be improved? Also all plots are labelled Volume of Capacity, should be Volume over Capacity.

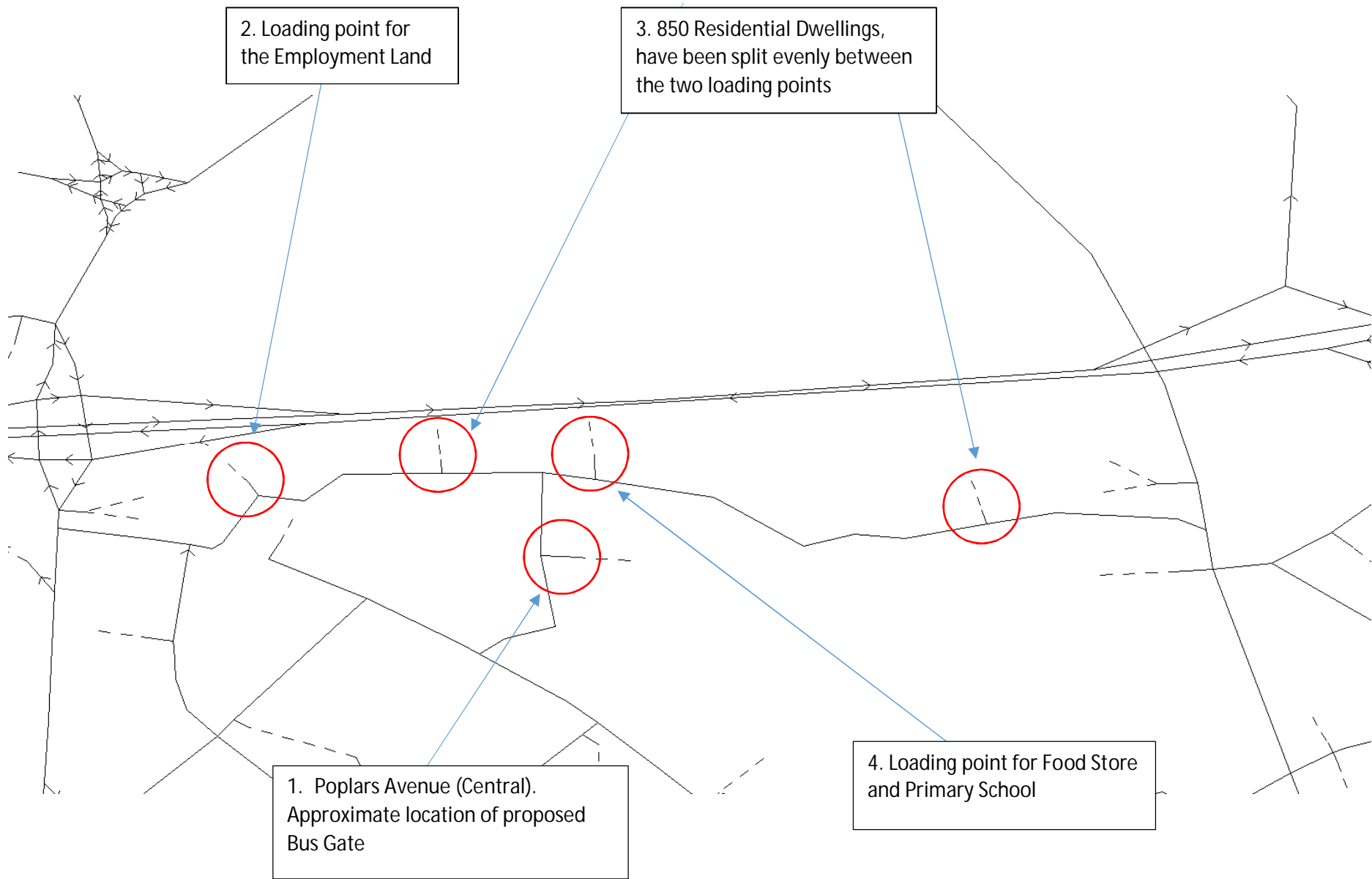
This will be taken into account going forward.

Other

37. It would be beneficial to see some flow plots, both total and difference. Also select link analysis plots to show the routing to and from the developments, and also to identify the non-development traffic using the through route.

To be provided going forward.

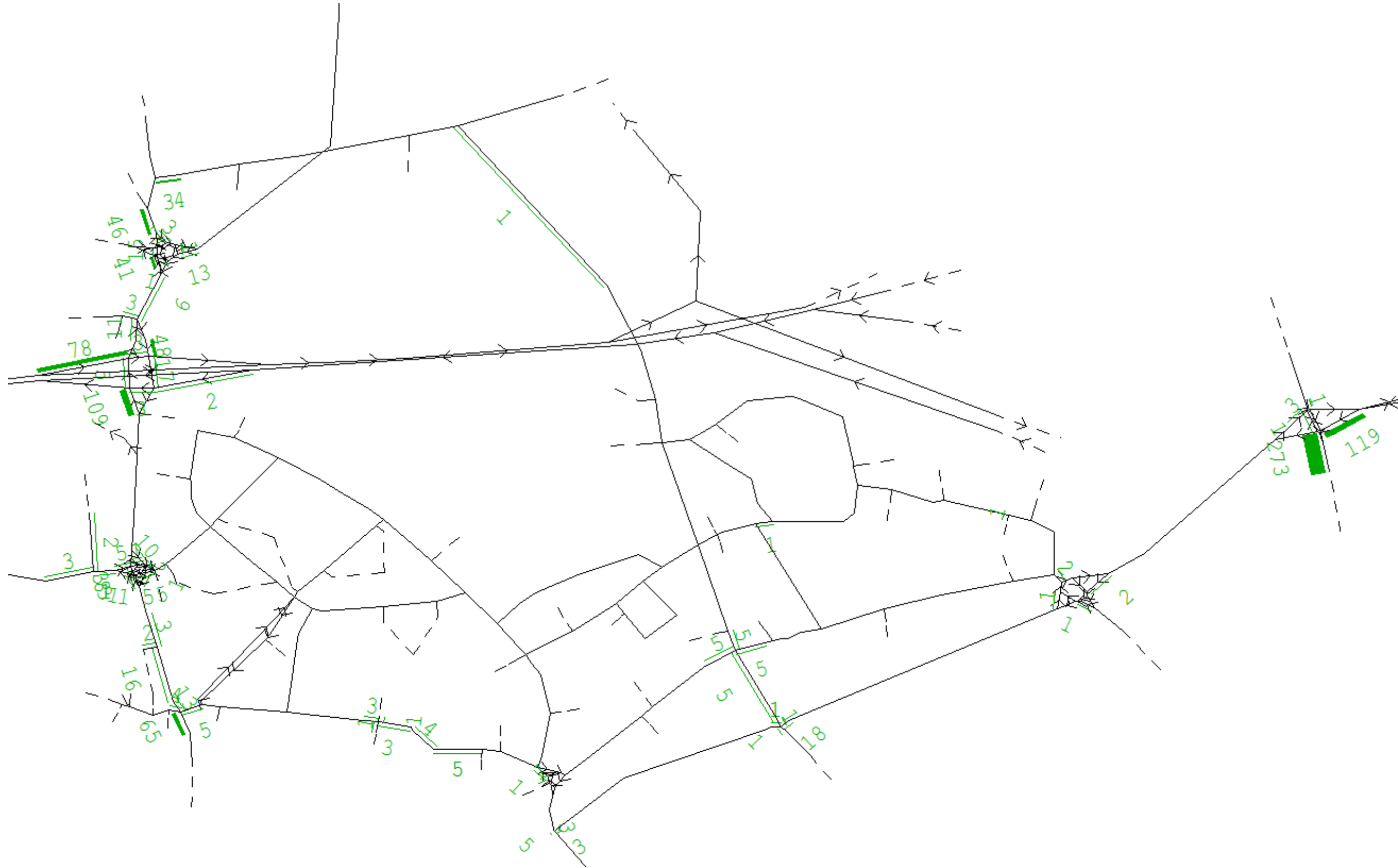
Appendix 1



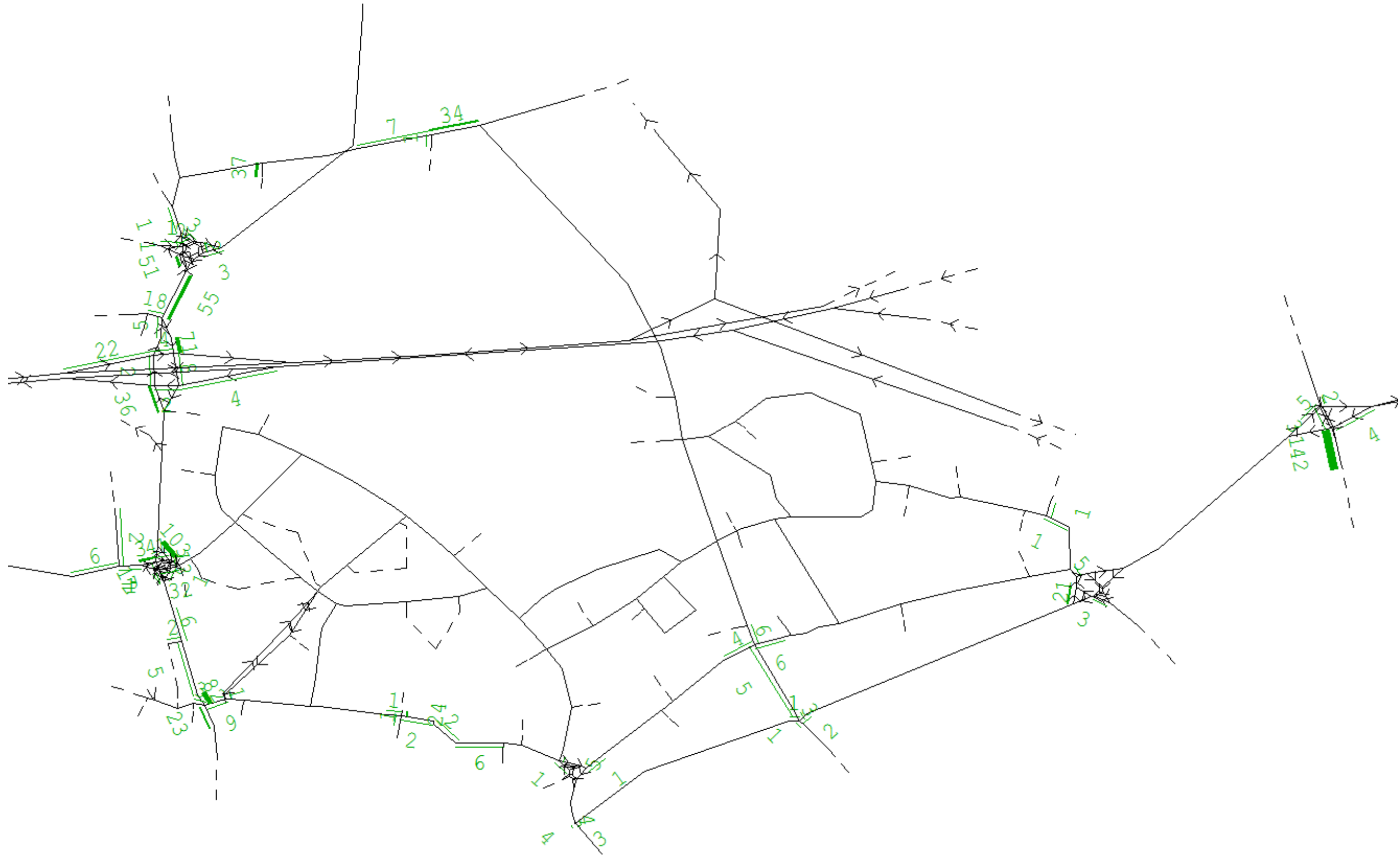
Appendix E, Through Route Trip Loading Points

Appendix 2

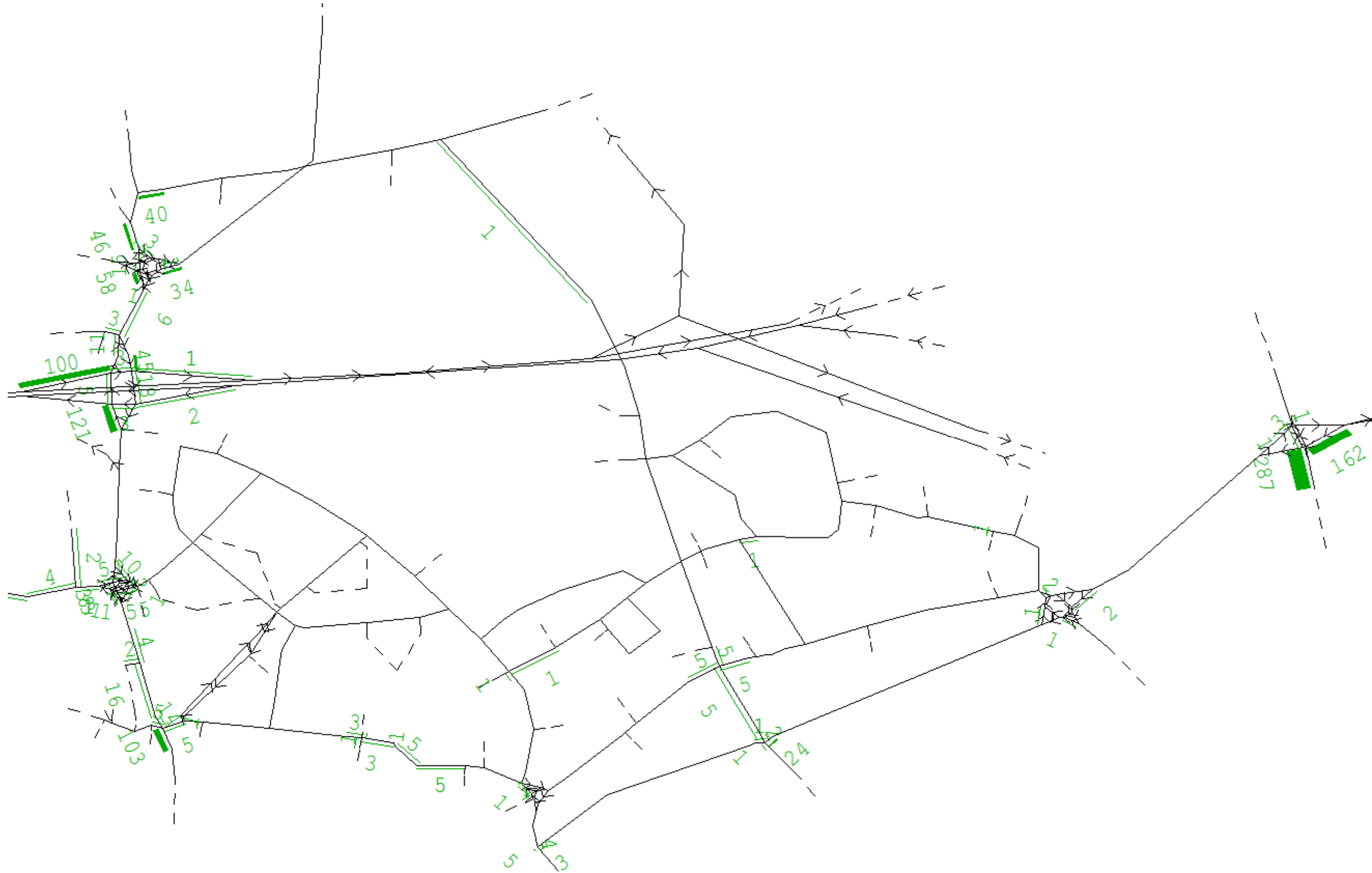
2025 Do-Minimum PM Peak Period Average Queue Plot



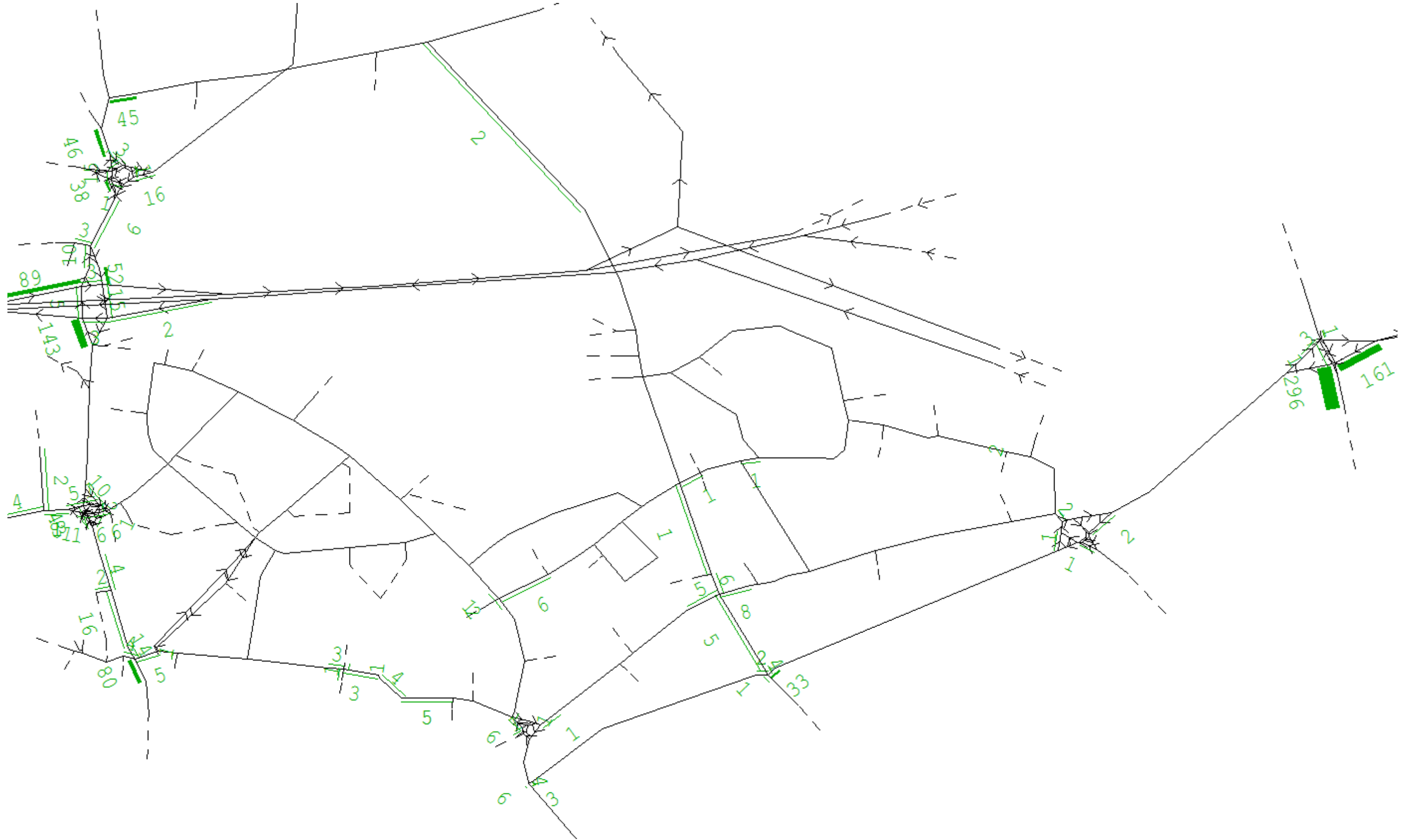
2030 Do-Minimum AM Peak Period Average Queue Plot



2030 Do-Minimum PM Peak Period Average Queue Plot



2025 Do-Something PM Peak Period Average Queue Plot



Appendix 62

Junction Location Plan



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- APPROXIMATE SITE BOUNDARY SHOWN
- Junction 1 - Winwick Link Road/Newton Road/A49
 - Junction 2 - A49/Delph Lane Retail Park
 - Junction 3 - M62 Junction 9
 - Junction 4 - Cromwell Avenue/Calver Road
 - Junction 5 - A49/Sandy Lane West
 - Junction 6 - A49/A50
 - Junction 7 - A50/Hallfields Road
 - Junction 8 - Blackbrook Avenue/Innsall Road/Hilden Road
 - Junction 9 - A574 Birchwood Way/A50 Orford Road
 - Junction 10 - A49/Birch Avenue
 - Junction 11 - Cotswold Road/Through-Route Alignment
 - Junction 12 - Cleveland Road/Poplars Avenue
 - Junction 13 - Howson Road/Poplars Avenue
 - Junction 14 - Statham Avenue/Poplars Avenue
 - Junction 15 - A50 Orford Green/Poplars Avenue
 - Junction 16 - Sandy Lane/Northway
 - Junction 17 - A50/Northway
 - Junction 18 - Sandy Lane West/Cotswold Road/Cleveland Road/Sandy Lane
 - Junction 19 - Cromwell Avenue/Europa Boulevard/Callands Road
 - Junction 20 - Capesthorpe Road/Poplars Avenue
 - Junction 21 - A50 Orford Green/Hilden Road/A50 Orford Road
 - Junction 22 - Ballater Drive/Mill Lane/Enfield Park Road/Blackbrook Avenue
 - Junction 23 - Capesthorpe Road/Blackbrook Avenue/Enfield Park Road
 - Junction 24 - Birchwood Way/Blackbrook Avenue
 - Junction 25 - Enfield Park Road/Crab Lane
 - Junction 26 - Birchwood Way/Crab Lane/Woolston Grange Avenue
 - Junction 27 - Birchwood Way/Oak Lane Gate
 - Junction PH1 - Employment site access priority junction with Cotswold Rd and Poplars Ave
 - Junction PH2 - Site access ghost right turn priority junction with Poplars Avenue
 - Junction PH3 - Windermere Avenue priority junction with Poplars Avenue
 - Junction PH4 - Mill Lane priority junction with Delph Lane
 - Junction PH5 - Peel Hall site access roundabout junction with Mill Lane
 - Junction PH6 - Peel Hall Through-Route A49/Poplars Avenue signalised junction

ISSUE	REASON FOR REVISION	DATE
B	Updated PH4 annotation	29/01/18
A	Junction annotations added (SATURN model)	29/09/17

PROJECT:
**PEEL HALL,
 WARRINGTON**

CLIENT:
**SATNAM MILLENNIUM
 LTD**

PROJECT REFERENCE:	DRAWING NUMBER:	SCALE:
1107	23	Not to Scale

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TITLE: STUDY AREA		
DATE:	DRAWN BY:	CHECKED:
27/01/15	FB	DT

Appendix 63

AECOM SATURN Summary Report

Project:	Peel Hall	Job No:	60487959
Subject:	SATURN Modelling Results		
Prepared by:	Chris Peachey	Date:	28/09/2017
Checked by:	Catherine Zoeflig	Date:	28/09/2017
Approved by:	Catherine Zoeflig	Date:	28/09/2017

Introduction

Following the production of the extended M62 Junction 9 VISSIM model, AECOM were commissioned by SATNAM Millennium (SM) (Under the instruction of Highgate Transportation (HTp)) to produce a SATURN model for the same modelled area.

This Technical Note has been developed to provide a clear summary of the impact of the development proposals, on the local highway network, at the future years. The results from the following scenarios have been considered in order to identify the specific impacts of the development traffic upon each junction arm:

- a. Do Something (Base + committed + growth + development) (AM and PM) 2025 (Part-build out development profile (information on part-build out to be supplied by Highgate)),
- b. Do Something (Base + committed + growth + development) (AM and PM) 2030 (Full development profile), and
- c. Sensitivity test for 'with development' in 2030 (Full development profile) to test for a full through route scenario between the A49 and Mill Lane/Blackbrook Avenue open for all traffic. (Base + committed + growth + Development + through route). (AM and PM).

Results

The results of the SATURN modelling are presented, (As Volume over Capacity (VoCs) and Queues (Qs)), within the figures contained within Appendix A at the end of this report.

Links with a VoC below 85% are considered to be operating within capacity, with an additional 15% reserve capacity to cope with any increases in traffic flows. Therefore, any links with a VoC % above 85 have been highlighted as they are in danger of becoming over saturated, since they do not have any additional reserve capacity to cope with increases in traffic volumes. Where a junction is operating over capacity with a value over 85% we would expect to observe issues relating to increases in delay, queueing, and blocking back.

In summary the junctions affected include:

- 3) Junction 9 M62,
- 5) A49/Sandy Lane West,
- 6) A49/A50,
- 8) Blackbrook Ave/Insall Rd/Hilden Rd,
- 10) A49/ Birch Ave,
- 15) A50 Orford Green/ Poplars Ave,
- 20) Capesthorpe Rd/ Poplars Ave,
- 23) Capesthorpe Rd/ Blackbrook Ave/ Enfield Park Rd,
- 24) Birchwood Way/ Blackbrook Ave,
- 25) Enfield Park Rd/ Crab Lane,
- 27) Birchwood Way/ Oakwood Gate, and
- PH6) Through Route joining the A49

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The following paragraphs identify specifically where the addition of the development traffic results in an increase in VoCs or Qs:

a. 2025 AM (With Development)

The following junctions and arms have been identified to be experiencing higher levels of VoC and queueing compared to the 2025 AM Do Minimum scenario.

- **Junction 6** - A49/A50 Additional saturation forecast on arms C (A50 East) and D (A49 south);
- **Junction 24** - Birchwood Way / Blackbrook Ave – Arm C (Birchwood Way East); and
- **Junction 27** - Birchwood Way/ Oakwood Gate – Arm B (Birchwood Park Avenue).

b. 2025 PM (With Development)

The following junctions and arms have been identified to be experiencing higher levels of VoC and queueing compared to the 2025 PM Do Minimum scenario.

- **Junction 8** - Blackbrook Ave/ Insall Rd/ Hilden Rd – Arms A (Hilden Road) and C (Insall Road);
- **Junction 15** - A50 Orford Green/ Poplars Avenue – Arm C (A50 from Orford Road roundabout);
- **Junction 20** - Capesthorpe Road/ Poplars – Arm C (Poplars Avenue South);
- **Junction 24** - Birchwood Way/ Blackbrook Ave – Arms A (Birchwood Way West), B (Blackbrook Ave North), and C (Birchwood Way East);
- **Junction 25** - Enfield Park Road/ Crab Lane – B (Crab Lane); and
- **Junction 27** - Birchwood Way/ Oakwood Gate – Arm B (Birchwood Park Avenue).

c. 2030 AM (With Development)

The following junctions and arms have been identified to be experiencing higher levels of VoC and queueing compared to the 2030 AM Do Minimum scenario.

- **Junction 3** - M62 J9 – Arms A (East off slip), B (A49 North), and C (M62 West off slip);
- **Junction 15** - A50 Orford Green/ Poplars Ave – B (Poplars Avenue); and
- **Junction 23** - Capesthorpe/Blackbrook Ave/ Enfield Park Rd – B (Blackbrook Ave North); and
- **Junction 27** - Birchwood Way/ Oakwood Gate – Arm A (Birchwood Park Avenue), Arm C (Birchwood Avenue East), and D (Oakwood Gate).

d. 2030 PM (With Development)

The following junctions and arms have been identified to be experiencing higher levels of VoC and queueing compared to the 2030 PM Do Minimum scenario.

- **Junction 3** - M62 J9 – Arms A (East off slip), B (A49 North), and C (M62 West off slip);
- **Junction 5** - A49/ Sandy Lane West – Arms B (A49 north) and C (Sandy Lane W);
- **Junction 8** - Blackbrook Ave/ Insall Rd/ Hilden Rd – Arm B (Blackbrook North);
- **Junction 15** - A50 Orford Green/ Poplars Ave – Arm C (A50 from Orford Road);
- **Junction 20** - Capesthorpe Road/ Poplars – Arms C (Poplars South) and D (Capesthorpe South);
- **Junction 23** - Capesthorpe/Blackbrook Ave/ Enfield Park Rd – Arm C (Enfield Park Rd);
- **Junction 24** - Birchwood Way/ Blackbrook Ave – Arms A (Birchwood Way West) and B (Blackbrook Ave North);
- **Junction 25** - Enfield Park Road/ Crab Lane – Arm B (Crab Lane); and
- **Junction 27** - Birchwood Way/ Oakwood Gate – Arm C (Birchwood Avenue East) and D (Oakwood Gate).

e. AM Through Route (With Development)

The Through Route option within SATURN on the A49 North has been modelled as a two lane entry. The following junctions and arms have been identified to be experiencing higher levels of VoC and queueing compared to the 2030 AM Do Something scenario.

- **Junction 10** - A49/ Birch Ave –Arm A (A49 North); and
- **PH6 – Through Route joining the A49** – Arm A (A49 North)

f. PM Through Route (With Development)

The following junctions and arms have been identified to be experiencing higher levels of VoC and queueing compared to the 2030 PM Do Something scenario.

- **PH5 – Through Route joining Blackbrook Avenue** - Arm C (Blackbrook Avenue South)
- **PH6 – Through Route joining the A49** - Arm C (A49 South)

Conclusion

It is therefore suggested that the aforementioned junctions would benefit from further, more detailed modelling analysis, if necessary (Subject to further discussions with Warrington Borough Council (WBC)).

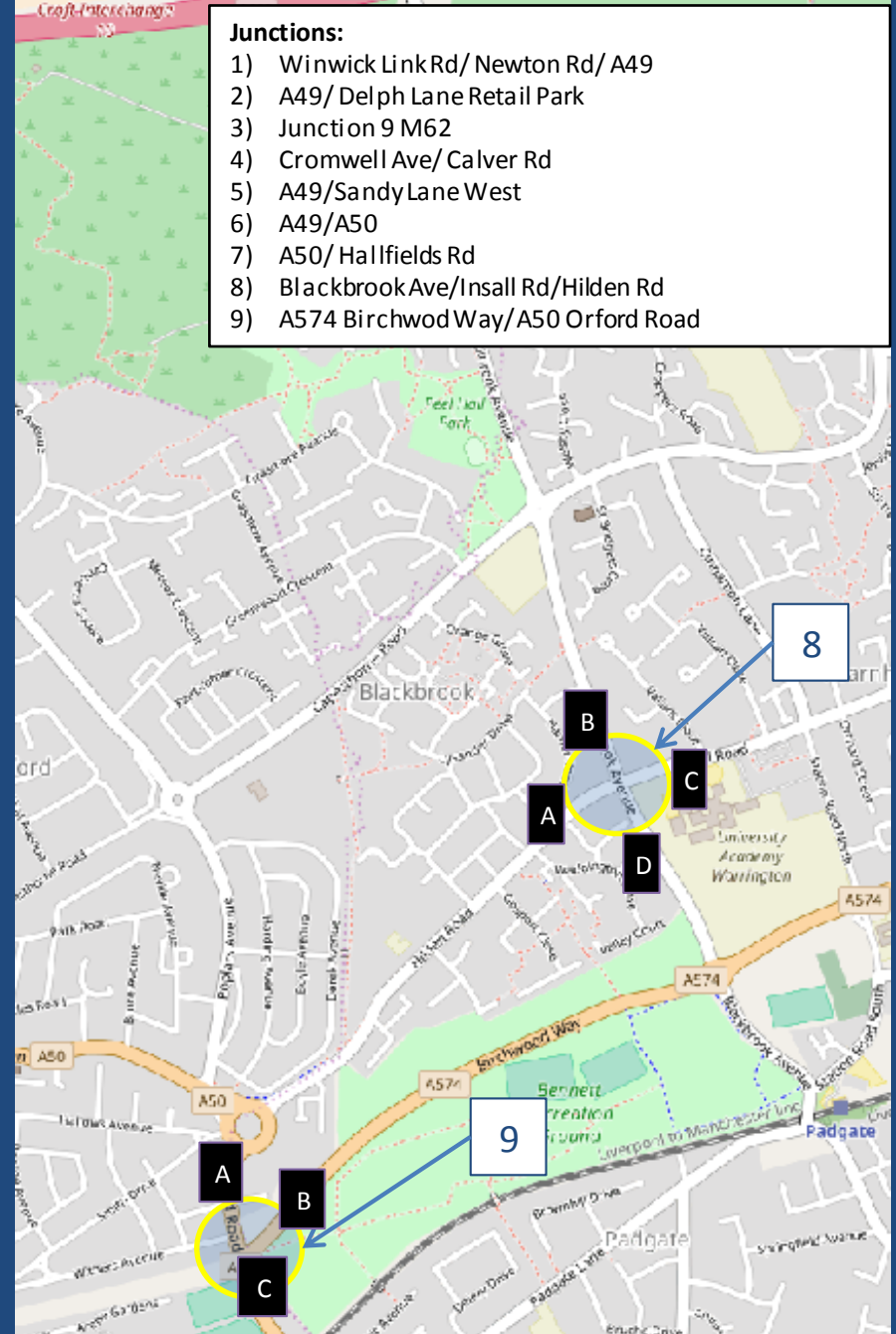
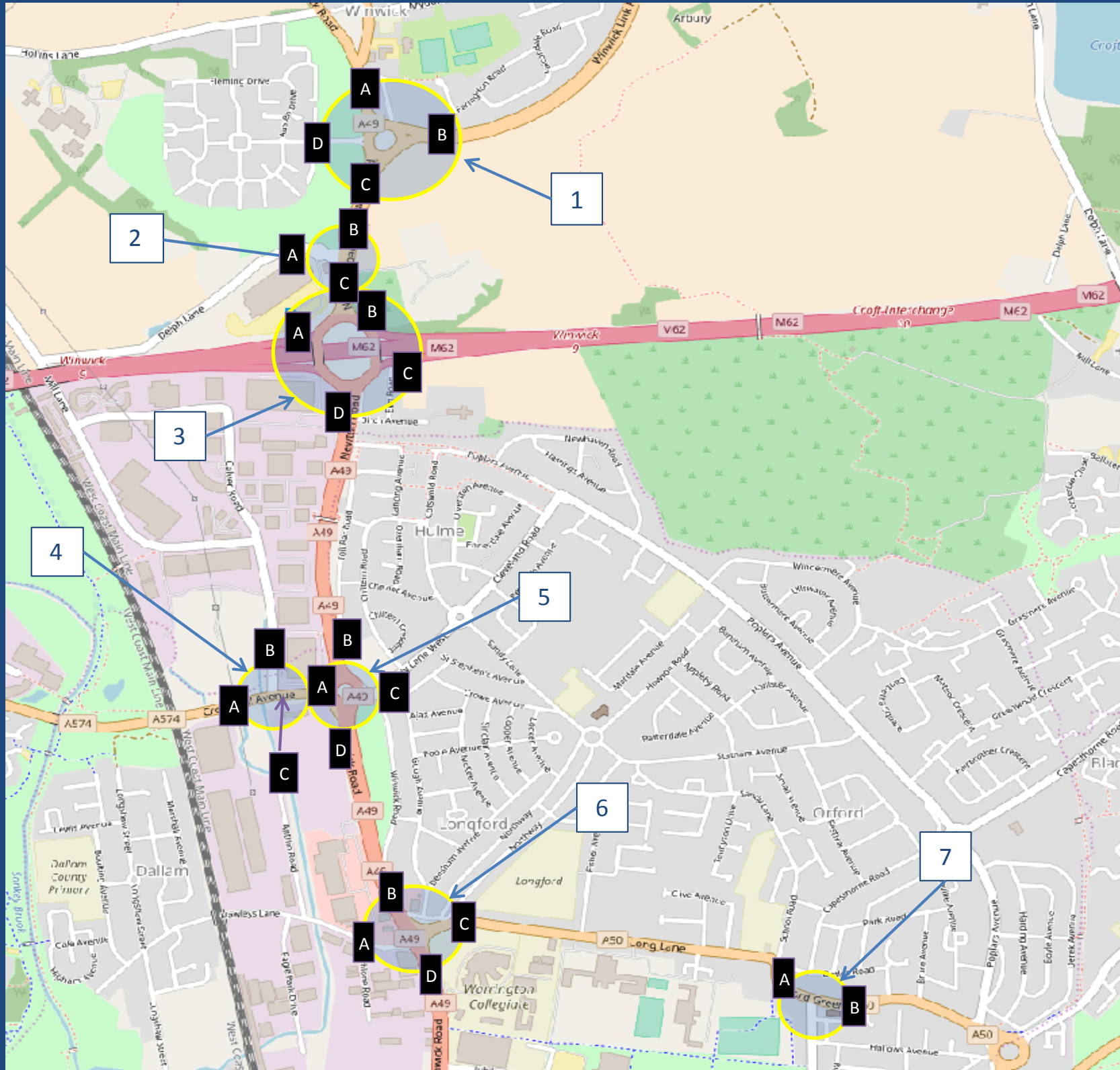
Appendix A – SATURN Model Results

BASE YEAR SIGNALISED JUNCTIONS

VoC (%) & AVERAGE QUEUE (PCUs)

Junctions:

- 1) Winwick Link Rd/ Newton Rd/ A49
- 2) A49/Delph Lane Retail Park
- 3) Junction 9 M62
- 4) Cromwell Ave/ Calver Rd
- 5) A49/Sandy Lane West
- 6) A49/A50
- 7) A50/Halfields Rd
- 8) Blackbrook Ave/Insal Rd/Hilden Rd
- 9) A574 Birchwod Way/A50 Orford Road



Junction 1	Junction 2	Junction 3	Junction 4	Junction 5	Junction 6	Junction 7	Junction 8	Junction 9
AM A: VoC=61, Q=3 B: VoC=54, Q=2 C: VoC=96, Q=5 D: VoC=20, Q=1	AM A: VoC=30, Q=3 B: VoC=50, Q=4 C: VoC=59, Q=4	AM A: VoC=82, Q=17 B: VoC=102, Q=21 C: VoC=61, Q=3 D: VoC=80, Q=6	AM A: VoC=73, Q=5 B: VoC=51, Q=1 C: VoC=31, Q=1	AM A: VoC=62, Q=7 B: VoC=85, Q=66 C: VoC=34, Q=2 D: VoC=25, Q=0	AM A: VoC=28, Q=3 B: VoC=102, Q=59 C: VoC=63, Q=6 D: VoC=66, Q=11	AM A: VoC=34, Q=1 B: VoC=69, Q=5	AM A: VoC=77, Q=2 B: VoC=60, Q=5 C: VoC=66, Q=4 D: VoC=12, Q=4	AM A: VoC=35, Q=0 B: VoC=14, Q=2 C: VoC=35, Q=3
PMVoC A: VoC=75, Q=3 B: VoC=87, Q=4 C: VoC=90, Q=6 D: VoC=12, Q=0	PM A: VoC=31, Q=3 B: VoC=57, Q=6 C: VoC=95, Q=10	PM A: VoC=99, Q=25 B: VoC=104, Q=31 C: VoC=43, Q=2 D: VoC=87, Q=40	PM A: VoC=51, Q=3 B: VoC=67, Q=2 C: VoC=48, Q=1	PM A: VoC=37, Q=4 B: VoC=83, Q=9 C: VoC=58, Q=3 D: VoC=40, Q=0	PM A: VoC=46, Q=9 B: VoC=68, Q=20 C: VoC=43, Q=4 D: VoC=90, Q=18	PM A: VoC=32, Q=3 B: VoC=27, Q=5	PM A: VoC=73, Q=4 B: VoC=58, Q=4 C: VoC=90, Q=4 D: VoC=68, Q=4	PM A: VoC=35, Q=0 B: VoC=43, Q=3 C: VoC=48, Q=3

Key:
VoC – Value over Cost (%)
Q = Average Queue (PCU)

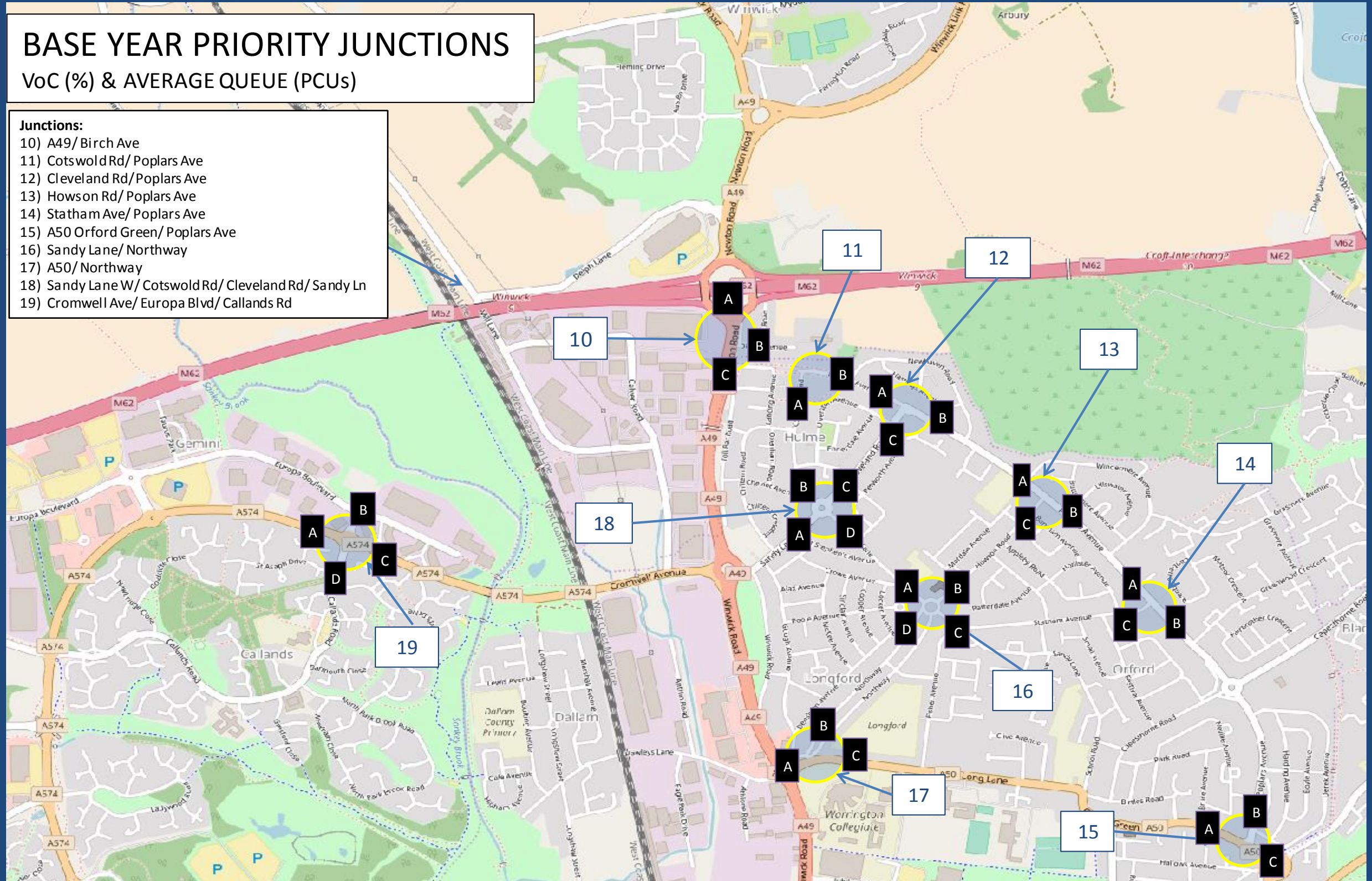


BASE YEAR PRIORITY JUNCTIONS

VoC (%) & AVERAGE QUEUE (PCUs)

Junctions:

- 10) A49/ Birch Ave
- 11) Cotswold Rd/ Poplars Ave
- 12) Cleveland Rd/ Poplars Ave
- 13) Howson Rd/ Poplars Ave
- 14) Statham Ave/ Poplars Ave
- 15) A50 Orford Green/ Poplars Ave
- 16) Sandy Lane/ Northway
- 17) A50/ Northway
- 18) Sandy Lane W/ Cotswold Rd/ Cleveland Rd/ Sandy Ln
- 19) Cromwell Ave/ Europa Blvd/ Callands Rd



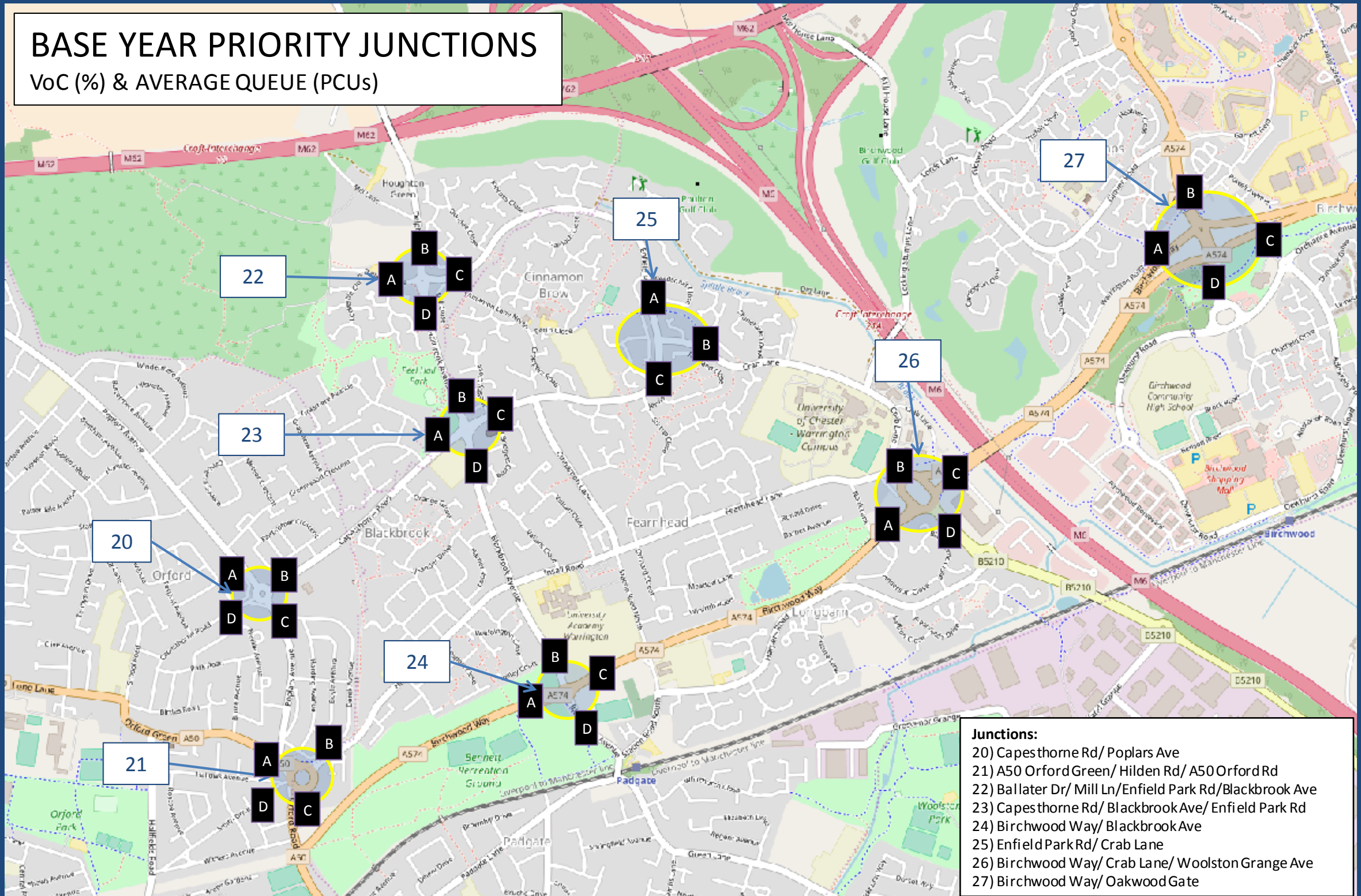
Junction 10	Junction 11	Junction 12	Junction 13	Junction 14	Junction 15	Junction 16	Junction 17	Junction 18	Junction 19
AM A:VoC=49,Q=0 B:VoC=12,Q=0 C:VoC=36,Q=0	AM A:VoC=1,Q=0 B:VoC=1,Q=0	AM A:VoC=4,Q=0 B:VoC=12,Q=0 C:VoC=44,Q=0	AM A:VoC=16,Q=0 B:VoC=11,Q=0 C:VoC=20,Q=0	AM A:VoC=17,Q=0 B:VoC=8,Q=0 C:VoC=4,Q=0	AM A:VoC=19,Q=0 B:VoC=78,Q=1 C:VoC=47,Q=0	AM A:VoC=11,Q=0, B:VoC=10,Q=0 C:VoC=7,Q=0 D:VoC=5,Q=0	AM A:VoC=17,Q=0 B:VoC=16,Q=0 C:VoC=29,Q=0	AM A:VoC=15,Q=0 B:VoC=20,Q=0 C:VoC=7,Q=0 D:VoC=36,Q=0	AM A:VoC=22, Q=0 B:VoC=16,Q=0 C:VoC=40,Q=0 D:VoC=24,Q=0
PM A:VoC=36,Q=0 B:VoC=5,Q=0 C:VoC=47,Q=0	PM A:VoC=0,Q=0 B:VoC=0,Q=0	PM A:VoC=3,Q=0 B:VoC=18,Q=0 C:VoC=40,Q=0	PM A:VoC=16,Q=0 B:VoC=19,Q=0 C:VoC=10,Q=0	PM A:VoC=15,Q=0 B:VoC=14,Q=0 C:VoC=5,Q=0	PM A:VoC=34,Q=0 B:VoC=39,Q=0 C:VoC=57,Q=1	PM A:VoC=9,Q=0 B:VoC=10,Q=0 C:VoC=11,Q=0 D:VoC=16,Q=0	PM A:VoC=31,Q=0 B:VoC=4,Q=0 C:VoC=32,Q=0	PM A:VoC=9,Q=0 B:VoC=29,Q=0 C:VoC=14,Q=0 D:VoC=36,Q=0	PM A:VoC=22,Q=0 B:VoC=19,Q=0 C:VoC=63,Q=0 D:VoC=12,Q=0

Key:
VoC – Value over Cost (%)
Q = Average Queue (PCU)



BASE YEAR PRIORITY JUNCTIONS

VoC (%) & AVERAGE QUEUE (PCUs)



- Junctions:**
- 20) Capesborne Rd/ Poplars Ave
 - 21) A50 Orford Green/ Hilden Rd/ A50 Orford Rd
 - 22) Ballater Dr/ Mill Ln/Enfield Park Rd/Blackbrook Ave
 - 23) Capesborne Rd/ Blackbrook Ave/ Enfield Park Rd
 - 24) Birchwood Way/ Blackbrook Ave
 - 25) Enfield Park Rd/ Crab Lane
 - 26) Birchwood Way/ Crab Lane/ Woolston Grange Ave
 - 27) Birchwood Way/ Oakwood Gate

Junction 20	Junction 21	Junction 22	Junction 23	Junction 24	Junction 25	Junction 26	Junction 27
AM	AM	AM	AM	AM	AM	AM	AM
A:VoC=38,Q=0	A:VoC=49,Q=0	A:VoC=6,Q=0	A:VoC=24,Q=0	A:VoC=73,Q=0	A:VoC=0,Q=0	A:VoC=38, Q=0	A:VoC=83,Q=1
B:VoC=45,Q=0	B:VoC=40, Q=0	B:VoC=36,Q=0	B:VoC=39,Q=0	B:VoC=38,Q=1	B:VoC=25,Q=0	B:Voc= 49,Q=1	B:VoC=70,Q=1
C:VoC=20,Q=0	C:VoC=44,Q=0	C:VoC=14,Q=0	C:VoC=26,Q=0	C:VoC=56,Q=0	C:VoC=38,Q=0	C:VoC=54,Q=0	C:VoC=62,Q=1
D:VoC=22,Q=0	D:VoC=20,Q=0	D:VoC=10,Q=0	D:Voc=17,Q=0	D:VoC=65,Q=0		D:VoC=74,Q=1	D:VoC=78,Q=2
PM	PM	PM	PM	PM	PM	PM	PM
A:VoC=25,Q=0	A:VoC=48,Q=0	A:VoC=2,Q=0	A:VoC=30,Q=0	A:VoC=61,Q=0	A:VoC=0,Q=0	A:VoC=28,Q=0	A:VoC=51,Q=0
B:VoC=48,Q=0	B:VoC=32,Q=0	B:VoC=20,Q=0	B:VoC=22,Q=0	B:VoC=44,Q=0	B:VoC=37,Q=0	B:VoC=49,Q=1	B:VoC=56,Q=1
C:VoC=7,Q=0	C:VoC=47,Q=0	C:VoC=18,Q=0	C:VoC=30,Q=0	C:VoC=83,Q=1	C:VoC=44,Q=0	C:VoC=57,Q=1	C:VoC=83,Q=2
D:VoC=25,Q=0	D:VoC=36,Q=0	D:VoC=27,Q=0	D:VoC=25,Q=0	D:VoC=62,Q=1		D:VoC=36,Q=1	D:VoC=173,Q=135

Key:
 VoC – Value over Cost (%)
 Q = Average Queue (PCU)

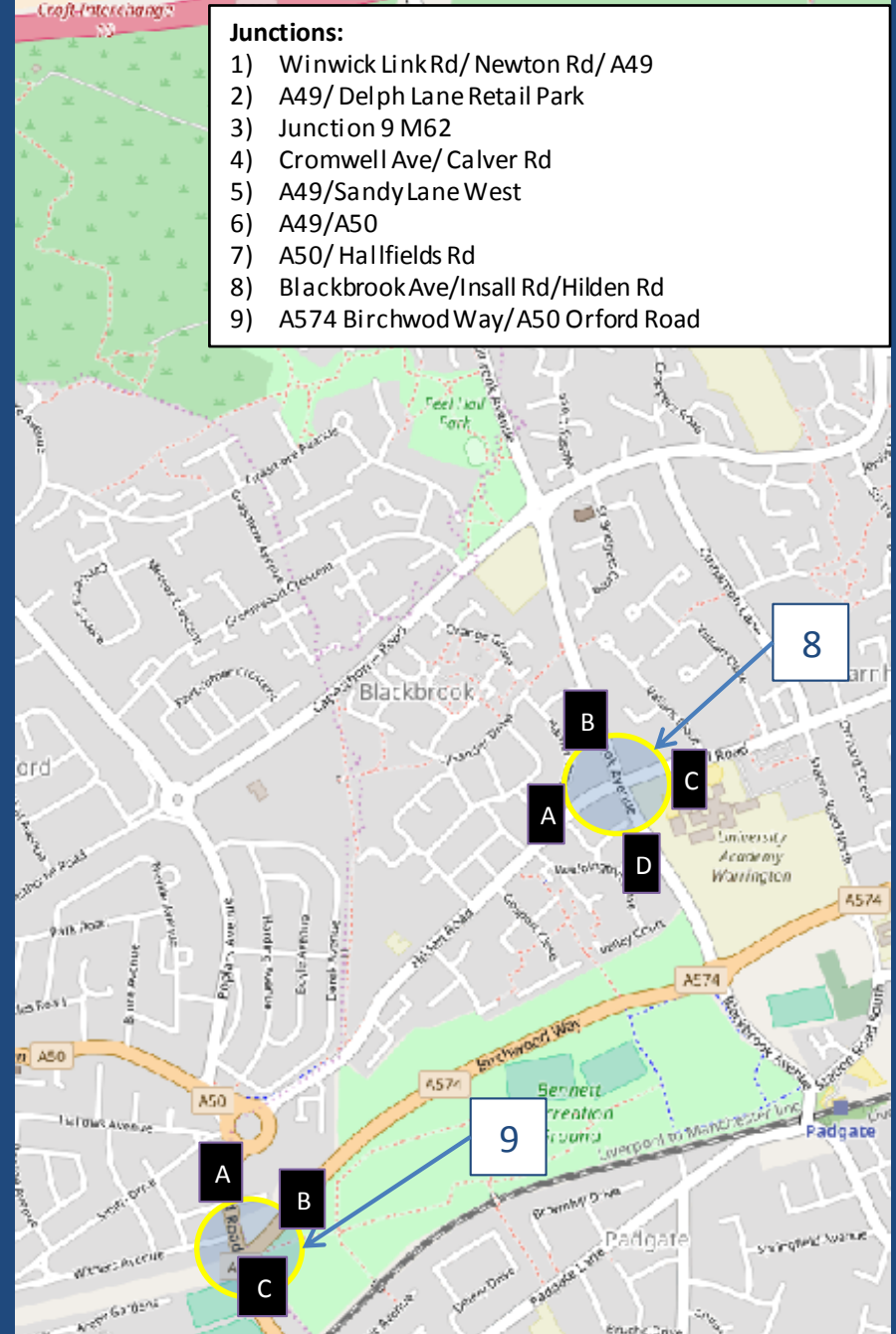
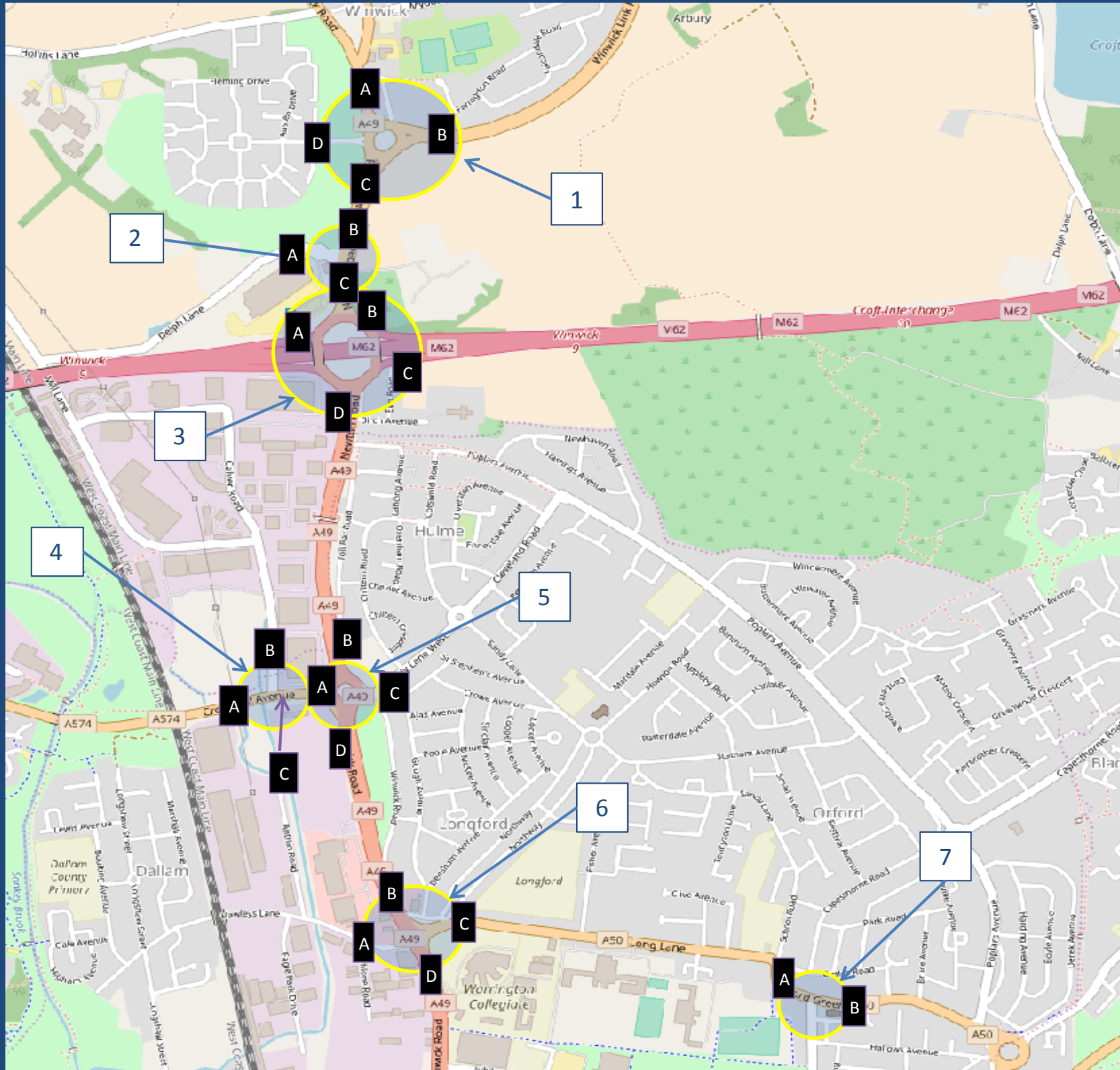


2025 DO MIN SIGNALISED JUNCTIONS

VoC (%) & AVERAGE QUEUE (PCUs)

Junctions:

- 1) Winwick Link Rd/ Newton Rd/ A49
- 2) A49/ Delph Lane Retail Park
- 3) Junction 9 M62
- 4) Cromwell Ave/ Calver Rd
- 5) A49/Sandy Lane West
- 6) A49/A50
- 7) A50/ Halfields Rd
- 8) Blackbrook Ave/ Insal Rd/ Hilden Rd
- 9) A574 Birchwod Way/ A50 Orford Road



Junction 1	Junction 2	Junction 3	Junction 4	Junction 5	Junction 6	Junction 7	Junction 8	Junction 9
AM A: VoC=69, Q=3 B: VoC=63, Q=3 C: VoC=107, Q=46 D: VoC=23, Q=1	AM A: VoC=42, Q=14 B: VoC=103, Q=29 C: VoC=99, Q=4	AM A: VoC=97, Q=21 B: VoC=109, Q=71 C: VoC=71, Q=4 D: VoC=91, Q=15	AM A: VoC=86, Q=6 B: VoC=60, Q=2 C: VoC=36, Q=1	AM A: VoC=74, Q=16 B: VoC=92, Q=96 C: VoC=40, Q=2 D: VoC=30, Q=0	AM A: VoC=20, Q=2 B: VoC=100, Q=84 C: VoC=82, Q=8 D: VoC=78, Q=21	AM A: VoC=39, Q=2 B: VoC=82, Q=6	AM A: VoC=46, Q=3 B: VoC=86, Q=6 C: VoC=73, Q=5 D: VoC=92, Q=5	AM A: VoC=42, Q=4 B: VoC=40, Q=3 C: VoC=52, Q=4
PM A: VoC=74, Q=3 B: VoC=102, Q=13 C: VoC=104, Q=41 D: VoC=14, Q=0	PM A: VoC=36, Q=3 B: VoC=59, Q=6 C: VoC=97, Q=11	PM A: VoC=135, Q=78 B: VoC=106, Q=49 C: VoC=50, Q=2 D: VoC=101, Q=109	PM A: VoC=59, Q=3 B: VoC=78, Q=2 C: VoC=55, Q=1	PM A: VoC=43, Q=5 B: VoC=90, Q=10 C: VoC=80, Q=4 D: VoC=45, Q=0	PM A: VoC=36, Q=4 B: VoC=67, Q=13 C: VoC=50, Q=5 D: VoC=105, Q=65	PM A: VoC=77, Q=4 B: VoC=71, Q=5	PM A: VoC=83, Q=5 B: VoC=72, Q=5 C: VoC=100, Q=4 D: VoC=72, Q=5	PM A: VoC=46, Q=3 B: VoC=46, Q=3 C: VoC=64, Q=5

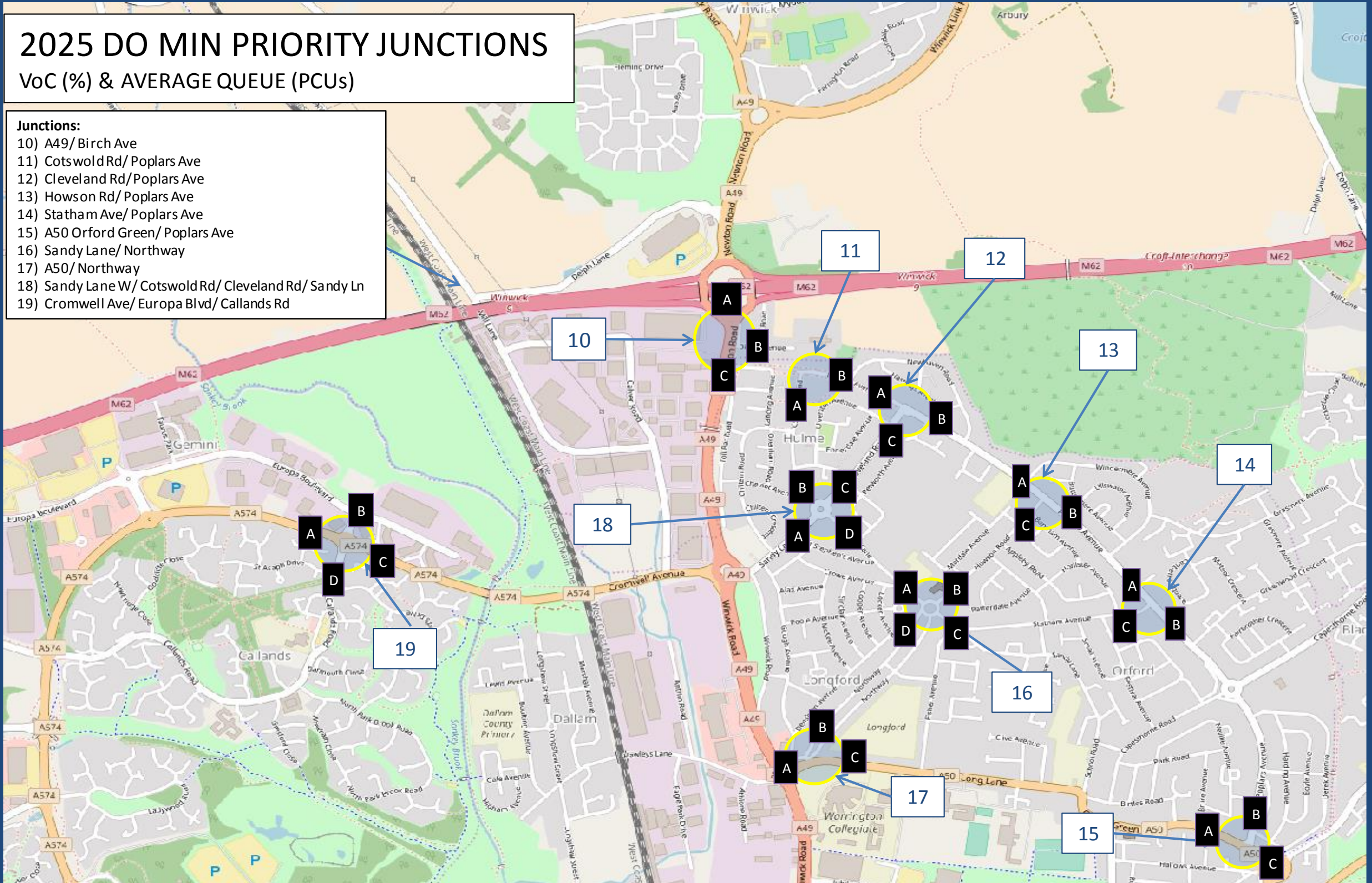
Key:
VoC – Value over Cost (%)
Q = Average Queue (PCU)



2025 DO MIN PRIORITY JUNCTIONS

VoC (%) & AVERAGE QUEUE (PCUs)

- Junctions:**
- 10) A49/Birch Ave
 - 11) Cotswold Rd/Poplars Ave
 - 12) Cleveland Rd/Poplars Ave
 - 13) Howson Rd/Poplars Ave
 - 14) Statham Ave/Poplars Ave
 - 15) A50 Orford Green/Poplars Ave
 - 16) Sandy Lane/Northway
 - 17) A50/Northway
 - 18) Sandy Lane W/ Cotswold Rd/ Cleveland Rd/ Sandy Ln
 - 19) Cromwell Ave/ Europa Blvd/ Callands Rd



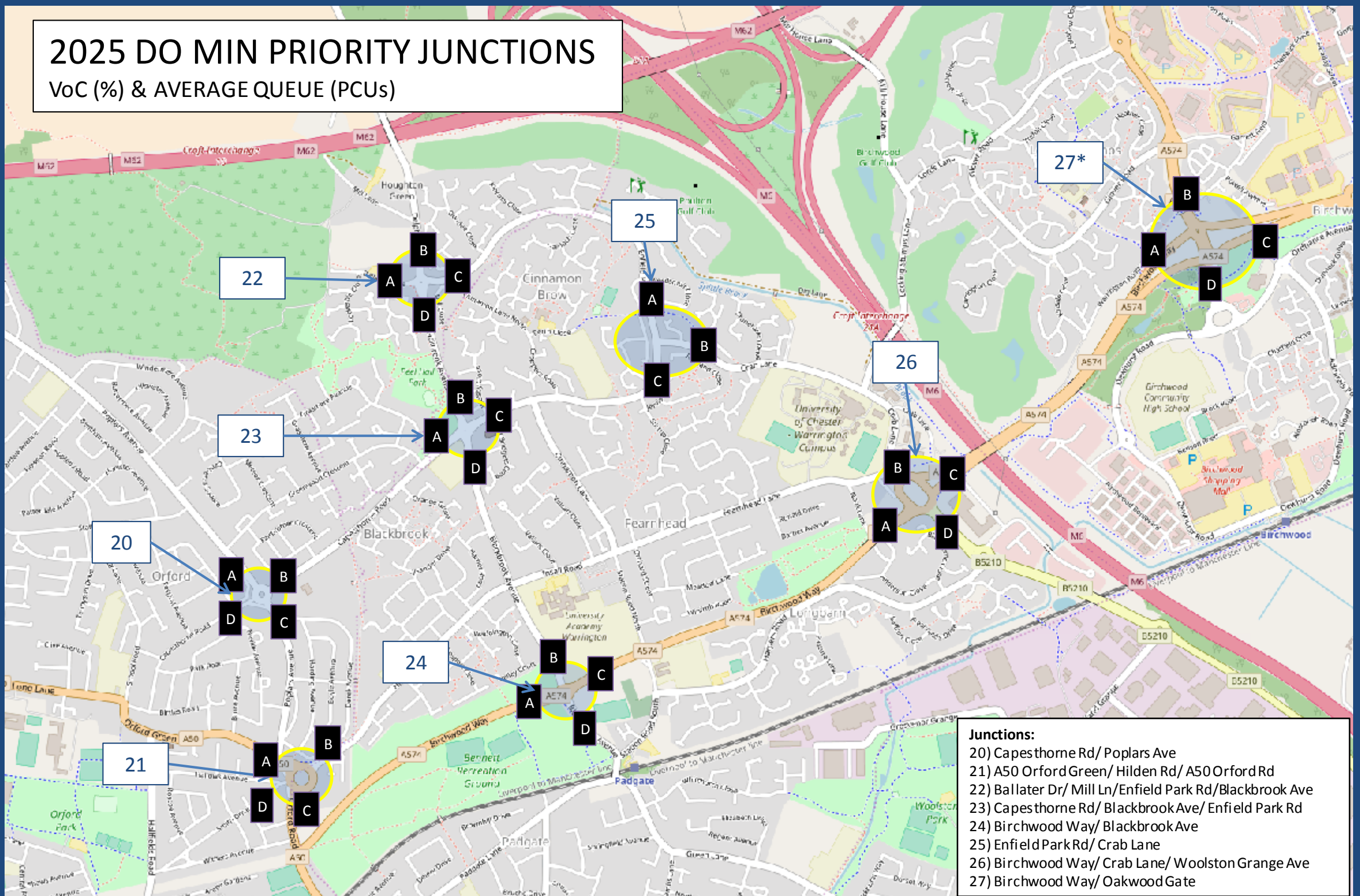
Junction	AM	PM
Junction 10	A:VoC=53,Q=0 B:VoC=17,Q=0 C:VoC=40,Q=0	A:VoC=39,Q=0 B:VoC=6,Q=0 C:VoC=54,Q=0
Junction 11	A:VoC=1,Q=0 B:VoC=1,Q=0	A:VoC=1,Q=0 B:VoC=1,Q=0
Junction 12	A:VoC=5,Q=0 B:VoC=62,Q=0 C:VoC=15,Q=0	A:VoC=4,Q=0 B:VoC=46,Q=0 C:VoC=28,Q=0
Junction 13	A:VoC=21,Q=0 B:VoC=16,Q=0 C:VoC=27,Q=0	A:VoC=19,Q=0 B:VoC=30,Q=0 C:VoC=20,Q=0
Junction 14	A:VoC=21,Q=0 B:VoC=11,Q=0 C:VoC=6,Q=0	A:VoC=19,Q=0 B:VoC=25,Q=0 C:VoC=6,Q=0
Junction 15	A:VoC=22,Q=0 B:VoC=97,Q=3 C:VoC=70,Q=1	A:VoC=42,Q=0 B:VoC=47,Q=0 C:VoC=73,Q=0
Junction 16	A:VoC=19,Q=0 B:VoC=16,Q=0 C:VoC=9,Q=0 D:VoC=3,Q=0	A:VoC=14,Q=0 B:VoC=14,Q=0 C:VoC=13,Q=0 D:VoC=16,Q=0
Junction 17	A:VoC=16,Q=0 B:VoC=31,Q=0 C:VoC=35,Q=0	A:VoC=36,Q=0 B:VoC=6,Q=0 C:VoC=38,Q=0
Junction 18	A:VoC=58,Q=0 B:VoC=27,Q=0 C:VoC=8,Q=0 D:VoC=20,Q=0	A:VoC=46,Q=0 B:VoC=12,Q=0 C:VoC=48,Q=0 D:VoC=19,Q=0
Junction 19	A:VoC=26,Q=0 B:VoC=21,Q=0 C:VoC=46,Q=0 D:VoC=29,Q=0	A:VoC=25,Q=0 B:VoC=23,Q=0 C:VoC=71,Q=0 D:VoC=17,Q=0

Key:
VoC – Value over Cost (%)
Q = Average Queue (PCU)



2025 DO MIN PRIORITY JUNCTIONS

VoC (%) & AVERAGE QUEUE (PCUs)



- Junctions:**
- 20) Capes thorne Rd/ Poplars Ave
 - 21) A50 Orford Green/ Hilden Rd/ A50 Orford Rd
 - 22) Ballater Dr/ Mill Ln/Enfield Park Rd/Blackbrook Ave
 - 23) Capes thorne Rd/ Blackbrook Ave/ Enfield Park Rd
 - 24) Birchwood Way/ Blackbrook Ave
 - 25) Enfield Park Rd/ Crab Lane
 - 26) Birchwood Way/ Crab Lane/ Woolston Grange Ave
 - 27) Birchwood Way/ Oakwood Gate

Junction 20	Junction 21	Junction 22	Junction 23	Junction 24	Junction 25	Junction 26	Junction 27*
AM	AM	AM	AM	AM	AM	AM	AM
A:VoC=52,Q=0	A:VoC=60,Q=0	A:VoC=8,Q=0	A:VoC=35,Q=0	A:VoC=77,Q=1	A:VoC=0,Q=0	A:VoC=39, Q=0	A*:VoC=92, Q=5
B:VoC=59,Q=0	B:VoC=58, Q=1	B:VoC=43,Q=0	B:VoC=51,Q=0	B:VoC=90, Q=3	B:VoC=29,Q=0	B:Voc=85, Q=3	B:VoC=68,Q=1
C:VoC=28,Q=0	C:VoC=69,Q=0	C:VoC=18,Q=0	C:VoC=24,Q=0	C:VoC=58,Q=2	C:VoC=50,Q=0	C:VoC=59,Q=0	C:VoC=86,Q=3
D:VoC=28,Q=0	D:VoC=29,Q=0	D:VoC=16,Q=0	D:Voc=22,Q=0	D:VoC=69,Q=1		D:VoC=90,Q=0	D:VoC=134,Q=101
PM	PM	PM	PM	PM	PM	PM	PM
A:VoC=35,Q=0	A:VoC=59,Q=0	A:VoC=3,Q=0	A:VoC=40,Q=0	A:VoC=79,Q=1	A:VoC=43,Q=0	A:VoC=37,Q=0	A:VoC=70,Q=3
B:VoC=73,Q=0	B:VoC=45,Q=0	B:VoC=33,Q=0	B:VoC=36,Q=0	B:VoC=73,Q=1	B:VoC=0,Q=0	B:VoC=74,Q=2	B:VoC=52,Q=1
C:VoC=58,Q=0	C:VoC=58,Q=0	C:VoC=24,Q=0	C:VoC=48,Q=0	C:VoC=109,Q=18	C:VoC=64,Q=0	C:VoC=57,Q=2	C:VoC=122,Q=119
D:VoC=35,Q=0	D:VoC=50,Q=1	D:VoC=38,Q=0	D:VoC=36,Q=0	D:VoC=78,Q=1		D:VoC=42,Q=0	D:VoC=294,Q=273

Key:
 VoC – Value over Cost (%)
 Q = Average Queue (PCU)
 * = Signalised in future years

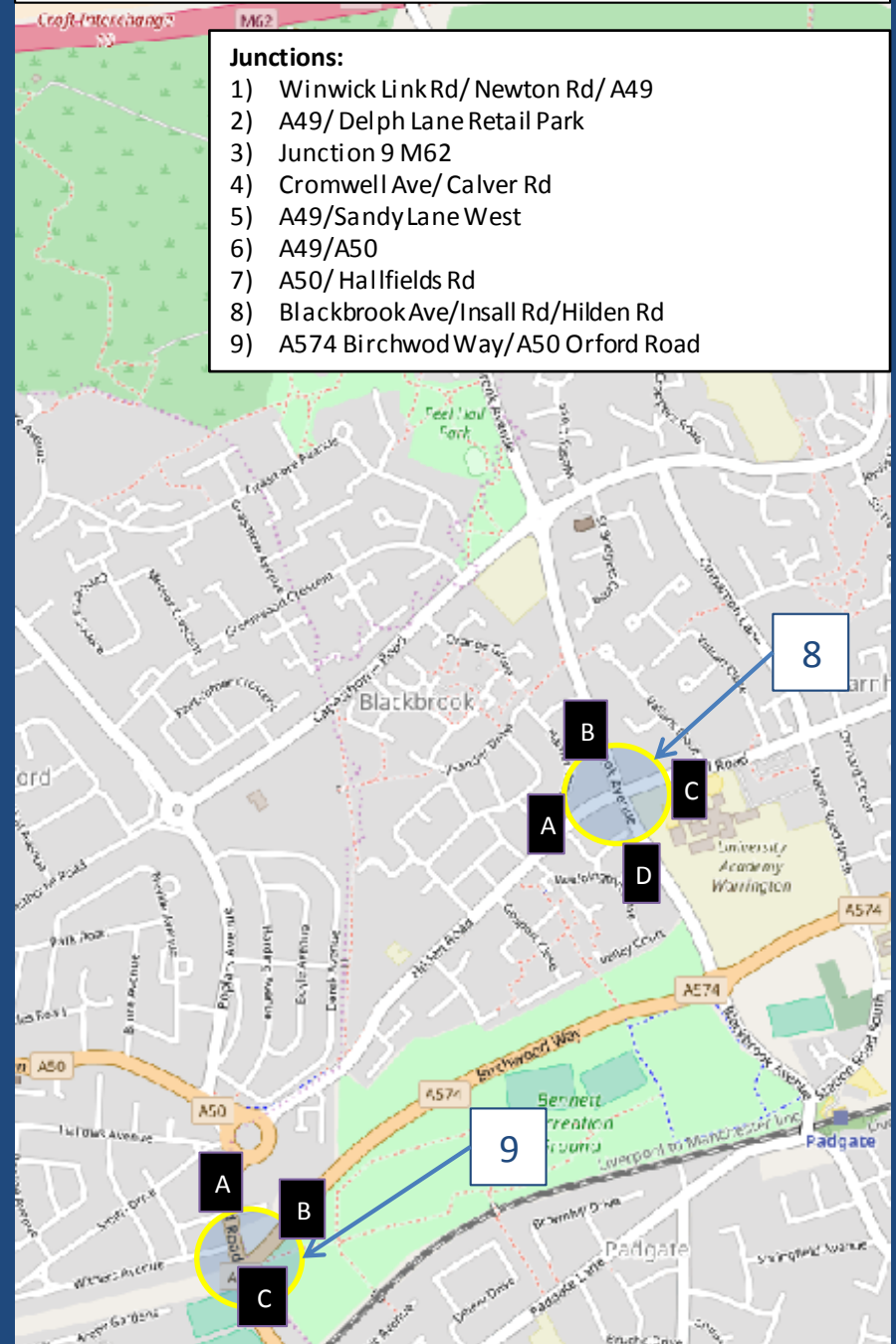
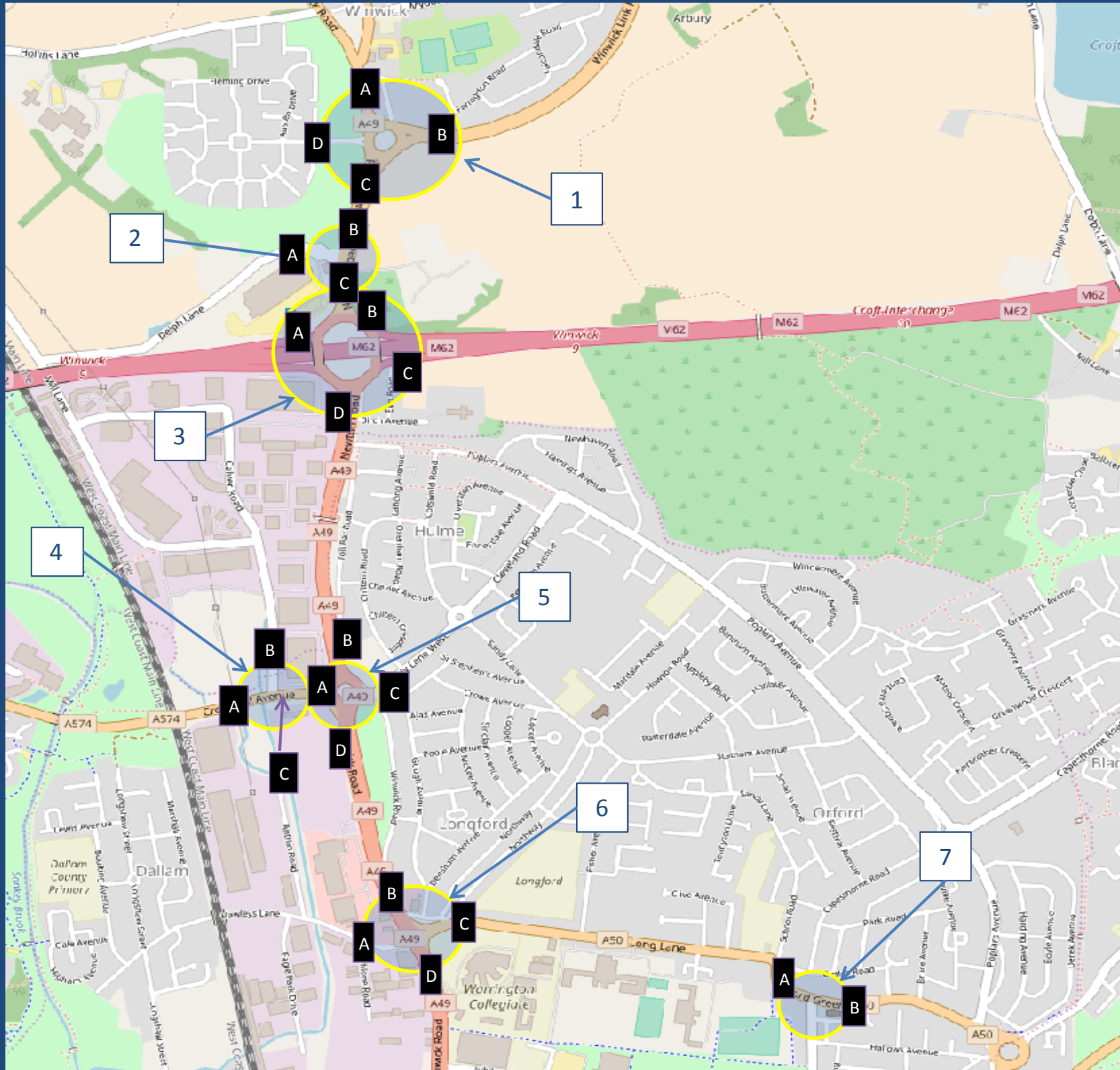


2030 DO MIN SIGNALISED JUNCTIONS

VoC (%) & AVERAGE QUEUE (PCUs)

Junctions:

- 1) Winwick Link Rd/ Newton Rd/ A49
- 2) A49/ Delph Lane Retail Park
- 3) Junction 9 M62
- 4) Cromwell Ave/ Calver Rd
- 5) A49/Sandy Lane West
- 6) A49/A50
- 7) A50/ Halfields Rd
- 8) Blackbrook Ave/ Insal Rd/ Hilden Rd
- 9) A574 Birchwod Way/ A50 Orford Road



Junction 1 AM A: VoC=70, Q=3 B: VoC=66, Q=3 C: VoC=107, Q=50 D: VoC=24, Q=1 PM A: VoC=74, Q=3 B: VoC=106, Q=34 C: VoC=106, Q=54 D: VoC=14, Q=0

Junction 2 AM A: VoC=44, Q=18 B: VoC=106, Q=55 C: VoC=99, Q=5 PM A: VoC=37, Q=3 B: VoC=58, Q=6 C: VoC=98, Q=11

Junction 3 AM A: VoC=101, Q=22 B: VoC=109, Q=71 C: VoC=74, Q=4 D: VoC=94, Q=36 PM A: VoC=119, Q=100 B: VoC=105, Q=45 C: VoC=52, Q=2 D: VoC=104, Q=121
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Junction 4 AM A: VoC=89, Q=6 B: VoC=62, Q=2 C: VoC=37, Q=1 PM A: VoC=62, Q=4 B: VoC=81, Q=2 C: VoC=56, Q=1

Junction 5 AM A: VoC=76, Q=34 B: VoC=95, Q=103 C: VoC=42, Q=2 D: VoC=32, Q=0 PM A: VoC=45, Q=5 B: VoC=92, Q=10 C: VoC=86, Q=5 D: VoC=45, Q=0

Junction 6 AM A: VoC=21, Q=3 B: VoC=99, Q=82 C: VoC=87, Q=9 D: VoC=81, Q=23 PM A: VoC=36, Q=4 B: VoC=69, Q=14 C: VoC=52, Q=5 D: VoC=108, Q=103

Junction 7 AM A: VoC=40, Q=2 B: VoC=84, Q=6 PM A: VoC=78, Q=5 B: VoC=73, Q=5

Junction 8 AM A: VoC=63, Q=4 B: VoC=89, Q=6 C: VoC=77, Q=6 D: VoC=93, Q=5 PM A: VoC=86, Q=5 B: VoC=76, Q=5 C: VoC=101, Q=6 D: VoC=75, Q=5
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Junction 9 AM A: VoC=40, Q=4 B: VoC=41, Q=3 C: VoC=54, Q=4 PM A: VoC=47, Q=4 B: VoC=45, Q=3 C: VoC=67, Q=5

Key:
VoC – Value over Cost (%)
Q = Average Queue (PCU)

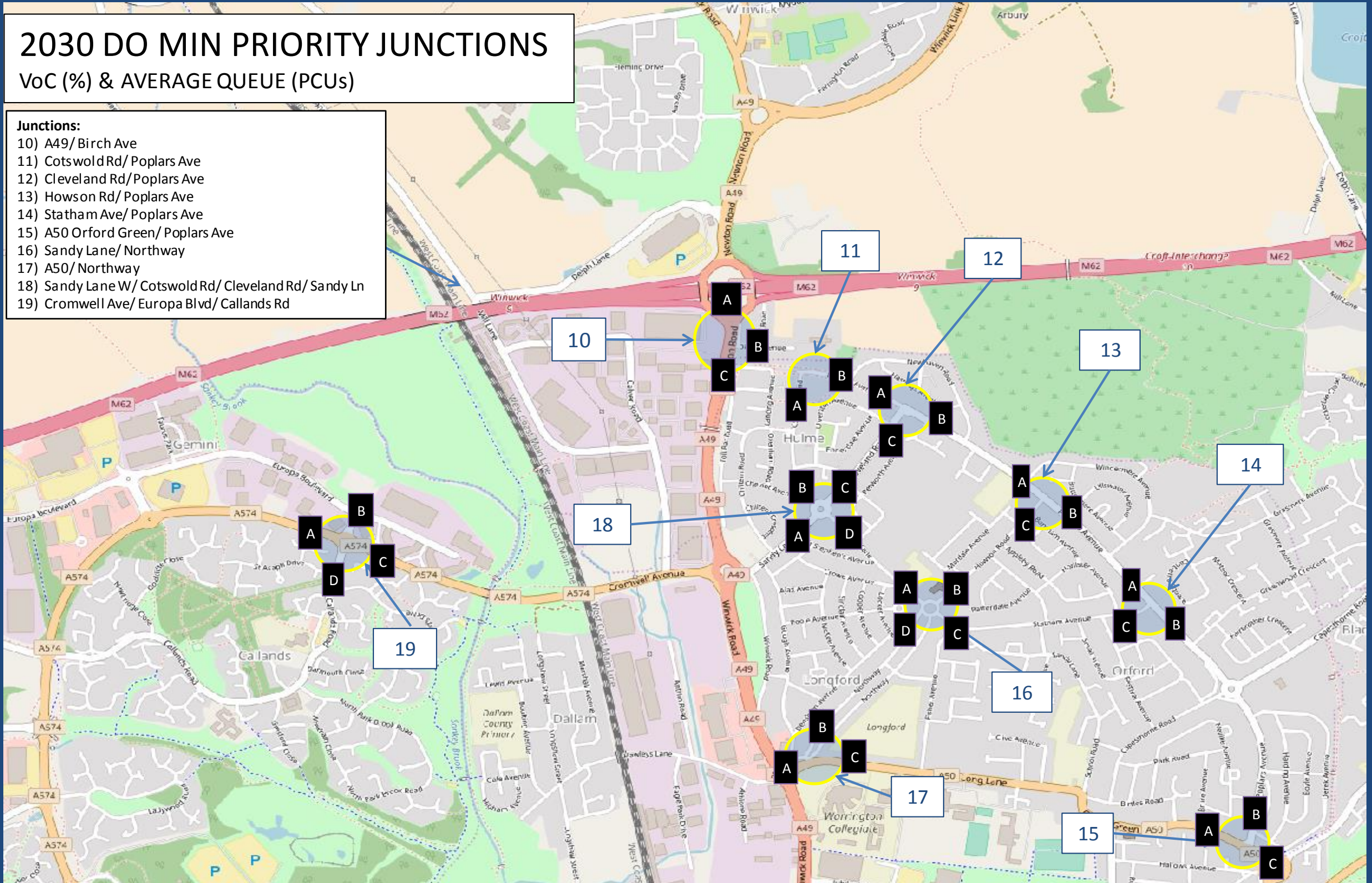


2030 DO MIN PRIORITY JUNCTIONS

VoC (%) & AVERAGE QUEUE (PCUs)

Junctions:

- 10) A49/Birch Ave
- 11) Cotswold Rd/Poplars Ave
- 12) Cleveland Rd/Poplars Ave
- 13) Howson Rd/Poplars Ave
- 14) Statham Ave/Poplars Ave
- 15) A50 Orford Green/Poplars Ave
- 16) Sandy Lane/Northway
- 17) A50/Northway
- 18) Sandy Lane W/ Cotswold Rd/ Cleveland Rd/ Sandy Ln
- 19) Cromwell Ave/ Europa Blvd/ Callands Rd



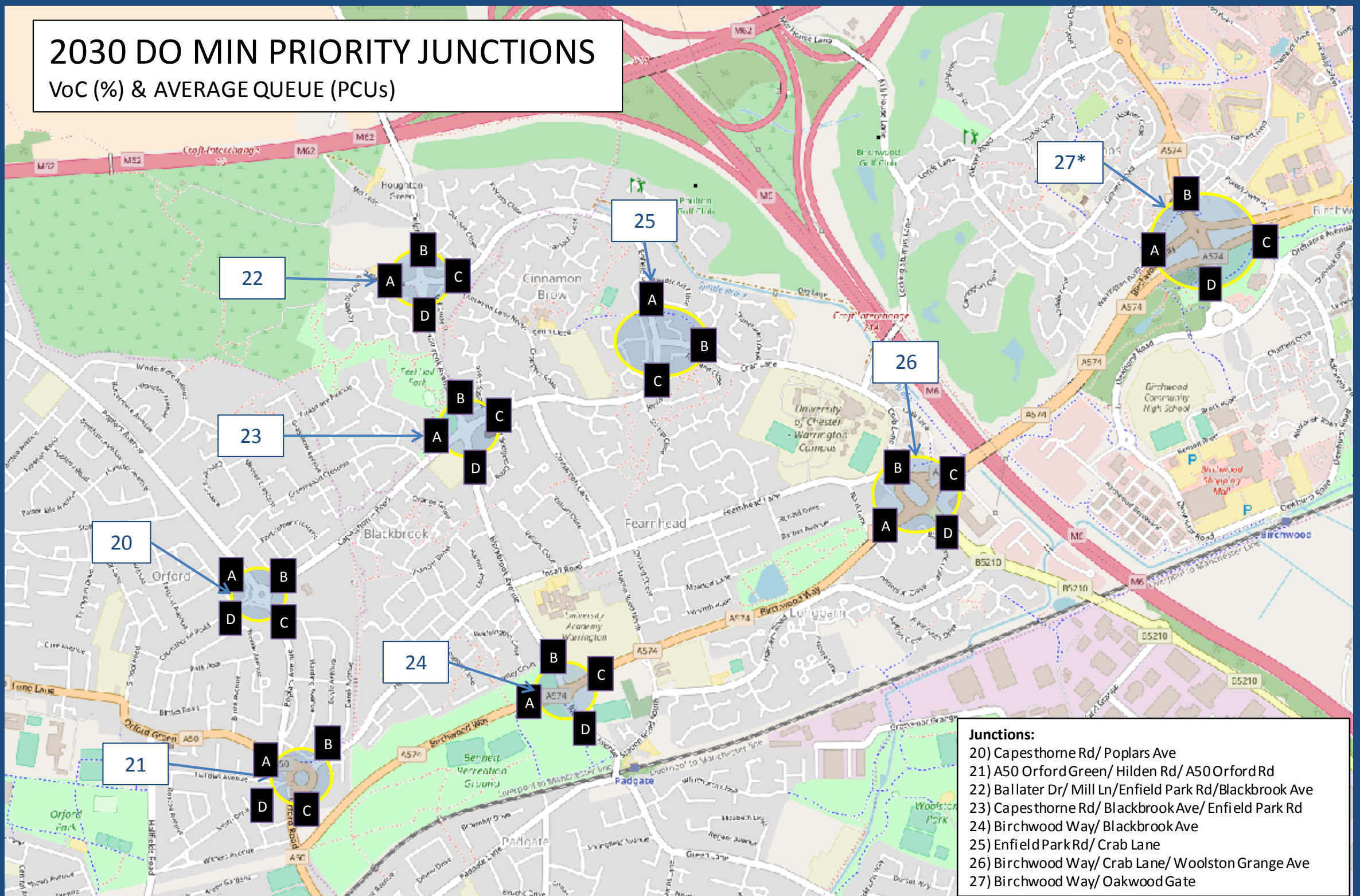
Junction 10	Junction 11	Junction 12	Junction 13	Junction 14	Junction 15	Junction 16	Junction 17	Junction 18	Junction 19
AM	AM	AM	AM	AM	AM	AM	AM	AM	AM
A:VoC=42,Q=0 B:VoC=54,Q=0 C:VoC=19,Q=0	A:VoC=1,Q=0 B:VoC=1,Q=0	A:VoC=5,Q=0 B:VoC=16,Q=0 C:VoC=67,Q=0	A:VoC=22,Q=0 B:VoC=17,Q=0 C:VoC=28,Q=0	A:VoC=23,Q=0 B:VoC=11,Q=0 C:VoC=6,Q=0	A:VoC=22,Q=0 B:VoC=31,Q=0 C:VoC=76,Q=0	A:VoC=22,Q=0, B:VoC=17,Q=0 C:VoC=9,Q=0 D:VoC=3,Q=0	A:VoC=16,Q=0 B:VoC=36,Q=1 C:VoC=36,Q=0	A:VoC=64,Q=0 B:VoC=21,Q=0 C:VoC=29,Q=0 D:VoC=8,Q=0	A:VoC=27, Q=0 B:VoC=23,Q=0 C:VoC=47,Q=0 D:VoC=30,Q=0
PM	PM	PM	PM	PM	PM	PM	PM	PM	PM
A:VoC=40,Q=0 B:VoC=7, Q=0 C:VoC=55,Q=0	A:VoC=1,Q=0 B:VoC=1,Q=0	A:VoC=4,Q=0 B:VoC=31,Q=0 C:VoC=47,Q=0	A:VoC=20,Q=0 B:VoC=32,Q=0 C:VoC=25,Q=0	A:VoC=20,Q=0 B:VoC=27,Q=0 C:VoC=6,Q=0	A:VoC=42,Q=0 B:VoC=54,Q=0 C:VoC=74,Q=1	A:VoC=15,Q=0 B:VoC=14,Q=0 C:VoC=13,Q=0 D:VoC=17,Q=0	A:VoC=37,Q=0 B:VoC=9,Q=0 C:VoC=39,Q=0	A:VoC=48,Q=0 B:VoC=12,Q=0 C:VoC=52,Q=0 D:VoC=21,Q=0	A:VoC=26,Q=0 B:VoC=24,Q=0 C:VoC=73,Q=1 D:VoC=18,Q=0

Key:
VoC – Value over Cost (%)
Q = Average Queue (PCU)



2030 DO MIN PRIORITY JUNCTIONS

VoC (%) & AVERAGE QUEUE (PCUs)



- Junctions:**
- 20) Capes thorne Rd/ Poplars Ave
 - 21) A50 Orford Green/ Hilden Rd/ A50 Orford Rd
 - 22) Ballater Dr/ Mill Ln/Enfield Park Rd/Blackbrook Ave
 - 23) Capes thorne Rd/ Blackbrook Ave/ Enfield Park Rd
 - 24) Birchwood Way/ Blackbrook Ave
 - 25) Enfield Park Rd/ Crab Lane
 - 26) Birchwood Way/ Crab Lane/ Woolston Grange Ave
 - 27) Birchwood Way/ Oakwood Gate

Junction 20	Junction 21	Junction 22	Junction 23	Junction 24	Junction 25	Junction 26	Junction 27*
AM	AM	AM	AM	AM	AM	AM	AM
A:VoC=29,Q=0	A:VoC=61,Q=0	A:VoC=8,Q=0	A:VoC=38,Q=0	A:VoC=74,Q=1	A:VoC=53,Q=0	A:VoC=38, Q=0	A*:VoC=95,Q=5
B:VoC=56,Q=0	B:VoC=58, Q=1	B:VoC=43,Q=0	B:VoC=53,Q=0	B:VoC=90, Q=3	B:VoC=0, Q=0	B:VoC=95, Q=5	B:VoC=95, Q=5
C:VoC=61,Q=0	C:VoC=62,Q=1	C:VoC=18,Q=0	C:VoC=34,Q=0	C:VoC=88, Q=2	C:VoC=30, Q=0	C:VoC=59,Q=0	C:VoC=92,Q=4
D:VoC=31,Q=0	D:VoC=31,Q=0	D:VoC=17,Q=0	D:VoC=24,Q=0	D:VoC=72,Q=1		D:VoC=64,Q=0	D:VoC=154,Q=142
PM	PM	PM	PM	PM	PM	PM	PM
A:VoC=38,Q=0	A:VoC=62,Q=0	A:VoC=3,Q=0	A:VoC=42,Q=0	A:VoC=83,Q=1	A:VoC=0, Q=0	A:VoC=38,Q=0	A:VoC=72,Q=3
B:VoC=83,Q=0	B:VoC=50,Q=0	B:VoC=35,Q=0	B:VoC=39,Q=0	B:VoC=80,Q=2	B:VoC=18,Q=0	B:VoC=78,Q=2	B:VoC=55,Q=1
C:VoC=61,Q=1	C:VoC=59,Q=0	C:VoC=25,Q=0	C:VoC=55,Q=0	C:VoC=103,Q=23	C:VoC=44,Q=0	C:VoC=57,Q=0	C:VoC=131,Q=162
D:VoC=38,Q=1	D:VoC=53,Q=1	D:VoC=40,Q=0	D:VoC=41,Q=0	D:VoC=79,Q=1		D:VoC=44,Q=0	D:VoC=305,Q=287

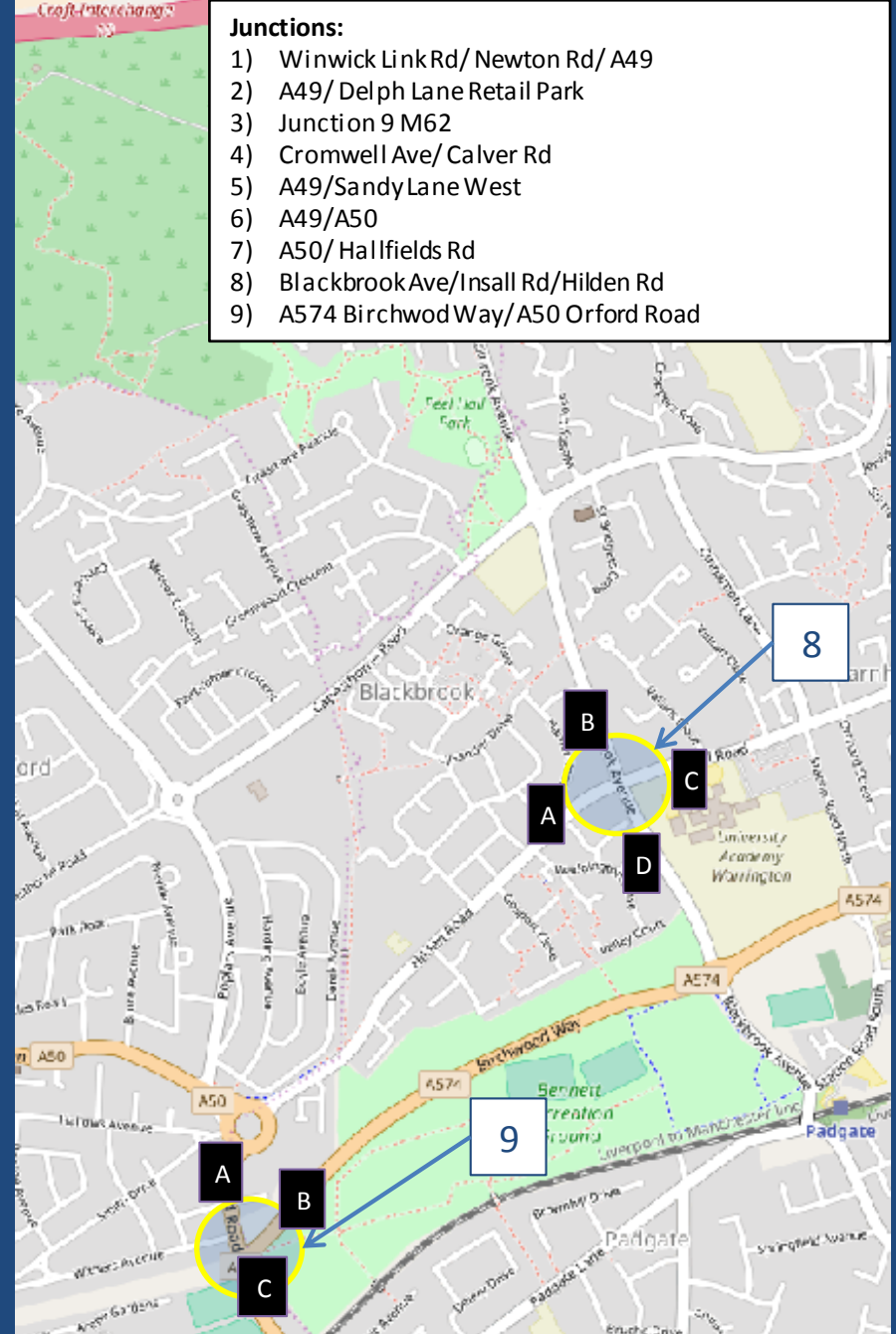
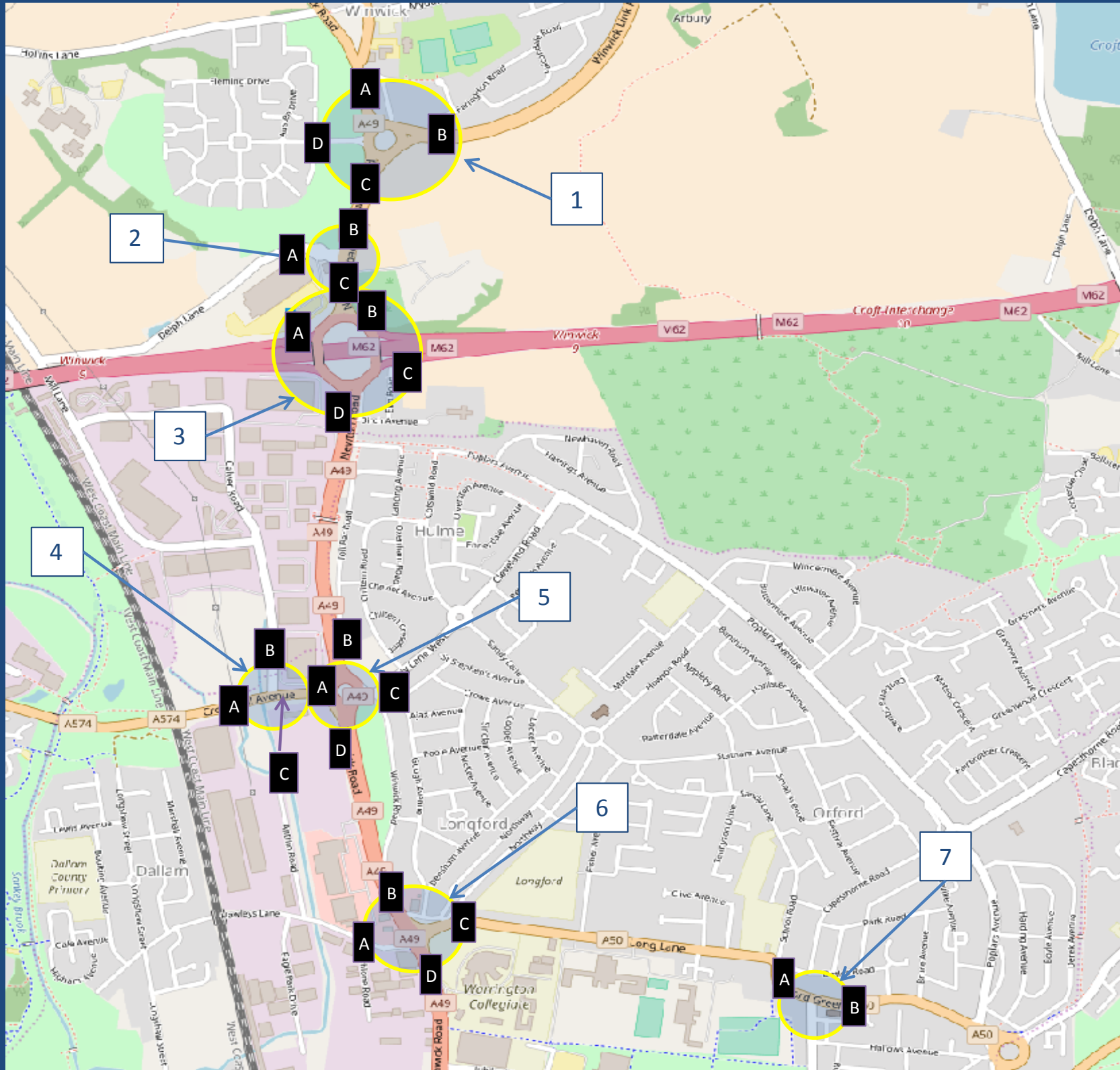
Key:
 VoC – Value over Cost (%)
 Q = Average Queue (PCU)
 * = Signalised in future years



2025 DO SOMETHING SIGNALISED JUNCTIONS

VoC (%) & AVERAGE QUEUE (PCUs)

- Junctions:**
- 1) Winwick Link Rd/ Newton Rd/ A49
 - 2) A49/ Delph Lane Retail Park
 - 3) Junction 9 M62
 - 4) Cromwell Ave/ Calver Rd
 - 5) A49/Sandy Lane West
 - 6) A49/A50
 - 7) A50/ Hallfields Rd
 - 8) Blackbrook Ave/Insal Rd/Hilden Rd
 - 9) A574 Birchwod Way/A50 Orford Road



Junction 1	Junction 2	Junction 3	Junction 4	Junction 5	Junction 6	Junction 7	Junction 8	Junction 9
AM A: VoC=71, Q=3 B: VoC=64, Q=3 C: VoC=107, Q=46 D: VoC=23, Q=1	AM A: VoC=42, Q=16 B: VoC=105, Q=47 C: VoC=66, Q=5	AM A: VoC=98, Q=21 B: VoC=109, Q=71 C: VoC=72, Q=4 D: VoC=93, Q=18	AM A: VoC=90, Q=6 B: VoC=60, Q=2 C: VoC=37, Q=1	AM A: VoC=76, Q=39 B: VoC=94, Q=93 C: VoC=49, Q=3 D: VoC=31, Q=0	AM A: VoC=20, Q=2 B: VoC=100, Q=90 C: VoC=83, Q=9 D: VoC=81, Q=22	AM A: VoC=40, Q=2 B: VoC=82, Q=6	AM A: VoC=52, Q=0 B: VoC=99, Q=1 C: VoC=80, Q=0 D: VoC=93, Q=0	AM A: VoC=43, Q=4 B: VoC=42, Q=3 C: VoC=54, Q=4
PMVoC A: VoC=75, Q=3 B: VoC=102, Q=16 C: VoC=104, Q=38 D: VoC=14, Q=0	PM A: VoC=36, Q=3 B: VoC=59, Q=6 C: VoC=96, Q=10	PM A: VoC=117, Q=89 B: VoC=107, Q=52 C: VoC=51, Q=2 D: VoC=106, Q=143	PM A: VoC=60, Q=4 B: VoC=78, Q=2 C: VoC=56, Q=1	PM A: VoC=44, Q=5 B: VoC=91, Q=10 C: VoC=97, Q=6 D: VoC=45, Q=0	PM A: VoC=36, Q=4 B: VoC=69, Q=14 C: VoC=51, Q=5 D: VoC=106, Q=80	PM A: VoC=75, Q=4 B: VoC=73, Q=5	PM A: VoC=91, Q=5 B: VoC=85, Q=6 C: VoC=103, Q=8 D: VoC=82, Q=5	PM A: VoC=50, Q=4 B: VoC=45, Q=3 C: VoC=74, Q=9

Key:
VoC – Value over Cost (%)
Q = Average Queue (PCU)

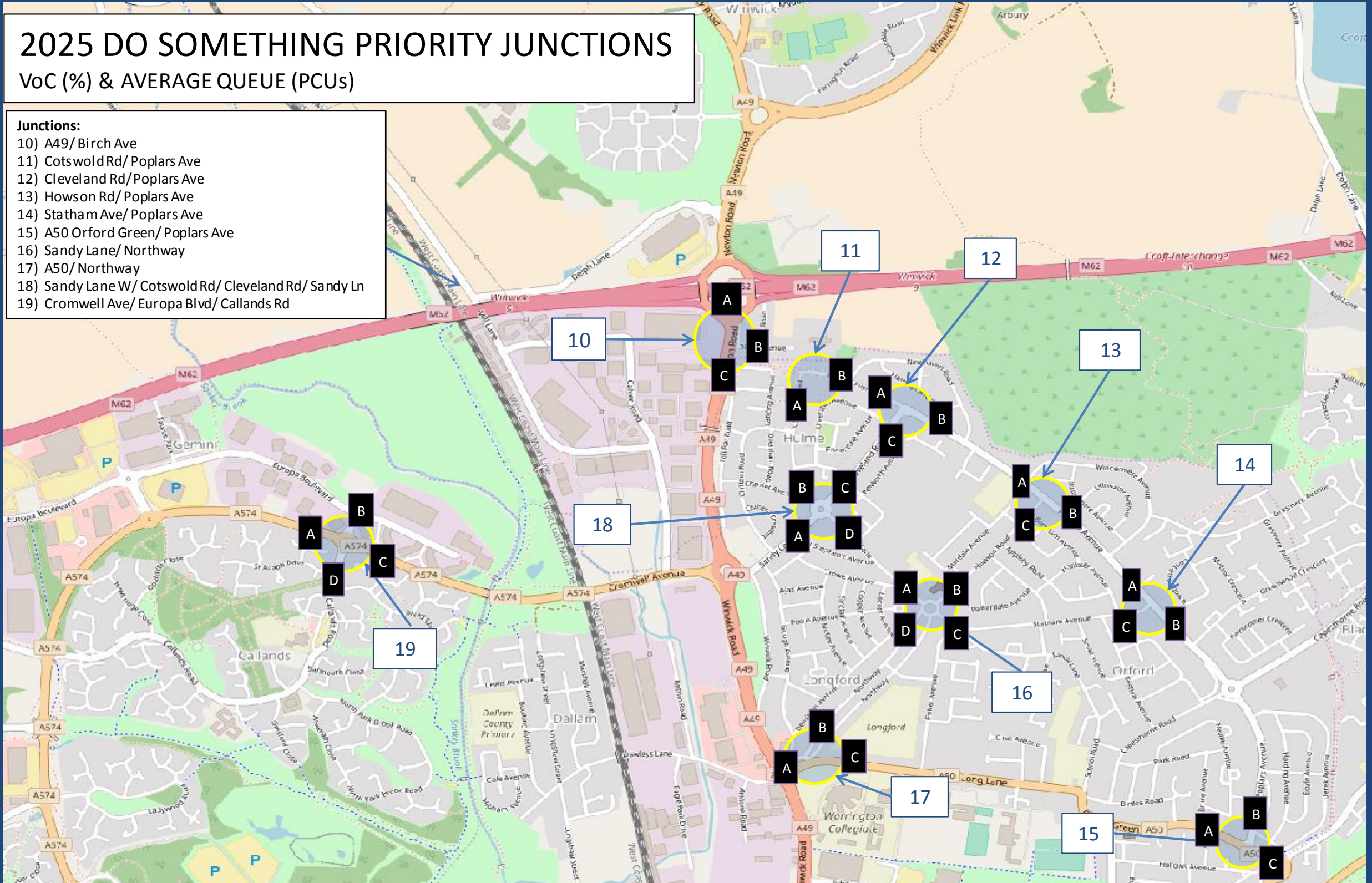


2025 DO SOMETHING PRIORITY JUNCTIONS

VoC (%) & AVERAGE QUEUE (PCUs)

Junctions:

- 10) A49/ Birch Ave
- 11) Cotswold Rd/ Poplars Ave
- 12) Cleveland Rd/ Poplars Ave
- 13) Howson Rd/ Poplars Ave
- 14) Statham Ave/ Poplars Ave
- 15) A50 Orford Green/ Poplars Ave
- 16) Sandy Lane/ Northway
- 17) A50/ Northway
- 18) Sandy Lane W/ Cotswold Rd/ Cleveland Rd/ Sandy Ln
- 19) Cromwell Ave/ Europa Blvd/ Callands Rd



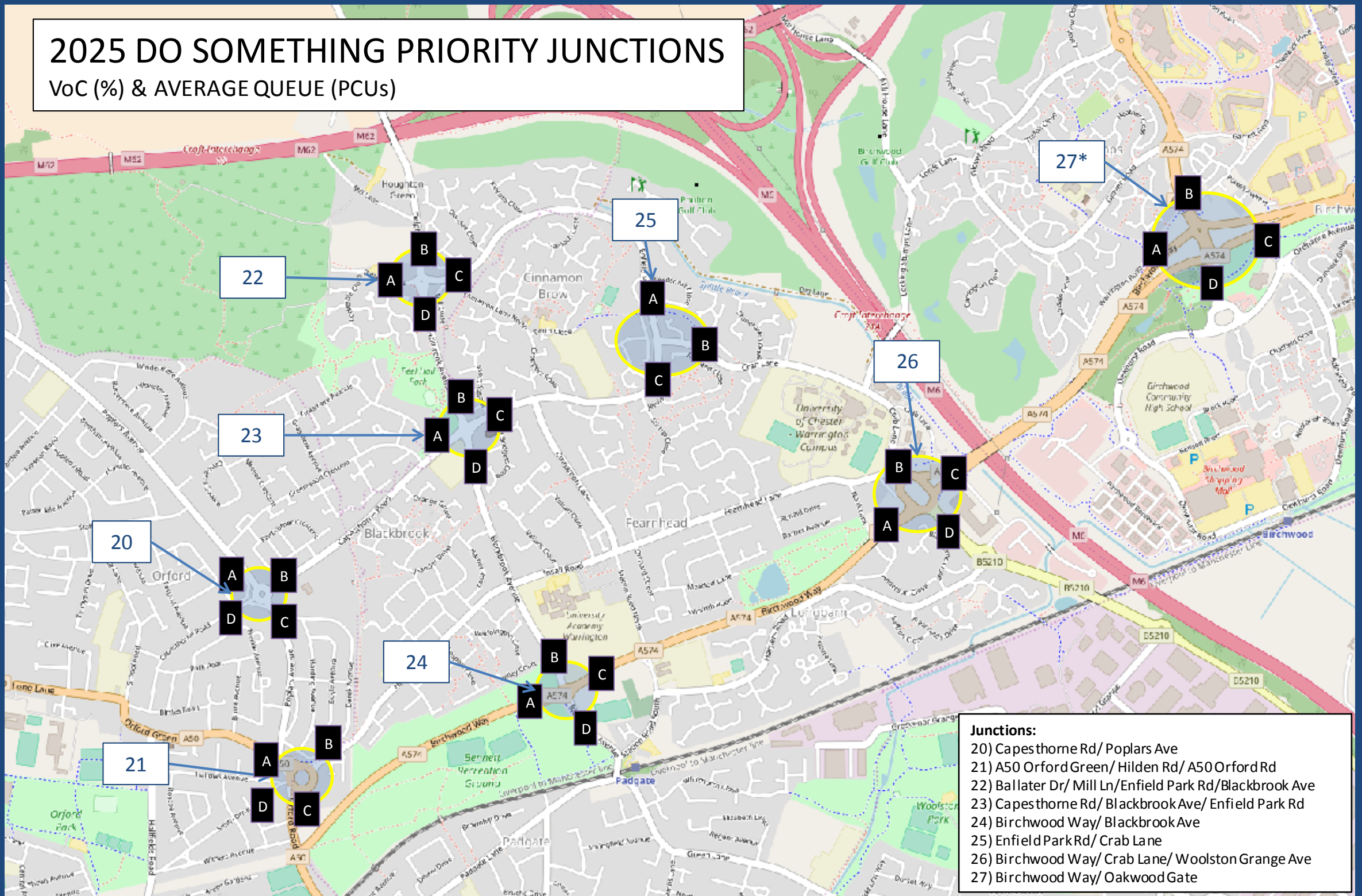
Junction 10	Junction 11	Junction 12	Junction 13	Junction 14	Junction 15	Junction 16	Junction 17	Junction 18	Junction 19
AM	AM	AM	AM	AM	AM	AM	AM	AM	AM
A:VoC=53,Q=0 B:VoC=25,Q=0 C:VoC=41,Q=0	A:VoC=5,Q=0 B:VoC=1,Q=0	A:VoC=12,Q=0 B:VoC=19,Q=0 C:VoC=77,Q=0	A:VoC=32,Q=0 B:VoC=23,Q=0 C:VoC=35,Q=0	A:VoC=27,Q=0 B:VoC=17,Q=0 C:VoC=8,Q=0	A:VoC=23,Q=0 B:VoC=103,Q=15 C:VoC=84,Q=1	A:VoC=20,Q=0, B:VoC=20,Q=0 C:VoC=9,Q=0 D:VoC=4,Q=0	A:VoC=16,Q=0 B:VoC=35,Q=1 C:VoC=35,Q=0	A:VoC=70,Q=0 B:VoC=21,Q=0 C:VoC=38,Q=0 D:VoC=9,Q=0	A:VoC=57, Q=0 B:VoC=22,Q=0 C:VoC=47,Q=0 D:VoC=30,Q=0
PM	PM	PM	PM	PM	PM	PM	PM	PM	PM
A:VoC=40,Q=0 B:VoC=9,Q=0 C:VoC=56,Q=0	A:VoC=1,Q=0 B:VoC=1,Q=0	A:VoC=13,Q=0 B:VoC=36,Q=0 C:VoC=57,Q=0	A:VoC=33,Q=0 B:VoC=44,Q=0 C:VoC=44,Q=0	A:VoC=32,Q=0 B:VoC=39,Q=0 C:VoC=10,Q=0	A:VoC=41,Q=0 B:VoC=67,Q=1 C:VoC=101,Q=5	A:VoC=15,Q=0 B:VoC=16,Q=0 C:VoC=13,Q=0 D:VoC=22,Q=0	A:VoC=37,Q=0 B:VoC=7,Q=0 C:VoC=39,Q=0	A:VoC=52,Q=0 B:VoC=12,Q=0 C:VoC=64,Q=0 D:VoC=23,Q=0	A:VoC=26,Q=0 B:VoC=23,Q=0 C:VoC=73,Q=1 D:VoC=17,Q=0

Key:
VoC – Value over Cost (%)
Q = Average Queue (PCU)



2025 DO SOMETHING PRIORITY JUNCTIONS

VoC (%) & AVERAGE QUEUE (PCUs)



- Junctions:**
- 20) Capeshome Rd/ Poplars Ave
 - 21) A50 Orford Green/ Hilden Rd/ A50 Orford Rd
 - 22) Ballater Dr/ Mill Ln/Enfield Park Rd/Blackbrook Ave
 - 23) Capeshome Rd/ Blackbrook Ave/ Enfield Park Rd
 - 24) Birchwood Way/ Blackbrook Ave
 - 25) Enfield Park Rd/ Crab Lane
 - 26) Birchwood Way/ Crab Lane/ Woolston Grange Ave
 - 27) Birchwood Way/ Oakwood Gate

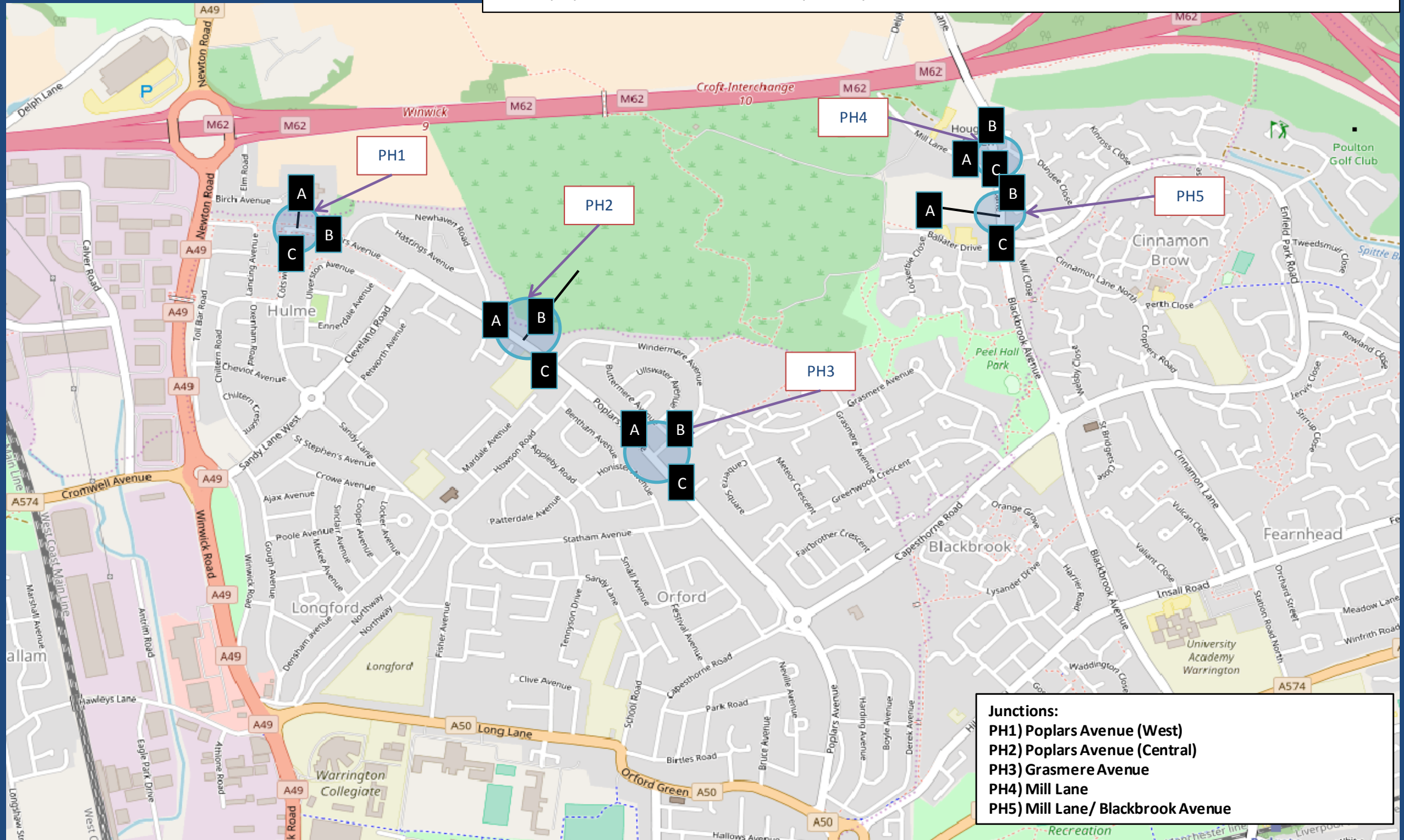
Junction 20	Junction 21	Junction 22	Junction 23	Junction 24	Junction 25	Junction 26	Junction 27*
AM	AM	AM	AM	AM	AM	AM	AM
A:VoC=66,Q=0	A:VoC=61,Q=0	A:VoC=8,Q=0	A:VoC=42,Q=0	A:VoC=76,Q=1	A:VoC=0,Q=0	A:VoC=38, Q=0	A*:VoC=95,Q=5
B:VoC=69,Q=0	B:VoC=59, Q=1	B:VoC=54,Q=0	B:VoC=68,Q=1	B:VoC=97,Q=5	B:VoC=32,Q=0	B:Voc=96 ,Q=6	B:VoC=96,Q=1
C:VoC=38,Q=0	C:VoC=62,Q=0	C:VoC=21,Q=0	C:VoC=40,Q=0	C:VoC=92,Q=3	C:VoC=64,Q=0	C:VoC=48,Q=0	C:VoC=86,Q=3
D:VoC=31,Q=0	D:VoC=30,Q=0	D:VoC=21,Q=0	D:Voc=26,Q=0	D:VoC=72,Q=1		D:VoC=60,Q=0	D:VoC=135,Q=104
PM	PM	PM	PM	PM	PM	PM	PM
A:VoC=47,Q=0	A:VoC=66,Q=0	A:VoC=3,Q=0	A:VoC=51,Q=0	A:VoC=89,Q=2	A:VoC=0,Q=0	A:VoC=38,Q=0	A:VoC=71,Q=3
B::VoC=60,Q=0	B:VoC=53,Q=1	B:VoC=40,Q=0	B:VoC=46,Q=0	B:VoC=92,Q=4	B:VoC=91,Q=0	B:VoC=74,Q=2	B:VoC=56,Q=1
C:VoC=100, Q=6	C:VoC=66,Q=0	C:VoC=26,Q=0	C:VoC=72,Q=1	C:VoC=106,Q=33	C:VoC=51,Q=0	C:VoC=57,Q=0	C:VoC=133,Q=161
D:VoC=87,Q=2	D:VoC=58,Q=1	D:VoC=50,Q=0	D:VoC=58,Q=1	D:VoC=83,Q=1		D:VoC=45,Q=0	D:VoC=321,Q=296

Key:
 VoC – Value over Cost (%)
 Q = Average Queue (PCU)
 * = Signalised in future years



2025 DO SOMETHING PEEL HALL ACCESS JUNCTIONS

VoC (%) & AVERAGE QUEUE (PCUs)



Junctions:
 PH1) Poplars Avenue (West)
 PH2) Poplars Avenue (Central)
 PH3) Grasmere Avenue
 PH4) Mill Lane
 PH5) Mill Lane/ Blackbrook Avenue

Junction PH1	Junction PH2	Junction PH3	Junction PH4	Junction PH5
AM	AM	AM	AM	AM
A:VoC=6,Q=0	A:VoC=23,Q=0	A:VoC=31,Q=0	A:VoC=40,Q=0	A:VoC=12,Q=0
B:VoC=3,Q=0	B:VoC=15,Q=0	B:VoC=53,Q=0	B:VoC=31,Q=0	B:VoC=62,Q=0
C:VoC=2,Q=0	C:VoC=21,Q=0	C:VoC=24,Q=0	C:VoC=19,Q=0	C:VoC=32,Q=0
PM	PM	PM	PM	PM
A:VoC=1,Q=0	A:VoC=18,Q=0	A:VoC=30,Q=0	A:VoC=19,Q=0	A:VoC=3,Q=0
B:VoC=3,Q=0	B:VoC=31,Q=0	B:VoC=49,Q=0	B:VoC=30,Q=0	B:VoC=40,Q=0
C:VoC=2,Q=0	C:VoC=43,Q=0	C:VoC=43,Q=0	C:VoC=32,Q=0	C:VoC=50,Q=0

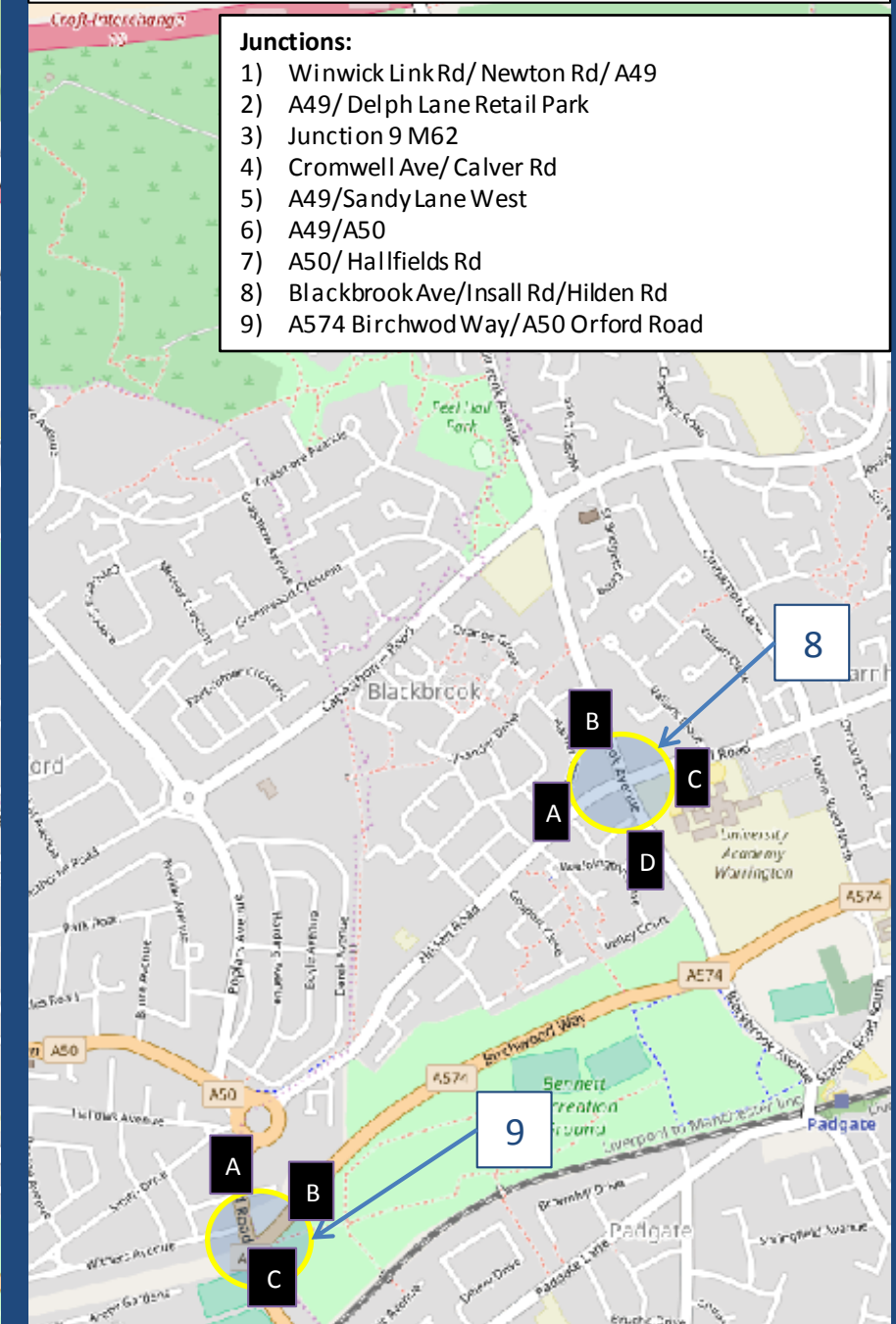
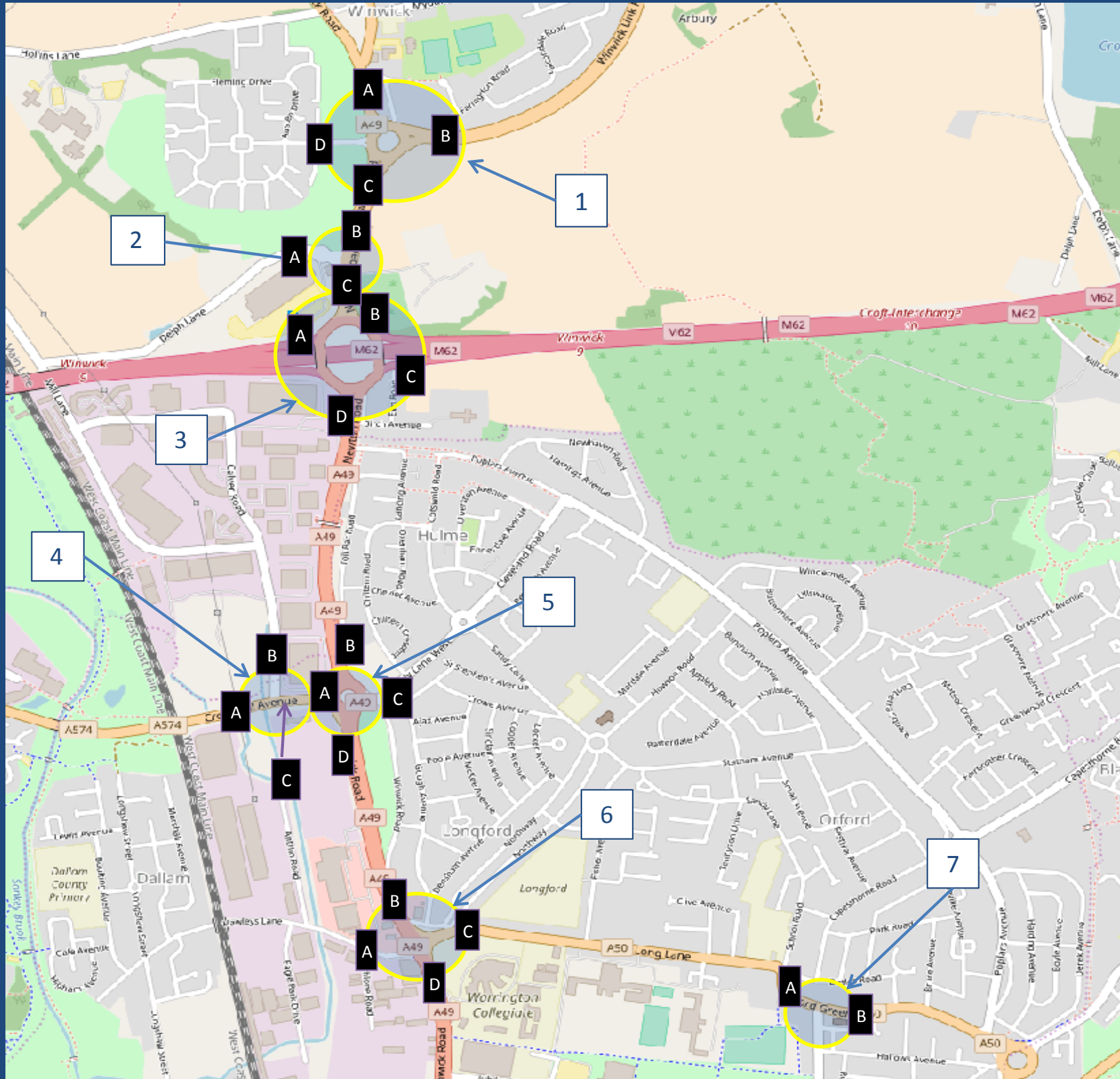
Key:
 VoC – Value over Cost (%)
 Q = Average Queue (PCU)

2030 DO SOMETHING SIGNALISED JUNCTIONS

VoC (%) & AVERAGE QUEUE (PCUs)

Junctions:

- 1) Winwick Link Rd/ Newton Rd/ A49
- 2) A49/Delph Lane Retail Park
- 3) Junction 9 M62
- 4) Cromwell Ave/ Calver Rd
- 5) A49/Sandy Lane West
- 6) A49/A50
- 7) A50/Halfields Rd
- 8) Blackbrook Ave/Insal Rd/Hilden Rd
- 9) A574 Birchwod Way/A50 Orford Road



Junction 1	Junction 2	Junction 3	Junction 4	Junction 5	Junction 6	Junction 7	Junction 8	Junction 9
AM A: VoC=75, Q=3 B: VoC=66, Q=3 C: VoC=108, Q=52 D: VoC=24, Q=1	AM A: VoC=44, Q=20 B: VoC=111, Q=87 C: VoC=66, Q=5	AM A: VoC=102, Q=21 B: VoC=109, Q=71 C: VoC=75, Q=4 D: VoC=96, Q=38	AM A: VoC=93, Q=6 B: VoC=62, Q=2 C: VoC=38, Q=1	AM A: VoC=79, Q=60 B: VoC=97, Q=98 C: VoC=53, Q=3 D: VoC=33, Q=0	AM A: VoC=21, Q=3 B: VoC=100, Q=92 C: VoC=86, Q=9 D: VoC=83, Q=24	AM A: VoC=43, Q=2 B: VoC=77, Q=6	AM A: VoC=44, Q=3 B: VoC=103, Q=13 C: VoC=81, Q=6 D: VoC=97, Q=6	AM A: VoC=52, Q=5 B: VoC=43, Q=4 C: VoC=57, Q=4
PM A: VoC=75, Q=3 B: VoC=107, Q=40 C: VoC=106, Q=58 D: VoC=14, Q=0	PM A: VoC=37, Q=4 B: VoC=58, Q=6 C: VoC=97, Q=11	PM A: VoC=123, Q=119 B: VoC=106, Q=48 C: VoC=53, Q=2 D: VoC=107, Q=143	PM A: VoC=63, Q=4 B: VoC=82, Q=3 C: VoC=57, Q=1	PM A: VoC=45, Q=5 B: VoC=95, Q=10 C: VoC=99, Q=6 D: VoC=46, Q=0	PM A: VoC=37, Q=5 B: VoC=71, Q=14 C: VoC=53, Q=7 D: VoC=109, Q=113	PM A: VoC=76, Q=4 B: VoC=76, Q=5	PM A: VoC=92, Q=1 B: VoC=93, Q=0 C: VoC=104, Q=2 D: VoC=82, Q=1	PM A: VoC=49, Q=4 B: VoC=45, Q=3 C: VoC=72, Q=6

Key:
VoC – Value over Cost (%)
Q = Average Queue (PCU)

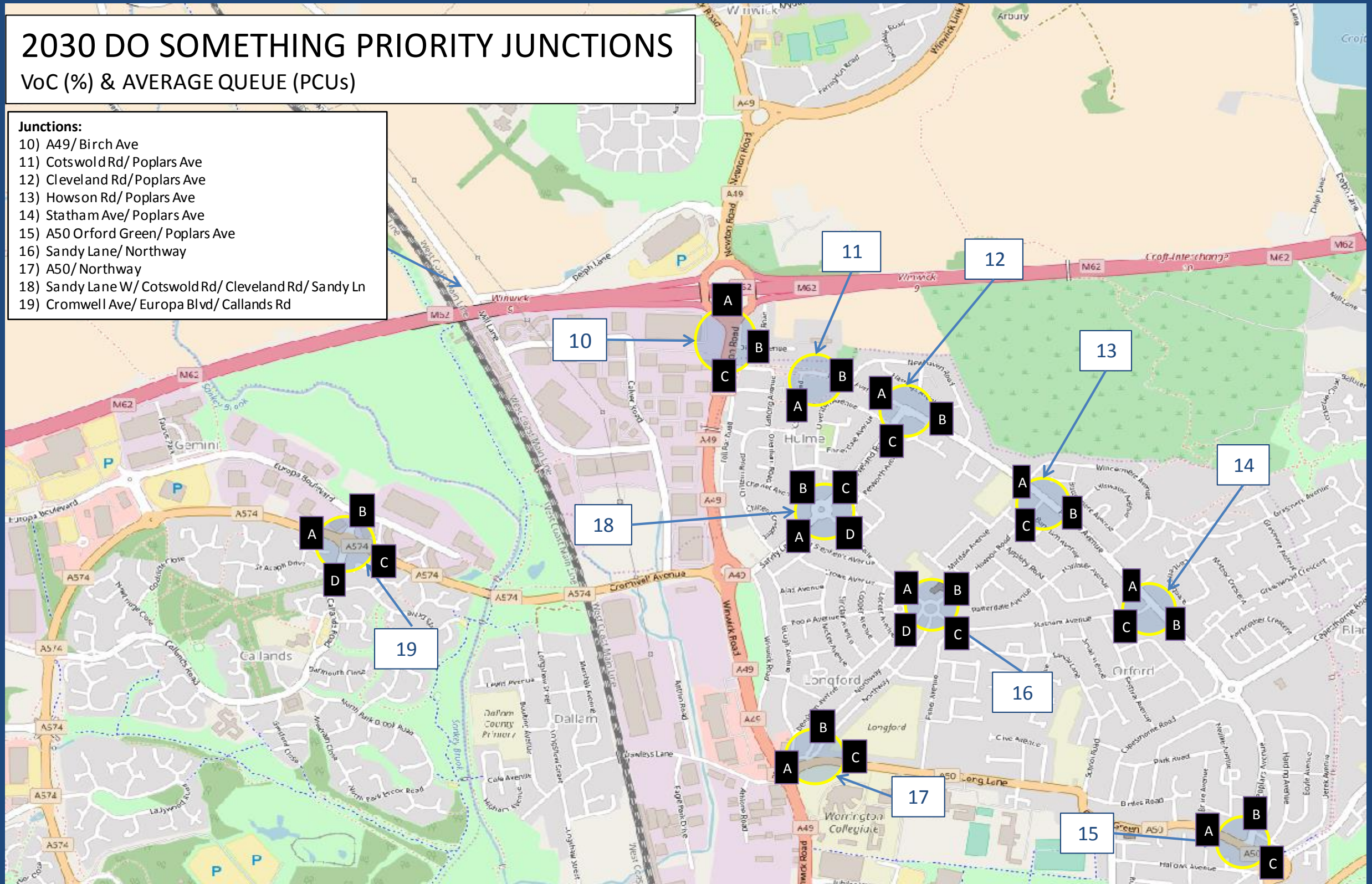


2030 DO SOMETHING PRIORITY JUNCTIONS

VoC (%) & AVERAGE QUEUE (PCUs)

Junctions:

- 10) A49/ Birch Ave
- 11) Cotswold Rd/ Poplars Ave
- 12) Cleveland Rd/ Poplars Ave
- 13) Howson Rd/ Poplars Ave
- 14) Statham Ave/ Poplars Ave
- 15) A50 Orford Green/ Poplars Ave
- 16) Sandy Lane/ Northway
- 17) A50/ Northway
- 18) Sandy Lane W/ Cotswold Rd/ Cleveland Rd/ Sandy Ln
- 19) Cromwell Ave/ Europa Blvd/ Callands Rd



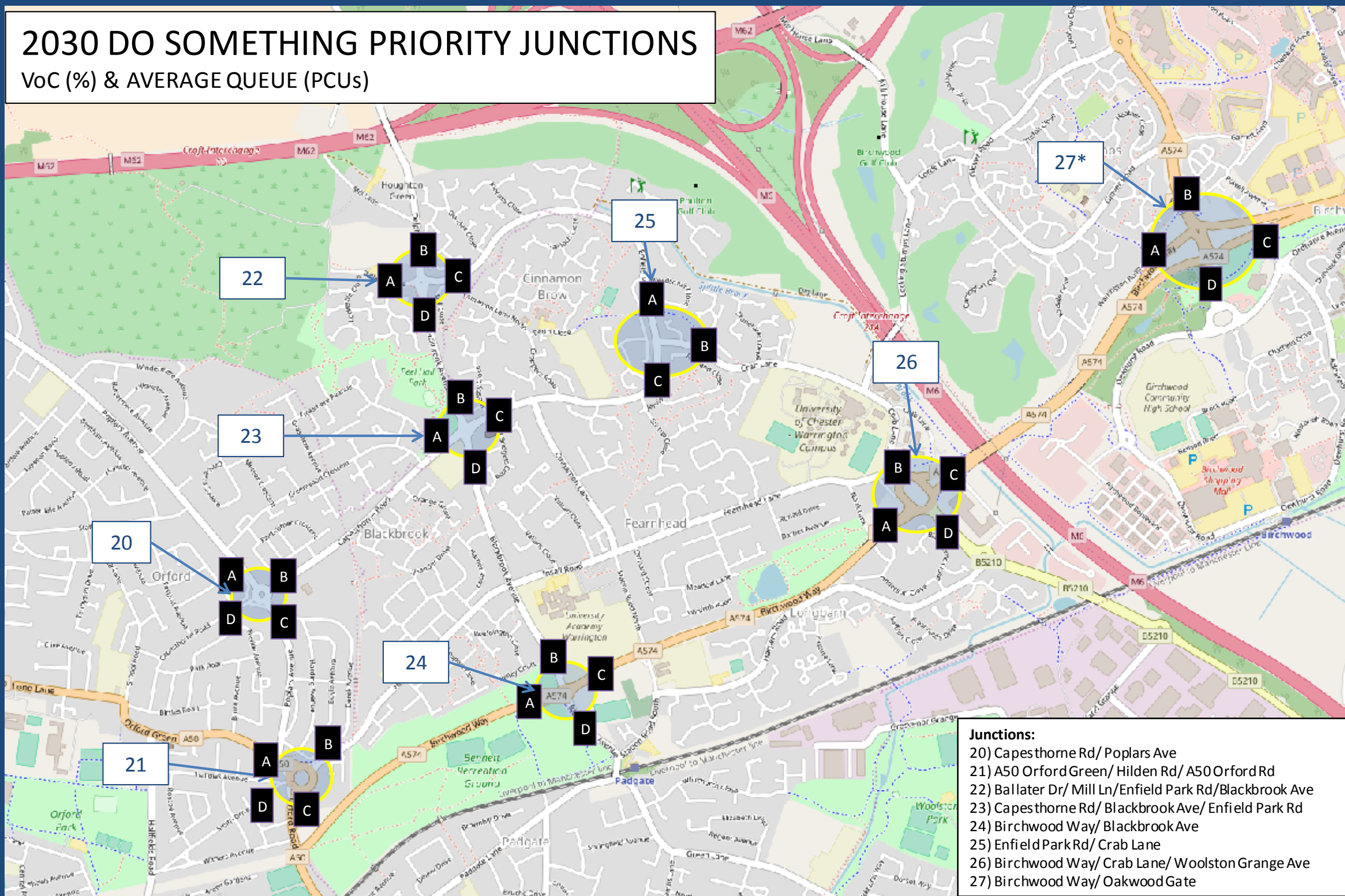
Junction 10	Junction 11	Junction 12	Junction 13	Junction 14	Junction 15	Junction 16	Junction 17	Junction 18	Junction 19
AM	AM	AM	AM	AM	AM	AM	AM	AM	AM
A:VoC=55,Q=0 B:VoC=27,Q=0 C:VoC=43,Q=0	A:VoC=5,Q=0 B:VoC=1,Q=0	A:VoC=12,Q=0 B:VoC=22,Q=0 C:VoC=75,Q=0	A:VoC=34,Q=0 B:VoC=28,Q=0 C:VoC=41,Q=0	A:VoC=31,Q=0 B:VoC=23,Q=0 C:VoC=11,Q=0	A:VoC=25,Q=0 B:VoC=107,Q=25 C:VoC=84,Q=1	A:VoC=25,Q=0, B:VoC=28,Q=0 C:VoC=10,Q=0 D:VoC=4,Q=0	A:VoC=17,Q=0 B:VoC=46,Q=1 C:VoC=32,Q=0	A:VoC=75,Q=0 B:VoC=23,Q=0 C:VoC=45,Q=0 D:VoC=9,Q=0	A:VoC=28,Q=0 B:VoC=24,Q=0 C:VoC=50,Q=0 D:VoC=33,Q=0
PM	PM	PM	PM	PM	PM	PM	PM	PM	PM
A:VoC=41,Q=0 B:VoC=9,Q=0 C:VoC=57,Q=0	A:VoC=2,Q=0 B:VoC=1,Q=0	A:VoC=13,Q=0 B:VoC=36,Q=0 C:VoC=63,Q=0	A:VoC=32,Q=0 B:VoC=44,Q=0 C:VoC=59,Q=0	A:VoC=33,Q=0 B:VoC=39,Q=0 C:VoC=13,Q=0	A:VoC=42,Q=0 B:VoC=57,Q=0 C:VoC=100,Q=0	A:VoC=17,Q=0 B:VoC=17,Q=0 C:VoC=13,Q=0 D:VoC=26,Q=0	A:VoC=39,Q=0 B:VoC=7,Q=0 C:VoC=41,Q=0	A:VoC=56,Q=0 B:VoC=13,Q=0 C:VoC=62,Q=0 D:VoC=24,Q=0	A:VoC=27,Q=0 B:VoC=24,Q=0 C:VoC=75,Q=1 D:VoC=20,Q=0

Key:
VoC – Value over Cost (%)
Q = Average Queue (PCU)



2030 DO SOMETHING PRIORITY JUNCTIONS

VoC (%) & AVERAGE QUEUE (PCUs)



Junction 20

AM

A:VoC=36,Q=0
B:VoC=79,Q=1
C:VoC=85,Q=1
D:VoC=32,Q=0

PM

A:VoC=50,Q=0
B:VoC=66,Q=0
C:VoC=102,Q=12
D:VoC=90,Q=3

Junction 21

AM

A:VoC=64,Q=0
B:VoC=75,Q=1
C:VoC=67,Q=1
D:VoC=33,Q=0

PM

A:VoC=64,Q=0
B:VoC=61,Q=1
C:VoC=66,Q=0
D:VoC=61,Q=1

Junction 22

AM

A:VoC=10,Q=0
B:VoC=68,Q=0
C:VoC=27,Q=0
D:VoC=31,Q=0

PM

A:VoC=4,Q=0
B:VoC=51,Q=0
C:VoC=31,Q=0
D:VoC=65,Q=0

Junction 23

AM

A:VoC=50,Q=0
B:VoC=86,Q=1
C:VoC=50,Q=0
D:VoC=36,Q=0

PM

A:VoC=65,Q=1
B:VoC=59,Q=0
C:VoC=87,Q=2
D:VoC=70,Q=1

Junction 24

AM

A:VoC=84,Q=1
B:VoC=101,Q=9
C:VoC=94,Q=4
D:VoC=74,Q=1

PM

A:VoC=89,Q=2
B:VoC=97,Q=5
C:VoC=108,Q=40
D:VoC=84,Q=1

Junction 25

AM

A:VoC=0,Q=0
B:VoC=37,Q=0
C:VoC=77,Q=0

PM

A:VoC=0,Q=0
B:VoC=97,Q=0
C:VoC=57,Q=0

Junction 26

AM

A:VoC=38,Q=0
B:VoC=103,Q=15
C:VoC=48,Q=0
D:VoC=63,Q=0

PM

A:VoC=38,Q=0
B:VoC=82,Q=2
C:VoC=58,Q=0
D:VoC=46,Q=0

Junction 27*

AM

A*:VoC=96,Q=5
B:VoC=73,Q=2
C:VoC=91,Q=4
D:VoC=153,Q=141

PM

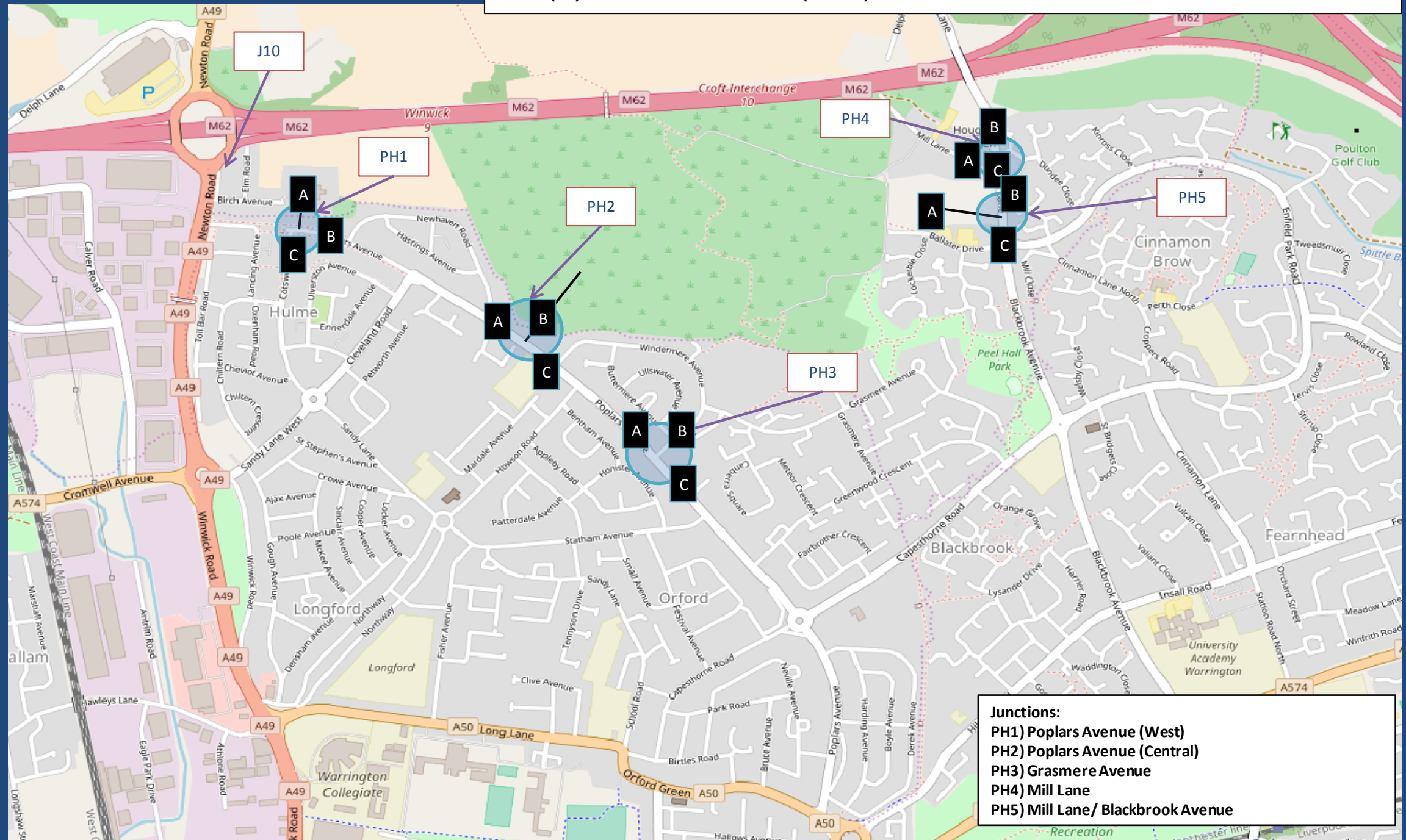
A:VoC=74,Q=3
B:VoC=62,Q=1
C:VoC=86,Q=221
D:VoC=346,Q=326

Key:
VoC – Value over Cost (%)
Q = Average Queue (PCU)
* = Signalised in future years



2030 DO SOMETHING PEEL HALL ACCESS JUNCTIONS

VoC (%) & AVERAGE QUEUE (PCUs)



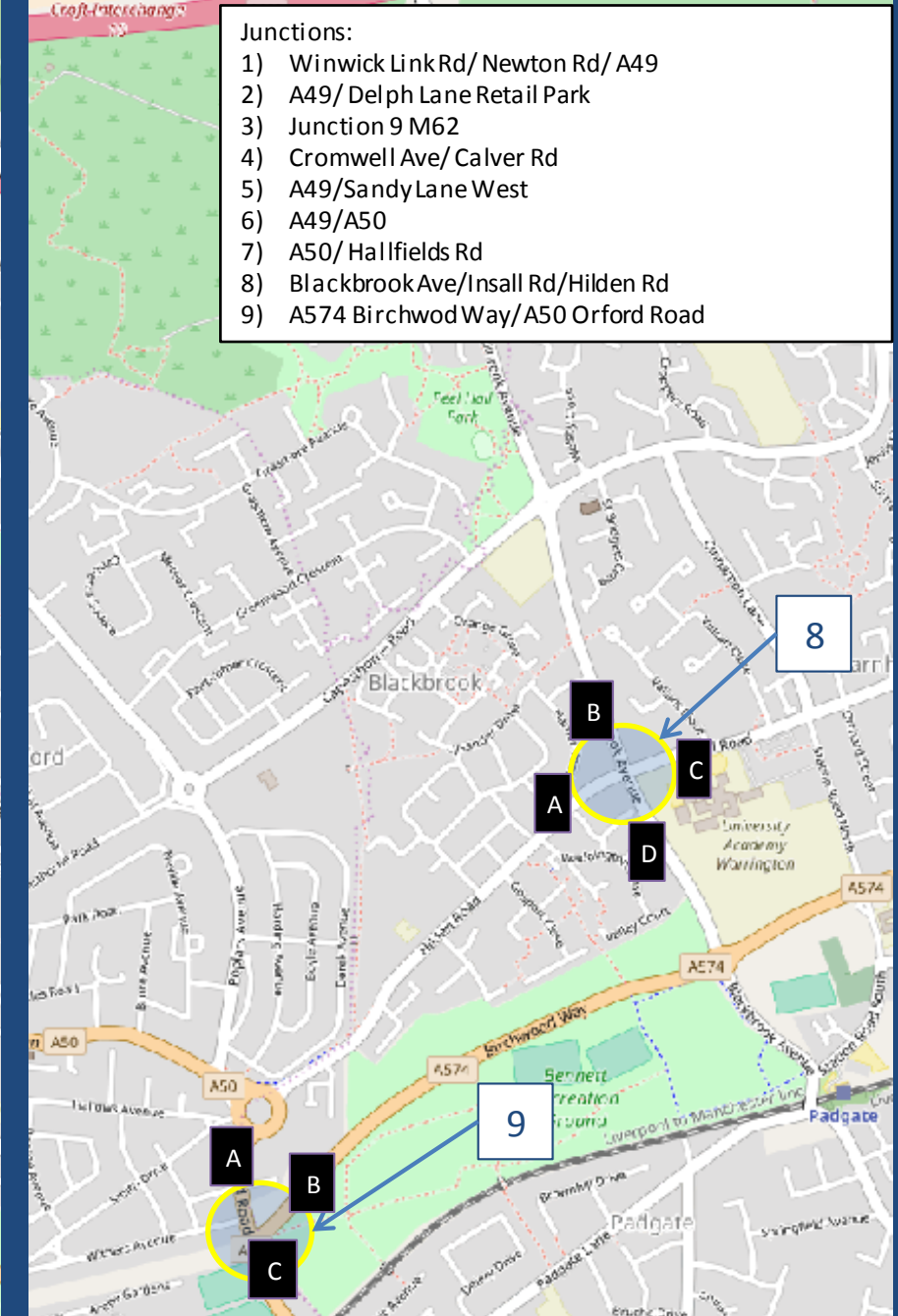
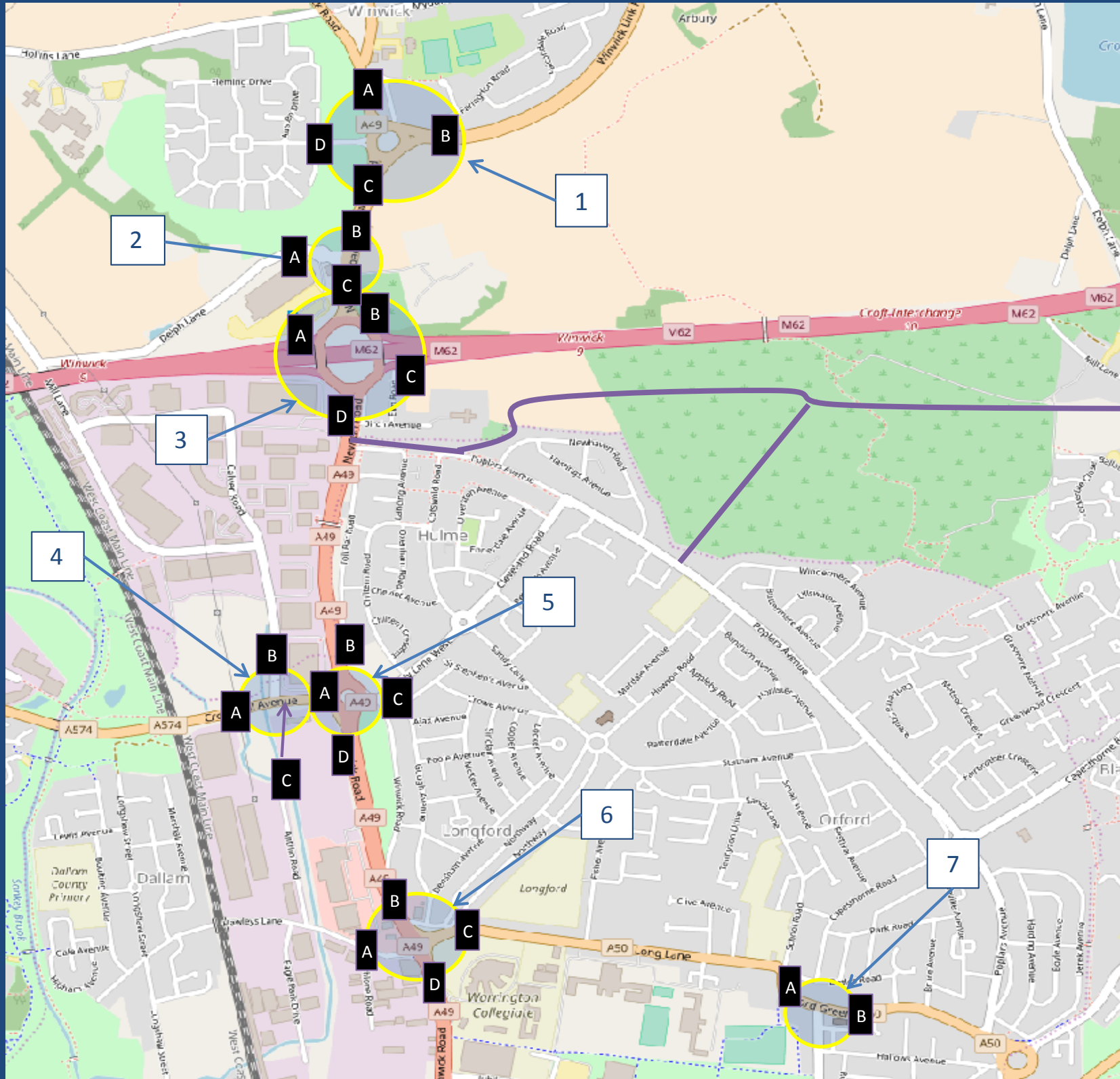
Junction PH1	Junction PH2	Junction PH3	Junction PH4	Junction PH5
AM	AM	AM	AM	AM
A:VoC=6,Q=0	A:VoC=23,Q=0	A:VoC=34,Q=0	A:VoC=42,Q=0	A:VoC=12,Q=0
B:VoC=3,Q=0	B:VoC=18,Q=0	B:VoC=61,Q=1	B:VoC=31,Q=0	B:VoC=62,Q=0
C:VoC=2,Q=0	C:VoC=22,Q=0	C:VoC=31,Q=0	C:VoC=23,Q=0	C:VoC=32,Q=0
PM	PM	PM	PM	PM
A:VoC=2,Q=0	A:VoC=20,Q=0	A:VoC=31,Q=0	A:VoC=21,Q=0	A:VoC=24,Q=0
B:VoC=3,Q=0	B:VoC=18,Q=0	B:VoC=52,Q=0	B:VoC=35,Q=0	B:VoC=56,Q=0
C:VoC=2,Q=0	C:VoC=42,Q=0	C:VoC=43,Q=0	C:VoC=34,Q=0	C:VoC=76,Q=0

Key:
VoC – Value over Cost (%)
Q = Average Queue (PCU)

2030 THROUGH ROUTE SIGNALISED JUNCTIONS

VoC (%) & AVERAGE QUEUE (PCUs)

- Junctions:
- 1) Winwick Link Rd/ Newton Rd/ A49
 - 2) A49/Delph Lane Retail Park
 - 3) Junction 9 M62
 - 4) Cromwell Ave/ Calver Rd
 - 5) A49/Sandy Lane West
 - 6) A49/A50
 - 7) A50/Halfields Rd
 - 8) Blackbrook Ave/Insal Rd/Hilden Rd
 - 9) A574 Birchwod Way/A50 Orford Road



Junction 1
AM
A: VoC=73, Q=3
B: VoC=66, Q=3
C: VoC=106, Q=41
D: VoC=24, Q=1
PM
A: VoC=74, Q=3
B: VoC=107, Q=40
C: VoC=91, Q=6
D: VoC=14, Q=0

Junction 2
AM
A: VoC=44, Q=18
B: VoC=108, Q=67
C: VoC=65, Q=4
PM
A: VoC=37, Q=4
B: VoC=58, Q=6
C: VoC=95, Q=10

Junction 3
AM
A: VoC=102, Q=20
B: VoC=109, Q=71
C: VoC=75, Q=4
D: VoC=98, Q=41
PM
A: VoC=123, Q=119
B: VoC=107, Q=55
C: VoC=53, Q=2
D: VoC=101, Q=96

Junction 4
AM
A: VoC=93, Q=6
B: VoC=62, Q=2
C: VoC=38, Q=1
PM
A: VoC=63, Q=4
B: VoC=82, Q=3
C: VoC=58, Q=1

Junction 5
AM
A: VoC=79, Q=32
B: VoC=96, Q=106
C: VoC=40, Q=2
D: VoC=33, Q=0
PM
A: VoC=46, Q=5
B: VoC=91, Q=10
C: VoC=74, Q=4
D: VoC=46, Q=0

Junction 6
AM
A: VoC=21, Q=3
B: VoC=100, Q=88
C: VoC=89, Q=9
D: VoC=83, Q=23
PM
A: VoC=37, Q=5
B: VoC=70, Q=14
C: VoC=51, Q=5
D: VoC=109, Q=114

Junction 7
AM
A: VoC=43, Q=2
B: VoC=77, Q=6
PM
A: VoC=74, Q=4
B: VoC=73, Q=5

Junction 8
AM
A: VoC=42, Q=3
B: VoC=103, Q=14
C: VoC=81, Q=6
D: VoC=97, Q=6
PM
A: VoC=78, Q=4
B: VoC=92, Q=6
C: VoC=102, Q=7
D: VoC=84, Q=6

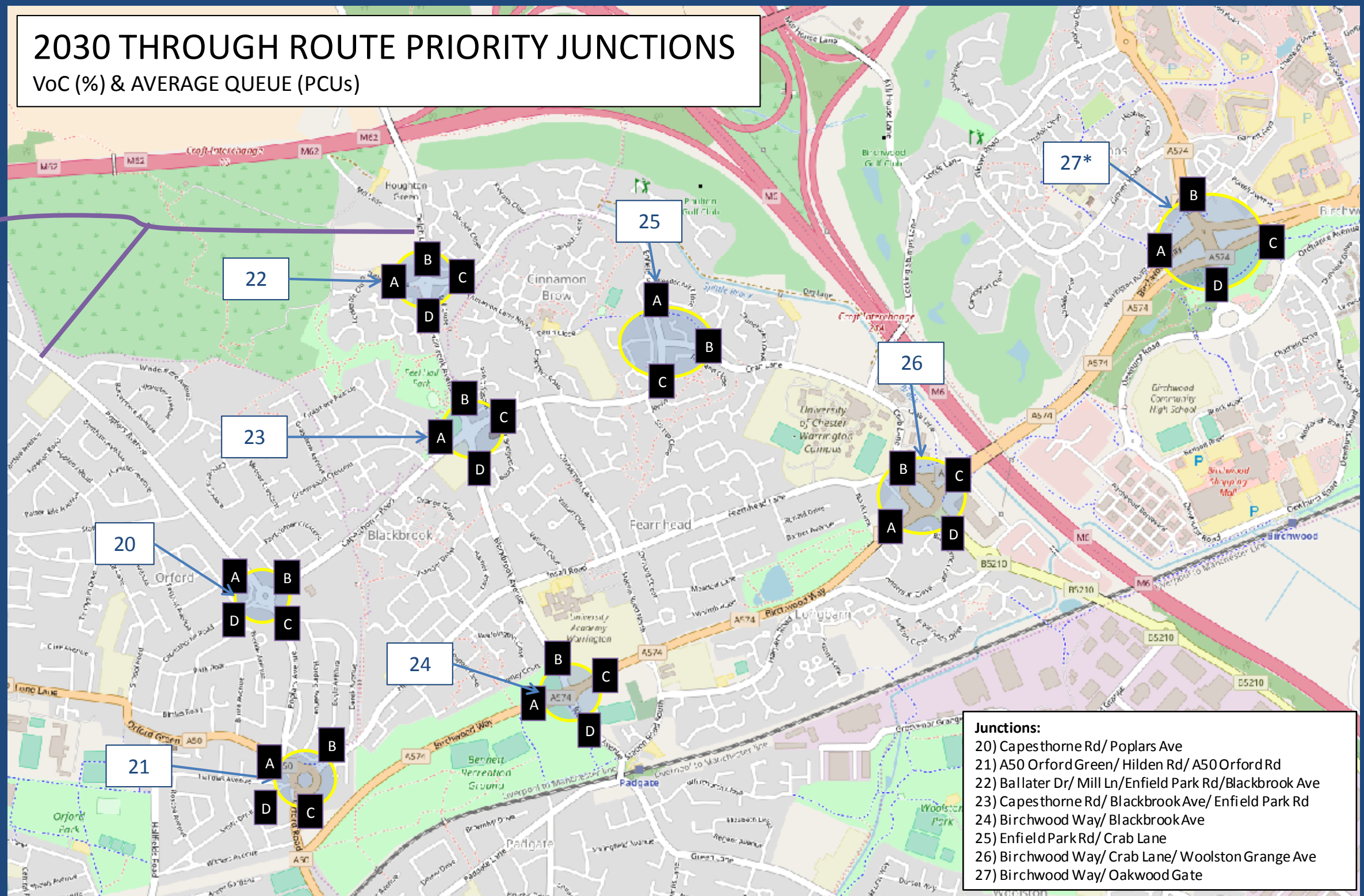
Junction 9
AM
A: VoC=52, Q=5
B: VoC=42, Q=4
C: VoC=57, Q=4
PM
A: VoC=49, Q=4
B: VoC=44, Q=3
C: VoC=74, Q=6

Key:
VoC – Value over Cost (%)
Q = Average Queue (PCU)
— = Indicative Through Route



2030 THROUGH ROUTE PRIORITY JUNCTIONS

VoC (%) & AVERAGE QUEUE (PCUs)



- Junctions:**
- 20) Capesborne Rd/ Poplars Ave
 - 21) A50 Orford Green/ Hilden Rd/ A50 Orford Rd
 - 22) Ballater Dr/ Mill Ln/Enfield Park Rd/Blackbrook Ave
 - 23) Capesborne Rd/ Blackbrook Ave/ Enfield Park Rd
 - 24) Birchwood Way/ Blackbrook Ave
 - 25) Enfield Park Rd/ Crab Lane
 - 26) Birchwood Way/ Crab Lane/ Woolston Grange Ave
 - 27) Birchwood Way/ Oakwood Gate

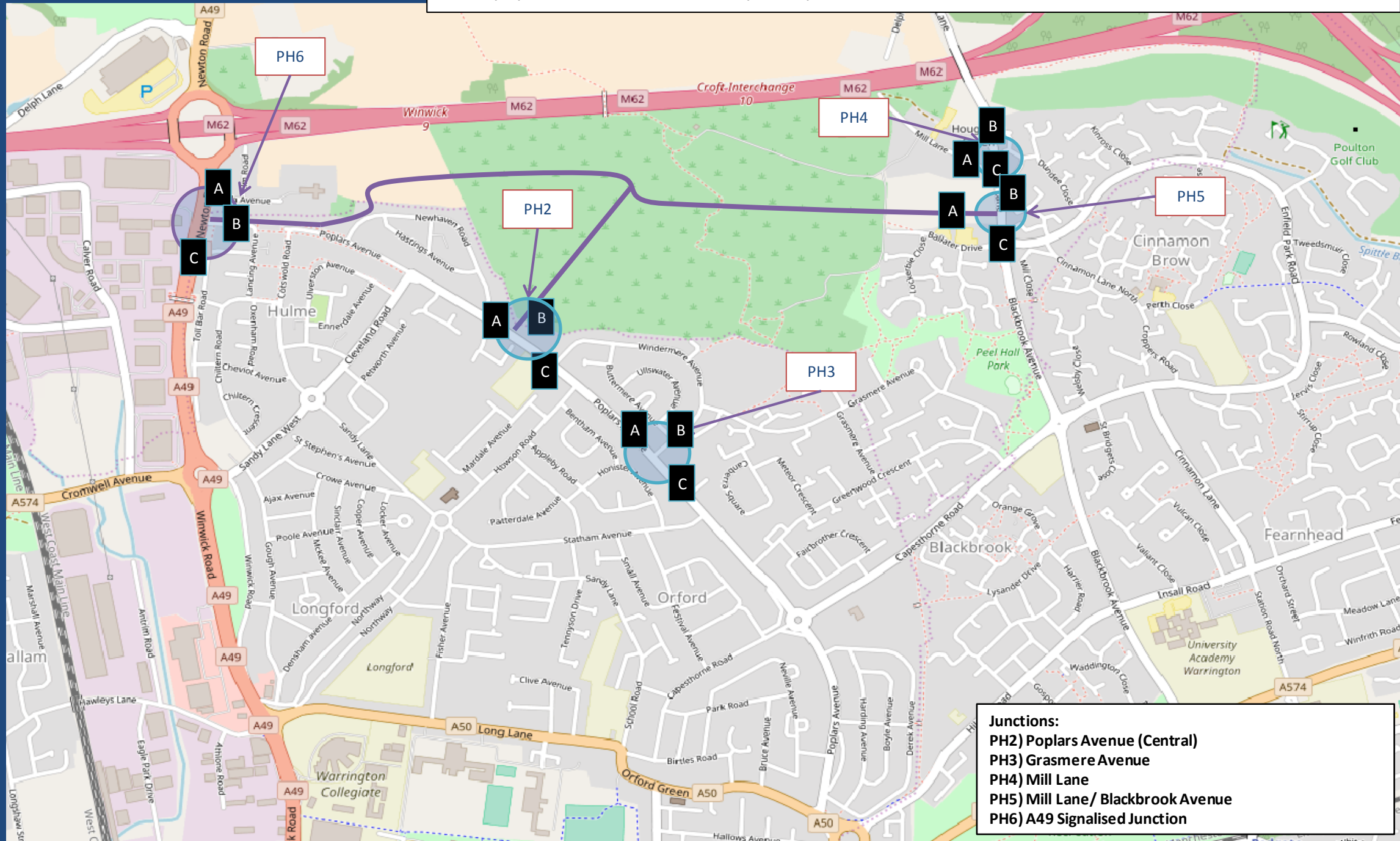
Junction 20	Junction 21	Junction 22	Junction 23	Junction 24	Junction 25	Junction 26	Junction 27*
AM	AM	AM	AM	AM	AM	AM	AM
A:VoC=35,Q=0	A:VoC=65,Q=0	A:VoC=10,Q=0	A:VoC=45,Q=0	A:VoC=84,Q=1	A:VoC=0,Q=0	A:VoC=3, Q=0	A*:VoC=75,Q=4
B:VoC=62,Q=0	B:VoC=76, Q=2	B:VoC=70,Q=0	B:VoC=87,Q=1	B:VoC=101,Q=11	B:VoC=38,Q=0	B:Voc=103, Q=15	B:VoC=69,Q=1
C:VoC=82,Q=1	C:VoC=67,Q=1	C:VoC=28,Q=0	C:VoC=50,Q=0	C:VoC=90,Q=3	C:VoC=80,Q=0	C:VoC=49,Q=0	C:VoC=89,Q=3
D:VoC=43,Q=0	D:VoC=33,Q=0	D:VoC=29,Q=0	D:Voc=38,Q=0	D:VoC=73,Q=1	D:VoC=80,Q=0	D:VoC=63,Q=0	D:VoC=148,Q=132
PM	PM	PM	PM	PM	PM	PM	PM
A:VoC=40,Q=0	A:VoC=64,Q=0	A:VoC=4,Q=0	A:VoC=56,Q=0	A:VoC=86,Q=2	A:VoC=0,Q=0	A:VoC=38,Q=0	A:VoC=74,Q=3
B::VoC=36,Q=0	B:VoC=51,Q=1	B:VoC=50,Q=0	B:VoC=53,Q=0	B:VoC=85,Q=2	B:VoC=97,Q=0	B:VoC=88,Q=3	B:VoC=62,Q=1
C:VoC=83,Q=1	C:VoC=65,Q=0	C:VoC=30,Q=0	C:VoC=78,Q=1	C:VoC=105,Q=31	C:VoC=57,Q=0	C::VoC=57,Q=0	C:VoC=149,Q=221
D:VoC=77,Q=1	D:VoC=59,Q=1	D:VoC=65,Q=0	D:VoC=63,Q=1	D:VoC=84,Q=1	D:VoC=84,Q=1	D:VoC=46,Q=2	D:VoC=347,Q=326

Key:
 VoC= Value over Cost (%)
 Q= Average Queue (PCU)
 = Indicative Through Route
 *= Signalised in Future Years



2030 THROUGH ROUTE PEEL HALL ACCESS JUNCTIONS

VoC (%) & AVERAGE QUEUE (PCUs)



Junction PH2	Junction PH3	Junction PH4	Junction PH5	Junction PH6
AM	AM	AM	AM	AM
A:VoC=18,Q=0	A:VoC=34,Q=0	A:VoC=45,Q=0	A:VoC=41,Q=0	A:VoC=101,Q=15
B:VoC=9,Q=0	B:VoC=61,Q=1	B:VoC=33,Q=0	B:VoC=77,Q=1	B:VoC=59,Q=2
C:VoC=18,Q=0	C:VoC=31,Q=0	C:VoC=24,Q=0	C:VoC=44,Q=0	C:VoC=73,Q=5
PM	PM	PM	PM	PM
A:VoC=13,Q=0	A:VoC=17,Q=0	A:VoC=21,Q=0	A:VoC=42,Q=0	A:VoC=76,Q=4
B:Voc=5,Q=0	B:Voc=36,Q=0	B:Voc=35,Q=0	B:VoC=62,Q=0	B:VoC=82,Q=13
C:VoC=25,Q=0	C:VoC=28,Q=0	C:VoC=35,Q=0	C:VoC=87,Q=1	C:VoC=97,Q=71

Key:
 VoC – Value over Cost (%)
 Q = Average Queue (PCU)
 = Indicative Through Route

Appendix 64

HTp/1107/TN/22 – Impact Summary

Highgate *Transportation*

**Land at Peel Hall, Warrington
Technical Note – Impact Summary**

(HTp/1107/TN/22)

September 2017

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Appendices

Appendix 1	AECOM Technical Note 'SATURN Modelling Results' Appendix A
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1.0 Introduction

- 1.1 This Technical Note has been prepared by Highgate Transportation Limited to summarise the traffic impact results on the junctions in Warrington within the Peel Hall SATURN model, using the data arising from the AECOM SATURN modelling report.
- 1.2 The SATURN data is summarised in AECOM Technical Note 'SATURN Modelling Results' dated 22 September 2017; the Appendix of which is contained in **Appendix 1** to this report for ease of reference. The junction locations are illustrated on the summary sheets.
- 1.3 The scenarios that have been modelled are as follows:
 - i. Base 2015 – this is calibrated from existing traffic count and journey time data.
 - ii. 'Do Minimum' 2025 – this is the base traffic growthed to a future year of 2025, plus committed development traffic.
 - iii. 'Do Something' 2025 – this is the Do Minimum 2025 scenario plus the Peel Hall development flows for a part build-out scenario of 600 dwellings and no internal vehicular link for car traffic between the majority of the residential areas and the local centre.
 - iv. 'Do Minimum' 2030 – this is the base traffic growthed to a future year of 2030, plus committed development traffic.
 - v. 'Do Something' 2030 – this is the Do Minimum 2030 scenario plus full build-out of the Peel Hall development, with an internal link to the local centre, but no through-route for general traffic across the site.
 - vi. 'Through-Route' 2030 - this is the Do Minimum 2030 scenario plus full build-out of the Peel Hall development, with a fully open through-route for general traffic between the A49 (a new signalised junction is proposed) in the west and the proposed site access roundabout junction with Mill Lane to the east of the site.
- 1.4 The 2025 'Do Minimum' has been compared with the 2025 'Do Something' results to identify what mitigation, if any, on the local highway network may be required in the interim build-out years.
- 1.5 The 2030 'Do Minimum' scenario has been compared against the 2030 'Do Something' and the 2030 'Through-Route' scenarios; to again identify what mitigation may be required on the local highway network as a result of the Peel Hall development.
- 1.6 The following is a list of the junctions in the SATURN model:
 - Junction 1 – Winwick Link Road/Newton Road/A49
 - Junction 2 – A49/Delph Lane Retail Park
 - Junction 3 – M62 Junction 9
 - Junction 4 – Cromwell Avenue/Calver Road
 - Junction 5 – A49/Sandy Lane West
 - Junction 6 – A49/A50
 - Junction 7 – A50/Hallfields Road
 - Junction 8 – Blackbrook Avenue/Insall Road/Hilden Road
 - Junction 9 – A574 Birchwood Way/A50 Oreford Road

- Junction 10 – A49/Birch Avenue
- Junction 11 – Cotswold Road/Through-Route Alignment
- Junction 12 – Cleveland Road/Poplars Avenue
- Junction 13 – Howson Road/Poplars Avenue
- Junction 14 – Statham Avenue/Poplars Avenue
- Junction 15 – A50 Orford Green/Poplars Avenue
- Junction 16 – Sandy Lane/Northway
- Junction 17 – A50/Northway
- Junction 18 – Sandy Lane West/Cotswold Road/Cleveland Road/Sandy Lane
- Junction 19 – Cromwell Avenue/Europa Boulevard/Callands Road
- Junction 20 – Capesthorpe Road/Poplars Avenue
- Junction 21 – A50 Orford Green/Hilden Road/A50 Orford Road
- Junction 22 – Ballater Drive/Mill Lane/Enfield Park Road/Blackbrook Avenue
- Junction 23 – Capesthorpe Road/Blackbrook Avenue/Enfield Park Road
- Junction 24 – Birchwood Way/Blackbrook Avenue
- Junction 25 – Enfield Park Road/Crab Lane
- Junction 26 – Birchwood Way/Crab Lane/Woolston Grange Avenue
- Junction 27 – Birchwood Way/Oakwood Gate
- Junction PH1 – Peel Hall employment site access priority junction with Cotswold Road and Poplars Avenue
- Junction PH2 – Peel Hall site access ghost right turn priority junction with Poplars Avenue
- Junction PH3 – Windermere Avenue priority junction with Poplars Avenue (sports club and community use site access off Grasmere Avenue)
- Junction PH4 – Mill Lane priority junction with Delph Lane (residential site access off Mill Lane)
- Junction PH5 – Peel Hall site access roundabout junction with Mill Lane
- Junction PH6 – Peel Hall Through-Route A49/Poplars Avenue signalised junction

- 1.7 As set out in the AECOM Technical note, the results of the SATURN modelling are presented as Volume over Capacity (%) and Queues. Links with a VoC of below 85% are considered to be operating within capacity, with an additional 15% of reserve capacity to deal with any increases in traffic flows.
- 1.8 Usually, a significant impact is considered as an increase of 10% or more on a junction operating at 90% or above. The significance of impact on queue lengths is generally dependent on the available stacking capacity of that link.
- 1.9 A list of the junctions that show VoC of over 85% in the Base 2015 SATURN model are as follows:

- Junction 1 - Winwick Link Road/Newton Road/A49
- Junction 2 - A49/Delph Lane Retail Park
- Junction 3 - M62 Junction 9
- Junction 6 - A49/A50
- Junction 8 - Blackbrook Avenue/Insall Road/Hilden Road
- Junction 27 - Birchwood Way/Oakwood Gate

- 1.10 A list of the junctions that show VoC of over 85% in the Do Minimum 2025 SATURN model are as follows (the highlighted junctions are in addition to those junctions operating at or over capacity in the base year of 2015):

Junction 1 - Winwick Link Road/Newton Road/A49

Junction 2 - A49/Delph Lane Retail Park

Junction 3 - M62 Junction 9

Junction 4 - Cromwell Avenue/Calver Road

Junction 5 - A49/Sandy Lane West

Junction 6 - A49/A50

Junction 8 - Blackbrook Avenue/Insall Road/Hilden Road

Junction 15 - A50 Orford Green/Poplars Avenue

Junction 24 - Birchwood Way/Blackbrook Avenue

Junction 26 - Birchwood Way/Crab Lane/Woolston Grange Avenue

Junction 27 - Birchwood Way/Oakwood Gate

- 1.11 A list of the junctions that show VoC of over 85% in the Do Minimum 2030 SATURN Model are as follows:

Junction 1 - Winwick Link Road/Newton Road/A49

Junction 2 - A49/Delph Lane Retail Park

Junction 3 - M62 Junction 9

Junction 4 - Cromwell Avenue/Calver Road

Junction 5 - A49/Sandy Lane West

Junction 6 - A49/A50

Junction 8 - Blackbrook Avenue/Insall Road/Hilden Road

Junction 24 - Birchwood Way/Blackbrook Avenue

Junction 26 - Birchwood Way/Crab Lane/Woolston Grange Avenue

Junction 27 - Birchwood Way/Oakwood Gate

- 1.12 It is noted that Junction 15 (A50 Orford Green/Poplars Avenue) has dropped out of this list shown in **paragraph 1.11**, this is due to the change in the proportion of traffic flows across the arms resulting in the junction working more efficiently.

- 1.13 Junctions 1, 2, 4 and 26 show very minor (or no) increase from the 'Do Minimum' scenarios in 2025 and 2030 and therefore, whilst these junctions may be approaching operational capacity, the development does not impact them significantly. It is not for this development to mitigate for existing deficiencies on the local highway network.

- 1.14 This report provides a summary of the SATURN results by providing a direct tabulated comparison of the 'Do Minimum' and 'Do Something' results, thereby highlighting the junctions to be modelled on an individual basis with PICADY, ARCADY (Junctions 9) and Linsig software.

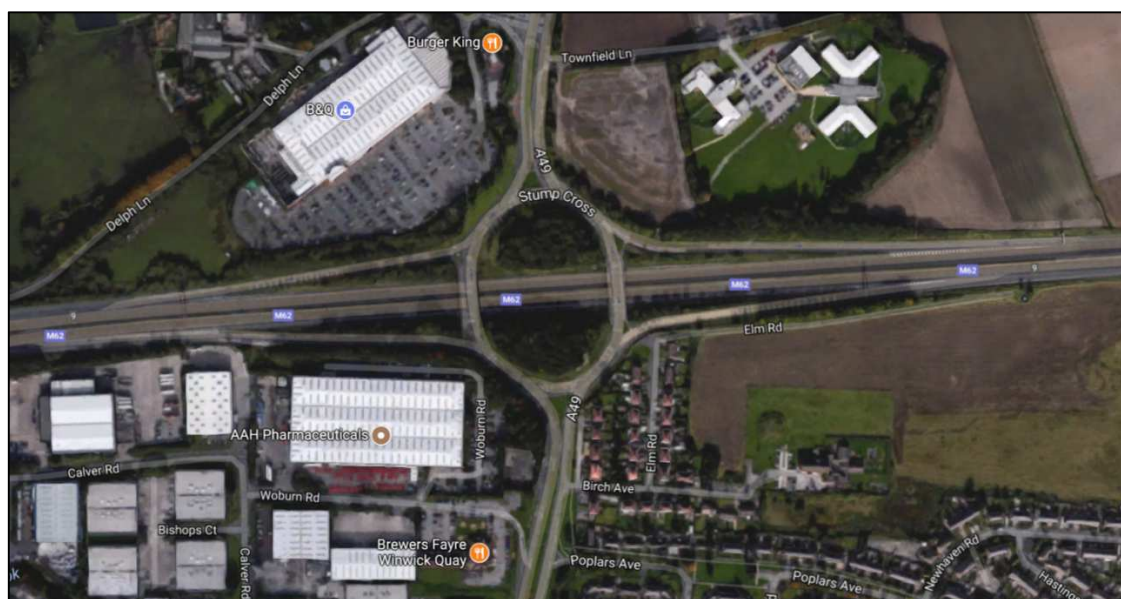
2.0 2025 Junction Summary Results

2.1 The following Section is a summary of the 2025 'Do Minimum' and 'Do Something' SATURN modelling results, where a VoC of above 85% is shown and exceeds that in the base and 'Do Minimum' scenarios.

Junction 3, M62 Junction 9

2.2 The M62 Junction 9 with the A49 Winwick Road is located to the north western corner of the Peel Hall site.

Figure 2.1 – M62 Junction 9 Google Map Extract



(Accessed 20/09/17)

Table 2.1 – M62 Junction 9 Saturn Results

Arm	2025			
	Do Minimum		Do Something	
	VoC	Queue	VoC	Queue
AM				
A. M62 Ebd Off Slip	97	21	98	21
B. A49 N	109	71	109	71
C. M62 Wbd Off Slip	71	4	72	4
D. A49 S	91	15	93	18
PM				
A. M62 Ebd Off Slip	135	78	117	89
B. A49 N	106	49	107	52
C. M62 Wbd Off Slip	50	2	51	2
D. A49 S	101	109	106	143

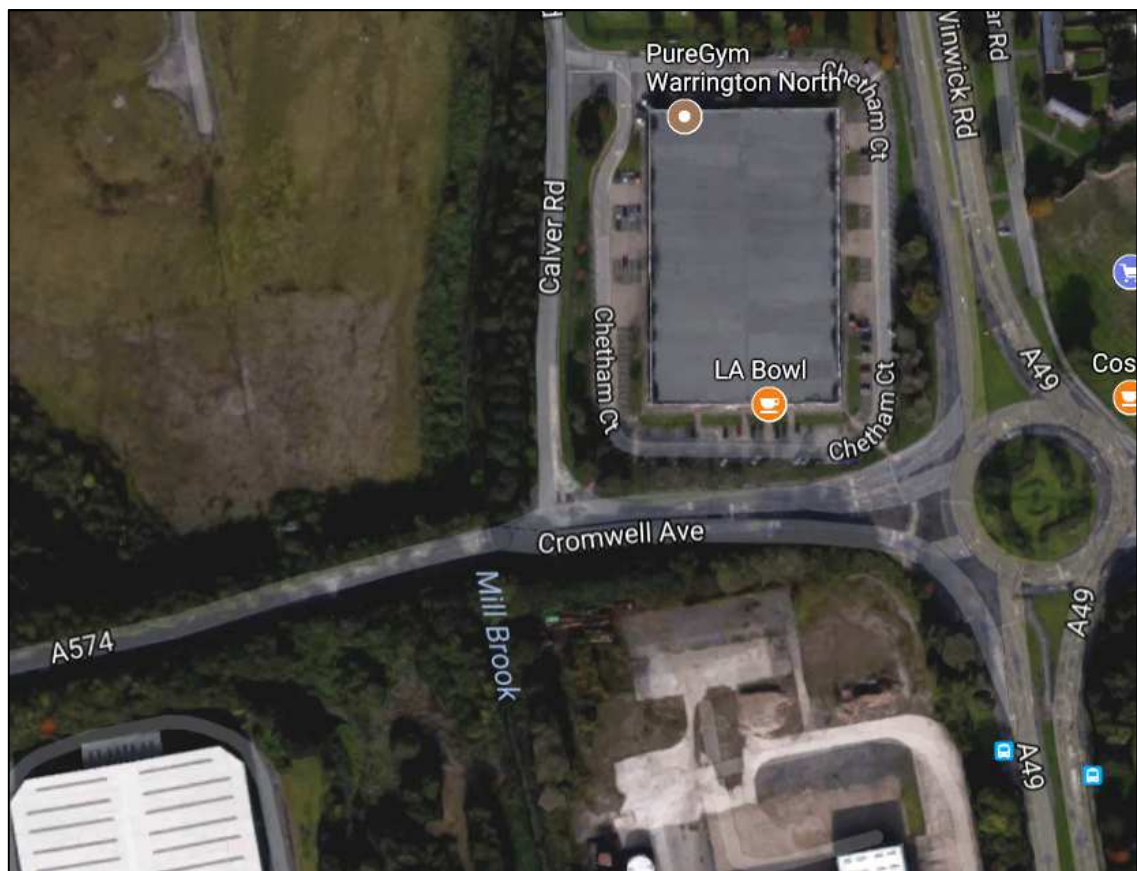
2.3 It can be seen from the above results that there is not a significant impact of the 'Do Something' above the 'Do Minimum' results.

2.4 Furthermore, it should be noted that when a junction starts to operate at or exceed its design capacity, longer delays and queues start to form. However, the model is unable to accurately reflect what may occur on site in practice and therefore once a capacity of 1.0 is exceeded caution should be taken when reviewing the corresponding queue lengths.

Junction 4, Cromwell Avenue/Calver Road

2.5 The Cromwell Avenue junction with Calver Road is located to the south west of the Peel Hall site.

Figure 2.2 – Cromwell Avenue/Calver Road Google Map Extract



(Accessed 20/09/17)

Table 2.2 – Cromwell Avenue/Calver Road Saturn Results

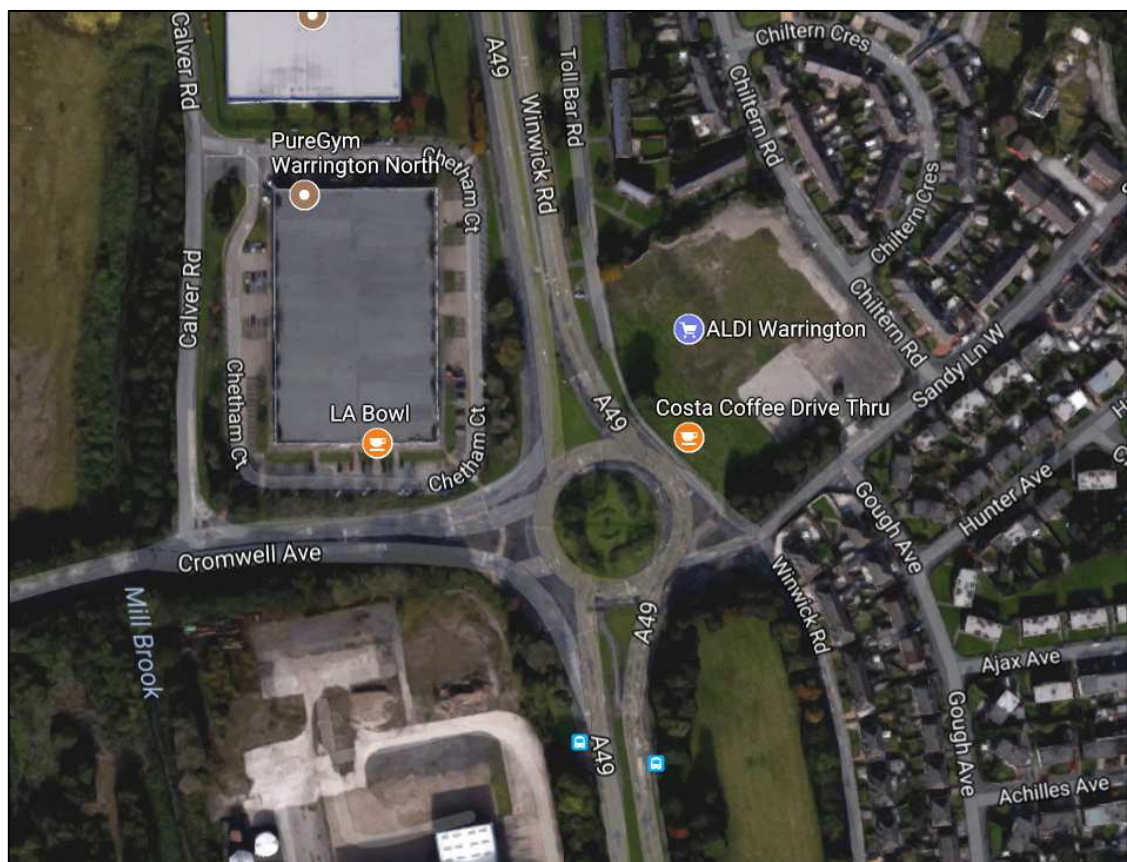
Arm	2025			
	Do Minimum		Do Something	
	VoC	Queue	VoC	Queue
AM				
A. Cromwell Ave W	86	6	90	6
B. Calver Road	60	2	60	2
C. Cromwell Ave E	36	1	37	1
PM				
A. Cromwell Ave W	59	3	60	4
B. Calver Road	78	2	78	2
C. Cromwell Ave E	55	1	56	1

- 2.6 It can be seen from the above that there is not a significant impact of the 'Do Something' above the 'Do Minimum' results, with a queue of only six vehicles on the Cromwell Avenue West arm. It is considered that this junction does not require further testing for this future year of 2025.
- 2.7 Furthermore it can be noted from the SATURN results in **Appendix A** that there are no capacity issues shown in the model for the future year of 2030.

Junction 5, A49/Sandy Lane West

- 2.8 The A49 signalised roundabout junction with Sandy Lane West is to the immediate southwest of the Peel Hall site.

Figure 2.3 – A49/Sandy Lane West Google Map Extract



(Accessed 20/09/17)

Table 2.3 – A49/Sandy Lane West Saturn Results

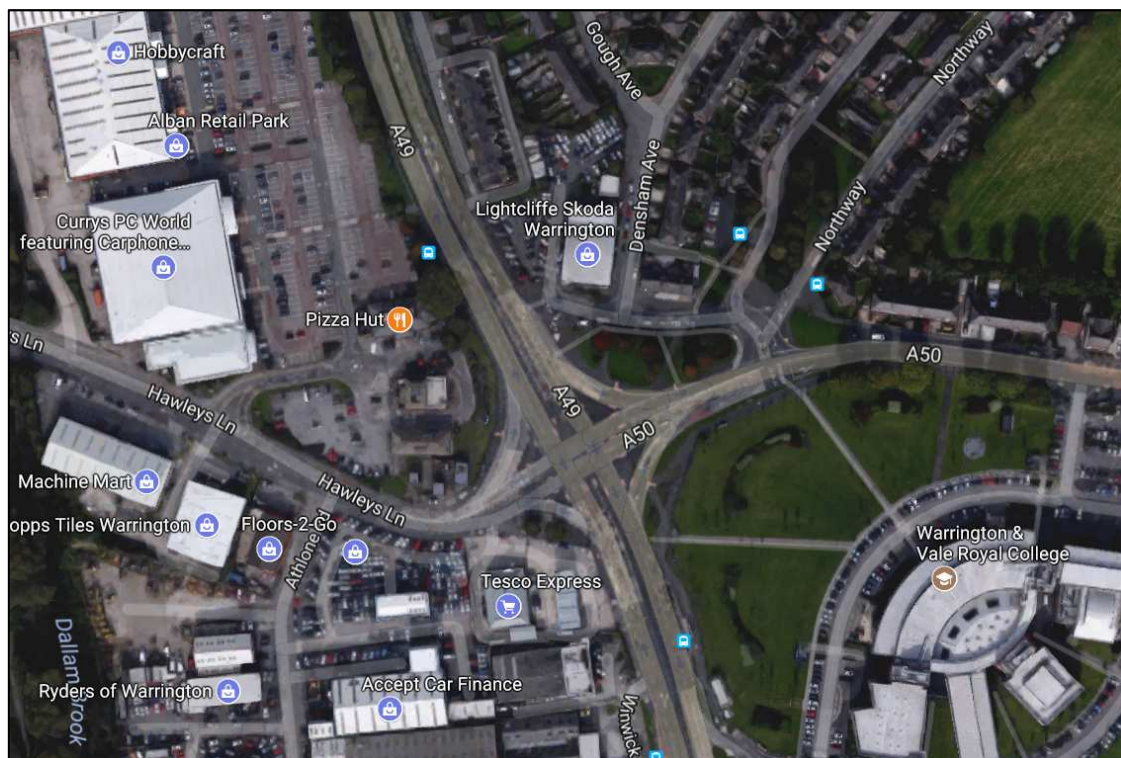
Arm	2025			
	Do Minimum		Do Something	
	VoC	Queue	VoC	Queue
AM				
A. Cromwell Ave W	74	16	76	39
B. A49 N	92	96	94	93
C. Sandy Lane W	40	2	49	3
D. A49 S	30	0	31	0
PM				
A. Cromwell Ave W	43	5	44	5
B. A49 N	90	10	91	10
C. Sandy Lane W	80	4	97	6
D. A49 S	45	0	45	0

2.9 It can be seen from the above results that there is generally not a significant impact of the 'Do Something' above the 'Do Minimum' results. However, the Sandy Lane West arm is shown to be experiencing an increase in VoC of 17% in the PM peak hour and therefore it is considered that this junction should be modelled.

Junction 6 – A49/A50

2.10 The A49 signalised four-arm junction with the A50 is located to the southwest of the site, towards the city centre.

Figure 2.4 – A49/A50 Google Map Extract



(Accessed 20/09/17)

Table 2.4 – A49/A50 Saturn Results

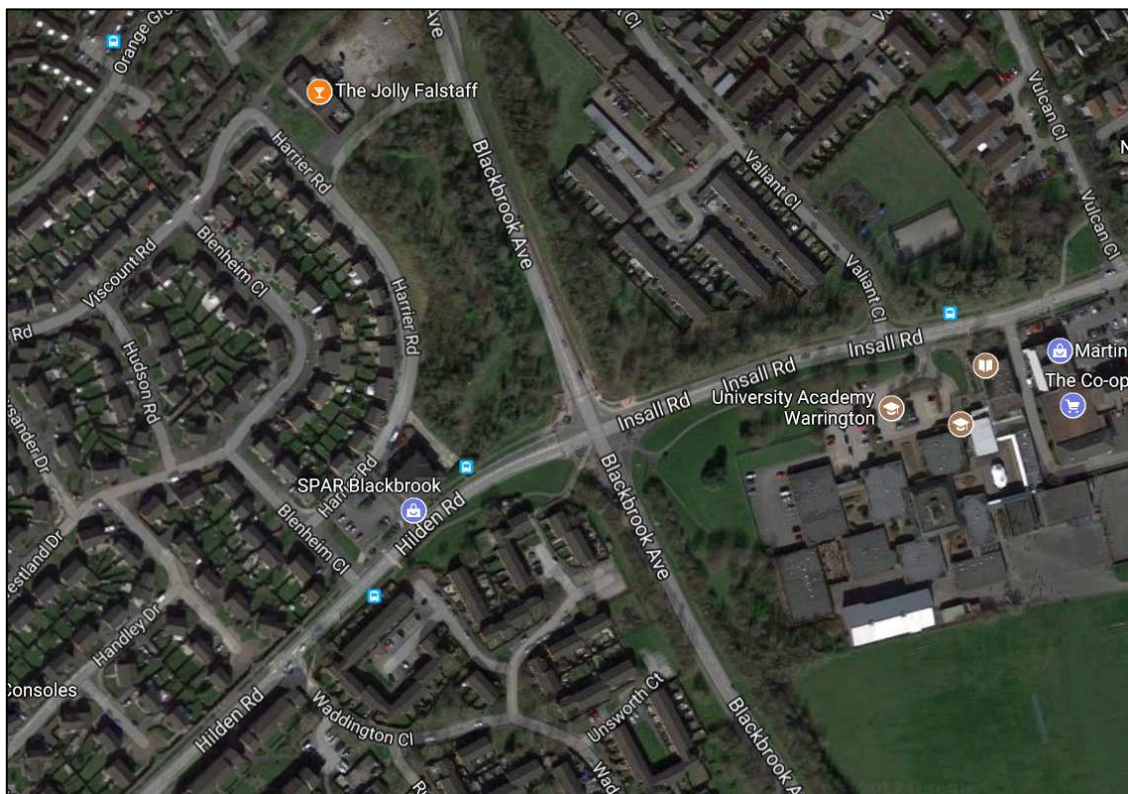
Arm	2025			
	Do Minimum		Do Something	
	VoC	Queue	VoC	Queue
AM				
A. Hawleys Lane	20	2	20	2
B. A49 N	100	84	100	90
C. A50	82	8	83	9
D. A49 S	78	21	81	22
PM				
A. Hawleys Lane	36	4	36	4
B. A49 N	67	13	69	14
C. A50	50	5	51	5
D. A49 S	105	65	106	80

2.11 It can be seen from the above results that there is not a significant impact of the 'Do Something' above the 'Do Minimum' results. Therefore no detailed modelling is required.

Junction 8, Blackbrook Avenue/Insall Road/Hilden Road

2.12 The Blackbrook Avenue signalised junction with Insall and Hilden Road is located to the southeast of the Peel Hall site.

Figure 2.5 – Blackbrook Avenue/Insall Road/Hilden Road Google Map Extract



(Accessed 20/09/17)

Table 2.5 – Blackbrook Avenue/Insall Road/Hilden Road Saturn Results

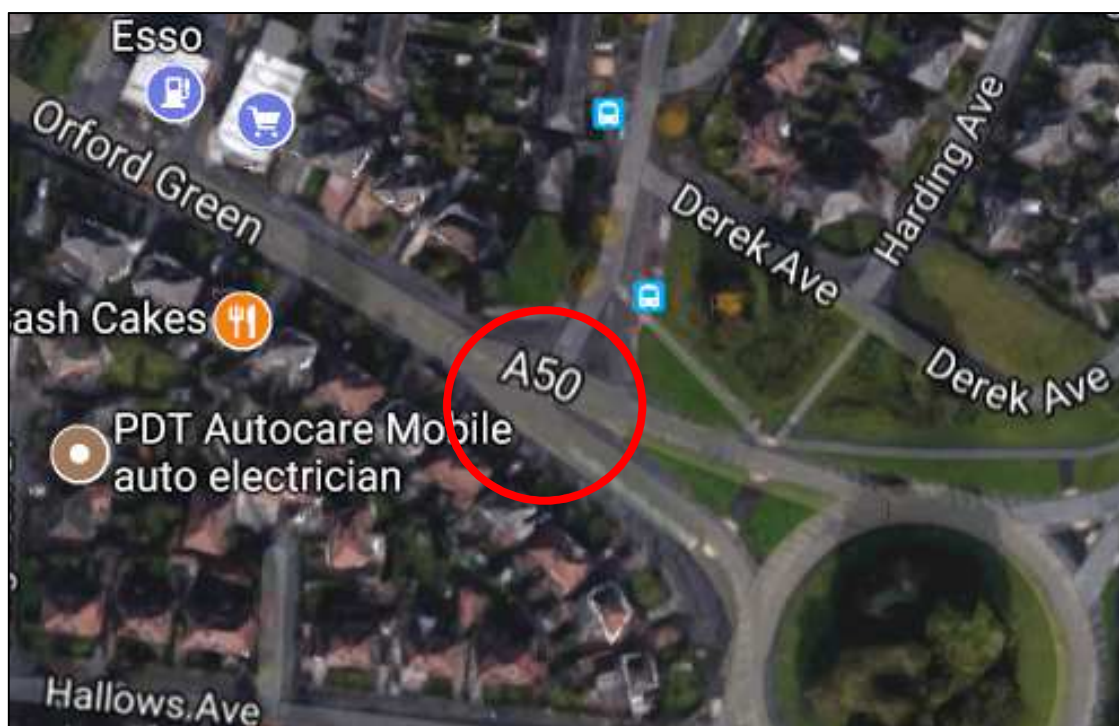
2025				
Arm	Do Minimum		Do Something	
	VoC	Queue	VoC	Queue
AM				
A. Hilden Road	46	3	52	0
B. Blackbrook Ave N	86	6	99	1
C. Insall Road	73	5	80	0
D. Blackbrook Ave S	92	5	93	0
PM				
A. Hilden Road	83	5	91	5
B. Blackbrook Ave N	72	5	85	6
C. Insall Road	100	4	103	8
D. Blackbrook Ave S	72	5	82	5

- 2.13 In the AM peak hour both arms B and D are operating at capacity; albeit that arm D is not a significant increase over the 'Do Minimum' scenario with the Peel Hall development traffic added on.
- 2.14 Arm A and arm C are shown to be operating at or above capacity in the PM peak hour. Therefore further detailed modelling will be carried out for this junction.

Junction 15, A50 Orford Green/Poplars Avenue

- 2.15 The A50 Orford Green junction with Poplars Avenue is located to the south of the site, as shown in **Figure 2.5** below (depicted by red circle).

Figure 2.6 – A50 Orford Green/Poplars Avenue Google Map Extract



(Accessed 20/09/17)

Table 2.6 – A50 Orford Green/Poplars Avenue Saturn Results

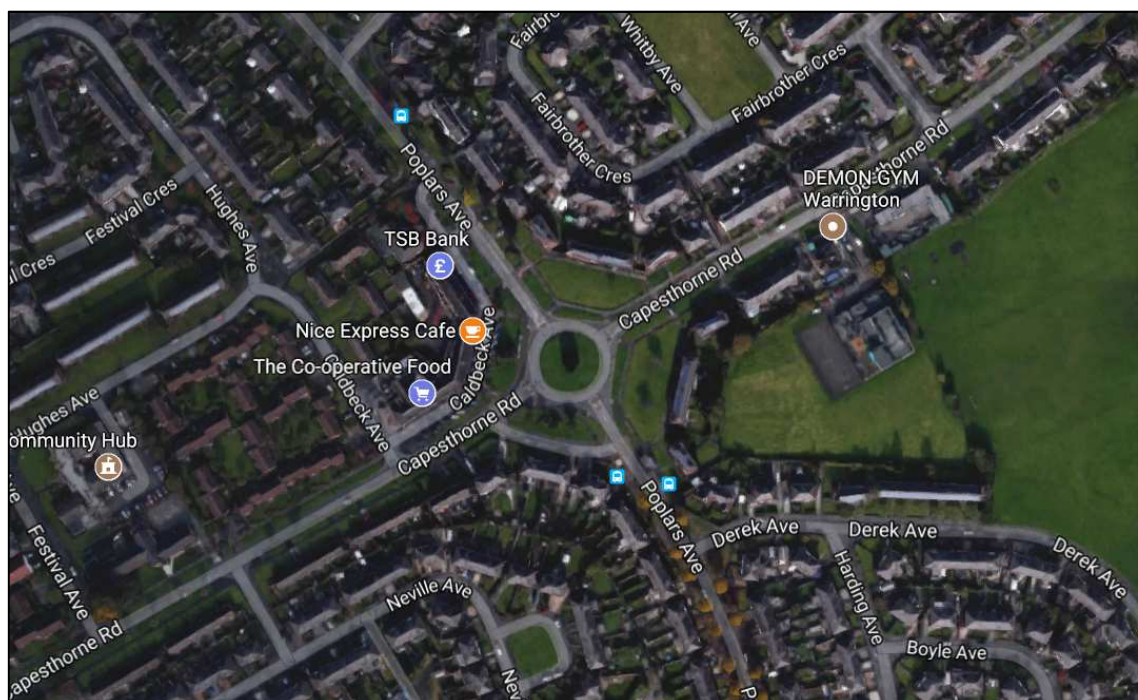
Arm	2025			
	Do Minimum		Do Something	
	VoC	Queue	VoC	Queue
AM				
A. A50 W	22	0	23	0
B. Poplars Avenue	97	3	103	15
C. A50 E	70	1	84	1
PM				
A. A50 W	42	0	41	0
B. Poplars Avenue	47	0	67	1
C. A50 E	73	0	101	5

2.16 Arm B is shown to be operating at a slight increase in capacity in the AM peak hour, with arm C operating just over capacity in the PM peak hour. Therefore it is considered that more detailed modelling of this junction should be carried out.

Junction 20, Capesthorne Road/Poplars Avenue

2.17 The Capesthorne Road roundabout junction with poplars Avenue is located to the immediate south of the Peel Hall site.

Figure 2.7 – Capesthorne Road/Poplars Avenue Google Map Extract



(Accessed 20/09/17)

Table 2.7 – Capesthorpe Road/Poplars Avenue Saturn Results

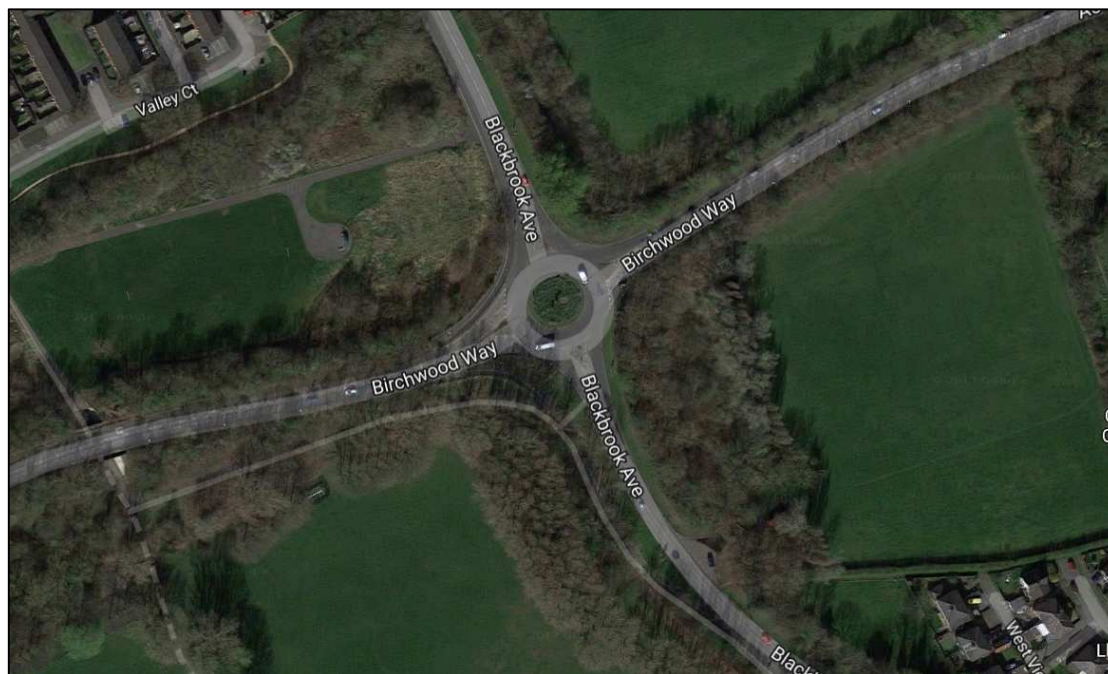
2025				
Arm	Do Minimum		Do Something	
	VoC	Queue	VoC	Queue
AM				
A. Poplars Ave N	52	0	66	0
B. Capesthorpe Road E	59	0	69	0
C. Poplars Ave S	28	0	38	0
D. Capesthorpe Road W	28	0	31	0
PM				
A. Poplars Ave N	35	0	47	0
B. Capesthorpe Road E	73	0	60	0
C. Poplars Ave S	58	0	100	6
D. Capesthorpe Road W	35	0	87	2

2.18 The junction is generally shown to be operating within capacity apart from in the PM peak hour in the 'Do Something' scenario on arms C and D. Therefore it is considered that further detailed modelling should be carried out.

Junction 24, Birchwood Way/Blackbrook Avenue

2.19 The Birchwood Way roundabout junction with Blackbrook Avenue is located to the southeast of the Peel Hall site.

Figure 2.8 – Birchwood Way/Blackbrook Avenue Google Map Extract



(Accessed 20/09/17)

Table 2.8 – Birchwood Way/Blackbrook Avenue Saturn Results

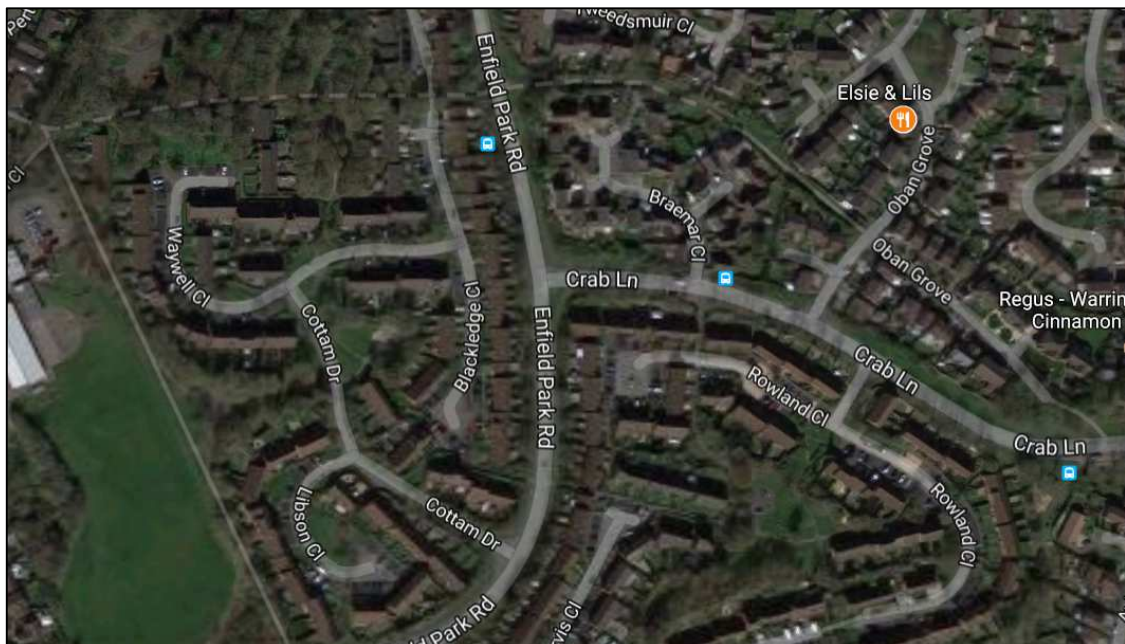
Arm	2025			
	Do Minimum		Do Something	
	VoC	Queue	VoC	Queue
AM				
A. Birchwood Way W	77	1	76	1
B. Blackbrook Ave N	90	3	97	5
C. Birchwood Way E	58	2	92	3
D. Blackbrook Ave S	69	1	72	1
PM				
A. Birchwood Way W	79	1	89	2
B. Blackbrook Ave N	73	1	92	4
C. Birchwood Way E	109	18	106	33
D. Blackbrook Ave S	78	1	83	1

2.20 This junction is shown to operate at capacity in both the ‘Do Minimum’ and ‘Do Something’ scenarios, with arm B and C in the AM peak hour and arms A, B and C in the PM peak hour. Therefore it is considered that further detailed modelling should be carried out for this junction.

Junction 25, Enfield Park Road/Crab Lane

2.21 The Enfield Park Road priority junction with Crab Lane is located to the east of the Peel Hall site.

Figure 2.9 – Enfield Park Road/Crab Lane Google Map Extract



(Accessed 20/09/17)

Table 2.9 – Enfield Park Road/Crab Lane Saturn Results

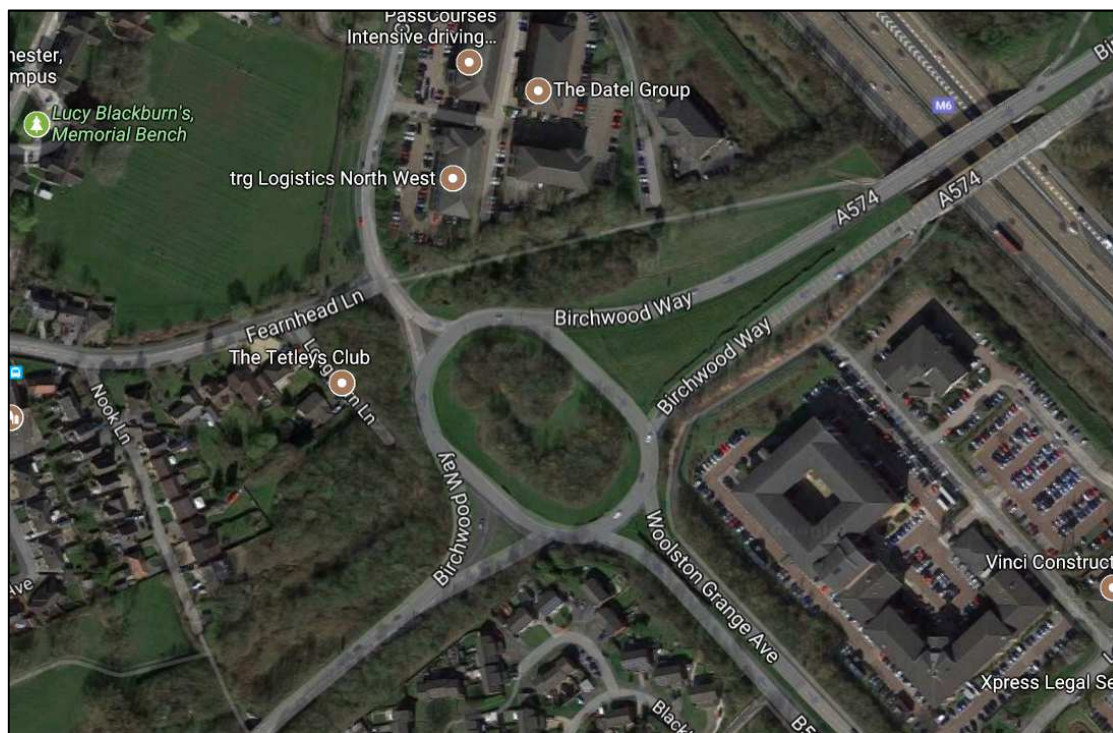
Arm	2025			
	Do Minimum		Do Something	
	VoC	Queue	VoC	Queue
AM				
A. Enfield Park Road N	0	0	0	0
B. Crab Lane	29	0	32	0
C. Enfield Park Lane S	50	0	64	0
PM				
A. Enfield Park Road N	43	0	0	0
B. Crab Lane	0	0	91	0
C. Enfield Park Lane S	64	0	51	0

2.22 The Peel Hall traffic is shown to impact this junction in the PM peak hour on arm B, Crab Lane. Therefore it is considered that further detailed modelling should be carried out for this junction.

Junction 26, Birchwood Way/Crab Lane/Woolston Grange Avenue

2.23 The Birchwood Way roundabout junction with Crab Lane and Woolston Grange Avenue is located to the southeast of the Peel Hall site.

Figure 2.10 – Birchwood Way/Crab Lane/Woolston Grange Avenue Google Map Extract



(Accessed 20/09/17)

Table 2.10 – Birchwood Way/Crab Lane/Woolston Grange Avenue Saturn Results

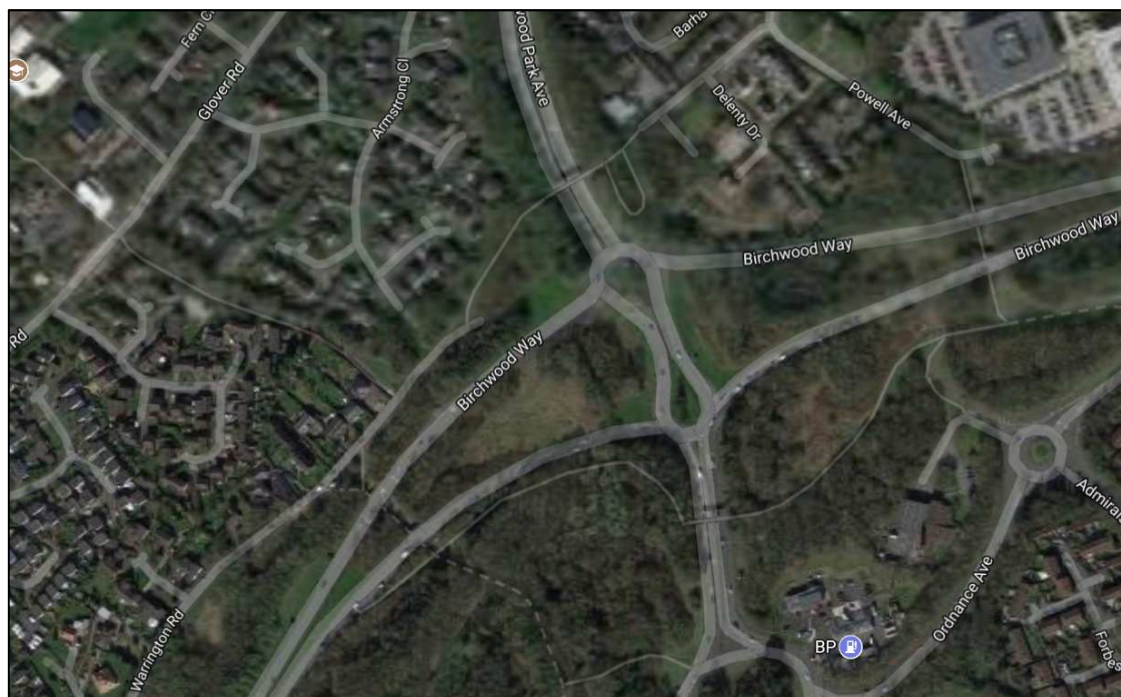
2025				
Arm	Do Minimum		Do Something	
	VoC	Queue	VoC	Queue
AM				
A. Birchwood Way W	39	0	38	0
B. Crab Lane	85	3	96	6
C. Birchwood Way E	59	0	48	0
D. Woolston Grange	90	0	60	0
PM				
A. Birchwood Way W	37	0	38	0
B. Crab Lane	74	2	74	2
C. Birchwood Way E	57	2	57	0
D. Woolston Grange	42	0	45	0

2.24 The above results show that there is not a significant impact of the Peel Hall traffic on the 'Do Minimum' scenario; with a benefit to arm D in the AM and an increase in VoC to arm B. Therefore it is considered that further detailed modelling should be carried out for this junction.

Junction 27, Birchwood Way/Oakwood Gate

2.25 The Birchwood Way part-signalised gyratory system with Oakwood Gate is located around 4.5km to the east of the Peel Hall development.

Figure 2.11 – Birchwood Way/Oakwood Gate Google Map Extract



(Accessed 20/09/17)

Table 2.11 – Birchwood Way/Oakwood Gate Saturn Results

2025				
Arm	Do Minimum		Do Something	
	VoC	Queue	VoC	Queue
AM				
A. Birchwood Way W	92	5	95	5
B. Birchwood Park Ave	68	1	96	1
C. Birchwood Way E	86	3	86	3
D. Oakwood Gate	134	101	135	104
PM				
A. Birchwood Way W	70	3	71	3
B. Birchwood Park Ave	52	1	56	1
C. Birchwood Way E	122	119	133	161
D. Oakwood Gate	294	273	321	296

2.26 It can be seen that this junction will operate significantly over capacity in the future year of 2025 in the without development traffic scenario. In any event it is considered that further detailed modelling should be carried out for this junction.

Summary

2.27 Therefore the following junctions will need to be modelled in more detail for a 2025 scenario:

- Junction 5 - A49/Sandy Lane West
- Junction 8 - Blackbrook Avenue/Insall Road/Hilden Road
- Junction 15 - A50 Orford Green/Poplars Avenue
- Junction 20 - Capesthorpe Road/Poplars Avenue
- Junction 24 - Birchwood Way/Blackbrook Avenue
- Junction 25 - Enfield Park Road/Crab Lane
- Junction 26 - Birchwood Way/Crab Lane/Woolston Grange Avenue
- Junction 27 - Birchwood Way/Oakwood Gate

3.0 2030 Junction Summary Results

3.1 The following Section is a summary of the 2030 'Do Minimum' and 'Do Something' SATURN modelling results, where a VoC of above 85% is shown and exceeds that in the base and 'Do Minimum' scenarios. A comparison of the 2030 'Through-Route' scenario is also provided.

3.2 Map extracts are provided in **Section 2.0** where already referenced.

Junction 3, M62 Junction 9

3.3 The M62 Junction 9 modelling results are summarised below.

Table 3.1 – M62 Junction 9 Saturn Results

2030						
Arm	Do Minimum		Do Something		Through-Route	
	VoC	Queue	VoC	Queue	VoC	Queue
AM						
A. M62 Ebd Off Slip	101	22	102	21	102	20
B. A49 N	109	71	109	71	109	71
C. M62 Wbd Off Slip	74	4	75	4	75	4
D. A49 S	94	36	96	38	98	41
PM						
A. M62 Ebd Off Slip	119	100	123	119	123	119
B. A49 N	105	45	106	48	107	55
C. M62 Wbd Off Slip	52	2	53	2	53	2
D. A49 S	104	121	107	143	101	96

3.4 It can be seen that this junction operates over capacity in the future year of 2030, but that the development traffic has little impact.

3.5 It should be noted that when a junction starts to operate at or exceed its design capacity, longer delays and queues start to form. However, the model is unable to accurately reflect what may occur on site in practice and therefore once a capacity of 1.0 is exceeded caution should be taken when reviewing the corresponding queue lengths.

3.6 It can be seen from the values in **Table 3.1** that the 'Through-Route' has a beneficial difference in impact in the PM peak hour overall and a minor negative impact in the AM peak hour.

Junction 5, A49/Sandy Lane West

3.7 The results for the A49 roundabout junction with Sandy Lane West are summarised below.

Table 3.2 – A49/Sandy Lane West Saturn Results

2030						
Arm	Do Minimum		Do Something		Through-Route	
	VoC	Queue	VoC	Queue	VoC	Queue
AM						
A. Cromwell Ave W	76	34	79	60	79	32
B. A49 N	95	103	97	98	96	106
C. Sandy Lane W	42	2	53	3	40	2
D. A49 S	32	0	33	0	33	0
PM						
A. Cromwell Ave W	45	5	45	5	46	5
B. A49 N	92	10	95	10	91	10
C. Sandy Lane W	86	5	99	6	74	4
D. A49 S	45	0	46	0	46	0

3.8 It can be seen that this junction operates over capacity in the future year of 2030. Therefore it is considered that further detailed modelling should be carried out for this junction. It can be seen that the 'Through-Route' access option has a clear beneficial difference in impact in the PM peak hour.

Junction 8, Blackbrook Avenue/Insall Road/Hilden Road

3.9 The results of the Blackbrook Avenue junction with Insall Road and Hilden Road are summarised below.

Table 3.3 – Blackbrook Avenue/Insall Road/Hilden Road Saturn Results

2030						
Arm	Do Minimum		Do Something		Through-Route	
	VoC	Queue	VoC	Queue	VoC	Queue
AM						
A. Hilden Road	63	4	44	3	42	3
B. Blackbrook Ave N	89	6	103	13	103	14
C. Insall Road	77	6	81	6	81	6
D. Blackbrook Ave S	93	5	97	6	97	6
PM						
A. Hilden Road	86	5	92	1	78	4
B. Blackbrook Ave N	76	5	93	0	92	6
C. Insall Road	101	6	104	2	102	7
D. Blackbrook Ave S	75	5	82	1	84	6

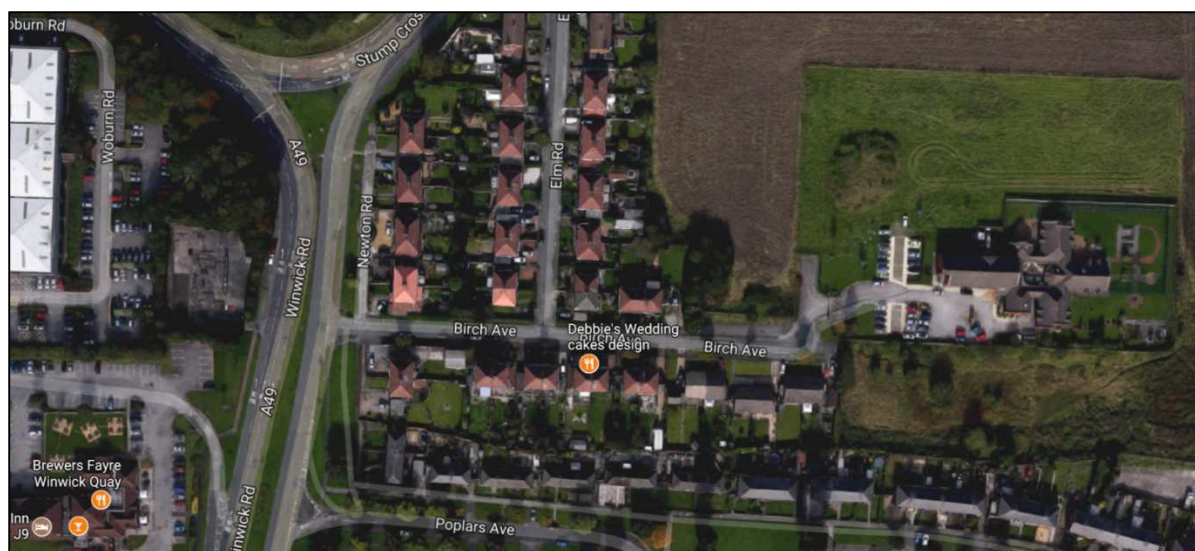
3.10 It can be seen that this junction operates over capacity in the future year of 2030. Therefore it is considered that further detailed modelling should be carried out for this

junction. It can be seen from **Table 3.3** that there is a slight increase in forecast queue levels in the PM peak hour with the 'Through-Route' access option, but that VoC's reduce, compared to the 'Do Something' scenario.

Junction 10, A49/Birch Avenue

3.11 The A49 priority junction with Birch Avenue is located to the immediate west of the Peel Hall site.

Figure 3.1 – A49/Birch Avenue Google Maps Extract



(Accessed 25/09/17)

Table 3.4 – A49/Birch Avenue Saturn Results

Arm	2030					
	Do Minimum		Do Something		Through-Route	
	VoC	Queue	VoC	Queue	VoC	Queue
AM						
A. A49 S/bd N	42	0	55	0	101	7
B. Birch Avenue	54	0	27	0	51	1
C. A49 S/bd S	19	0	43	0	43	0
PM						
A. A49 S/bd N	40	0	41	0	42	0
B. Birch Avenue	7	0	9	0	10	0
C. A49 S/bd S	55	0	57	0	54	0

3.12 It can be seen that this junction generally operated well within capacity. However, due to blocking back from the proposed new signalised junction onto A49 in the 'Through-Route' scenario, VoC in the AM peak hour has increased to 101.

3.13 It is not considered that the geometry of this junction needs to be remodelled, but that consideration should be given to mitigation measures such as Keep Clear or yellow box markings to assist with drivers exiting Birch Avenue.

3.14 Furthermore it should be noted that the SATURN model did not include for a 3-arm entry for southbound A49 traffic at the new proposed signalised junction to the south of Birch Avenue at Poplars Avenue for the 'Through-Route'. This should reduce the length of queues on the A49.

Junction 15, A50 Orford Green/Poplars Avenue

3.15 The results of the A50 Orford Green junction with Poplars Avenue are summarised below.

Table 3.5 – A50 Orford Green/Poplars Avenue Saturn Results

2030						
Arm	Do Minimum		Do Something		Through-Route	
	VoC	Queue	VoC	Queue	VoC	Queue
AM						
A. A50 W	22	0	25	0	25	0
B. Poplars Avenue	31	0	107	25	107	26
C. A50 E	76	0	84	1	81	0
PM						
A. A50 W	42	0	42	0	41	0
B. Poplars Avenue	54	0	57	0	68	1
C. A50 E	74	1	100	0	97	4

3.16 It can be seen that the Peel Hall development has an impact on the operation of this junction, and that there is no significant difference between the 'Through-Route' and the 'Do Something' scenarios. Therefore it is considered that further detailed modelling should be carried out for this junction. It can also be noted from **Table 3.5** above that the impact of the development traffic is similar between access strategies.

Junction 20, Capesthorpe Road/Poplars Avenue

3.17 The results of the Capesthorpe Road roundabout junction with Poplars Avenue are summarised below.

Table 3.6 – Capesthorpe Road/Poplars Avenue Saturn Results

2030						
Arm	Do Minimum		Do Something		Through-Route	
	VoC	Queue	VoC	Queue	VoC	Queue
AM						
A. Poplars Ave N	29	0	36	0	35	0
B. Capesthorpe Road E	56	0	79	1	62	0
C. Poplars Ave S	61	0	85	1	82	1
D. Capesthorpe Road W	31	0	32	0	43	0
PM						
A. Poplars Ave N	38	0	50	0	40	0
B. Capesthorpe Road E	83	0	66	0	36	0
C. Poplars Ave S	61	1	102	12	83	1
D. Capesthorpe Road W	38	1	90	3	77	1

- 3.18 It can be seen that the 'Through-Route' scenario does not have an impact on the operation of this junction. However, in the PM peak hour the 'Do Something' scenario has an impact on the operation of arms C and D. In any event it is considered that further detailed modelling should be carried out for this junction.
- 3.19 It can be seen that there is a clear difference in impact between the 'Do Something' and 'Through-Route' access strategy options at this junction.

Junction 23, Capesthorne Road/Blackbrook Avenue/Enfield Park Road

- 3.20 The Capesthorne Road roundabout junction with Blackbrook Avenue and Enfield Park Road is located to the immediate east of the Peel Hall site.

Figure 3.2 - Capesthorne Road/Blackbrook Avenue/Enfield Park Road Google Maps Extract



(Accessed 25/09/17)

Table 3.7 – Capesthorpe Road/Blackbrook Avenue/Enfield Park Road Saturn Results

2030						
Arm	Do Minimum		Do Something		Through-Route	
	VoC	Queue	VoC	Queue	VoC	Queue
AM						
A. Capesthorpe Road	38	0	50	0	45	0
B. Blackbrook Avenue	53	0	86	1	87	1
C. Enfield Park Road	34	0	50	0	50	0
D. Blackbrook Avenue	24	0	36	0	38	0
PM						
A. Capesthorpe Road	42	0	65	1	56	0
B. Blackbrook Avenue	39	0	59	0	53	0
C. Enfield Park Road	55	0	87	2	78	1
D. Blackbrook Avenue	41	0	70	1	63	1

3.21 It can be seen that there is not a significant impact of the Peel Hall development traffic on this junction and that it will continue to operate reasonably within capacity in the future year of 2030. It is the Blackbrook Avenue North arm in the AM peak hour and the Enfield Park Road arm in PM peak hour that are slightly effected.

3.22 It is not considered that this junction needs to be remodelled.

3.23 It can be seen that there is no significant difference between either of the Peel Hall access strategies at this junction.

Junction 24, Birchwood Way/Blackbrook Avenue

3.24 The Birchwood Way junction with Blackbrook Avenue results are summarised below.

Table 3.8 – Birchwood Way/Blackbrook Avenue Saturn Results

2030						
Arm	Do Minimum		Do Something		Through-Route	
	VoC	Queue	VoC	Queue	VoC	Queue
AM						
A. Birchwood Way W	74	1	84	1	84	1
B. Blackbrook Ave N	90	3	101	9	101	11
C. Birchwood Way E	88	2	94	4	90	3
D. Blackbrook Ave S	72	1	74	1	73	1
PM						
A. Birchwood Way W	83	1	89	2	86	2
B. Blackbrook Ave N	80	2	97	5	85	2
C. Birchwood Way E	103	23	108	40	105	31
D. Blackbrook Ave S	79	1	84	1	84	1

3.25 It can be seen that the Peel Hall development traffic is shown to have an impact on the operation of this junction in the future year of 2030. Therefore it is considered that further detailed modelling should be carried out for this junction. Furthermore, it can also be seen that the impact of development traffic on this junction is slightly less with the 'Through-Route' access option.

Junction 25, Enfield Park Road/Crab Lane

3.26 The results of the Enfield Park Road junction with Crab Lane are summarised below.

Table 3.9 – Enfield Park Road/Crab Lane Saturn Results

2030						
Arm	Do Minimum		Do Something		Through-Route	
	VoC	Queue	VoC	Queue	VoC	Queue
AM						
A. Enfield Park Road N	53	0	0	0	0	0
B. Crab Lane	0	0	37	0	38	0
C. Enfield Park Lane S	30	0	77	0	80	0
PM						
A. Enfield Park Road N	0	0	0	0	0	0
B. Crab Lane	18	0	97	0	97	0
C. Enfield Park Lane S	44	0	57	0	57	0

3.27 It can again be seen that the Peel Hall development is likely to have an impact on the operation of this junction in the PM peak hour. Therefore it is considered that further detailed modelling should be carried out for this junction and mitigation measures considered further. It can be seen that there is no significant difference between the access option strategies.

Junction 26 – Birchwood Way/Crab Lane/Woolston Grange Avenue

3.28 The Birchwood Way junction with Crab Lane and Woolston Grange Avenue are summarised below.

Table 3.10 – Birchwood Way/Crab Lane/Woolston Grange Avenue Saturn Results

2030						
Arm	Do Minimum		Do Something		Through-Route	
	VoC	Queue	VoC	Queue	VoC	Queue
AM						
A. Birchwood Way W	38	0	38	0	3	0
B. Crab Lane	95	5	103	15	103	15
C. Birchwood Way E	59	0	48	0	49	0
D. Woolston Grange Ave	64	0	63	0	63	0
PM						
A. Birchwood Way W	38	0	38	0	38	0
B. Crab Lane	78	2	82	2	88	0
C. Birchwood Way E	57	0	58	0	57	0
D. Woolston Grange Ave	44	0	46	0	46	2

3.29 It can be seen that this junction is already operating at capacity in the AM peak hour on arm B, Crab Lane, but that the Peel Hall development traffic may have a further impact on capacity. Therefore it is considered that further detailed modelling should be carried out for this junction.

3.30 It is considered that there is no significant difference in the access option scenarios.

Junction 27, Birchwood Way/Oakwood Gate

3.31 The results of the Birchwood Way junction with Oakwood Gate are summarised below.

Table 3.11 – Birchwood Way/Oakwood Gate Saturn Results

2030						
Arm	Do Minimum		Do Something		Through-Route	
	VoC	Queue	VoC	Queue	VoC	Queue
AM						
A. Birchwood Way W	95	5	96	5	75	4
B. Birchwood Park Ave	2	2	73	2	69	1
C. Birchwood Way E	92	4	91	4	89	3
D. Oakwood Gate	154	142	153	141	148	132
PM						
A. Birchwood Way W	72	3	74	3	74	3
B. Birchwood Park Ave	55	1	62	1	62	1
C. Birchwood Way E	131	162	86	221	149	221
D. Oakwood Gate	305	287	346	326	347	326

3.32 It can be seen that this junction will operate over capacity in the future year of 2030 without development traffic. In any event it is considered that further detailed modelling should be carried out for this junction.

PH5, Peel Hall site access roundabout junction with Mill Lane

3.27 The proposed Peel Hall site access roundabout junction with Mill Lane is illustrated below.

Figure 3.3 – Peel Hall site access roundabout junction with Mill Lane

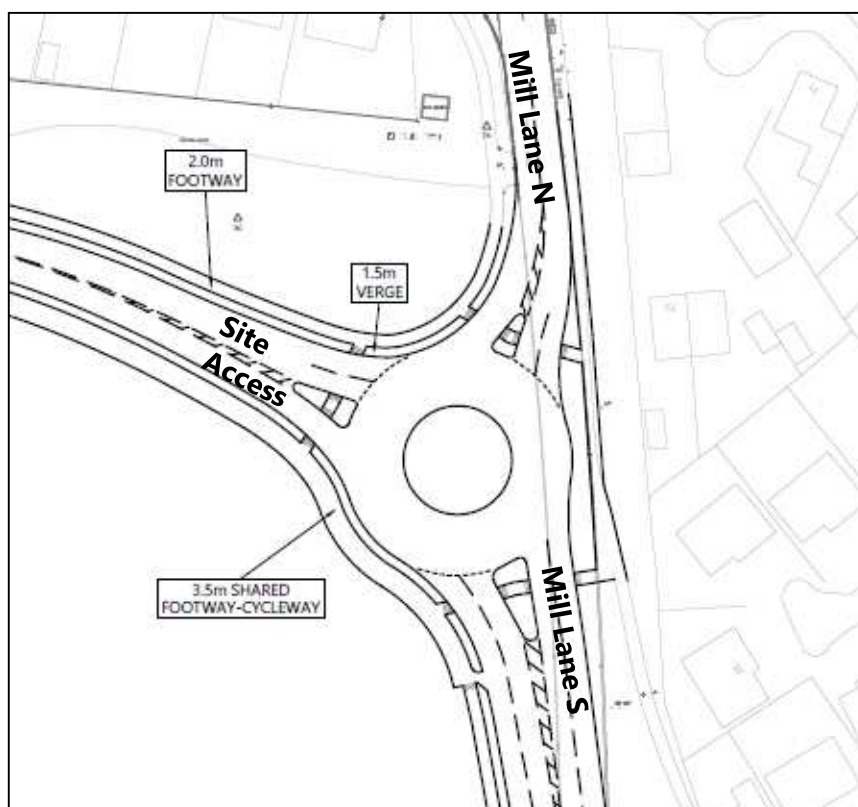


Table 3.12 – Peel Hall site access roundabout junction with Mill Lane Saturn Results

Arm	2030			
	Do Something		Through-Route	
	VoC	Queue	VoC	Queue
AM				
A. Site Access	12	0	41	0
B. Mill Lane N	62	0	77	1
C. Mill Lane S	32	0	44	0
PM				
A. Site Access	24	0	42	0
B. Mill Lane N	56	0	62	0
C. Mill Lane S	76	0	87	1

3.28 It can be seen that there may be an increase in VoC slightly above desirable in the Pm peak hour on arm C (Mill lane South), with only 13% capacity remaining. This junction will be remodelled in more detail in any event as part of the access junction modelling.

PH6 - Peel Hall Through-Route A49/Poplars Avenue signalised junction

3.29 The proposed new signalised junction with the A49 at Poplars Avenue as part of the Through-Route is located to the immediate west of the Peel Hall site.

Figure 3.4 – Peel Hall Through-Route A49/Poplars Avenue signalised junction

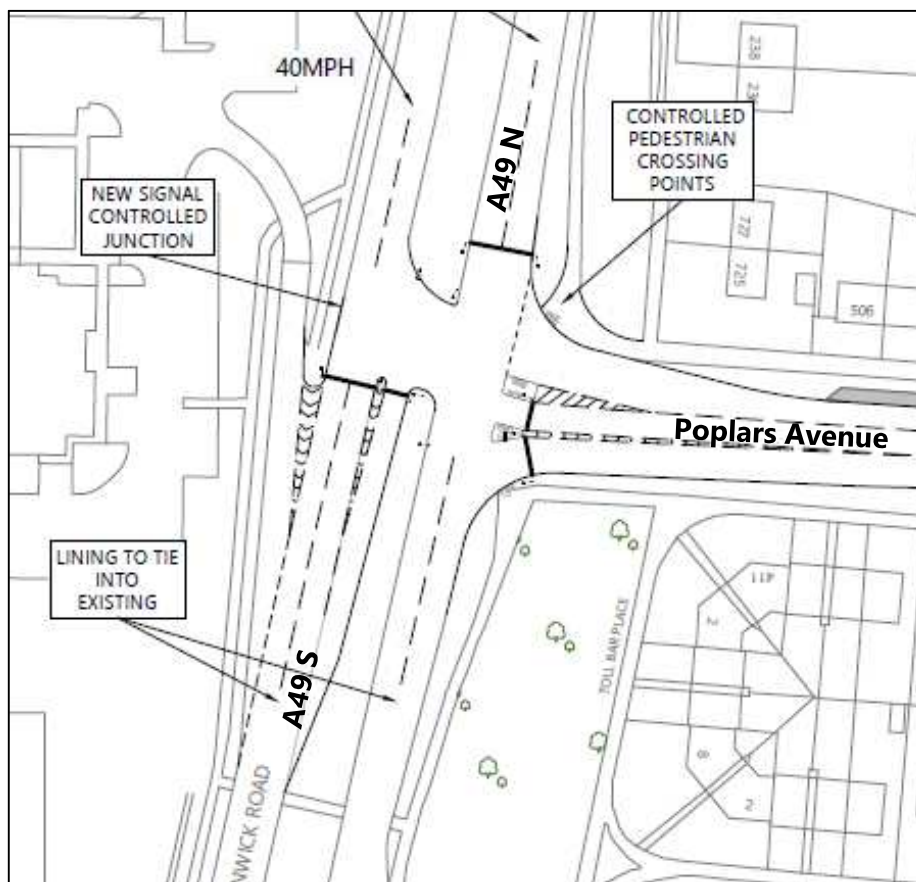


Table 3.13 – Peel Hall Through-Route A49/Poplars Avenue signalised junction Saturn Results

2030		
Arm	Through-Route	
	VoC	Queue
AM		
A. A49 North	101	15
B. Poplars Avenue	59	2
C. A49 South	73	5
PM		
A. A49 North	76	4
B. Poplars Avenue	82	13
C. A49 South	97	71

3.30 It can be seen that the proposed junction arrangement is operating at capacity in the future year of 2030. It is considered that a third lane for A49 southbound traffic on the northern arm could be provided. Therefore further detailed modelling should be carried out for this junction.

Summary

3.31 Therefore the following junctions will need to be modelled in more detail for the 2030 scenarios:

Junction 5 - A49/Sandy Lane West

Junction 8 - Blackbrook Avenue/Insall Road/Hilden Road

Junction 15 - A50 Orford Green/Poplars Avenue

Junction 20 - Capesthorne Road/Poplars Avenue

Junction 24 - Birchwood Way/Blackbrook Avenue

Junction 25 - Enfield Park Road/Crab Lane

Junction 26 - Birchwood Way/Crab Lane/Woolston Grange Avenue

Junction 27 - Birchwood Way/Oakwood Gate

PH6 – Peel Hall Through-Route A49/Poplars Avenue

3.32 The five Peel Hall access junctions will all be modelled as part of the Transport Assessment work in any event.

3.33 Measures will be considered further for Junction 10, the Birch Avenue access onto the A49 southbound to prevent stacking traffic on the A49 blocking the junction.

4.0 Conclusions

- 4.1 This report has been prepared by Highgate Transportation Limited to summarise the traffic impact results on the junctions in Warrington surrounding the Peel Hall site using the data arising from the AECOM SATURN modelling.
- 4.2 The junctions shown to be operating at or above capacity in the SATURN modelling results are indicated in **Table 4.1** below for ease of reference.

Junction Ref.	Base 2015	Do Minimum 2025	Do Something 2025	Do Minimum 2030	Do Something 2030	Through Route 2030
1	*	*	-	*	-	-
2	*	*	-	*	-	-
3	*	*	*	*	*	*
4		*	-	*	-	-
5		*	*	*	*	*
6	*	*	-	*	-	-
7						
8	*	*	*	*	*	*
9						
10						*
11						
12						
13						
14						
15		*	*		*	*
16						
17						
18						
19						
20			*		*	
21						
22						
23					-	-
24		*	*	*	*	*
25			*		*	*
26		*	*	*	*	*
27	*	*	*	*	*	*
PH1						
PH2						
PH3						
PH4						
PH5						*
PH6						*

4.3 Therefore, it can be concluded that the following junctions will need to be looked at in more detail and likely modelled in a junction modelling package such as Linsig or Junctions 9:

- i. Junction 5 - A49/Sandy Lane West
- ii. Junction 8 - Blackbrook Avenue/Insall Road/Hilden Road
- iii. Junction 15 - A50 Orford Green/Poplars Avenue
- iv. Junction 20 - Capesthorne Road/Poplars Avenue
- v. Junction 24 - Birchwood Way/Blackbrook Avenue
- vi. Junction 25 - Enfield Park Road/Crab Lane
- vii. Junction 26 - Birchwood Way/Crab Lane/Woolston Grange Avenue
- viii. Junction 27 - Birchwood Way/Oakwood Gate
- ix. Junction PH6 - Peel Hall Through Route A49/Poplars Avenue signalised junction

4.4 All the site access junctions are to be modelled as part of the Transport Assessment work in any event.

Appendix 65

AECOM Detailed Modelling Report

DRAFT

Peel Hall Development

Detailed Modelling Results

Highgate Transportation

November 2017

Quality information

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Revision History

Revision	Revision date	Details	Authorized	Name	Position
A	October 2017	Final Report		Catherine Zoeflig	Associate Director

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1. Introduction

1.1 Introduction and Background

This report has been prepared on behalf of Highgate Transportation, and presents the results of a detailed modelling exercise, undertaken in order to assist in defining the mitigation requirements needed to support the proposed Peel Hall mixed use development site. The detailed modelling exercise follows a detailed SATURN modelling process which has identified those junctions that become over-saturated following the inclusion of the development proposals and or the proposed through route. This is discussed within 'Highgate Transportations Technical Note (TN22)' Impact Summary a copy of which is contained within **Appendix A** at the end of this report. This Technical Note, alongside a meeting, which took place on Thursday 28th September 2017, have been used as the basis for defining the requirements of the detailed modelling analysis. For background, this Technical Note should also be read in conjunction with the following AECOM reports:

- Peel Hall SATURN model Forecasting Report (September 2017),
- Peel Hall SATURN model Local Model Validation Report (September 2017), and
- Peel Hall SATURN Model Results Technical Note (28th September 2017).

The results and conclusions drawn from the SATURN modelling and presented within the Highgate Transportation TN 22 are summarised within the following table:

Junction Ref.	Base 2015	Do Minimum 2025	Do Something 2025	Do Minimum 2030	Do Something 2030	Through Route 2030
1	*	*	-	*	-	-
2	*	*	-	*	-	-
3	*	*	*	*	*	*
4		*	-	*	-	-
5		*	*	*	*	*
6	*	*	-	*	-	-
7						
8	*	*	*	*	*	*
9						
10						*
11						
12						
13						
14						
15		*	*		*	*
16						
17						
18						
19						
20			*		*	
21						
22						
23					-	-
24		*	*	*	*	*
25			*		*	*
26		*	*	*	*	*
27	*	*	*	*	*	*
PH1						
PH2						
PH3						
PH4						
PH5						*
PH6						*

Table 1 – Junctions operation at or above capacity within the Peel Hall SATURN model

It was therefore concluded that the following junctions needed to be understood in detail and modelled in a junction modelling package such as LINSIG, Junctions 8, or Junctions 9:

1. Junction 5 - A49/Sandy Lane West;
2. Junction 8 - Blackbrook Avenue/Insall Road/Hilden Road;
3. Junction 15 - A50 Orford Green/Poplars Avenue;
4. Junction 20 - Capesthorpe Road/Poplars Avenue;
5. Junction 24 - Birchwood Way/Blackbrook Avenue;
6. Junction 25 - Enfield Park Road/Crab Lane;
7. Junction 26 - Birchwood Way/Crab Lane/Woolston Grange Avenue; and
8. Junction 27 - Birchwood Way/Oakwood Gate.

The following figure illustrates the location of the above junctions in the context of the wider network modelled using SATURN:

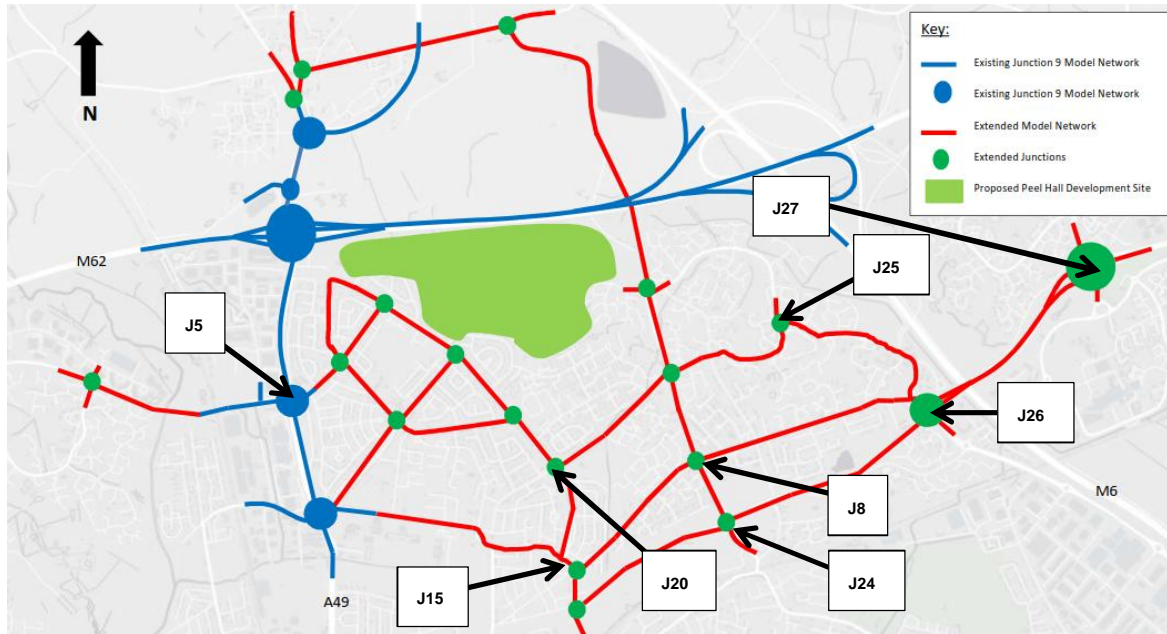


Figure 1 – Extent of modelled network showing junctions requiring detailed modelling

The table below sets out specifically how the above junctions have been modelled and which modelling packages have been utilised:

Peel Hall Detailed Modelling			
	ARCADY	PICADY	LINSIG
Junction 5 - A49 / Sandy Lane (To include Calver Road / Cromwell Avenue)			*
J8 - Blackbrook Avenue / Insall Road / Hilden Road			*
J15 - A50 Orford Green / Poplars Avenue (To include adjacent 4 arm priority roundabout A50 / Hilden Road) Modelled using JUNCTIONS 9 to simulate the interactions between these two junctions	*	*	
J20 - Capesthorne Road / Poplars Avenue (Model to include bypass lane between Poplars Ave S and Capesthorne Road West)	*		
J24 - Birchwood Way / Blackbrook Avenue	*		
J25 - Enfield Park Road / Crabb Lane		*	
J26 - Birchwood Way / Crabb Lane / Woolston Grange Avenue (LINSIG in future years)			*
J27 - Birchwood Way / Oakwood Gate			*

Table 2 – Modelling method by junction

1.2 Structure of this Report

This introductory chapter is followed by one further chapter and two appendices which are identified as follows:

- **Chapter 2 – Presents the results for each junction and each scenario**
- **Appendix A - Highgate Transportations Technical Note (TN22), and**
- **Appendix B – Modelling Results Outputs**

2. Results

2.1 Introduction

2.2 Junction 5 - A49 / Sandy Lane West

Table 1 below summarise the results of the 2025 and 2030 Do Minimum and Do Something Scenarios in the AM and PM peak periods at the A49 / Sandy Lane West junction.

Table 1. A49 / Sandy Lane West Peak LinSig Results Summary

Link	Scenario																				
	2025 Do Minimum				2025 Do Something				2030 Do Minimum				2030 Do Something				2030 Do Something Through Route				
	AM		PM		AM		PM		AM		PM		AM		PM		AM		PM		
	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	
Junction 5: A49 / Sandy Lane																					
1/1+1/2	A49 North Ahead	74.9 : 74.9%	12.8	47.2 : 47.2%	5.0	78.2 : 78.2%	11.4	50.0 : 50.0%	5.6	76.9 : 76.9%	11.7	49.6 : 49.6%	6.1	80.5 : 80.5%	12.7	49.5 : 49.5%	5.3	76.3 : 76.3%	10.6	49.3 : 49.3%	5.5
1/3+1/4	A49 North Ahead	79.9 : 79.9%	15.0	53.6 : 53.6%	5.3	81.4 : 81.4%	12.5	57.9 : 57.9%	6.7	82.4 : 82.4%	13.9	59.0 : 59.0%	7.3	81.3 : 81.3%	13.4	56.8 : 56.8%	6.0	81.1 : 81.1%	11.9	58.7 : 58.7%	6.2
2/1+2/2	Sandy Lane West Left Ahead	86.0 : 86.0%	9.7	87.0 : 87.0%	14.5	92.9 : 92.9%	14.1	94.1 : 94.1%	19.4	89.6 : 89.6%	11.6	89.0 : 89.0%	14.5	97.1 : 97.1%	18.7	94.6 : 94.6%	19.9	89.6 : 89.6%	11.5	86.8 : 86.8%	13.1
3/2+3/1	A49 South Ahead Left	67.5 : 67.5%	7.5	89.3 : 89.3%	15.4	66.3 : 66.3%	6.3	87.7 : 87.7%	14.3	66.2 : 66.2%	6.2	90.4 : 90.4%	17.8	69.8 : 69.8%	7.0	91.2 : 91.2%	16.3	70.5 : 70.5%	7.8	86.9 : 86.9%	14.2
3/3+3/4	A49 South Ahead	62.8 : 62.8%	8.4	87.4 : 87.4%	13.8	60.0 : 60.0%	6.9	89.2 : 89.2%	14.5	60.6 : 60.6%	6.9	90.2 : 90.2%	16.6	65.5 : 65.5%	8.1	92.9 : 92.9%	16.9	65.8 : 65.8%	8.8	78.7 : 78.7%	10.7
4/2+4/1	Cromwell Ave Left	37.5 : 37.5%	3.3	49.1 : 49.1%	3.8	36.4 : 36.4%	3.1	49.6 : 49.6%	3.4	38.3 : 38.3%	3.0	51.5 : 51.5%	3.8	39.1 : 39.1%	3.8	48.9 : 48.9%	3.4	43.5 : 43.5%	3.8	53.2 : 53.2%	4.4
4/3	Cromwell Ave Ahead	71.4%	9.0	70.2%	8.3	76.4%	9.9	71.5%	7.6	75.1%	10.9	75.4%	8.5	79.8%	12.6	74.0%	7.9	78.8%	11.7	72.1%	9.1
4/4	Cromwell Ave Ahead	53.6%	5.3	66.4%	6.9	55.5%	5.9	64.0%	5.8	55.2%	6.5	70.6%	7.2	60.2%	8.0	67.0%	6.4	60.2%	7.4	68.7%	7.6
7/1	A49 South (exit)	55.0%	0.7	36.8%	0.3	56.2%	0.9	38.4%	0.3	55.9%	0.7	38.8%	0.3	57.2%	0.8	38.6%	0.3	56.8%	0.9	38.6%	0.3
7/2	A49 South (exit)	54.7%	0.7	35.5%	0.4	55.4%	0.8	36.6%	0.5	55.9%	0.8	35.5%	0.6	56.7%	0.8	37.3%	0.4	56.0%	0.9	33.8%	0.4
8/1	Rbout Link 1 Right	67.7%	7.8	29.9%	1.6	78.2%	9.9	32.7%	1.6	69.4%	7.5	30.1%	3.0	79.8%	10.6	35.9%	1.6	71.0%	7.7	26.9%	2.6
8/2	Rbout Link 1 Right	41.4%	3.8	40.6%	0.6	38.6%	3.5	41.4%	0.6	43.3%	5.1	42.9%	4.5	39.8%	3.9	43.9%	0.6	46.4%	5.4	41.7%	5.9
8/3	Rbout Link 1 Right	69.4%	7.8	56.9%	1.3	68.0%	8.1	56.4%	0.9	69.4%	8.6	58.6%	6.4	72.1%	10.2	62.3%	1.1	74.8%	9.8	57.3%	7.7
9/1	Rbout Link 2 Ahead	87.1%	11.5	78.6%	12.4	92.2%	21.6	92.1%	16.1	88.6%	19.7	85.9%	15.1	96.8%	26.8	94.6%	19.0	89.4%	20.0	79.4%	9.8
9/2	Rbout Link 2 Ahead Right	86.2%	11.5	78.2%	12.5	92.1%	22.7	92.6%	13.7	87.9%	20.3	86.3%	15.7	97.1%	27.7	95.4%	20.7	88.7%	20.5	79.6%	9.6
9/3	Rbout Link 2 Right	38.9%	2.5	53.9%	7.5	41.4%	2.8	52.5%	4.0	39.9%	2.6	52.2%	6.2	43.2%	6.3	58.0%	5.0	42.2%	2.6	50.5%	4.0
10/1	Rbout Link 3 Ahead	30.7%	4.1	58.3%	8.3	36.9%	5.6	67.4%	6.1	35.3%	5.3	64.9%	8.4	40.5%	6.3	66.9%	5.5	34.3%	5.8	75.2%	10.0
10/2+10/3	Rbout Link 3 Right Ahead	63.8 : 63.8%	8.0	90.4 : 90.4%	7.9	71.8 : 71.8%	6.1	92.9 : 92.9%	18.2	71.3 : 71.3%	6.3	90.0 : 90.0%	14.5	72.3 : 72.3%	4.2	95.0 : 95.0%	20.9	66.2 : 66.2%	5.1	88.0 : 88.0%	11.0
11/1	Rbout Link 4 Ahead	57.6%	6.0	41.1%	4.9	63.5%	7.6	49.8%	6.9	61.9%	7.3	42.7%	3.9	64.8%	3.2	51.6%	6.9	56.4%	6.4	44.8%	5.1
11/2	Rbout Link 4 Ahead	63.6%	7.2	71.6%	3.1	67.2%	8.5	75.6%	2.7	65.3%	8.5	71.4%	11.9	68.3%	2.3	75.0%	2.8	63.3%	7.6	68.5%	11.1
11/3	Rbout Link 4 Ahead Right	67.2%	8.3	72.9%	11.5	69.6%	7.2	75.9%	8.7	68.7%	8.2	72.7%	10.7	71.1%	9.0	76.1%	8.3	62.5%	7.3	68.0%	9.9
12/1	Cromwell Ave (exit) Ahead	26.9%	1.3	44.2%	5.8	28.2%	1.1	47.6%	5.6	28.0%	1.1	47.2%	6.4	30.8%	1.1	48.5%	5.6	28.4%	3.0	48.9%	2.9
12/2	Cromwell Ave (exit) Ahead	32.9%	1.0	45.8%	5.9	33.6%	1.0	43.5%	6.4	33.7%	0.9	45.0%	6.8	34.1%	1.0	45.4%	6.2	36.5%	2.6	45.4%	3.0
13/1	Sandy Lane Crossing Left	40.4%	4.5	31.8%	1.5	48.5%	6.2	34.9%	1.7	44.3%	4.5	32.7%	1.5	52.6%	6.9	37.0%	1.8	45.5%	4.2	29.5%	1.4
Junction 5: Cromwell Avenue / Calver Road																					
1/1	Cromwell Ave (East) Ahead	47.4%	5.5	71.8%	8.9	49.2%	6.1	73.1%	10.9	48.8%	6.9	73.7%	9.3	51.9%	10.5	75.6%	13.2	52.0%	6.2	75.9%	11.7
1/2	Cromwell Ave (East) Right	71.9%	9.4	57.4%	11.2	79.2%	10.5	61.1%	11.4	77.6%	10.5	59.9%	11.3	85.8%	12.6	61.2%	11.8	82.0%	10.9	60.0%	11.3
2/2+2/1	Cromwell Ave (West) Ahead Left	85.5 : 85.5%	24.4	74.3 : 74.3%	11.5	87.9 : 87.9%	27.7	72.5 : 72.5%	11.4	87.7 : 87.7%	26.7	75.8 : 75.8%	12.0	90.2 : 90.2%	30.4	76.8 : 76.8%	12.3	89.6 : 89.6%	28.9	77.0 : 77.0%	12.2
3/1	Calver Road Left	64.9%	14.6	56.8%	14.2	67.6%	15.1	59.8%	15.3	68.4%	15.6	59.9%	15.4	71.5%	16.2	61.6%	16.0	69.9%	15.8	60.6%	15.8
Cycle Time		120s		120s		120s		120s		120s		120s		120s		120s		120s		120s	
C1: Stream 1 PRC for Signalised Lanes		33.3%		-0.4%		25.3%		-3.2%		26.3%		-0.5%		24.4%		-5.6%		27.7%		2.3%	
C1: Stream 2 PRC for Signalised Lanes		26.1%		23.4%		17.8%		18.5%		19.8%		19.3%		12.8%		18.2%		14.2%		24.8%	
C1: Stream 3 PRC for Signalised Lanes		12.7%		58.3%		10.5%		55.3%		9.3%		52.5%		10.6%		44.5%		10.9%		53.4%	
C1: Stream 4 PRC for Signalised Lanes		3.4%		3.5%		-3.2%		-4.6%		0.4%		1.1%		-7.9%		-6.0%		0.4%		3.7%	
C1: Stream 5 PRC for Signalised Lanes		123.0%		183.3%		85.5%		158.0%		103.1%		175.6%		71.1%		143.3%		97.7%		204.7%	
C1: Stream 6 PRC for Signalised Lanes		36.6%		144.4%		60.0%		134.2%		60.9%		131.7%		57.5%		133.3%		58.5%		132.9%	
C1: Stream 7 PRC for Signalised Lanes		173.2%		96.6%		168.2%		88.9%		166.8%		90.7%		164.2%		85.4%		146.7%		84.1%	
C2: PRC for Signalised Lanes		5.3%		21.1%		2.4%		23.1%		2.6%		18.7%		-0.3%		17.2%		0.5%		16.8%	
PRC Over All Lanes		3.4%		-0.4%		-3.2%		-4.6%		0.4%		-0.5%		-7.9%		-6.0%		0.4%		2.3%	

2.3 Junction 8 - Blackbrook Avenue/Insall Road/Hilden Road

Table 2 below summarise the results of the 2025 and 2030 Do Minimum and Do Something Scenarios in the AM and PM peak periods at the Blackbrook Avenue / Insall Road Hilden Road junction.

Table 2. Blackbrook Avenue/Insall Road/Hilden Road Peak LinSig Results Summary

Link	Scenario																			
	2025 Do Minimum				2025 Do Something				2030 Do Minimum				2030 Do Something				2030 Do Something Through Route			
	AM		PM		AM		PM		AM		PM		AM		PM		AM		PM	
	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ
Junction 8: Blackbrook Avenue / Insall Road / Hilden Road																				
1/1 Blackbrook Ave S ahead / right / left	88.90%	13.6	88.70%	12.1	89.80%	14	92.30%	13.7	91.90%	14.9	88.30%	14.9	96.00%	17.6	92.10%	16.1	100.60%	21.3	90.40%	15.9
2/1 Hilden Rd left / ahead / right	53.90%	6.6	87.00%	10.5	69.40%	9	88.30%	10.9	58.20%	7.2	90.00%	12.8	57.30%	7	90.40%	13	51.50%	6.4	87.20%	11.4
3/1 Blackbrook Ave N left / ahead / right	88.50%	14.8	85.60%	11.9	91.10%	16.1	89.30%	13.3	93.00%	18.8	86.80%	15.6	97.10%	22.1	90.90%	17.9	97.00%	22.1	89.20%	17.1
4/1 Insall Rd right / left / ahead	88.20%	14	76.20%	8.3	93.50%	16.8	77.30%	8.5	95.30%	17.9	75.50%	9.4	100.80%	23.6	90.70%	13.6	97.00%	20	79.90%	9.9
Cycle Time	112s		99s		112s		99s		115s		115s		115s		115s		115s		115s	
PRC Over All Lanes	1.2%		1.4%		-3.9%		-2.5%		-5.9%		0.0%		-12.0%		-2.3%		-11.7%		-0.5%	

2.4 Junction 15 - A50 Hilden Road/Orford Green/Poplars Avenue

Table 3 below summarise the results of the 2025 and 2030 Do Minimum and Do Something Scenarios in the AM and PM peak periods at the A50 Hilden Road/Orford Green/Poplars Avenue junction as individual junctions.

Table 3. A50 Hilden Road/Orford Green/Poplars Avenue (Separate)

Link	Scenario																			
	2025 Do Minimum				2025 Do Something				2030 Do Minimum				2030 Do Something				2030 Do Something Through Route			
	AM		PM		AM		PM		AM		PM		AM		PM		AM		PM	
	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)
Junction 15: A50 Orford Road / Hilden Road																				
Hilden Road	0.36	0.60	0.31	0.50	0.37	0.60	0.33	0.50	0.38	0.60	0.33	0.50	0.45	0.80	0.41	0.70	0.45	0.80	0.32	0.50
A50 Orford Road	0.79	3.60	0.84	4.90	0.85	5.30	0.93	10.30	0.83	4.60	0.85	5.30	0.91	8.40	0.93	9.90	0.91	8.40	0.92	9.40
Smith Drive	0.35	0.50	0.63	1.60	0.36	0.60	0.67	2.00	0.36	0.60	0.66	1.90	0.38	0.60	0.71	2.30	0.39	0.60	0.70	22.00
A50 Orford Green	0.98	18.50	0.92	9.60	1.00	22.80	1.05	40.10	1.01	25.40	0.97	16.50	1.05	40.00	1.00	22.80	1.06	44.50	1.01	25.80
Junction 15: A50 Orford Green / Poplars Avenue																				
Poplars Ave left turn	0.98	15.00	0.42	0.70	1.01	20.70	0.61	1.50	0.97	13.70	0.49	0.90	1.04	26.70	0.50	1.00	1.04	27.60	0.64	1.70
A50 Orford Green WB right turn	0.57	1.70	0.63	2.30	0.66	2.60	0.80	6.70	0.59	1.90	0.64	2.50	0.69	3.10	0.80	6.80	0.68	2.90	0.79	6.10

Table 4 below summarise the results of the 2025 and 2030 Do Minimum and Do Something Scenarios in the AM and PM peak periods at the A50 Hilden Road/Orford Green/Poplars Avenue junction as linked junctions.

Table 4. A50 Hilden Road/Orford Green/Poplars Avenue (Linked)

Link	Scenario																			
	2025 Do Minimum				2025 Do Something				2030 Do Minimum				2030 Do Something				2030 Do Something Through Route			
	AM		PM		AM		PM		AM		PM		AM		PM		AM		PM	
	Delay (s)	Queue (PCU)	Delay (s)	Queue (PCU)	Delay (s)	Queue (PCU)	Delay (s)	Queue (PCU)	Delay (s)	Queue (PCU)	Delay (s)	Queue (PCU)	Delay (s)	Queue (PCU)	Delay (s)	Queue (PCU)	Delay (s)	Queue (PCU)	Delay (s)	Queue (PCU)
Junction 15: A50 Orford Road / Hilden Road																				
Hilden Road	6.14	0.60	6.16	0.60	6.22	0.60	7.38	0.70	6.17	0.60	6.72	0.60	7.33	0.90	9.43	1.00	7.65	0.80	7.39	0.60
A50 Orford Road	21.01	5.40	32.17	9.10	31.36	8.60	102.00	34.70	24.40	6.00	36.43	10.60	56.41	16.40	116.71	38.20	52.91	16.30	103.66	35.60
Smith Drive	7.44	0.60	14.68	2.00	7.81	0.60	19.40	2.80	7.64	0.60	17.07	2.40	8.22	0.70	23.57	3.30	8.53	0.70	21.46	3.20
A50 Orford Green	8.64	2.40	9.40	2.50	8.52	2.30	10.13	2.70	8.44	2.30	9.95	2.80	9.09	2.50	9.89	2.70	9.17	2.40	10.06	2.70
Junction 15: A50 Orford Road / Hilden Road																				
A50 Orford Green EB	2.06	0.30	5.44	1.60	1.61	0.30	8.35	2.10	1.40	0.20	10.00	2.60	1.93	0.50	9.56	2.50	1.99	0.30	5.37	1.40
Poplars Ave left turn	667.09	102.20	120.11	9.00	591.19	95.50	513.04	54.90	493.49	82.20	385.47	34.10	806.02	129.40	339.63	30.50	824.20	133.40	367.07	42.60
A50 Orford Green WB right turn	4.47	1.50	5.55	1.80	5.61	1.80	8.06	2.60	4.61	1.40	5.65	1.90	6.38	2.10	8.19	2.70	6.25	2.00	8.11	2.60

2.5 Junction 20 - Capesthorpe Road/Poplars Avenue

Table 5 below summarise the results of the 2025 and 2030 Do Minimum and Do Something Scenarios in the AM and PM peak periods at the Capesthorpe Road / Poplars Avenue junction.

Table 5. Capesthorpe Road / Poplars Avenue Junctions 8 Results Summary

Link	Scenario																			
	2025 Do Minimum				2025 Do Something				2030 Do Minimum				2030 Do Something				2030 Do Something Through Route			
	AM		PM		AM		PM		AM		PM		AM		PM		AM		PM	
	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)
Junction 20: Capesthorpe Road / Poplars Avenue																				
Capesthorpe Road (W)	0.30	0.43	0.35	0.54	0.33	0.48	0.42	0.71	0.32	0.46	0.37	0.59	0.37	0.58	0.45	0.80	0.36	0.56	0.39	0.65
Poplars Avenue (N)	0.36	0.55	0.24	0.31	0.46	0.84	0.42	0.71	0.38	0.62	0.26	0.34	0.54	1.16	0.43	0.75	0.42	0.72	0.23	0.30
Capesthorpe Road (E)	0.56	1.25	0.70	2.27	0.65	1.82	0.94	11.67	0.57	1.32	0.79	3.57	0.80	3.77	0.96	14.80	0.77	3.29	0.79	3.71
Poplars Avenue (S)	0.22	0.28	0.41	0.69	0.30	0.42	0.58	1.34	0.24	0.31	0.43	0.76	0.34	0.52	0.58	1.37	0.33	0.49	0.56	1.28

2.6 Junction 24 – A574 Birchwood Way/Blackbrook Avenue

Table 6 below summarise the results of the 2025 and 2030 Do Minimum and Do Something Scenarios in the AM and PM peak periods at the Birchwood Way / Blackbrook Avenue junction.

Table 6. A574 Birchwood Way / Blackbrook Avenue Junctions 8 Results Summary

Link	Scenario																			
	2025 Do Minimum				2025 Do Something				2030 Do Minimum				2030 Do Something				2030 Do Something Through Route			
	AM		PM		AM		PM		AM		PM		AM		PM		AM		PM	
	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)
Junction 24: Birchwood Way / Blackbrook Avenue																				
A574 (E)	0.52	1.06	0.67	1.97	0.53	1.10	0.64	1.75	0.53	1.11	0.66	1.94	0.54	1.18	0.64	1.79	0.53	1.11	0.68	2.06
Blackbrook Avenue (N)	0.48	0.93	0.43	0.75	0.53	1.13	0.47	0.89	0.51	1.03	0.45	0.80	0.51	1.04	0.50	1.00	0.51	1.04	0.48	0.90
A574 (W)	0.67	2.03	0.67	1.97	0.68	2.07	0.72	2.47	0.65	1.85	0.70	2.27	0.74	2.81	0.73	2.62	0.74	2.81	0.71	2.36
Blackbrook Avenue (S)	0.52	1.08	0.50	0.99	0.53	1.14	0.56	1.25	0.53	1.13	0.52	1.09	0.57	1.33	0.57	1.33	0.57	1.32	0.57	1.32

2.7 Junction 25 - Enfield Park Road/Crab Lane

Table 7 below summarise the results of the 2025 and 2030 Do Minimum and Do Something Scenarios in the AM and PM peak periods at the Enfield Park Road / Crab Lane junction.

Table 7. Enfield Park Road / Crab Lane Junctions 8 Results Summary

Approach	Scenario																			
	2025 Do Minimum				2025 Do Something				2030 Do Minimum				2030 Do Something				2030 Do Something Through Route			
	AM		PM		AM		PM		AM		PM		AM		PM		AM		PM	
	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC	Queue (PCU)	RFC
Junction 25: Enfield Oark Road / Crab Lane																				
Crab Lane left turn	0.41	0.29	1.99	0.67	0.48	0.33	12.52	0.96	0.42	0.30	2.96	0.75	0.58	0.37	25.78	1.02	0.61	0.38	23.98	1.02
Crab Lane right turn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enfield Park Rd NB right turn	1.39	0.59	0.97	0.49	2.84	0.75	1.40	0.59	1.59	0.62	1.04	0.51	7.04	0.90	1.90	0.66	9.95	0.94	1.97	0.67

2.8 Junction 26 - Birchwood Way/Crab Lane/Woolston Grange Avenue

Table 8 below summarise the results of the 2025 and 2030 Do Minimum and Do Something Scenarios in the AM and PM peak periods at the Birchwood Way / Crab Lane / Woolston Grange Avenue junction.

Table 8. Birchwood Way / Crab Lane / Woolston Grange Avenue LinSig Results Summary

Link	Scenario																				
	2025 Do Minimum				2025 So Something				2030 Do Minimum				2030 So Something				20230 Do Something Through Route				
	AM		PM		AM		PM		AM		PM		AM		PM		AM		PM		
	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	
Junction 26: Birchwood Way / Crab Lane / Woolston Grange Avenue																					
1/1	Birchwood Way WB left	41.8%	5.2	76.1%	10.8	43.5%	4.3	82.2%	12.8	43.8%	4.2	82.7%	12.5	46.4%	4.8	87.4%	14.5	47.1%	4.9	86.6%	14.4
1/2+1/3	Birchwood Way WB left / ahead	55.7 : 55.7%	8.3	84.7 : 84.7%	21.8	57.4 : 57.4%	7	89.0 : 89.0%	23.1	62.4 : 62.4%	8.4	90.4 : 90.5%	29.8	60.1 : 60.1%	8	92.7 : 92.7%	30.5	62.6 : 62.6%	8.5	92.4 : 92.4%	26.3
2/1	Woolston Grange Ave NB ahead / left	76.9%	11.4	78.0%	9.5	79.0%	12.1	79.7%	10	79.9%	12.3	80.6%	10.2	84.0%	13.9	83.8%	11.1	84.0%	13.9	88.9%	12.5
2/2	Woolston Grange Ave NB ahead	77.9%	11.7	78.9%	9.7	80.3%	12.5	84.7%	11.4	81.2%	12.9	82.5%	10.7	85.0%	14.2	87.5%	12.5	85.2%	14.3	90.9%	13.7
3/1	Birchwood Way EB left	76.9%	7.7	64.1%	6.1	79.0%	7.7	69.1%	6.7	78.5%	7.5	66.7%	6.6	80.2%	8.0	80.2%	8.0	81.7%	8.2	85.7%	8.9
3/2	Birchwood Way EB left	76.4%	7.6	64.1%	6.1	80.0%	7.9	69.1%	6.7	78.1%	7.5	66.3%	6.5	80.0%	7.9	80.2%	8.0	81.0%	8.1	85.3%	8.7
4/1	Crab Lane SB ahead / left	54.7%	2.3	62.8%	3.4	64.5%	3.2	65.6%	4	62.2%	2.5	66.2%	3.5	69.0%	3.5	73.1%	5.0	67.3%	3.5	78.6%	5.8
4/2	Crab Lane SB ahead	36.1%	0.9	58.3%	2.9	43.6%	1.1	57.6%	3	43.8%	1.1	59.6%	2.6	51.6%	1.7	60.8%	3.3	51.2%	1.7	66.3%	3.9
5/1	R't SB circulatory ahead / right	42.4%	2.7	87.3%	8.7	38.2%	2.6	84.8%	8	32.7%	2.1	84.8%	7.9	35.3%	2.4	86.8%	8.6	35.8%	2.4	94.3%	11.8
5/2	R't SB circulatory ahead / right	52.5%	3.5	86.7%	8.5	53.6%	3.8	85.3%	8.1	57.6%	4.2	85.7%	8.1	61.5%	4.5	88.0%	8.9	61.3%	4.5	94.7%	12.0
7/1	R't NB circulatory ahead	80.6%	6.2	66.5%	4.4	80.1%	12.1	80.1%	9.9	82.0%	9.0	69.7%	5.8	85.5%	9.6	84.3%	11.1	85.6%	10.1	81.9%	11.2
7/2	R't NB circulatory ahead	80.5%	4.1	63.8%	1.1	80.1%	2.7	65.9%	1.4	80.9%	3.2	66.7%	1.1	84.8%	4.2	63.2%	1.6	85.0%	4.3	60.4%	1.0
10/1	R't WB circulatory right / ahead	76.1%	4.5	64.2%	6.2	77.0%	4.5	71.6%	7.1	82.3%	6.3	67.4%	7.3	80.6%	6.1	76.3%	8.0	83.2%	5.9	75.5%	8.3
10/2	R't WB circulatory right / ahead	80.6%	4.8	78.2%	5.8	80.8%	5.9	80.1%	7.0	80.2%	7.8	72.3%	8.4	81.5%	8.0	87.2%	8.8	83.2%	8.5	87.8%	8.8
Junction 26: Crab Lane / Fearnhead Lane Pedestrian Crossing																					
1/2+1/1	Fearnhead Lane right / left	25.9 : 25.9%	0.2	32.0 : 32.0%	0.5	31.3 : 31.3%	0.2	31.6 : 31.6%	0.5	41.1 : 41.1%	0.3	33.6 : 33.6%	0.5	32.4 : 32.4%	0.3	24.6 : 24.6%	0.5	25.4 : 25.4%	0.3	42.1 : 42.1%	1.4
2/1	Crab Lane SB	20.4%	2.4	32.1%	4.3	24.9%	3.1	33.7%	4.7	21.2%	2.5	32.4%	4.3	27.9%	3.6	38.3%	5.5	28.8%	3.7	38.6%	5.5
3/1	Crab Lane NB (@ Fearnhead Lane)	43.2%	1.0	32.0%	2.3	45.6%	1.0	44.1%	2.8	45.3%	1.0	33.8%	2.4	48.1%	0.8	48.8%	3.2	48.1%	0.7	49.1%	3.0
6/1	Crab Lane NB (@ ped crossing)	35.3%	0.3	26.6%	0.3	36.6%	0.4	38.0%	0.5	36.3%	0.4	28.1%	0.2	38.9%	0.5	43.2%	0.5	40.1%	0.5	42.9%	0.6
7/1	Crab Lane SB (@ Fearnhead Lane)	16.8%	0.1	26.5%	0.2	20.9%	1.2	27.8%	0.2	17.5%	0.1	26.8%	0.2	23.8%	1.8	31.6%	0.2	24.5%	1.8	31.9%	0.2
Cycle Time		60s (120s for J3)		60s (120s for J3)		60s (120s for J3)		60s (120s for J3)		60s (120s for J3)		60s (120s for J3)		60s (120s for J3)		60s (120s for J3)		60s (120s for J3)		60s (120s for J3)	
C3: Stream 1 PRC for Signalised Lanes		61.5%		3.1%		56.7%		1.1%		44.2%		-0.6%		46.3%		-3.0%		43.8%		-5.2%	
C3: Stream 2 PRC for Signalised Lanes		11.6%		14.0%		11.4%		6.3%		9.3%		9.1%		5.9%		2.9%		5.6%		-1.0%	
C3: Stream 3 PRC for Signalised Lanes		11.6%		35.4%		12.4%		12.4%		9.8%		29.2%		5.3%		6.7%		5.1%		5.0%	
C4: PRC for Signalised Lanes		108.4%		180.6%		97.4%		104.3%		98.8%		166.5%		86.9%		84.4%		86.9%		83.2%	
PRC Over All Lanes		11.6%		3.1%		11.4%		1.1%		9.3%		-0.6%		5.3%		-3.5%		5.1%		-5.2%	

2.9 Junction 27 - Birchwood Way / Oakwood Gate / Birchwood Park Avenue

Table 9 below summarise the results of the 2025 and 2030 Do Minimum and Do Something Scenarios in the AM and PM peak periods at the Birchwood Way / Oakwood Gate / Birchwood Park Avenue junction.

Table 9. Birchwood Way / Oakwood Gate / Birchwood Park Avenue LinSig Results Summary

Link	Scenario																				
	2025 Do Minimum				2025 So Something				2030 Do Minimum				2030 So Something				20230 Do Something Through Route				
	AM		PM		AM		PM		AM		PM		AM		PM		AM		PM		
	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	DoS (%)	MMQ	
Junction 27: Birchwood Way / Oakwood Gate / Birchwood Park Avenue																					
1/1	Birchwood Way WB ahead / left	63.1%	6.9	77.4%	10.2	66.6%	7.2	85.5%	11.9	68.7%	7.5	84.7%	12.0	68.9%	7.5	88.8%	13.2	67.0%	7.4	93.1%	15.4
1/2	Birchwood Way WB ahead	65.0%	7.7	79.2%	11.4	68.6%	8.0	86.2%	12.8	71.1%	8.5	85.5%	13.0	71.2%	8.5	89.5%	14.3	68.9%	8.4	94.0%	16.9
2/1	Oakwood Gate NB ahead / left	33.1%	1.1	51.4%	2.3	33.7%	1.2	53.4%	2.4	41.8%	1.6	55.4%	3.2	36.0%	1.3	58.7%	3.0	36.9%	1.3	58.3%	3.4
2/2	Oakwood Gate NB ahead	34.4%	1.1	27.7%	1.0	34.5%	1.2	29.1%	1.0	36.7%	1.3	29.9%	1.1	36.8%	1.3	32.5%	1.1	37.2%	1.3	32.2%	1.1
3/1	Birchwood Way EB left	53.2%	6.0	26.0%	2.4	54.3%	6.5	26.3%	2.4	55.1%	6.5	27.5%	2.7	56.1%	6.9	28.2%	2.5	57.7%	7.3	28.9%	2.7
3/2+3/3	Birchwood Way EB ahead	69.4 : 69.4%	9.0	52.8 : 52.8%	5.6	69.9 : 69.9%	9.5	53.6 : 53.6%	5.6	72.2 : 72.2%	9.8	55.9 : 55.9%	6.2	74.6 : 74.6%	10.7	56.4 : 56.4%	6.1	73.9 : 73.9%	10.7	57.4 : 57.4%	6.3
4/2+4/1	Birchwood Park Ave SB ahead / left	62.0 : 62.0%	3.7	58.6 : 58.6%	2.8	62.6 : 62.6%	3.8	68.1 : 68.1%	4.4	63.1 : 63.1%	3.8	64.4 : 64.4%	3.7	69.3 : 69.3%	4.7	75.1 : 75.1%	5.8	66.7 : 66.7%	4.3	75.1 : 75.1%	5.9
4/3	Birchwood Park Ave SB ahead	69.2%	4.7	75.1%	5.7	70.8%	4.9	80.2%	7.5	75.9%	6.4	78.4%	6.5	74.1%	5.9	88.0%	10.1	75.9%	6.2	87.3%	9.9
5/1	R't SB circulatory right / ahead	78.1%	9.7	86.1%	15.2	75.9%	10.2	87.5%	16.5	77.1%	12.7	88.4%	17.4	79.9%	10.8	93.1%	17.8	80.2%	10.6	90.2%	18.5
5/2	R't SB circulatory right	41.2%	5.1	52.6%	4.7	40.3%	4.6	52.1%	5.0	42.8%	3.6	51.8%	4.5	40.8%	4.8	55.7%	6.6	43.4%	5.1	53.7%	5.6
8/1	R't NB circulatory ahead	73.6%	6.9	65.6%	7.2	77.1%	9.0	65.6%	7.2	76.4%	10.5	68.1%	7.6	80.0%	9.3	68.1%	6.8	80.0%	9.3	64.7%	7.3
8/2	R't NB circulatory right	32.1%	2.8	24.6%	1.9	33.6%	2.6	24.6%	1.9	33.3%	2.9	25.7%	2.0	34.9%	2.8	25.7%	2.0	34.9%	2.8	24.4%	1.9
Cycle Time		60s (120s for J3)		60s (120s for J3)		60s (120s for J3)		60s (120s for J3)		60s (120s for J3)		60s (120s for J3)		60s (120s for J3)		60s (120s for J3)		60s (120s for J3)		60s (120s for J3)	
C1: PRC for Signalised Lanes		22.3%		37.3%		16.7%		37.3%		17.9%		32.1%		12.5%		32.1%		12.5%		39.1%	
C2: PRC for Signalised Lanes		15.3%		4.6%		18.6%		2.8%		16.7%		1.8%		12.7%		-3.5%		12.2%		-4.4%	
PRC Over All Lanes		11.6%		3.1%		11.4%		1.1%		9.3%		-0.6%		5.3%		-3.5%		5.1%		-5.2%	

Appendix 66

SATURN Flow Data Spreadsheets

Junction	Road	Movement	Base Model				2025 Do Minimum				2030 Do Minimum															
			AM PEAK 0800 - 0900		PM PEAK 1700-1800		AM PEAK 0800 - 0900		PM PEAK 1700-1800		AM PEAK 0800 - 0900		PM PEAK 1700-1800													
			Cars	LGV	HGV	All Traffic	Cars	LGV	HGV	All Traffic	Cars	LGV	HGV	All Traffic	Cars	LGV	HGV	All Traffic								
Southworth Lane / Delph Lane / Myddleton Lane	Southworth Lane	Left to Delph Lane	79	3	3	85	56	4	0	61	93	3	3	99	162	16	0	178	97	4	3	104	187	17	4	208
		W/B to Myddleton Lane	142	14	5	161	382	24	3	409	167	17	6	190	348	17	3	368	173	18	6	197	343	18	0	361
	Delph Lane	Left to Myddleton Lane	183	0	0	183	323	31	14	368	237	0	0	237	451	35	16	502	249	0	0	249	472	38	17	527
		E/B to Southworth Lane	28	0	0	28	23	0	0	23	56	5	5	66	27	0	0	27	73	6	5	84	28	0	0	28
Newton Road / A49 / Winwick Park Avenue	Myddleton Lane	E/B to Southworth Lane	335	26	18	379	159	17	0	176	352	26	15	393	181	19	0	199	340	25	15	379	186	20	0	205
		Right to Delph Lane	375	26	13	413	231	16	0	247	472	41	14	527	289	18	0	307	472	42	14	528	297	19	0	316
	Newton Road	Left to A49 (East)	657	85	52	794	712	49	13	773	729	85	60	875	706	45	14	765	758	89	63	910	712	48	12	772
		A49 (East)	526	101	131	759	721	90	38	848	618	120	154	892	840	104	44	988	643	124	160	927	872	111	45	1028
A49 / Delph Lane	A49 (South)	Left to Winwick Park Avenue	852	143	183	1178	1630	143	37	1810	941	160	206	1307	1686	152	40	1879	944	166	209	1318	1699	152	40	1891
		Left to Newton Road	70	0	5	75	33	4	2	39	82	0	6	88	38	5	3	46	85	0	6	91	40	5	3	48
	Winwick Park Avenue	E/B to A49 (East)	82	0	0	82	29	5	0	34	96	0	0	96	34	6	0	40	100	0	0	100	35	6	0	41
		A49 (North)	977	162	182	1322	1104	95	50	1249	1077	176	210	1463	1129	95	55	1279	1117	182	217	1516	1117	97	53	1267
A49 / Birch Avenue (20 Dwellings)	A49 (North)	Right to Delph Lane	59	6	0	64	113	11	0	124	68	7	0	74	126	11	0	138	70	7	0	77	127	13	0	140
		Left to Delph Lane	178	30	0	208	155	42	0	197	205	34	0	239	164	44	0	208	209	35	0	244	165	47	0	212
	Delph Lane	N/B to A49 (North)	793	143	178	1114	1491	126	27	1644	868	159	200	1227	1523	133	29	1685	867	164	202	1233	1529	133	29	1691
		Left to A49 (North)	59	0	5	64	139	17	10	166	73	1	6	80	162	20	12	194	78	1	6	85	168	20	12	200
A49 / Sandy Lane West / A574	A49 (North)	Right to A49 (South)	138	51	0	188	169	17	0	187	158	58	0	216	197	21	0	218	162	62	0	224	205	21	0	226
		Left to Birch Avenue	15	5	0	20	19	0	0	19	17	6	0	22	21	0	0	21	17	6	0	22	22	0	0	22
	Birch Avenue	S/B to A49 (South)	1442	191	261	1894	1198	132	83	1412	1559	201	288	2048	1294	145	93	1532	1604	207	295	2106	1321	151	93	1565
		Left to A49 (South)	19	3	0	22	12	2	0	14	22	4	0	26	15	2	0	17	23	4	0	27	15	2	0	17
A49 / Sandy Lane West / A574	A49 (North)	Left to Sandy Lane West	100	13	8	121	221	24	5	250	186	25	9	220	272	26	6	304	223	33	10	265	284	27	5	316
		Entry to roundabout	1361	181	253	1795	989	110	78	1177	1396	180	280	1855	1037	121	87	1245	1405	178	286	1869	1053	126	88	1267
	Sandy Lane West	Left to A49 (South)	29	4	19	51	52	0	0	52	29	5	17	51	58	0	0	58	31	5	17	52	65	0	0	65
		Entry to roundabout	329	25	6	360	457	25	12	494	377	30	23	430	643	41	19	702	389	30	29	447	684	41	23	749
	A49 (South)	Left to A574	240	38	45	323	434	4	3	441	272	45	48	365	434	12	4	449	283	46	50	378	443	12	3	451
		Entry to roundabout	595	130	238	963	1269	130	63	1461	722	154	272	1148	1425	138	66	1629	753	164	276	1193	1443	138	65	1645
A574	Left to A49 (North)	243	46	96	385	369	17	15	401	284	57	112	453	430	20	17	467	295	57	118	470	446	20	18	484	
	Entry to Roundabout	714	70	66	850	627	46	0	673	845	82	79	1006	729	53	0	782	877	85	79	1042	757	56	0	813	
Cotswold Road / Cleveland Road / Sandy Lane / Sandy Lane West	Cotswold Road	Left to Cleveland Road	21	0	0	21	12	0	0	12	26	0	0	26	14	0	0	14	29	0	0	29	14	0	0	14
		S/B to Sandy Lane	43	0	0	43	30	0	0	30	50	0	0	50	35	0	0	35	52	0	0	52	36	0	0	36
		Right to Sandy Lane West	43	2	10	55	34	0	3	37	51	2	12	65	40	0	3	43	51	2	12	65	41	0	3	44
	Cleveland Road	Left to Sandy Lane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		W/B to Sandy Lane West	176	20	9	205	250	25	8	283	204	25	22	251	402	40	14	456	210	25	28	263	439	41	18	498
		Right to Cotswold Road	0	0	0	0	5	4	0	10	0	0	0	0	7	5	0	12	0	0	0	0	7	5	0	12
	Sandy Lane	Left to Sandy Lane West	74	0	0	74	135	0	1	136	76	0	0	76	156	0	2	158	78	0	0	78	162	0	2	164
		N/B to Cotswold Road	9	0	0	9	32	0	0	32	10	0	0	10	36	0	0	36	11	0	0	11	36	0	0	36
		Right to Cleveland Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Sandy Lane West	Left to Cotswold Road	14	0	1	16	63	0	0	63	16	0	2	18	73	0	0	73	16	0	2	18	75	0	0	75
		E/B to Cleveland Road	247	15	9	272	192	24	0	216	331	22	15	368	218	27	0	245	348	23	15	387	224	27	0	251
		Right to Sandy Lane	39	1	0	40	44	0	0	44	126	14	1	140	95	0	0	95	148	20	5	173	104	0	0	104
Poplars Avenue / Cleveland Road	Poplars Avenue (East)	Left to Cleveland Road	138	16	1	155	213	30	5	248	165	20	20	205	361	45	10	416	171	20	26	216	396	46	14	456
		W/B to Poplars Avenue (West)	40	0	0	40	61	0	0	61	47	0	0	47	71	0	0	71	48	0	0	48	74	0	0	74
	Cleveland Road	Left to Poplars Avenue (West)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Right to Poplars Avenue (East)	214	15	7	236	187	24	0	211	294	22	13	329	213	27	0	240	313	23	13	349	218	27	0	246
Poplars Avenue (West)	E/B to Poplars Avenue (East)	31	10	0	41	48	0	0	48	37	12	0	49	56	0	0	56	39	12	0	51	58	0	0	58	
	Right to Cleveland Road	8	0	2	10	4	0	0	4	9	0	2	11	5	0	0	5	9	0	2	11	5	0	0	5	
Poplars Avenue / Howson Road	Poplars Avenue (East)	Left to Howson Road	25	3	7	36	44	5	0	49	44	16	8	68	74	6	0	80	49	16	9	73	77	6	0	82
		W/B to Poplars Avenue (West)	158	16	1	175	274	30	5	309	188	20	20	228	432	45	10	487	195	20	26	240	469	46	14	530
	Howson Road	Left to Poplars Avenue (West)	20	0	0	20	0	0	0	0	23	0	0	23	0	0	0	0	24	0	0	24	0	0	0	0
		Right to Poplars Avenue (East)	74	11	0	85	40	7	0	47	89	13	0	102	67	9	0	76	93	14	0	106	82	11	0	92
Poplars Avenue (West)	E/B to Poplars Avenue (East)	245	15	7	267	213	24	0	237	332	22	13	367	244	27	0	271	353	24	13	389	251	28	0	279	
	Right to Howson Road	0	10	0	10	22	0	0	22	0	12	0	12	25	0	0	25	0	11	0	11	25	0	0	25	
Mill Lane / Enfield Park Road / Blackbrook Avenue / Ballater Drive	Mill Lane	Left to Enfield Park Road	164	0	5	169	60	0	0	60	175	0	5	181	69	0	0	69	177	0	5	183	72	0	0	72
		S/B to Blackbrook Avenue	337	39	10	387	211	20	0	231	412	54	11	477	364	34	0	397	416	55	11	482	394	35	4	433
		Right to Ballater Drive																								

A49 / Long Lane / Hawleys Lane	Long Lane	W/B to Hawleys Lane	125	0	3	128	104	16	0	120	134	0	0	134	110	12	0	122	136	0	0	136	109	14	0	124
		Right to A49 (North)	71	3	36	109	64	0	5	68	81	2	26	109	83	6	0	89	86	2	21	109	86	5	0	92
	A49 (South)	Left to Hawleys Lane	40	6	0	46	66	3	0	69	47	7	0	54	77	3	0	80	49	7	0	56	80	3	0	83
		N/B to A49 (North)	608	127	178	913	1293	112	37	1442	741	153	212	1105	1449	130	44	1623	772	160	221	1153	1500	134	44	1679
		Right to Long Lane	183	21	3	207	216	23	0	239	197	21	3	222	319	26	0	346	203	21	0	224	336	28	0	363
Hawleys Lane	Left to A49 (North)	156	38	69	263	346	22	24	392	120	26	0	146	274	17	0	291	125	28	0	153	284	17	0	301	
	E/B to Long Lane	43	3	0	46	120	6	0	126	50	4	0	54	71	7	0	78	52	4	0	56	68	7	0	75	
	Right to A49 (South)	37	11	0	48	73	4	0	78	44	13	0	57	85	5	0	90	46	14	0	60	88	5	0	93	
Blackbrook Avenue / Insall Road / Hilden Road	Blackbrook Avenue (North)	Left to Insall Road	0	0	0	0	7	0	0	7	0	0	0	0	8	0	0	8	0	0	0	8	8	0	0	8
		S/B to Blackbrook Avenue (South)	289	28	8	325	231	33	0	264	323	31	9	363	295	38	0	333	333	32	8	373	308	40	0	348
		Right to Hilden Road	17	0	0	17	7	0	0	7	19	0	0	19	8	0	0	8	20	0	0	20	8	0	0	8
	Insall Road	Left to Blackbrook Avenue (South)	128	9	0	137	73	0	0	73	150	10	0	160	76	0	0	76	156	10	0	165	78	0	0	78
		W/B to Hilden Road	158	0	0	158	134	0	0	134	197	0	0	197	163	0	0	163	214	0	0	214	168	0	0	168
		Right to Blackbrook Avenue (North)	0	0	0	0	27	0	0	27	0	0	0	0	20	0	0	20	0	0	0	0	17	0	0	17
	Blackbrook Avenue (South)	Left to Hilden Road	46	7	0	53	50	0	0	50	40	2	0	42	59	0	0	59	32	2	0	34	61	0	0	61
		N/B to Blackbrook Avenue (North)	151	17	0	168	189	7	2	198	177	20	0	197	220	8	2	230	184	21	0	205	228	9	2	239
		Right to Insall Road	20	0	0	20	54	5	0	60	96	0	0	96	37	0	0	37	100	0	0	100	39	0	0	39
	Hilden Road	Left to Blackbrook Avenue (North)	14	0	0	14	98	0	0	98	16	0	0	16	113	0	0	113	17	0	0	17	115	0	0	115
		E/B to Insall Road	149	0	0	149	106	10	0	116	190	0	0	190	152	18	0	170	247	1	0	248	153	18	0	171
Right to Blackbrook Avenue (South)		15	0	0	15	11	0	0	11	9	0	0	9	0	0	0	0	12	0	0	12	1	0	0	1	
A50 / Hilden Road / Orford Road / Smith Drive	A50	Left to Hilden Road	740	92	9	841	694	57	11	761	881	105	8	994	789	67	13	869	896	111	8	1015	830	68	13	910
	Hilden Road	Left to Orford Road	234	12	0	246	211	10	0	221	295	13	0	308	268	11	0	279	304	15	0	319	280	13	0	293
	Orford Road	Left to Smith Drive	577	50	18	645	709	53	7	769	698	65	22	785	828	66	8	902	729	65	23	817	820	67	9	895
	Smith Drive	Left to A50	208	0	0	208	350	29	0	379	244	0	0	244	408	33	0	441	254	0	0	254	423	35	0	458
Blackbrook Avenue / A574	Blackbrook Avenue (North)	Left to A574 (East)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		S/B to Blackbrook Avenue (South)	398	34	8	440	293	33	0	327	442	38	9	489	334	38	0	373	456	39	9	504	348	40	0	388
		Right to A574 (West)	35	3	0	37	21	0	0	21	39	3	0	42	36	0	0	36	44	3	0	47	38	0	0	38
	A574 (East)	Left to Blackbrook Avenue (South)	209	25	16	251	227	14	3	243	239	29	18	286	259	16	4	278	245	29	19	293	263	16	4	283
		W/B to A574 (West)	280	37	12	329	542	11	0	553	332	44	14	389	589	12	0	600	340	44	13	398	570	11	0	581
		Right to Blackbrook Avenue (North)	21	8	0	29	22	0	0	22	18	8	0	26	25	0	0	25	10	8	0	18	25	0	0	25
	Blackbrook Avenue (South)	Left to A574 (West)	165	4	4	173	177	15	2	194	202	9	5	216	206	18	2	226	212	9	5	226	214	18	2	234
		N/B to Blackbrook Avenue (North)	196	16	0	213	250	7	2	259	295	14	0	309	291	8	2	301	307	15	0	322	302	9	2	313
		Right to A574 (East)	233	16	14	263	129	23	0	152	201	19	16	236	180	26	0	206	207	20	17	244	186	29	0	215
	A574 (West)	Left to Blackbrook Avenue (North)	0	0	0	0	22	5	0	28	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
		E/B to A574 (East)	438	33	25	496	387	18	4	409	475	40	29	544	502	21	5	528	433	39	31	502	519	21	5	545
Right to Blackbrook Avenue (South)		163	24	5	192	227	13	11	251	199	28	6	232	269	15	13	296	204	30	6	240	277	17	13	307	
A50 / A574	A50 (North)	Left to A574	281	33	5	319	350	26	11	387	310	38	6	354	421	30	13	464	265	39	6	310	436	31	13	480
		S/B to A50 (South)	308	46	2	356	271	27	0	299	355	53	2	409	302	32	0	335	363	56	2	420	312	33	0	345
	A574	Left to A50 (South)	165	30	12	206	384	11	0	395	195	33	14	242	438	12	0	450	204	35	14	252	447	12	0	459
		Right to A50 (North)	315	14	4	333	357	15	2	373	378	23	5	406	381	16	2	399	391	22	5	419	356	16	2	374
A50 (South)	N/B to A50 (North)	261	36	14	312	352	39	6	396	319	43	17	379	445	51	6	502	337	43	18	399	462	52	7	521	
	Right to A574	319	24	25	369	286	11	4	300	363	29	29	421	350	6	5	361	372	29	31	432	362	6	5	373	
Crab Lane / A574 / Woolston Grange Avenue	Crab Lane	Entry to Roundabout	306	48	0	354	555	9	0	564	374	57	0	431	630	10	0	641	441	58	0	499	624	11	0	635
	A574 (East)	Entry to Roundabout	928	101	85	1114	1323	61	25	1410	1000	106	89	1196	1330	58	23	1412	994	104	90	1188	1330	58	24	1412
	Woolston Grange Avenue	Entry to Roundabout	1100	78	55	1233	775	94	31	900	1292	91	64	1447	916	110	36	1062	1343	96	68	1507	950	115	37	1102
	A574 (West)	Entry to Roundabout	671	49	39	759	516	41	4	561	677	59	45	780	682	47	5	735	640	59	47	747	705	50	5	760
A49 / Golborne Road	A49 (North)	Left to Golborne Road	91	4	0	95	54	6	0	60	117	5	0	123	63	8	0	71	124	5	0	129	65	8	0	73
		Ahead to A49 (South)	369	45	24	438	347	23	0	370	424	52	28	504	405	27	0	432	438	55	29	522	420	28	0	448
	Golborne Road	Left to A49 (South)	288	40	28	355	365	26	13	403	306	34	32	371	302	18	13	333	320	34	33	387	293	20	11	324
		Right to A49 (North)	44	0	0	44	20	1	19	40	51	0	0	51	40	1	21	62	53	0	0	53	48	2	22	71
A49 (South)	Ahead to A49 (North)	298	35	0	333	736	69	17	822	326	38	0	364	747	72	18	836	331	40	0	372	737	70	17	824	
	Right to Golborne Road	263	38	51	351	327	22	10	359	261	38	51	350	309	22	11	342	250	37	52	338	308	23	10	341	
Europa Boulevard / A574 / Callands Road	Europa Boulevard	Entry to Roundabout	198	33	32	263	298	8	9	315	233	39	37	309	347	10	11	368	242	40	40	322	361	10	11	382
	A574 (East)	Entry to Roundabout	513	66	64	643	934	63	15	1013	589	77	73	739	56	11	0	67	607	77	74	757	58	11	0	69
	Callands Road	Entry to Roundabout	361	22	12	395	145	13	3	161	429	28	14	471	1067	68	17	1153	446	28	15	489	1094	72	17	1183
	A574 (West)	Entry to Roundabout	440	42	59	541	484	36	25	545	521	50	70	641	653	45	29	727	541	51	73	665	677	47	30	754
Calver Road / A574	Calver Road	Left to A574 (East)	298	65	66	429	532	28	0	560	350	77	79	506	619	33	0	652	364	79	80	523	643	34	0	677
	A574 (East)	W/B to A574 (West)	513	66	64	643	934	63	15	1013	589	77	73	739	1067	68	17	1153	607	77	74	757	1094	72	17	1183
		Right to Calver Road	202	19	45	266	363	6	32	401	232	22	52	306	413	7	37	457	239	23	53	315	424	7	37	468
	A574 (West)	Left to Calver Road	76	11	7	94	97	4	10	111	89	13	8	110	113	5	12	130	92	13	9	114	117	5	12	134

Junction	Road	Traffic Direction	Base Model				2025 Do Minimum				2030 Do Minimum															
			AM PEAK 0800 - 0900		PM PEAK 1700-1800		AM PEAK 0800 - 0900		PM PEAK 1700-1800		AM PEAK 0800 - 0900		PM PEAK 1700-1800													
			Cars	LGV	HGV	All Traffic	Cars	LGV	HGV	All Traffic	Cars	LGV	HGV	All Traffic	Cars	LGV	HGV	All Traffic								
Southworth Lane / Delph Lane / Myddleton Lane	Southworth Lane	Westbound Junction Entry	221	17	8	246	438	28	3	469	260	20	9	289	510	33	3	546	270	22	9	301	530	35	4	569
		Eastbound Junction Exit	363	26	18	407	182	17	0	199	408	31	20	458	207	19	0	226	412	31	21	463	213	20	0	233
	Delph Lane	Northbound Junction Entry	211	0	0	211	346	31	14	391	293	5	5	303	478	35	16	528	321	6	5	332	499	38	17	554
		Southbound Junction Exit	454	29	15	498	287	20	0	307	565	44	17	626	451	34	0	485	569	46	17	631	484	36	4	524
	Myddleton Lane	Eastbound Junction Entry	709	52	30	792	390	33	0	423	824	66	29	920	470	37	0	506	812	66	29	907	483	38	0	521
		Westbound Junction Exit	325	14	5	344	705	55	17	777	404	17	6	427	799	52	19	870	422	18	6	446	814	56	17	887
Newton Road / A49 / Winwick Park Avenue	Newton Road	Southbound Junction Entry	657	85	52	794	712	49	13	773	729	85	60	875	706	45	14	765	758	89	63	910	712	48	12	772
		Northbound Junction Exit	561	73	51	684	1062	91	27	1180	588	75	51	714	1056	94	29	1178	582	77	52	710	1045	93	27	1165
	A49 (East)	Westbound Junction Entry	526	101	131	759	721	90	38	848	618	120	154	892	840	104	44	988	643	124	160	927	872	111	45	1028
		Eastbound Junction Exit	543	88	139	770	702	82	12	797	616	100	158	873	760	90	14	863	632	104	161	897	771	90	14	875
	A49 (South)	Northbound Junction Entry	852	143	183	1178	1630	143	37	1810	941	160	206	1307	1686	152	40	1879	944	166	209	1318	1699	152	40	1891
		Southbound Junction Exit	1036	168	182	1386	1217	106	50	1372	1145	183	210	1538	1256	106	55	1417	1186	189	217	1592	1244	110	53	1406
Winwick Park Avenue	Eastbound Junction Entry	152	0	5	157	62	9	2	74	178	0	6	184	72	11	3	86	185	0	6	191	75	11	3	89	
	Westbound Junction Exit	47	0	0	47	126	10	0	136	53	0	0	53	133	11	0	144	55	0	0	55	132	11	0	143	
A49 / Delph Lane	A49 (North)	Southbound Junction Entry	1036	168	182	1386	1217	106	50	1372	1145	183	210	1538	1256	106	55	1417	1186	189	217	1592	1244	110	53	1406
		Northbound Junction Exit	853	143	183	1178	1630	143	37	1810	941	160	206	1307	1685	153	41	1879	945	165	208	1319	1697	153	41	1891
	A49 (South)	Northbound Junction Entry	972	173	178	1322	1646	168	27	1841	1074	192	200	1466	1687	177	29	1893	1076	199	202	1477	1694	179	29	1903
		Southbound Junction Exit	1115	213	182	1510	1273	112	50	1435	1235	234	210	1679	1327	116	55	1498	1279	244	217	1740	1322	118	53	1492
	Delph Lane	Eastbound Junction Entry	197	51	5	252	308	34	10	353	231	59	6	296	359	41	12	412	240	63	6	309	373	41	12	426
		Westbound Junction Exit	237	36	0	273	268	53	0	321	273	40	0	313	290	55	0	345	279	41	0	320	292	60	0	352
A49 / Birch Avenue	A49 (North)	Southbound Junction Entry	1457	196	261	1914	1217	132	83	1431	1576	207	288	2070	1316	145	93	1553	1621	213	295	2129	1343	151	93	1587
	Birch Avenue	Eastbound Junction Entry	19	3	0	22	12	2	0	14	22	4	0	26	15	2	0	17	23	4	0	27	15	2	0	17
A49 / Sandy Lane West / A574	A49 (North)	Southbound Junction Entry	1461	194	261	1916	1210	134	83	1427	1581	205	288	2075	1309	147	93	1549	1628	211	295	2134	1337	153	93	1583
		Northbound Junction Exit	967	182	329	1479	1623	132	80	1835	1093	212	383	1688	1880	161	90	2132	1131	219	395	1746	1932	162	94	2188
	Sandy Lane West	Westbound Junction Entry	358	29	24	411	508	25	12	546	406	35	40	481	701	41	19	760	419	35	46	500	748	41	23	813
		Eastbound Junction Exit	375	30	11	416	164	0	0	164	554	50	19	623	464	26	6	495	595	58	23	676	483	27	5	515
	A49 (South)	Northbound Junction Entry	835	168	283	1285	1703	134	66	1902	995	199	320	1513	1854	149	69	2078	1035	209	326	1571	1878	150	68	2096
		Southbound Junction Exit	1469	199	264	1932	1110	132	44	1286	1500	198	287	1985	1200	149	51	1399	1500	196	289	1985	1229	155	51	1434
A574	Eastbound Junction Entry	957	117	162	1235	996	63	15	1074	1129	139	191	1459	1159	73	17	1249	1172	142	198	1511	1203	76	18	1297	
	Westbound Junction Exit	715	85	109	909	1298	69	47	1413	821	99	124	1044	1480	75	54	1609	845	100	127	1072	1518	78	55	1651	
Cotswold Road / Cleveland Road / Sandy Lane / Sandy Lane West	Cotswold Road	Southbound Junction Entry	107	2	10	119	76	0	3	79	127	2	12	141	89	0	3	92	132	2	12	146	92	0	3	95
		Northbound Junction Exit	23	0	1	25	101	4	0	105	27	0	2	29	116	5	0	121	27	0	2	29	119	5	0	124
	Cleveland Road	Westbound Junction Entry	176	20	9	205	255	30	8	293	204	25	22	251	409	45	14	468	210	25	28	263	446	46	18	511
		Eastbound Junction Entry	269	15	9	293	204	24	0	228	357	22	15	394	232	27	0	259	377	23	15	415	238	27	0	265
	Sandy Lane	Northbound Junction Entry	83	0	0	83	167	0	1	168	86	0	0	86	192	0	2	194	89	0	0	89	198	0	2	200
		Southbound Junction Exit	82	1	0	83	74	0	0	74	176	14	1	191	130	0	0	130	200	20	5	225	140	0	0	140
Sandy Lane West	Eastbound Junction Entry	301	17	10	328	299	24	0	324	473	36	18	527	386	27	0	413	512	44	22	578	403	27	0	430	
	Westbound Junction Exit	293	22	19	334	419	25	12	456	330	27	34	391	598	40	19	657	340	27	40	406	642	41	23	706	
Poplars Avenue / Cleveland Road	Poplars Avenue (East)	Northbound Junction Entry	178	16	1	195	274	30	5	309	211	20	20	251	432	45	10	487	219	20	26	264	469	46	14	530
		Southbound Junction Exit	245	25	7	277	235	24	0	259	331	34	13	378	269	27	0	295	352	35	13	400	276	27	0	304
	Cleveland Road	Southbound Junction Entry	214	15	7	236	187	24	0	211	294	22	13	329	213	27	0	240	313	23	13	349	218	27	0	246
		Northbound Junction Exit	146	16	3	165	217	30	5	252	174	20	22	216	365	45	10	421	180	20	28	228	401	46	14	461
	Poplars Avenue (West)	Eastbound Junction Entry	39	10	2	51	52	0	0	52	47	12	2	61	60	0	0	60	49	12	2	62	63	0	0	63
		Westbound Junction Exit	40	0	0	40	61	0	0	61	47	0	0	47	71	0	0	71	48	0	0	48	74	0	0	74
Poplars Avenue / Howson Road	Poplars Avenue (East)	Northbound Junction Entry	183	19	8	210	319	35	5	358	232	36	28	296	506	51	10	567	244	36	35	314	546	52	14	612
		Southbound Junction Exit	319	26	7	352	253	31	0	284	421	35	13	469	311	36	0	347	446	37	13	495	333	38	0	371
	Howson Road	Eastbound Junction Entry	94	11	0	105	40	7	0	47	112	13	0	125	67	9	0	76	117	14	0	130	82	11	0	92
		Westbound Junction Exit	25	13	7	45	66	5	0	71	44	27	8	80	99	6	0	105	49	27	9	85	102	6	0	108
Poplars Avenue (West)	Southbound Junction Entry	245	25	7	277	235	24	0	259	332	34	13	378	269	27	0	296	353	35	13	400	276	28	0	304	
	Northbound Junction Exit	178	16	1	195	274	30	5	309	211	20	20	251	432	45	10	487	219	20	26	264	469	46	14	530	
Mill Lane / Enfield Park Road / Blackbrook Avenue / Ballater Drive	Mill Lane	Southbound Junction Entry	500	39	15	555	288	20	0	308	587	54	16	657	453	34	0	487	593	55	16	664	486	35	4	525
		Northbound Junction Exit	221	0	0	221	362	31	14	407	305	5	5	315	496	35	16	547	334	6	5</					

A50 / Hilden Road / Orford Road / Smith Drive	Orford Road	Eastbound Junction Exit	182	0	0	182	300	33	0	333	240	7	0	247	931	62	8	1001	299	7	0	306	949	65	9	1023	
		Northbound Junction Entry	577	50	18	645	709	53	7	769	698	65	22	785	828	66	8	902	729	65	23	817	820	67	9	895	
		Southbound Junction Exit	589	79	7	675	621	54	11	686	665	91	8	764	723	62	13	798	628	95	8	731	748	64	13	825	
Blackbrook Avenue / A574	Blackbrook Avenue (North)	Eastbound Junction Entry	208	0	0	208	350	29	0	379	244	0	0	244	408	33	0	441	254	0	0	254	423	35	0	458	
		Westbound Junction Exit	289	0	0	289	228	7	0	235	335	0	0	335	262	8	0	269	346	0	0	346	270	8	0	278	
		Southbound Junction Entry	433	37	8	477	315	33	0	348	482	41	9	532	371	38	0	409	500	42	9	551	386	40	0	426	
A50 / A574	A574 (East)	Northbound Junction Exit	217	24	0	242	294	13	2	308	313	22	0	335	316	8	2	326	316	23	0	340	328	9	2	339	
		Westbound Junction Entry	510	71	28	609	791	24	3	818	589	81	32	702	872	27	4	903	595	81	33	709	858	27	4	889	
	Blackbrook Avenue (South)	Eastbound Junction Entry	671	49	39	759	516	41	4	561	677	59	45	780	682	47	5	735	640	59	48	747	705	50	5	760	
		Northbound Junction Entry	594	36	18	648	556	45	4	605	698	42	21	761	677	52	4	733	726	44	22	792	702	56	4	762	
	A574 (West)	Southbound Junction Exit	770	83	29	882	747	60	14	821	880	95	33	1008	862	69	16	947	906	97	34	1037	889	72	16	978	
		Eastbound Junction Entry	601	57	30	688	636	37	15	688	674	67	35	776	771	36	18	825	637	68	36	742	797	38	18	853	
A50 / A574	A50 (North)	Westbound Junction Exit	480	43	16	539	740	26	2	768	573	56	19	647	831	30	2	862	596	56	18	670	821	29	2	853	
		Southbound Junction Entry	589	79	7	675	621	54	11	686	665	91	8	764	723	62	13	798	628	95	8	731	748	64	13	825	
	A574	Northbound Junction Exit	577	50	18	645	709	53	8	769	697	66	22	785	826	67	8	901	729	65	23	817	818	68	9	895	
		Westbound Junction Entry	480	43	16	539	741	25	2	768	573	56	19	647	819	28	2	849	595	57	18	670	803	28	2	833	
Crab Lane / A574 / Woolston Grange Avenue	Crab Lane	Eastbound Junction Exit	601	57	30	688	636	37	15	688	674	67	35	776	771	36	18	825	637	68	37	742	798	37	18	853	
		Southbound Junction Entry	581	60	39	681	638	49	10	697	682	72	46	800	795	57	11	863	709	72	49	830	824	58	12	894	
	A574 (East)	Southbound Junction Exit	472	76	13	562	656	38	0	694	549	86	16	651	740	44	0	784	567	90	16	672	759	45	0	804	
		Northbound Junction Entry	306	48	0	354	555	9	0	564	374	57	0	431	630	10	0	641	441	58	0	499	624	11	0	635	
	A49 / Golborne Road	A574 (East)	Northbound Junction Exit	631	18	26	675	336	34	0	370	621	20	29	670	432	37	0	469	638	21	31	690	457	39	0	496
			Westbound Junction Entry	928	101	85	1114	1323	61	25	1410	1000	106	89	1196	1330	58	23	1412	994	104	90	1188	1330	58	24	1412
Woolston Grange Avenue		Eastbound Junction Exit	1172	110	94	1377	857	100	34	991	1377	128	107	1612	1069	112	39	1220	1412	130	112	1654	1099	118	40	1257	
		Northbound Junction Entry	1100	78	55	1233	775	94	31	900	1292	91	64	1447	916	110	36	1062	1343	96	68	1507	950	115	37	1102	
Europa Boulevard / A574 / Callands Road	A574 (West)	Southbound Junction Exit	691	78	31	800	1184	47	23	1254	745	83	33	862	1186	47	22	1256	746	83	34	863	1196	47	23	1267	
		Eastbound Junction Entry	671	49	39	759	516	41	4	561	677	59	45	780	682	47	5	735	640	59	47	747	705	50	5	760	
	A49 (North)	Westbound Junction Exit	510	71	28	609	791	24	3	818	589	81	32	702	872	27	4	903	595	81	33	709	858	27	4	889	
		Southbound Junction Entry	461	49	24	534	401	29	0	430	541	57	28	626	467	35	0	502	563	60	29	652	485	36	0	521	
	A49 (South)	Golborne Road	Northbound Junction Exit	342	35	0	377	755	71	36	862	377	38	0	415	787	73	38	899	384	40	0	424	785	72	38	895
			Westbound Junction Entry	332	40	28	399	384	27	32	443	357	34	32	422	343	19	34	396	372	34	33	440	340	21	33	394
A49 (South)		Eastbound Junction Exit	354	42	51	447	381	28	10	419	379	43	51	473	372	30	11	413	374	42	52	468	373	31	10	414	
		Southbound Junction Entry	561	73	51	684	1062	91	27	1180	588	75	51	714	1056	94	29	1178	582	77	52	710	1045	93	27	1165	
Europa Boulevard / A574 / Callands Road	Europa Boulevard	Southbound Junction Exit	657	85	52	793	712	49	13	773	730	85	60	875	707	45	13	765	758	89	62	910	713	48	11	772	
		Northbound Junction Entry	198	33	32	263	298	8	9	315	233	39	37	309	347	10	11	368	242	40	40	322	361	10	11	382	
	A574 (East)	Westbound Junction Exit	229	13	23	266	48	10	0	58	268	16	27	310	56	11	0	67	278	17	28	322	58	11	0	69	
		Eastbound Junction Entry	513	66	64	643	934	63	15	1013	589	77	73	739	56	11	0	67	607	77	74	757	58	11	0	69	
	Callands Road	Northbound Junction Entry	735	62	102	900	562	39	25	625	868	75	120	1063	653	45	29	727	900	76	127	1103	677	47	30	754	
		Southbound Junction Exit	361	22	12	395	145	13	3	161	429	28	14	471	1067	68	17	1153	446	28	15	489	1094	72	17	1183	
Calver Road / A574	A574 (West)	Eastbound Junction Entry	58	10	13	81	243	28	0	271	66	13	15	94	278	30	0	309	68	12	15	96	286	32	0	318	
		Westbound Junction Exit	440	42	59	541	484	36	25	545	521	50	70	641	653	45	29	727	541	51	73	665	677	47	30	754	
	Calver Road	Eastbound Junction Entry	490	77	28	595	1008	44	28	1079	569	90	32	691	1160	48	32	1240	589	90	33	712	1194	50	32	1277	
		Southbound Junction Exit	298	65	66	429	532	28	0	560	350	77	79	506	619	33	0	652	364	79	80	523	643	34	0	677	
	A574 (East)	Northbound Junction Exit	278	30	52	360	461	10	42	512	321	35	60	415	526	12	49	587	331	36	62	429	541	12	49	602	
		Westbound Junction Entry	715	85	109	909	1298	69	47	1413	821	99	124	1044	1481	75	54	1609	845	99	127	1072	1518	78	55	1651	
A574 (West)	Eastbound Junction Exit	957	117	162	1235	996	63	15	1074	1129	139	191	1459	1159	73	17	1249	1172	142	198	1511	1203	76	18	1297		
	Westbound Junction Entry	735	62	102	900	562	39	25	625	868	75	120	1063	653	45	29	727	900	76	127	1103	677	47	30	754		
A49 North	Southbound Junction Exit	513	66	64	643	934	63	15	1013	589	77	73	739	1067	68	17	1153	607	77	74	757	1094	72	17	1183		
M62 East	Southbound Junction Entry	1115	213	182	1510	1273	112	50	1435	1189	225	202	1616	1326	116	55	1498	1189	226	203	1618	1321	118	53	1492		
A49 South	Northbound Junction Exit	972	173	178	1322	1646	168	27	1841	1074	192	200	1466	1687	177	29	1893	1076	199	202	1477	1694	179	29	1903		
M62 West	Westbound Off Slip	659	115	134	907	651	87	62	801	771	131	156	1058	759	100	74	933	801	141	163	1105	788	108	75	971		
Junction 9	Eastbound On Slip	Eastbound On Slip	454	77	126	656	482	44	59	585	514	86	143	743	526	47	62	635	522	89	146	757	528	47	61	636	
		Northbound Junction Entry	919	152	329	1400	1618	132	80	1830	1037	175	383	1596	1875	161	90	2126	1073	183	395	1651	1926	162	94	2182	
Junction 10	Southbound Junction Exit	Southbound Junction Exit	1457	196	261	1914	806	85	30	921	975	115	140	1230	843	92	33	967	993	114	141	1248	853	94	33		

Junction	Road	Movement	2025 Do Something								2030 Do Something								2030 Do Something Through Route							
			AM PEAK 0800 - 0900				PM PEAK 1700-1800				AM PEAK 0800 - 0900				PM PEAK 1700-1800				AM PEAK 0800 - 0900				PM PEAK 1700-1800			
			Cars	LGV	HGV	All Traffic	Cars	LGV	HGV	All Traffic	Cars	LGV	HGV	All Traffic	Cars	LGV	HGV	All Traffic	Cars	LGV	HGV	All Traffic	Cars	LGV	HGV	All Traffic
Southworth Lane / Delph Lane / Myddleton Lane	Southworth Lane	Left to Delph Lane	97	3	3	103	156	16	0	172	104	4	3	111	194	17	3	213	127	8	3	138	194	17	4	215
		W/B to Myddleton Lane	167	17	6	190	357	17	3	377	173	18	6	197	342	18	1	361	149	14	6	169	343	18	0	361
	Delph Lane	Left to Myddleton Lane	277	0	0	277	468	35	16	519	328	0	0	328	508	37	17	562	326	0	0	326	493	37	16	546
		E/B to Southworth Lane	60	3	5	68	28	0	0	28	82	6	5	92	30	0	0	30	94	6	22	121	54	8	0	62
	Myddleton Lane	E/B to Southworth Lane	351	27	15	392	180	19	0	198	344	25	15	384	186	20	0	205	330	24	0	354	165	13	0	177
Right to Delph Lane		471	41	14	526	322	18	0	339	469	42	14	524	359	19	0	378	480	41	13	534	366	19	0	385	
Newton Road / A49 / Winwick Park Avenue	Newton Road	Left to A49 (East)	768	85	60	913	717	44	14	775	837	88	62	988	719	47	13	779	800	85	63	947	711	47	11	769
		Left to A49 (South)	622	120	154	896	846	104	44	994	647	124	160	931	884	111	45	1040	647	124	160	931	885	111	45	1041
	A49 (East)	943	160	205	1309	1667	148	40	1855	947	164	208	1319	1690	148	40	1879	940	165	193	1298	1659	141	40	1840	
	Winwick Park Avenue	Left to Newton Road	82	0	6	88	38	5	3	46	85	0	6	91	40	5	3	48	85	0	6	91	40	5	3	48
		E/B to A49 (East)	96	0	0	96	34	6	0	40	100	0	0	100	35	6	0	41	100	0	0	100	35	6	0	41
A49 / Delph Lane	A49 (North)	S/B to A49 (South)	1109	175	209	1494	1136	94	55	1286	1175	180	217	1572	1124	96	53	1273	1140	178	218	1536	1124	97	51	1272
		Right to Delph Lane	68	7	0	74	125	11	0	136	70	7	0	77	125	13	0	138	70	7	0	77	127	13	0	139
	A49 (South)	Left to Delph Lane	204	33	0	238	158	42	0	201	208	35	0	243	160	45	0	205	209	35	0	243	159	45	0	204
		N/B to A49 (North)	873	160	199	1232	1501	129	30	1659	874	164	202	1239	1516	129	30	1675	863	164	186	1212	1487	122	30	1639
	Delph Lane	Left to A49 (North)	71	0	6	77	164	20	12	196	75	0	6	81	172	20	12	204	79	0	6	85	169	20	12	201
Right to A49 (South)		160	59	0	219	198	21	0	219	166	63	0	229	207	21	0	228	161	63	0	224	210	21	0	231	
A49 / Birch Avenue (20 Dwellings)	A49 (North)	Left to Birch Avenue	21	6	0	27	30	0	0	30	21	5	0	26	30	0	0	30	21	5	0	27	30	0	0	30
		S/B to A49 (South)	1588	197	287	2072	1314	143	93	1550	1642	203	291	2136	1358	148	94	1600	1659	206	310	2175	1380	155	93	1629
A49 / Sandy Lane West / A574	A49 (South)	Left to A49 (South)	33	4	0	37	21	2	0	23	34	4	0	38	21	2	0	23	34	4	0	38	21	2	0	23
		Left to Sandy Lane West	226	27	10	263	302	26	8	335	273	33	10	317	325	26	7	358	256	39	3	298	263	14	5	282
	Sandy Lane West	Entry to roundabout	1396	174	277	1846	1033	120	85	1238	1403	173	282	1858	1055	124	87	1266	1445	166	290	1901	1085	114	77	1276
		Left to A49 (South)	53	5	24	82	115	0	0	115	56	5	24	85	97	0	0	97	31	5	17	53	78	0	0	78
	A49 (South)	Entry to roundabout	446	30	22	498	749	38	18	805	499	30	25	553	782	40	20	842	391	30	10	431	578	27	21	625
Left to A574		272	45	48	365	434	12	3	450	282	46	50	378	439	11	4	453	282	46	51	379	433	19	3	456	
A574	Entry to roundabout	766	154	276	1196	1449	138	70	1657	790	163	284	1238	1460	139	69	1669	794	163	278	1235	1462	129	65	1657	
	Left to A49 (North)	284	57	112	453	430	20	17	467	295	57	118	470	446	20	18	484	346	57	122	526	476	20	18	514	
Cotswold Road / Cleveland Road / Sandy Lane / Sandy Lane West	Cotswold Road	Entry to Roundabout	888	82	82	1053	743	53	0	796	925	85	83	1094	781	56	0	837	874	84	79	1038	752	56	0	808
		Left to Cleveland Road	30	0	0	30	14	0	0	14	31	0	0	31	14	0	0	14	27	0	0	27	14	0	0	14
Cotswold Road / Cleveland Road / Sandy Lane / Sandy Lane West	Cleveland Road	S/B to Sandy Lane	50	0	0	50	35	0	0	35	52	0	0	52	36	0	0	36	52	0	0	52	36	0	0	36
		Right to Sandy Lane West	52	2	12	66	40	0	3	43	52	2	12	66	41	0	3	44	35	2	12	49	42	0	3	45
	Sandy Lane	Left to Sandy Lane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		W/B to Sandy Lane West	297	25	28	349	562	38	14	614	344	25	30	399	569	40	15	624	239	25	9	272	325	27	15	367
	Sandy Lane West	Right to Cotswold Road	6	0	0	6	10	5	0	15	6	0	0	6	8	5	0	13	23	0	18	41	7	5	0	12
		Left to Sandy Lane West	76	0	0	76	156	0	2	158	79	0	0	79	161	0	2	163	60	0	0	60	162	0	2	164
	Sandy Lane West	N/B to Cotswold Road	11	0	0	11	37	0	2	38	12	0	0	12	41	0	2	43	30	0	0	30	39	0	0	39
		Right to Cleveland Road	0	0	0	0	5	0	0	5	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0
	Sandy Lane West	Left to Cotswold Road	66	0	9	75	71	0	3	74	64	0	9	73	77	0	2	78	20	0	2	22	73	0	0	73
		E/B to Cleveland Road	387	20	15	421	267	26	0	293	378	20	14	413	295	27	0	322	303	18	7	328	178	14	0	192
Poplars Avenue / Cleveland Road	Poplars Avenue (East)	Right to Sandy Lane	123	17	0	140	94	0	0	94	170	21	4	195	97	0	0	97	195	30	4	230	100	0	0	100
		Left to Cleveland Road	233	20	17	270	492	43	5	540	278	20	20	317	492	44	7	544	221	20	24	265	282	31	12	325
	Cleveland Road	W/B to Poplars Avenue (West)	54	0	2	56	74	0	0	74	56	0	2	58	74	0	0	74	48	0	0	48	74	0	0	74
		Left to Poplars Avenue (West)	2	0	0	2	15	0	0	15	1	0	0	1	8	0	0	8	1	0	0	1	1	0	0	1
	Poplars Avenue (West)	Right to Poplars Avenue (East)	359	20	12	391	250	27	0	277	349	21	12	381	284	27	0	311	264	18	5	287	171	14	0	185
E/B to Poplars Avenue (East)		39	12	0	51	64	0	0	64	41	12	0	53	66	0	0	66	40	12	0	52	58	0	0	58	
Poplars Avenue / Howson Road	Poplars Avenue (West)	Right to Cleveland Road	44	0	11	55	41	0	5	46	44	0	11	55	42	0	4	46	11	0	2	13	5	0	0	5
		Left to Howson Road	67	16	8	90	86	6	0	91	120	26	9	155	97	6	0	103	111	24	9	144	92	6	0	98
	Howson Road	W/B to Poplars Avenue (West)	300	20	19	339	704	42	5	752	334	20	21	375	694	44	7	746	257	20	24	301	410	31	11	453
		Left to Poplars Avenue (West)	39	0	0	39	27	0	0	27	35	0	0	35	23	0	0	23	29	0	0	29	10	0	0	10
	Poplars Avenue (West)	Right to Poplars Avenue (East)	96	13	0	109	92	14	0	106	109	14	0	123	134	18	0	152	108	14	0	121	59	10	0	69
E/B to Poplars Avenue (East)		441	20	12	473	429	27	0	456	496	21	12	530	407	28	0	435	362	18	5	384	230	14	0	245	
Mill Lane / Enfield Park Road / Blackbrook Avenue / Ballater Drive	Mill Lane	Right to Howson Road	27	12	0	38	37	0	0	37	24	11	0	36	36	0	0	36	13	11	0	25	30	0	0	30
		Left to Enfield Park Road	177	0	6	183	70	0	0	70	186	0	6	192	72	0	0	72	186	0	6	192	114	0	0	114
	Enfield Park Road	S/B to Blackbrook Avenue	586	55	11	652	472	34	0	506	781	58	11	851	633	36	3	671	811	58	17	886	569	49	12	630
		Left to Ballater Drive	0	0	0	0	20	0	0	20	0	0	0	0	21	0	0	21	0	0	0	0	23	0	0	23
	Blackbrook Avenue	Left to Blackbrook Avenue	105	13	0	118	52	7	0	59	109	13	0	122	54	7	0	61	108	13	0	121	54	7	0	61
		W/B to Ballater Drive	8	0	0	8	35	7	0	42	9	0	0	9	36	7	0	43	9	0	0	9	36	7	0	43
	Ballater Drive	Right to Mill Lane	79	0	0	79	178	10	0	188	83	0	0	83	185	11	0	196	85	0	0	85	185	11	0	196
		Left to Ballater Drive	15	0	0	15	52	0	0	52																

A49 / Long Lane / Hawleys Lane	Long Lane	W/B to Hawleys Lane	135	0	0	135	107	18	0	125	137	0	0	137	109	19	0	129	136	0	0	136	106	19	0	125	
		Right to A49 (North)	78	2	29	109	93	2	5	101	82	2	27	111	94	1	6	101	84	2	22	108	88	0	0	89	
	A49 (South)	Left to Hawleys Lane	47	7	0	54	77	3	0	80	49	7	0	56	80	3	0	83	49	7	0	56	80	3	0	83	
		N/B to A49 (North)	784	153	213	1150	1472	130	43	1645	809	160	223	1192	1526	135	44	1705	812	160	223	1195	1531	135	46	1712	
	Hawleys Lane	Right to Long Lane	Left to A49 (North)	197	21	4	222	324	26	2	352	203	21	0	224	327	27	2	356	202	21	0	223	323	27	0	349
			Left to A49 (South)	121	26	0	147	275	17	0	292	126	28	0	154	285	17	0	302	126	28	0	154	291	17	0	308
E/B to Long Lane		Right to A49 (South)	50	4	0	54	71	7	0	78	52	4	0	56	69	7	0	76	52	4	0	56	68	7	0	75	
		Right to A49 (North)	44	13	0	57	85	5	0	90	46	14	0	60	89	5	0	94	46	14	0	60	88	5	0	93	
Blackbrook Avenue / Insall Road / Hilden Road	Blackbrook Avenue (North)	Left to Insall Road	0	0	0	0	8	0	0	8	0	0	0	0	8	0	0	8	0	0	0	8	0	12	0	44	
		S/B to Blackbrook Avenue (South)	366	33	9	408	351	38	0	389	368	27	8	403	359	40	0	399	376	26	14	416	335	31	13	379	
		Right to Hilden Road	30	1	0	31	14	0	0	14	51	2	0	53	37	0	0	37	41	1	0	41	13	0	0	13	
		Left to Blackbrook Avenue (South)	150	10	0	160	76	0	0	76	137	9	0	146	91	0	0	91	133	9	0	142	76	0	0	76	
	Insall Road	W/B to Hilden Road	212	0	0	212	164	0	0	164	245	1	0	245	204	0	0	204	238	1	0	239	159	0	0	159	
		Right to Blackbrook Avenue (North)	1	3	0	4	20	0	0	20	5	3	0	8	18	0	0	18	16	3	0	19	26	0	0	26	
	Blackbrook Avenue (South)	Left to Hilden Road	31	2	0	33	59	0	0	59	1	0	0	1	60	0	0	60	1	0	0	1	61	0	0	61	
		N/B to Blackbrook Avenue (North)	192	17	0	209	273	11	3	286	232	19	0	251	264	9	2	275	230	21	0	250	282	9	1	292	
		Right to Insall Road	96	0	0	96	28	0	0	29	104	0	0	104	38	0	0	38	104	0	0	104	29	0	0	30	
		Left to Blackbrook Avenue (North)	17	0	0	17	133	0	0	133	22	0	0	22	127	0	0	127	32	0	0	32	129	0	0	129	
	Hilden Road	E/B to Insall Road	200	0	0	200	145	18	0	162	200	1	0	201	151	19	0	170	176	0	0	176	135	7	0	142	
		Right to Blackbrook Avenue (South)	9	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
A50 / Hilden Road / Orford Road / Smith Drive	A50	Left to Hilden Road	904	100	8	1012	895	66	12	974	917	100	7	1024	855	68	13	935	918	103	2	1023	870	65	0	935	
	Hilden Road	Left to Orford Road	303	14	0	317	277	11	0	288	361	18	0	378	341	13	0	354	357	17	0	374	268	13	0	280	
	Orford Road	Left to Smith Drive	752	65	22	839	915	63	8	986	835	67	23	925	892	66	8	967	831	68	22	922	901	66	9	976	
	Smith Drive	Left to A50	245	0	0	245	409	33	0	442	254	0	0	254	426	35	0	461	255	0	0	255	425	35	0	460	
Blackbrook Avenue / A574	Blackbrook Avenue (North)	Left to A574 (East)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		S/B to Blackbrook Avenue (South)	474	38	9	521	362	38	0	400	472	33	8	513	385	40	0	425	482	32	14	528	391	31	13	434	
		Right to A574 (West)	50	5	0	55	63	0	0	63	22	2	0	24	62	0	0	62	15	2	0	17	19	0	0	19	
		Left to Blackbrook Avenue (South)	239	29	18	286	251	16	3	270	238	28	19	285	246	15	3	264	231	28	18	277	266	15	3	285	
	A574 (East)	W/B to A574 (West)	349	44	14	406	529	11	0	540	355	45	13	413	535	11	0	546	343	44	13	400	559	11	0	570	
		Right to Blackbrook Avenue (North)	7	5	0	12	24	0	0	24	0	4	0	4	24	0	0	24	1	6	0	7	24	0	0	24	
	Blackbrook Avenue (South)	Left to A574 (West)	211	9	5	225	236	15	2	253	247	9	5	261	248	18	2	268	248	10	5	263	232	18	3	252	
		N/B to Blackbrook Avenue (North)	313	14	0	327	337	11	3	350	337	15	0	352	340	9	2	351	335	14	0	349	348	9	1	359	
	A574 (West)	Right to A574 (East)	200	19	16	235	189	26	0	215	184	20	17	221	186	29	0	215	184	20	17	221	195	29	0	224	
		Left to Blackbrook Avenue (North)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		E/B to A574 (East)	452	39	28	520	508	21	5	533	463	38	30	530	521	21	5	546	475	39	30	544	511	21	5	537	
		Right to Blackbrook Avenue (South)	214	28	6	247	317	15	13	345	274	35	6	314	305	17	13	335	261	35	0	296	279	26	0	304	
A50 / A574	A50 (North)	Left to A574	307	38	6	351	473	29	12	515	394	44	6	443	465	31	13	509	397	45	0	443	431	40	0	471	
		S/B to A50 (South)	382	50	2	434	315	32	0	348	431	55	2	488	316	33	0	349	440	56	2	498	356	33	0	389	
	A574	Left to A50 (South)	206	35	14	255	450	11	0	461	178	33	13	224	451	11	0	463	167	32	13	212	420	11	0	431	
		Right to A50 (North)	404	22	5	432	349	13	2	364	445	24	5	474	357	15	2	374	438	25	5	468	363	15	2	381	
A50 (South)	N/B to A50 (North)	347	43	17	407	564	51	7	622	389	44	18	451	533	52	7	592	392	44	18	454	535	52	7	594		
	Right to A574	358	29	29	416	352	6	5	363	342	28	31	401	362	6	5	373	339	28	31	397	359	6	5	370		
Crab Lane / A574 / Woolston Grange Avenue	Crab Lane	Entry to Roundabout	459	56	0	515	643	11	0	654	501	57	0	559	683	11	0	694	483	57	0	540	744	11	0	755	
	A574 (East)	Entry to Roundabout	1003	106	89	1198	1348	56	23	1426	999	104	89	1192	1357	54	22	1434	1034	105	89	1229	1357	54	22	1434	
	Woolston Grange Avenue	Entry to Roundabout	1334	91	64	1489	967	110	36	1113	1417	96	68	1581	1006	115	37	1158	1419	96	68	1583	1006	115	37	1158	
	A574 (West)	Entry to Roundabout	652	58	44	755	696	47	5	748	647	58	47	751	707	49	5	761	660	59	47	765	706	50	5	761	
A49 / Golborne Road	A49 (North)	Left to Golborne Road	125	5	0	130	67	8	0	75	134	5	0	139	71	8	0	137	132	5	0	137	72	8	0	80	
		Ahead to A49 (South)	439	52	28	518	405	27	0	432	454	55	29	538	422	28	0	450	455	55	29	539	420	28	0	448	
	Golborne Road	Left to A49 (South)	330	33	32	394	312	18	14	344	383	33	33	450	298	19	12	329	345	30	33	408	291	20	10	321	
		Right to A49 (North)	63	0	0	63	30	1	21	52	74	0	0	74	26	1	21	48	74	0	0	74	27	1	21	50	
	A49 (South)	Ahead to A49 (North)	325	37	0	362	740	70	17	827	330	40	0	370	737	69	16	822	336	41	0	376	774	72	17	864	
		Right to Golborne Road	267	39	51	356	312	21	10	344	262	37	52	350	308	22	10	340	259	37	37	333	301	17	11	328	
Europa Boulevard / A574 / Callands Road	Europa Boulevard	Entry to Roundabout	233	39	37	309	347	10	11	368	242	40	40	322	361	10	11	382	242	40	40	322	361	10	11	382	
	A574 (East)	Entry to Roundabout	616	76	74	766	1088	67	19	1175	657	76	75	809	1130	71	19	1220	655	76	75	807	1131	71	19	1222	
	Callands Road	Entry to Roundabout	441	28	16	485	171	14	4	188	458	28	17	503	177	15	4	196	458	28	17	503	177	15	4	196	
	A574 (West)	Entry to Roundabout	553	50	72	675	572	42	29	643	579	51	75	705	600	43	30	673	580	51	75	706	601	43	30	674	
Calver Road / A574	Calver Road	Left to A574 (East)	350	77	79	506	623	33	0	656	364	79	80	523	651	34	0	685	364	79	80	523	651	34	0	685	
	A574 (East)	W/B to A574 (West)	616	76	74	766	1088	67	19	1175	657	76	75	809	1130	71	19	1220	655	76	75	807	1131	71	19	1222	
		Right to Calver Road	235	22	51	308	414	7	36	456	243	23	53	319	425	7	37	469	242	23	53	317	426	7	37	469	
	A574 (West)	Left to Calver Road	89	13	8	110	113	5	12	130	92	13	9	114	117	5	12	134	92	13							

POP cenral Poplars Avenue West (Employment Land)	Poplars East	Left to Peel Hall Access	71	0	0	71	18	0	0	18	32	0	0	32	26	0	0	26								
		Ahead to Poplars West	328	31	12	372	296	27	0	323	359	32	12	403	324	27	0	351								
	Peel Hall Access	Left to Poplars West	140	0	0	140	170	0	0	170	163	0	0	163	120	0	0	120								
		Right to Poplars East	33	0	0	33	128	0	0	128	35	0	0	35	61	0	0	61								
	Poplars West	Ahead to Poplars East	254	20	19	293	438	42	5	486	298	20	21	339	505	44	7	557								
		Right to Peel Hall Access	85	0	0	85	293	0	0	293	71	0	0	71	212	0	0	212								
Grassmere Avenue (Sports Pitches and Club House)	Poplars Eastbound	Left to Grasmere/ Windermere	123	0	0	123	92	14	0	106	119	0	0	119	92	14	0	106	114	0	0	114	89	14	0	104
		Ahead to Poplars	414	33	13	460	429	27	0	456	487	35	12	534	450	31	0	481	356	32	5	392	200	10	0	210
	Windermere/ Grasmere	Left to Poplars Westbound	46	0	0	46	45	0	0	45	48	0	0	48	46	0	0	46	52	0	0	52	46	0	0	46
		Right to Poplars Eastbound	150	23	8	181	113	2	2	118	151	23	9	183	118	2	2	122	147	23	9	179	117	2	2	121
	Poplars Westbound	Ahead to Poplars Eastbound	217	13	19	248	676	46	3	726	304	23	21	348	674	48	5	727	222	21	24	267	385	35	9	429
		Right to Grasmere/ Windermere	52	0	0	52	30	0	0	30	59	0	0	59	30	0	0	30	64	0	0	64	33	0	0	33
Peel Hall Access/ Poplars Ave/ Cotswold	Cotswold Road	Left to Poplars New																63	0	18	81	0	0	0	0	
	Peel Hall Access	Ahead to Poplars																166	4	9	178	315	15	8	338	
	Poplars Avenue	Ahead to Peel Hall Access																183	4	31	218	250	31	15	296	
A49 / Thorough Route	A49 North	Left to Peel Hall Access Road																81	3	23	106	175	30	13	219	
		Straight on Southbound to A49																1602	206	286	2094	1226	127	80	1433	
	Peel Hall Access Road	Left turn to A49 South																110	0	9	119	123	0	2	125	
		Right turn to A49 North																118	4	18	140	192	15	6	213	
	A49 South	Straight on Northbound to A49																1015	183	378	1575	1816	147	91	2053	
		Right turn to Peel Hall Access Road																104	1	8	113	75	0	2	77	

Junction	Road	Traffic Direction	2025 Do Something								2030 Do Something								2030 Do Something Through Route							
			AM PEAK 0800 - 0900				PM PEAK 1700-1800				AM PEAK 0800 - 0900				PM PEAK 1700-1800				AM PEAK 0800 - 0900				PM PEAK 1700-1800			
			Cars	LGV	HGV	All Traffic	Cars	LGV	HGV	All Traffic	Cars	LGV	HGV	All Traffic	Cars	LGV	HGV	All Traffic	Cars	LGV	HGV	All Traffic	Cars	LGV	HGV	All Traffic
Southworth Lane / Delph Lane / Myddleton Lane	Southworth Lane	Westbound Junction Entry	264	20	9	293	513	33	3	550	277	22	9	308	536	35	4	575	276	22	9	307	537	35	4	576
		Eastbound Junction Exit	410	30	20	460	207	19	0	226	426	30	20	476	216	20	0	235	424	30	22	476	219	20	0	239
	Delph Lane	Northbound Junction Entry	337	3	5	345	495	35	16	546	410	6	5	420	539	37	17	593	420	6	22	448	547	45	16	607
		Southbound Junction Exit	569	44	17	629	478	34	0	512	573	46	17	635	553	36	3	591	607	49	16	672	560	36	4	600
Newton Road / A49 / Winwick Park Avenue	Myddleton Lane	Eastbound Junction Entry	822	67	29	918	501	36	0	538	813	66	29	908	545	38	0	583	810	65	13	889	530	32	0	562
		Westbound Junction Exit	444	17	6	467	825	52	20	896	501	18	6	525	851	55	18	924	476	14	6	496	835	55	16	906
	Newton Road	Southbound Junction Entry	768	85	60	913	717	44	14	775	837	88	62	988	719	47	13	779	800	85	63	947	711	47	11	769
		Northbound Junction Exit	592	76	51	719	1052	92	27	1171	592	77	52	720	1045	91	27	1163	595	78	37	710	1075	89	28	1192
A49 (East)	Westbound Junction Entry	Eastbound Junction Entry	622	120	154	896	846	104	44	994	647	124	160	931	884	111	45	1040	647	124	160	931	885	111	45	1041
		Westbound Junction Exit	623	99	158	880	758	88	15	861	647	104	161	912	768	89	16	872	651	105	162	918	789	91	16	896
	A49 (South)	Northbound Junction Entry	943	160	205	1309	1667	148	40	1855	947	164	208	1319	1690	148	40	1879	940	165	193	1298	1659	141	40	1840
		Southbound Junction Exit	1177	181	209	1568	1262	105	55	1422	1245	187	217	1649	1249	109	53	1411	1211	184	218	1613	1250	110	51	1412
Winwick Park Avenue	Eastbound Junction Entry	Westbound Junction Exit	178	0	6	184	72	11	3	86	185	0	6	191	75	11	3	89	185	0	6	191	75	11	3	89
		Westbound Junction Exit	53	0	0	53	130	11	0	141	55	0	0	55	129	11	0	140	55	0	0	55	136	11	0	147
	A49 (North)	Southbound Junction Entry	1177	181	209	1568	1262	105	55	1422	1245	187	217	1649	1249	109	53	1411	1211	184	218	1613	1250	110	51	1412
		Northbound Junction Exit	944	160	205	1309	1665	149	42	1855	948	164	208	1319	1688	149	42	1879	942	164	192	1298	1656	142	42	1840
A49 / Delph Lane	A49 (South)	Northbound Junction Entry	1077	193	199	1469	1659	171	30	1860	1082	198	202	1481	1676	174	30	1880	1071	198	186	1456	1646	167	30	1843
		Southbound Junction Exit	1270	234	209	1713	1335	115	55	1505	1341	243	217	1801	1331	117	53	1501	1302	240	218	1760	1334	118	51	1503
	Delph Lane	Eastbound Junction Entry	231	59	6	296	362	41	12	415	240	63	6	309	379	41	12	432	240	63	6	309	379	41	12	432
		Westbound Junction Exit	272	40	0	312	283	54	0	337	278	41	0	319	285	58	0	343	279	41	0	320	286	58	0	343
A49 / Birch Avenue	A49 (North)	Southbound Junction Entry	1609	202	287	2098	1344	143	93	1580	1663	208	291	2162	1388	148	94	1630	1681	211	310	2202	1410	155	93	1659
		Eastbound Junction Entry	33	4	0	37	21	2	0	23	34	4	0	38	21	2	0	23	34	4	0	38	21	2	0	23
	Birch Avenue	Westbound Junction Exit	21	6	0	27	30	0	0	30	21	5	0	26	30	0	0	30	21	5	0	27	30	0	0	30
		Southbound Junction Entry	1621	201	287	2110	1335	145	93	1573	1676	207	292	2175	1379	151	94	1624	1701	205	294	2200	1348	128	82	1558
A49 / Sandy Lane West / A574	A49 (North)	Northbound Junction Entry	1129	212	383	1723	1986	160	93	2239	1180	219	394	1793	2012	161	95	2268	1194	220	386	1800	1910	147	93	2150
		Westbound Junction Exit	499	35	46	580	863	38	18	920	555	35	48	638	879	40	20	939	423	35	26	484	656	27	21	703
	Sandy Lane West	Eastbound Junction Exit	658	50	26	734	508	26	8	542	697	56	28	782	546	26	7	580	619	62	14	696	183	0	0	183
		Northbound Junction Entry	1038	198	324	1560	1883	150	74	2107	1073	209	334	1616	1899	150	73	2122	1076	209	329	1615	1895	149	69	2112
A49 (South)	Southbound Junction Exit	Eastbound Junction Entry	1517	192	289	1998	1252	148	50	1450	1527	193	290	2011	1265	153	51	1469	1525	187	292	2004	1209	142	38	1390
		Westbound Junction Exit	1173	139	195	1506	1173	73	17	1263	1220	142	201	1564	1227	76	18	1321	1221	142	201	1564	1228	76	18	1322
	A574	Eastbound Junction Entry	851	98	126	1074	1502	74	55	1631	901	99	128	1128	1555	78	56	1688	898	99	128	1124	1527	78	56	1691
		Westbound Junction Exit	132	2	12	146	88	0	3	91	136	2	12	150	92	0	3	95	114	2	12	128	93	0	3	96
Cotswold Road / Cleveland Road / Sandy Lane / Sandy Lane West	Cotswold Road	Northbound Junction Exit	83	0	9	92	118	5	4	127	81	0	9	91	126	5	4	135	73	0	20	93	120	5	0	125
		Westbound Junction Entry	303	25	28	355	573	43	14	629	350	25	30	404	578	45	15	637	262	25	26	313	332	31	15	379
	Cleveland Road	Eastbound Junction Entry	417	20	15	451	285	26	0	311	410	20	14	445	312	27	0	339	330	18	7	355	192	14	0	206
		Northbound Junction Entry	88	0	0	88	197	0	3	201	91	0	0	91	205	0	4	209	90	0	0	90	201	0	2	203
Sandy Lane West	Southbound Junction Exit	Eastbound Junction Entry	173	17	0	190	128	0	0	128	222	21	4	247	133	0	0	133	248	30	4	282	136	0	0	136
		Westbound Junction Exit	575	37	25	636	432	26	3	461	612	42	27	681	468	27	2	497	518	48	13	579	351	14	0	365
	Sandy Lane West	Eastbound Junction Entry	425	27	40	491	759	38	18	815	475	27	42	544	771	40	20	831	333	27	21	380	529	27	20	576
		Westbound Junction Exit	287	20	19	326	566	43	5	614	333	20	21	374	566	44	7	618	269	20	24	313	356	31	12	399
Poplars Avenue / Cleveland Road	Poplars Avenue (East)	Southbound Junction Exit	398	32	12	442	314	27	0	341	390	32	12	434	350	27	0	377	304	30	5	339	229	14	0	243
		Southbound Junction Entry	361	20	12	393	265	27	0	292	350	21	12	382	292	27	0	319	265	18	5	287	171	14	0	186
	Cleveland Road	Northbound Junction Exit	277	20	28	325	534	43	10	586	322	20	30	372	534	44	11	590	232	20	26	278	287	31	12	330
		Eastbound Junction Entry	84	12	11	106	105	0	5	110	85	12	11	108	108	0	4	111	51	12	2	65	63	0	0	63
Poplars Avenue (West)	Westbound Junction Exit	Eastbound Junction Entry	56	0	2	58	89	0	0	89	57	0	2	59	82	0	0	82	49	0	0	49	75	0	0	75
		Westbound Junction Exit	367	35	27	429	790	48	5	843	454	46	30	530	791	50	7	848	369	44	33	445	502	37	11	551
	Poplars Avenue (East)	Southbound Junction Exit	537	33	12	582	521	41	0	562	606	35	12	653	542	45	0	587	469	32	5	506	290	24	0	314
		Eastbound Junction Entry	135	13	0	148	119	14	0	133	144	14	0	158	157	18	0	175	136	14	0	150	69	10	0	79
Poplars Avenue (West)	Westbound Junction Exit	Eastbound Junction Entry	94	27	8	129	122	6	0	128	144	37	9	190	133	6	0	139	125	36	9	169	122	6	0	128
		Southbound Junction Entry	468	32	12	512	466	27	0	493	521	33	12	566	444	28	0	471	375	30	5	409	261	14	0	275
	Poplars Avenue (West)	Northbound Junction Exit	339	20	19	378	731	42	5	779	370	20	21	411	717	44	7	769	286	20	24	330	420	31	11	463
		Southbound Junction Entry	763	55	17	835	562	34	0	596	968	58	17	1042	726	36	3	764	997	58	22	1078	706	49	12	767
Mill Lane / Enfield Park Road / Blackbrook Avenue / Ballater Drive	Mill Lane	Northbound Junction Exit	390	3	5	399	674	35	16	724	552	6	5	563	875	37	17	929	526	3	5	534	919	40	16	975
		Westbound Junction Entry	193	13	0	206	265	24	0	289	201	13	0	214	275	25	0	300	202	13	0	215	275	25	0	300
	Enfield Park Road	Eastbound Junction Entry	233	0	6	239	183	0	0	183	244	0	6	249	189	0	0	189	244	0	6	249	188	0	0	188
		Northbound Junction Entry	315	3	5	323	660	25	16	701	473	6	5	483	859	26	17									

A50 / Hilden Road / Orford Road / Smith Drive	Hilden Road	Westbound Junction Entry	303	14	0	317	277	11	0	288	361	18	0	378	341	13	0	354	357	17	0	374	268	13	0	280	
		Eastbound Junction Exit	247	6	0	253	390	45	0	434	281	9	0	291	392	45	0	438	357	8	0	286	367	34	0	401	
	Orford Road	Northbound Junction Entry	752	65	22	839	915	63	8	986	835	67	23	925	892	66	8	967	831	68	22	922	901	66	9	976	
Blackbrook Avenue / A574	Smith Drive	Southbound Junction Exit	689	87	8	785	789	61	12	863	825	99	8	932	781	64	13	858	837	101	2	940	787	73	0	860	
		Eastbound Junction Entry	245	0	0	245	409	33	0	442	254	0	0	254	426	35	0	461	255	0	0	255	425	35	0	460	
	Blackbrook Avenue (North)	Westbound Junction Exit	333	0	0	333	268	8	0	276	344	0	0	344	272	8	0	279	342	0	0	342	271	8	0	279	
Blackbrook Avenue / A574	Blackbrook Avenue (North)	Southbound Junction Entry	524	43	9	576	426	38	0	463	494	35	8	537	447	40	0	487	497	34	14	545	410	31	13	453	
		Northbound Junction Exit	319	19	0	338	361	11	3	375	337	19	0	356	363	9	2	374	335	21	0	356	373	9	1	383	
	A574 (East)	Westbound Junction Entry	595	77	32	704	804	27	3	834	593	77	32	703	804	26	3	834	575	78	31	684	849	26	3	879	
	Blackbrook Avenue (South)	Eastbound Junction Entry	652	58	44	755	696	47	5	748	647	58	47	751	707	50	5	761	659	59	47	765	706	50	5	761	
		Northbound Junction Entry	723	42	21	786	761	52	5	818	768	44	22	834	774	56	4	834	767	44	22	833	775	56	4	835	
	A50 / A574	A574 (West)	Southbound Junction Exit	926	95	33	1054	931	68	16	1015	984	96	33	1113	937	72	16	1024	974	95	32	1101	936	72	16	1023
Eastbound Junction Entry			666	67	34	767	825	36	17	878	736	73	36	845	826	37	18	881	736	74	30	840	790	46	5	841	
A50 (North)		Westbound Junction Exit	611	57	19	686	828	26	2	856	623	57	18	698	845	29	2	876	606	56	18	680	809	29	3	841	
Crab Lane / A574 / Woolston Grange Avenue	A50 (South)	Southbound Junction Entry	689	87	8	785	789	61	12	863	825	99	8	932	781	64	13	858	837	101	2	940	787	73	0	860	
		Northbound Junction Exit	752	65	22	839	913	64	8	986	834	68	23	925	890	67	9	966	830	69	23	921	898	67	9	975	
	Crab Lane	Westbound Junction Entry	610	57	19	686	799	25	2	826	622	57	18	698	808	27	2	837	605	57	18	680	783	27	2	812	
		Eastbound Junction Exit	666	67	35	767	826	35	17	878	736	73	36	845	827	37	18	881	736	73	31	840	790	46	5	841	
	A49 / Golborne Road	A574 (West)	Northbound Junction Entry	705	72	46	823	916	57	11	984	731	72	49	852	895	58	12	965	730	72	49	851	895	58	12	965
			Southbound Junction Exit	588	85	16	689	765	44	0	809	609	88	15	713	768	44	0	812	607	88	15	710	776	44	0	821
Woolston Grange Avenue		Southbound Junction Entry	459	56	0	515	643	11	0	654	501	57	0	559	683	11	0	694	483	57	0	540	744	11	0	755	
		Northbound Junction Exit	649	22	29	701	607	37	0	644	654	23	30	707	666	38	0	704	643	20	29	691	670	38	0	707	
Europa Boulevard / A574 / Callands Road	A574 (East)	Westbound Junction Entry	1003	106	89	1198	1348	56	23	1426	999	104	89	1192	1357	54	22	1434	1034	105	89	1229	1357	54	22	1434	
		Eastbound Junction Exit	1417	127	106	1650	1082	111	38	1231	1433	125	108	1667	1129	116	39	1285	1441	124	106	1672	1131	117	39	1287	
	Callands Road	Northbound Junction Entry	1334	91	64	1489	967	110	36	1113	1417	96	68	1581	1006	115	37	1158	1419	96	68	1583	1006	115	37	1158	
		Southbound Junction Exit	762	83	33	878	1163	45	22	1230	774	82	33	889	1158	45	22	1224	773	82	33	888	1166	45	22	1233	
	A49 / Golborne Road	A574 (West)	Eastbound Junction Entry	652	58	44	755	696	47	5	748	647	58	47	751	707	49	5	761	660	59	47	765	706	50	5	761
			Westbound Junction Exit	595	77	32	704	804	27	3	834	593	77	32	703	804	26	3	834	575	78	31	684	849	26	3	879
A49 (North)		Southbound Junction Entry	563	57	28	648	471	35	0	506	588	60	29	677	492	36	0	528	587	60	29	676	492	36	0	528	
		Northbound Junction Exit	388	37	0	425	770	71	37	879	404	40	0	444	763	70	38	870	410	41	0	451	802	73	39	914	
Calver Road / A574	Golborne Road	Westbound Junction Entry	393	33	32	457	343	19	34	396	457	33	33	524	324	20	33	377	419	30	33	482	319	21	32	371	
		Eastbound Junction Exit	392	44	51	486	379	29	10	419	396	42	52	489	379	30	10	419	391	42	37	470	373	25	11	409	
	A49 (South)	Northbound Junction Entry	592	76	51	719	1052	92	27	1171	592	77	52	720	1045	91	27	1163	595	78	37	710	1075	89	28	1192	
		Southbound Junction Exit	768	85	60	913	717	45	14	775	837	88	62	988	720	47	12	779	800	85	62	947	711	48	10	769	
	Europa Boulevard / A574 / Callands Road	Europa Boulevard	Southbound Junction Entry	233	39	37	309	347	10	11	368	242	40	40	322	361	10	11	382	242	40	40	322	361	10	11	382
			Northbound Junction Exit	274	16	29	318	56	11	0	67	286	17	30	332	0	0	0	0	286	17	29	332	1646	167	30	1843
Callands Road		Westbound Junction Entry	616	76	74	766	1088	67	19	1175	657	76	75	809	1130	71	19	1220	655	76	75	807	1131	71	19	1222	
		Eastbound Junction Exit	911	75	124	1110	663	45	29	737	948	76	130	1155	0	0	0	0	948	76	130	1155	529	45	29	634	
A574 (West)		Northbound Junction Entry	441	28	16	485	171	14	4	188	458	28	17	503	177	15	4	196	458	28	17	503	177	15	4	196	
		Southbound Junction Exit	71	13	15	99	277	30	0	307	79	12	15	106	0	0	0	0	78	12	15	106	903	98	34	1035	
Calver Road / A574	A574 (West)	Eastbound Junction Entry	553	50	72	675	572	42	29	643	579	51	75	705	600	43	30	673	580	51	75	706	601	43	30	674	
		Westbound Junction Exit	587	90	32	708	1183	48	34	1264	623	90	33	746	0	0	0	0	622	90	33	745	1041	78	44	1164	
	Calver Road	Southbound Junction Entry	350	77	79	506	623	33	0	656	364	79	80	523	651	34	0	685	364	79	80	523	651	34	0	685	
		Northbound Junction Exit	324	35	59	418	527	12	48	586	336	35	62	433	542	12	49	602	334	35	61	431	543	12	49	603	
	A49 North	A574 (East)	Westbound Junction Entry	850	98	126	1074	1502	74	55	1631	901	99	128	1128	1554	78	56	1688	898	99	128	1124	1557	78	56	1691
			Eastbound Junction Exit	1172	139	195	1506	1173	73	17	1263	1220	142	201	1564	1227	76	18	1321	1220	142	201	1564	1228	76	18	1322
A49 South	A574 (West)	Eastbound Junction Entry	911	75	124	1110	663	45	29	737	948	76	130	1155	693	47	30	770	948	76	130	1155	694	47	30	771	
		Westbound Junction Exit	616	76	74	766	1088	67	19	1175	657	76	75	809	1130	71	19	1220	655	76	75	807	1131	71	19	1222	
M62 East	Junction 9	Southbound Junction Entry	1197	220	198	1614	1335	115	56	1505	1202	217	195	1614	1330	117	54	1501	1196	220	201	1616	1333	118	52	1503	
		Northbound Junction Exit	1077	193	199	1469	2219	171	30	2419	1082	198	202	1481	1676	174	30	1880	1071	198	186	1456	1646	167	30	1843	
M62 West	Junction 10	Westbound Off Slip	781	131	156	1068	773	100	73	946	812	141	163	1116	801	108	75	984	812	141	163	1116	801	108	75	984	
		Eastbound On Slip	511	85	142	739	549	46	61	656	519	88	144	751	532	45	60	637	523	88	145	757	529	45	59	634	
Junction 9	Junction 10	Northbound Junction Entry	1066	175	383	1623	1973	160	93	2226	1105	182	394	1682	1993	161	95	224									

		Poplars Avenue																								
A49 / Thorough Route	A49 North	Westbound Junction Exit																	183	4	31	218	250	31	15	296
		Southbound Junction Entry																	1683	208	309	2200	1401	157	94	1652
		Northbound Junction Exit																	1133	187	395	1715	2008	161	97	2266
	Peel Hall Access Road	Westbound Junction Entry																	229	4	27	259	315	15	8	338
		Eastbound Junction Exit																	184	4	31	219	250	30	15	296
		Northbound Junction Entry																	1119	184	386	1688	1891	147	93	2130
	A49 South	Southbound Junction Exit																	1712	206	295	2213	1349	127	82	1558
Northway (Sandy Lane End)		Northbound	25	0	4	28	186	6	2	193	25	0	0	25	213	9	2	224	22	0	0	22	141	1	0	141
		Southbound	191	34	24	249	88	0	0	88	282	48	24	355	93	0	0	93	300	56	25	381	94	0	0	94
Northway (Long Lane End)	Northbound	25	0	4	28	186	6	2	193	25	0	0	25	213	9	2	224	22	0	0	22	141	1	0	141	
	Southbound	284	39	24	347	39	5	0	44	378	54	25	456	44	5	0	49	399	61	25	485	41	5	0	46	

Appendix 67

Mill Lane/Blackbrook Avenue Modelling Reports

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.2.5947
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Filename: Mill Lane . Blackbrook . Site 2025 and 2030.j9
Report generation date: 25/01/2018 11:46:41

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2025 Do Something						
Arm 1	0.1	2.61	0.11	0.1	2.57	0.06
Arm 2	1.1	5.12	0.54	0.6	3.76	0.38
Arm 3	0.2	1.93	0.19	0.5	2.41	0.35
2030 Do Something						
Arm 1	0.4	3.54	0.31	0.2	3.19	0.18
Arm 2	1.5	6.65	0.60	0.9	4.59	0.47
Arm 3	0.4	2.16	0.27	0.8	2.90	0.46
2030 Do Something Through Route						
Arm 1	0.6	4.02	0.39	0.6	4.24	0.36
Arm 2	1.7	7.39	0.64	1.0	5.37	0.51
Arm 3	0.4	2.13	0.26	1.0	3.37	0.51

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	(untitled)
Location	
Site number	
Date	18/05/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
✓		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025 Do Something	AM	ONE HOUR	07:45	09:15	15
D2	2025 Do Something	PM	ONE HOUR	16:45	18:15	15
D3	2030 Do Something	AM	ONE HOUR	07:45	09:15	15
D4	2030 Do Something	PM	ONE HOUR	16:45	18:15	15
D5	2030 Do Something Through Route	AM	ONE HOUR	07:45	09:15	15
D6	2030 Do Something Through Route	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2025 Do Something, AM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3	3.83	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Site	
2	Mill Lane N	
3	untitled	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.65	7.35	20.0	11.0	36.0	56.0	
2	3.50	7.80	10.0	20.0	36.0	31.0	
3	7.00	8.00	10.0	30.0	36.0	38.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.585	1574
2	0.629	1603
3	0.772	2324

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)
D1	2025 Do Something	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	150	100.000
2		✓	738	100.000
3		✓	404	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	24	126
	2	13	0	725
	3	353	51	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.11	2.61	0.1	0.5	A
2	0.54	5.12	1.1	1.5	A
3	0.19	1.93	0.2	0.5	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	113	38	1552	0.073	113	0.1	2.501	A
2	556	95	1544	0.360	553	0.6	3.628	A
3	304	10	2316	0.131	304	0.2	1.788	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	135	46	1548	0.087	135	0.1	2.547	A
2	663	113	1532	0.433	663	0.8	4.137	A
3	363	12	2315	0.157	363	0.2	1.843	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	165	56	1542	0.107	165	0.1	2.614	A
2	813	139	1516	0.536	811	1.1	5.095	A
3	445	14	2313	0.192	445	0.2	1.927	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	165	56	1542	0.107	165	0.1	2.614	A
2	813	139	1516	0.536	813	1.1	5.117	A
3	445	14	2313	0.192	445	0.2	1.927	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	135	46	1548	0.087	135	0.1	2.550	A
2	663	113	1532	0.433	665	0.8	4.159	A
3	363	12	2315	0.157	363	0.2	1.847	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	113	38	1552	0.073	113	0.1	2.503	A
2	556	95	1544	0.360	556	0.6	3.649	A
3	304	10	2316	0.131	304	0.2	1.788	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.08	0.00	0.00	0.08	0.08			N/A	N/A
2	0.56	0.55	1.00	1.40	1.45			N/A	N/A
3	0.15	0.00	0.00	0.15	0.15			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.10	0.03	0.25	0.46	0.48			N/A	N/A
2	0.76	0.10	0.84	1.41	1.49			N/A	N/A
3	0.19	0.00	0.00	0.19	0.19			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.12	0.03	0.26	0.46	0.49			N/A	N/A
2	1.14	0.03	0.26	1.14	1.14			N/A	N/A
3	0.24	0.03	0.25	0.45	0.48			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.12	0.00	0.00	0.12	0.12			N/A	N/A
2	1.15	0.03	0.27	1.15	1.31			N/A	N/A
3	0.24	0.03	0.25	0.45	0.48			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.10	0.00	0.00	0.10	0.10			N/A	N/A
2	0.77	0.39	0.97	1.39	1.45			N/A	N/A
3	0.19	0.00	0.00	0.19	0.19			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.08	0.00	0.00	0.08	0.08			N/A	N/A
2	0.57	0.06	0.68	1.34	1.42			N/A	N/A
3	0.15	0.00	0.00	0.15	0.15			N/A	N/A

2025 Do Something, PM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3	2.96	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2025 Do Something	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	88	100.000
2		✓	542	100.000
3		✓	741	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	15	73
	2	19	0	523
	3	622	119	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.06	2.57	0.1	0.5	A
2	0.38	3.76	0.6	2.6	A
3	0.35	2.41	0.5	2.6	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	66	89	1522	0.044	66	0.0	2.472	A
2	408	55	1569	0.260	407	0.3	3.093	A
3	558	14	2313	0.241	557	0.3	2.049	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	79	107	1512	0.052	79	0.1	2.512	A
2	487	66	1562	0.312	487	0.5	3.348	A
3	666	17	2310	0.288	666	0.4	2.189	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	97	131	1498	0.065	97	0.1	2.569	A
2	597	80	1553	0.384	596	0.6	3.761	A
3	816	21	2307	0.354	815	0.5	2.413	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	97	131	1498	0.065	97	0.1	2.569	A
2	597	80	1553	0.384	597	0.6	3.764	A
3	816	21	2307	0.354	816	0.5	2.413	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	79	107	1512	0.052	79	0.1	2.514	A
2	487	66	1562	0.312	488	0.5	3.355	A
3	666	17	2310	0.288	667	0.4	2.192	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	66	90	1522	0.044	66	0.0	2.474	A
2	408	55	1569	0.260	408	0.4	3.105	A
3	558	14	2313	0.241	558	0.3	2.052	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.05	0.00	0.00	0.05	0.05			N/A	N/A
2	0.35	0.00	0.00	0.35	0.35			N/A	N/A
3	0.32	0.00	0.00	0.32	0.32			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.06	0.03	0.25	0.45	0.48			N/A	N/A
2	0.45	0.00	0.00	0.45	0.45			N/A	N/A
3	0.40	0.00	0.00	0.40	0.40			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.07	0.03	0.26	0.47	0.49			N/A	N/A
2	0.62	0.03	0.25	0.62	0.62			N/A	N/A
3	0.54	0.03	0.25	0.54	0.54			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.07	0.00	0.00	0.07	0.07			N/A	N/A
2	0.62	0.03	0.29	1.04	2.65			N/A	N/A
3	0.55	0.03	0.30	1.37	2.56			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.06	0.00	0.00	0.06	0.06			N/A	N/A
2	0.46	0.00	0.00	0.46	0.46			N/A	N/A
3	0.41	0.00	0.00	0.41	0.41			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.05	0.00	0.00	0.05	0.05			N/A	N/A
2	0.35	0.00	0.00	0.35	0.35			N/A	N/A
3	0.32	0.00	0.00	0.32	0.32			N/A	N/A

2030 Do Something, AM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3	4.43	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2030 Do Something	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	406	100.000
2		✓	746	100.000
3		✓	568	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	58	348
	2	35	0	711
	3	395	173	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.31	3.54	0.4	1.8	A
2	0.60	6.65	1.5	1.8	A
3	0.27	2.16	0.4	1.5	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	306	130	1498	0.204	305	0.3	3.012	A
2	562	261	1439	0.390	559	0.6	4.080	A
3	428	26	2303	0.186	427	0.2	1.918	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	365	155	1484	0.246	365	0.3	3.217	A
2	671	313	1407	0.477	670	0.9	4.878	A
3	511	31	2299	0.222	510	0.3	2.012	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	447	190	1463	0.306	447	0.4	3.539	A
2	821	383	1362	0.603	819	1.5	6.595	A
3	625	38	2294	0.273	625	0.4	2.157	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	447	190	1463	0.306	447	0.4	3.542	A
2	821	383	1362	0.603	821	1.5	6.653	A
3	625	39	2294	0.273	625	0.4	2.157	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	365	156	1483	0.246	365	0.3	3.220	A
2	671	313	1406	0.477	673	0.9	4.925	A
3	511	32	2299	0.222	511	0.3	2.014	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	306	130	1498	0.204	306	0.3	3.021	A
2	562	262	1438	0.390	563	0.6	4.116	A
3	428	26	2303	0.186	428	0.2	1.921	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.26	0.00	0.00	0.26	0.26			N/A	N/A
2	0.64	0.55	1.00	1.40	1.45			N/A	N/A
3	0.23	0.00	0.00	0.23	0.23			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.32	0.00	0.00	0.32	0.32			N/A	N/A
2	0.90	0.08	0.85	1.46	1.84			N/A	N/A
3	0.28	0.00	0.00	0.28	0.28			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.44	0.03	0.25	0.45	0.48			N/A	N/A
2	1.49	0.03	0.26	1.49	1.49			N/A	N/A
3	0.37	0.03	0.25	0.45	0.48			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.44	0.03	0.31	1.37	1.79			N/A	N/A
2	1.50	0.03	0.27	1.50	1.50			N/A	N/A
3	0.37	0.03	0.33	1.22	1.46			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.33	0.00	0.00	0.33	0.33			N/A	N/A
2	0.92	0.15	0.96	1.07	1.56			N/A	N/A
3	0.29	0.00	0.00	0.29	0.29			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.26	0.00	0.00	0.26	0.26			N/A	N/A
2	0.65	0.06	0.63	1.39	1.48			N/A	N/A
3	0.23	0.00	0.00	0.23	0.23			N/A	N/A

2030 Do Something, PM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3	3.52	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2030 Do Something	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	229	100.000
2		✓	624	100.000
3		✓	945	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	38	191
	2	48	0	576
	3	645	300	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.18	3.19	0.2	0.5	A
2	0.47	4.59	0.9	1.8	A
3	0.46	2.90	0.8	1.6	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	172	225	1443	0.120	172	0.1	2.831	A
2	470	143	1513	0.310	468	0.4	3.439	A
3	711	36	2296	0.310	710	0.4	2.268	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	206	270	1417	0.145	206	0.2	2.972	A
2	561	172	1495	0.375	560	0.6	3.848	A
3	850	43	2290	0.371	849	0.6	2.496	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	252	330	1381	0.183	252	0.2	3.186	A
2	687	210	1471	0.467	686	0.9	4.578	A
3	1040	53	2283	0.456	1039	0.8	2.892	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	252	330	1381	0.183	252	0.2	3.187	A
2	687	210	1471	0.467	687	0.9	4.592	A
3	1040	53	2283	0.456	1040	0.8	2.897	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	206	270	1417	0.145	206	0.2	2.976	A
2	561	172	1495	0.375	562	0.6	3.863	A
3	850	43	2290	0.371	851	0.6	2.503	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	172	226	1442	0.120	173	0.1	2.834	A
2	470	144	1513	0.311	470	0.5	3.457	A
3	711	36	2296	0.310	712	0.5	2.273	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.14	0.00	0.00	0.14	0.14			N/A	N/A
2	0.45	0.00	0.00	0.45	0.45			N/A	N/A
3	0.45	0.00	0.00	0.45	0.45			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.17	0.00	0.00	0.17	0.17			N/A	N/A
2	0.60	0.10	0.82	1.37	1.43			N/A	N/A
3	0.59	0.08	0.77	1.35	1.43			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.22	0.03	0.25	0.46	0.48			N/A	N/A
2	0.87	0.03	0.25	0.87	0.87			N/A	N/A
3	0.83	0.03	0.25	0.83	0.83			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.22	0.03	0.25	0.46	0.48			N/A	N/A
2	0.87	0.03	0.27	0.87	1.84			N/A	N/A
3	0.84	0.03	0.27	0.84	1.59			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.17	0.00	0.00	0.17	0.17			N/A	N/A
2	0.60	0.55	1.00	1.40	1.45			N/A	N/A
3	0.59	0.55	1.00	1.40	1.45			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.14	0.00	0.00	0.14	0.14			N/A	N/A
2	0.45	0.00	0.00	0.45	0.45			N/A	N/A
3	0.45	0.00	0.00	0.45	0.45			N/A	N/A

2030 Do Something Through Route, AM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3	4.90	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2030 Do Something Through Route	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	511	100.000
2		✓	781	100.000
3		✓	538	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	141	370
	2	51	0	730
	3	356	182	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.39	4.02	0.6	2.7	A
2	0.64	7.39	1.7	2.4	A
3	0.26	2.13	0.4	1.4	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	385	137	1494	0.257	383	0.3	3.235	A
2	588	278	1429	0.412	585	0.7	4.255	A
3	405	38	2294	0.177	404	0.2	1.904	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	459	164	1479	0.311	459	0.4	3.527	A
2	702	332	1394	0.504	701	1.0	5.183	A
3	484	46	2288	0.211	483	0.3	1.994	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	563	200	1457	0.386	562	0.6	4.017	A
2	860	407	1347	0.638	857	1.7	7.299	A
3	592	56	2280	0.260	592	0.3	2.132	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	563	200	1457	0.386	563	0.6	4.023	A
2	860	407	1347	0.638	860	1.7	7.388	A
3	592	56	2280	0.260	592	0.4	2.132	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	459	164	1479	0.311	460	0.5	3.538	A
2	702	333	1394	0.504	705	1.0	5.248	A
3	484	46	2288	0.211	484	0.3	1.997	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	385	137	1494	0.257	385	0.3	3.246	A
2	588	279	1428	0.412	589	0.7	4.299	A
3	405	38	2294	0.177	405	0.2	1.905	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.34	0.00	0.00	0.34	0.34			N/A	N/A
2	0.69	0.55	1.00	1.40	1.45			N/A	N/A
3	0.21	0.00	0.00	0.21	0.21			N/A	N/A

08:00 - 08:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.45	0.00	0.00	0.45	0.45			N/A	N/A
2	1.00	0.07	0.85	1.80	2.41			N/A	N/A
3	0.27	0.00	0.00	0.27	0.27			N/A	N/A

08:15 - 08:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.62	0.03	0.25	0.62	0.62			N/A	N/A
2	1.73	0.03	0.27	1.73	1.73			N/A	N/A
3	0.35	0.03	0.25	0.45	0.48			N/A	N/A

08:30 - 08:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.63	0.03	0.29	1.06	2.67			N/A	N/A
2	1.75	0.03	0.27	1.75	1.75			N/A	N/A
3	0.35	0.03	0.33	1.15	1.38			N/A	N/A

08:45 - 09:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.45	0.00	0.00	0.45	0.45			N/A	N/A
2	1.03	0.11	0.98	1.61	1.91			N/A	N/A
3	0.27	0.00	0.00	0.27	0.27			N/A	N/A

09:00 - 09:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.35	0.00	0.00	0.35	0.35			N/A	N/A
2	0.71	0.05	0.59	1.50	1.59			N/A	N/A
3	0.21	0.00	0.00	0.21	0.21			N/A	N/A

2030 Do Something Through Route, PM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1, 2, 3	4.17	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2030 Do Something Through Route	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	432	100.000
2		✓	634	100.000
3		✓	991	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	93	339
	2	193	0	441
	3	603	388	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
1	0.36	4.24	0.6	2.6	A
2	0.51	5.37	1.0	1.5	A
3	0.51	3.37	1.0	1.5	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	325	291	1404	0.232	324	0.3	3.330	A
2	477	254	1443	0.331	475	0.5	3.711	A
3	746	145	2212	0.337	744	0.5	2.449	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	388	349	1371	0.283	388	0.4	3.663	A
2	570	304	1412	0.404	569	0.7	4.269	A
3	891	173	2190	0.407	890	0.7	2.768	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	476	427	1325	0.359	475	0.6	4.233	A
2	698	373	1369	0.510	697	1.0	5.346	A
3	1091	212	2160	0.505	1090	1.0	3.359	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	476	427	1325	0.359	476	0.6	4.239	A
2	698	373	1368	0.510	698	1.0	5.369	A
3	1091	212	2159	0.505	1091	1.0	3.368	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	388	349	1370	0.283	389	0.4	3.670	A
2	570	305	1411	0.404	571	0.7	4.293	A
3	891	174	2189	0.407	892	0.7	2.777	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	325	292	1403	0.232	326	0.3	3.340	A
2	477	256	1442	0.331	478	0.5	3.737	A
3	746	146	2211	0.337	747	0.5	2.461	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.30	0.00	0.00	0.30	0.30			N/A	N/A
2	0.49	0.00	0.00	0.49	0.49			N/A	N/A
3	0.51	0.51	1.00	1.40	1.45			N/A	N/A

17:00 - 17:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.39	0.00	0.00	0.39	0.39			N/A	N/A
2	0.67	0.10	0.84	1.37	1.44			N/A	N/A
3	0.68	0.08	0.79	1.37	1.45			N/A	N/A

17:15 - 17:30

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.56	0.03	0.25	0.56	0.56			N/A	N/A
2	1.03	0.03	0.26	1.03	1.03			N/A	N/A
3	1.01	0.03	0.25	1.01	1.01			N/A	N/A

17:30 - 17:45

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.56	0.03	0.30	1.33	2.61			N/A	N/A
2	1.03	0.03	0.27	1.03	1.48			N/A	N/A
3	1.02	0.03	0.27	1.02	1.25			N/A	N/A

17:45 - 18:00

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.40	0.00	0.00	0.40	0.40			N/A	N/A
2	0.68	0.30	0.95	1.39	1.45			N/A	N/A
3	0.69	0.55	1.00	1.40	1.45			N/A	N/A

18:00 - 18:15

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.30	0.00	0.00	0.30	0.30			N/A	N/A
2	0.50	0.05	0.46	1.28	1.39			N/A	N/A
3	0.51	0.51	1.00	1.40	1.45			N/A	N/A

Appendix 68

Poplars Avenue (*central*) Modelling Reports

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.0.2.5947
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Filename: Poplars Avenue C 2025 and 2030.j9
Report generation date: 25/01/2018 23:03:39

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2025 Do Something						
Stream B-C	0.3	6.81	0.23	0.5	8.76	0.31
Stream B-A	0.1	10.04	0.09	0.8	21.35	0.46
Stream C-B	0.2	6.25	0.14	0.8	9.35	0.46
2030 Do Something						
Stream B-C	0.4	7.25	0.27	0.2	6.76	0.20
Stream B-A	0.1	10.40	0.10	0.3	14.17	0.21
Stream C-B	0.1	6.06	0.12	0.5	7.79	0.34
2030 Do Something Through Route						
Stream B-C	0.1	5.75	0.13	0.1	5.16	0.07
Stream B-A	0.0	8.56	0.05	0.0	8.46	0.04
Stream C-B	0.1	5.39	0.05	0.1	5.54	0.12

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	(untitled)
Location	
Site number	
Date	02/03/2016
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
✓		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025 Do Something	AM	ONE HOUR	07:45	09:15	15
D2	2025 Do Something	PM	ONE HOUR	16:45	18:15	15
D3	2030 Do Something	AM	ONE HOUR	07:45	09:15	15
D4	2030 Do Something	PM	ONE HOUR	16:45	18:15	15
D5	2030 Do Something Through Route	AM	ONE HOUR	07:45	09:15	15
D6	2030 Do Something Through Route	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2025 Do Something, AM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1107A	Poplars Ave central	T-Junction	Two-way	1.77	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Poplars Ave	WEST	Major
B	Site		Minor
C	Poplars Ave	EAST	Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.25		✓	3.50	250.0		-

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

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	6.50	3.80	3.60	3.60	✓	1.00	65	200

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1107A	B-A	614	0.106	0.267	0.168	0.382
1107A	B-C	840	0.122	0.308	-	-
1107A	C-B	820	0.301	0.301	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025 Do Something	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	455	100.000
B		✓	173	100.000
C		✓	397	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	71	384
	B	33	0	140
	C	312	85	0

Vehicle Mix

Heavy Vehicle Percentages

From	To		
	A	B	C
A	0	0	0
B	0	0	0
C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	0.23	6.81	0.3	1.3	A
B-A	0.09	10.04	0.1	0.5	B
C-A					
C-B	0.14	6.25	0.2	0.5	A
A-B					
A-C					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	105	734	0.144	105	0.2	5.712	A
B-A	25	466	0.053	25	0.1	8.155	A
C-A	235			235			
C-B	64	717	0.089	64	0.1	5.502	A
A-B	53			53			
A-C	289			289			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	126	713	0.177	126	0.2	6.127	A
B-A	30	436	0.068	30	0.1	8.852	A
C-A	280			280			
C-B	76	697	0.110	76	0.1	5.795	A
A-B	64			64			
A-C	345			345			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	154	683	0.226	154	0.3	6.800	A
B-A	36	395	0.092	36	0.1	10.035	B
C-A	344			344			
C-B	94	670	0.140	93	0.2	6.244	A
A-B	78			78			
A-C	423			423			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	154	683	0.226	154	0.3	6.806	A
B-A	36	395	0.092	36	0.1	10.043	B
C-A	344			344			
C-B	94	670	0.140	94	0.2	6.246	A
A-B	78			78			
A-C	423			423			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	126	713	0.177	126	0.2	6.137	A
B-A	30	436	0.068	30	0.1	8.863	A
C-A	280			280			
C-B	76	697	0.110	77	0.1	5.798	A
A-B	64			64			
A-C	345			345			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	105	734	0.144	106	0.2	5.728	A
B-A	25	466	0.053	25	0.1	8.171	A
C-A	235			235			
C-B	64	717	0.089	64	0.1	5.512	A
A-B	53			53			
A-C	289			289			

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.17	0.00	0.00	0.17	0.17			N/A	N/A
B-A	0.06	0.00	0.00	0.06	0.06			N/A	N/A
C-B	0.10	0.00	0.00	0.10	0.10			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.21	0.00	0.00	0.21	0.21			N/A	N/A
B-A	0.07	0.03	0.25	0.45	0.48			N/A	N/A
C-B	0.12	0.00	0.00	0.12	0.12			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.29	0.03	0.25	0.46	0.48			N/A	N/A
B-A	0.10	0.03	0.26	0.47	0.49			N/A	N/A
C-B	0.16	0.03	0.26	0.46	0.49			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.29	0.03	0.31	1.02	1.31			N/A	N/A
B-A	0.10	0.03	0.25	0.45	0.48			N/A	N/A
C-B	0.16	0.03	0.25	0.45	0.48			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.22	0.00	0.00	0.22	0.22			N/A	N/A
B-A	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-B	0.12	0.00	0.00	0.12	0.12			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.17	0.00	0.00	0.17	0.17			N/A	N/A
B-A	0.06	0.00	0.00	0.06	0.06			N/A	N/A
C-B	0.10	0.00	0.00	0.10	0.10			N/A	N/A

2025 Do Something, PM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1107A	Poplars Ave central	T-Junction	Two-way	4.89	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2025 Do Something	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	341	100.000
B		✓	298	100.000
C		✓	784	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	18	323
	B	128	0	170
	C	491	293	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	0.31	8.76	0.5	1.9	A
B-A	0.46	21.35	0.8	4.0	C
C-A					
C-B	0.46	9.35	0.8	2.8	A
A-B					
A-C					

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	128	722	0.177	127	0.2	6.046	A
B-A	96	423	0.228	95	0.3	10.931	B
C-A	370			370			
C-B	221	743	0.297	219	0.4	6.843	A
A-B	14			14			
A-C	243			243			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	153	681	0.224	153	0.3	6.803	A
B-A	115	376	0.306	115	0.4	13.713	B
C-A	441			441			
C-B	263	728	0.362	263	0.6	7.725	A
A-B	16			16			
A-C	290			290			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	187	601	0.312	187	0.4	8.688	A
B-A	141	310	0.455	139	0.8	20.949	C
C-A	541			541			
C-B	323	708	0.456	322	0.8	9.299	A
A-B	20			20			
A-C	356			356			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	187	598	0.313	187	0.5	8.763	A
B-A	141	309	0.456	141	0.8	21.348	C
C-A	541			541			
C-B	323	708	0.456	323	0.8	9.348	A
A-B	20			20			
A-C	356			356			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	153	679	0.225	153	0.3	6.862	A
B-A	115	376	0.306	117	0.5	13.954	B
C-A	441			441			
C-B	263	728	0.362	264	0.6	7.777	A
A-B	16			16			
A-C	290			290			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	128	720	0.178	128	0.2	6.087	A
B-A	96	423	0.228	97	0.3	11.075	B
C-A	370			370			
C-B	221	743	0.297	221	0.4	6.905	A
A-B	14			14			
A-C	243			243			

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.21	0.00	0.00	0.21	0.21			N/A	N/A
B-A	0.29	0.00	0.00	0.29	0.29			N/A	N/A
C-B	0.42	0.00	0.00	0.42	0.42			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.29	0.00	0.00	0.29	0.29			N/A	N/A
B-A	0.43	0.00	0.00	0.43	0.43			N/A	N/A
C-B	0.56	0.55	1.00	1.40	1.45			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.45	0.03	0.26	0.46	0.49			N/A	N/A
B-A	0.80	0.03	0.27	0.80	1.17			N/A	N/A
C-B	0.82	0.03	0.26	0.82	0.82			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.45	0.03	0.31	1.39	1.86			N/A	N/A
B-A	0.82	0.03	0.30	1.26	3.97			N/A	N/A
C-B	0.83	0.03	0.28	0.83	2.84			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.29	0.00	0.00	0.29	0.29			N/A	N/A
B-A	0.45	0.04	0.38	1.21	1.36			N/A	N/A
C-B	0.57	0.08	0.76	1.35	1.43			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.22	0.00	0.00	0.22	0.22			N/A	N/A
B-A	0.30	0.03	0.28	0.65	1.08			N/A	N/A
C-B	0.43	0.03	0.34	1.12	1.31			N/A	N/A

2030 Do Something, AM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1107A	Poplars Ave central	T-Junction	Two-way	1.83	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2030 Do Something	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	447	100.000
B		✓	198	100.000
C		✓	432	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	32	415
	B	35	0	163
	C	361	71	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	0.27	7.25	0.4	1.2	A
B-A	0.10	10.40	0.1	0.5	B
C-A					
C-B	0.12	6.06	0.1	0.5	A
A-B					
A-C					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	123	730	0.168	122	0.2	5.914	A
B-A	26	460	0.057	26	0.1	8.296	A
C-A	272			272			
C-B	53	719	0.074	53	0.1	5.402	A
A-B	24			24			
A-C	312			312			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	147	708	0.207	146	0.3	6.409	A
B-A	31	429	0.073	31	0.1	9.062	A
C-A	325			325			
C-B	64	700	0.091	64	0.1	5.661	A
A-B	29			29			
A-C	373			373			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	179	676	0.265	179	0.4	7.235	A
B-A	39	385	0.100	38	0.1	10.393	B
C-A	397			397			
C-B	78	672	0.116	78	0.1	6.054	A
A-B	35			35			
A-C	457			457			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	179	676	0.265	179	0.4	7.247	A
B-A	39	385	0.100	39	0.1	10.402	B
C-A	397			397			
C-B	78	672	0.116	78	0.1	6.056	A
A-B	35			35			
A-C	457			457			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	147	708	0.207	147	0.3	6.427	A
B-A	31	429	0.073	32	0.1	9.071	A
C-A	325			325			
C-B	64	700	0.091	64	0.1	5.665	A
A-B	29			29			
A-C	373			373			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	123	730	0.168	123	0.2	5.934	A
B-A	26	460	0.057	26	0.1	8.313	A
C-A	272			272			
C-B	53	719	0.074	54	0.1	5.409	A
A-B	24			24			
A-C	312			312			

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.20	0.00	0.00	0.20	0.20			N/A	N/A
B-A	0.06	0.00	0.00	0.06	0.06			N/A	N/A
C-B	0.08	0.00	0.00	0.08	0.08			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.26	0.00	0.00	0.26	0.26			N/A	N/A
B-A	0.08	0.03	0.26	0.47	0.49			N/A	N/A
C-B	0.10	0.03	0.25	0.45	0.48			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.36	0.03	0.25	0.46	0.48			N/A	N/A
B-A	0.11	0.03	0.26	0.47	0.49			N/A	N/A
C-B	0.13	0.03	0.26	0.46	0.49			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.36	0.03	0.32	1.21	1.21			N/A	N/A
B-A	0.11	0.03	0.25	0.45	0.48			N/A	N/A
C-B	0.13	0.03	0.25	0.45	0.48			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.26	0.00	0.00	0.26	0.26			N/A	N/A
B-A	0.08	0.00	0.00	0.08	0.08			N/A	N/A
C-B	0.10	0.00	0.00	0.10	0.10			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.20	0.00	0.00	0.20	0.20			N/A	N/A
B-A	0.06	0.00	0.00	0.06	0.06			N/A	N/A
C-B	0.08	0.00	0.00	0.08	0.08			N/A	N/A

2030 Do Something, PM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1107A	Poplars Ave central	T-Junction	Two-way	2.49	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2030 Do Something	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	377	100.000
B		✓	181	100.000
C		✓	776	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To		
	A	B	C
A	0	26	351
B	61	0	120
C	564	212	0

Vehicle Mix

Heavy Vehicle Percentages

From	To		
	A	B	C
A	0	0	0
B	0	0	0
C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	0.20	6.76	0.2	1.1	A
B-A	0.21	14.17	0.3	1.2	B
C-A					
C-B	0.34	7.79	0.5	2.3	A
A-B					
A-C					

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	90	725	0.125	90	0.1	5.658	A
B-A	46	422	0.109	45	0.1	9.554	A
C-A	425			425			
C-B	160	735	0.217	159	0.3	6.232	A
A-B	20			20			
A-C	264			264			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	108	702	0.154	108	0.2	6.058	A
B-A	55	380	0.144	55	0.2	11.071	B
C-A	507			507			
C-B	191	719	0.265	190	0.4	6.809	A
A-B	23			23			
A-C	316			316			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	132	665	0.199	132	0.2	6.752	A
B-A	67	321	0.209	67	0.3	14.124	B
C-A	621			621			
C-B	233	696	0.336	233	0.5	7.769	A
A-B	29			29			
A-C	386			386			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	132	664	0.199	132	0.2	6.762	A
B-A	67	321	0.209	67	0.3	14.175	B
C-A	621			621			
C-B	233	696	0.336	233	0.5	7.787	A
A-B	29			29			
A-C	386			386			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	108	701	0.154	108	0.2	6.071	A
B-A	55	379	0.145	55	0.2	11.116	B
C-A	507			507			
C-B	191	719	0.265	191	0.4	6.834	A
A-B	23			23			
A-C	316			316			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	90	725	0.125	91	0.1	5.674	A
B-A	46	421	0.109	46	0.1	9.599	A
C-A	425			425			
C-B	160	735	0.217	160	0.3	6.262	A
A-B	20			20			
A-C	264			264			

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.14	0.00	0.00	0.14	0.14			N/A	N/A
B-A	0.12	0.00	0.00	0.12	0.12			N/A	N/A
C-B	0.27	0.00	0.00	0.27	0.27			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.18	0.00	0.00	0.18	0.18			N/A	N/A
B-A	0.17	0.00	0.00	0.17	0.17			N/A	N/A
C-B	0.36	0.00	0.00	0.36	0.36			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.25	0.03	0.26	0.46	0.48			N/A	N/A
B-A	0.26	0.03	0.26	0.47	0.49			N/A	N/A
C-B	0.50	0.03	0.25	0.50	0.50			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.25	0.03	0.29	0.73	1.12			N/A	N/A
B-A	0.26	0.03	0.30	0.90	1.22			N/A	N/A
C-B	0.50	0.03	0.30	1.34	2.29			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.18	0.00	0.00	0.18	0.18			N/A	N/A
B-A	0.17	0.00	0.00	0.17	0.17			N/A	N/A
C-B	0.36	0.00	0.00	0.36	0.36			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.14	0.00	0.00	0.14	0.14			N/A	N/A
B-A	0.12	0.00	0.00	0.12	0.12			N/A	N/A
C-B	0.28	0.00	0.00	0.28	0.28			N/A	N/A

2030 Do Something Through Route, AM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1107A	Poplars Ave central	T-Junction	Two-way	1.03	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2030 Do Something Through Route	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	343	100.000
B		✓	101	100.000
C		✓	354	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	12	331
	B	18	0	83
	C	319	35	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	0.13	5.75	0.1	0.5	A
B-A	0.05	8.56	0.0	0.5	A
C-A					
C-B	0.05	5.39	0.1	0.5	A
A-B					
A-C					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	62	757	0.083	62	0.1	5.179	A
B-A	14	496	0.027	13	0.0	7.463	A
C-A	240			240			
C-B	26	743	0.035	26	0.0	5.022	A
A-B	9			9			
A-C	249			249			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	75	741	0.101	75	0.1	5.405	A
B-A	16	473	0.034	16	0.0	7.888	A
C-A	287			287			
C-B	31	728	0.043	31	0.0	5.169	A
A-B	11			11			
A-C	298			298			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	91	718	0.127	91	0.1	5.744	A
B-A	20	440	0.045	20	0.0	8.556	A
C-A	351			351			
C-B	39	707	0.055	38	0.1	5.385	A
A-B	13			13			
A-C	364			364			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	91	718	0.127	91	0.1	5.746	A
B-A	20	440	0.045	20	0.0	8.558	A
C-A	351			351			
C-B	39	707	0.055	39	0.1	5.385	A
A-B	13			13			
A-C	364			364			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	75	741	0.101	75	0.1	5.407	A
B-A	16	472	0.034	16	0.0	7.892	A
C-A	287			287			
C-B	31	728	0.043	32	0.0	5.172	A
A-B	11			11			
A-C	298			298			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	62	757	0.083	63	0.1	5.187	A
B-A	14	496	0.027	14	0.0	7.468	A
C-A	240			240			
C-B	26	743	0.035	26	0.0	5.024	A
A-B	9			9			
A-C	249			249			

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.09	0.00	0.00	0.09	0.09			N/A	N/A
B-A	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-B	0.04	0.00	0.00	0.04	0.04			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.11	0.00	0.00	0.11	0.11			N/A	N/A
B-A	0.04	0.03	0.25	0.45	0.48			N/A	N/A
C-B	0.04	0.03	0.25	0.45	0.48			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.14	0.03	0.26	0.46	0.49			N/A	N/A
B-A	0.05	0.03	0.26	0.46	0.48			N/A	N/A
C-B	0.06	0.03	0.26	0.46	0.49			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.15	0.03	0.25	0.45	0.48			N/A	N/A
B-A	0.05	0.00	0.00	0.05	0.05			N/A	N/A
C-B	0.06	0.00	0.00	0.06	0.06			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.11	0.00	0.00	0.11	0.11			N/A	N/A
B-A	0.04	0.00	0.00	0.04	0.04			N/A	N/A
C-B	0.05	0.00	0.00	0.05	0.05			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.09	0.00	0.00	0.09	0.09			N/A	N/A
B-A	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-B	0.04	0.00	0.00	0.04	0.04			N/A	N/A

2030 Do Something Through Route, PM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1107A	Poplars Ave central	T-Junction	Two-way	1.08	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2030 Do Something Through Route	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	242	100.000
B		✓	63	100.000
C		✓	474	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To		
	A	B	C
A	0	12	230
B	18	0	45
C	392	82	0

Vehicle Mix

Heavy Vehicle Percentages

From	To		
	A	B	C
A	0	0	0
B	0	0	0
C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	0.07	5.16	0.1	0.5	A
B-A	0.04	8.46	0.0	0.5	A
C-A					
C-B	0.12	5.54	0.1	0.5	A
A-B					
A-C					

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	34	775	0.044	34	0.0	4.853	A
B-A	14	502	0.027	13	0.0	7.365	A
C-A	295			295			
C-B	62	766	0.081	61	0.1	5.109	A
A-B	9			9			
A-C	173			173			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	40	763	0.053	40	0.1	4.979	A
B-A	16	478	0.034	16	0.0	7.792	A
C-A	352			352			
C-B	74	755	0.098	74	0.1	5.283	A
A-B	11			11			
A-C	207			207			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	50	747	0.066	49	0.1	5.161	A
B-A	20	445	0.045	20	0.0	8.461	A
C-A	432			432			
C-B	90	740	0.122	90	0.1	5.537	A
A-B	13			13			
A-C	253			253			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	50	747	0.066	50	0.1	5.161	A
B-A	20	445	0.045	20	0.0	8.463	A
C-A	432			432			
C-B	90	740	0.122	90	0.1	5.537	A
A-B	13			13			
A-C	253			253			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	40	763	0.053	41	0.1	4.980	A
B-A	16	478	0.034	16	0.0	7.795	A
C-A	352			352			
C-B	74	755	0.098	74	0.1	5.287	A
A-B	11			11			
A-C	207			207			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	34	775	0.044	34	0.0	4.858	A
B-A	14	502	0.027	14	0.0	7.373	A
C-A	295			295			
C-B	62	766	0.081	62	0.1	5.116	A
A-B	9			9			
A-C	173			173			

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.05	0.00	0.00	0.05	0.05			N/A	N/A
B-A	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-B	0.09	0.00	0.00	0.09	0.09			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.06	0.03	0.25	0.45	0.48			N/A	N/A
B-A	0.03	0.03	0.25	0.45	0.48			N/A	N/A
C-B	0.11	0.00	0.00	0.11	0.11			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.07	0.03	0.26	0.47	0.49			N/A	N/A
B-A	0.05	0.03	0.25	0.46	0.48			N/A	N/A
C-B	0.14	0.03	0.26	0.46	0.49			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.07	0.00	0.00	0.07	0.07			N/A	N/A
B-A	0.05	0.00	0.00	0.05	0.05			N/A	N/A
C-B	0.14	0.03	0.25	0.45	0.48			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.06	0.00	0.00	0.06	0.06			N/A	N/A
B-A	0.04	0.00	0.00	0.04	0.04			N/A	N/A
C-B	0.11	0.00	0.00	0.11	0.11			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.05	0.00	0.00	0.05	0.05			N/A	N/A
B-A	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-B	0.09	0.00	0.00	0.09	0.09			N/A	N/A

Appendix 69

Poplars Avenue (*west*) Modelling Reports

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.0.2.5947
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Filename: Poplars Avenue W 2025 and 2030.j9
Report generation date: 25/01/2018 11:56:04

Summary of junction performance

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
2025 Do Something						
Stream B-AC	0.1	6.68	0.10	0.1	6.63	0.10
Stream C-AB	0.0	6.37	0.02	0.0	6.26	0.03
2030 Do Something						
Stream B-AC	0.1	6.68	0.10	0.1	6.62	0.10
Stream C-AB	0.0	6.35	0.02	0.0	6.18	0.02

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	(untitled)
Location	
Site number	
Date	18/05/2016
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
✓		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025 Do Something	AM	ONE HOUR	07:45	09:15	15
D2	2025 Do Something	PM	ONE HOUR	16:45	18:15	15
D3	2030 Do Something	AM	ONE HOUR	07:45	09:15	15
D4	2030 Do Something	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2025 Do Something, AM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	3.24	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Cotswold Road		Major
B	Site		Minor
C	Poplars Avenue		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.30			38.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	2.20	79	51

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	486	0.084	0.211	0.133	0.302
1	B-C	603	0.087	0.221	-	-
1	C-B	596	0.218	0.218	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025 Do Something	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	69	100.000
B		✓	53	100.000
C		✓	13	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	69	0
	B	0	0	53
	C	0	13	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS
B-AC	0.10	6.68	0.1	0.5	A
C-AB	0.02	6.37	0.0	0.5	A
C-A					
A-B					
A-C					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-AC	40	599	0.067	40	0.1	6.433	A
C-AB	10	585	0.017	10	0.0	6.261	A
C-A	0			0			
A-B	52			52			
A-C	0			0			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-AC	48	598	0.080	48	0.1	6.539	A
C-AB	12	582	0.020	12	0.0	6.306	A
C-A	0			0			
A-B	62			62			
A-C	0			0			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-AC	58	597	0.098	58	0.1	6.684	A
C-AB	14	579	0.025	14	0.0	6.369	A
C-A	0			0			
A-B	76			76			
A-C	0			0			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-AC	58	597	0.098	58	0.1	6.684	A
C-AB	14	579	0.025	14	0.0	6.369	A
C-A	0			0			
A-B	76			76			
A-C	0			0			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-AC	48	598	0.080	48	0.1	6.544	A
C-AB	12	582	0.020	12	0.0	6.306	A
C-A	0			0			
A-B	62			62			
A-C	0			0			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-AC	40	599	0.067	40	0.1	6.440	A
C-AB	10	585	0.017	10	0.0	6.264	A
C-A	0			0			
A-B	52			52			
A-C	0			0			

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

08:00 - 08:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.09	0.03	0.26	0.47	0.50			N/A	N/A
C-AB	0.02	0.02	0.25	0.45	0.48			N/A	N/A

08:15 - 08:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.11	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	0.03	0.00	0.00	0.03	0.03			N/A	N/A

08:30 - 08:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.11	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.03	0.00	0.00	0.03	0.03			N/A	N/A

08:45 - 09:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.09	0.00	0.00	0.09	0.09			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

09:00 - 09:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

2025 Do Something, PM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	5.73	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2025 Do Something	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	10	100.000
B		✓	54	100.000
C		✓	17	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
	A	B	C	
From	A	0	10	0
	B	0	0	54
	C	0	17	0

Vehicle Mix

Heavy Vehicle Percentages

From	To		
	A	B	C
A	0	0	0
B	0	0	0
C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS
B-AC	0.10	6.63	0.1	0.5	A
C-AB	0.03	6.26	0.0	0.5	A
C-A					
A-B					
A-C					

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-AC	41	603	0.067	40	0.1	6.397	A
C-AB	13	594	0.022	13	0.0	6.189	A
C-A	0			0			
A-B	8			8			
A-C	0			0			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-AC	49	603	0.081	48	0.1	6.495	A
C-AB	15	594	0.026	15	0.0	6.219	A
C-A	0			0			
A-B	9			9			
A-C	0			0			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-AC	59	603	0.099	59	0.1	6.628	A
C-AB	19	594	0.032	19	0.0	6.261	A
C-A	0			0			
A-B	11			11			
A-C	0			0			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-AC	59	603	0.099	59	0.1	6.628	A
C-AB	19	594	0.032	19	0.0	6.261	A
C-A	0			0			
A-B	11			11			
A-C	0			0			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-AC	49	603	0.081	49	0.1	6.497	A
C-AB	15	594	0.026	15	0.0	6.220	A
C-A	0			0			
A-B	9			9			
A-C	0			0			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-AC	41	603	0.067	41	0.1	6.404	A
C-AB	13	594	0.022	13	0.0	6.192	A
C-A	0			0			
A-B	8			8			
A-C	0			0			

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

17:00 - 17:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.09	0.03	0.26	0.47	0.50			N/A	N/A
C-AB	0.03	0.03	0.25	0.45	0.48			N/A	N/A

17:15 - 17:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.11	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	0.03	0.00	0.00	0.03	0.03			N/A	N/A

17:30 - 17:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.11	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.03	0.00	0.00	0.03	0.03			N/A	N/A

17:45 - 18:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.09	0.00	0.00	0.09	0.09			N/A	N/A
C-AB	0.03	0.00	0.00	0.03	0.03			N/A	N/A

18:00 - 18:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

2030 Do Something, AM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	3.26	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2030 Do Something	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	67	100.000
B		✓	53	100.000
C		✓	12	100.000

Origin-Destination Data

Demand (Veh/hr)

From	To		
	A	B	C
A	0	67	0
B	0	0	53
C	0	12	0

Vehicle Mix

Heavy Vehicle Percentages

From	To		
	A	B	C
A	0	0	0
B	0	0	0
C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS
B-AC	0.10	6.68	0.1	0.5	A
C-AB	0.02	6.35	0.0	0.5	A
C-A					
A-B					
A-C					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-AC	40	599	0.067	40	0.1	6.432	A
C-AB	9	585	0.015	9	0.0	6.249	A
C-A	0			0			
A-B	50			50			
A-C	0			0			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-AC	48	598	0.080	48	0.1	6.537	A
C-AB	11	583	0.019	11	0.0	6.292	A
C-A	0			0			
A-B	60			60			
A-C	0			0			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-AC	58	597	0.098	58	0.1	6.681	A
C-AB	13	580	0.023	13	0.0	6.351	A
C-A	0			0			
A-B	74			74			
A-C	0			0			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-AC	58	597	0.098	58	0.1	6.681	A
C-AB	13	580	0.023	13	0.0	6.351	A
C-A	0			0			
A-B	74			74			
A-C	0			0			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-AC	48	598	0.080	48	0.1	6.542	A
C-AB	11	583	0.019	11	0.0	6.292	A
C-A	0			0			
A-B	60			60			
A-C	0			0			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-AC	40	599	0.067	40	0.1	6.441	A
C-AB	9	585	0.015	9	0.0	6.250	A
C-A	0			0			
A-B	50			50			
A-C	0			0			

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

08:00 - 08:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.09	0.03	0.26	0.47	0.50			N/A	N/A
C-AB	0.02	0.02	0.25	0.45	0.48			N/A	N/A

08:15 - 08:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.11	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

08:30 - 08:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.11	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

08:45 - 09:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.09	0.00	0.00	0.09	0.09			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

09:00 - 09:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

2030 Do Something, PM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	5.21	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2030 Do Something	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	16	100.000
B		✓	53	100.000
C		✓	9	100.000

Origin-Destination Data

Demand (Veh/hr)

From	To		
	A	B	C
A	0	16	0
B	0	0	53
C	0	9	0

Vehicle Mix

Heavy Vehicle Percentages

From	To		
	A	B	C
A	0	0	0
B	0	0	0
C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS
B-AC	0.10	6.62	0.1	0.5	A
C-AB	0.02	6.18	0.0	0.5	A
C-A					
A-B					
A-C					

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-AC	40	602	0.066	40	0.1	6.393	A
C-AB	7	593	0.011	7	0.0	6.136	A
C-A	0			0			
A-B	12			12			
A-C	0			0			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-AC	48	602	0.079	48	0.1	6.490	A
C-AB	8	593	0.014	8	0.0	6.155	A
C-A	0			0			
A-B	14			14			
A-C	0			0			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-AC	58	602	0.097	58	0.1	6.621	A
C-AB	10	592	0.017	10	0.0	6.182	A
C-A	0			0			
A-B	18			18			
A-C	0			0			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-AC	58	602	0.097	58	0.1	6.621	A
C-AB	10	592	0.017	10	0.0	6.182	A
C-A	0			0			
A-B	18			18			
A-C	0			0			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-AC	48	602	0.079	48	0.1	6.492	A
C-AB	8	593	0.014	8	0.0	6.156	A
C-A	0			0			
A-B	14			14			
A-C	0			0			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	LOS
B-AC	40	602	0.066	40	0.1	6.402	A
C-AB	7	593	0.011	7	0.0	6.136	A
C-A	0			0			
A-B	12			12			
A-C	0			0			

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

17:00 - 17:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.09	0.03	0.26	0.47	0.50			N/A	N/A
C-AB	0.01	0.01	0.25	0.45	0.48			N/A	N/A

17:15 - 17:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.11	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

17:30 - 17:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.11	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

17:45 - 18:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.09	0.00	0.00	0.09	0.09			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

18:00 - 18:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

Appendix 70

Mill Lane/Delph Lane Modelling Reports

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.0.2.5947
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Filename: Mill Lane 2025 and 2030.j9
Report generation date: 25/01/2018 22:39:47

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2025 Do Something						
Stream B-C	0.0	6.05	0.02	0.0	6.37	0.01
Stream B-A	0.7	16.88	0.41	0.3	14.60	0.21
Stream C-AB	0.0	6.82	0.01	0.1	7.76	0.07
2030 Do Something						
Stream B-C	0.0	6.34	0.02	0.0	6.58	0.01
Stream B-A	0.8	18.94	0.44	0.3	16.43	0.23
Stream C-AB	0.0	7.07	0.01	0.1	7.85	0.07
2030 Do Something Through Route						
Stream B-C	0.0	6.53	0.02	0.0	6.64	0.01
Stream B-A	0.9	20.89	0.47	0.3	16.85	0.23
Stream C-AB	0.0	7.21	0.01	0.1	7.89	0.07

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	(untitled)
Location	
Site number	
Date	18/05/2016
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
✓		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025 Do Something	AM	ONE HOUR	07:45	09:15	15
D2	2025 Do Something	PM	ONE HOUR	16:45	18:15	15
D3	2030 Do Something	AM	ONE HOUR	07:45	09:15	15
D4	2030 Do Something	PM	ONE HOUR	16:45	18:15	15
D5	2030 Do Something Through Route	AM	ONE HOUR	07:45	09:15	15
D6	2030 Do Something Through Route	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2025 Do Something, AM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Mill Lane/Delph Lane	T-Junction	Two-way	2.11	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Mill Lane S		Major
B	Mill Lane/Site		Minor
C	Delph Lane		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.30			80.0	✓	1.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane Width (Left) (m)	Lane Width (Right) (m)	Visibility to left (m)	Visibility to right (m)
B	Two lanes	5.00	3.80	42	56

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	560	0.096	0.243	0.153	0.348
1	B-C	791	0.114	0.289	-	-
1	C-B	620	0.227	0.227	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025 Do Something	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	377	100.000
B		✓	147	100.000
C		✓	609	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	39	338
	B	135	0	12
	C	603	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	0.02	6.05	0.0	0.5	A
B-A	0.41	16.88	0.7	3.2	C
C-AB	0.01	6.82	0.0	0.5	A
C-A					
A-B					
A-C					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	9	671	0.013	9	0.0	5.433	A
B-A	102	425	0.239	100	0.3	11.065	B
C-AB	5	560	0.008	5	0.0	6.484	A
C-A	454			454			
A-B	29			29			
A-C	254			254			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	11	645	0.017	11	0.0	5.671	A
B-A	121	398	0.305	121	0.4	12.959	B
C-AB	5	549	0.010	5	0.0	6.624	A
C-A	542			542			
A-B	35			35			
A-C	304			304			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	13	608	0.022	13	0.0	6.050	A
B-A	149	362	0.411	148	0.7	16.764	C
C-AB	7	535	0.013	7	0.0	6.819	A
C-A	664			664			
A-B	43			43			
A-C	372			372			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	13	608	0.022	13	0.0	6.055	A
B-A	149	362	0.411	149	0.7	16.884	C
C-AB	7	535	0.013	7	0.0	6.819	A
C-A	664			664			
A-B	43			43			
A-C	372			372			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	11	645	0.017	11	0.0	5.680	A
B-A	121	398	0.305	122	0.4	13.098	B
C-AB	5	549	0.010	5	0.0	6.624	A
C-A	542			542			
A-B	35			35			
A-C	304			304			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	9	671	0.013	9	0.0	5.442	A
B-A	102	425	0.239	102	0.3	11.186	B
C-AB	5	560	0.008	5	0.0	6.487	A
C-A	454			454			
A-B	29			29			
A-C	254			254			

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.31	0.00	0.00	0.31	0.31			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.02	0.02	0.25	0.45	0.48			N/A	N/A
B-A	0.43	0.00	0.00	0.43	0.43			N/A	N/A
C-AB	0.01	0.01	0.25	0.45	0.48			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.02	0.00	0.00	0.02	0.02			N/A	N/A
B-A	0.68	0.03	0.26	0.68	0.68			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.02	0.00	0.00	0.02	0.02			N/A	N/A
B-A	0.69	0.03	0.29	1.40	3.22			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.02	0.00	0.00	0.02	0.02			N/A	N/A
B-A	0.45	0.04	0.37	1.18	1.34			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.32	0.03	0.27	0.49	0.82			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

2025 Do Something, PM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Mill Lane/Delph Lane	T-Junction	Two-way	0.92	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2025 Do Something	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	637	100.000
B		✓	65	100.000
C		✓	512	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	81	556
	B	58	0	7
	C	484	28	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	0.01	6.37	0.0	0.5	A
B-A	0.21	14.60	0.3	1.2	B
C-AB	0.07	7.76	0.1	0.5	A
C-A					
A-B					
A-C					

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	5	645	0.008	5	0.0	5.630	A
B-A	44	390	0.112	43	0.1	10.380	B
C-AB	22	527	0.041	22	0.0	7.126	A
C-A	364			364			
A-B	61			61			
A-C	419			419			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	6	615	0.010	6	0.0	5.916	A
B-A	52	356	0.146	52	0.2	11.822	B
C-AB	26	513	0.051	26	0.1	7.399	A
C-A	434			434			
A-B	73			73			
A-C	500			500			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	8	573	0.013	8	0.0	6.372	A
B-A	64	310	0.206	64	0.3	14.560	B
C-AB	33	497	0.067	33	0.1	7.762	A
C-A	531			531			
A-B	89			89			
A-C	612			612			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	8	572	0.013	8	0.0	6.374	A
B-A	64	310	0.206	64	0.3	14.602	B
C-AB	33	497	0.067	33	0.1	7.764	A
C-A	531			531			
A-B	89			89			
A-C	612			612			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	6	614	0.010	6	0.0	5.918	A
B-A	52	356	0.146	52	0.2	11.865	B
C-AB	26	513	0.051	26	0.1	7.402	A
C-A	434			434			
A-B	73			73			
A-C	500			500			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	5	644	0.008	5	0.0	5.635	A
B-A	44	389	0.112	44	0.1	10.424	B
C-AB	22	527	0.041	22	0.0	7.134	A
C-A	364			364			
A-B	61			61			
A-C	419			419			

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.12	0.00	0.00	0.12	0.12			N/A	N/A
C-AB	0.04	0.00	0.00	0.04	0.04			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.01	0.25	0.45	0.48			N/A	N/A
B-A	0.17	0.00	0.00	0.17	0.17			N/A	N/A
C-AB	0.06	0.03	0.25	0.45	0.48			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.25	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	0.08	0.03	0.26	0.47	0.49			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.26	0.03	0.30	0.88	1.22			N/A	N/A
C-AB	0.08	0.00	0.00	0.08	0.08			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.17	0.00	0.00	0.17	0.17			N/A	N/A
C-AB	0.06	0.00	0.00	0.06	0.06			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.13	0.00	0.00	0.13	0.13			N/A	N/A
C-AB	0.04	0.00	0.00	0.04	0.04			N/A	N/A

2030 Do Something, AM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Mill Lane/Delph Lane	T-Junction	Two-way	2.23	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2030 Do Something	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	452	100.000
B		✓	149	100.000
C		✓	614	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	39	413
	B	137	0	12
	C	608	6	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	0.02	6.34	0.0	0.5	A
B-A	0.44	18.94	0.8	3.6	C
C-AB	0.01	7.07	0.0	0.5	A
C-A					
A-B					
A-C					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	9	654	0.014	9	0.0	5.580	A
B-A	103	410	0.251	102	0.3	11.626	B
C-AB	5	547	0.008	5	0.0	6.636	A
C-A	458			458			
A-B	29			29			
A-C	311			311			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	11	624	0.017	11	0.0	5.867	A
B-A	123	381	0.323	123	0.5	13.897	B
C-AB	5	534	0.010	5	0.0	6.813	A
C-A	547			547			
A-B	35			35			
A-C	371			371			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	13	581	0.023	13	0.0	6.335	A
B-A	151	341	0.443	150	0.8	18.716	C
C-AB	7	516	0.013	7	0.0	7.065	A
C-A	669			669			
A-B	43			43			
A-C	455			455			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	13	581	0.023	13	0.0	6.341	A
B-A	151	341	0.443	151	0.8	18.936	C
C-AB	7	516	0.013	7	0.0	7.068	A
C-A	669			669			
A-B	43			43			
A-C	455			455			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	11	623	0.017	11	0.0	5.877	A
B-A	123	381	0.323	124	0.5	14.084	B
C-AB	5	534	0.010	5	0.0	6.816	A
C-A	547			547			
A-B	35			35			
A-C	371			371			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	9	653	0.014	9	0.0	5.590	A
B-A	103	410	0.251	104	0.3	11.768	B
C-AB	5	547	0.008	5	0.0	6.639	A
C-A	458			458			
A-B	29			29			
A-C	311			311			

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.33	0.00	0.00	0.33	0.33			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.02	0.02	0.25	0.45	0.48			N/A	N/A
B-A	0.47	0.00	0.00	0.47	0.47			N/A	N/A
C-AB	0.01	0.01	0.25	0.45	0.48			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.02	0.00	0.00	0.02	0.02			N/A	N/A
B-A	0.77	0.03	0.26	0.77	0.78			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.02	0.00	0.00	0.02	0.02			N/A	N/A
B-A	0.78	0.03	0.29	1.43	3.64			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.02	0.00	0.00	0.02	0.02			N/A	N/A
B-A	0.49	0.04	0.43	1.26	1.38			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.34	0.03	0.30	0.88	1.19			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

2030 Do Something, PM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Mill Lane/Delph Lane	T-Junction	Two-way	0.94	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2030 Do Something	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	683	100.000
B		✓	66	100.000
C		✓	594	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	81	602
	B	59	0	7
	C	565	29	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	0.01	6.58	0.0	0.5	A
B-A	0.23	16.43	0.3	1.3	C
C-AB	0.07	7.85	0.1	0.5	A
C-A					
A-B					
A-C					

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	5	634	0.008	5	0.0	5.728	A
B-A	44	371	0.120	44	0.1	10.972	B
C-AB	23	522	0.043	22	0.0	7.203	A
C-A	425			425			
A-B	61			61			
A-C	453			453			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	6	601	0.010	6	0.0	6.049	A
B-A	53	335	0.158	53	0.2	12.760	B
C-AB	28	509	0.054	28	0.1	7.482	A
C-A	506			506			
A-B	73			73			
A-C	541			541			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	8	555	0.014	8	0.0	6.574	A
B-A	65	284	0.229	65	0.3	16.369	C
C-AB	35	494	0.071	35	0.1	7.843	A
C-A	619			619			
A-B	89			89			
A-C	663			663			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	8	555	0.014	8	0.0	6.577	A
B-A	65	284	0.229	65	0.3	16.431	C
C-AB	35	494	0.071	35	0.1	7.845	A
C-A	619			619			
A-B	89			89			
A-C	663			663			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	6	601	0.010	6	0.0	6.055	A
B-A	53	335	0.158	53	0.2	12.817	B
C-AB	28	509	0.054	28	0.1	7.489	A
C-A	506			506			
A-B	73			73			
A-C	541			541			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	5	633	0.008	5	0.0	5.734	A
B-A	44	371	0.120	45	0.1	11.026	B
C-AB	23	522	0.043	23	0.0	7.208	A
C-A	425			425			
A-B	61			61			
A-C	453			453			

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.13	0.00	0.00	0.13	0.13			N/A	N/A
C-AB	0.05	0.00	0.00	0.05	0.05			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.01	0.25	0.45	0.48			N/A	N/A
B-A	0.19	0.00	0.00	0.19	0.19			N/A	N/A
C-AB	0.06	0.03	0.25	0.45	0.48			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.29	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	0.08	0.03	0.26	0.47	0.50			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.29	0.03	0.31	1.04	1.34			N/A	N/A
C-AB	0.08	0.00	0.00	0.08	0.08			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.19	0.00	0.00	0.19	0.19			N/A	N/A
C-AB	0.06	0.00	0.00	0.06	0.06			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.14	0.00	0.00	0.14	0.14			N/A	N/A
C-AB	0.05	0.00	0.00	0.05	0.05			N/A	N/A

2030 Do Something Through Route, AM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Mill Lane/Delph Lane	T-Junction	Two-way	2.30	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2030 Do Something Through Route	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	496	100.000
B		✓	149	100.000
C		✓	650	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	39	457
	B	137	0	12
	C	644	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	0.02	6.53	0.0	0.5	A
B-A	0.47	20.89	0.9	4.0	C
C-AB	0.01	7.21	0.0	0.5	A
C-A					
A-B					
A-C					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	9	644	0.014	9	0.0	5.671	A
B-A	103	398	0.259	102	0.3	12.098	B
C-AB	5	540	0.008	5	0.0	6.726	A
C-A	485			485			
A-B	29			29			
A-C	344			344			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	11	612	0.018	11	0.0	5.991	A
B-A	123	366	0.336	123	0.5	14.723	B
C-AB	5	525	0.010	5	0.0	6.925	A
C-A	579			579			
A-B	35			35			
A-C	411			411			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	13	565	0.023	13	0.0	6.524	A
B-A	151	323	0.467	149	0.8	20.587	C
C-AB	7	506	0.013	7	0.0	7.211	A
C-A	709			709			
A-B	43			43			
A-C	503			503			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	13	564	0.023	13	0.0	6.532	A
B-A	151	323	0.467	151	0.9	20.892	C
C-AB	7	506	0.013	7	0.0	7.211	A
C-A	709			709			
A-B	43			43			
A-C	503			503			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	11	611	0.018	11	0.0	6.001	A
B-A	123	366	0.336	125	0.5	14.959	B
C-AB	5	525	0.010	5	0.0	6.925	A
C-A	579			579			
A-B	35			35			
A-C	411			411			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	9	643	0.014	9	0.0	5.681	A
B-A	103	398	0.259	104	0.4	12.265	B
C-AB	5	540	0.008	5	0.0	6.726	A
C-A	485			485			
A-B	29			29			
A-C	344			344			

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.34	0.00	0.00	0.34	0.34			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.02	0.02	0.25	0.45	0.48			N/A	N/A
B-A	0.49	0.00	0.00	0.49	0.49			N/A	N/A
C-AB	0.01	0.01	0.25	0.45	0.48			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.02	0.00	0.00	0.02	0.02			N/A	N/A
B-A	0.84	0.03	0.27	0.84	1.40			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.02	0.00	0.00	0.02	0.02			N/A	N/A
B-A	0.86	0.03	0.29	1.48	3.98			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.02	0.00	0.00	0.02	0.02			N/A	N/A
B-A	0.52	0.05	0.47	1.29	1.40			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.36	0.03	0.32	1.04	1.27			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

2030 Do Something Through Route, PM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Mill Lane/Delph Lane	T-Junction	Two-way	0.94	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2030 Do Something Through Route	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	697	100.000
B		✓	66	100.000
C		✓	604	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	81	616
	B	59	0	7
	C	575	29	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	0.01	6.64	0.0	0.5	A
B-A	0.23	16.85	0.3	1.4	C
C-AB	0.07	7.89	0.1	0.5	A
C-A					
A-B					
A-C					

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	5	630	0.008	5	0.0	5.757	A
B-A	44	368	0.121	44	0.1	11.098	B
C-AB	23	520	0.044	22	0.0	7.232	A
C-A	432			432			
A-B	61			61			
A-C	464			464			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	6	597	0.011	6	0.0	6.089	A
B-A	53	330	0.161	53	0.2	12.974	B
C-AB	28	506	0.055	28	0.1	7.517	A
C-A	515			515			
A-B	73			73			
A-C	554			554			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	8	550	0.014	8	0.0	6.633	A
B-A	65	279	0.233	65	0.3	16.781	C
C-AB	35	492	0.072	35	0.1	7.885	A
C-A	630			630			
A-B	89			89			
A-C	678			678			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	8	550	0.014	8	0.0	6.636	A
B-A	65	279	0.233	65	0.3	16.849	C
C-AB	35	492	0.072	35	0.1	7.888	A
C-A	630			630			
A-B	89			89			
A-C	678			678			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	6	597	0.011	6	0.0	6.092	A
B-A	53	330	0.161	53	0.2	13.027	B
C-AB	28	506	0.055	28	0.1	7.524	A
C-A	515			515			
A-B	73			73			
A-C	554			554			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	5	630	0.008	5	0.0	5.763	A
B-A	44	368	0.121	45	0.1	11.151	B
C-AB	23	520	0.044	23	0.0	7.239	A
C-A	432			432			
A-B	61			61			
A-C	464			464			

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.14	0.00	0.00	0.14	0.14			N/A	N/A
C-AB	0.05	0.00	0.00	0.05	0.05			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.01	0.25	0.45	0.48			N/A	N/A
B-A	0.19	0.00	0.00	0.19	0.19			N/A	N/A
C-AB	0.06	0.03	0.25	0.45	0.48			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.30	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	0.08	0.03	0.26	0.47	0.50			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.30	0.03	0.31	1.06	1.36			N/A	N/A
C-AB	0.08	0.00	0.00	0.08	0.08			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.19	0.00	0.00	0.19	0.19			N/A	N/A
C-AB	0.06	0.00	0.00	0.06	0.06			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.14	0.00	0.00	0.14	0.14			N/A	N/A
C-AB	0.05	0.00	0.00	0.05	0.05			N/A	N/A

Appendix 71

Birch Avenue/A49 Winwick Road Modelling Reports

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.0.2.5947
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Filename: 1107 Birch Ave jw A49 AM PM 2025 and 2030.j9
Report generation date: 25/01/2018 11:37:28

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2025 Do Something						
Stream B-AC	0.2	13.79	0.14	0.1	8.48	0.06
Stream C-B	0.0	0.00	0.00	0.0	0.00	0.00
2030 Do Something						
Stream B-AC	0.2	14.64	0.15	0.1	8.70	0.06
Stream C-B	0.0	0.00	0.00	0.0	0.00	0.00
2030 Do Something Through Route						
Stream B-AC	0.2	15.41	0.15	0.1	8.82	0.06
Stream C-B	0.0	0.00	0.00	0.0	0.00	0.00

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	(untitled)
Location	
Site number	
Date	27/06/2016
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
✓		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025 Do Something	AM	ONE HOUR	07:45	09:15	15
D2	2025 Do Something	PM	ONE HOUR	16:45	18:15	15
D3	2030 Do Something	AM	ONE HOUR	07:45	09:15	15
D4	2030 Do Something	PM	ONE HOUR	16:45	18:15	15
D5	2030 Do Something Through Route	AM	ONE HOUR	07:45	09:15	15
D6	2030 Do Something Through Route	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2025 Do Something, AM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Birch Avenue jw A49	T-Junction	Two-way	0.21	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A49 North	(left turn in)	Major
B	Birch Ave	(left turn out only)	Minor
C	A49 South	southbound only	Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	14.90			250.0		-

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	4.54	250	100

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	707	0.079	0.200	0.126	0.285
1	B-C	793	0.074	0.188	-	-
1	C-B	719	0.171	0.171	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025 Do Something	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	2386	100.000
B		✓	37	100.000
C		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	27	2359
	B	0	0	37
	C	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	0.14	13.79	0.2	0.5	B
C-A					
C-B	0.00	0.00	0.0	~1	A
A-B					
A-C					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	28	457	0.061	28	0.1	8.378	A
C-A	0			0			
C-B	0	412	0.000	0	0.0	0.000	A
A-B	20			20			
A-C	1776			1776			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	33	392	0.085	33	0.1	10.034	B
C-A	0			0			
C-B	0	353	0.000	0	0.0	0.000	A
A-B	24			24			
A-C	2121			2121			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	41	302	0.135	40	0.2	13.771	B
C-A	0			0			
C-B	0	270	0.000	0	0.0	0.000	A
A-B	30			30			
A-C	2597			2597			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	41	302	0.135	41	0.2	13.795	B
C-A	0			0			
C-B	0	270	0.000	0	0.0	0.000	A
A-B	30			30			
A-C	2597			2597			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	33	392	0.085	34	0.1	10.055	B
C-A	0			0			
C-B	0	353	0.000	0	0.0	0.000	A
A-B	24			24			
A-C	2121			2121			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	28	457	0.061	28	0.1	8.393	A
C-A	0			0			
C-B	0	412	0.000	0	0.0	0.000	A
A-B	20			20			
A-C	1776			1776			

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.06	0.00	0.00	0.06	0.06			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.09	0.00	0.00	0.09	0.09			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.15	0.03	0.26	0.47	0.50			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.15	0.03	0.25	0.45	0.48			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.09	0.00	0.00	0.09	0.09			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

2025 Do Something, PM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Birch Avenue jw A49	T-Junction	Two-way	0.12	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2025 Do Something	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1673	100.000
B		✓	23	100.000
C		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	30	1643
	B	0	0	23
	C	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

From	To		
	A	B	C
A	0	0	0
B	0	0	0
C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	0.06	8.48	0.1	0.5	A
C-A					
C-B	0.00	0.00	0.0	~1	A
A-B					
A-C					

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	17	558	0.031	17	0.0	6.651	A
C-A	0			0			
C-B	0	504	0.000	0	0.0	0.000	A
A-B	23			23			
A-C	1237			1237			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	21	513	0.040	21	0.0	7.314	A
C-A	0			0			
C-B	0	462	0.000	0	0.0	0.000	A
A-B	27			27			
A-C	1477			1477			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	25	450	0.056	25	0.1	8.478	A
C-A	0			0			
C-B	0	404	0.000	0	0.0	0.000	A
A-B	33			33			
A-C	1809			1809			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	25	450	0.056	25	0.1	8.480	A
C-A	0			0			
C-B	0	404	0.000	0	0.0	0.000	A
A-B	33			33			
A-C	1809			1809			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	21	513	0.040	21	0.0	7.316	A
C-A	0			0			
C-B	0	462	0.000	0	0.0	0.000	A
A-B	27			27			
A-C	1477			1477			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	17	558	0.031	17	0.0	6.654	A
C-A	0			0			
C-B	0	504	0.000	0	0.0	0.000	A
A-B	23			23			
A-C	1237			1237			

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.04	0.03	0.25	0.45	0.48			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.06	0.03	0.26	0.46	0.49			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.06	0.00	0.00	0.06	0.06			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.04	0.00	0.00	0.04	0.04			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

2030 Do Something, AM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Birch Avenue jw A49	T-Junction	Two-way	0.22	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2030 Do Something	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	2453	100.000
B		✓	38	100.000
C		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To		
	A	B	C
A	0	26	2427
B	0	0	38
C	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

From	To		
	A	B	C
A	0	0	0
B	0	0	0
C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	0.15	14.64	0.2	0.5	B
C-A					
C-B	0.00	0.00	0.0	~1	A
A-B					
A-C					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	29	447	0.064	28	0.1	8.585	A
C-A	0			0			
C-B	0	404	0.000	0	0.0	0.000	A
A-B	20			20			
A-C	1827			1827			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	34	380	0.090	34	0.1	10.392	B
C-A	0			0			
C-B	0	342	0.000	0	0.0	0.000	A
A-B	23			23			
A-C	2182			2182			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	42	288	0.145	42	0.2	14.611	B
C-A	0			0			
C-B	0	258	0.000	0	0.0	0.000	A
A-B	29			29			
A-C	2672			2672			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	42	288	0.145	42	0.2	14.643	B
C-A	0			0			
C-B	0	258	0.000	0	0.0	0.000	A
A-B	29			29			
A-C	2672			2672			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	34	380	0.090	34	0.1	10.414	B
C-A	0			0			
C-B	0	342	0.000	0	0.0	0.000	A
A-B	23			23			
A-C	2182			2182			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	29	447	0.064	29	0.1	8.600	A
C-A	0			0			
C-B	0	404	0.000	0	0.0	0.000	A
A-B	20			20			
A-C	1827			1827			

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.10	0.00	0.00	0.10	0.10			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.17	0.03	0.26	0.47	0.50			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.17	0.03	0.25	0.45	0.48			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.10	0.00	0.00	0.10	0.10			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

2030 Do Something, PM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Birch Avenue jw A49	T-Junction	Two-way	0.11	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2030 Do Something	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1724	100.000
B		✓	23	100.000
C		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To		
	A	B	C
A	0	30	1694
B	0	0	23
C	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

From	To		
	A	B	C
A	0	0	0
B	0	0	0
C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	0.06	8.70	0.1	0.5	A
C-A					
C-B	0.00	0.00	0.0	~1	A
A-B					
A-C					

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	17	551	0.031	17	0.0	6.741	A
C-A	0			0			
C-B	0	497	0.000	0	0.0	0.000	A
A-B	23			23			
A-C	1275			1275			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	21	504	0.041	21	0.0	7.445	A
C-A	0			0			
C-B	0	454	0.000	0	0.0	0.000	A
A-B	27			27			
A-C	1523			1523			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	25	439	0.058	25	0.1	8.695	A
C-A	0			0			
C-B	0	395	0.000	0	0.0	0.000	A
A-B	33			33			
A-C	1865			1865			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	25	439	0.058	25	0.1	8.696	A
C-A	0			0			
C-B	0	395	0.000	0	0.0	0.000	A
A-B	33			33			
A-C	1865			1865			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	21	504	0.041	21	0.0	7.447	A
C-A	0			0			
C-B	0	454	0.000	0	0.0	0.000	A
A-B	27			27			
A-C	1523			1523			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	17	551	0.031	17	0.0	6.745	A
C-A	0			0			
C-B	0	497	0.000	0	0.0	0.000	A
A-B	23			23			
A-C	1275			1275			

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.04	0.03	0.25	0.45	0.48			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.06	0.03	0.26	0.46	0.49			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.06	0.00	0.00	0.06	0.06			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.04	0.00	0.00	0.04	0.04			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

2030 Do Something Through Route, AM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Birch Avenue jw A49	T-Junction	Two-way	0.23	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2030 Do Something Through Route	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	2513	100.000
B		✓	38	100.000
C		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To		
	A	B	C
A	0	27	2486
B	0	0	38
C	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

From	To		
	A	B	C
A	0	0	0
B	0	0	0
C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	0.15	15.41	0.2	0.5	C
C-A					
C-B	0.00	0.00	0.0	~1	A
A-B					
A-C					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	29	439	0.065	28	0.1	8.761	A
C-A	0			0			
C-B	0	396	0.000	0	0.0	0.000	A
A-B	20			20			
A-C	1872			1872			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	34	370	0.092	34	0.1	10.702	B
C-A	0			0			
C-B	0	333	0.000	0	0.0	0.000	A
A-B	24			24			
A-C	2235			2235			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	42	275	0.152	42	0.2	15.376	C
C-A	0			0			
C-B	0	247	0.000	0	0.0	0.000	A
A-B	30			30			
A-C	2737			2737			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	42	275	0.152	42	0.2	15.414	C
C-A	0			0			
C-B	0	247	0.000	0	0.0	0.000	A
A-B	30			30			
A-C	2737			2737			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	34	370	0.092	34	0.1	10.727	B
C-A	0			0			
C-B	0	333	0.000	0	0.0	0.000	A
A-B	24			24			
A-C	2235			2235			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	29	439	0.065	29	0.1	8.779	A
C-A	0			0			
C-B	0	396	0.000	0	0.0	0.000	A
A-B	20			20			
A-C	1872			1872			

Queue Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.10	0.00	0.00	0.10	0.10			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.18	0.03	0.26	0.47	0.50			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.18	0.03	0.25	0.45	0.48			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.10	0.00	0.00	0.10	0.10			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

2030 Do Something Through Route, PM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Birch Avenue jw A49	T-Junction	Two-way	0.11	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2030 Do Something Through Route	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1752	100.000
B		✓	23	100.000
C		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To		
	A	B	C
A	0	30	1722
B	0	0	23
C	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

From	To		
	A	B	C
A	0	0	0
B	0	0	0
C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	0.06	8.82	0.1	0.5	A
C-A					
C-B	0.00	0.00	0.0	~1	A
A-B					
A-C					

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	17	547	0.032	17	0.0	6.791	A
C-A	0			0			
C-B	0	494	0.000	0	0.0	0.000	A
A-B	23			23			
A-C	1296			1296			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	21	499	0.041	21	0.0	7.519	A
C-A	0			0			
C-B	0	450	0.000	0	0.0	0.000	A
A-B	27			27			
A-C	1548			1548			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	25	433	0.058	25	0.1	8.818	A
C-A	0			0			
C-B	0	390	0.000	0	0.0	0.000	A
A-B	33			33			
A-C	1896			1896			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	25	433	0.058	25	0.1	8.820	A
C-A	0			0			
C-B	0	390	0.000	0	0.0	0.000	A
A-B	33			33			
A-C	1896			1896			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	21	499	0.041	21	0.0	7.521	A
C-A	0			0			
C-B	0	450	0.000	0	0.0	0.000	A
A-B	27			27			
A-C	1548			1548			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	17	547	0.032	17	0.0	6.795	A
C-A	0			0			
C-B	0	494	0.000	0	0.0	0.000	A
A-B	23			23			
A-C	1296			1296			

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.04	0.03	0.25	0.45	0.48			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.06	0.03	0.26	0.47	0.49			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.06	0.00	0.00	0.06	0.06			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.04	0.00	0.00	0.04	0.04			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-B	0.00	0.00	0.00	0.00	0.00			N/A	N/A

Appendix 72

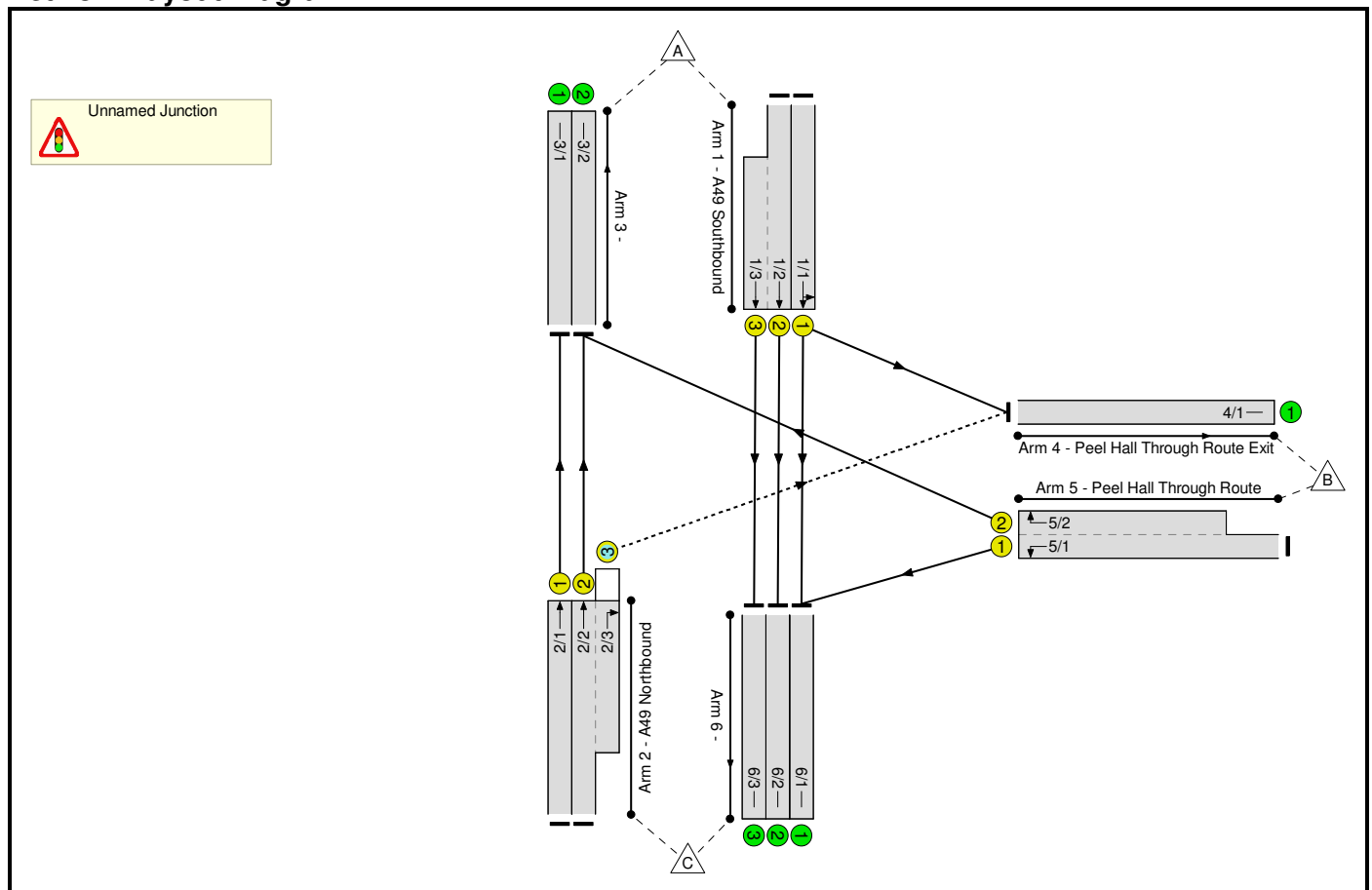
Poplars Avenue/A49 Modelling Reports

Full Input Data And Results
Full Input Data And Results

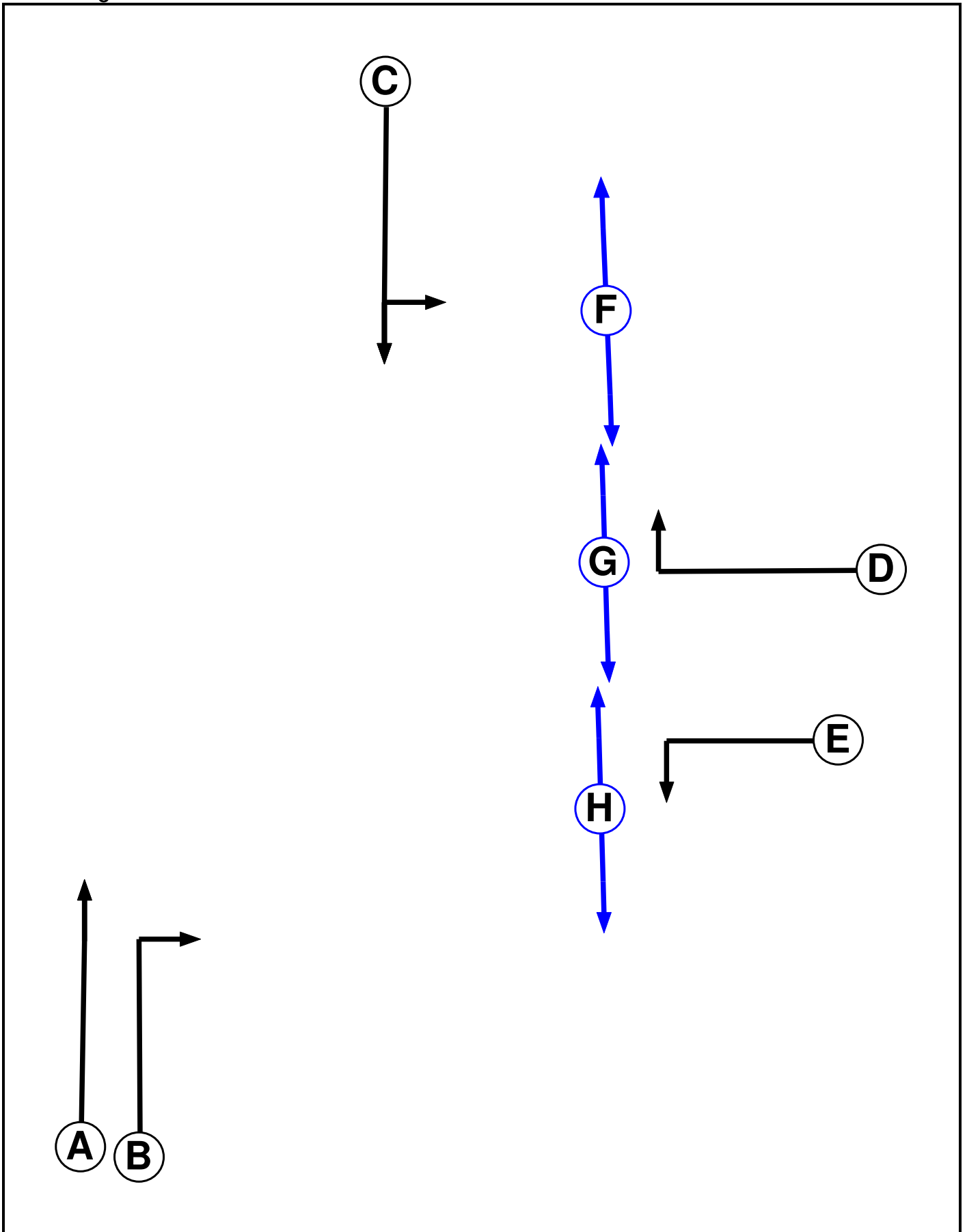
User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	A49 Junction - Three Lanes Southbound.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Pedestrian		8	8
G	Pedestrian		4	4
H	Pedestrian		5	5

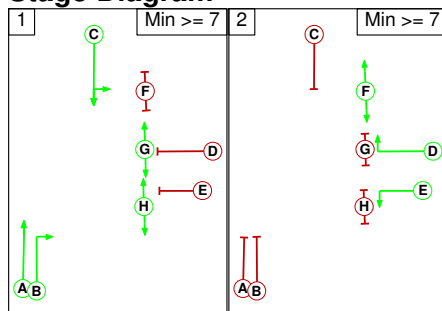
Phase Intergreens Matrix

Terminating Phase	Starting Phase							
	A	B	C	D	E	F	G	H
A	-	-	-	5	-	-	-	-
B	-	-	-	-	-	7	-	-
C	-	-	-	7	8	6	-	-
D	6	-	5	-	-	-	5	-
E	-	-	5	-	-	-	-	5
F	-	11	11	-	-	-	-	-
G	-	-	-	7	-	-	-	-
H	-	-	-	-	7	-	-	-

Phases in Stage

Stage No.	Phases in Stage
1	A B C G H
2	D E F

Stage Diagram



Phase Delays

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

Prohibited Stage Change

		To Stage	
		1	2
From Stage	1		8
	2	11	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Unnamed Junction											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
2/3 (A49 Northbound)	4/1 (Right)	1439	0	1/1	1.09	All	2.00	-	0.50	2	2.00
				1/2	1.09	All					

Full Input Data And Results

Lane Input Data

Junction: Unnamed Junction												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A49 Southbound)	U	C	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 4 Left	12.00
											Arm 6 Ahead	Inf
1/2 (A49 Southbound)	U	C	2	3	60.0	Geom	-	3.50	0.00	N	Arm 6 Ahead	Inf
1/3 (A49 Southbound)	U	C	2	3	9.6	Geom	-	3.50	0.00	N	Arm 6 Ahead	Inf
2/1 (A49 Northbound)	U	A	2	3	60.0	Geom	-	3.50	0.00	N	Arm 3 Ahead	Inf
2/2 (A49 Northbound)	U	A	2	3	60.0	Geom	-	3.50	0.00	N	Arm 3 Ahead	Inf
2/3 (A49 Northbound)	O	B	2	3	9.6	Geom	-	3.50	0.00	N	Arm 4 Right	12.00
3/1	U		2	3	60.0	Inf	-	-	-	-	-	-
3/2	U		2	3	60.0	Inf	-	-	-	-	-	-
4/1 (Peel Hall Through Route Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Peel Hall Through Route)	U	E	2	3	60.0	Geom	-	3.50	0.00	N	Arm 6 Left	12.00
5/2 (Peel Hall Through Route)	U	D	2	3	14.8	Geom	-	3.50	0.00	Y	Arm 3 Right	15.00
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/2	U		2	3	60.0	Inf	-	-	-	-	-	-
6/3	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM Actual Flows'	08:00	09:00	01:00	
2: 'PM Actual Flow'	17:00	18:00	01:00	

Full Input Data And Results

Scenario 1: 'AM Actual Flows' (FG1: 'AM Actual Flows', Plan 1: 'Network Control Plan 1')

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	106	2117	2223
	B	130	0	119	249
	C	1589	104	0	1693
	Tot.	1719	210	2236	4165

Traffic Lane Flows

Lane	Scenario 1: AM Actual Flows
Junction: Unnamed Junction	
1/1	752
1/2 (with short)	1471(In) 735(Out)
1/3 (short)	736
2/1	819
2/2 (with short)	874(In) 770(Out)
2/3 (short)	104
3/1	819
3/2	900
4/1	210
5/1 (with short)	249(In) 119(Out)
5/2 (short)	130
6/1	765
6/2	735
6/3	736

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A49 Southbound)	3.50	0.00	Y	Arm 4 Left	12.00	14.1 %	1931	1931
				Arm 6 Ahead	Inf	85.9 %		
1/2 (A49 Southbound)	3.50	0.00	N	Arm 6 Ahead	Inf	100.0 %	2105	2105
1/3 (A49 Southbound)	3.50	0.00	N	Arm 6 Ahead	Inf	100.0 %	2105	2105
2/1 (A49 Northbound)	3.50	0.00	N	Arm 3 Ahead	Inf	100.0 %	2105	2105
2/2 (A49 Northbound)	3.50	0.00	N	Arm 3 Ahead	Inf	100.0 %	2105	2105
2/3 (A49 Northbound)	3.50	0.00	N	Arm 4 Right	12.00	100.0 %	1871	1871
3/1	Infinite Saturation Flow						Inf	Inf
3/2	Infinite Saturation Flow						Inf	Inf
4/1 (Peel Hall Through Route Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Peel Hall Through Route)	3.50	0.00	N	Arm 6 Left	12.00	100.0 %	1871	1871
5/2 (Peel Hall Through Route)	3.50	0.00	Y	Arm 3 Right	15.00	100.0 %	1786	1786
6/1	Infinite Saturation Flow						Inf	Inf
6/2	Infinite Saturation Flow						Inf	Inf
6/3	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 2: 'PM Actual Flows' (FG2: 'PM Actual Flow', Plan 1: 'Network Control Plan 1')

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	211	1446	1657
	B	198	0	125	323
	C	2073	47	0	2120
	Tot.	2271	258	1571	4100

Traffic Lane Flows

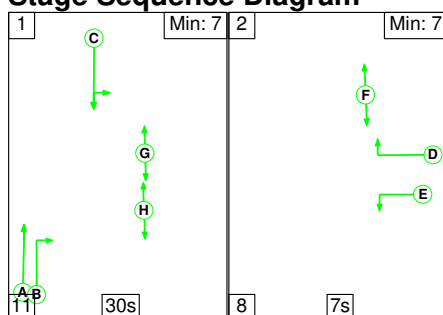
Lane	Scenario 2: PM Actual Flows
Junction: Unnamed Junction	
1/1	489
1/2 (with short)	1168(In) 584(Out)
1/3 (short)	584
2/1	1036
2/2 (with short)	1084(In) 1037(Out)
2/3 (short)	47
3/1	1036
3/2	1235
4/1	258
5/1 (with short)	323(In) 125(Out)
5/2 (short)	198
6/1	403
6/2	584
6/3	584

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A49 Southbound)	3.50	0.00	Y	Arm 4 Left	12.00	43.1 %	1864	1864
				Arm 6 Ahead	Inf	56.9 %		
1/2 (A49 Southbound)	3.50	0.00	N	Arm 6 Ahead	Inf	100.0 %	2105	2105
1/3 (A49 Southbound)	3.50	0.00	N	Arm 6 Ahead	Inf	100.0 %	2105	2105
2/1 (A49 Northbound)	3.50	0.00	N	Arm 3 Ahead	Inf	100.0 %	2105	2105
2/2 (A49 Northbound)	3.50	0.00	N	Arm 3 Ahead	Inf	100.0 %	2105	2105
2/3 (A49 Northbound)	3.50	0.00	N	Arm 4 Right	12.00	100.0 %	1871	1871
3/1	Infinite Saturation Flow						Inf	Inf
3/2	Infinite Saturation Flow						Inf	Inf
4/1 (Peel Hall Through Route Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Peel Hall Through Route)	3.50	0.00	N	Arm 6 Left	12.00	100.0 %	1871	1871
5/2 (Peel Hall Through Route)	3.50	0.00	Y	Arm 3 Right	15.00	100.0 %	1786	1786
6/1	Infinite Saturation Flow						Inf	Inf
6/2	Infinite Saturation Flow						Inf	Inf
6/3	Infinite Saturation Flow						Inf	Inf

Scenario 1: 'AM Actual Flows' (FG1: 'AM Actual Flows', Plan 1: 'Network Control Plan 1')

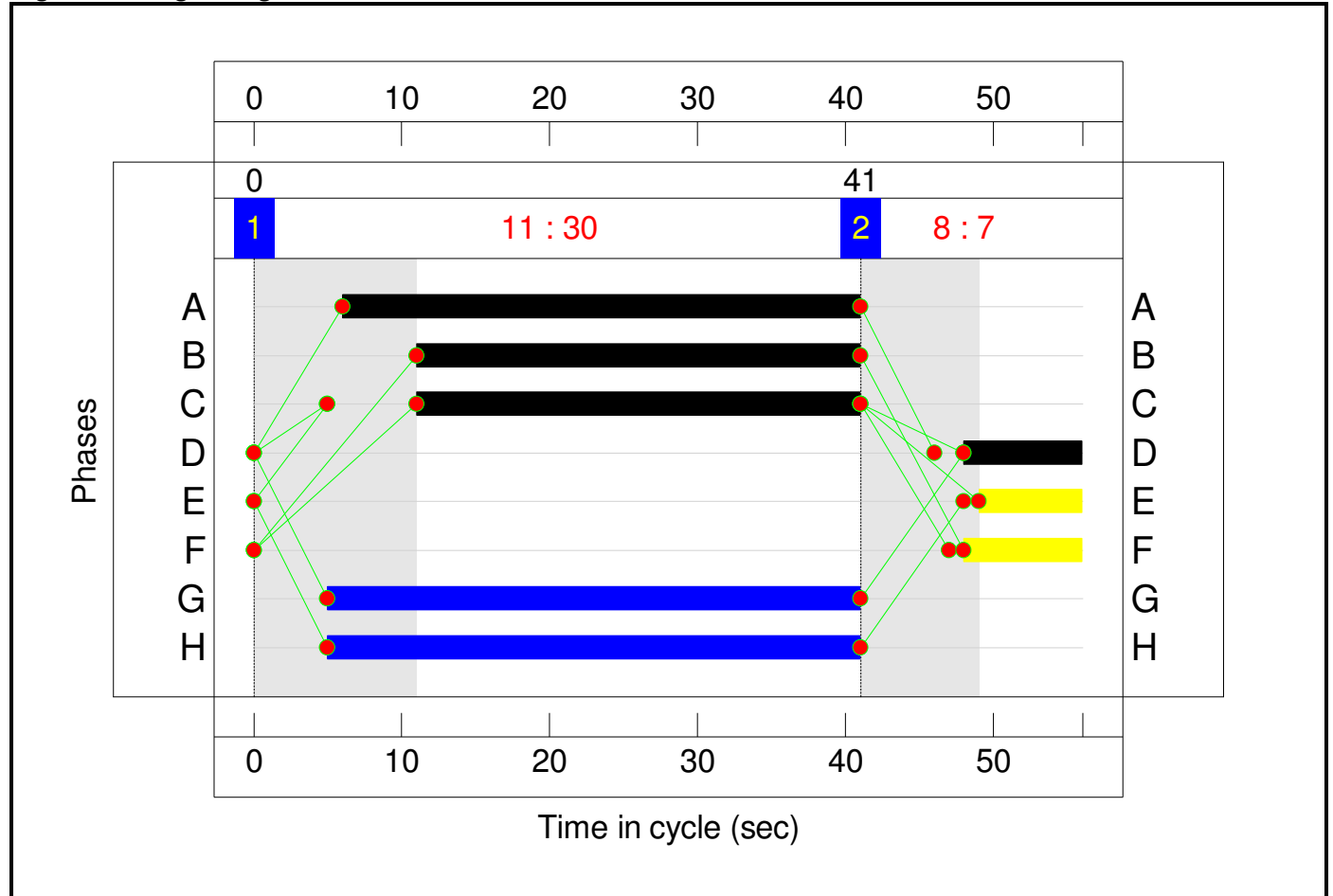
Stage Sequence Diagram



Stage Timings

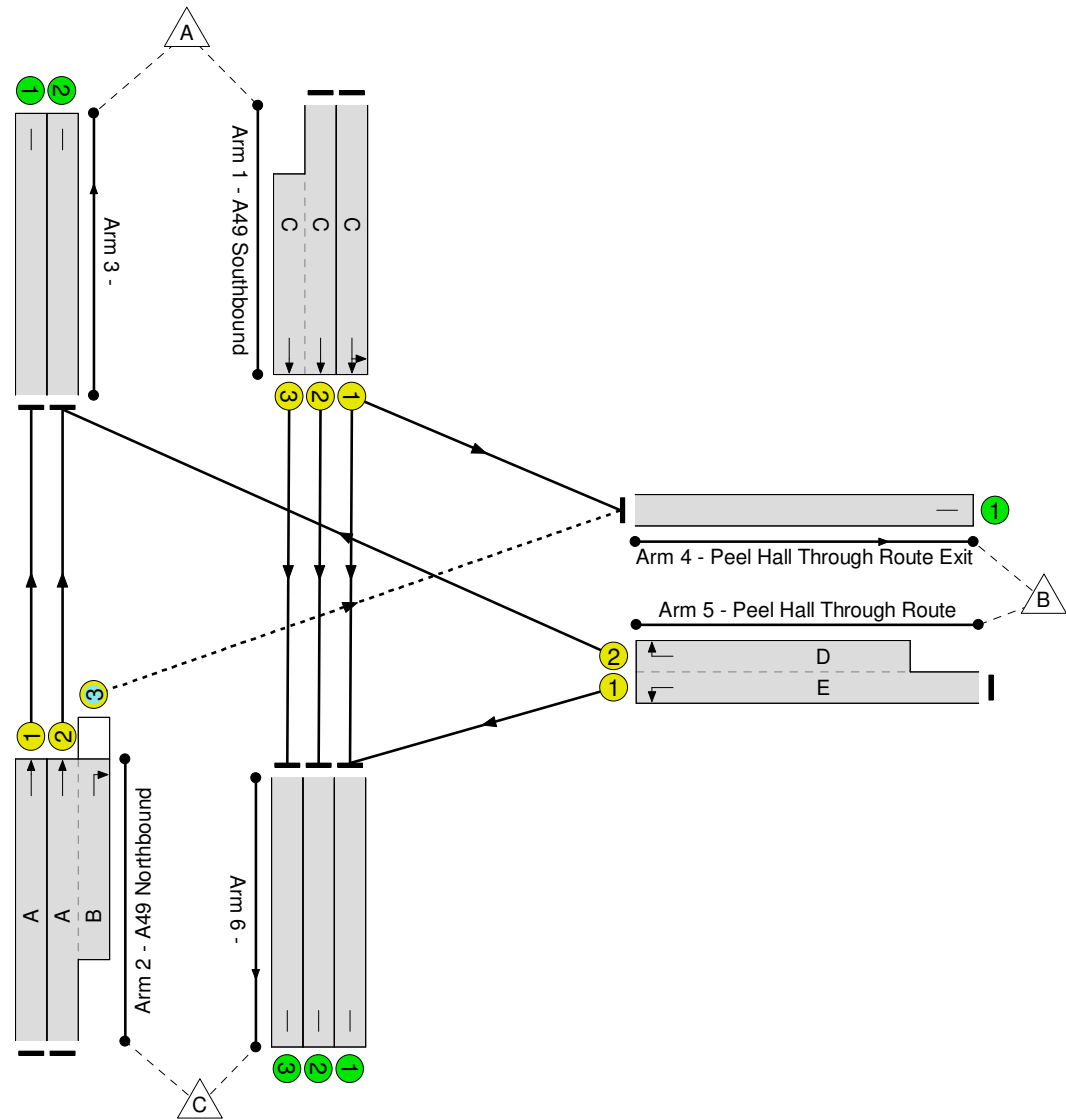
Stage	1	2
Duration	30	7
Change Point	0	41

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Unnamed Junction
PRC: 10.9 %
Total Traffic Delay: 15.6 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	81.1%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	81.1%
1/1	A49 Southbound Left Ahead	U	N/A	N/A	C		1	30	-	752	1931	1069	70.3%
1/2+1/3	A49 Southbound Ahead	U	N/A	N/A	C		1	30	-	1471	2105:2105	906+907	81.1 : 81.1%
2/1	A49 Northbound Ahead	U	N/A	N/A	A		1	35	-	819	2105	1353	60.5%
2/2+2/3	A49 Northbound Ahead Right	U+O	N/A	N/A	A B		1	35:30	-	874	2105:1871	1284+129	60.0 : 80.9%
3/1		U	N/A	N/A	-		-	-	-	819	Inf	Inf	0.0%
3/2		U	N/A	N/A	-		-	-	-	900	Inf	Inf	0.0%
4/1	Peel Hall Through Route Exit	U	N/A	N/A	-		-	-	-	210	Inf	Inf	0.0%
5/1+5/2	Peel Hall Through Route Right Left	U	N/A	N/A	E D		1	7:8	-	249	1871:1786	267+287	44.5 : 45.3%
6/1		U	N/A	N/A	-		-	-	-	765	Inf	Inf	0.0%
6/2		U	N/A	N/A	-		-	-	-	735	Inf	Inf	0.0%
6/3		U	N/A	N/A	-		-	-	-	736	Inf	Inf	0.0%

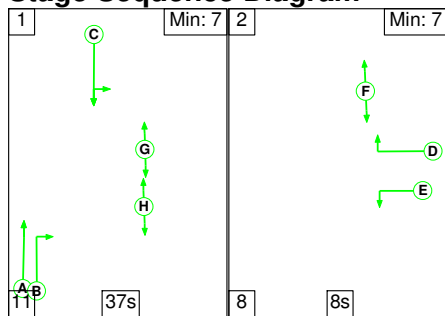
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	0	0	104	9.6	5.3	0.7	15.6	-	-	-	-
Unnamed Junction	-	-	0	0	104	9.6	5.3	0.7	15.6	-	-	-	-
1/1	752	752	-	-	-	1.9	1.2	-	3.1	14.8	8.4	1.2	9.5
1/2+1/3	1471	1471	-	-	-	3.5	2.1	-	5.6	13.8	7.8	2.1	9.9
2/1	819	819	-	-	-	1.3	0.8	-	2.1	9.2	7.3	0.8	8.0
2/2+2/3	874	874	0	0	104	1.4	0.8	0.7	2.9	11.9	6.6	0.8	7.4
3/1	819	819	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	900	900	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	210	210	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1+5/2	249	249	-	-	-	1.5	0.4	-	1.9	27.5	1.8	0.4	2.2
6/1	765	765	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	735	735	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/3	736	736	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1			PRC for Signalled Lanes (%):		10.9	Total Delay for Signalled Lanes (pcuHr):		15.60	Cycle Time (s):		56		
			PRC Over All Lanes (%):		10.9	Total Delay Over All Lanes(pcuHr):		15.60					

Full Input Data And Results

Scenario 2: 'PM Actual Flows' (FG2: 'PM Actual Flow', Plan 1: 'Network Control Plan 1')

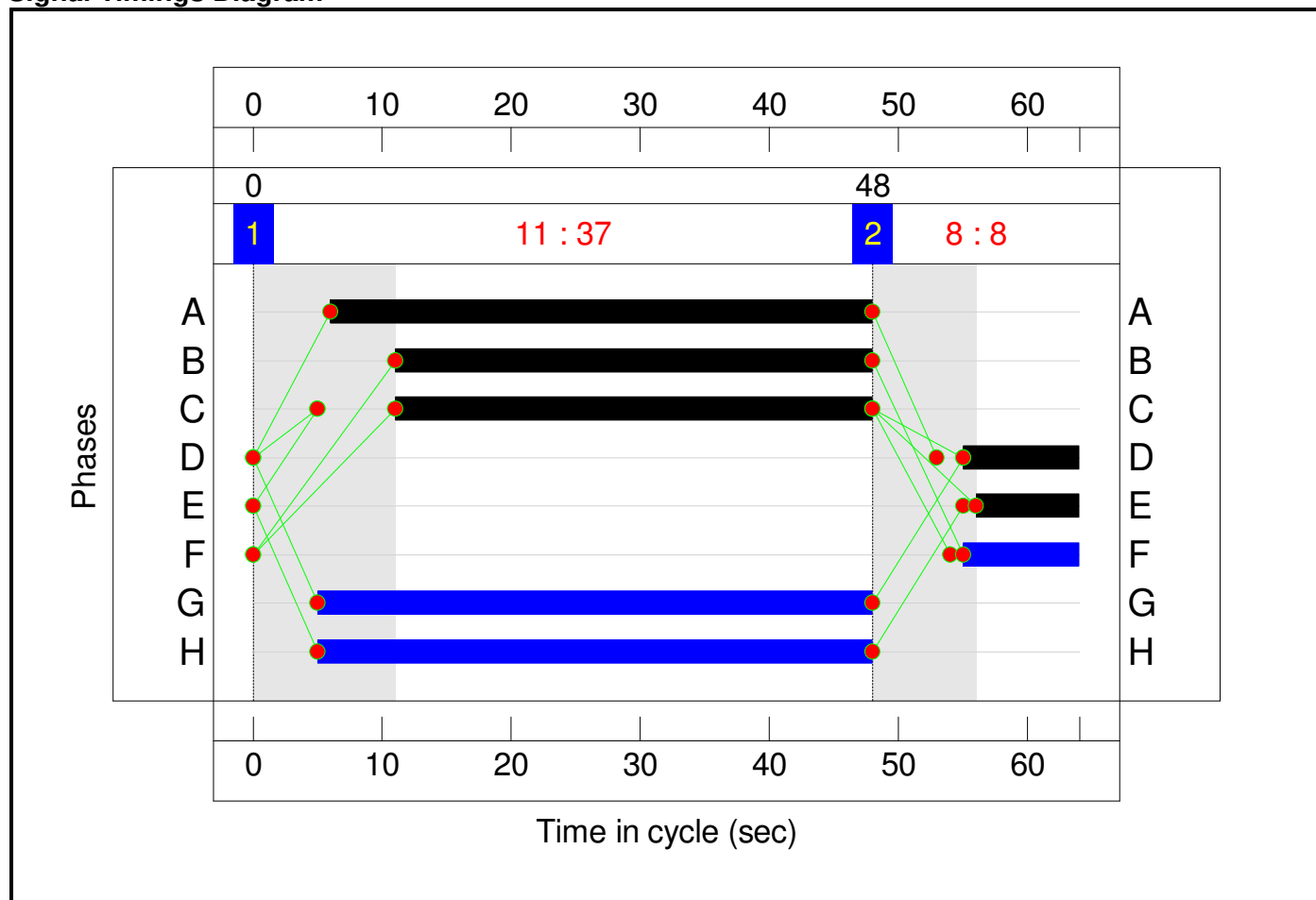
Stage Sequence Diagram



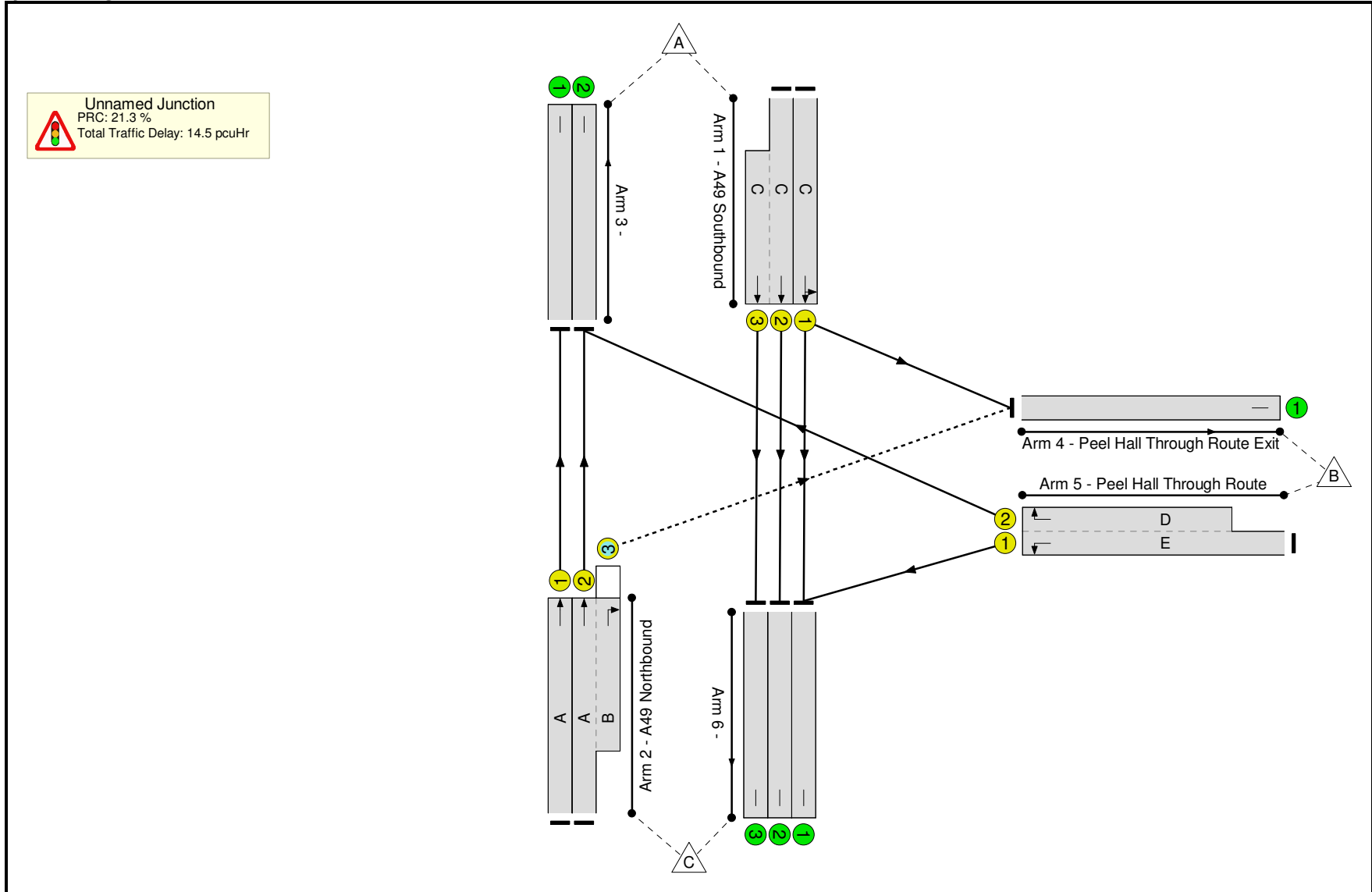
Stage Timings

Stage	1	2
Duration	37	8
Change Point	0	48

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	74.2%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	74.2%
1/1	A49 Southbound Left Ahead	U	N/A	N/A	C		1	37	-	489	1864	1107	44.2%
1/2+1/3	A49 Southbound Ahead	U	N/A	N/A	C		1	37	-	1168	2105:2105	908+908	64.3 : 64.3%
2/1	A49 Northbound Ahead	U	N/A	N/A	A		1	42	-	1036	2105	1414	73.3%
2/2+2/3	A49 Northbound Ahead Right	U+O	N/A	N/A	A B		1	42:37	-	1084	2105:1871	1398+63	74.2 : 74.2%
3/1		U	N/A	N/A	-		-	-	-	1036	Inf	Inf	0.0%
3/2		U	N/A	N/A	-		-	-	-	1235	Inf	Inf	0.0%
4/1	Peel Hall Through Route Exit	U	N/A	N/A	-		-	-	-	258	Inf	Inf	0.0%
5/1+5/2	Peel Hall Through Route Right Left	U	N/A	N/A	E D		1	8:9	-	323	1871:1786	263+279	47.5 : 71.0%
6/1		U	N/A	N/A	-		-	-	-	403	Inf	Inf	0.0%
6/2		U	N/A	N/A	-		-	-	-	584	Inf	Inf	0.0%
6/3		U	N/A	N/A	-		-	-	-	584	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	47	0	0	9.6	4.8	0.1	14.5	-	-	-	-
Unnamed Junction	-	-	47	0	0	9.6	4.8	0.1	14.5	-	-	-	-
1/1	489	489	-	-	-	1.0	0.4	-	1.4	10.1	4.8	0.4	5.1
1/2+1/3	1168	1168	-	-	-	2.4	0.9	-	3.3	10.1	5.7	0.9	6.6
2/1	1036	1036	-	-	-	2.0	1.4	-	3.3	11.5	11.8	1.4	13.2
2/2+2/3	1084	1084	47	0	0	2.0	1.4	0.1	3.5	11.8	11.8	1.4	13.2
3/1	1036	1036	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	1235	1235	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	258	258	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1+5/2	323	323	-	-	-	2.3	0.7	-	3.0	33.7	3.3	0.7	4.0
6/1	403	403	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	584	584	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/3	584	584	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1			PRC for Signalled Lanes (%): 21.3		PRC Over All Lanes (%): 21.3		Total Delay for Signalled Lanes (pcuHr): 14.51		Total Delay Over All Lanes(pcuHr): 14.51		Cycle Time (s): 64		

Appendix 73

Off-Site Highway Junction Modelling Reports

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.0.2.5947
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Filename: Import of J25 - Enfield Park Rd Crab Lane_0.1 Original.j9
Report generation date: 30/01/2018 17:46:40

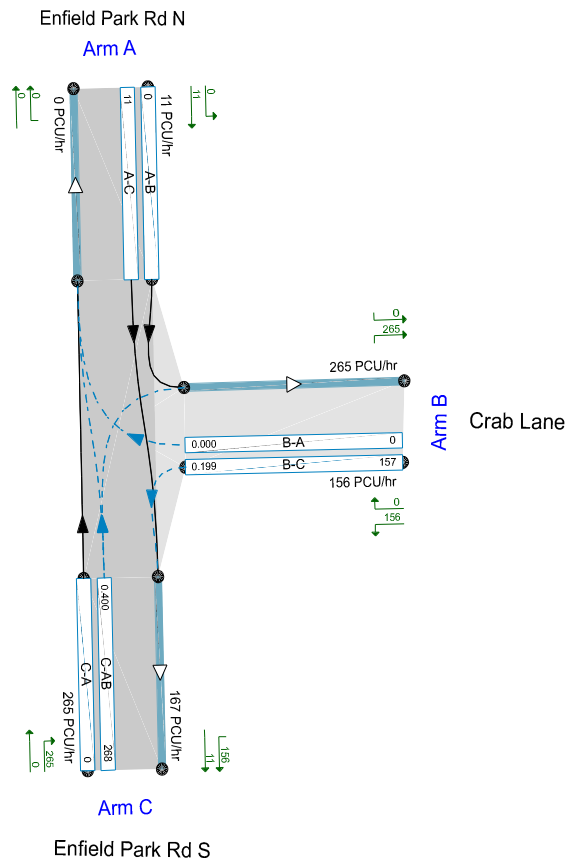
Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2025 Do Minimum (Base + Committed + Growth)								
Stream B-C	0.4	6.42	0.29	A	2.0	13.80	0.67	B
Stream B-A	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-AB	1.4	13.00	0.59	B	1.0	10.64	0.49	B
A1 - 2025 Do Something (Base + Committed + Growth + Part Development Build Out)								
Stream B-C	0.5	6.75	0.33	A	12.5	63.12	0.96	F
Stream B-A	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-AB	2.8	21.15	0.75	C	1.4	13.05	0.59	B
A1 - 2030 Do Minimum (Base + Committed + Growth)								
Stream B-C	0.4	6.49	0.30	A	3.0	18.40	0.75	C
Stream B-A	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-AB	1.6	14.12	0.62	B	1.0	11.03	0.51	B
A1 - 2030 Do Something (Base + Committed + Growth + Full Development Build Out)								
Stream B-C	0.6	7.20	0.37	A	25.8	112.61	1.02	F
Stream B-A	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-AB	7.0	45.42	0.90	E	1.9	15.81	0.66	C
A1 - 2030 Through Route Scenario (Base + Committed + Growth + Full Development Build Out)								
Stream B-C	0.6	7.36	0.38	A	24.0	106.35	1.02	F
Stream B-A	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-AB	9.9	61.15	0.94	F	2.0	16.23	0.67	C

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

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 modelled flow through junction (PCU/hr).
Streams (upstream end) show Total Demand (PCU/hr). Streams (downstream end) show RFC ().
Time Segment: 07:45-08:00

The junction diagram reflects the last run of Junctions.

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025 Do Minimum (Base + Committed + Growth)	AM	ONE HOUR	07:45	09:15	15	✓
D2	2025 Do Minimum (Base + Committed + Growth)	PM	ONE HOUR	16:45	18:15	15	✓
D3	2025 Do Something (Base + Committed + Growth + Part Development Build Out)	AM	ONE HOUR	07:45	09:15	15	✓
D4	2025 Do Something (Base + Committed + Growth + Part Development Build Out)	PM	ONE HOUR	16:45	18:15	15	✓
D5	2030 Do Minimum (Base + Committed + Growth)	AM	ONE HOUR	07:45	09:15	15	✓
D6	2030 Do Minimum (Base + Committed + Growth)	PM	ONE HOUR	16:45	18:15	15	✓
D7	2030 Do Something (Base + Committed + Growth + Full Development Build Out)	AM	ONE HOUR	07:45	09:15	15	✓
D8	2030 Do Something (Base + Committed + Growth + Full Development Build Out)	PM	ONE HOUR	16:45	18:15	15	✓
D9	2030 Through Route Scenario (Base + Committed + Growth + Full Development Build Out)	AM	ONE HOUR	07:45	09:15	15	✓
D10	2030 Through Route Scenario (Base + Committed + Growth + Full Development Build Out)	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	(Default Analysis Set)	✓	100.000	100.000

(Default Analysis Set) - 2025 Do Minimum (Base + Committed + Growth), AM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Enfield Park Rd / Crab Lane	T-Junction	Two-way	10.31	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Enfield Park Rd N		Major
B	Crab's Lane		Minor
C	Enfield Park Rd S		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.80			170.0	✓	1.00

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

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	5.20	3.65	3.65	3.65	✓	1.00	99	138

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	557	0.098	0.247	0.156	0.353
1	B-C	795	0.118	0.297	-	-
1	C-B	672	0.251	0.251	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025 Do Minimum (Base + Committed + Growth)	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	14	100.000
B		ONE HOUR	✓	209	100.000
C		ONE HOUR	✓	356	100.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.29	6.42	0.4	A	192	288
B-A	0.00	0.00	0.0	A	0	0
C-AB	0.59	13.00	1.4	B	327	490
C-A					0	0
A-B					0	0
A-C					13	19

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	157	39	792	0.199	156	0.0	0.2	5.653	A
B-A	0	0	459	0.000	0	0.0	0.0	0.000	A
C-AB	268	67	670	0.400	265	0.0	0.7	8.846	A
C-A	0	0			0				
A-B	0	0			0				
A-C	11	3			11				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	188	47	792	0.237	188	0.2	0.3	5.956	A
B-A	0	0	439	0.000	0	0.0	0.0	0.000	A
C-AB	320	80	669	0.478	319	0.7	0.9	10.250	B
C-A	0	0			0				
A-B	0	0			0				
A-C	13	3			13				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	230	58	791	0.291	230	0.3	0.4	6.411	A
B-A	0	0	413	0.000	0	0.0	0.0	0.000	A
C-AB	392	98	669	0.586	390	0.9	1.4	12.837	B
C-A	0	0			0				
A-B	0	0			0				
A-C	15	4			15				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	230	58	791	0.291	230	0.4	0.4	6.418	A
B-A	0	0	412	0.000	0	0.0	0.0	0.000	A
C-AB	392	98	669	0.586	392	1.4	1.4	13.000	B
C-A	0	0			0				
A-B	0	0			0				
A-C	15	4			15				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	188	47	792	0.237	188	0.4	0.3	5.970	A
B-A	0	0	438	0.000	0	0.0	0.0	0.000	A
C-AB	320	80	669	0.478	322	1.4	0.9	10.419	B
C-A	0	0			0				
A-B	0	0			0				
A-C	13	3			13				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	157	39	792	0.199	158	0.3	0.2	5.673	A
B-A	0	0	458	0.000	0	0.0	0.0	0.000	A
C-AB	268	67	670	0.400	269	0.9	0.7	9.007	A
C-A	0	0			0				
A-B	0	0			0				
A-C	11	3			11				

(Default Analysis Set) - 2025 Do Minimum (Base + Committed + Growth), PM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Enfield Park Rd / Crab Lane	T-Junction	Two-way	12.37	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2025 Do Minimum (Base + Committed + Growth)	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	14	100.000
B		ONE HOUR	✓	482	100.000
C		ONE HOUR	✓	300	100.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.67	13.80	2.0	B	442	663
B-A	0.00	0.00	0.0	A	0	0
C-AB	0.49	10.64	1.0	B	275	413
C-A					0	0
A-B					0	0
A-C					13	19

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	363	91	792	0.458	360	0.0	0.8	8.257	A
B-A	0	0	474	0.000	0	0.0	0.0	0.000	A
C-AB	226	56	670	0.337	224	0.0	0.5	8.038	A
C-A	0	0			0				
A-B	0	0			0				
A-C	11	3			11				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	433	108	792	0.547	432	0.8	1.2	9.964	A
B-A	0	0	457	0.000	0	0.0	0.0	0.000	A
C-AB	270	67	669	0.403	269	0.5	0.7	8.979	A
C-A	0	0			0				
A-B	0	0			0				
A-C	13	3			13				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	531	133	791	0.671	528	1.2	2.0	13.509	B
B-A	0	0	435	0.000	0	0.0	0.0	0.000	A
C-AB	330	83	669	0.494	329	0.7	1.0	10.570	B
C-A	0	0			0				
A-B	0	0			0				
A-C	15	4			15				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	531	133	791	0.671	531	2.0	2.0	13.801	B
B-A	0	0	435	0.000	0	0.0	0.0	0.000	A
C-AB	330	83	669	0.494	330	1.0	1.0	10.638	B
C-A	0	0			0				
A-B	0	0			0				
A-C	15	4			15				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	433	108	792	0.547	436	2.0	1.2	10.215	B
B-A	0	0	457	0.000	0	0.0	0.0	0.000	A
C-AB	270	67	669	0.403	271	1.0	0.7	9.060	A
C-A	0	0			0				
A-B	0	0			0				
A-C	13	3			13				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	363	91	792	0.458	364	1.2	0.9	8.443	A
B-A	0	0	473	0.000	0	0.0	0.0	0.000	A
C-AB	226	56	670	0.337	227	0.7	0.5	8.134	A
C-A	0	0			0				
A-B	0	0			0				
A-C	11	3			11				

(Default Analysis Set) - 2025 Do Something (Base + Committed + Growth + Part Development Build Out), AM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Enfield Park Rd / Crab Lane	T-Junction	Two-way	15.93	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2025 Do Something (Base + Committed + Growth + Part Development Build Out)	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	14	100.000
B		ONE HOUR	✓	234	100.000
C		ONE HOUR	✓	454	100.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.33	6.75	0.5	A	215	322
B-A	0.00	0.00	0.0	A	0	0
C-AB	0.75	21.15	2.8	C	417	625
C-A					0	0
A-B					0	0
A-C					13	19

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	176	44	792	0.222	175	0.0	0.3	5.821	A
B-A	0	0	433	0.000	0	0.0	0.0	0.000	A
C-AB	342	85	670	0.510	338	0.0	1.0	10.716	B
C-A	0	0			0				
A-B	0	0			0				
A-C	11	3			11				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	210	53	792	0.266	210	0.3	0.4	6.186	A
B-A	0	0	408	0.000	0	0.0	0.0	0.000	A
C-AB	408	102	669	0.610	406	1.0	1.5	13.576	B
C-A	0	0			0				
A-B	0	0			0				
A-C	13	3			13				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	258	64	791	0.326	257	0.4	0.5	6.739	A
B-A	0	0	374	0.000	0	0.0	0.0	0.000	A
C-AB	500	125	669	0.748	495	1.5	2.7	20.162	C
C-A	0	0			0				
A-B	0	0			0				
A-C	15	4			15				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	258	64	791	0.326	258	0.5	0.5	6.749	A
B-A	0	0	372	0.000	0	0.0	0.0	0.000	A
C-AB	500	125	669	0.748	499	2.7	2.8	21.150	C
C-A	0	0			0				
A-B	0	0			0				
A-C	15	4			15				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	210	53	792	0.266	211	0.5	0.4	6.201	A
B-A	0	0	405	0.000	0	0.0	0.0	0.000	A
C-AB	408	102	669	0.610	413	2.8	1.6	14.303	B
C-A	0	0			0				
A-B	0	0			0				
A-C	13	3			13				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	176	44	792	0.222	176	0.4	0.3	5.849	A
B-A	0	0	431	0.000	0	0.0	0.0	0.000	A
C-AB	342	85	670	0.510	344	1.6	1.1	11.127	B
C-A	0	0			0				
A-B	0	0			0				
A-C	11	3			11				

(Default Analysis Set) - 2025 Do Something (Base + Committed + Growth + Part Development Build Out), PM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Enfield Park Rd / Crab Lane	T-Junction	Two-way	45.39	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2025 Do Something (Base + Committed + Growth + Part Development Build Out)	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	14	100.000
B		ONE HOUR	✓	687	100.000
C		ONE HOUR	✓	357	100.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.96	63.12	12.5	F	630	946
B-A	0.00	0.00	0.0	A	0	0
C-AB	0.59	13.05	1.4	B	328	491
C-A					0	0
A-B					0	0
A-C					13	19

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	517	129	792	0.653	510	0.0	1.8	12.454	B
B-A	0	0	459	0.000	0	0.0	0.0	0.000	A
C-AB	269	67	670	0.401	266	0.0	0.7	8.863	A
C-A	0	0			0				
A-B	0	0			0				
A-C	11	3			11				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	618	154	792	0.780	612	1.8	3.2	19.376	C
B-A	0	0	439	0.000	0	0.0	0.0	0.000	A
C-AB	321	80	669	0.480	320	0.7	0.9	10.276	B
C-A	0	0			0				
A-B	0	0			0				
A-C	13	3			13				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	756	189	791	0.956	729	3.2	10.1	45.112	E
B-A	0	0	413	0.000	0	0.0	0.0	0.000	A
C-AB	393	98	669	0.588	391	0.9	1.4	12.886	B
C-A	0	0			0				
A-B	0	0			0				
A-C	15	4			15				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	756	189	791	0.956	747	10.1	12.5	63.124	F
B-A	0	0	412	0.000	0	0.0	0.0	0.000	A
C-AB	393	98	669	0.588	393	1.4	1.4	13.052	B
C-A	0	0			0				
A-B	0	0			0				
A-C	15	4			15				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	618	154	792	0.780	652	12.5	3.9	30.207	D
B-A	0	0	438	0.000	0	0.0	0.0	0.000	A
C-AB	321	80	669	0.480	323	1.4	0.9	10.447	B
C-A	0	0			0				
A-B	0	0			0				
A-C	13	3			13				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	517	129	792	0.653	525	3.9	2.0	13.839	B
B-A	0	0	458	0.000	0	0.0	0.0	0.000	A
C-AB	269	67	670	0.401	270	0.9	0.7	9.024	A
C-A	0	0			0				
A-B	0	0			0				
A-C	11	3			11				

(Default Analysis Set) - 2030 Do Minimum (Base + Committed + Growth), AM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Enfield Park Rd / Crab Lane	T-Junction	Two-way	11.08	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2030 Do Minimum (Base + Committed + Growth)	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	14	100.000
B		ONE HOUR	✓	215	100.000
C		ONE HOUR	✓	376	100.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.30	6.49	0.4	A	197	296
B-A	0.00	0.00	0.0	A	0	0
C-AB	0.62	14.12	1.6	B	345	518
C-A					0	0
A-B					0	0
A-C					13	19

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	162	40	792	0.204	161	0.0	0.3	5.691	A
B-A	0	0	454	0.000	0	0.0	0.0	0.000	A
C-AB	283	71	670	0.423	280	0.0	0.7	9.176	A
C-A	0	0			0				
A-B	0	0			0				
A-C	11	3			11				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	193	48	792	0.244	193	0.3	0.3	6.009	A
B-A	0	0	433	0.000	0	0.0	0.0	0.000	A
C-AB	338	85	669	0.505	337	0.7	1.0	10.793	B
C-A	0	0			0				
A-B	0	0			0				
A-C	13	3			13				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	237	59	791	0.299	236	0.3	0.4	6.487	A
B-A	0	0	405	0.000	0	0.0	0.0	0.000	A
C-AB	414	103	669	0.619	412	1.0	1.6	13.890	B
C-A	0	0			0				
A-B	0	0			0				
A-C	15	4			15				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	237	59	791	0.299	237	0.4	0.4	6.495	A
B-A	0	0	404	0.000	0	0.0	0.0	0.000	A
C-AB	414	103	669	0.619	414	1.6	1.6	14.119	B
C-A	0	0			0				
A-B	0	0			0				
A-C	15	4			15				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	193	48	792	0.244	194	0.4	0.3	6.022	A
B-A	0	0	432	0.000	0	0.0	0.0	0.000	A
C-AB	338	85	669	0.505	340	1.6	1.0	11.015	B
C-A	0	0			0				
A-B	0	0			0				
A-C	13	3			13				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	162	40	792	0.204	162	0.3	0.3	5.714	A
B-A	0	0	452	0.000	0	0.0	0.0	0.000	A
C-AB	283	71	670	0.423	284	1.0	0.7	9.367	A
C-A	0	0			0				
A-B	0	0			0				
A-C	11	3			11				

(Default Analysis Set) - 2030 Do Minimum (Base + Committed + Growth), PM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Enfield Park Rd / Crab Lane	T-Junction	Two-way	15.46	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2030 Do Minimum (Base + Committed + Growth)	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	14	100.000
B		ONE HOUR	✓	542	100.000
C		ONE HOUR	✓	311	100.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.75	18.40	3.0	C	497	746
B-A	0.00	0.00	0.0	A	0	0
C-AB	0.51	11.03	1.0	B	285	428
C-A					0	0
A-B					0	0
A-C					13	19

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	408	102	792	0.515	404	0.0	1.0	9.172	A
B-A	0	0	471	0.000	0	0.0	0.0	0.000	A
C-AB	234	59	670	0.350	232	0.0	0.5	8.186	A
C-A	0	0			0				
A-B	0	0			0				
A-C	11	3			11				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	487	122	792	0.615	485	1.0	1.6	11.662	B
B-A	0	0	454	0.000	0	0.0	0.0	0.000	A
C-AB	280	70	669	0.418	279	0.5	0.7	9.205	A
C-A	0	0			0				
A-B	0	0			0				
A-C	13	3			13				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	597	149	791	0.755	592	1.6	2.9	17.590	C
B-A	0	0	431	0.000	0	0.0	0.0	0.000	A
C-AB	342	86	669	0.512	341	0.7	1.0	10.952	B
C-A	0	0			0				
A-B	0	0			0				
A-C	15	4			15				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	597	149	791	0.755	596	2.9	3.0	18.401	C
B-A	0	0	430	0.000	0	0.0	0.0	0.000	A
C-AB	342	86	669	0.512	342	1.0	1.0	11.034	B
C-A	0	0			0				
A-B	0	0			0				
A-C	15	4			15				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	487	122	792	0.615	492	3.0	1.7	12.231	B
B-A	0	0	453	0.000	0	0.0	0.0	0.000	A
C-AB	280	70	669	0.418	281	1.0	0.7	9.299	A
C-A	0	0			0				
A-B	0	0			0				
A-C	13	3			13				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	408	102	792	0.515	410	1.7	1.1	9.480	A
B-A	0	0	470	0.000	0	0.0	0.0	0.000	A
C-AB	234	59	670	0.350	235	0.7	0.5	8.292	A
C-A	0	0			0				
A-B	0	0			0				
A-C	11	3			11				

(Default Analysis Set) - 2030 Do Something (Base + Committed + Growth + Full Development Build Out), AM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Enfield Park Rd / Crab Lane	T-Junction	Two-way	32.37	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2030 Do Something (Base + Committed + Growth + Full Development Build Out)	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	14	100.000
B		ONE HOUR	✓	264	100.000
C		ONE HOUR	✓	544	100.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.37	7.20	0.6	A	242	363
B-A	0.00	0.00	0.0	A	0	0
C-AB	0.90	45.42	7.0	E	499	749
C-A					0	0
A-B					0	0
A-C					13	19

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	199	50	792	0.251	197	0.0	0.3	6.037	A
B-A	0	0	409	0.000	0	0.0	0.0	0.000	A
C-AB	410	102	670	0.611	403	0.0	1.5	13.239	B
C-A	0	0			0				
A-B	0	0			0				
A-C	11	3			11				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	237	59	792	0.300	237	0.3	0.4	6.484	A
B-A	0	0	379	0.000	0	0.0	0.0	0.000	A
C-AB	489	122	669	0.731	485	1.5	2.5	19.102	C
C-A	0	0			0				
A-B	0	0			0				
A-C	13	3			13				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	291	73	791	0.368	290	0.4	0.6	7.178	A
B-A	0	0	338	0.000	0	0.0	0.0	0.000	A
C-AB	599	150	669	0.896	584	2.5	6.2	37.239	E
C-A	0	0			0				
A-B	0	0			0				
A-C	15	4			15				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	291	73	791	0.368	291	0.6	0.6	7.195	A
B-A	0	0	332	0.000	0	0.0	0.0	0.000	A
C-AB	599	150	669	0.896	596	6.2	7.0	45.419	E
C-A	0	0			0				
A-B	0	0			0				
A-C	15	4			15				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	237	59	792	0.300	238	0.6	0.4	6.508	A
B-A	0	0	371	0.000	0	0.0	0.0	0.000	A
C-AB	489	122	669	0.731	506	7.0	2.9	23.804	C
C-A	0	0			0				
A-B	0	0			0				
A-C	13	3			13				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	199	50	792	0.251	199	0.4	0.3	6.071	A
B-A	0	0	405	0.000	0	0.0	0.0	0.000	A
C-AB	410	102	670	0.611	415	2.9	1.6	14.385	B
C-A	0	0			0				
A-B	0	0			0				
A-C	11	3			11				

(Default Analysis Set) - 2030 Do Something (Base + Committed + Growth + Full Development Build Out), PM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Enfield Park Rd / Crab Lane	T-Junction	Two-way	77.52	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2030 Do Something (Base + Committed + Growth + Full Development Build Out)	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	14	100.000
B		ONE HOUR	✓	736	100.000
C		ONE HOUR	✓	401	100.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	1.02	112.61	25.8	F	675	1013
B-A	0.00	0.00	0.0	A	0	0
C-AB	0.66	15.81	1.9	C	368	552
C-A					0	0
A-B					0	0
A-C					13	19

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	554	139	792	0.699	545	0.0	2.2	14.110	B
B-A	0	0	447	0.000	0	0.0	0.0	0.000	A
C-AB	302	75	670	0.451	299	0.0	0.8	9.621	A
C-A	0	0			0				
A-B	0	0			0				
A-C	11	3			11				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	662	165	792	0.836	653	2.2	4.4	24.421	C
B-A	0	0	425	0.000	0	0.0	0.0	0.000	A
C-AB	360	90	669	0.539	359	0.8	1.1	11.556	B
C-A	0	0			0				
A-B	0	0			0				
A-C	13	3			13				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	810	203	791	1.025	759	4.4	17.3	66.475	F
B-A	0	0	395	0.000	0	0.0	0.0	0.000	A
C-AB	442	110	669	0.660	439	1.1	1.9	15.458	C
C-A	0	0			0				
A-B	0	0			0				
A-C	15	4			15				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	810	203	791	1.025	776	17.3	25.8	112.615	F
B-A	0	0	394	0.000	0	0.0	0.0	0.000	A
C-AB	442	110	669	0.660	441	1.9	1.9	15.813	C
C-A	0	0			0				
A-B	0	0			0				
A-C	15	4			15				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	662	165	792	0.836	739	25.8	6.5	75.090	F
B-A	0	0	423	0.000	0	0.0	0.0	0.000	A
C-AB	360	90	669	0.539	363	1.9	1.2	11.873	B
C-A	0	0			0				
A-B	0	0			0				
A-C	13	3			13				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	554	139	792	0.699	570	6.5	2.5	17.247	C
B-A	0	0	446	0.000	0	0.0	0.0	0.000	A
C-AB	302	75	670	0.451	303	1.2	0.8	9.865	A
C-A	0	0			0				
A-B	0	0			0				
A-C	11	3			11				

(Default Analysis Set) - 2030 Through Route Scenario (Base + Committed + Growth + Full Development Build Out), AM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Enfield Park Rd / Crab Lane	T-Junction	Two-way	42.95	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2030 Through Route Scenario (Base + Committed + Growth + Full Development Build Out)	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	14	100.000
B		ONE HOUR	✓	274	100.000
C		ONE HOUR	✓	569	100.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.38	7.36	0.6	A	251	377
B-A	0.00	0.00	0.0	A	0	0
C-AB	0.94	61.15	9.9	F	522	783
C-A					0	0
A-B					0	0
A-C					13	19

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	206	52	792	0.260	205	0.0	0.3	6.109	A
B-A	0	0	403	0.000	0	0.0	0.0	0.000	A
C-AB	428	107	670	0.640	422	0.0	1.7	14.149	B
C-A	0	0			0				
A-B	0	0			0				
A-C	11	3			11				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	246	62	792	0.311	246	0.3	0.4	6.591	A
B-A	0	0	370	0.000	0	0.0	0.0	0.000	A
C-AB	512	128	669	0.764	506	1.7	3.0	21.428	C
C-A	0	0			0				
A-B	0	0			0				
A-C	13	3			13				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	302	75	791	0.381	301	0.4	0.6	7.340	A
B-A	0	0	327	0.000	0	0.0	0.0	0.000	A
C-AB	626	157	669	0.937	605	3.0	8.3	45.872	E
C-A	0	0			0				
A-B	0	0			0				
A-C	15	4			15				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	302	75	791	0.381	302	0.6	0.6	7.357	A
B-A	0	0	320	0.000	0	0.0	0.0	0.000	A
C-AB	626	157	669	0.937	620	8.3	9.9	61.152	F
C-A	0	0			0				
A-B	0	0			0				
A-C	15	4			15				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	246	62	792	0.311	247	0.6	0.5	6.614	A
B-A	0	0	359	0.000	0	0.0	0.0	0.000	A
C-AB	512	128	669	0.764	537	9.9	3.6	30.977	D
C-A	0	0			0				
A-B	0	0			0				
A-C	13	3			13				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	206	52	792	0.260	207	0.5	0.4	6.150	A
B-A	0	0	398	0.000	0	0.0	0.0	0.000	A
C-AB	428	107	670	0.640	435	3.6	1.9	15.766	C
C-A	0	0			0				
A-B	0	0			0				
A-C	11	3			11				

(Default Analysis Set) - 2030 Through Route Scenario (Base + Committed + Growth + Full Development Build Out), PM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Enfield Park Rd / Crab Lane	T-Junction	Two-way	73.26	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2030 Through Route Scenario (Base + Committed + Growth + Full Development Build Out)	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	14	100.000
B		ONE HOUR	✓	731	100.000
C		ONE HOUR	✓	406	100.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	1.02	106.35	24.0	F	671	1006
B-A	0.00	0.00	0.0	A	0	0
C-AB	0.67	16.23	2.0	C	373	559
C-A					0	0
A-B					0	0
A-C					13	19

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	550	138	792	0.695	542	0.0	2.2	13.923	B
B-A	0	0	446	0.000	0	0.0	0.0	0.000	A
C-AB	306	76	670	0.456	302	0.0	0.8	9.714	A
C-A	0	0			0				
A-B	0	0			0				
A-C	11	3			11				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	657	164	792	0.830	649	2.2	4.3	23.809	C
B-A	0	0	423	0.000	0	0.0	0.0	0.000	A
C-AB	365	91	669	0.545	364	0.8	1.2	11.722	B
C-A	0	0			0				
A-B	0	0			0				
A-C	13	3			13				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	805	201	791	1.018	756	4.3	16.4	63.923	F
B-A	0	0	393	0.000	0	0.0	0.0	0.000	A
C-AB	447	112	669	0.669	444	1.2	1.9	15.812	C
C-A	0	0			0				
A-B	0	0			0				
A-C	15	4			15				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	805	201	791	1.018	774	16.4	24.0	106.346	F
B-A	0	0	392	0.000	0	0.0	0.0	0.000	A
C-AB	447	112	669	0.669	447	1.9	2.0	16.226	C
C-A	0	0			0				
A-B	0	0			0				
A-C	15	4			15				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	657	164	792	0.830	729	24.0	6.0	67.428	F
B-A	0	0	422	0.000	0	0.0	0.0	0.000	A
C-AB	365	91	669	0.545	368	2.0	1.2	12.060	B
C-A	0	0			0				
A-B	0	0			0				
A-C	13	3			13				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	550	138	792	0.695	565	6.0	2.4	16.734	C
B-A	0	0	444	0.000	0	0.0	0.0	0.000	A
C-AB	306	76	670	0.456	307	1.2	0.9	9.971	A
C-A	0	0			0				
A-B	0	0			0				
A-C	11	3			11				

Junctions 9

ARCADY 9 - Roundabout Module PICADY 9 - Priority Intersection Module

Version: 9.0.2.5947
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Filename: Peel Hall Advanced Mode Existing Arrangement.j9
Report generation date: 25/01/2018 10:34:25

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
A50-Conjunction [Lane Simulation] - 2025 DM								
1 - A50/Hilden Rd Roundabout - 1 - Hilden Rd	0.7	6.45		A	0.6	6.28		A
1 - A50/Hilden Rd Roundabout - 2 - Orford Rd	5.3	21.73		C	10.6	33.06		D
1 - A50/Hilden Rd Roundabout - 3 - Smith Drive	0.8	7.33		A	2.0	15.11		C
1 - A50/Hilden Rd Roundabout - 4 - A50	2.5	8.84		A	2.5	9.42		A
2 - Poplars Ave/A50 - A - A50 W	0.4	2.30		A	1.5	5.04		A
2 - Poplars Ave/A50 - B - Poplars Ave	112.0	735.61		F	10.5	132.15		F
2 - Poplars Ave/A50 - C - A50 E	1.4	4.74		A	1.7	5.61		A
A50-Conjunction [Lane Simulation] - 2025 DS								
1 - A50/Hilden Rd Roundabout - 1 - Hilden Rd	0.6	6.23		A	0.7	7.52		A
1 - A50/Hilden Rd Roundabout - 2 - Orford Rd	8.2	31.68		D	38.9	115.16		F
1 - A50/Hilden Rd Roundabout - 3 - Smith Drive	0.6	7.91		A	2.6	19.16		C
1 - A50/Hilden Rd Roundabout - 4 - A50	2.3	8.54		A	2.8	10.22		B
2 - Poplars Ave/A50 - A - A50 W	0.2	1.59		A	1.9	7.68		A
2 - Poplars Ave/A50 - B - Poplars Ave	97.9	601.41		F	56.2	529.78		F
2 - Poplars Ave/A50 - C - A50 E	1.9	5.70		A	2.8	8.22		A
A50-Conjunction [Lane Simulation] - 2030 DM								
1 - A50/Hilden Rd Roundabout - 1 - Hilden Rd	0.8	6.25		A	0.6	6.76		A
1 - A50/Hilden Rd Roundabout - 2 - Orford Rd	6.4	23.37		C	10.6	37.51		E
1 - A50/Hilden Rd Roundabout - 3 - Smith Drive	0.6	7.40		A	2.5	16.28		C
1 - A50/Hilden Rd Roundabout - 4 - A50	2.4	8.50		A	2.8	10.03		B
2 - Poplars Ave/A50 - A - A50 W	0.2	1.51		A	2.1	8.42		A
2 - Poplars Ave/A50 - B - Poplars Ave	84.0	507.10		F	31.3	354.85		F
2 - Poplars Ave/A50 - C - A50 E	1.5	4.58		A	2.0	5.75		A
A50-Conjunction [Lane Simulation] - 2030 DS								
1 - A50/Hilden Rd Roundabout - 1 - Hilden Rd	0.9	7.70		A	1.1	10.04		B
1 - A50/Hilden Rd Roundabout - 2 - Orford Rd	17.8	57.46		F	46.2	141.62		F
1 - A50/Hilden Rd Roundabout - 3 - Smith Drive	0.7	8.45		A	3.7	27.01		D
1 - A50/Hilden Rd Roundabout - 4 - A50	2.4	9.07		A	2.7	9.94		A
2 - Poplars Ave/A50 - A - A50 W	0.3	2.08		A	2.0	7.34		A

2 - Poplars Ave/A50 - B - Poplars Ave	131.3	810.69		F	26.7	291.51		F
2 - Poplars Ave/A50 - C - A50 E	2.2	6.81		A	3.1	8.53		A
A50-Conjunction [Lane Simulation] - 2030 Through Route Scenario								
1 - A50/Hilden Rd Roundabout - 1 - Hilden Rd	1.0	7.44		A	0.6	7.12		A
1 - A50/Hilden Rd Roundabout - 2 - Orford Rd	15.2	54.05		F	32.2	98.10		F
1 - A50/Hilden Rd Roundabout - 3 - Smith Drive	0.7	8.37		A	2.8	19.92		C
1 - A50/Hilden Rd Roundabout - 4 - A50	2.5	9.04		A	2.7	10.06		B
2 - Poplars Ave/A50 - A - A50 W	0.3	1.88		A	1.2	5.15		A
2 - Poplars Ave/A50 - B - Poplars Ave	133.3	823.30		F	40.5	351.76		F
2 - Poplars Ave/A50 - C - A50 E	1.8	5.90		A	2.5	7.87		A

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Arm and junction delays are averages for all movements, including movements with zero delay.

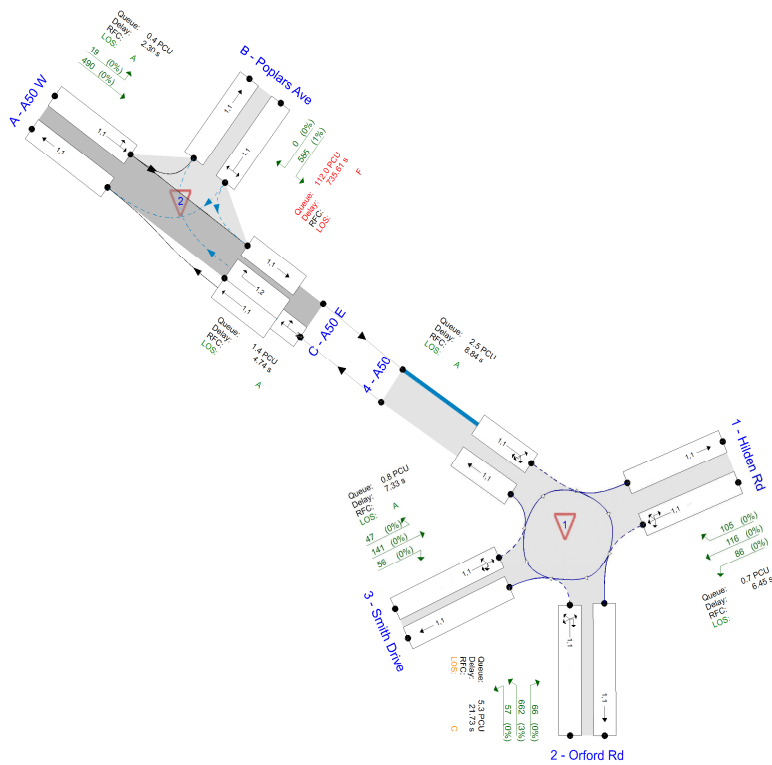
File summary

File Description

Title	(untitled)
Location	
Site number	
Date	15/11/2017
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	
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).
Lane simulation visualisation time: 08:00:00

The junction diagram reflects the last run of Junctions.

Analysis Options

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

Lane Simulation options

Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Use crossings quick response	Last run random seed	Last run number of trials	Last run time taken (s)
1.00	100000	100000	-1	3	1	✓	1437890064	175	41.06

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	2025 DM	AM	ONE HOUR	08:00	09:30	15	✓
D2	2025 DM	PM	ONE HOUR	17:00	18:30	15	✓
D3	2025 DS	AM	ONE HOUR	08:00	09:30	15	✓
D4	2025 DS	PM	ONE HOUR	17:00	18:30	15	✓
D5	2030 DM	AM	ONE HOUR	08:00	09:30	15	✓
D6	2030 DM	PM	ONE HOUR	17:00	18:30	15	✓
D7	2030 DS	AM	ONE HOUR	08:00	09:30	15	✓
D8	2030 DS	PM	ONE HOUR	17:00	18:30	15	✓
D9	2030 Through Route Scenario	AM	ONE HOUR	08:00	09:30	15	✓
D10	2030 Through Route Scenario	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
AV-1	A50-Conjunction	✓	✓	100.000	100.000

A50-Conjunction - 2025 DM, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	AV-1 - A50-Conjunction [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Arm order	Junction Delay (s)	Junction LOS
1	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	12.65	B
2	Poplars Ave/A50	T-Junction	Two-way		210.08	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Name	Description	Arm type
1 - A50/Hilden Rd Roundabout	1	Hilden Rd	Hilden Rd	
	2	Orford Rd		
	3	Smith Drive		
	4	A50		
2 - Poplars Ave/A50	A	A50 W		Major
	B	Poplars Ave		Minor
	C	A50 E		Major

Roundabout Geometry

Junction	Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	3.70	5.50	11.3	31.3	78.0	54.5	
	2 - Orford Rd	4.35	4.35	0.0	26.8	78.0	25.1	
	3 - Smith Drive	3.60	4.40	3.8	15.0	78.0	32.0	
	4 - A50	3.85	3.85	0.0	48.7	78.0	20.5	

Major Arm Geometry

Junction	Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
2 - Poplars Ave/A50	C - A50 E	11.00		✓	3.00	120.0	✓	3.00

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

Minor Arm Geometry

Junction	Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
2 - Poplars Ave/A50	B - Poplars Ave	One lane	5.00	120	52

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Final slope	Final intercept (PCU/hr)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	0.415	1383
	2 - Orford Rd	0.433	1357
	3 - Smith Drive	0.399	1207
	4 - A50	0.423	1239

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

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
2	B-A	651	0.093	0.235	0.148	0.335
2	B-C	788	0.095	0.239	-	-
2	C-B	699	0.212	0.212	-	-

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

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

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

Lane Simulation: Arm options

Junction	Arm	Lane capacity source	Traffic Considering Secondary Lanes (%)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Evenly split	10.00
	2 - Orford Rd	Evenly split	10.00
	3 - Smith Drive	Evenly split	10.00
	4 - A50	Evenly split	10.00
2 - Poplars Ave/A50	A - A50 W		
	B - Poplars Ave		
	C - A50 E		

Lanes

Junction	Arm	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	1 [Give-way line]	1	1, 2, 3, 4		Infinity	0	99999
	2 - Orford Rd	1 [Give-way line]	1	1, 2, 3, 4		Infinity	0	99999
	3 - Smith Drive	1 [Give-way line]	1	1, 2, 3, 4		Infinity	0	99999
	4 - A50	1 [Give-way line]	1	1, 2, 3, 4	✓	3.00	0	99999
2 - Poplars Ave/A50	A - A50 W	1 [Give-way line]	1	B, C		Infinity	0	99999
	B - Poplars Ave	1 [Give-way line]	1	A, C		Infinity	0	99999
	C - A50 E	1 [Give-way line]	1	A	✓	3.00	0	99999
			2	B	✓	3.00	0	99999
		2	1	(A, B)	✓	3.00		

Entry Lane slope and intercept

Junction	Arm	Lane level	Lane	Final slope	Final intercept (PCU/hr)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	1 [Give-way line]	1	0.415	1383
	2 - Orford Rd	1 [Give-way line]	1	0.433	1357
	3 - Smith Drive	1 [Give-way line]	1	0.399	1207
	4 - A50	1 [Give-way line]	1	0.423	1239

Lane Movements

Junction	Arm	Lane Level	Lane	Destination arm			
				Hilden Rd	Orford Rd	Smith Drive	A50
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	1 [Give-way line]	1	✓	✓	✓	✓
	2 - Orford Rd	1 [Give-way line]	1	✓	✓	✓	✓
	3 - Smith Drive	1 [Give-way line]	1	✓	✓	✓	✓
	4 - A50	1 [Give-way line]	1	✓	✓	✓	✓

Lane Movements

Junction	Arm	Lane Level	Lane	Destination arm		
				A50 W	Poplars Ave	A50 E
2 - Poplars Ave/A50	A - A50 W	1 [Give-way line]	1		✓	✓
	B - Poplars Ave	1 [Give-way line]	1	✓		✓
	C - A50 E	1 [Give-way line]	1	✓		
			2		✓	
		2	1	✓	✓	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025 DM	AM	ONE HOUR	08:00	09:30	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - A50/Hilden Rd Roundabout	4 - A50	2	C	Simple (vertical queueing)	Normal	0	100.00	
2 - Poplars Ave/A50	C - A50 E	1	4	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd		ONE HOUR	✓	308	100.000
	2 - Orford Rd		ONE HOUR	✓	785	100.000
	3 - Smith Drive		ONE HOUR	✓	244	100.000
	4 - A50	✓				
2 - Poplars Ave/A50	A - A50 W		ONE HOUR	✓	509	100.000
	B - Poplars Ave		ONE HOUR	✓	585	100.000
	C - A50 E	✓				

Origin-Destination Data

Demand (PCU/hr)

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	86	116	105
	2 - Orford Rd	66	0	57	662
	3 - Smith Drive	141	56	0	47
	4 - A50	45	621	161	168

Demand (PCU/hr)

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	19	490
	B - Poplars Ave	0	0	585
	C - A50 E	687	299	0

Vehicle Mix

Heavy Vehicle Percentages

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	0	0	0
	2 - Orford Rd	0	0	0	3
	3 - Smith Drive	0	0	0	0
	4 - A50	0	1	0	0

Heavy Vehicle Percentages

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	0	0
	B - Poplars Ave	0	0	1
	C - A50 E	1	6	0

Results

Results Summary for whole modelled period

Junction	Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	6.45	0.7	A	280	420
	2 - Orford Rd	21.73	5.3	C	718	1077
	3 - Smith Drive	7.33	0.8	A	226	339
	4 - A50	8.84	2.5	A	942	1414
2 - Poplars Ave/A50	A - A50 W	2.30	0.4	A	467	700
	B - Poplars Ave	735.61	112.0	F	538	807
	C - A50 E	4.74	1.4	A	905	1358

Main Results for each time segment

08:00 - 08:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	234	58	820	233	196	0.0	0.3	4.156	A
	2 - Orford Rd	602	150	435	603	618	0.0	1.1	6.202	A
	3 - Smith Drive	184	46	775	185	263	0.0	0.2	4.654	A
	4 - A50	815	204	203	813	757	0.0	1.7	6.496	A
2 - Poplars Ave/A50	A - A50 W	390	98		390	525	0.0	0.1	0.342	A
	B - Poplars Ave	439	110		441	248	0.0	2.5	19.299	C
	C - A50 E	758	190		758	815	0.0	0.8	2.971	A

08:15 - 08:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	279	70	945	277	224	0.3	0.4	5.022	A
	2 - Orford Rd	693	173	506	694	716	1.1	1.6	9.020	A
	3 - Smith Drive	220	55	895	220	305	0.2	0.4	5.608	A
	4 - A50	931	233	238	931	877	1.7	2.0	7.768	A
2 - Poplars Ave/A50	A - A50 W	448	112		449	614	0.1	0.1	1.069	A
	B - Poplars Ave	522	131		497	290	2.5	11.8	63.016	F
	C - A50 E	884	221		886	929	0.8	0.9	3.525	A

08:30 - 08:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	335	84	1008	333	284	0.4	0.7	6.389	A
	2 - Orford Rd	862	215	561	855	781	1.6	4.6	17.527	C
	3 - Smith Drive	272	68	1076	273	340	0.4	0.5	7.067	A
	4 - A50	996	249	296	997	1053	2.0	2.5	8.611	A
2 - Poplars Ave/A50	A - A50 W	567	142		565	738	0.1	0.4	2.023	A
	B - Poplars Ave	644	161		449	342	11.8	61.0	298.096	F
	C - A50 E	1056	264		1058	993	0.9	1.4	4.582	A

08:45 - 09:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	333	83	996	333	281	0.7	0.7	6.451	A
	2 - Orford Rd	856	214	561	857	768	4.6	5.3	21.733	C
	3 - Smith Drive	273	68	1072	269	345	0.5	0.8	7.335	A
	4 - A50	986	247	292	985	1049	2.5	2.5	8.836	A
2 - Poplars Ave/A50	A - A50 W	558	139		557	731	0.4	0.3	2.299	A
	B - Poplars Ave	653	163		447	343	61.0	112.0	657.088	F
	C - A50 E	1056	264		1054	983	1.4	1.4	4.738	A

09:00 - 09:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	277	69	980	277	235	0.7	0.4	5.388	A
	2 - Orford Rd	708	177	525	707	733	5.3	1.8	10.548	B
	3 - Smith Drive	221	55	915	221	316	0.8	0.4	6.080	A
	4 - A50	979	245	237	978	898	2.5	2.1	8.183	A
2 - Poplars Ave/A50	A - A50 W	451	113		451	622	0.3	0.1	1.296	A
	B - Poplars Ave	530	133		541	297	112.0	111.6	735.608	F
	C - A50 E	904	226		904	978	1.4	0.9	3.822	A

09:15 - 09:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	223	56	948	223	199	0.4	0.3	4.791	A
	2 - Orford Rd	587	147	482	588	689	1.8	1.2	7.102	A
	3 - Smith Drive	185	46	785	183	285	0.4	0.4	5.231	A
	4 - A50	947	237	198	948	771	2.1	2.0	7.702	A
2 - Poplars Ave/A50	A - A50 W	386	97		387	534	0.1	0.0	0.769	A
	B - Poplars Ave	441	110		570	253	111.6	76.4	534.396	F
	C - A50 E	773	193		773	946	0.9	0.7	3.184	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

08:00 - 08:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	234	1042	0.224	233	0.0	0.3	4.156	A	
		Exit	1	1		196			196	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	602	1168	0.515	603	0.0	1.1	6.202	A	
		Exit	1	1		618			618	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	184	898	0.205	185	0.0	0.2	4.654	A	
		Exit	1	1		263			263	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	815	1153	0.707	813	0.0	1.7	6.496	A	
		Exit	1	1		757			757	0.0	0.0	0.103	A	
2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	390			390	0.0	0.1	0.342	A	
		Exit	1	1		525			525	0.0	0.0	0.000	A	
	B - Poplars Ave	Entry	1	1	A, C	439			441	0.0	2.5	19.299	C	
		Exit	1	1		248			248	0.0	0.0	0.000	A	
	C - A50 E	Entry	1	1	A	525			525	0.0	0.0	0.000	A	
				2	B	233			233	0.0	0.6	8.898	A	
		Exit	1	1	(A, B)		758			757	0.0	0.1	0.337	A
							816			815	0.0	0.5	1.771	A

08:15 - 08:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	279	990	0.281	277	0.3	0.4	5.022	A	
		Exit	1	1		224			224	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	693	1138	0.609	694	1.1	1.6	9.020	A	
		Exit	1	1		716			716	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	220	850	0.259	220	0.2	0.4	5.608	A	
		Exit	1	1		305			305	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	931	1138	0.818	931	1.7	2.0	7.768	A	
		Exit	1	1		877			877	0.0	0.1	0.254	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	448			449	0.1	0.1	1.069	A
			Exit	1	1		614			614	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	522			497	2.5	11.8	63.016	F	
		Exit	1	1		290			290	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	614			614	0.0	0.0	0.000	A	
				2	B	270			272	0.6	0.7	9.912	A	
		Exit	1	1	(A, B)	884			884	0.1	0.1	0.606	A	
							928			929	0.5	0.8	3.281	A

08:30 - 08:45

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	335	964	0.348	333	0.4	0.7	6.389	A	
		Exit	1	1		284			284	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	862	1114	0.773	855	1.6	4.6	17.527	C	
		Exit	1	1		781			781	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	272	778	0.350	273	0.4	0.5	7.067	A	
		Exit	1	1		340			340	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	996	1114	0.894	997	2.0	2.5	8.611	A	
		Exit	1	1		1054			1053	0.1	0.2	0.534	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	567			565	0.1	0.4	2.023	A
			Exit	1	1		738			738	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	644			449	11.8	61.0	298.096	F	
		Exit	1	1		342			342	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	738			738	0.0	0.0	0.000	A	
				2	B	320			321	0.7	1.0	11.618	B	
		Exit	1	1	(A, B)	1056			1057	0.1	0.3	1.158	A	
							992			993	0.8	1.4	4.754	A

08:45 - 09:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	333	969	0.343	333	0.7	0.7	6.451	A	
		Exit	1	1		281			281	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	856	1114	0.768	857	4.6	5.3	21.733	C	
		Exit	1	1		768			768	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	273	779	0.350	269	0.5	0.8	7.335	A	
		Exit	1	1		345			345	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	986	1115	0.885	985	2.5	2.5	8.836	A	
		Exit	1	1		1049			1049	0.2	0.1	0.571	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	558			557	0.4	0.3	2.299	A
			Exit	1	1		731			731	0.0	0.0	0.000	A
		B - Poplars Ave	Entry	1	1	A, C	653			447	61.0	112.0	657.088	F
			Exit	1	1		343			343	0.0	0.0	0.000	A
C - A50 E		Entry	1	1	A	731			731	0.0	0.0	0.000	A	
				2	B	324			323	1.0	1.1	11.939	B	
		Exit	1	1	(A, B)	1056			1055	0.3	0.3	1.232	A	
						984			983	1.4	1.4	5.010	A	

09:00 - 09:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	277	976	0.283	277	0.7	0.4	5.388	A	
		Exit	1	1		235			235	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	708	1130	0.626	707	5.3	1.8	10.548	B	
		Exit	1	1		733			733	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	221	842	0.263	221	0.8	0.4	6.080	A	
		Exit	1	1		316			316	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	979	1138	0.860	978	2.5	2.1	8.183	A	
		Exit	1	1		899			898	0.1	0.1	0.264	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	451			451	0.3	0.1	1.296	A
			Exit	1	1		622			622	0.0	0.0	0.000	A
		B - Poplars Ave	Entry	1	1	A, C	530			541	112.0	111.6	735.608	F
			Exit	1	1		297			297	0.0	0.0	0.000	A
C - A50 E		Entry	1	1	A	622			622	0.0	0.0	0.000	A	
				2	B	281			282	1.1	0.8	10.514	B	
		Exit	1	1	(A, B)	904			903	0.3	0.2	0.716	A	
						976			978	1.4	1.0	3.905	A	

09:15 - 09:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	223	989	0.225	223	0.4	0.3	4.791	A
		Exit	1	1		199			199	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	587	1148	0.511	588	1.8	1.2	7.102	A
		Exit	1	1		689			689	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	185	894	0.207	183	0.4	0.4	5.231	A
		Exit	1	1		285			285	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2, 3, 4	947	1155	0.820	948	2.1	2.0	7.702	A
		Exit	1	1		770			771	0.1	0.0	0.157	A
2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	386			387	0.1	0.0	0.769	A
		Exit	1	1		534			534	0.0	0.0	0.000	A
	B - Poplars Ave	Entry	1	1	A, C	441			570	111.6	76.4	534.396	F
		Exit	1	1		253			253	0.0	0.0	0.000	A
	C - A50 E	Entry	1	1	A	534			534	0.0	0.0	0.000	A
			2	1	(A, B)	773			773	0.2	0.1	0.441	A
		Exit	1	1		943			946	1.0	0.7	3.203	A
			2	1									

A50-Conjunction - 2025 DM, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	AV-1 - A50-Conjunction [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Arm order	Junction Delay (s)	Junction LOS
1	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	18.69	C
2	Poplars Ave/A50	T-Junction	Two-way		19.89	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2025 DM	PM	ONE HOUR	17:00	18:30	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - A50/Hilden Rd Roundabout	4 - A50	2	C	Simple (vertical queueing)	Normal	0	100.00	
2 - Poplars Ave/A50	C - A50 E	1	4	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd		ONE HOUR	✓	279	100.000
	2 - Orford Rd		ONE HOUR	✓	902	100.000
	3 - Smith Drive		ONE HOUR	✓	441	100.000
	4 - A50	✓				
2 - Poplars Ave/A50	A - A50 W		ONE HOUR	✓	799	100.000
	B - Poplars Ave		ONE HOUR	✓	231	100.000
	C - A50 E	✓				

Origin-Destination Data

Demand (PCU/hr)

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	100	41	138
	2 - Orford Rd	135	0.95	71	694
	3 - Smith Drive	205	93	0	143
	4 - A50	82	608	160	19

Demand (PCU/hr)

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	161	638
	B - Poplars Ave	0	0	231
	C - A50 E	708	292	0

Vehicle Mix

Heavy Vehicle Percentages

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	0	0	0
	2 - Orford Rd	0	0	0	1
	3 - Smith Drive	0	0	0	0
	4 - A50	0	2	0	0

Heavy Vehicle Percentages

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	0	2
	B - Poplars Ave	0	0	0
	C - A50 E	0	3	0

Results

Results Summary for whole modelled period

Junction	Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	6.28	0.6	A	257	385
	2 - Orford Rd	33.06	10.6	D	831	1247
	3 - Smith Drive	15.11	2.0	C	403	605
	4 - A50	9.42	2.5	A	790	1185
2 - Poplars Ave/A50	A - A50 W	5.04	1.5	A	732	1098
	B - Poplars Ave	132.15	10.5	F	213	319
	C - A50 E	5.61	1.7	A	911	1367

Main Results for each time segment

17:00 - 17:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	209	52	665	210	313	0.0	0.3	3.901	A
	2 - Orford Rd	676	169	271	679	603	0.0	1.0	6.437	A
	3 - Smith Drive	329	82	740	329	210	0.0	0.6	5.785	A
	4 - A50	655	164	324	654	745	0.0	1.1	6.156	A
2 - Poplars Ave/A50	A - A50 W	599	150		599	528	0.0	0.0	0.240	A
	B - Poplars Ave	177	44		176	338	0.0	0.5	8.223	A
	C - A50 E	747	187		747	656	0.0	0.7	2.937	A

17:15 - 17:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	257	64	782	257	380	0.3	0.3	4.684	A
	2 - Orford Rd	810	203	323	807	716	1.0	2.6	9.363	A
	3 - Smith Drive	395	99	887	394	243	0.6	0.9	8.071	A
	4 - A50	773	193	389	773	892	1.1	1.7	7.393	A
2 - Poplars Ave/A50	A - A50 W	717	179		716	637	0.0	0.2	0.817	A
	B - Poplars Ave	207	52		206	406	0.5	0.9	14.812	B
	C - A50 E	894	223		894	773	0.7	1.0	3.770	A

17:30 - 17:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	311	78	936	311	462	0.3	0.6	6.284	A
	2 - Orford Rd	997	249	393	983	854	2.6	7.8	23.598	C
	3 - Smith Drive	479	120	1081	480	296	0.9	2.0	13.488	B
	4 - A50	922	231	475	922	1087	1.7	2.4	9.083	A
2 - Poplars Ave/A50	A - A50 W	882	220		878	774	0.2	1.5	4.048	A
	B - Poplars Ave	250	63		224	492	0.9	7.3	75.623	F
	C - A50 E	1090	273		1091	926	1.0	1.7	5.467	A

17:45 - 18:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	309	77	953	308	462	0.6	0.6	6.232	A
	2 - Orford Rd	1004	251	397	990	864	7.8	10.6	33.057	D
	3 - Smith Drive	482	121	1085	483	303	2.0	1.8	15.109	C
	4 - A50	941	235	474	941	1094	2.4	2.5	9.424	A
2 - Poplars Ave/A50	A - A50 W	879	220		878	776	1.5	1.3	5.036	A
	B - Poplars Ave	254	64		239	498	7.3	10.5	132.155	F
	C - A50 E	1095	274		1097	941	1.7	1.6	5.610	A

18:00 - 18:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	247	62	807	246	387	0.6	0.3	4.968	A
	2 - Orford Rd	817	204	315	819	739	10.6	2.6	15.850	C
	3 - Smith Drive	398	99	888	400	246	1.8	1.0	9.170	A
	4 - A50	799	200	394	800	894	2.5	1.6	8.125	A
2 - Poplars Ave/A50	A - A50 W	721	180		723	634	1.3	0.1	1.498	A
	B - Poplars Ave	210	52		221	405	10.5	1.8	53.118	F
	C - A50 E	895	224		896	800	1.6	0.9	4.264	A

18:15 - 18:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	208	52	661	208	324	0.3	0.2	4.177	A
	2 - Orford Rd	685	171	268	683	602	2.6	1.3	6.888	A
	3 - Smith Drive	336	84	747	337	205	1.0	0.6	6.431	A
	4 - A50	649	162	336	649	747	1.6	1.2	6.490	A
2 - Poplars Ave/A50	A - A50 W	594	148		594	530	0.1	0.1	0.317	A
	B - Poplars Ave	178	45		178	339	1.8	0.5	11.163	B
	C - A50 E	748	187		748	650	0.9	0.7	3.217	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

17:00 - 17:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	209	1107	0.189	210	0.0	0.3	3.901	A	
		Exit	1	1		313			313	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	676	1239	0.545	679	0.0	1.0	6.437	A	
		Exit	1	1		603			603	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	329	912	0.360	329	0.0	0.6	5.785	A	
		Exit	1	1		210			210	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	655	1102	0.594	654	0.0	1.1	6.156	A	
		Exit	1	1		745			745	0.0	0.0	0.085	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	599			599	0.0	0.0	0.240	A
			Exit	1	1		528			528	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	177			176	0.0	0.5	8.223	A	
		Exit	1	1		338			338	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	528			528	0.0	0.0	0.000	A	
				2	B	219			219	0.0	0.6	9.281	A	
		Exit	1	1	(A, B)	747			747	0.0	0.1	0.283	A	
							656			656	0.0	0.2	1.180	A

17:15 - 17:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	257	1058	0.243	257	0.3	0.3	4.684	A	
		Exit	1	1		380			380	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	810	1217	0.666	807	1.0	2.6	9.363	A	
		Exit	1	1		716			716	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	395	853	0.463	394	0.6	0.9	8.071	A	
		Exit	1	1		243			243	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	773	1074	0.719	773	1.1	1.7	7.393	A	
		Exit	1	1		893			892	0.0	0.1	0.231	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	717			716	0.0	0.2	0.817	A
			Exit	1	1		637			637	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	207			206	0.5	0.9	14.812	B	
		Exit	1	1		406			406	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	637			637	0.0	0.0	0.000	A	
				2	B	257			257	0.6	0.8	11.124	B	
		Exit	1	1	(A, B)	894			893	0.1	0.2	0.619	A	
							773			773	0.2	0.5	2.531	A

17:30 - 17:45

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	311	994	0.313	311	0.3	0.6	6.284	A	
		Exit	1	1		462			462	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	997	1187	0.840	983	2.6	7.8	23.598	C	
		Exit	1	1		854			854	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	479	776	0.617	480	0.9	2.0	13.488	B	
		Exit	1	1		296			296	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	922	1038	0.889	922	1.7	2.4	9.083	A	
		Exit	1	1		1086			1087	0.1	0.2	0.714	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	882			878	0.2	1.5	4.048	A
			Exit	1	1		774			774	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	250			224	0.9	7.3	75.623	F	
		Exit	1	1		492			492	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	774			774	0.0	0.0	0.000	A	
				2	B	316			317	0.8	1.3	13.864	B	
		Exit	1	1	(A, B)	1090			1091	0.2	0.5	1.494	A	
							927			926	0.5	1.5	5.376	A

17:45 - 18:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	309	987	0.313	308	0.6	0.6	6.232	A
		Exit	1	1		462			462	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	1004	1185	0.847	990	7.8	10.6	33.057	D
		Exit	1	1		864			864	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	482	774	0.623	483	2.0	1.8	15.109	C
		Exit	1	1		303			303	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2, 3, 4	941	1038	0.906	941	2.4	2.5	9.424	A
		Exit	1	1		1093			1094	0.2	0.2	0.783	A
2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	879			878	1.5	1.3	5.036	A
		Exit	1	1		776			776	0.0	0.0	0.000	A
	B - Poplars Ave	Entry	1	1	A, C	254			239	7.3	10.5	132.155	F
		Exit	1	1		498			498	0.0	0.0	0.000	A
	C - A50 E	Entry	1	1	A	776			776	0.0	0.0	0.000	A
				2	B	321			322	1.3	1.3	14.003	B
		Exit	1	1	(A, B)	1095			1097	0.5	0.4	1.591	A
							941			941	1.5	1.6	6.105

18:00 - 18:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	247	1048	0.236	246	0.6	0.3	4.968	A
		Exit	1	1		387			387	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	817	1221	0.669	819	10.6	2.6	15.850	C
		Exit	1	1		739			739	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	398	853	0.467	400	1.8	1.0	9.170	A
		Exit	1	1		246			246	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2, 3, 4	799	1072	0.746	800	2.5	1.6	8.125	A
		Exit	1	1		894			894	0.2	0.1	0.388	A
2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	721			723	1.3	0.1	1.498	A
		Exit	1	1		634			634	0.0	0.0	0.000	A
	B - Poplars Ave	Entry	1	1	A, C	210			221	10.5	1.8	53.118	F
		Exit	1	1		405			405	0.0	0.0	0.000	A
	C - A50 E	Entry	1	1	A	634			634	0.0	0.0	0.000	A
				2	B	261			262	1.3	0.8	11.794	B
		Exit	1	1	(A, B)	895			895	0.4	0.1	0.884	A
							801			800	1.6	0.6	3.618

18:15 - 18:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	208	1108	0.188	208	0.3	0.2	4.177	A	
		Exit	1	1		324			324	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	685	1241	0.552	683	2.6	1.3	6.888	A	
		Exit	1	1		602			602	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	336	909	0.370	337	1.0	0.6	6.431	A	
		Exit	1	1		205			205	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	649	1097	0.592	649	1.6	1.2	6.490	A	
		Exit	1	1		747			747	0.1	0.0	0.099	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	594			594	0.1	0.1	0.317	A
			Exit	1	1		530			530	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	178			178	1.8	0.5	11.163	B	
		Exit	1	1		339			339	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	530			530	0.0	0.0	0.000	A	
			2	1	B	217			217	0.8	0.6	9.925	A	
		Exit	2	1	(A, B)	748			748	0.1	0.1	0.355	A	
			1	1		650			650	0.6	0.3	1.531	A	

A50-Conjunction - 2025 DS, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	AV-1 - A50-Conjunction [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Arm order	Junction Delay (s)	Junction LOS
1	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	16.25	C
2	Poplars Ave/A50	T-Junction	Two-way		182.27	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2025 DS	AM	ONE HOUR	08:00	09:30	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - A50/Hilden Rd Roundabout	4 - A50	2	C	Simple (vertical queueing)	Normal	0	100.00	
2 - Poplars Ave/A50	C - A50 E	1	4	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd		ONE HOUR	✓	317	100.000
	2 - Orford Rd		ONE HOUR	✓	839	100.000
	3 - Smith Drive		ONE HOUR	✓	245	100.000
	4 - A50	✓				
2 - Poplars Ave/A50	A - A50 W		ONE HOUR	✓	450	100.000
	B - Poplars Ave		ONE HOUR	✓	621	100.000
	C - A50 E	✓				

Origin-Destination Data

Demand (PCU/hr)

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	70	158	89
	2 - Orford Rd	63	0	55	720
	3 - Smith Drive	145	52	0	48
	4 - A50	54	638	156	164

Demand (PCU/hr)

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	37	413
	B - Poplars Ave	0	0	621
	C - A50 E	688	356	0

Vehicle Mix

Heavy Vehicle Percentages

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	0	0	0
	2 - Orford Rd	0	0	0	3
	3 - Smith Drive	0	0	0	0
	4 - A50	0	1	0	0

Heavy Vehicle Percentages

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	5	0
	B - Poplars Ave	0	0	1
	C - A50 E	1	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	6.23	0.6	A	291	437
	2 - Orford Rd	31.68	8.2	D	768	1153
	3 - Smith Drive	7.91	0.6	A	226	339
	4 - A50	8.54	2.3	A	913	1370
2 - Poplars Ave/A50	A - A50 W	1.59	0.2	A	412	618
	B - Poplars Ave	601.41	97.9	F	570	854
	C - A50 E	5.70	1.9	A	930	1395

Main Results for each time segment

08:00 - 08:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	239	60	778	239	200	0.0	0.3	4.149	A
	2 - Orford Rd	630	157	432	629	585	0.0	1.3	6.687	A
	3 - Smith Drive	184	46	779	184	282	0.0	0.3	4.827	A
	4 - A50	783	196	195	782	768	0.0	1.4	6.396	A
2 - Poplars Ave/A50	A - A50 W	341	85		341	506	0.0	0.0	0.224	A
	B - Poplars Ave	469	117		471	291	0.0	2.5	17.577	C
	C - A50 E	768	192		769	782	0.0	0.7	3.508	A

08:15 - 08:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	284	71	907	284	232	0.3	0.4	5.054	A
	2 - Orford Rd	752	188	509	753	683	1.3	2.2	10.497	B
	3 - Smith Drive	220	55	926	220	336	0.3	0.4	5.878	A
	4 - A50	909	227	231	909	915	1.4	2.0	7.446	A
2 - Poplars Ave/A50	A - A50 W	403	101		403	603	0.0	0.1	0.643	A
	B - Poplars Ave	558	139		538	346	2.5	10.5	51.463	F
	C - A50 E	914	228		915	908	0.7	1.1	4.289	A

08:30 - 08:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	350	88	970	351	281	0.4	0.6	6.122	A
	2 - Orford Rd	926	231	577	918	743	2.2	7.8	24.865	C
	3 - Smith Drive	267	67	1111	268	384	0.4	0.6	7.367	A
	4 - A50	966	241	285	966	1094	2.0	2.3	8.439	A
2 - Poplars Ave/A50	A - A50 W	495	124		496	719	0.1	0.2	1.446	A
	B - Poplars Ave	687	172		511	416	10.5	53.1	229.230	F
	C - A50 E	1094	273		1094	965	1.1	1.7	5.504	A

08:45 - 09:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	352	88	970	352	281	0.6	0.6	6.230	A
	2 - Orford Rd	921	230	573	923	749	7.8	8.2	31.678	D
	3 - Smith Drive	274	68	1114	275	383	0.6	0.6	7.909	A
	4 - A50	961	240	289	962	1099	2.3	2.2	8.538	A
2 - Poplars Ave/A50	A - A50 W	493	123		493	722	0.2	0.2	1.588	A
	B - Poplars Ave	687	172		505	414	53.1	97.9	522.542	F
	C - A50 E	1098	275		1097	960	1.7	1.9	5.699	A

09:00 - 09:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	284	71	936	284	244	0.6	0.4	5.363	A
	2 - Orford Rd	747	187	522	746	699	8.2	2.2	14.779	B
	3 - Smith Drive	225	56	927	225	341	0.6	0.4	6.300	A
	4 - A50	942	235	239	941	913	2.2	2.1	7.972	A
2 - Poplars Ave/A50	A - A50 W	401	100		401	600	0.2	0.1	0.905	A
	B - Poplars Ave	555	139		575	347	97.9	95.1	601.410	F
	C - A50 E	913	228		913	942	1.9	1.1	4.637	A

09:15 - 09:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	238	60	909	238	208	0.4	0.3	4.771	A
	2 - Orford Rd	635	159	475	636	672	2.2	1.3	7.674	A
	3 - Smith Drive	185	46	807	185	304	0.4	0.3	5.266	A
	4 - A50	920	230	196	920	795	2.1	1.9	7.465	A
2 - Poplars Ave/A50	A - A50 W	341	85		341	523	0.1	0.0	0.568	A
	B - Poplars Ave	462	116		607	300	95.1	58.9	428.053	F
	C - A50 E	795	199		795	920	1.1	0.9	3.774	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

08:00 - 08:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	239	1060	0.226	239	0.0	0.3	4.149	A
		Exit	1	1		200			200	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	630	1170	0.538	629	0.0	1.3	6.687	A
		Exit	1	1		585			585	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	184	896	0.206	184	0.0	0.3	4.827	A
		Exit	1	1		282			282	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2, 3, 4	783	1156	0.678	782	0.0	1.4	6.396	A
		Exit	1	1		768			768	0.0	0.0	0.136	A
2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	341			341	0.0	0.0	0.224	A
		Exit	1	1		506			506	0.0	0.0	0.000	A
	B - Poplars Ave	Entry	1	1	A, C	469			471	0.0	2.5	17.577	C
		Exit	1	1		291			291	0.0	0.0	0.000	A
	C - A50 E	Entry	1	1	A	506			506	0.0	0.0	0.000	A
				2	B	262			263	0.0	0.7	9.128	A
		Exit	1	1	(A, B)	768			768	0.0	0.1	0.454	A
							782			782	0.0	0.3	1.532

08:15 - 08:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	284	1006	0.283	284	0.3	0.4	5.054	A	
		Exit	1	1		232			232	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	752	1136	0.662	753	1.3	2.2	10.497	B	
		Exit	1	1		683			683	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	220	838	0.263	220	0.3	0.4	5.878	A	
		Exit	1	1		336			336	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	909	1141	0.796	909	1.4	2.0	7.446	A	
		Exit	1	1		915			915	0.0	0.1	0.308	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	403			403	0.0	0.1	0.643	A
			Exit	1	1		603			603	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	558			538	2.5	10.5	51.463	F	
		Exit	1	1		346			346	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	603			603	0.0	0.0	0.000	A	
				2	B	311			312	0.7	0.9	10.342	B	
		Exit	1	1	(A, B)	914			914	0.1	0.2	0.827	A	
						907			908	0.3	0.7	2.768	A	

08:30 - 08:45

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	350	980	0.357	351	0.4	0.6	6.122	A	
		Exit	1	1		281			281	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	926	1107	0.837	918	2.2	7.8	24.865	C	
		Exit	1	1		743			743	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	267	764	0.350	268	0.4	0.6	7.367	A	
		Exit	1	1		384			384	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	966	1118	0.864	966	2.0	2.3	8.439	A	
		Exit	1	1		1094			1094	0.1	0.2	0.678	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	495			496	0.1	0.2	1.446	A
			Exit	1	1		719			719	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	687			511	10.5	53.1	229.230	F	
		Exit	1	1		416			416	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	719			719	0.0	0.0	0.000	A	
				2	B	374			375	0.9	1.2	11.937	B	
		Exit	1	1	(A, B)	1094			1093	0.2	0.5	1.509	A	
						965			965	0.7	1.2	4.169	A	

08:45 - 09:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	352	980	0.359	352	0.6	0.6	6.230	A	
		Exit	1	1		281			281	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	921	1109	0.830	923	7.8	8.2	31.678	D	
		Exit	1	1		749			749	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	274	763	0.359	275	0.6	0.6	7.909	A	
		Exit	1	1		383			383	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	961	1116	0.861	962	2.3	2.2	8.538	A	
		Exit	1	1		1099			1099	0.2	0.2	0.726	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	493			493	0.2	0.2	1.588	A
			Exit	1	1		722			722	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	687			505	53.1	97.9	522.542	F	
		Exit	1	1		414			414	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	722			722	0.0	0.0	0.000	A	
			2	2	B	376			375	1.2	1.3	12.222	B	
		Exit	2	1	(A, B)	1098			1098	0.5	0.5	1.602	A	
			1	1		959			960	1.2	1.1	4.315	A	

09:00 - 09:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	284	994	0.286	284	0.6	0.4	5.363	A	
		Exit	1	1		244			244	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	747	1131	0.660	746	8.2	2.2	14.779	B	
		Exit	1	1		699			699	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	225	837	0.269	225	0.6	0.4	6.300	A	
		Exit	1	1		341			341	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	942	1138	0.828	941	2.2	2.1	7.972	A	
		Exit	1	1		913			913	0.2	0.1	0.409	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	401			401	0.2	0.1	0.905	A
			Exit	1	1		600			600	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	555			575	97.9	95.1	601.410	F	
		Exit	1	1		347			347	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	600			600	0.0	0.0	0.000	A	
			2	2	B	313			313	1.3	0.9	10.822	B	
		Exit	2	1	(A, B)	913			913	0.5	0.2	1.018	A	
			1	1		943			942	1.1	0.9	3.416	A	

09:15 - 09:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	238	1005	0.237	238	0.4	0.3	4.771	A	
		Exit	1	1		208			208	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	635	1151	0.552	636	2.2	1.3	7.674	A	
		Exit	1	1		672			672	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	185	885	0.209	185	0.4	0.3	5.266	A	
		Exit	1	1		304			304	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	920	1156	0.796	920	2.1	1.9	7.465	A	
		Exit	1	1		796			795	0.1	0.1	0.187	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	341			341	0.1	0.0	0.568	A
			Exit	1	1		523			523	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	462			607	95.1	58.9	428.053	F	
		Exit	1	1		300			300	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	523			523	0.0	0.0	0.000	A	
			2	2	B	272			272	0.9	0.7	9.610	A	
		Exit	2	1	(A, B)	795			795	0.2	0.1	0.567	A	
			1	1		920			920	0.9	0.7	2.785	A	

A50-Conjunction - 2025 DS, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	AV-1 - A50-Conjunction [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Arm order	Junction Delay (s)	Junction LOS
1	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	49.96	E
2	Poplars Ave/A50	T-Junction	Two-way		87.89	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2025 DS	PM	ONE HOUR	17:00	18:30	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - A50/Hilden Rd Roundabout	4 - A50	2	C	Simple (vertical queueing)	Normal	0	100.00	
2 - Poplars Ave/A50	C - A50 E	1	4	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd		ONE HOUR	✓	288	100.000
	2 - Orford Rd		ONE HOUR	✓	986	100.000
	3 - Smith Drive		ONE HOUR	✓	442	100.000
	4 - A50	✓				
2 - Poplars Ave/A50	A - A50 W		ONE HOUR	✓	786	100.000
	B - Poplars Ave		ONE HOUR	✓	336	100.000
	C - A50 E	✓				

Origin-Destination Data

Demand (PCU/hr)

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	102	46	140
	2 - Orford Rd	149	0	55	782
	3 - Smith Drive	247	77	0	118
	4 - A50	82	672	177	43

Demand (PCU/hr)

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	148	638
	B - Poplars Ave	0	0	336
	C - A50 E	740	377	0

Vehicle Mix

Heavy Vehicle Percentages

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	0	0	0
	2 - Orford Rd	0	0	0	1
	3 - Smith Drive	0	0	0	0
	4 - A50	0	2	0	0

Heavy Vehicle Percentages

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	0	2
	B - Poplars Ave	0	0	0
	C - A50 E	1	1	0

Results

Results Summary for whole modelled period

Junction	Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	7.52	0.7	A	265	398
	2 - Orford Rd	115.16	38.9	F	904	1355
	3 - Smith Drive	19.16	2.6	C	405	608
	4 - A50	10.22	2.8	B	885	1328
2 - Poplars Ave/A50	A - A50 W	7.68	1.9	A	722	1083
	B - Poplars Ave	529.78	56.2	F	309	463
	C - A50 E	8.22	2.8	A	987	1480

Main Results for each time segment

17:00 - 17:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	216	54	724	215	361	0.0	0.3	4.023	A
	2 - Orford Rd	733	183	307	733	632	0.0	1.6	7.480	A
	3 - Smith Drive	331	83	828	333	211	0.0	0.6	6.334	A
	4 - A50	731	183	355	730	805	0.0	1.5	6.748	A
2 - Poplars Ave/A50	A - A50 W	590	147		590	536	0.0	0.1	0.340	A
	B - Poplars Ave	251	63		252	379	0.0	0.9	11.056	B
	C - A50 E	807	202		805	731	0.0	1.0	4.004	A

17:15 - 17:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	263	66	861	262	424	0.3	0.4	5.055	A
	2 - Orford Rd	886	222	366	881	756	1.6	4.3	14.945	B
	3 - Smith Drive	389	97	998	390	249	0.6	1.0	9.102	A
	4 - A50	869	217	418	866	969	1.5	2.2	8.317	A
2 - Poplars Ave/A50	A - A50 W	704	176		703	642	0.1	0.3	1.656	A
	B - Poplars Ave	302	76		298	459	0.9	3.4	33.438	D
	C - A50 E	971	243		970	869	1.0	1.5	5.530	A

17:30 - 17:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	323	81	968	324	508	0.4	0.6	7.297	A
	2 - Orford Rd	1095	274	423	1018	869	4.3	25.3	57.776	F
	3 - Smith Drive	488	122	1160	484	280	1.0	2.6	16.771	C
	4 - A50	964	241	512	964	1132	2.2	2.8	9.845	A
2 - Poplars Ave/A50	A - A50 W	870	218		866	751	0.3	1.7	6.209	A
	B - Poplars Ave	370	92		261	546	3.4	29.1	253.327	F
	C - A50 E	1135	284		1135	964	1.5	2.5	7.912	A

17:45 - 18:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	314	78	975	316	509	0.6	0.7	7.522	A
	2 - Orford Rd	1093	273	421	1032	870	25.3	38.9	115.157	F
	3 - Smith Drive	488	122	1169	489	283	2.6	2.6	19.157	C
	4 - A50	968	242	515	969	1143	2.8	2.8	10.216	B
2 - Poplars Ave/A50	A - A50 W	866	217		868	753	1.7	1.9	7.677	A
	B - Poplars Ave	371	93		263	553	29.1	56.2	529.783	F
	C - A50 E	1147	287		1143	968	2.5	2.8	8.222	A

18:00 - 18:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	259	65	944	258	452	0.7	0.4	6.180	A
	2 - Orford Rd	884	221	384	961	819	38.9	12.8	82.718	F
	3 - Smith Drive	400	100	1075	401	270	2.6	1.1	12.483	B
	4 - A50	957	239	441	955	1034	2.8	2.5	9.418	A
2 - Poplars Ave/A50	A - A50 W	707	177		709	685	1.9	0.5	3.329	A
	B - Poplars Ave	302	76		381	486	56.2	37.6	425.990	F
	C - A50 E	1036	259		1037	956	2.8	1.7	6.855	A

18:15 - 18:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	217	54	810	218	368	0.4	0.2	4.572	A
	2 - Orford Rd	731	183	327	740	700	12.8	1.6	16.950	C
	3 - Smith Drive	334	84	845	334	223	1.1	0.7	7.274	A
	4 - A50	821	205	354	823	825	2.5	1.8	8.207	A
2 - Poplars Ave/A50	A - A50 W	593	148		594	550	0.5	0.2	1.211	A
	B - Poplars Ave	257	64		334	386	37.6	7.6	148.250	F
	C - A50 E	826	207		827	820	1.7	1.0	4.655	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

17:00 - 17:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	216	1082	0.199	215	0.0	0.3	4.023	A
		Exit	1	1		361			361	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	733	1224	0.599	733	0.0	1.6	7.480	A
		Exit	1	1		632			632	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	331	877	0.377	333	0.0	0.6	6.334	A
		Exit	1	1		211			211	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2, 3, 4	731	1089	0.672	730	0.0	1.5	6.748	A
		Exit	1	1		806			805	0.0	0.1	0.189	A
2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	590			590	0.0	0.1	0.340	A
		Exit	1	1		536			536	0.0	0.0	0.000	A
	B - Poplars Ave	Entry	1	1	A, C	251			252	0.0	0.9	11.056	B
		Exit	1	1		379			379	0.0	0.0	0.000	A
	C - A50 E	Entry	1	1	A	536			536	0.0	0.0	0.000	A
				2	B	270			268	0.0	0.8	10.243	B
		Exit	1	1	(A, B)	807			806	0.0	0.2	0.573	A
Exit	1	1		731			731	0.0	0.4	1.753	A		

17:15 - 17:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	263	1025	0.256	262	0.3	0.4	5.055	A
		Exit	1	1		424			424	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	886	1198	0.740	881	1.6	4.3	14.945	B
		Exit	1	1		756			756	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	389	809	0.481	390	0.6	1.0	9.102	A
		Exit	1	1		249			249	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2, 3, 4	869	1062	0.818	866	1.5	2.2	8.317	A
		Exit	1	1		969			969	0.1	0.2	0.573	A
2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	704			703	0.1	0.3	1.656	A
		Exit	1	1		642			642	0.0	0.0	0.000	A
	B - Poplars Ave	Entry	1	1	A, C	302			298	0.9	3.4	33.438	D
		Exit	1	1		459			459	0.0	0.0	0.000	A
	C - A50 E	Entry	1	1	A	642			642	0.0	0.0	0.000	A
				2	B	329			328	0.8	1.1	12.474	B
		Exit	1	1	(A, B)	971			971	0.2	0.3	1.319	A
						870			869	0.4	1.1	3.842	A

17:30 - 17:45

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	323	981	0.329	324	0.4	0.6	7.297	A
		Exit	1	1		508			508	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	1095	1174	0.933	1018	4.3	25.3	57.776	F
		Exit	1	1		869			869	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	488	744	0.656	484	1.0	2.6	16.771	C
		Exit	1	1		280			280	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2, 3, 4	964	1022	0.944	964	2.2	2.8	9.845	A
		Exit	1	1		1132			1132	0.2	0.5	1.401	A
2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	870			866	0.3	1.7	6.209	A
		Exit	1	1		751			751	0.0	0.0	0.000	A
	B - Poplars Ave	Entry	1	1	A, C	370			261	3.4	29.1	253.327	F
		Exit	1	1		546			546	0.0	0.0	0.000	A
	C - A50 E	Entry	1	1	A	751			751	0.0	0.0	0.000	A
				2	B	384			385	1.1	1.7	15.471	C
		Exit	1	1	(A, B)	1135			1135	0.3	0.8	2.673	A
						966			964	1.1	2.0	6.857	A

17:45 - 18:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	314	978	0.321	316	0.6	0.7	7.522	A	
		Exit	1	1		509			509	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	1093	1175	0.930	1032	25.3	38.9	115.157	F	
		Exit	1	1		870			870	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	488	741	0.659	489	2.6	2.6	19.157	C	
		Exit	1	1		283			283	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	968	1021	0.949	969	2.8	2.8	10.216	B	
		Exit	1	1		1143			1143	0.5	0.5	1.542	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	866			868	1.7	1.9	7.677	A
			Exit	1	1		753			753	0.0	0.0	0.000	A
		B - Poplars Ave	Entry	1	1	A, C	371			263	29.1	56.2	529.783	F
			Exit	1	1		553			553	0.0	0.0	0.000	A
C - A50 E		Entry	1	1	A	753			753	0.0	0.0	0.000	A	
				2	B	392			390	1.7	1.8	15.820	C	
		Exit	1	1	(A, B)	1147			1145	0.8	1.0	2.872	A	
						968			968	2.0	2.1	7.595	A	

18:00 - 18:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	259	991	0.261	258	0.7	0.4	6.180	A	
		Exit	1	1		452			452	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	884	1191	0.742	961	38.9	12.8	82.718	F	
		Exit	1	1		819			819	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	400	778	0.515	401	2.6	1.1	12.483	B	
		Exit	1	1		270			270	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	957	1052	0.909	955	2.8	2.5	9.418	A	
		Exit	1	1		1034			1034	0.5	0.2	1.057	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	707			709	1.9	0.5	3.329	A
			Exit	1	1		685			685	0.0	0.0	0.000	A
		B - Poplars Ave	Entry	1	1	A, C	302			381	56.2	37.6	425.990	F
			Exit	1	1		486			486	0.0	0.0	0.000	A
C - A50 E		Entry	1	1	A	685			685	0.0	0.0	0.000	A	
				2	B	351			352	1.8	1.3	14.067	B	
		Exit	1	1	(A, B)	1036			1036	1.0	0.4	2.124	A	
						956			956	2.1	1.4	5.775	A	

18:15 - 18:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	217	1047	0.208	218	0.4	0.2	4.572	A
		Exit	1	1		368			368	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	731	1215	0.602	740	12.8	1.6	16.950	C
		Exit	1	1		700			700	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	334	870	0.384	334	1.1	0.7	7.274	A
		Exit	1	1		223			223	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2, 3, 4	821	1089	0.754	823	2.5	1.8	8.207	A
		Exit	1	1		824			825	0.2	0.1	0.344	A
2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	593			594	0.5	0.2	1.211	A
		Exit	1	1		550			550	0.0	0.0	0.000	A
	B - Poplars Ave	Entry	1	1	A, C	257			334	37.6	7.6	148.250	F
		Exit	1	1		386			386	0.0	0.0	0.000	A
	C - A50 E	Entry	1	1	A	550			550	0.0	0.0	0.000	A
			2	2	B	276			276	1.3	0.8	11.222	B
		Exit	2	1	(A, B)	826			826	0.4	0.2	0.898	A
			1	1		819			820	1.4	0.7	3.798	A

A50-Conjunction - 2030 DM, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	AV-1 - A50-Conjunction [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Arm order	Junction Delay (s)	Junction LOS
1	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	13.20	B
2	Poplars Ave/A50	T-Junction	Two-way		153.81	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2030 DM	AM	ONE HOUR	08:00	09:30	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - A50/Hilden Rd Roundabout	4 - A50	2	C	Simple (vertical queueing)	Normal	0	100.00	
2 - Poplars Ave/A50	C - A50 E	1	4	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd		ONE HOUR	✓	319	100.000
	2 - Orford Rd		ONE HOUR	✓	817	100.000
	3 - Smith Drive		ONE HOUR	✓	254	100.000
	4 - A50	✓				
2 - Poplars Ave/A50	A - A50 W		ONE HOUR	✓	438	100.000
	B - Poplars Ave		ONE HOUR	✓	596	100.000
	C - A50 E	✓				

Origin-Destination Data

Demand (PCU/hr)

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	88	121	110
	2 - Orford Rd	71	0	58	688
	3 - Smith Drive	163	42	0	49
	4 - A50	53	621	225	116

Demand (PCU/hr)

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	20	418
	B - Poplars Ave	0	0	596
	C - A50 E	703	320	0

Vehicle Mix

Heavy Vehicle Percentages

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	0	0	0
	2 - Orford Rd	0	0	0	3
	3 - Smith Drive	0	0	0	0
	4 - A50	0	1	0	0

Heavy Vehicle Percentages

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	0	0
	B - Poplars Ave	0	0	1
	C - A50 E	0	7	0

Results

Results Summary for whole modelled period

Junction	Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	6.25	0.8	A	294	441
	2 - Orford Rd	23.37	6.4	C	753	1129
	3 - Smith Drive	7.40	0.6	A	234	351
	4 - A50	8.50	2.4	A	909	1363
2 - Poplars Ave/A50	A - A50 W	1.51	0.2	A	402	603
	B - Poplars Ave	507.10	84.0	F	547	820
	C - A50 E	4.58	1.5	A	884	1326

Main Results for each time segment

08:00 - 08:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	242	61	757	243	216	0.0	0.3	4.034	A
	2 - Orford Rd	609	152	439	611	561	0.0	1.2	6.550	A
	3 - Smith Drive	193	48	742	192	308	0.0	0.2	4.722	A
	4 - A50	765	191	209	764	725	0.0	1.4	6.345	A
2 - Poplars Ave/A50	A - A50 W	333	83		333	498	0.0	0.0	0.190	A
	B - Poplars Ave	449	112		447	243	0.0	2.4	16.426	C
	C - A50 E	725	181		725	765	0.0	0.7	2.953	A

08:15 - 08:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	288	72	896	288	258	0.3	0.4	5.009	A
	2 - Orford Rd	742	185	514	743	670	1.2	1.9	9.750	A
	3 - Smith Drive	231	58	894	231	363	0.2	0.3	5.778	A
	4 - A50	905	226	250	904	875	1.4	1.9	7.434	A
2 - Poplars Ave/A50	A - A50 W	398	100		399	598	0.0	0.1	0.567	A
	B - Poplars Ave	529	132		524	295	2.4	7.9	45.276	E
	C - A50 E	875	219		875	905	0.7	1.1	3.607	A

08:30 - 08:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	353	88	963	351	310	0.4	0.8	6.080	A
	2 - Orford Rd	898	224	581	904	732	1.9	6.2	21.983	C
	3 - Smith Drive	279	70	1074	279	412	0.3	0.5	7.261	A
	4 - A50	968	242	305	968	1047	1.9	2.4	8.380	A
2 - Poplars Ave/A50	A - A50 W	485	121		485	721	0.1	0.2	1.446	A
	B - Poplars Ave	662	165		505	352	7.9	46.7	201.660	F
	C - A50 E	1048	262		1050	966	1.1	1.5	4.510	A

08:45 - 09:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	355	89	958	356	308	0.8	0.6	6.246	A
	2 - Orford Rd	911	228	580	899	735	6.2	6.4	23.370	C
	3 - Smith Drive	276	69	1064	275	414	0.5	0.6	7.404	A
	4 - A50	965	241	302	964	1037	2.4	2.4	8.505	A
2 - Poplars Ave/A50	A - A50 W	483	121		483	710	0.2	0.2	1.515	A
	B - Poplars Ave	654	164		503	346	46.7	84.0	456.379	F
	C - A50 E	1035	259		1035	965	1.5	1.5	4.578	A

09:00 - 09:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	287	72	934	288	260	0.6	0.4	5.121	A
	2 - Orford Rd	738	184	532	735	690	6.4	2.2	12.588	B
	3 - Smith Drive	232	58	892	232	374	0.6	0.4	6.158	A
	4 - A50	944	236	251	943	873	2.4	2.1	7.942	A
2 - Poplars Ave/A50	A - A50 W	387	97		388	602	0.2	0.1	0.861	A
	B - Poplars Ave	538	135		574	289	84.0	76.8	507.097	F
	C - A50 E	874	218		873	944	1.5	0.9	3.723	A

09:15 - 09:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	239	60	895	239	219	0.4	0.3	4.858	A
	2 - Orford Rd	620	155	482	617	653	2.2	1.3	7.202	A
	3 - Smith Drive	192	48	762	192	337	0.4	0.3	5.304	A
	4 - A50	906	227	207	908	747	2.1	1.8	7.356	A
2 - Poplars Ave/A50	A - A50 W	326	81		326	512	0.1	0.0	0.546	A
	B - Poplars Ave	449	112		594	252	76.8	39.2	325.090	F
	C - A50 E	748	187		749	906	0.9	0.7	3.134	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

08:00 - 08:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	242	1068	0.227	243	0.0	0.3	4.034	A	
		Exit	1	1		216			216	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	609	1167	0.522	611	0.0	1.2	6.550	A	
		Exit	1	1		561			561	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	193	911	0.212	192	0.0	0.2	4.722	A	
		Exit	1	1		308			308	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	765	1150	0.665	764	0.0	1.4	6.345	A	
		Exit	1	1		725			725	0.0	0.0	0.109	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	333			333	0.0	0.0	0.190	A
			Exit	1	1		498			498	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	449			447	0.0	2.4	16.426	C	
		Exit	1	1		243			243	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	498			498	0.0	0.0	0.000	A	
				2	B	227			227	0.0	0.6	8.684	A	
		Exit	1	1	(A, B)	725			725	0.0	0.1	0.344	A	
						765			765	0.0	0.3	1.475	A	

08:15 - 08:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	288	1011	0.285	288	0.3	0.4	5.009	A
		Exit	1	1		258			258	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	742	1134	0.654	743	1.2	1.9	9.750	A
		Exit	1	1		670			670	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	231	850	0.272	231	0.2	0.3	5.778	A
		Exit	1	1		363			363	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2, 3, 4	905	1133	0.799	904	1.4	1.9	7.434	A
		Exit	1	1		875			875	0.0	0.1	0.225	A
2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	398			399	0.0	0.1	0.567	A
		Exit	1	1		598			598	0.0	0.0	0.000	A
	B - Poplars Ave	Entry	1	1	A, C	529			524	2.4	7.9	45.276	E
		Exit	1	1		295			295	0.0	0.0	0.000	A
	C - A50 E	Entry	1	1	A	598			598	0.0	0.0	0.000	A
				2	B	278			277	0.6	0.9	9.867	A
		Exit	1	1	(A, B)	875			876	0.1	0.2	0.628	A
						905			905	0.3	0.7	2.680	A

08:30 - 08:45

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	353	983	0.359	351	0.4	0.8	6.080	A
		Exit	1	1		310			310	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	898	1105	0.812	904	1.9	6.2	21.983	C
		Exit	1	1		732			732	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	279	779	0.358	279	0.3	0.5	7.261	A
		Exit	1	1		412			412	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2, 3, 4	968	1110	0.872	968	1.9	2.4	8.380	A
		Exit	1	1		1048			1047	0.1	0.2	0.483	A
2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	485			485	0.1	0.2	1.446	A
		Exit	1	1		721			721	0.0	0.0	0.000	A
	B - Poplars Ave	Entry	1	1	A, C	662			505	7.9	46.7	201.660	F
		Exit	1	1		352			352	0.0	0.0	0.000	A
	C - A50 E	Entry	1	1	A	721			721	0.0	0.0	0.000	A
				2	B	327			329	0.9	1.1	11.297	B
		Exit	1	1	(A, B)	1048			1048	0.2	0.4	1.129	A
						966			966	0.7	1.2	4.122	A

08:45 - 09:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	355	985	0.361	356	0.8	0.6	6.246	A	
		Exit	1	1		308			308	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	911	1106	0.824	899	6.2	6.4	23.370	C	
		Exit	1	1		735			735	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	276	782	0.353	275	0.5	0.6	7.404	A	
		Exit	1	1		414			414	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	965	1111	0.869	964	2.4	2.4	8.505	A	
		Exit	1	1		1037			1037	0.2	0.2	0.500	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	483			483	0.2	0.2	1.515	A
			Exit	1	1		710			710	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	654			503	46.7	84.0	456.379	F	
		Exit	1	1		346			346	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	710			710	0.0	0.0	0.000	A	
				2	B	325			325	1.1	1.1	11.521	B	
		Exit	1	1	(A, B)	1035			1035	0.4	0.4	1.155	A	
						964			965	1.2	1.2	4.255	A	

09:00 - 09:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	287	995	0.288	288	0.6	0.4	5.121	A	
		Exit	1	1		260			260	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	738	1126	0.655	735	6.4	2.2	12.588	B	
		Exit	1	1		690			690	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	232	851	0.273	232	0.6	0.4	6.158	A	
		Exit	1	1		374			374	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	944	1133	0.833	943	2.4	2.1	7.942	A	
		Exit	1	1		874			873	0.2	0.1	0.279	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	387			388	0.2	0.1	0.861	A
			Exit	1	1		602			602	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	538			574	84.0	76.8	507.097	F	
		Exit	1	1		289			289	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	602			602	0.0	0.0	0.000	A	
				2	B	271			271	1.1	0.8	10.150	B	
		Exit	1	1	(A, B)	874			873	0.4	0.2	0.705	A	
						944			944	1.2	0.9	3.432	A	

09:15 - 09:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	239	1011	0.237	239	0.4	0.3	4.858	A
		Exit	1	1		219			219	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	620	1148	0.540	617	2.2	1.3	7.202	A
		Exit	1	1		653			653	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	192	903	0.213	192	0.4	0.3	5.304	A
		Exit	1	1		337			337	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2, 3, 4	906	1151	0.787	908	2.1	1.8	7.356	A
		Exit	1	1		747			747	0.1	0.0	0.131	A
2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	326			326	0.1	0.0	0.546	A
		Exit	1	1		512			512	0.0	0.0	0.000	A
	B - Poplars Ave	Entry	1	1	A, C	449			594	76.8	39.2	325.090	F
		Exit	1	1		252			252	0.0	0.0	0.000	A
	C - A50 E	Entry	1	1	A	512			512	0.0	0.0	0.000	A
			2	2	B	236			237	0.8	0.6	9.121	A
		Exit	2	1	(A, B)	748			748	0.2	0.1	0.425	A
			1	1		906			906	0.9	0.6	2.671	A

A50-Conjunction - 2030 DM, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	AV-1 - A50-Conjunction [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Arm order	Junction Delay (s)	Junction LOS
1	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	20.28	C
2	Poplars Ave/A50	T-Junction	Two-way		49.86	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2030 DM	PM	ONE HOUR	17:00	18:30	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - A50/Hilden Rd Roundabout	4 - A50	2	C	Simple (vertical queueing)	Normal	0	100.00	
2 - Poplars Ave/A50	C - A50 E	1	4	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd		ONE HOUR	✓	293	100.000
	2 - Orford Rd		ONE HOUR	✓	895	100.000
	3 - Smith Drive		ONE HOUR	✓	458	100.000
	4 - A50	✓				
2 - Poplars Ave/A50	A - A50 W		ONE HOUR	✓	842	100.000
	B - Poplars Ave		ONE HOUR	✓	262	100.000
	C - A50 E	✓				

Origin-Destination Data

Demand (PCU/hr)

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	105	44	144
	2 - Orford Rd	142	0	61	693
	3 - Smith Drive	212	97	0	150
	4 - A50	80	603	198	28

Demand (PCU/hr)

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	158	684
	B - Poplars Ave	0	0	262
	C - A50 E	730	292	0

Vehicle Mix

Heavy Vehicle Percentages

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	0	0	0
	2 - Orford Rd	0	0	0	1
	3 - Smith Drive	0	0	0	0
	4 - A50	0	2	0	0

Heavy Vehicle Percentages

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	0	2
	B - Poplars Ave	0	0	0
	C - A50 E	0	3	0

Results

Results Summary for whole modelled period

Junction	Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	6.76	0.6	A	268	403
	2 - Orford Rd	37.51	10.6	E	819	1228
	3 - Smith Drive	16.28	2.5	C	421	632
	4 - A50	10.03	2.8	B	858	1287
2 - Poplars Ave/A50	A - A50 W	8.42	2.1	A	770	1155
	B - Poplars Ave	354.85	31.3	F	239	358
	C - A50 E	5.75	2.0	A	929	1393

Main Results for each time segment

17:00 - 17:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	221	55	713	221	326	0.0	0.2	4.100	A
	2 - Orford Rd	669	167	316	670	619	0.0	1.3	6.494	A
	3 - Smith Drive	344	86	753	345	233	0.0	0.6	6.065	A
	4 - A50	702	175	339	700	760	0.0	1.5	6.448	A
2 - Poplars Ave/A50	A - A50 W	630	158		630	545	0.0	0.1	0.371	A
	B - Poplars Ave	193	48		192	339	0.0	0.6	9.807	A
	C - A50 E	761	190		762	701	0.0	0.7	2.879	A

17:15 - 17:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	262	66	858	262	389	0.2	0.3	4.891	A
	2 - Orford Rd	803	201	379	803	741	1.3	2.6	10.219	B
	3 - Smith Drive	407	102	903	406	279	0.6	1.0	8.436	A
	4 - A50	849	212	399	847	910	1.5	1.9	7.987	A
2 - Poplars Ave/A50	A - A50 W	756	189		756	652	0.1	0.4	1.438	A
	B - Poplars Ave	236	59		235	395	0.6	1.9	24.412	C
	C - A50 E	912	228		909	851	0.7	1.2	3.906	A

17:30 - 17:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	321	80	991	321	474	0.3	0.6	6.503	A
	2 - Orford Rd	988	247	448	960	863	2.6	10.1	27.202	D
	3 - Smith Drive	511	128	1079	509	328	1.0	2.5	14.977	B
	4 - A50	970	242	495	970	1093	1.9	2.7	9.665	A
2 - Poplars Ave/A50	A - A50 W	920	230		921	779	0.4	2.1	6.857	A
	B - Poplars Ave	285	71		222	488	1.9	17.0	174.146	F
	C - A50 E	1096	274		1097	972	1.2	1.8	5.545	A

17:45 - 18:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	325	81	1003	326	479	0.6	0.5	6.761	A
	2 - Orford Rd	982	246	455	980	874	10.1	10.6	37.510	E
	3 - Smith Drive	508	127	1103	506	331	2.5	2.3	16.277	C
	4 - A50	986	247	497	985	1113	2.7	2.8	10.028	B
2 - Poplars Ave/A50	A - A50 W	922	230		925	794	2.1	2.0	8.424	A
	B - Poplars Ave	289	72		238	493	17.0	31.3	354.855	F
	C - A50 E	1116	279		1114	989	1.8	2.0	5.751	A

18:00 - 18:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	263	66	924	263	394	0.5	0.4	5.351	A
	2 - Orford Rd	803	201	401	802	786	10.6	2.6	16.709	C
	3 - Smith Drive	413	103	906	413	297	2.3	0.9	9.928	A
	4 - A50	917	229	400	918	919	2.8	2.3	9.129	A
2 - Poplars Ave/A50	A - A50 W	753	188		753	657	2.0	0.5	3.402	A
	B - Poplars Ave	236	59		306	407	31.3	10.3	208.238	F
	C - A50 E	920	230		921	917	2.0	1.1	4.424	A

18:15 - 18:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	219	55	734	219	326	0.4	0.2	4.396	A
	2 - Orford Rd	668	167	320	668	633	2.6	1.3	7.232	A
	3 - Smith Drive	344	86	754	344	234	0.9	0.7	6.867	A
	4 - A50	726	182	332	728	767	2.3	1.3	7.385	A
2 - Poplars Ave/A50	A - A50 W	637	159		636	550	0.5	0.1	0.772	A
	B - Poplars Ave	195	49		208	336	10.3	0.9	38.046	E
	C - A50 E	767	192		768	727	1.1	0.7	3.263	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

17:00 - 17:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	221	1087	0.203	221	0.0	0.2	4.100	A	
		Exit	1	1		326			326	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	669	1220	0.548	670	0.0	1.3	6.494	A	
		Exit	1	1		619			619	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	344	906	0.380	345	0.0	0.6	6.065	A	
		Exit	1	1		233			233	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	702	1095	0.641	700	0.0	1.5	6.448	A	
		Exit	1	1		759			760	0.0	0.0	0.092	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	630			630	0.0	0.1	0.371	A
			Exit	1	1		545			545	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	193			192	0.0	0.6	9.807	A	
		Exit	1	1		339			339	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	545			545	0.0	0.0	0.000	A	
				2	B	217			218	0.0	0.6	9.301	A	
		Exit	1	1	(A, B)	761			762	0.0	0.0	0.283	A	
						701			701	0.0	0.3	1.579	A	

17:15 - 17:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	262	1027	0.255	262	0.2	0.3	4.891	A	
		Exit	1	1		389			389	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	803	1193	0.673	803	1.3	2.6	10.219	B	
		Exit	1	1		741			741	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	407	847	0.481	406	0.6	1.0	8.436	A	
		Exit	1	1		279			279	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	849	1070	0.793	847	1.5	1.9	7.987	A	
		Exit	1	1		910			910	0.0	0.1	0.277	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	756			756	0.1	0.4	1.438	A
			Exit	1	1		652			652	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	236			235	0.6	1.9	24.412	C	
		Exit	1	1		395			395	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	652			652	0.0	0.0	0.000	A	
				2	B	259			257	0.6	1.0	11.531	B	
		Exit	1	1	(A, B)	912			911	0.0	0.2	0.687	A	
						853			851	0.3	0.9	3.443	A	

17:30 - 17:45

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	321	971	0.331	321	0.3	0.6	6.503	A	
		Exit	1	1		474			474	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	988	1163	0.850	960	2.6	10.1	27.202	D	
		Exit	1	1		863			863	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	511	776	0.658	509	1.0	2.5	14.977	B	
		Exit	1	1		328			328	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	970	1029	0.942	970	1.9	2.7	9.665	A	
		Exit	1	1		1093			1093	0.1	0.3	0.784	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	920			921	0.4	2.1	6.857	A
			Exit	1	1		779			779	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	285			222	1.9	17.0	174.146	F	
		Exit	1	1		488			488	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	779			779	0.0	0.0	0.000	A	
				2	B	317			318	1.0	1.3	14.192	B	
		Exit	1	1	(A, B)	1096			1096	0.2	0.5	1.564	A	
						972			972	0.9	2.0	6.740	A	

17:45 - 18:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	325	966	0.336	326	0.6	0.5	6.761	A	
		Exit	1	1		479			479	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	982	1160	0.847	980	10.1	10.6	37.510	E	
		Exit	1	1		874			874	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	508	767	0.662	506	2.5	2.3	16.277	C	
		Exit	1	1		331			331	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	986	1029	0.959	985	2.7	2.8	10.028	B	
		Exit	1	1		1113			1113	0.3	0.3	0.832	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	922			925	2.1	2.0	8.424	A
			Exit	1	1		794			794	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	289			238	17.0	31.3	354.855	F	
		Exit	1	1		493			493	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	794			794	0.0	0.0	0.000	A	
				2	B	322			320	1.3	1.4	14.529	B	
		Exit	1	1	(A, B)	1116			1116	0.5	0.6	1.686	A	
							990			989	2.0	2.2	7.590	A

18:00 - 18:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	263	999	0.263	263	0.5	0.4	5.351	A	
		Exit	1	1		394			394	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	803	1183	0.679	802	10.6	2.6	16.709	C	
		Exit	1	1		786			786	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	413	845	0.488	413	2.3	0.9	9.928	A	
		Exit	1	1		297			297	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	917	1069	0.857	918	2.8	2.3	9.129	A	
		Exit	1	1		919			919	0.3	0.1	0.432	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	753			753	2.0	0.5	3.402	A
			Exit	1	1		657			657	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	236			306	31.3	10.3	208.238	F	
		Exit	1	1		407			407	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	657			657	0.0	0.0	0.000	A	
				2	B	263			264	1.4	0.9	12.275	B	
		Exit	1	1	(A, B)	920			920	0.6	0.2	0.965	A	
							916			917	2.2	1.2	5.492	A

18:15 - 18:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	219	1078	0.203	219	0.4	0.2	4.396	A
		Exit	1	1		326			326	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	668	1218	0.548	668	2.6	1.3	7.232	A
		Exit	1	1		633			633	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	344	906	0.380	344	0.9	0.7	6.867	A
		Exit	1	1		234			234	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2, 3, 4	726	1098	0.661	728	2.3	1.3	7.385	A
		Exit	1	1		766			767	0.1	0.0	0.142	A
2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	637			636	0.5	0.1	0.772	A
		Exit	1	1		550			550	0.0	0.0	0.000	A
	B - Poplars Ave	Entry	1	1	A, C	195			208	10.3	0.9	38.046	E
		Exit	1	1		336			336	0.0	0.0	0.000	A
	C - A50 E	Entry	1	1	A	550			550	0.0	0.0	0.000	A
			2	2	B	218			218	0.9	0.6	10.236	B
		Exit	2	1	(A, B)	767			768	0.2	0.0	0.425	A
			1	1		726			727	1.2	0.4	2.594	A

A50-Conjunction - 2030 DS, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	AV-1 - A50-Conjunction [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Arm order	Junction Delay (s)	Junction LOS
1	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	26.30	D
2	Poplars Ave/A50	T-Junction	Two-way		244.29	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2030 DS	AM	ONE HOUR	08:00	09:30	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - A50/Hilden Rd Roundabout	4 - A50	2	C	Simple (vertical queueing)	Normal	0	100.00	
2 - Poplars Ave/A50	C - A50 E	1	4	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd		ONE HOUR	✓	378	100.000
	2 - Orford Rd		ONE HOUR	✓	925	100.000
	3 - Smith Drive		ONE HOUR	✓	254	100.000
	4 - A50	✓				
2 - Poplars Ave/A50	A - A50 W		ONE HOUR	✓	480	100.000
	B - Poplars Ave		ONE HOUR	✓	632	100.000
	C - A50 E	✓				

Origin-Destination Data

Demand (PCU/hr)

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	134	123	121
	2 - Orford Rd	122	23	53	727
	3 - Smith Drive	149	55	0	49
	4 - A50	55	708	159	102

Demand (PCU/hr)

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	47	433
	B - Poplars Ave	0	0	632
	C - A50 E	647	369	0

Vehicle Mix

Heavy Vehicle Percentages

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	0	0	0
	2 - Orford Rd	0	0	0	3
	3 - Smith Drive	0	0	0	0
	4 - A50	0	1	0	0

Heavy Vehicle Percentages

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	4	0
	B - Poplars Ave	0	0	1
	C - A50 E	4	5	0

Results

Results Summary for whole modelled period

Junction	Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	7.70	0.9	A	346	519
	2 - Orford Rd	57.46	17.8	F	846	1269
	3 - Smith Drive	8.45	0.7	A	234	351
	4 - A50	9.07	2.4	A	914	1371
2 - Poplars Ave/A50	A - A50 W	2.08	0.3	A	439	659
	B - Poplars Ave	810.69	131.3	F	579	868
	C - A50 E	6.81	2.2	A	932	1398

Main Results for each time segment

08:00 - 08:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	287	72	816	287	247	0.0	0.4	4.554	A
	2 - Orford Rd	698	175	388	699	715	0.0	1.5	7.767	A
	3 - Smith Drive	193	48	831	193	256	0.0	0.3	4.907	A
	4 - A50	797	199	265	798	758	0.0	1.5	6.741	A
2 - Poplars Ave/A50	A - A50 W	357	89		357	490	0.0	0.0	0.262	A
	B - Poplars Ave	477	119		475	320	0.0	3.3	20.340	C
	C - A50 E	775	194		774	797	0.0	1.0	4.210	A

08:15 - 08:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	340	85	939	339	294	0.4	0.6	5.528	A
	2 - Orford Rd	832	208	458	832	821	1.5	3.1	12.479	B
	3 - Smith Drive	231	58	985	231	304	0.3	0.4	6.234	A
	4 - A50	919	230	314	918	902	1.5	2.1	7.939	A
2 - Poplars Ave/A50	A - A50 W	427	107		428	586	0.0	0.1	0.811	A
	B - Poplars Ave	559	140		531	375	3.3	14.5	69.407	F
	C - A50 E	920	230		920	917	1.0	1.4	4.968	A

08:30 - 08:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	414	104	982	416	346	0.6	0.7	7.322	A
	2 - Orford Rd	1008	252	516	984	882	3.1	13.5	36.320	E
	3 - Smith Drive	283	71	1156	284	344	0.4	0.6	8.082	A
	4 - A50	949	237	380	948	1061	2.1	2.4	8.854	A
2 - Poplars Ave/A50	A - A50 W	527	132		527	688	0.1	0.3	1.848	A
	B - Poplars Ave	693	173		472	446	14.5	68.1	319.868	F
	C - A50 E	1083	271		1082	948	1.4	2.2	6.421	A

08:45 - 09:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	414	104	987	414	347	0.7	0.9	7.699	A
	2 - Orford Rd	1016	254	510	1000	891	13.5	17.8	57.461	F
	3 - Smith Drive	278	69	1171	277	339	0.6	0.7	8.449	A
	4 - A50	952	238	382	952	1066	2.4	2.4	9.074	A
2 - Poplars Ave/A50	A - A50 W	530	133		530	693	0.3	0.3	2.080	A
	B - Poplars Ave	695	174		474	447	68.1	124.9	701.240	F
	C - A50 E	1088	272		1086	951	2.2	2.1	6.810	A

09:00 - 09:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	339	85	966	339	296	0.9	0.6	6.160	A
	2 - Orford Rd	830	208	461	853	845	17.8	3.6	29.939	D
	3 - Smith Drive	230	57	1011	230	303	0.7	0.4	6.908	A
	4 - A50	942	236	319	943	922	2.4	2.2	8.428	A
2 - Poplars Ave/A50	A - A50 W	436	109		437	603	0.3	0.1	1.148	A
	B - Poplars Ave	569	142		546	382	124.9	131.3	810.694	F
	C - A50 E	943	236		942	940	2.1	1.5	5.599	A

09:15 - 09:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	283	71	934	283	250	0.6	0.4	5.205	A
	2 - Orford Rd	692	173	418	693	799	3.6	1.4	8.964	A
	3 - Smith Drive	189	47	835	188	276	0.4	0.3	5.421	A
	4 - A50	924	231	259	924	765	2.2	2.1	7.748	A
2 - Poplars Ave/A50	A - A50 W	359	90		359	499	0.1	0.0	0.660	A
	B - Poplars Ave	479	120		600	318	131.3	100.9	627.358	F
	C - A50 E	781	195		783	923	1.5	0.8	4.352	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

08:00 - 08:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	287	1044	0.275	287	0.0	0.4	4.554	A	
		Exit	1	1		247			247	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	698	1189	0.587	699	0.0	1.5	7.767	A	
		Exit	1	1		715			715	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	193	876	0.220	193	0.0	0.3	4.907	A	
		Exit	1	1		256			256	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	797	1127	0.707	798	0.0	1.5	6.741	A	
		Exit	1	1		758			758	0.0	0.0	0.237	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	357			357	0.0	0.0	0.262	A
			Exit	1	1		490			490	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	477			475	0.0	3.3	20.340	C	
		Exit	1	1		320			320	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	490			490	0.0	0.0	0.000	A	
				2	B	284			284	0.0	0.8	9.799	A	
		Exit	1	1	(A, B)	775			775	0.0	0.2	0.668	A	
							797			797	0.0	0.4	1.787	A

08:15 - 08:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	340	993	0.342	339	0.4	0.6	5.528	A	
		Exit	1	1		294			294	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	832	1159	0.718	832	1.5	3.1	12.479	B	
		Exit	1	1		821			821	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	231	814	0.284	231	0.3	0.4	6.234	A	
		Exit	1	1		304			304	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	919	1106	0.831	918	1.5	2.1	7.939	A	
		Exit	1	1		901			902	0.0	0.1	0.435	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	427			428	0.0	0.1	0.811	A
			Exit	1	1		586			586	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	559			531	3.3	14.5	69.407	F	
		Exit	1	1		375			375	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	586			586	0.0	0.0	0.000	A	
				2	B	335			333	0.8	1.1	10.788	B	
		Exit	1	1	(A, B)	920			921	0.2	0.3	1.070	A	
							917			917	0.4	0.9	3.271	A

08:30 - 08:45

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	414	975	0.425	416	0.6	0.7	7.322	A	
		Exit	1	1		346			346	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	1008	1134	0.889	984	3.1	13.5	36.320	E	
		Exit	1	1		882			882	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	283	746	0.380	284	0.4	0.6	8.082	A	
		Exit	1	1		344			344	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	949	1078	0.881	948	2.1	2.4	8.854	A	
		Exit	1	1		1061			1061	0.1	0.3	0.868	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	527			527	0.1	0.3	1.848	A
			Exit	1	1		688			688	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	693			472	14.5	68.1	319.868	F	
		Exit	1	1		446			446	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	688			688	0.0	0.0	0.000	A	
				2	B	395			394	1.1	1.5	12.520	B	
		Exit	1	1	(A, B)	1083			1082	0.3	0.7	1.881	A	
							948			948	0.9	1.3	4.740	A

08:45 - 09:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	414	973	0.426	414	0.7	0.9	7.699	A	
		Exit	1	1		347			347	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	1016	1136	0.894	1000	13.5	17.8	57.461	F	
		Exit	1	1		891			891	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	278	740	0.375	277	0.6	0.7	8.449	A	
		Exit	1	1		339			339	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	952	1077	0.884	952	2.4	2.4	9.074	A	
		Exit	1	1		1067			1066	0.3	0.3	1.038	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	530			530	0.3	0.3	2.080	A
			Exit	1	1		693			693	0.0	0.0	0.000	A
		B - Poplars Ave	Entry	1	1	A, C	695			474	68.1	124.9	701.240	F
			Exit	1	1		447			447	0.0	0.0	0.000	A
C - A50 E		Entry	1	1	A	693			693	0.0	0.0	0.000	A	
				2	B	394			393	1.5	1.4	12.942	B	
		Exit	1	1	(A, B)	1088			1086	0.7	0.7	2.132	A	
							951			951	1.3	1.3	4.971	A

09:00 - 09:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	339	982	0.345	339	0.9	0.6	6.160	A	
		Exit	1	1		296			296	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	830	1157	0.717	853	17.8	3.6	29.939	D	
		Exit	1	1		845			845	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	230	804	0.286	230	0.7	0.4	6.908	A	
		Exit	1	1		303			303	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	942	1104	0.853	943	2.4	2.2	8.428	A	
		Exit	1	1		922			922	0.3	0.1	0.626	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	436			437	0.3	0.1	1.148	A
			Exit	1	1		603			603	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	569			546	124.9	131.3	810.694	F	
		Exit	1	1		382			382	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	603			603	0.0	0.0	0.000	A	
				2	B	341			340	1.4	1.2	11.607	B	
		Exit	1	1	(A, B)	943			944	0.7	0.3	1.437	A	
							940			940	1.3	1.1	3.903	A

09:15 - 09:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	283	995	0.284	283	0.6	0.4	5.205	A
		Exit	1	1		250			250	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	692	1176	0.588	693	3.6	1.4	8.964	A
		Exit	1	1		799			799	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	189	874	0.216	188	0.4	0.3	5.421	A
		Exit	1	1		276			276	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2, 3, 4	924	1129	0.818	924	2.2	2.1	7.748	A
		Exit	1	1		764			765	0.1	0.0	0.262	A
2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	359			359	0.1	0.0	0.660	A
		Exit	1	1		499			499	0.0	0.0	0.000	A
	B - Poplars Ave	Entry	1	1	A, C	479			600	131.3	100.9	627.358	F
		Exit	1	1		318			318	0.0	0.0	0.000	A
	C - A50 E	Entry	1	1	A	499			499	0.0	0.0	0.000	A
			2	2	B	282			283	1.2	0.7	10.085	B
		Exit	2	1	(A, B)	781			782	0.3	0.1	0.742	A
			1	1		924			923	1.1	0.8	3.075	A

A50-Conjunction - 2030 DS, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	AV-1 - A50-Conjunction [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Arm order	Junction Delay (s)	Junction LOS
1	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	60.11	F
2	Poplars Ave/A50	T-Junction	Two-way		42.58	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2030 DS	PM	ONE HOUR	17:00	18:30	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - A50/Hilden Rd Roundabout	4 - A50	2	C	Simple (vertical queueing)	Normal	0	100.00	
2 - Poplars Ave/A50	C - A50 E	1	4	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd		ONE HOUR	✓	354	100.000
	2 - Orford Rd		ONE HOUR	✓	967	100.000
	3 - Smith Drive		ONE HOUR	✓	461	100.000
	4 - A50	✓				
2 - Poplars Ave/A50	A - A50 W		ONE HOUR	✓	805	100.000
	B - Poplars Ave		ONE HOUR	✓	274	100.000
	C - A50 E	✓				

Origin-Destination Data

Demand (PCU/hr)

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	115	53	186
	2 - Orford Rd	142	0.94	61	763
	3 - Smith Drive	213	96	0	152
	4 - A50	86	650	168	31

Demand (PCU/hr)

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	144	661
	B - Poplars Ave	0	0	274
	C - A50 E	772	371	0

Vehicle Mix

Heavy Vehicle Percentages

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	0	0	0
	2 - Orford Rd	0	0	0	1
	3 - Smith Drive	0	0	0	0
	4 - A50	0	2	0	0

Heavy Vehicle Percentages

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	0	5
	B - Poplars Ave	0	0	0
	C - A50 E	4	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	10.04	1.1	B	322	484
	2 - Orford Rd	141.62	46.2	F	886	1329
	3 - Smith Drive	27.01	3.7	D	426	639
	4 - A50	9.94	2.7	A	836	1254
2 - Poplars Ave/A50	A - A50 W	7.34	2.0	A	741	1112
	B - Poplars Ave	291.51	26.7	F	251	376
	C - A50 E	8.53	3.1	A	1064	1596

Main Results for each time segment

17:00 - 17:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	268	67	694	267	341	0.0	0.3	4.326	A
	2 - Orford Rd	732	183	323	733	639	0.0	1.6	7.738	A
	3 - Smith Drive	348	87	849	349	208	0.0	0.7	6.434	A
	4 - A50	691	173	345	690	852	0.0	1.3	6.402	A
2 - Poplars Ave/A50	A - A50 W	610	152		609	594	0.0	0.1	0.254	A
	B - Poplars Ave	207	52		207	395	0.0	0.6	9.214	A
	C - A50 E	880	220		880	707	0.0	1.1	4.221	A

17:15 - 17:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	315	79	833	315	392	0.3	0.5	5.755	A
	2 - Orford Rd	859	215	387	860	760	1.6	4.1	15.542	C
	3 - Smith Drive	417	104	995	418	252	0.7	1.1	10.287	B
	4 - A50	820	205	405	819	1008	1.3	1.8	7.915	A
2 - Poplars Ave/A50	A - A50 W	724	181		723	707	0.1	0.3	1.235	A
	B - Poplars Ave	247	62		246	465	0.6	1.6	21.484	C
	C - A50 E	1040	260		1040	837	1.1	1.7	5.721	A

17:30 - 17:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	383	96	971	384	466	0.5	1.0	9.204	A
	2 - Orford Rd	1067	267	463	989	892	4.1	27.1	63.804	F
	3 - Smith Drive	512	128	1159	508	293	1.1	3.7	21.020	C
	4 - A50	953	238	484	952	1182	1.8	2.6	9.596	A
2 - Poplars Ave/A50	A - A50 W	889	222		885	828	0.3	1.9	5.967	A
	B - Poplars Ave	301	75		249	550	1.6	15.4	142.994	F
	C - A50 E	1223	306		1221	976	1.7	3.0	7.968	A

17:45 - 18:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	388	97	979	387	475	1.0	1.1	10.044	B
	2 - Orford Rd	1056	264	467	996	900	27.1	46.2	141.622	F
	3 - Smith Drive	512	128	1167	516	295	3.7	3.6	27.012	D
	4 - A50	963	241	492	963	1190	2.6	2.7	9.942	A
2 - Poplars Ave/A50	A - A50 W	888	222		889	833	1.9	2.0	7.339	A
	B - Poplars Ave	298	75		255	552	15.4	26.7	291.513	F
	C - A50 E	1231	308		1228	986	3.0	3.1	8.532	A

18:00 - 18:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	316	79	898	316	415	1.1	0.6	7.273	A
	2 - Orford Rd	870	218	403	955	811	46.2	18.6	110.631	F
	3 - Smith Drive	419	105	1089	422	269	3.6	1.3	15.194	C
	4 - A50	889	222	423	890	1088	2.7	2.2	9.096	A
2 - Poplars Ave/A50	A - A50 W	728	182		729	757	2.0	0.4	2.983	A
	B - Poplars Ave	248	62		303	498	26.7	8.7	171.422	F
	C - A50 E	1122	281		1126	904	3.1	2.0	7.140	A

18:15 - 18:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	265	66	709	266	337	0.6	0.3	4.987	A
	2 - Orford Rd	729	182	327	745	648	18.6	2.4	26.019	D
	3 - Smith Drive	348	87	857	351	215	1.3	0.6	8.297	A
	4 - A50	699	175	346	700	862	2.2	1.4	7.260	A
2 - Poplars Ave/A50	A - A50 W	610	152		610	605	0.4	0.1	0.703	A
	B - Poplars Ave	202	50		211	396	8.7	0.6	30.165	D
	C - A50 E	890	222		892	713	2.0	1.1	5.005	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

17:00 - 17:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	268	1094	0.245	267	0.0	0.3	4.326	A	
		Exit	1	1		341			341	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	732	1217	0.602	733	0.0	1.6	7.738	A	
		Exit	1	1		639			639	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	348	868	0.401	349	0.0	0.7	6.434	A	
		Exit	1	1		208			208	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	691	1093	0.633	690	0.0	1.3	6.402	A	
		Exit	1	1		852			852	0.0	0.1	0.299	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	610			609	0.0	0.1	0.254	A
			Exit	1	1		594			594	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	207			207	0.0	0.6	9.214	A	
		Exit	1	1		395			395	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	594			594	0.0	0.0	0.000	A	
				2	B	285			286	0.0	0.9	10.661	B	
		Exit	1	1	(A, B)	880			879	0.0	0.2	0.763	A	
							707			707	0.0	0.3	1.381	A

17:15 - 17:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	315	1037	0.303	315	0.3	0.5	5.755	A	
		Exit	1	1		392			392	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	859	1189	0.723	860	1.6	4.1	15.542	C	
		Exit	1	1		760			760	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	417	810	0.515	418	0.7	1.1	10.287	B	
		Exit	1	1		252			252	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	820	1067	0.769	819	1.3	1.8	7.915	A	
		Exit	1	1		1008			1008	0.1	0.3	0.753	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	724			723	0.1	0.3	1.235	A
			Exit	1	1		707			707	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	247			246	0.6	1.6	21.484	C	
		Exit	1	1		465			465	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	707			707	0.0	0.0	0.000	A	
				2	B	334			333	0.9	1.2	12.855	B	
		Exit	1	1	(A, B)	1040			1040	0.2	0.5	1.558	A	
							838			837	0.3	0.8	3.174	A

17:30 - 17:45

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	383	980	0.391	384	0.5	1.0	9.204	A	
		Exit	1	1		466			466	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	1067	1156	0.923	989	4.1	27.1	63.804	F	
		Exit	1	1		892			892	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	512	744	0.688	508	1.1	3.7	21.020	C	
		Exit	1	1		293			293	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	953	1034	0.922	952	1.8	2.6	9.596	A	
		Exit	1	1		1183			1182	0.3	0.7	1.641	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	889			885	0.3	1.9	5.967	A
			Exit	1	1		828			828	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	301			249	1.6	15.4	142.994	F	
		Exit	1	1		550			550	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	828			828	0.0	0.0	0.000	A	
				2	B	394			393	1.2	1.9	15.653	C	
		Exit	1	1	(A, B)	1223			1222	0.5	1.1	2.887	A	
							977			976	0.8	1.9	6.273	A

17:45 - 18:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	388	976	0.397	387	1.0	1.1	10.044	B	
		Exit	1	1		475			475	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	1056	1155	0.915	996	27.1	46.2	141.622	F	
		Exit	1	1		900			900	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	512	741	0.691	516	3.7	3.6	27.012	D	
		Exit	1	1		295			295	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	963	1031	0.935	963	2.6	2.7	9.942	A	
		Exit	1	1		1192			1190	0.7	0.7	1.886	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	888			889	1.9	2.0	7.339	A
			Exit	1	1		833			833	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	298			255	15.4	26.7	291.513	F	
		Exit	1	1		552			552	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	833			833	0.0	0.0	0.000	A	
				2	B	396			395	1.9	1.9	16.289	C	
		Exit	1	1	(A, B)	1231			1229	1.1	1.2	3.251	A	
						987			986	1.9	2.0	6.967	A	

18:00 - 18:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	316	1010	0.313	316	1.1	0.6	7.273	A	
		Exit	1	1		415			415	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	870	1182	0.736	955	46.2	18.6	110.631	F	
		Exit	1	1		811			811	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	419	773	0.542	422	3.6	1.3	15.194	C	
		Exit	1	1		269			269	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	889	1060	0.839	890	2.7	2.2	9.096	A	
		Exit	1	1		1087			1088	0.7	0.3	1.288	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	728			729	2.0	0.4	2.983	A
			Exit	1	1		757			757	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	248			303	26.7	8.7	171.422	F	
		Exit	1	1		498			498	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	757			757	0.0	0.0	0.000	A	
				2	B	367			369	1.9	1.4	14.531	B	
		Exit	1	1	(A, B)	1122			1124	1.2	0.6	2.397	A	
						903			904	2.0	1.1	5.161	A	

18:15 - 18:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	265	1088	0.243	266	0.6	0.3	4.987	A
		Exit	1	1		337			337	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	729	1215	0.600	745	18.6	2.4	26.019	D
		Exit	1	1		648			648	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	348	865	0.402	351	1.3	0.6	8.297	A
		Exit	1	1		215			215	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2, 3, 4	699	1092	0.640	700	2.2	1.4	7.260	A
		Exit	1	1		861			862	0.3	0.1	0.545	A
2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	610			610	0.4	0.1	0.703	A
		Exit	1	1		605			605	0.0	0.0	0.000	A
	B - Poplars Ave	Entry	1	1	A, C	202			211	8.7	0.6	30.165	D
		Exit	1	1		396			396	0.0	0.0	0.000	A
	C - A50 E	Entry	1	1	A	605			605	0.0	0.0	0.000	A
			2	2	B	286			287	1.4	0.9	11.796	B
		Exit	2	1	(A, B)	890			891	0.6	0.2	1.200	A
			1	1		713			713	1.1	0.4	2.346	A

A50-Conjunction - 2030 Through Route Scenario, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	AV-1 - A50-Conjunction [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Arm order	Junction Delay (s)	Junction LOS
1	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	24.91	C
2	Poplars Ave/A50	T-Junction	Two-way		252.39	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2030 Through Route Scenario	AM	ONE HOUR	08:00	09:30	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - A50/Hilden Rd Roundabout	4 - A50	2	C	Simple (vertical queueing)	Normal	0	100.00	
2 - Poplars Ave/A50	C - A50 E	1	4	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd		ONE HOUR	✓	374	100.000
	2 - Orford Rd		ONE HOUR	✓	922	100.000
	3 - Smith Drive		ONE HOUR	✓	255	100.000
	4 - A50	✓				
2 - Poplars Ave/A50	A - A50 W		ONE HOUR	✓	485	100.000
	B - Poplars Ave		ONE HOUR	✓	634	100.000
	C - A50 E	✓				

Origin-Destination Data

Demand (PCU/hr)

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	135	125	114
	2 - Orford Rd	139	33	52	698
	3 - Smith Drive	146	59	0	50
	4 - A50	45	702	159	118

Demand (PCU/hr)

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	53	432
	B - Poplars Ave	0	0	634
	C - A50 E	647	360	0

Vehicle Mix

Heavy Vehicle Percentages

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	0	0	0
	2 - Orford Rd	0	0	0	3
	3 - Smith Drive	0	0	0	0
	4 - A50	0	0	0	0

Heavy Vehicle Percentages

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	4	0
	B - Poplars Ave	0	0	0
	C - A50 E	0	6	0

Results

Results Summary for whole modelled period

Junction	Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	7.44	1.0	A	345	517
	2 - Orford Rd	54.05	15.2	F	842	1262
	3 - Smith Drive	8.37	0.7	A	237	355
	4 - A50	9.04	2.5	A	919	1379
2 - Poplars Ave/A50	A - A50 W	1.88	0.3	A	445	667
	B - Poplars Ave	823.30	133.3	F	581	871
	C - A50 E	5.90	1.8	A	894	1340

Main Results for each time segment

08:00 - 08:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	286	72	837	285	249	0.0	0.4	4.576	A
	2 - Orford Rd	691	173	393	689	729	0.0	1.6	7.331	A
	3 - Smith Drive	197	49	829	195	253	0.0	0.3	5.006	A
	4 - A50	801	200	283	802	741	0.0	1.5	6.873	A
2 - Poplars Ave/A50	A - A50 W	360	90		360	482	0.0	0.0	0.311	A
	B - Poplars Ave	478	119		480	301	0.0	3.3	22.219	C
	C - A50 E	743	186		744	801	0.0	0.8	3.778	A

08:15 - 08:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	341	85	971	340	292	0.4	0.6	5.612	A
	2 - Orford Rd	825	206	470	824	841	1.6	3.1	12.184	B
	3 - Smith Drive	230	57	993	231	301	0.3	0.4	6.270	A
	4 - A50	930	232	335	928	889	1.5	2.1	7.942	A
2 - Poplars Ave/A50	A - A50 W	441	110		441	581	0.0	0.2	0.875	A
	B - Poplars Ave	579	145		536	355	3.3	15.8	71.803	F
	C - A50 E	886	222		888	930	0.8	1.2	4.472	A

08:30 - 08:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	404	101	1018	405	357	0.6	0.8	7.354	A
	2 - Orford Rd	1017	254	524	987	899	3.1	13.2	34.489	D
	3 - Smith Drive	280	70	1172	282	339	0.4	0.5	7.865	A
	4 - A50	958	240	419	956	1036	2.1	2.5	8.938	A
2 - Poplars Ave/A50	A - A50 W	536	134		535	665	0.2	0.3	1.834	A
	B - Poplars Ave	688	172		480	428	15.8	69.2	328.473	F
	C - A50 E	1035	259		1037	958	1.2	1.8	5.767	A

08:45 - 09:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	410	102	1014	407	361	0.8	1.0	7.441	A
	2 - Orford Rd	1002	251	516	1010	905	13.2	15.2	54.053	F
	3 - Smith Drive	285	71	1186	285	339	0.5	0.7	8.366	A
	4 - A50	956	239	421	954	1051	2.5	2.5	9.041	A
2 - Poplars Ave/A50	A - A50 W	528	132		529	674	0.3	0.2	1.883	A
	B - Poplars Ave	692	173		480	432	69.2	125.1	704.318	F
	C - A50 E	1050	262		1051	956	1.8	1.6	5.903	A

09:00 - 09:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	342	86	980	340	302	1.0	0.6	5.878	A
	2 - Orford Rd	822	205	470	839	850	15.2	2.9	24.383	C
	3 - Smith Drive	231	58	1001	233	308	0.7	0.4	6.835	A
	4 - A50	937	234	343	939	891	2.5	2.2	8.638	A
2 - Poplars Ave/A50	A - A50 W	434	108		433	572	0.2	0.1	1.136	A
	B - Poplars Ave	571	143		548	367	125.1	133.3	823.301	F
	C - A50 E	890	223		894	937	1.6	1.1	5.183	A

09:15 - 09:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	284	71	965	284	258	0.6	0.4	5.190	A
	2 - Orford Rd	694	173	431	694	818	2.9	1.4	8.543	A
	3 - Smith Drive	197	49	848	196	277	0.4	0.3	5.522	A
	4 - A50	934	233	287	936	757	2.2	1.9	7.934	A
2 - Poplars Ave/A50	A - A50 W	370	92		370	492	0.1	0.1	0.648	A
	B - Poplars Ave	477	119		601	301	133.3	104.5	655.009	F
	C - A50 E	757	189		754	934	1.1	1.0	3.948	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

08:00 - 08:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	286	1035	0.277	285	0.0	0.4	4.576	A
		Exit	1	1		249			249	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	691	1187	0.582	689	0.0	1.6	7.331	A
		Exit	1	1		729			729	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	197	876	0.224	195	0.0	0.3	5.006	A
		Exit	1	1		253			253	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2, 3, 4	801	1119	0.715	802	0.0	1.5	6.873	A
		Exit	1	1		741			741	0.0	0.0	0.172	A
2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	360			360	0.0	0.0	0.311	A
		Exit	1	1		482			482	0.0	0.0	0.000	A
	B - Poplars Ave	Entry	1	1	A, C	478			480	0.0	3.3	22.219	C
		Exit	1	1		301			301	0.0	0.0	0.000	A
	C - A50 E	Entry	1	1	A	482			482	0.0	0.0	0.000	A
				2	B	260			262	0.0	0.7	9.499	A
		Exit	1	1	(A, B)	743			743	0.0	0.1	0.549	A
							801			801	0.0	0.5	1.897

08:15 - 08:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	341	979	0.348	340	0.4	0.6	5.612	A	
		Exit	1	1		292			292	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	825	1153	0.715	824	1.6	3.1	12.184	B	
		Exit	1	1		841			841	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	230	811	0.283	231	0.3	0.4	6.270	A	
		Exit	1	1		301			301	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	930	1097	0.848	928	1.5	2.1	7.942	A	
		Exit	1	1		888			889	0.0	0.1	0.342	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	441			441	0.0	0.2	0.875	A
			Exit	1	1		581			581	0.0	0.0	0.000	A
		B - Poplars Ave	Entry	1	1	A, C	579			536	3.3	15.8	71.803	F
			Exit	1	1		355			355	0.0	0.0	0.000	A
C - A50 E		Entry	1	1	A	581			581	0.0	0.0	0.000	A	
				2	B	307			307	0.7	0.9	10.557	B	
		Exit	1	1	(A, B)	886			888	0.1	0.2	0.892	A	
							929			930	0.5	0.8	3.225	A

08:30 - 08:45

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	404	960	0.421	405	0.6	0.8	7.354	A	
		Exit	1	1		357			357	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	1017	1130	0.900	987	3.1	13.2	34.489	D	
		Exit	1	1		899			899	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	280	739	0.379	282	0.4	0.5	7.865	A	
		Exit	1	1		339			339	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	958	1061	0.903	956	2.1	2.5	8.938	A	
		Exit	1	1		1035			1036	0.1	0.2	0.711	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	536			535	0.2	0.3	1.834	A
			Exit	1	1		665			665	0.0	0.0	0.000	A
		B - Poplars Ave	Entry	1	1	A, C	688			480	15.8	69.2	328.473	F
			Exit	1	1		428			428	0.0	0.0	0.000	A
C - A50 E		Entry	1	1	A	665			665	0.0	0.0	0.000	A	
				2	B	371			371	0.9	1.3	12.162	B	
		Exit	1	1	(A, B)	1035			1036	0.2	0.5	1.597	A	
							958			958	0.8	1.3	4.758	A

08:45 - 09:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	410	962	0.426	407	0.8	1.0	7.441	A	
		Exit	1	1		361			361	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	1002	1133	0.884	1010	13.2	15.2	54.053	F	
		Exit	1	1		905			905	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	285	734	0.389	285	0.5	0.7	8.366	A	
		Exit	1	1		339			339	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	956	1061	0.901	954	2.5	2.5	9.041	A	
		Exit	1	1		1050			1051	0.2	0.2	0.755	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	528			529	0.3	0.2	1.883	A
			Exit	1	1		674			674	0.0	0.0	0.000	A
		B - Poplars Ave	Entry	1	1	A, C	692			480	69.2	125.1	704.318	F
			Exit	1	1		432			432	0.0	0.0	0.000	A
C - A50 E		Entry	1	1	A	674			674	0.0	0.0	0.000	A	
				2	B	376			377	1.3	1.2	12.292	B	
		Exit	1	1	(A, B)	1050			1050	0.5	0.4	1.681	A	
						953			956	1.3	1.2	4.856	A	

09:00 - 09:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	342	976	0.351	340	1.0	0.6	5.878	A	
		Exit	1	1		302			302	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	822	1153	0.713	839	15.2	2.9	24.383	C	
		Exit	1	1		850			850	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	231	808	0.286	233	0.7	0.4	6.835	A	
		Exit	1	1		308			308	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	937	1094	0.857	939	2.5	2.2	8.638	A	
		Exit	1	1		890			891	0.2	0.1	0.508	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	434			433	0.2	0.1	1.136	A
			Exit	1	1		572			572	0.0	0.0	0.000	A
		B - Poplars Ave	Entry	1	1	A, C	571			548	125.1	133.3	823.301	F
			Exit	1	1		367			367	0.0	0.0	0.000	A
C - A50 E		Entry	1	1	A	572			572	0.0	0.0	0.000	A	
				2	B	319			322	1.2	0.9	11.419	B	
		Exit	1	1	(A, B)	890			891	0.4	0.2	1.249	A	
						936			937	1.2	0.9	4.108	A	

09:15 - 09:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	284	982	0.290	284	0.6	0.4	5.190	A
		Exit	1	1		258			258	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	694	1170	0.593	694	2.9	1.4	8.543	A
		Exit	1	1		818			818	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	197	869	0.227	196	0.4	0.3	5.522	A
		Exit	1	1		277			277	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2, 3, 4	934	1117	0.836	936	2.2	1.9	7.934	A
		Exit	1	1		757			757	0.1	0.1	0.217	A
2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	370			370	0.1	0.1	0.648	A
		Exit	1	1		492			492	0.0	0.0	0.000	A
	B - Poplars Ave	Entry	1	1	A, C	477			601	133.3	104.5	655.009	F
		Exit	1	1		301			301	0.0	0.0	0.000	A
	C - A50 E	Entry	1	1	A	492			492	0.0	0.0	0.000	A
			2	1	(A, B)	263			261	0.9	0.8	9.746	A
		Exit	2	1	(A, B)	757			755	0.2	0.2	0.643	A
			1	1		932			934	0.9	0.8	3.193	A

A50-Conjunction - 2030 Through Route Scenario, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	AV-1 - A50-Conjunction [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Arm order	Junction Delay (s)	Junction LOS
1	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	44.02	E
2	Poplars Ave/A50	T-Junction	Two-way		62.39	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2030 Through Route Scenario	PM	ONE HOUR	17:00	18:30	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - A50/Hilden Rd Roundabout	4 - A50	2	C	Simple (vertical queueing)	Normal	0	100.00	
2 - Poplars Ave/A50	C - A50 E	1	4	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd		ONE HOUR	✓	280	100.000
	2 - Orford Rd		ONE HOUR	✓	976	100.000
	3 - Smith Drive		ONE HOUR	✓	461	100.000
	4 - A50	✓				
2 - Poplars Ave/A50	A - A50 W		ONE HOUR	✓	785	100.000
	B - Poplars Ave		ONE HOUR	✓	355	100.000
	C - A50 E	✓				

Origin-Destination Data

Demand (PCU/hr)

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	100	43	137
	2 - Orford Rd	140	2	66	767
	3 - Smith Drive	255	79	0	126
	4 - A50	50	665	174	47

Demand (PCU/hr)

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	205	580
	B - Poplars Ave	0	0	355
	C - A50 E	741	371	0

Vehicle Mix

Heavy Vehicle Percentages

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	0	0	0
	2 - Orford Rd	0	0	0	1
	3 - Smith Drive	0	0	0	0
	4 - A50	0	0	0	0

Heavy Vehicle Percentages

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	0	0
	B - Poplars Ave	0	0	0
	C - A50 E	0	2	0

Results

Results Summary for whole modelled period

Junction	Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	7.12	0.6	A	256	384
	2 - Orford Rd	98.10	32.2	F	896	1343
	3 - Smith Drive	19.92	2.8	C	421	632
	4 - A50	10.06	2.7	B	849	1274
2 - Poplars Ave/A50	A - A50 W	5.15	1.2	A	720	1080
	B - Poplars Ave	351.76	40.5	F	328	491
	C - A50 E	7.87	2.5	A	983	1474

Main Results for each time segment

17:00 - 17:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	214	53	730	214	338	0.0	0.2	4.046	A
	2 - Orford Rd	746	186	304	747	640	0.0	1.7	7.573	A
	3 - Smith Drive	346	87	837	345	215	0.0	0.7	6.350	A
	4 - A50	710	177	359	710	823	0.0	1.3	6.563	A
2 - Poplars Ave/A50	A - A50 W	593	148		593	552	0.0	0.0	0.266	A
	B - Poplars Ave	274	68		273	428	0.0	1.0	11.104	B
	C - A50 E	823	206		824	710	0.0	0.9	4.038	A

17:15 - 17:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	247	62	867	248	396	0.2	0.4	4.994	A
	2 - Orford Rd	873	218	358	873	756	1.7	4.0	14.098	B
	3 - Smith Drive	410	103	978	412	254	0.7	1.0	9.297	A
	4 - A50	837	209	424	839	966	1.3	1.9	8.032	A
2 - Poplars Ave/A50	A - A50 W	702	175		702	640	0.0	0.3	1.108	A
	B - Poplars Ave	324	81		320	511	1.0	2.8	27.174	D
	C - A50 E	965	241		965	837	0.9	1.6	5.380	A

17:30 - 17:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	307	77	985	307	482	0.4	0.6	6.809	A
	2 - Orford Rd	1074	269	422	1019	870	4.0	21.6	50.840	F
	3 - Smith Drive	508	127	1150	509	291	1.0	2.6	17.801	C
	4 - A50	948	237	519	947	1139	1.9	2.6	9.693	A
2 - Poplars Ave/A50	A - A50 W	869	217		871	757	0.3	1.2	4.271	A
	B - Poplars Ave	391	98		309	609	2.8	22.2	160.867	F
	C - A50 E	1138	285		1135	948	1.6	2.5	7.380	A

17:45 - 18:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	301	75	991	301	481	0.6	0.6	7.116	A
	2 - Orford Rd	1064	266	419	1037	873	21.6	32.2	98.096	F
	3 - Smith Drive	506	127	1161	507	295	2.6	2.8	19.923	C
	4 - A50	955	239	518	954	1150	2.6	2.7	10.060	B
2 - Poplars Ave/A50	A - A50 W	866	216		865	764	1.2	1.2	5.148	A
	B - Poplars Ave	386	97		318	612	22.2	40.5	351.762	F
	C - A50 E	1149	287		1149	955	2.5	2.5	7.871	A

18:00 - 18:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	256	64	933	256	416	0.6	0.4	5.660	A
	2 - Orford Rd	883	221	375	931	814	32.2	8.2	58.924	F
	3 - Smith Drive	413	103	1036	415	270	2.8	1.2	12.530	B
	4 - A50	909	227	440	908	1011	2.7	2.3	9.238	A
2 - Poplars Ave/A50	A - A50 W	702	175		703	676	1.2	0.4	2.325	A
	B - Poplars Ave	322	81		388	518	40.5	20.6	260.443	F
	C - A50 E	1011	253		1012	909	2.5	1.5	6.248	A

18:15 - 18:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	210	53	758	211	338	0.4	0.2	4.589	A
	2 - Orford Rd	733	183	305	738	664	8.2	1.7	12.923	B
	3 - Smith Drive	345	86	823	345	219	1.2	0.7	7.594	A
	4 - A50	736	184	358	738	810	2.3	1.4	7.612	A
2 - Poplars Ave/A50	A - A50 W	590	147		590	538	0.4	0.1	0.630	A
	B - Poplars Ave	268	67		302	429	20.6	2.3	67.696	F
	C - A50 E	810	202		810	736	1.5	1.0	4.645	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

17:00 - 17:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	214	1079	0.198	214	0.0	0.2	4.046	A	
		Exit	1	1		338			338	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	746	1225	0.609	747	0.0	1.7	7.573	A	
		Exit	1	1		640			640	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	346	873	0.397	345	0.0	0.7	6.350	A	
		Exit	1	1		215			215	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	710	1087	0.653	710	0.0	1.3	6.563	A	
		Exit	1	1		823			823	0.0	0.0	0.203	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	593			593	0.0	0.0	0.266	A
			Exit	1	1		552			552	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	274			273	0.0	1.0	11.104	B	
		Exit	1	1		428			428	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	552			552	0.0	0.0	0.000	A	
				2	B	272			272	0.0	0.8	10.322	B	
		Exit	1	1	(A, B)	823			824	0.0	0.1	0.624	A	
							710			710	0.0	0.3	1.503	A

17:15 - 17:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	247	1023	0.242	248	0.2	0.4	4.994	A	
		Exit	1	1		396			396	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	873	1202	0.727	873	1.7	4.0	14.098	B	
		Exit	1	1		756			756	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	410	817	0.502	412	0.7	1.0	9.297	A	
		Exit	1	1		254			254	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	837	1060	0.790	839	1.3	1.9	8.032	A	
		Exit	1	1		966			966	0.0	0.2	0.535	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	702			702	0.0	0.3	1.108	A
			Exit	1	1		640			640	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	324			320	1.0	2.8	27.174	D	
		Exit	1	1		511			511	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	640			640	0.0	0.0	0.000	A	
				2	B	325			325	0.8	1.2	12.432	B	
		Exit	1	1	(A, B)	965			965	0.1	0.4	1.267	A	
							836			837	0.3	0.8	3.310	A

17:30 - 17:45

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	307	974	0.316	307	0.4	0.6	6.809	A	
		Exit	1	1		482			482	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	1074	1174	0.915	1019	4.0	21.6	50.840	F	
		Exit	1	1		870			870	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	508	748	0.679	509	1.0	2.6	17.801	C	
		Exit	1	1		291			291	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	948	1019	0.930	947	1.9	2.6	9.693	A	
		Exit	1	1		1139			1139	0.2	0.4	1.246	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	869			871	0.3	1.2	4.271	A
			Exit	1	1		757			757	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	391			309	2.8	22.2	160.867	F	
		Exit	1	1		609			609	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	757			757	0.0	0.0	0.000	A	
				2	B	380			378	1.2	1.7	15.026	C	
		Exit	1	1	(A, B)	1138			1137	0.4	0.8	2.423	A	
							948			948	0.8	1.8	6.163	A

17:45 - 18:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	301	971	0.310	301	0.6	0.6	7.116	A	
		Exit	1	1		481			481	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	1064	1175	0.905	1037	21.6	32.2	98.096	F	
		Exit	1	1		873			873	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	506	744	0.681	507	2.6	2.8	19.923	C	
		Exit	1	1		295			295	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	955	1020	0.937	954	2.6	2.7	10.060	B	
		Exit	1	1		1150			1150	0.4	0.4	1.418	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	866			865	1.2	1.2	5.148	A
			Exit	1	1		764			764	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	386			318	22.2	40.5	351.762	F	
		Exit	1	1		612			612	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	764			764	0.0	0.0	0.000	A	
				2	B	384			385	1.7	1.6	15.610	C	
		Exit	1	1	(A, B)	1149			1149	0.8	0.9	2.732	A	
						957			955	1.8	1.8	6.872	A	

18:00 - 18:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	256	995	0.258	256	0.6	0.4	5.660	A	
		Exit	1	1		416			416	0.0	0.0	0.000	A	
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	883	1194	0.739	931	32.2	8.2	58.924	F	
		Exit	1	1		814			814	0.0	0.0	0.000	A	
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	413	794	0.521	415	2.8	1.2	12.530	B	
		Exit	1	1		270			270	0.0	0.0	0.000	A	
	4 - A50	Entry	1	1	1, 2, 3, 4	909	1053	0.863	908	2.7	2.3	9.238	A	
		Exit	1	1		1011			1011	0.4	0.2	0.851	A	
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	702			703	1.2	0.4	2.325	A
			Exit	1	1		676			676	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	A, C	322			388	40.5	20.6	260.443	F	
		Exit	1	1		518			518	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	676			676	0.0	0.0	0.000	A	
				2	B	335			337	1.6	1.1	13.506	B	
		Exit	1	1	(A, B)	1011			1011	0.9	0.4	1.817	A	
						909			909	1.8	1.3	5.198	A	

18:15 - 18:30

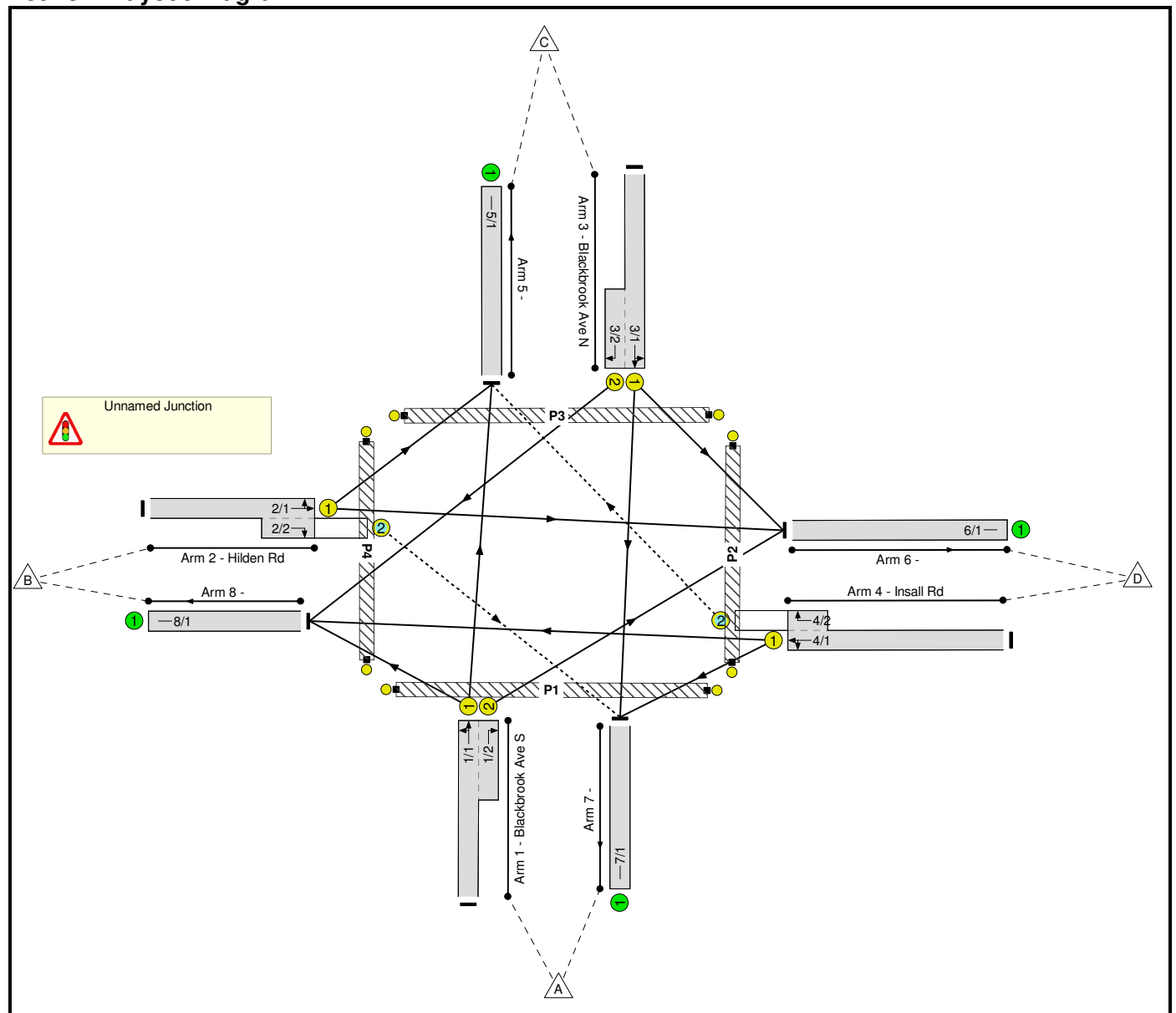
Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	210	1068	0.197	211	0.4	0.2	4.589	A
		Exit	1	1		338			338	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	733	1225	0.598	738	8.2	1.7	12.923	B
		Exit	1	1		664			664	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	345	879	0.392	345	1.2	0.7	7.594	A
		Exit	1	1		219			219	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2, 3, 4	736	1087	0.677	738	2.3	1.4	7.612	A
		Exit	1	1		810			810	0.2	0.1	0.371	A
2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	590			590	0.4	0.1	0.630	A
		Exit	1	1		538			538	0.0	0.0	0.000	A
	B - Poplars Ave	Entry	1	1	A, C	268			302	20.6	2.3	67.696	F
		Exit	1	1		429			429	0.0	0.0	0.000	A
	C - A50 E	Entry	1	1	A	538			538	0.0	0.0	0.000	A
				2	B	272			272	1.1	0.8	11.276	B
		Exit	1	1	(A, B)	810			810	0.4	0.1	0.941	A
Exit	1	1		735			736	1.3	0.4	2.773	A		

Full Input Data And Results
Full Input Data And Results

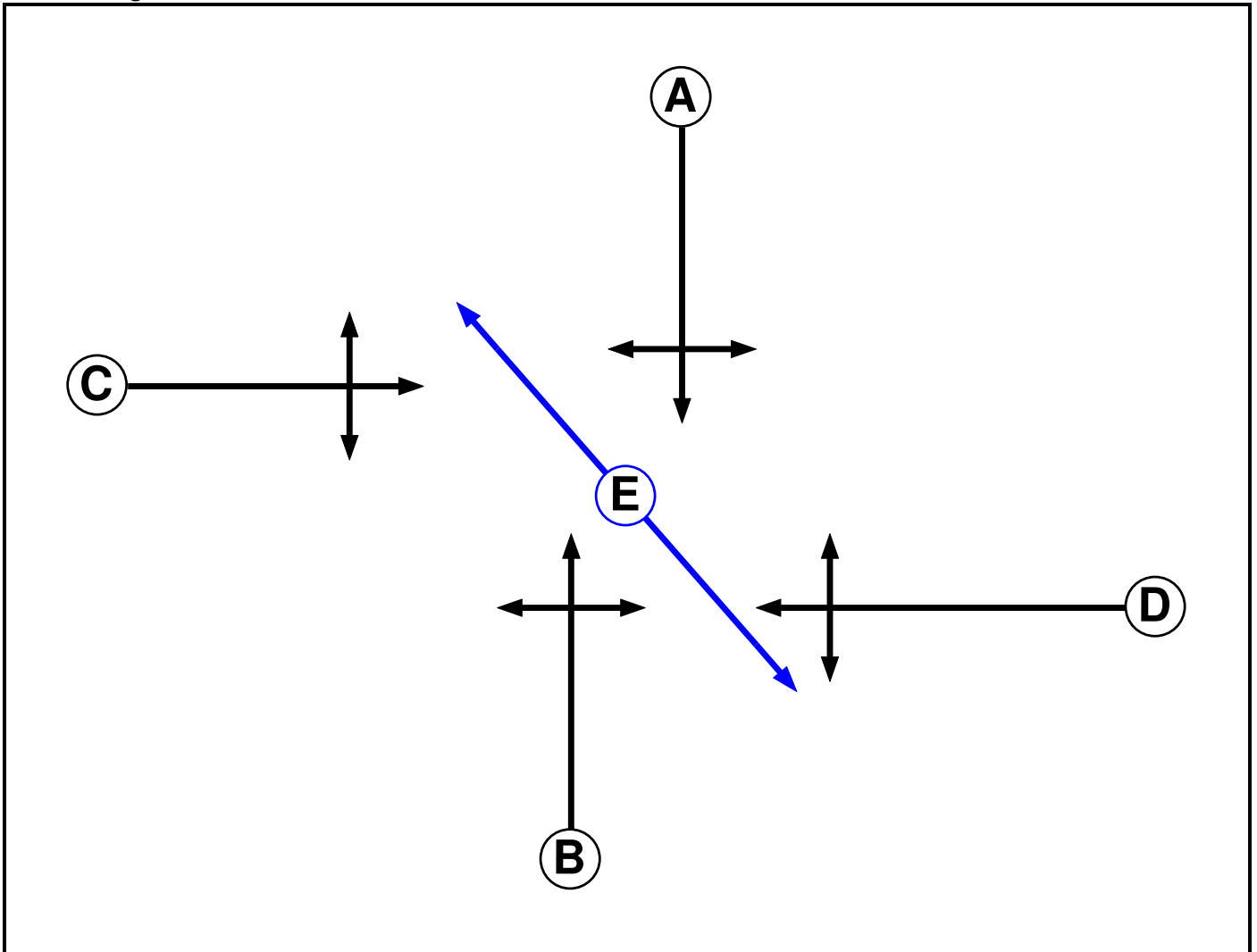
User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	Blackbrook Ave_Insall Rd_Hilden Rd_v2 - Existing Two Lanes.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Pedestrian		10	10

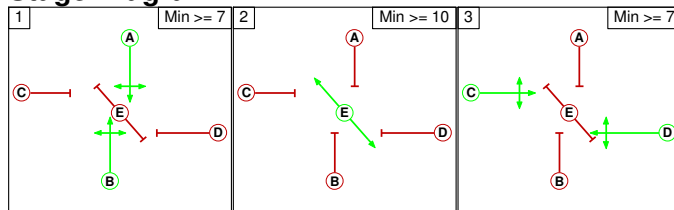
Phase Intergrens Matrix

Terminating Phase	Starting Phase					
		A	B	C	D	E
	A		-	6	6	10
	B	-		6	6	10
	C	6	6		-	10
	D	6	6	-		10
E	15	15	15	15		

Phases in Stage

Stage No.	Phases in Stage
1	A B
2	E
3	C D

Stage Diagram



Phase Delays

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

Prohibited Stage Change

From Stage	To Stage			
		1	2	3
	1		10	6
	2	15		15
3	6	10		

Full Input Data And Results

Give-Way Lane Input Data

Junction: Unnamed Junction											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
2/2 (Hilden Rd)	7/1 (Right)	1439	0	4/1	1.09	To 7/1 (Left) To 8/1 (Ahead)	4.00	-	0.50	4	2.00
4/2 (Insall Rd)	5/1 (Right)	1439	0	2/1	1.09	To 5/1 (Left) To 6/1 (Ahead)	4.00	-	0.50	4	2.00

Full Input Data And Results

Lane Input Data

Junction: Unnamed Junction												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Blackbrook Ave S)	U	B	2	3	60.0	Geom	-	3.20	0.00	Y	Arm 5 Ahead	Inf
											Arm 8 Left	18.00
1/2 (Blackbrook Ave S)	U	B	2	3	6.0	Geom	-	3.60	0.00	Y	Arm 6 Right	25.50
2/1 (Hilden Rd)	U	C	2	3	60.0	Geom	-	4.20	0.00	Y	Arm 5 Left	16.00
											Arm 6 Ahead	Inf
2/2 (Hilden Rd)	O	C	2	3	4.0	Geom	-	4.10	0.00	Y	Arm 7 Right	14.00
3/1 (Blackbrook Ave N)	U	A	2	3	60.0	Geom	-	3.40	0.00	Y	Arm 6 Left	14.50
											Arm 7 Ahead	Inf
3/2 (Blackbrook Ave N)	U	A	2	3	6.0	Geom	-	3.30	0.00	Y	Arm 8 Right	25.50
4/1 (Insall Rd)	U	D	2	3	60.0	Geom	-	3.90	0.00	Y	Arm 7 Left	18.00
											Arm 8 Ahead	Inf
4/2 (Insall Rd)	O	D	2	3	3.0	Geom	-	3.90	0.00	Y	Arm 5 Right	14.00
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2025 DM AM'	08:00	09:00	01:00	
2: '2025 DM PM'	17:00	18:00	01:00	
3: '2030 DM AM'	08:00	09:00	01:00	
4: '2030 DM PM'	17:00	18:00	01:00	
5: '2025 DS AM'	08:00	09:00	01:00	
6: '2025 DS PM'	17:00	18:00	01:00	
7: '2030 DS AM'	08:00	09:00	01:00	
8: '2030 DS PM'	17:00	18:00	01:00	
9: '2030 DS Link AM'	08:00	09:00	01:00	
10: '2030 DS Link PM'	17:00	18:00	01:00	

Scenario 1: '2025 DM AM' (FG1: '2025 DM AM', Plan 1: 'Peds Every Cycle')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	42	197	96	335
	B	9	0	16	190	215
	C	363	0	0	19	382
	D	160	197	0	0	357
	Tot.	532	239	213	305	1289

Traffic Lane Flows

Lane	Scenario 1: 2025 DM AM
Junction: Unnamed Junction	
1/1 (with short)	335(In) 239(Out)
1/2 (short)	96
2/1 (with short)	215(In) 206(Out)
2/2 (short)	9
3/1 (with short)	382(In) 382(Out)
3/2 (short)	0
4/1 (with short)	357(In) 357(Out)
4/2 (short)	0
5/1	213
6/1	305
7/1	532
8/1	239

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Blackbrook Ave S)	3.20	0.00	Y	Arm 5 Ahead	Inf	82.4 %	1907	1907
				Arm 8 Left	18.00	17.6 %		
1/2 (Blackbrook Ave S)	3.60	0.00	Y	Arm 6 Right	25.50	100.0 %	1865	1865
2/1 (Hilden Rd)	4.20	0.00	Y	Arm 5 Left	16.00	7.8 %	2020	2020
				Arm 6 Ahead	Inf	92.2 %		
2/2 (Hilden Rd)	4.10	0.00	Y	Arm 7 Right	14.00	100.0 %	1829	1829
3/1 (Blackbrook Ave N)	3.40	0.00	Y	Arm 6 Left	14.50	5.0 %	1945	1945
				Arm 7 Ahead	Inf	95.0 %		
3/2 (Blackbrook Ave N)	3.30	0.00	Y	Arm 8 Right	25.50	0.0 %	1945	1945
4/1 (Insall Rd)	3.90	0.00	Y	Arm 7 Left	18.00	44.8 %	1933	1933
				Arm 8 Ahead	Inf	55.2 %		
4/2 (Insall Rd)	3.90	0.00	Y	Arm 5 Right	14.00	0.0 %	2005	2005
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2025 DM PM' (FG2: '2025 DM PM', Plan 1: 'Peds Every Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	59	230	37	326	
B	0	0	113	170	283	
C	333	8	0	8	349	
D	76	163	20	0	259	
Tot.	409	230	363	215	1217	

Traffic Lane Flows

Lane	Scenario 2: 2025 DM PM
Junction: Unnamed Junction	
1/1 (with short)	326(In) 289(Out)
1/2 (short)	37
2/1 (with short)	283(In) 283(Out)
2/2 (short)	0
3/1 (with short)	349(In) 341(Out)
3/2 (short)	8
4/1 (with short)	259(In) 239(Out)
4/2 (short)	20
5/1	363
6/1	215
7/1	409
8/1	230

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Blackbrook Ave S)	3.20	0.00	Y	Arm 5 Ahead	Inf	79.6 %	1903	1903
				Arm 8 Left	18.00	20.4 %		
1/2 (Blackbrook Ave S)	3.60	0.00	Y	Arm 6 Right	25.50	100.0 %	1865	1865
2/1 (Hilden Rd)	4.20	0.00	Y	Arm 5 Left	16.00	39.9 %	1962	1962
				Arm 6 Ahead	Inf	60.1 %		
2/2 (Hilden Rd)	4.10	0.00	Y	Arm 7 Right	14.00	0.0 %	2025	2025
3/1 (Blackbrook Ave N)	3.40	0.00	Y	Arm 6 Left	14.50	2.3 %	1950	1950
				Arm 7 Ahead	Inf	97.7 %		
3/2 (Blackbrook Ave N)	3.30	0.00	Y	Arm 8 Right	25.50	100.0 %	1837	1837
4/1 (Insall Rd)	3.90	0.00	Y	Arm 7 Left	18.00	31.8 %	1953	1953
				Arm 8 Ahead	Inf	68.2 %		
4/2 (Insall Rd)	3.90	0.00	Y	Arm 5 Right	14.00	100.0 %	1811	1811
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 3: '2030 DM AM' (FG3: '2030 DM AM', Plan 1: 'Peds Every Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	34	205	100	339	
B	12	0	17	248	277	
C	373	0	0	20	393	
D	165	214	0	0	379	
Tot.	550	248	222	368	1388	

Traffic Lane Flows

Lane	Scenario 3: 2030 DM AM
Junction: Unnamed Junction	
1/1 (with short)	339(In) 239(Out)
1/2 (short)	100
2/1 (with short)	277(In) 265(Out)
2/2 (short)	12
3/1 (with short)	393(In) 393(Out)
3/2 (short)	0
4/1 (with short)	379(In) 379(Out)
4/2 (short)	0
5/1	222
6/1	368
7/1	550
8/1	248

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Blackbrook Ave S)	3.20	0.00	Y	Arm 5 Ahead	Inf	85.8 %	1912	1912
				Arm 8 Left	18.00	14.2 %		
1/2 (Blackbrook Ave S)	3.60	0.00	Y	Arm 6 Right	25.50	100.0 %	1865	1865
2/1 (Hilden Rd)	4.20	0.00	Y	Arm 5 Left	16.00	6.4 %	2023	2023
				Arm 6 Ahead	Inf	93.6 %		
2/2 (Hilden Rd)	4.10	0.00	Y	Arm 7 Right	14.00	100.0 %	1829	1829
3/1 (Blackbrook Ave N)	3.40	0.00	Y	Arm 6 Left	14.50	5.1 %	1945	1945
				Arm 7 Ahead	Inf	94.9 %		
3/2 (Blackbrook Ave N)	3.30	0.00	Y	Arm 8 Right	25.50	0.0 %	1945	1945
4/1 (Insall Rd)	3.90	0.00	Y	Arm 7 Left	18.00	43.5 %	1935	1935
				Arm 8 Ahead	Inf	56.5 %		
4/2 (Insall Rd)	3.90	0.00	Y	Arm 5 Right	14.00	0.0 %	2005	2005
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2030 DM PM' (FG4: '2030 DM PM', Plan 1: 'Peds Every Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	61	239	39	339	
B	1	0	115	171	287	
C	348	8	0	8	364	
D	78	168	17	0	263	
Tot.	427	237	371	218	1253	

Traffic Lane Flows

Lane	Scenario 4: 2030 DM PM
Junction: Unnamed Junction	
1/1 (with short)	339(In) 300(Out)
1/2 (short)	39
2/1 (with short)	287(In) 286(Out)
2/2 (short)	1
3/1 (with short)	364(In) 356(Out)
3/2 (short)	8
4/1 (with short)	263(In) 246(Out)
4/2 (short)	17
5/1	371
6/1	218
7/1	427
8/1	237

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Blackbrook Ave S)	3.20	0.00	Y	Arm 5 Ahead	Inf	79.7 %	1903	1903
				Arm 8 Left	18.00	20.3 %		
1/2 (Blackbrook Ave S)	3.60	0.00	Y	Arm 6 Right	25.50	100.0 %	1865	1865
2/1 (Hilden Rd)	4.20	0.00	Y	Arm 5 Left	16.00	40.2 %	1961	1961
				Arm 6 Ahead	Inf	59.8 %		
2/2 (Hilden Rd)	4.10	0.00	Y	Arm 7 Right	14.00	100.0 %	1829	1829
3/1 (Blackbrook Ave N)	3.40	0.00	Y	Arm 6 Left	14.50	2.2 %	1950	1950
				Arm 7 Ahead	Inf	97.8 %		
3/2 (Blackbrook Ave N)	3.30	0.00	Y	Arm 8 Right	25.50	100.0 %	1837	1837
4/1 (Insall Rd)	3.90	0.00	Y	Arm 7 Left	18.00	31.7 %	1953	1953
				Arm 8 Ahead	Inf	68.3 %		
4/2 (Insall Rd)	3.90	0.00	Y	Arm 5 Right	14.00	100.0 %	1811	1811
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 5: '2025 DS AM' (FG5: '2025 DS AM', Plan 1: 'Peds Every Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	33	209	96	338	
B	9	0	17	200	226	
C	408	0	0	31	439	
D	160	212	4	0	376	
Tot.	577	245	230	327	1379	

Traffic Lane Flows

Lane	Scenario 5: 2025 DS AM
Junction: Unnamed Junction	
1/1 (with short)	338(In) 242(Out)
1/2 (short)	96
2/1 (with short)	226(In) 217(Out)
2/2 (short)	9
3/1 (with short)	439(In) 439(Out)
3/2 (short)	0
4/1 (with short)	376(In) 372(Out)
4/2 (short)	4
5/1	230
6/1	327
7/1	577
8/1	245

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Blackbrook Ave S)	3.20	0.00	Y	Arm 5 Ahead	Inf	86.4 %	1913	1913
				Arm 8 Left	18.00	13.6 %		
1/2 (Blackbrook Ave S)	3.60	0.00	Y	Arm 6 Right	25.50	100.0 %	1865	1865
2/1 (Hilden Rd)	4.20	0.00	Y	Arm 5 Left	16.00	7.8 %	2020	2020
				Arm 6 Ahead	Inf	92.2 %		
2/2 (Hilden Rd)	4.10	0.00	Y	Arm 7 Right	14.00	100.0 %	1829	1829
3/1 (Blackbrook Ave N)	3.40	0.00	Y	Arm 6 Left	14.50	7.1 %	1941	1941
				Arm 7 Ahead	Inf	92.9 %		
3/2 (Blackbrook Ave N)	3.30	0.00	Y	Arm 8 Right	25.50	0.0 %	1945	1945
4/1 (Insall Rd)	3.90	0.00	Y	Arm 7 Left	18.00	43.0 %	1936	1936
				Arm 8 Ahead	Inf	57.0 %		
4/2 (Insall Rd)	3.90	0.00	Y	Arm 5 Right	14.00	100.0 %	1811	1811
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 6: '2025 DS PM' (FG6: '2025 DS PM', Plan 1: 'Peds Every Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	59	286	29	374	
B	0	0	133	162	295	
C	389	8	0	14	411	
D	76	164	20	0	260	
Tot.	465	231	439	205	1340	

Traffic Lane Flows

Lane	Scenario 6: 2025 DS PM
Junction: Unnamed Junction	
1/1 (with short)	374(In) 345(Out)
1/2 (short)	29
2/1 (with short)	295(In) 295(Out)
2/2 (short)	0
3/1 (with short)	411(In) 403(Out)
3/2 (short)	8
4/1 (with short)	260(In) 240(Out)
4/2 (short)	20
5/1	439
6/1	205
7/1	465
8/1	231

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Blackbrook Ave S)	3.20	0.00	Y	Arm 5 Ahead	Inf	82.9 %	1908	1908
				Arm 8 Left	18.00	17.1 %		
1/2 (Blackbrook Ave S)	3.60	0.00	Y	Arm 6 Right	25.50	100.0 %	1865	1865
2/1 (Hilden Rd)	4.20	0.00	Y	Arm 5 Left	16.00	45.1 %	1952	1952
				Arm 6 Ahead	Inf	54.9 %		
2/2 (Hilden Rd)	4.10	0.00	Y	Arm 7 Right	14.00	0.0 %	2025	2025
3/1 (Blackbrook Ave N)	3.40	0.00	Y	Arm 6 Left	14.50	3.5 %	1948	1948
				Arm 7 Ahead	Inf	96.5 %		
3/2 (Blackbrook Ave N)	3.30	0.00	Y	Arm 8 Right	25.50	100.0 %	1837	1837
4/1 (Insall Rd)	3.90	0.00	Y	Arm 7 Left	18.00	31.7 %	1953	1953
				Arm 8 Ahead	Inf	68.3 %		
4/2 (Insall Rd)	3.90	0.00	Y	Arm 5 Right	14.00	100.0 %	1811	1811
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 7: '2030 DS AM' (FG7: '2030 DS AM', Plan 1: 'Peds Every Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	1	251	104	356	
B	0	0	22	201	223	
C	403	0	0	53	456	
D	146	245	8	0	399	
Tot.	549	246	281	358	1434	

Traffic Lane Flows

Lane	Scenario 7: 2030 DS AM
Junction: Unnamed Junction	
1/1 (with short)	356(In) 252(Out)
1/2 (short)	104
2/1 (with short)	223(In) 223(Out)
2/2 (short)	0
3/1 (with short)	456(In) 456(Out)
3/2 (short)	0
4/1 (with short)	399(In) 391(Out)
4/2 (short)	8
5/1	281
6/1	358
7/1	549
8/1	246

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Blackbrook Ave S)	3.20	0.00	Y	Arm 5 Ahead	Inf	99.6 %	1934	1934
				Arm 8 Left	18.00	0.4 %		
1/2 (Blackbrook Ave S)	3.60	0.00	Y	Arm 6 Right	25.50	100.0 %	1865	1865
2/1 (Hilden Rd)	4.20	0.00	Y	Arm 5 Left	16.00	9.9 %	2016	2016
				Arm 6 Ahead	Inf	90.1 %		
2/2 (Hilden Rd)	4.10	0.00	Y	Arm 7 Right	14.00	0.0 %	2025	2025
3/1 (Blackbrook Ave N)	3.40	0.00	Y	Arm 6 Left	14.50	11.6 %	1932	1932
				Arm 7 Ahead	Inf	88.4 %		
3/2 (Blackbrook Ave N)	3.30	0.00	Y	Arm 8 Right	25.50	0.0 %	1945	1945
4/1 (Insall Rd)	3.90	0.00	Y	Arm 7 Left	18.00	37.3 %	1944	1944
				Arm 8 Ahead	Inf	62.7 %		
4/2 (Insall Rd)	3.90	0.00	Y	Arm 5 Right	14.00	100.0 %	1811	1811
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 8: '2030 DS PM' (FG8: '2030 DS PM', Plan 1: 'Peds Every Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	60	275	38	373	
B	0	0	127	170	297	
C	399	8	0	37	444	
D	91	204	18	0	313	
Tot.	490	272	420	245	1427	

Traffic Lane Flows

Lane	Scenario 8: 2030 DS PM
Junction: Unnamed Junction	
1/1 (with short)	373(In) 335(Out)
1/2 (short)	38
2/1 (with short)	297(In) 297(Out)
2/2 (short)	0
3/1 (with short)	444(In) 436(Out)
3/2 (short)	8
4/1 (with short)	313(In) 295(Out)
4/2 (short)	18
5/1	420
6/1	245
7/1	490
8/1	272

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Blackbrook Ave S)	3.20	0.00	Y	Arm 5 Ahead	Inf	82.1 %	1907	1907
				Arm 8 Left	18.00	17.9 %		
1/2 (Blackbrook Ave S)	3.60	0.00	Y	Arm 6 Right	25.50	100.0 %	1865	1865
2/1 (Hilden Rd)	4.20	0.00	Y	Arm 5 Left	16.00	42.8 %	1957	1957
				Arm 6 Ahead	Inf	57.2 %		
2/2 (Hilden Rd)	4.10	0.00	Y	Arm 7 Right	14.00	0.0 %	2025	2025
3/1 (Blackbrook Ave N)	3.40	0.00	Y	Arm 6 Left	14.50	8.5 %	1938	1938
				Arm 7 Ahead	Inf	91.5 %		
3/2 (Blackbrook Ave N)	3.30	0.00	Y	Arm 8 Right	25.50	100.0 %	1837	1837
4/1 (Insall Rd)	3.90	0.00	Y	Arm 7 Left	18.00	30.8 %	1955	1955
				Arm 8 Ahead	Inf	69.2 %		
4/2 (Insall Rd)	3.90	0.00	Y	Arm 5 Right	14.00	100.0 %	1811	1811
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 9: '2030 DS Link AM' (FG9: '2030 DS Link AM', Plan 1: 'Peds Every Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	1	250	104	355	
B	0	0	32	176	208	
C	416	0	0	41	457	
D	142	239	19	0	400	
Tot.	558	240	301	321	1420	

Traffic Lane Flows

Lane	Scenario 9: 2030 DS Link AM
Junction: Unnamed Junction	
1/1 (with short)	355(In) 251(Out)
1/2 (short)	104
2/1 (with short)	208(In) 208(Out)
2/2 (short)	0
3/1 (with short)	457(In) 457(Out)
3/2 (short)	0
4/1 (with short)	400(In) 381(Out)
4/2 (short)	19
5/1	301
6/1	321
7/1	558
8/1	240

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Blackbrook Ave S)	3.20	0.00	Y	Arm 5 Ahead	Inf	99.6 %	1934	1934
				Arm 8 Left	18.00	0.4 %		
1/2 (Blackbrook Ave S)	3.60	0.00	Y	Arm 6 Right	25.50	100.0 %	1865	1865
2/1 (Hilden Rd)	4.20	0.00	Y	Arm 5 Left	16.00	15.4 %	2006	2006
				Arm 6 Ahead	Inf	84.6 %		
2/2 (Hilden Rd)	4.10	0.00	Y	Arm 7 Right	14.00	0.0 %	2025	2025
3/1 (Blackbrook Ave N)	3.40	0.00	Y	Arm 6 Left	14.50	9.0 %	1937	1937
				Arm 7 Ahead	Inf	91.0 %		
3/2 (Blackbrook Ave N)	3.30	0.00	Y	Arm 8 Right	25.50	0.0 %	1945	1945
4/1 (Insall Rd)	3.90	0.00	Y	Arm 7 Left	18.00	37.3 %	1945	1945
				Arm 8 Ahead	Inf	62.7 %		
4/2 (Insall Rd)	3.90	0.00	Y	Arm 5 Right	14.00	100.0 %	1811	1811
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 10: '2030 DS Link PM' (FG10: '2030 DS Link PM', Plan 1: 'Peds Every Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	61	292	30	383	
B	0	0	129	142	271	
C	379	44	0	13	436	
D	76	159	26	0	261	
Tot.	455	264	447	185	1351	

Traffic Lane Flows

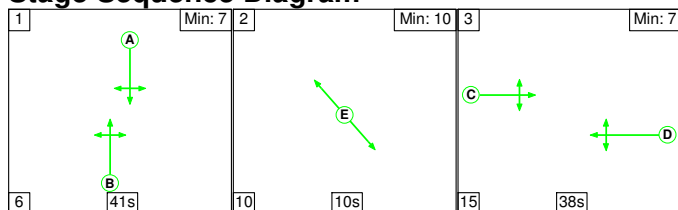
Lane	Scenario 10: 2030 DS Link PM
Junction: Unnamed Junction	
1/1 (with short)	383(In) 353(Out)
1/2 (short)	30
2/1 (with short)	271(In) 271(Out)
2/2 (short)	0
3/1 (with short)	436(In) 392(Out)
3/2 (short)	44
4/1 (with short)	261(In) 235(Out)
4/2 (short)	26
5/1	447
6/1	185
7/1	455
8/1	264

Lane Saturation Flows

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Blackbrook Ave S)	3.20	0.00	Y	Arm 5 Ahead	Inf	82.7 %	1908	1908
				Arm 8 Left	18.00	17.3 %		
1/2 (Blackbrook Ave S)	3.60	0.00	Y	Arm 6 Right	25.50	100.0 %	1865	1865
2/1 (Hilden Rd)	4.20	0.00	Y	Arm 5 Left	16.00	47.6 %	1948	1948
				Arm 6 Ahead	Inf	52.4 %		
2/2 (Hilden Rd)	4.10	0.00	Y	Arm 7 Right	14.00	0.0 %	2025	2025
3/1 (Blackbrook Ave N)	3.40	0.00	Y	Arm 6 Left	14.50	3.3 %	1948	1948
				Arm 7 Ahead	Inf	96.7 %		
3/2 (Blackbrook Ave N)	3.30	0.00	Y	Arm 8 Right	25.50	100.0 %	1837	1837
4/1 (Insall Rd)	3.90	0.00	Y	Arm 7 Left	18.00	32.3 %	1952	1952
				Arm 8 Ahead	Inf	67.7 %		
4/2 (Insall Rd)	3.90	0.00	Y	Arm 5 Right	14.00	100.0 %	1811	1811
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2025 DM AM' (FG1: '2025 DM AM', Plan 1: 'Peds Every Cycle')

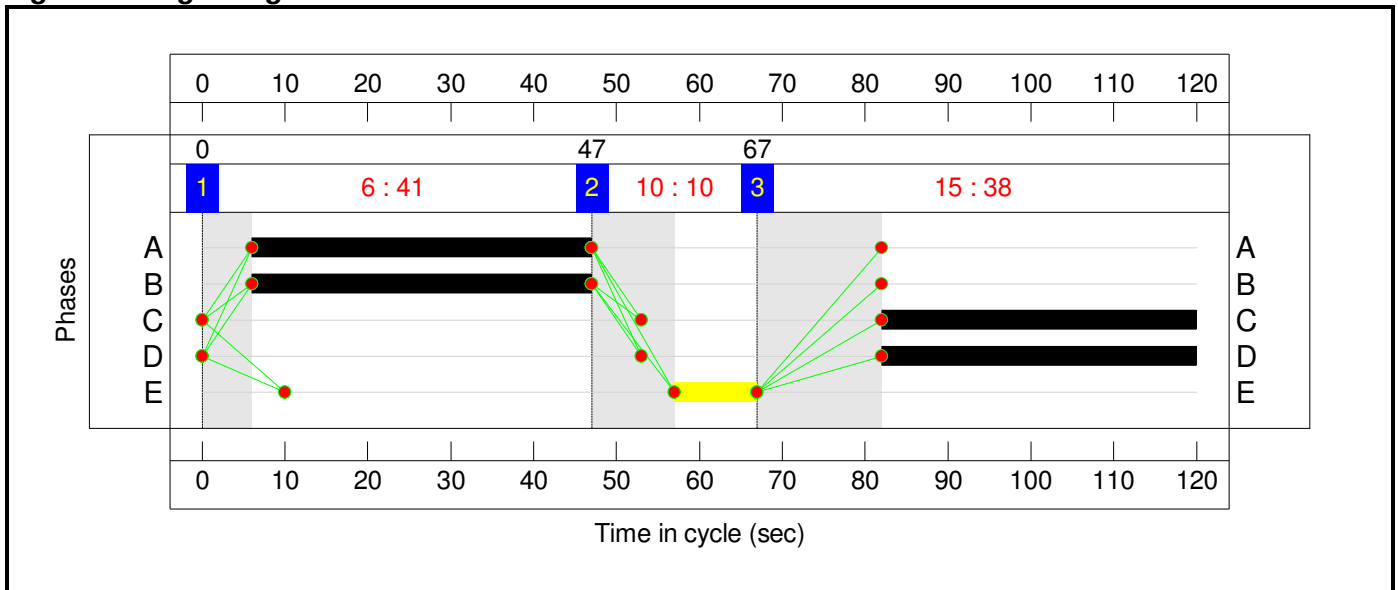
Stage Sequence Diagram



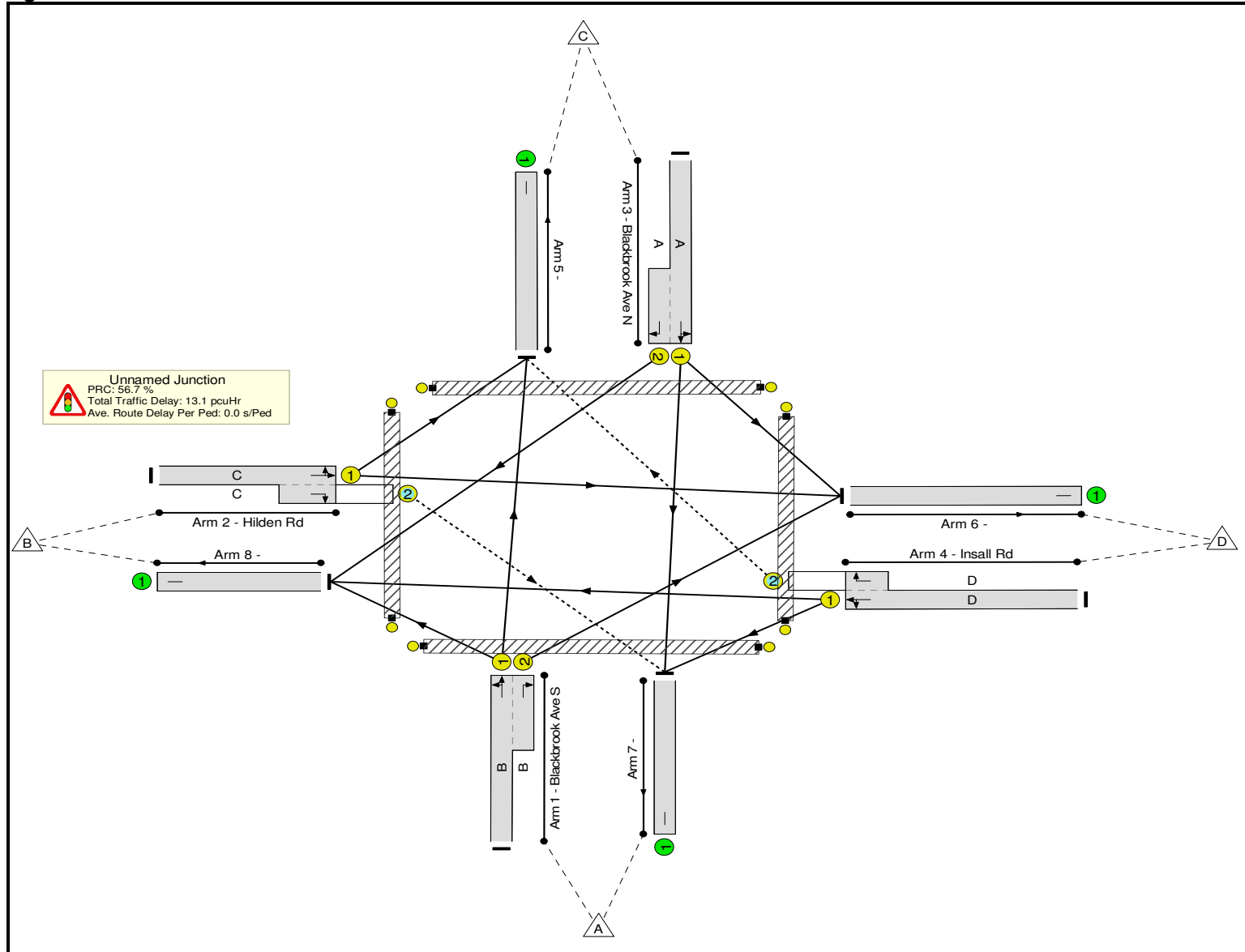
Stage Timings

Stage	1	2	3
Duration	41	10	38
Change Point	0	47	67

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	57.4%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	57.4%
1/1+1/2	Blackbrook Ave S Ahead Right Left	U	N/A	N/A	B		1	41	-	335	1907:1865	529+213	45.2 : 45.2%
2/1+2/2	Hilden Rd Left Ahead Right	U+O	N/A	N/A	C		1	38	-	215	2020:1829	634+28	32.5 : 32.5%
3/1+3/2	Blackbrook Ave N Left Ahead Right	U	N/A	N/A	A		1	41	-	382	1945:1945	681+0	56.1 : 0.0%
4/1+4/2	Insall Rd Right Left Ahead	U+O	N/A	N/A	D		1	38	-	357	1933:2005	622+0	57.4 : 0.0%
5/1		U	N/A	N/A	-		-	-	-	213	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	305	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	532	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	239	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%

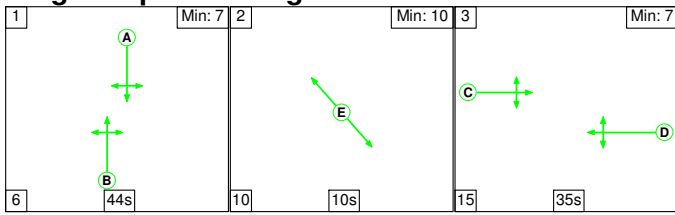
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	9	0	0	11.1	2.0	0.0	13.1	-	-	-	-
Unnamed Junction	-	-	9	0	0	11.1	2.0	0.0	13.1	-	-	-	-
1/1+1/2	335	335	-	-	-	2.6	0.4	-	3.0	32.8	5.9	0.4	6.3
2/1+2/2	215	215	9	0	0	1.8	0.2	0.0	2.1	34.8	5.2	0.2	5.4
3/1+3/2	382	382	-	-	-	3.3	0.6	-	4.0	37.5	10.3	0.6	10.9
4/1+4/2	357	357	0	0	0	3.3	0.7	0.0	4.0	40.5	9.8	0.7	10.5
5/1	213	213	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	305	305	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	532	532	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	239	239	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%):		56.7	Total Delay for Signalled Lanes (pcuHr):		13.13	Cycle Time (s): 120				
			PRC Over All Lanes (%):		56.7	Total Delay Over All Lanes(pcuHr):		13.13					

Full Input Data And Results

Scenario 2: '2025 DM PM' (FG2: '2025 DM PM', Plan 1: 'Peds Every Cycle')

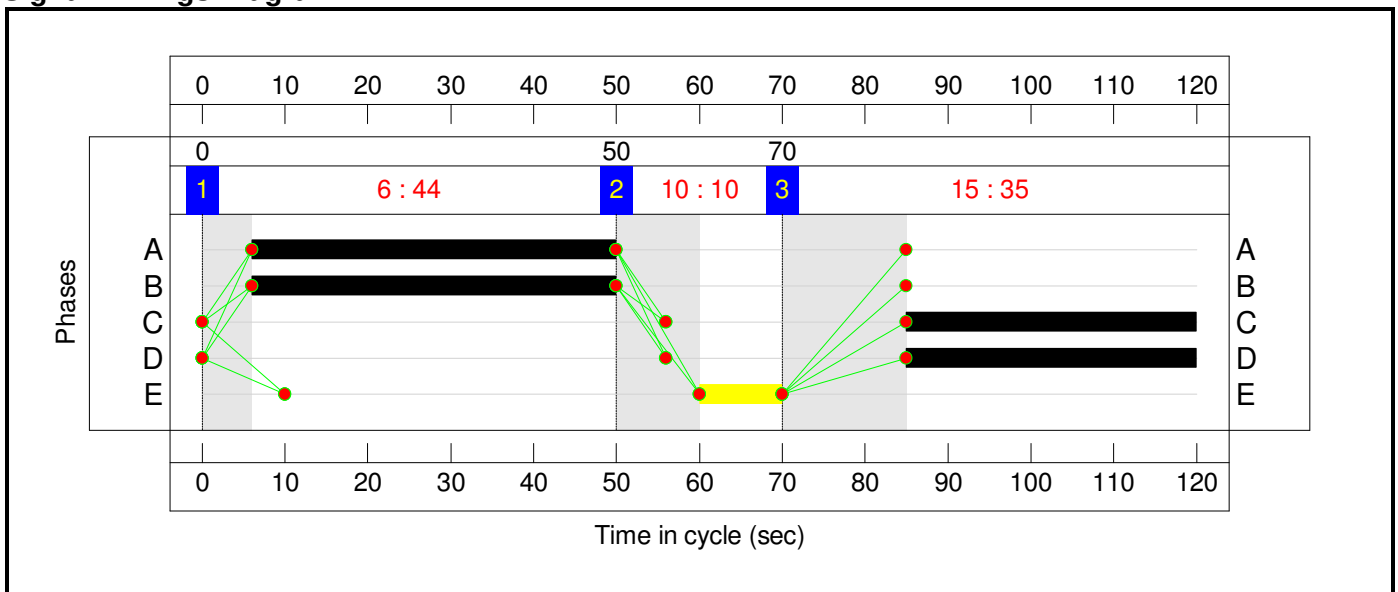
Stage Sequence Diagram



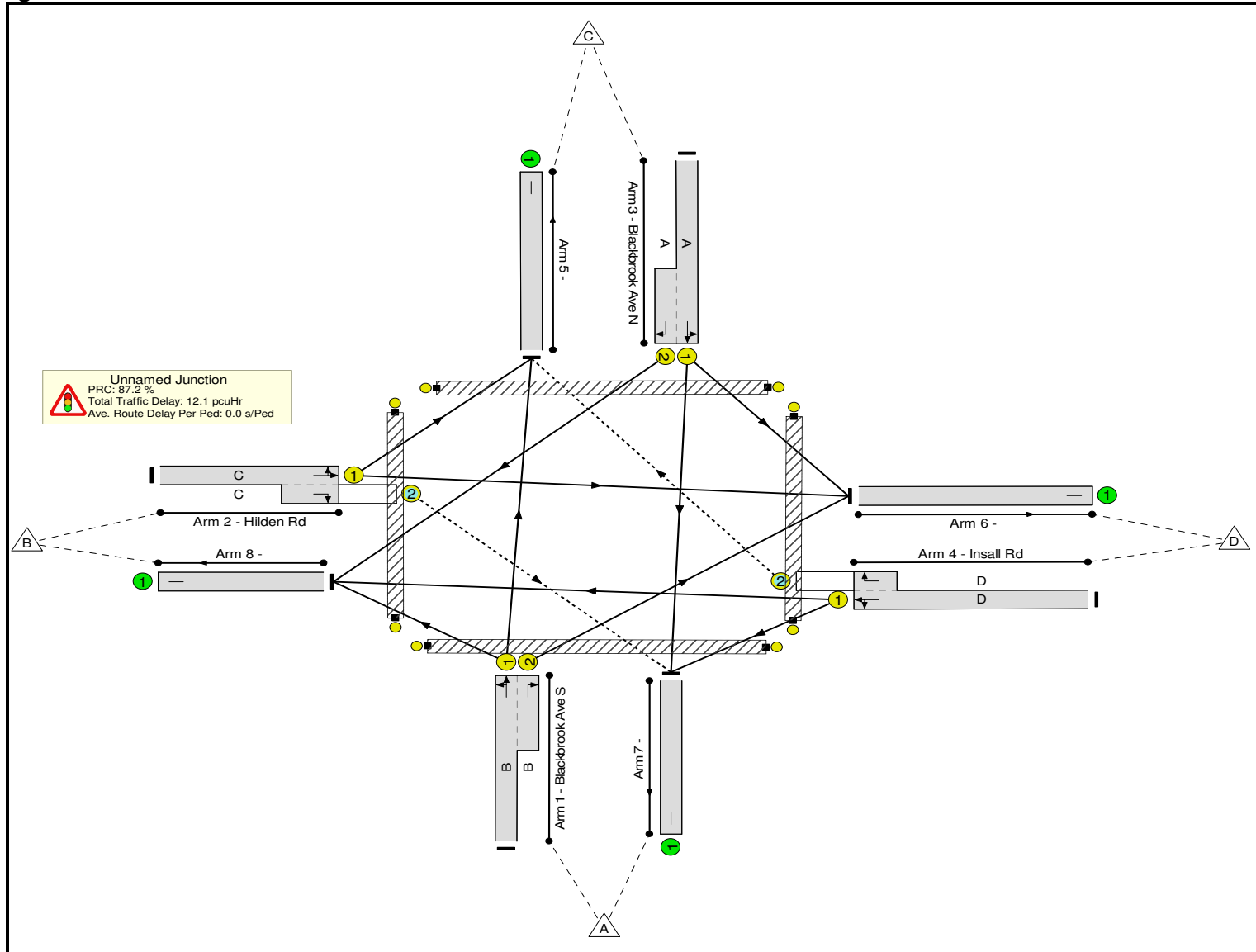
Stage Timings

Stage	1	2	3
Duration	44	10	35
Change Point	0	50	70

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	48.1%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	48.1%
1/1+1/2	Blackbrook Ave S Ahead Right Left	U	N/A	N/A	B		1	44	-	326	1903:1865	657+84	44.0 : 44.0%
2/1+2/2	Hilden Rd Left Ahead Right	U+O	N/A	N/A	C		1	35	-	283	1962:2025	589+0	48.1 : 0.0%
3/1+3/2	Blackbrook Ave N Left Ahead Right	U	N/A	N/A	A		1	44	-	349	1950:1837	719+17	47.4 : 47.4%
4/1+4/2	Insall Rd Right Left Ahead	U+O	N/A	N/A	D		1	35	-	259	1953:1811	538+45	44.4 : 44.4%
5/1		U	N/A	N/A	-		-	-	-	363	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	215	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	409	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	230	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%

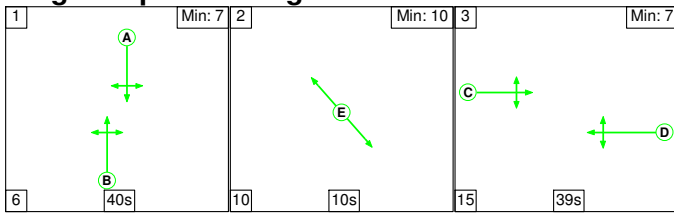
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	20	0	0	10.4	1.7	0.0	12.1	-	-	-	-
Unnamed Junction	-	-	20	0	0	10.4	1.7	0.0	12.1	-	-	-	-
1/1+1/2	326	326	-	-	-	2.5	0.4	-	2.9	31.6	7.2	0.4	7.6
2/1+2/2	283	283	0	0	0	2.7	0.5	0.0	3.2	40.2	7.7	0.5	8.2
3/1+3/2	349	349	-	-	-	2.7	0.4	-	3.2	33.0	8.6	0.4	9.0
4/1+4/2	259	259	20	0	0	2.4	0.4	0.0	2.9	39.8	6.7	0.4	7.1
5/1	363	363	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	215	215	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	409	409	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	230	230	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%):		87.2	Total Delay for Signalled Lanes (pcuHr):		12.09	Cycle Time (s): 120				
			PRC Over All Lanes (%):		87.2	Total Delay Over All Lanes(pcuHr):		12.09					

Full Input Data And Results

Scenario 3: '2030 DM AM' (FG3: '2030 DM AM', Plan 1: 'Peds Every Cycle')

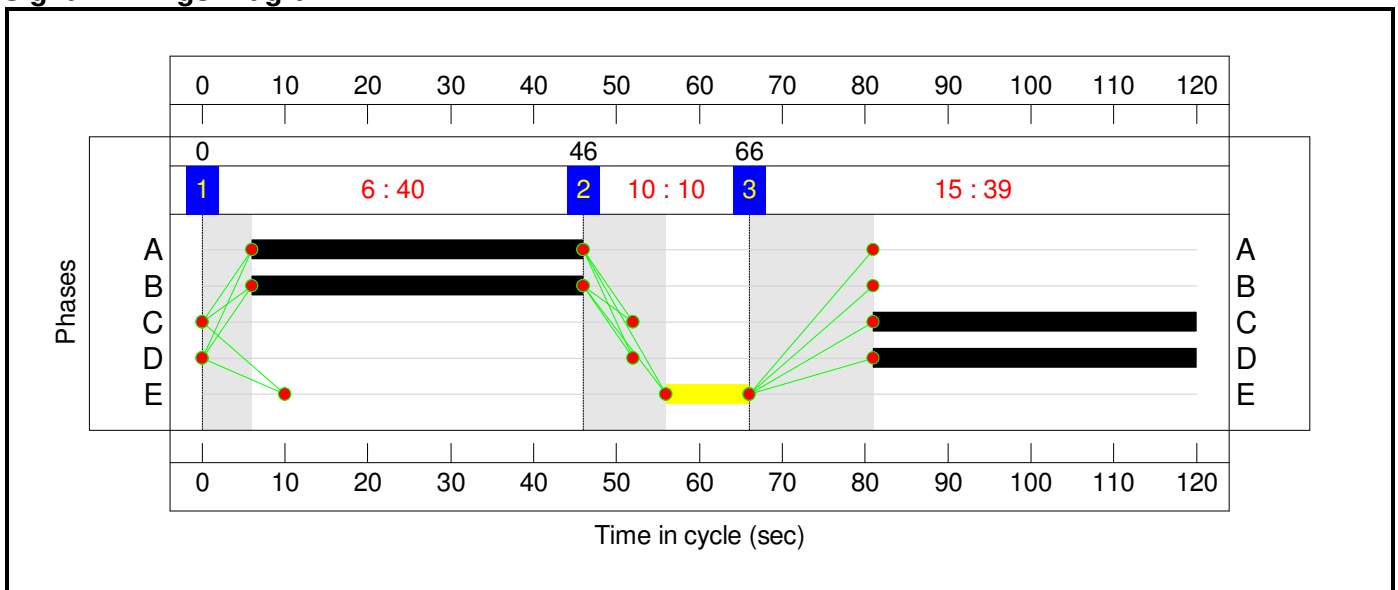
Stage Sequence Diagram



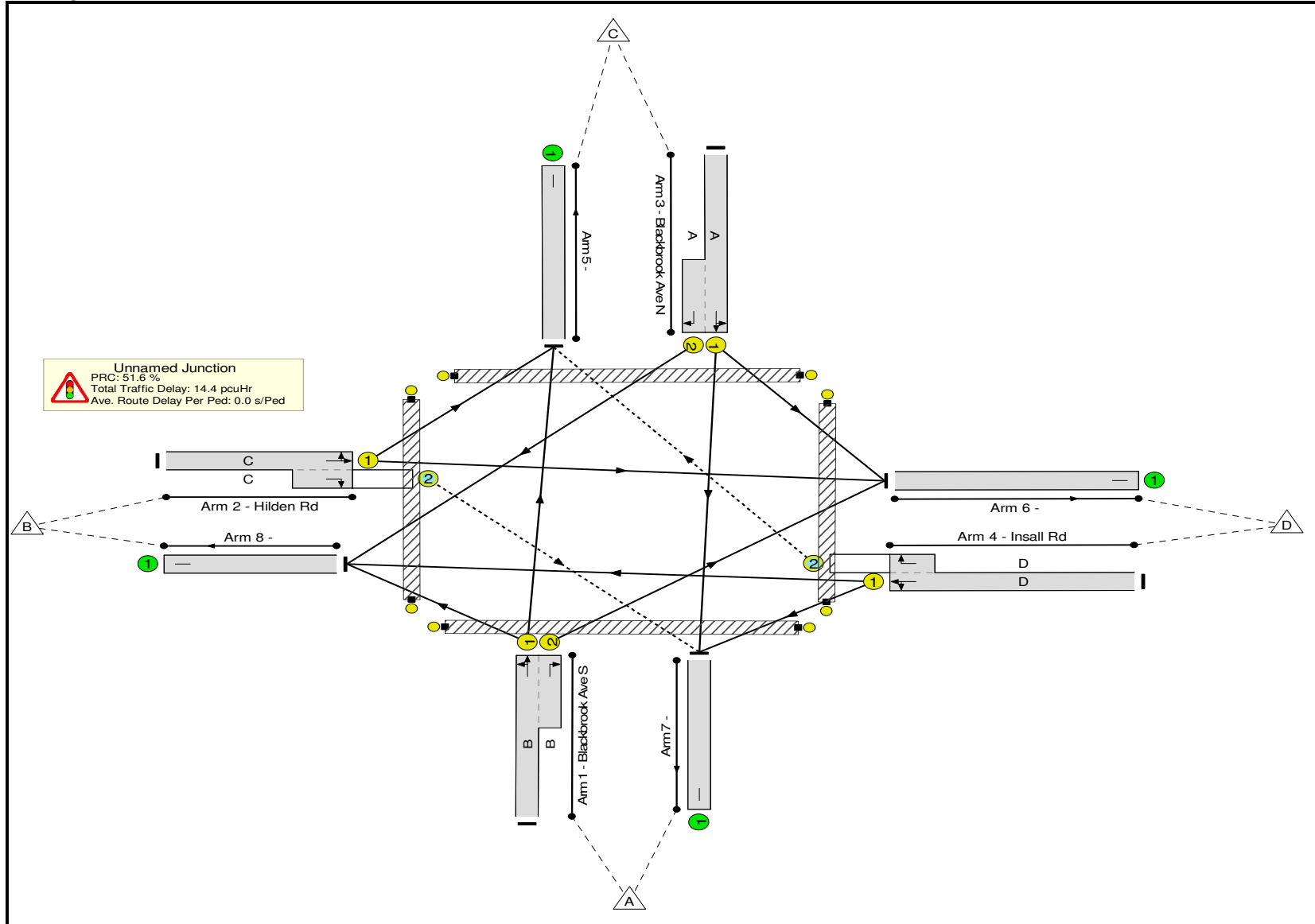
Stage Timings

Stage	1	2	3
Duration	40	10	39
Change Point	0	46	66

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	59.4%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	59.4%
1/1+1/2	Blackbrook Ave S Ahead Right Left	U	N/A	N/A	B		1	40	-	339	1912:1865	515+215	46.5 : 46.5%
2/1+2/2	Hilden Rd Left Ahead Right	U+O	N/A	N/A	C		1	39	-	277	2023:1829	650+29	40.8 : 40.8%
3/1+3/2	Blackbrook Ave N Left Ahead Right	U	N/A	N/A	A		1	40	-	393	1945:1945	665+0	59.1 : 0.0%
4/1+4/2	Insall Rd Right Left Ahead	U+O	N/A	N/A	D		1	39	-	379	1935:2005	638+0	59.4 : 0.0%
5/1		U	N/A	N/A	-		-	-	-	222	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	368	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	550	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	248	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%

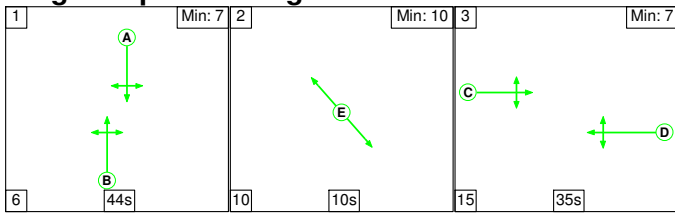
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	12	0	0	12.2	2.2	0.0	14.4	-	-	-	-
Unnamed Junction	-	-	12	0	0	12.2	2.2	0.0	14.4	-	-	-	-
1/1+1/2	339	339	-	-	-	2.7	0.4	-	3.2	33.7	6.0	0.4	6.4
2/1+2/2	277	277	12	0	0	2.4	0.3	0.0	2.7	35.5	6.9	0.3	7.2
3/1+3/2	393	393	-	-	-	3.6	0.7	-	4.3	39.2	10.8	0.7	11.5
4/1+4/2	379	379	0	0	0	3.5	0.7	0.0	4.2	40.3	10.5	0.7	11.3
5/1	222	222	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	368	368	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	550	550	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	248	248	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%):		51.6	Total Delay for Signalled Lanes (pcuHr):		14.42	Cycle Time (s): 120				
			PRC Over All Lanes (%):		51.6	Total Delay Over All Lanes(pcuHr):		14.42					

Full Input Data And Results

Scenario 4: '2030 DM PM' (FG4: '2030 DM PM', Plan 1: 'Peds Every Cycle')

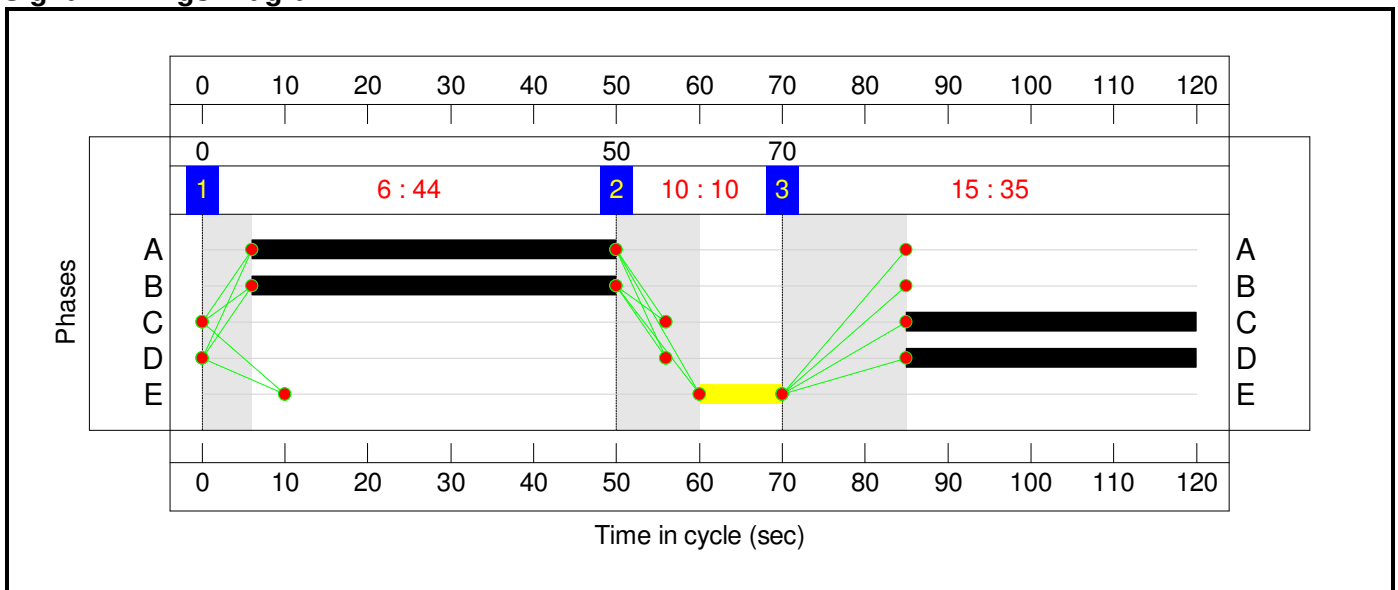
Stage Sequence Diagram



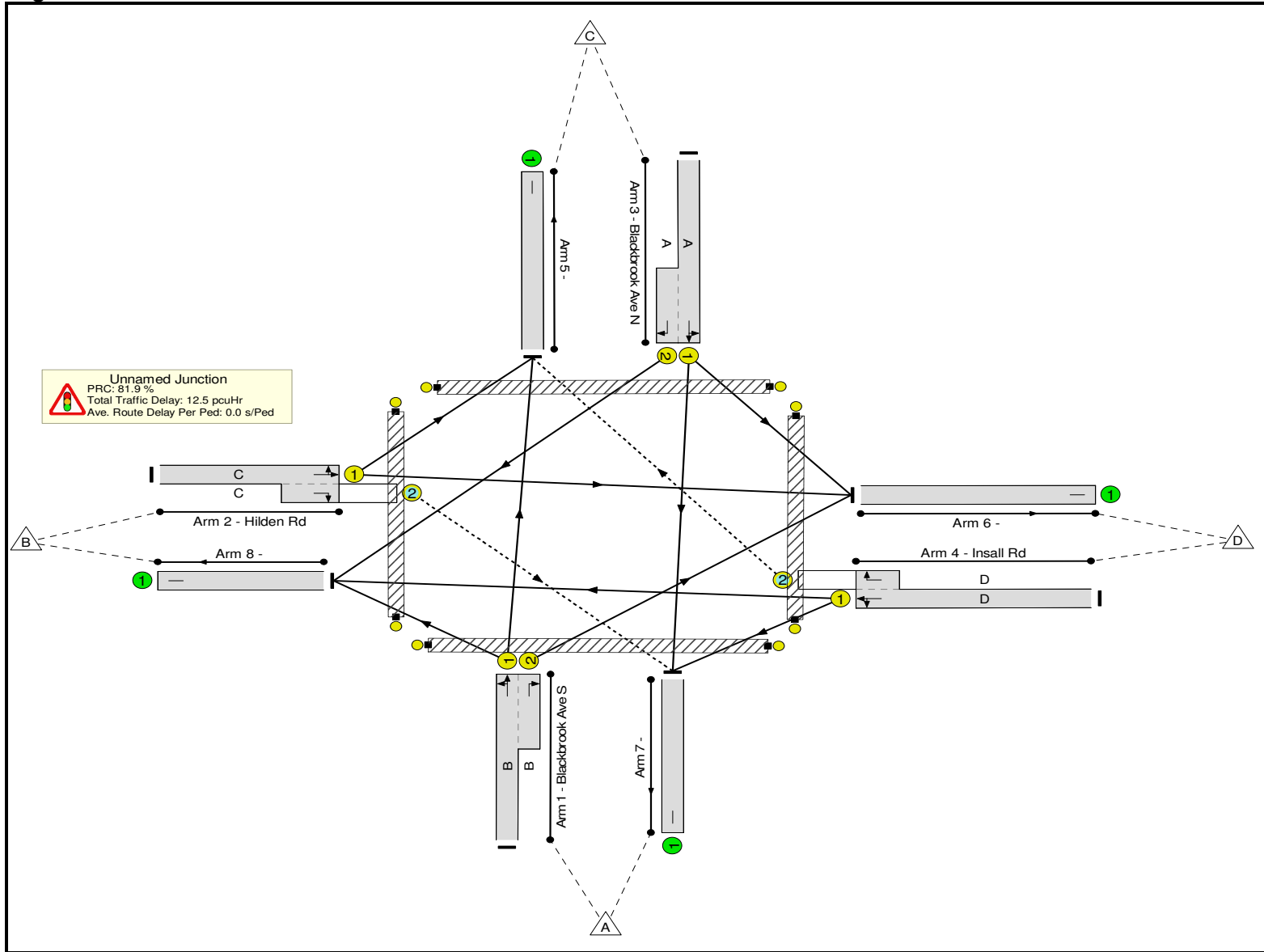
Stage Timings

Stage	1	2	3
Duration	44	10	35
Change Point	0	50	70

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	49.5%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	49.5%
1/1+1/2	Blackbrook Ave S Ahead Right Left	U	N/A	N/A	B		1	44	-	339	1903:1865	656+85	45.7 : 45.7%
2/1+2/2	Hilden Rd Left Ahead Right	U+O	N/A	N/A	C		1	35	-	287	1961:1829	588+2	48.6 : 48.6%
3/1+3/2	Blackbrook Ave N Left Ahead Right	U	N/A	N/A	A		1	44	-	364	1950:1837	720+16	49.5 : 49.5%
4/1+4/2	Insall Rd Right Left Ahead	U+O	N/A	N/A	D		1	35	-	263	1953:1811	544+38	45.2 : 45.2%
5/1		U	N/A	N/A	-		-	-	-	371	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	218	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	427	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	237	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%

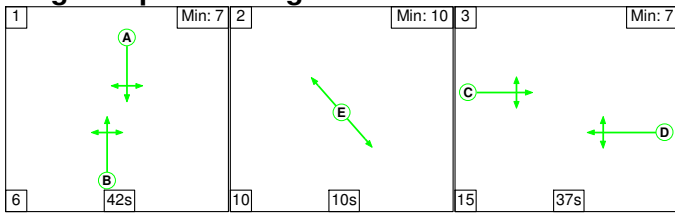
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	18	0	0	10.7	1.8	0.0	12.5	-	-	-	-
Unnamed Junction	-	-	18	0	0	10.7	1.8	0.0	12.5	-	-	-	-
1/1+1/2	339	339	-	-	-	2.6	0.4	-	3.0	32.0	7.6	0.4	8.0
2/1+2/2	287	287	1	0	0	2.7	0.5	0.0	3.2	40.3	7.8	0.5	8.3
3/1+3/2	364	364	-	-	-	2.9	0.5	-	3.4	33.5	9.1	0.5	9.6
4/1+4/2	263	263	17	0	0	2.5	0.4	0.0	2.9	39.9	6.9	0.4	7.3
5/1	371	371	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	218	218	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	427	427	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	237	237	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%):		81.9	Total Delay for Signalled Lanes (pcuHr):		12.53	Cycle Time (s): 120				
			PRC Over All Lanes (%):		81.9	Total Delay Over All Lanes(pcuHr):		12.53					

Full Input Data And Results

Scenario 5: '2025 DS AM' (FG5: '2025 DS AM', Plan 1: 'Peds Every Cycle')

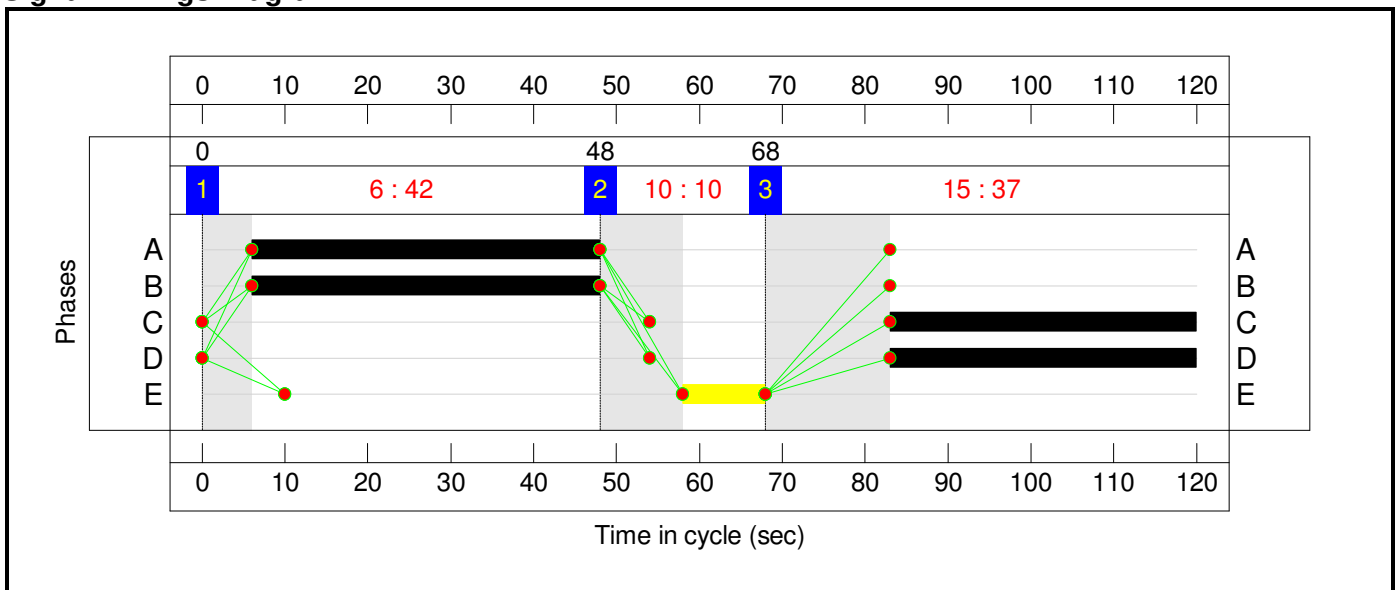
Stage Sequence Diagram



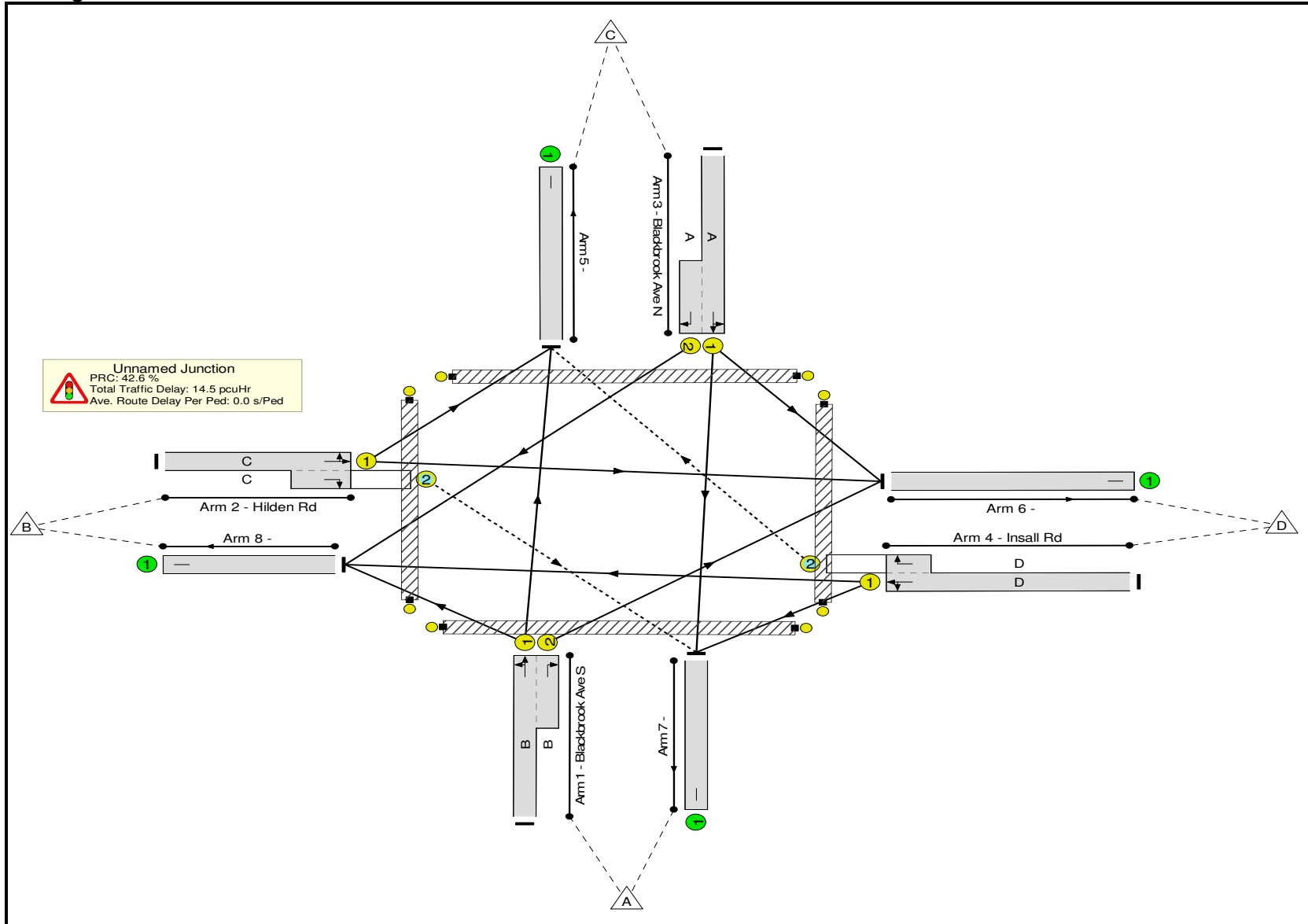
Stage Timings

Stage	1	2	3
Duration	42	10	37
Change Point	0	48	68

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	63.1%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	63.1%
1/1+1/2	Blackbrook Ave S Ahead Right Left	U	N/A	N/A	B		1	42	-	338	1913:1865	543+215	44.6 : 44.6%
2/1+2/2	Hilden Rd Left Ahead Right	U+O	N/A	N/A	C		1	37	-	226	2020:1829	619+26	35.1 : 35.1%
3/1+3/2	Blackbrook Ave N Left Ahead Right	U	N/A	N/A	A		1	42	-	439	1941:1945	696+0	63.1 : 0.0%
4/1+4/2	Insall Rd Right Left Ahead	U+O	N/A	N/A	D		1	37	-	376	1936:1811	600+6	62.0 : 62.0%
5/1		U	N/A	N/A	-		-	-	-	230	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	327	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	577	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	245	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%

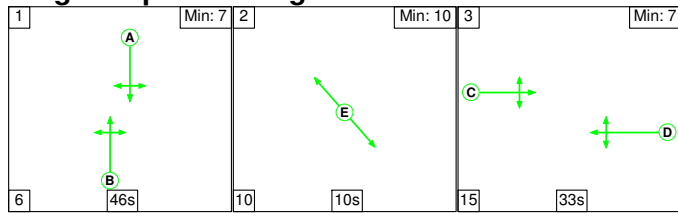
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	13	0	0	12.1	2.3	0.0	14.5	-	-	-	-
Unnamed Junction	-	-	13	0	0	12.1	2.3	0.0	14.5	-	-	-	-
1/1+1/2	338	338	-	-	-	2.6	0.4	-	3.0	31.9	5.9	0.4	6.3
2/1+2/2	226	226	9	0	0	2.0	0.3	0.0	2.3	36.0	5.5	0.3	5.8
3/1+3/2	439	439	-	-	-	3.9	0.9	-	4.7	38.9	12.1	0.9	12.9
4/1+4/2	376	376	4	0	0	3.7	0.8	0.0	4.5	42.8	10.6	0.8	11.4
5/1	230	230	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	327	327	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	577	577	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	245	245	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%):		42.6	Total Delay for Signalled Lanes (pcuHr):		14.47	Cycle Time (s): 120				
			PRC Over All Lanes (%):		42.6	Total Delay Over All Lanes(pcuHr):		14.47					

Full Input Data And Results

Scenario 6: '2025 DS PM' (FG6: '2025 DS PM', Plan 1: 'Peds Every Cycle')

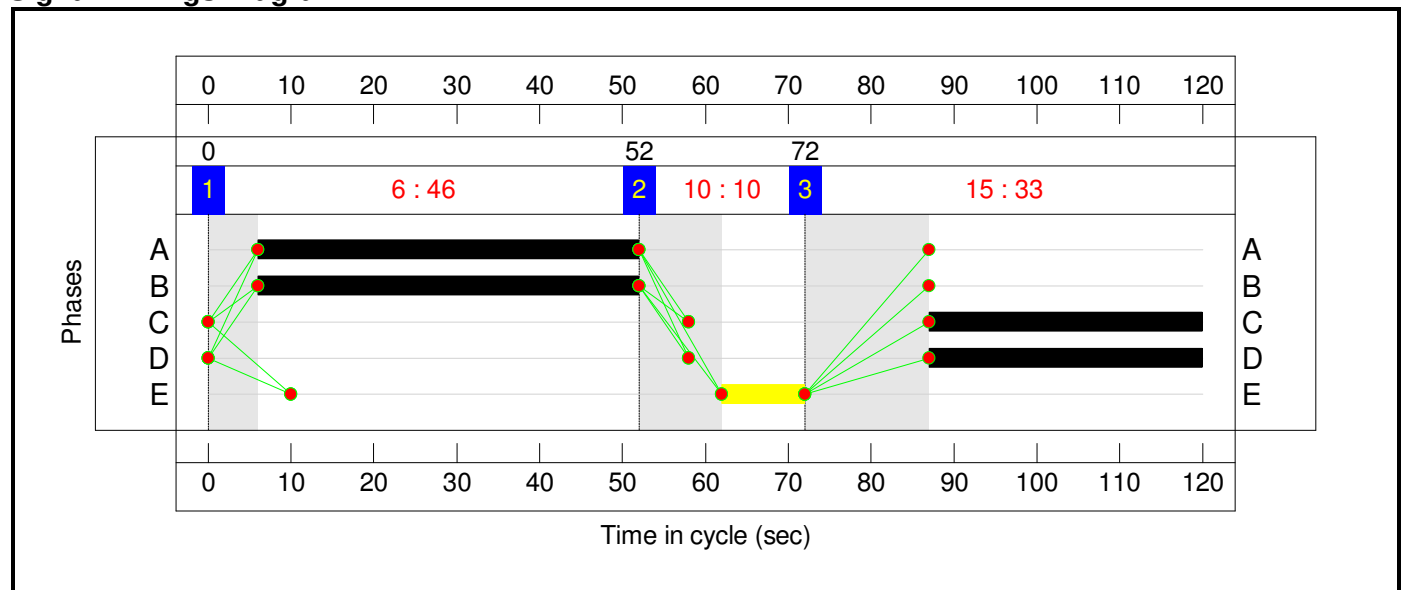
Stage Sequence Diagram



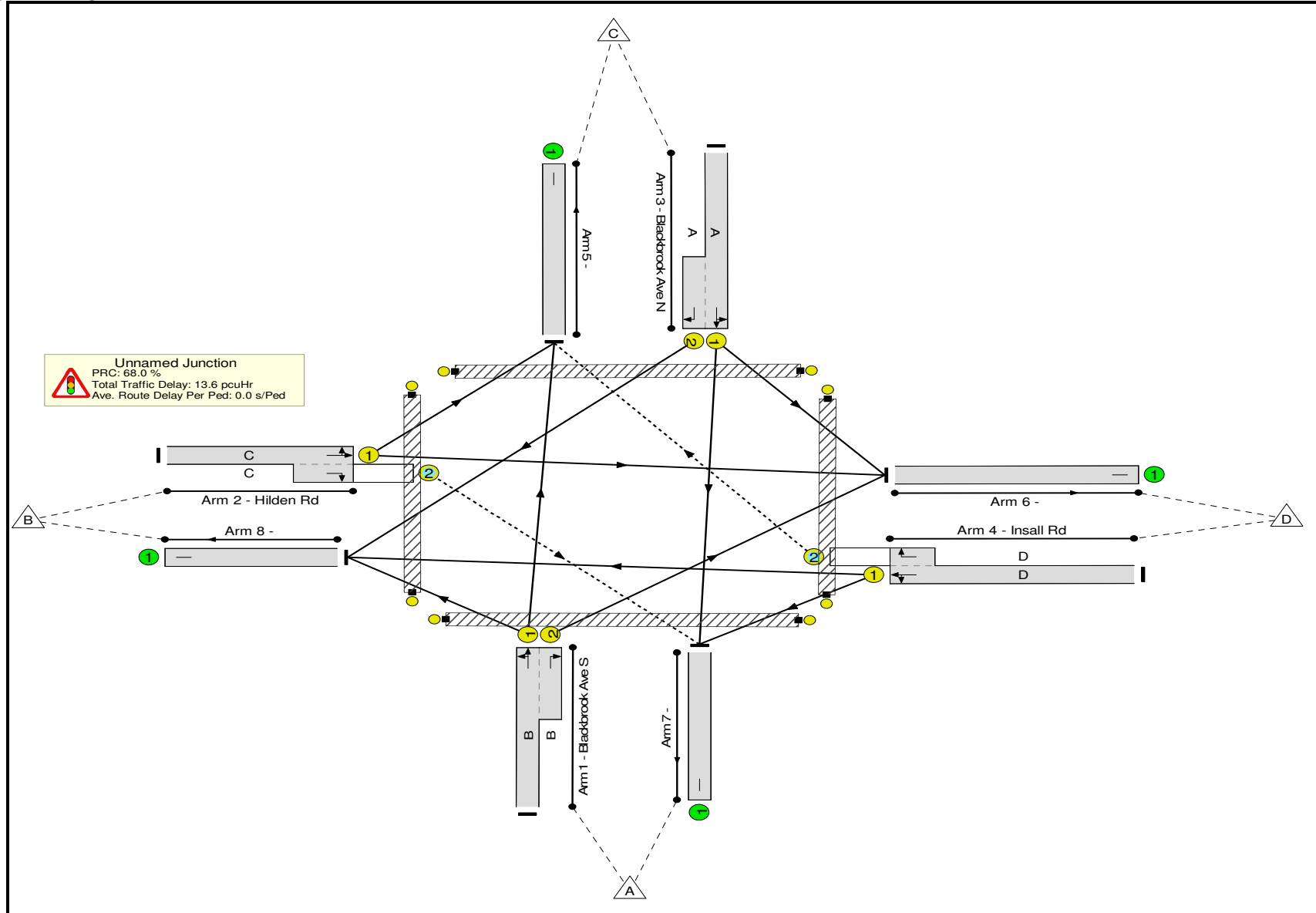
Stage Timings

Stage	1	2	3
Duration	46	10	33
Change Point	0	52	72

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	53.6%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	53.6%
1/1+1/2	Blackbrook Ave S Ahead Right Left	U	N/A	N/A	B		1	46	-	374	1908:1865	707+59	48.8 : 48.8%
2/1+2/2	Hilden Rd Left Ahead Right	U+O	N/A	N/A	C		1	33	-	295	1952:2025	553+0	53.3 : 0.0%
3/1+3/2	Blackbrook Ave N Left Ahead Right	U	N/A	N/A	A		1	46	-	411	1948:1837	752+15	53.6 : 53.6%
4/1+4/2	Insall Rd Right Left Ahead	U+O	N/A	N/A	D		1	33	-	260	1953:1811	508+42	47.2 : 47.2%
5/1		U	N/A	N/A	-		-	-	-	439	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	205	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	465	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	231	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%

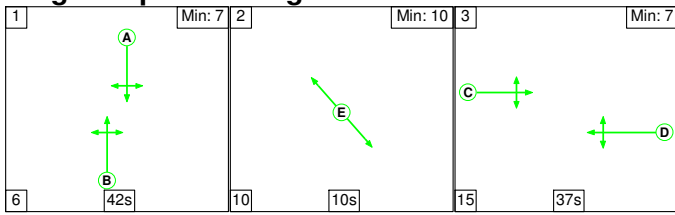
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	20	0	0	11.5	2.1	0.0	13.6	-	-	-	-
Unnamed Junction	-	-	20	0	0	11.5	2.1	0.0	13.6	-	-	-	-
1/1+1/2	374	374	-	-	-	2.8	0.5	-	3.3	31.5	8.7	0.5	9.2
2/1+2/2	295	295	0	0	0	3.0	0.6	0.0	3.5	43.3	8.3	0.6	8.8
3/1+3/2	411	411	-	-	-	3.2	0.6	-	3.8	33.0	10.4	0.6	11.0
4/1+4/2	260	260	20	0	0	2.6	0.4	0.0	3.0	42.2	6.9	0.4	7.3
5/1	439	439	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	205	205	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	465	465	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	231	231	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%):		68.0	Total Delay for Signalled Lanes (pcuHr):		13.63	Cycle Time (s): 120				
			PRC Over All Lanes (%):		68.0	Total Delay Over All Lanes(pcuHr):		13.63					

Full Input Data And Results

Scenario 7: '2030 DS AM' (FG7: '2030 DS AM', Plan 1: 'Peds Every Cycle')

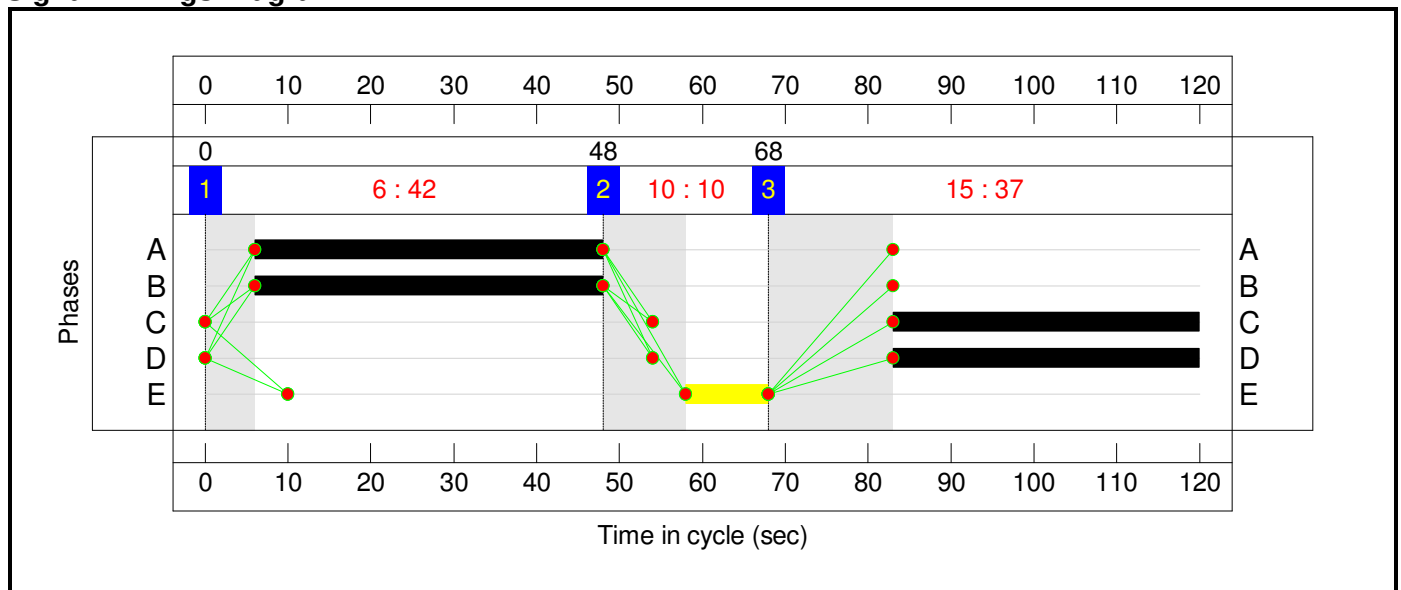
Stage Sequence Diagram



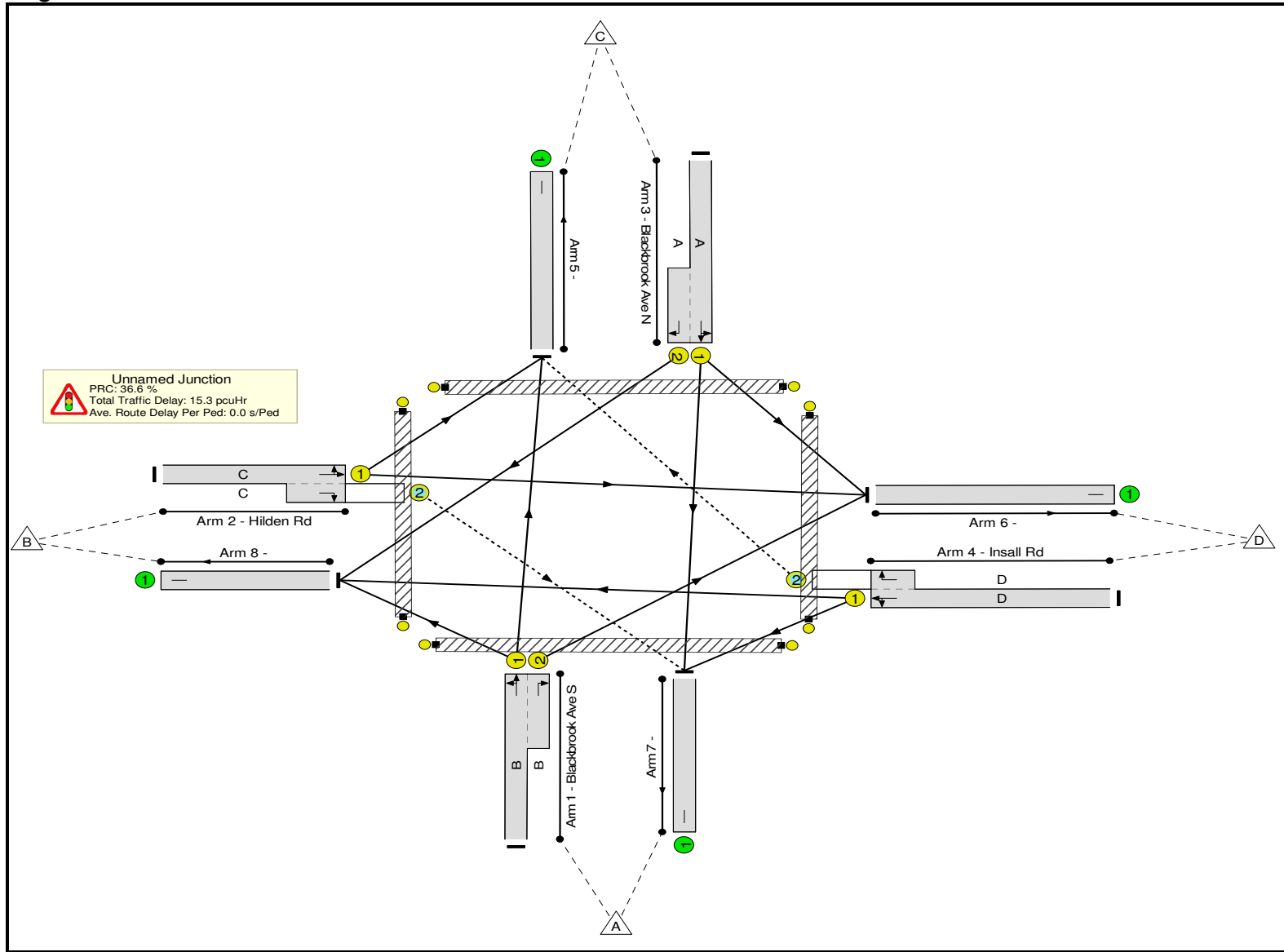
Stage Timings

Stage	1	2	3
Duration	42	10	37
Change Point	0	48	68

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	65.9%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	65.9%
1/1+1/2	Blackbrook Ave S Ahead Right Left	U	N/A	N/A	B		1	42	-	356	1934:1865	541+223	46.6 : 46.6%
2/1+2/2	Hilden Rd Left Ahead Right	U+O	N/A	N/A	C		1	37	-	223	2016:2025	638+0	34.9 : 0.0%
3/1+3/2	Blackbrook Ave N Left Ahead Right	U	N/A	N/A	A		1	42	-	456	1932:1945	692+0	65.9 : 0.0%
4/1+4/2	Insall Rd Right Left Ahead	U+O	N/A	N/A	D		1	37	-	399	1944:1811	597+12	65.5 : 65.5%
5/1		U	N/A	N/A	-		-	-	-	281	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	358	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	549	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	246	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%

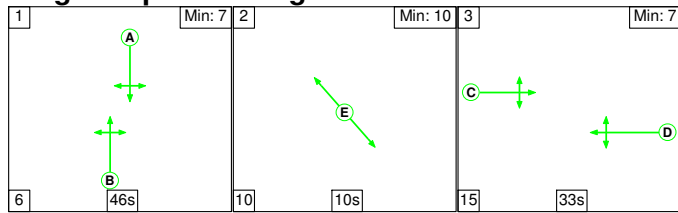
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	8	0	0	12.7	2.6	0.0	15.3	-	-	-	-
Unnamed Junction	-	-	8	0	0	12.7	2.6	0.0	15.3	-	-	-	-
1/1+1/2	356	356	-	-	-	2.7	0.4	-	3.2	32.2	6.3	0.4	6.7
2/1+2/2	223	223	0	0	0	2.0	0.3	0.0	2.2	35.8	5.7	0.3	6.0
3/1+3/2	456	456	-	-	-	4.1	1.0	-	5.1	39.9	12.7	1.0	13.6
4/1+4/2	399	399	8	0	0	3.9	0.9	0.0	4.9	44.0	11.4	0.9	12.3
5/1	281	281	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	358	358	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	549	549	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	246	246	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%):		36.6	Total Delay for Signalled Lanes (pcuHr):		15.33	Cycle Time (s): 120				
			PRC Over All Lanes (%):		36.6	Total Delay Over All Lanes(pcuHr):		15.33					

Full Input Data And Results

Scenario 8: '2030 DS PM' (FG8: '2030 DS PM', Plan 1: 'Peds Every Cycle')

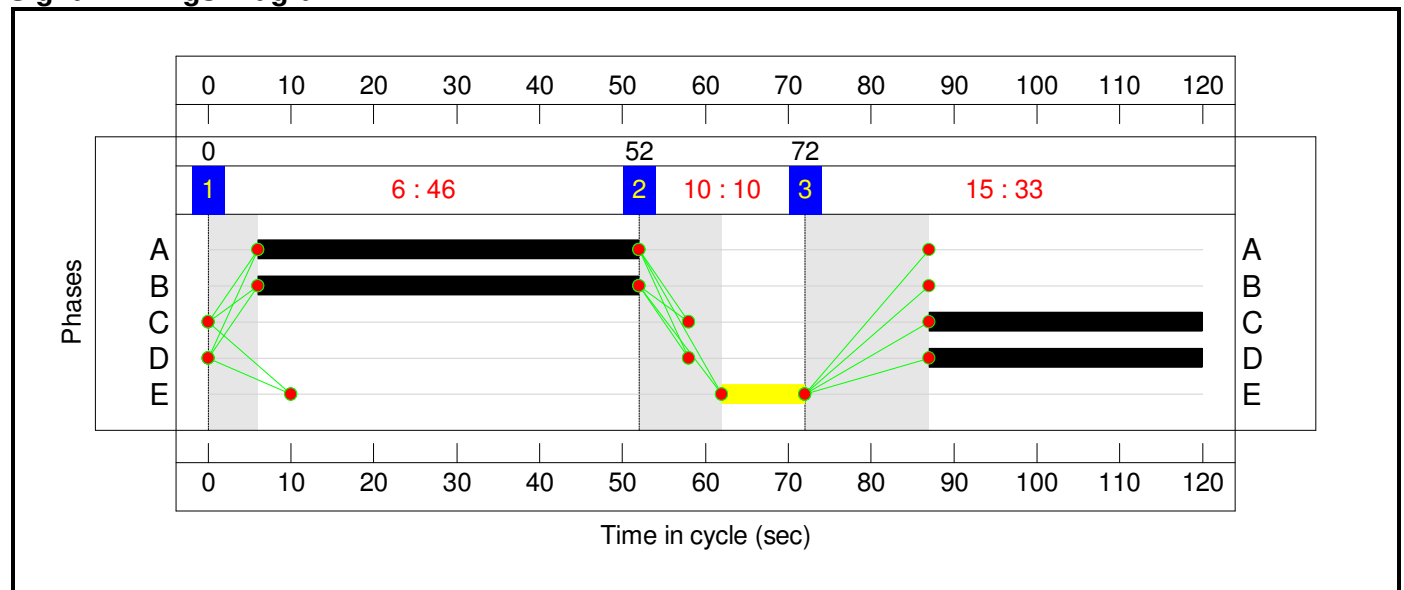
Stage Sequence Diagram



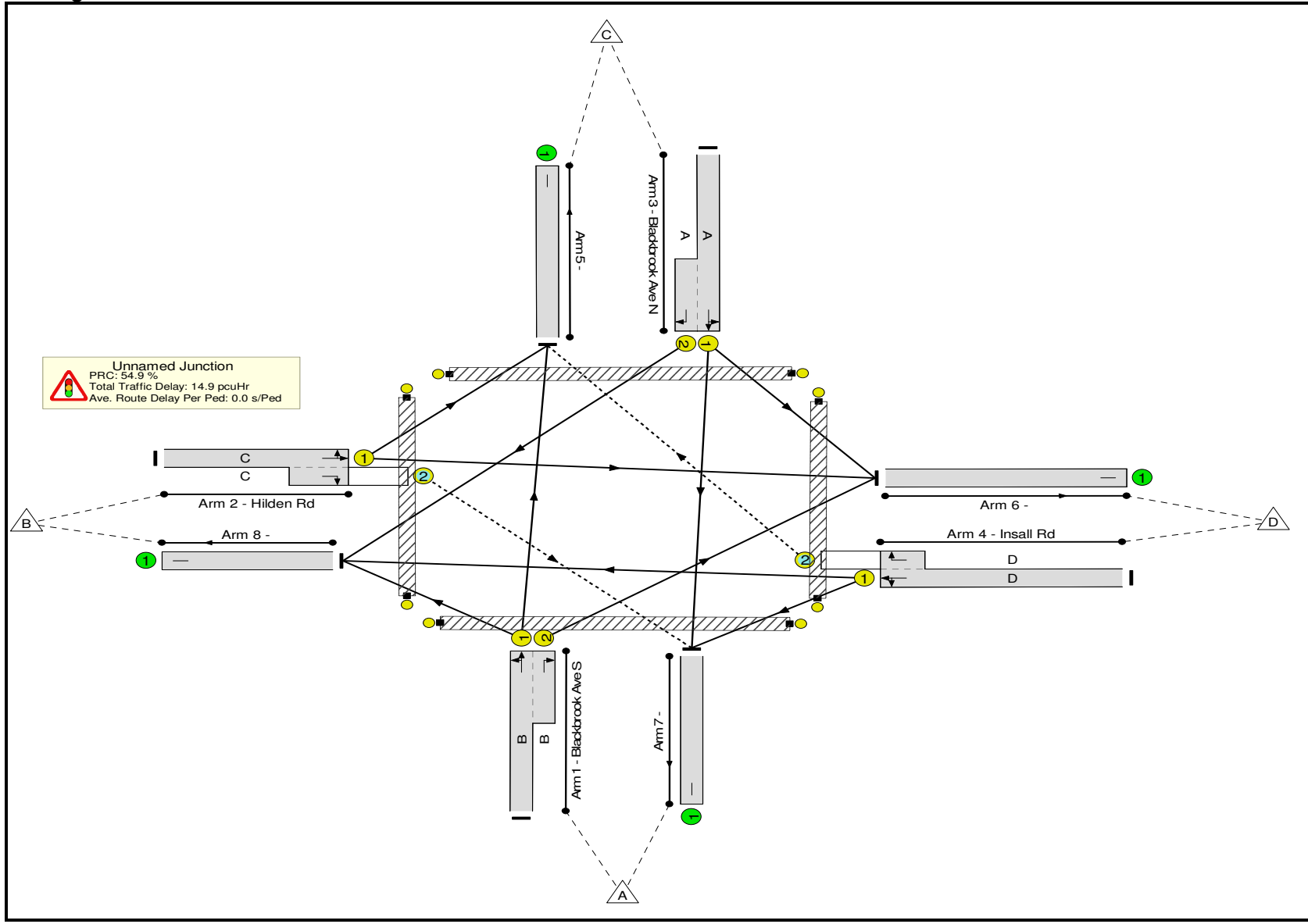
Stage Timings

Stage	1	2	3
Duration	46	10	33
Change Point	0	52	72

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	58.1%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	58.1%
1/1+1/2	Blackbrook Ave S Ahead Right Left	U	N/A	N/A	B		1	46	-	373	1907:1865	693+79	48.4 : 48.4%
2/1+2/2	Hilden Rd Left Ahead Right	U+O	N/A	N/A	C		1	33	-	297	1957:2025	554+0	53.6 : 0.0%
3/1+3/2	Blackbrook Ave N Left Ahead Right	U	N/A	N/A	A		1	46	-	444	1938:1837	750+14	58.1 : 58.1%
4/1+4/2	Insall Rd Right Left Ahead	U+O	N/A	N/A	D		1	33	-	313	1955:1811	518+32	57.0 : 57.0%
5/1		U	N/A	N/A	-		-	-	-	420	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	245	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	490	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	272	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%

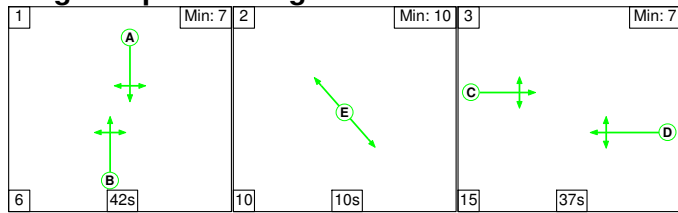
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	18	0	0	12.5	2.4	0.0	14.9	-	-	-	-
Unnamed Junction	-	-	18	0	0	12.5	2.4	0.0	14.9	-	-	-	-
1/1+1/2	373	373	-	-	-	2.8	0.5	-	3.2	31.2	8.4	0.5	8.9
2/1+2/2	297	297	0	0	0	3.0	0.6	0.0	3.6	43.3	8.3	0.6	8.9
3/1+3/2	444	444	-	-	-	3.5	0.7	-	4.2	34.2	11.5	0.7	12.2
4/1+4/2	313	313	18	0	0	3.2	0.7	0.0	3.9	44.6	8.7	0.7	9.3
5/1	420	420	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	245	245	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	490	490	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	272	272	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%):		54.9	Total Delay for Signalled Lanes (pcuHr):		14.90	Cycle Time (s): 120				
			PRC Over All Lanes (%):		54.9	Total Delay Over All Lanes(pcuHr):		14.90					

Full Input Data And Results

Scenario 9: '2030 DS Link AM' (FG9: '2030 DS Link AM', Plan 1: 'Peds Every Cycle')

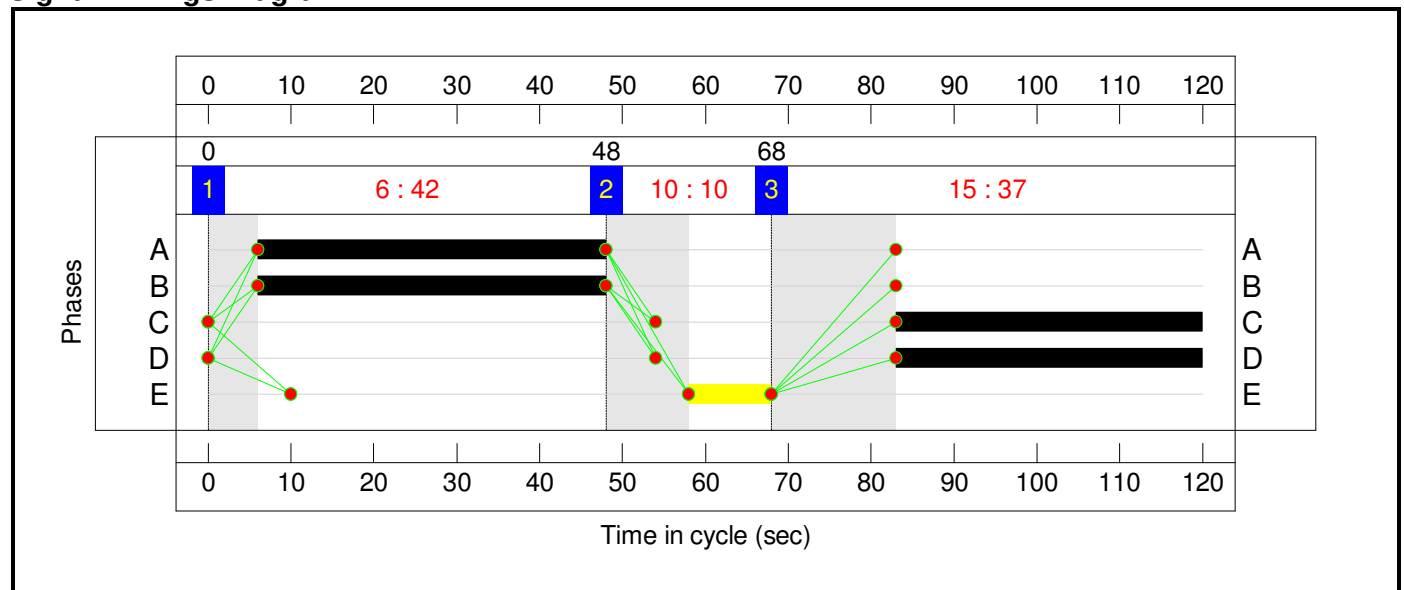
Stage Sequence Diagram



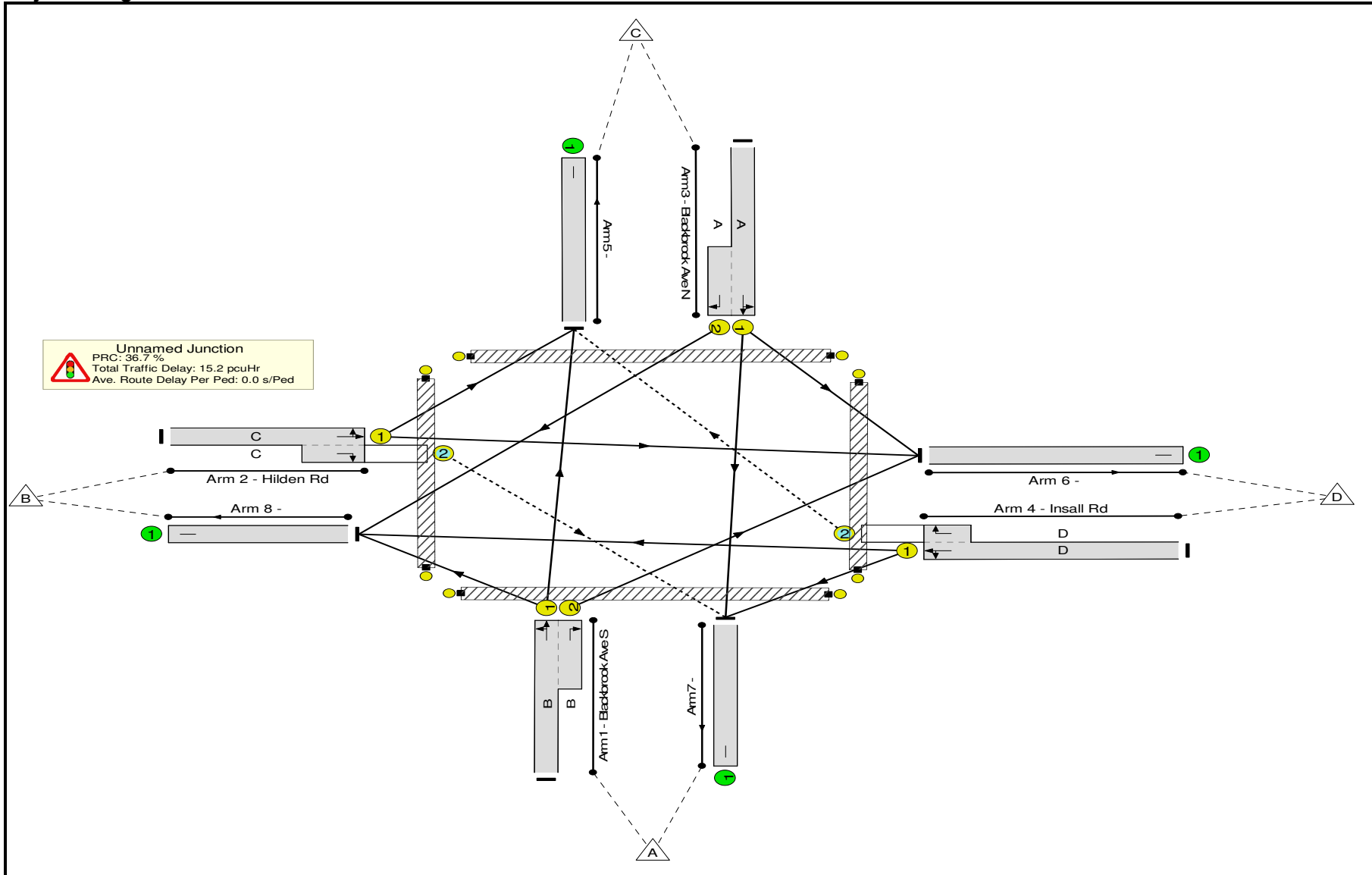
Stage Timings

Stage	1	2	3
Duration	42	10	37
Change Point	0	48	68

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	65.8%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	65.8%
1/1+1/2	Blackbrook Ave S Ahead Right Left	U	N/A	N/A	B		1	42	-	355	1934:1865	541+224	46.4 : 46.4%
2/1+2/2	Hidden Rd Left Ahead Right	U+O	N/A	N/A	C		1	37	-	208	2006:2025	635+0	32.7 : 0.0%
3/1+3/2	Blackbrook Ave N Left Ahead Right	U	N/A	N/A	A		1	42	-	457	1937:1945	694+0	65.8 : 0.0%
4/1+4/2	Insall Rd Right Left Ahead	U+O	N/A	N/A	D		1	37	-	400	1945:1811	582+29	65.4 : 65.4%
5/1		U	N/A	N/A	-		-	-	-	301	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	321	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	558	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	240	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%

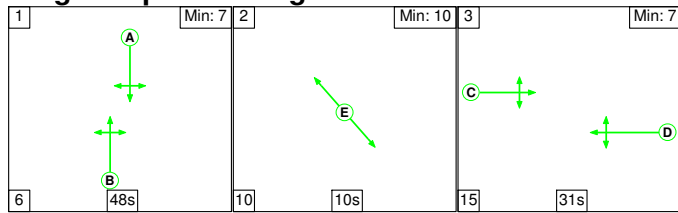
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	19	0	0	12.6	2.6	0.0	15.2	-	-	-	-
Unnamed Junction	-	-	19	0	0	12.6	2.6	0.0	15.2	-	-	-	-
1/1+1/2	355	355	-	-	-	2.7	0.4	-	3.2	32.1	6.3	0.4	6.7
2/1+2/2	208	208	0	0	0	1.8	0.2	0.0	2.0	35.5	5.3	0.2	5.5
3/1+3/2	457	457	-	-	-	4.1	1.0	-	5.1	39.9	12.7	1.0	13.7
4/1+4/2	400	400	19	0	0	3.9	0.9	0.0	4.9	43.9	11.3	0.9	12.2
5/1	301	301	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	321	321	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	558	558	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	240	240	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%):		36.7	Total Delay for Signalled Lanes (pcuHr):		15.15	Cycle Time (s): 120				
			PRC Over All Lanes (%):		36.7	Total Delay Over All Lanes(pcuHr):		15.15					

Full Input Data And Results

Scenario 10: '2030 DS Link PM' (FG10: '2030 DS Link PM', Plan 1: 'Peds Every Cycle')

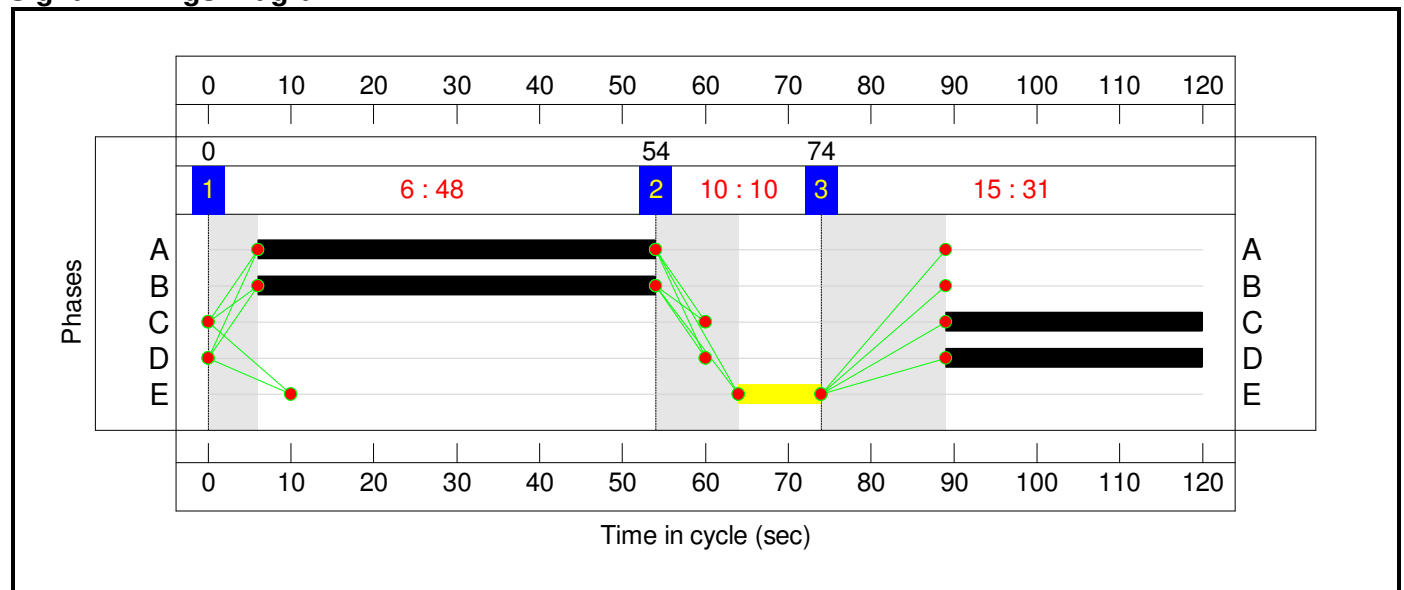
Stage Sequence Diagram



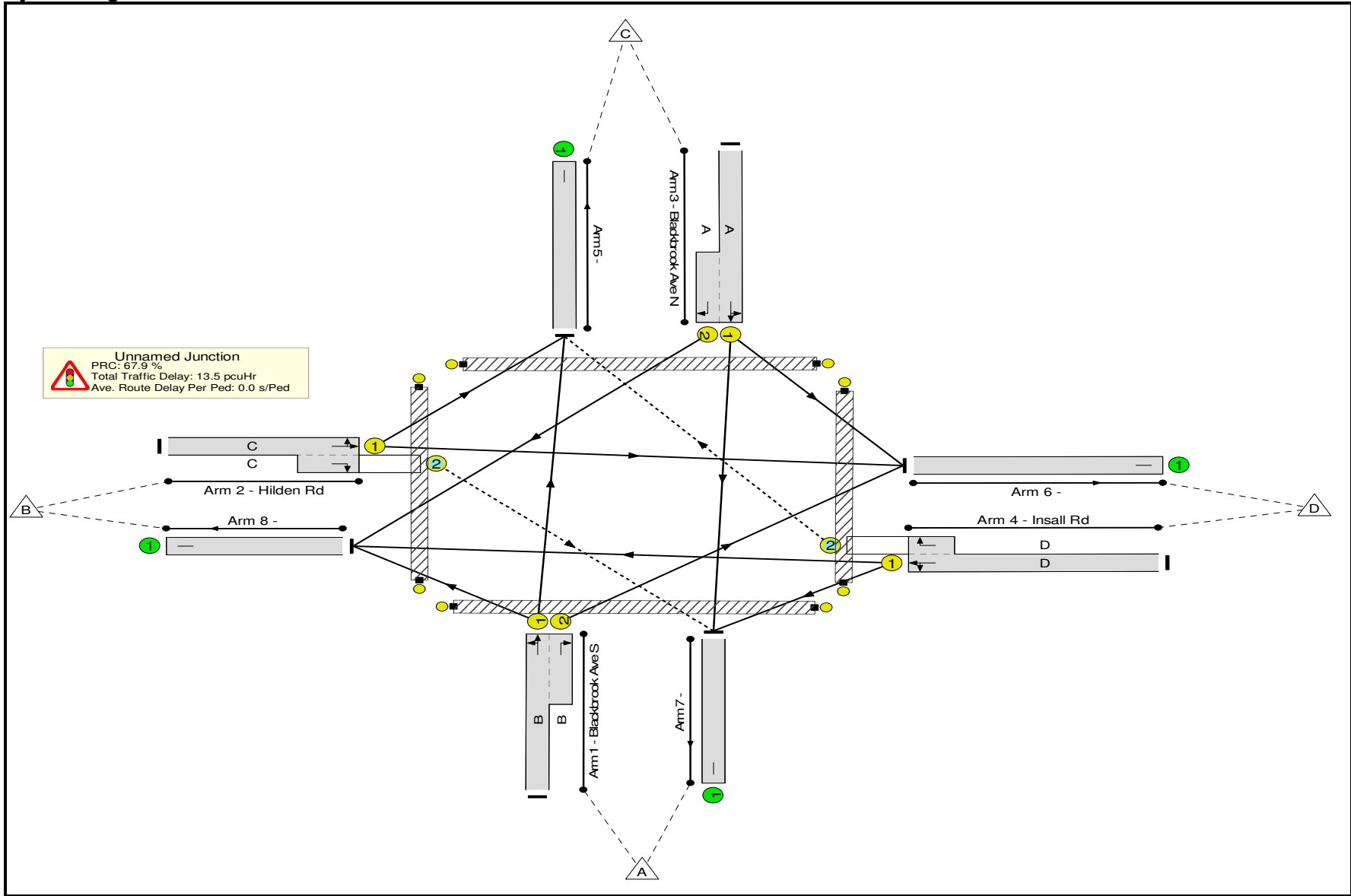
Stage Timings

Stage	1	2	3
Duration	48	10	31
Change Point	0	54	74

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	53.6%
Unnamed Junction	-	-	N/A	-	-		-	-	-	-	-	-	53.6%
1/1+1/2	Blackbrook Ave S Ahead Right Left	U	N/A	N/A	B		1	48	-	383	1908:1865	736+63	48.0 : 48.0%
2/1+2/2	Hilden Rd Left Ahead Right	U+O	N/A	N/A	C		1	31	-	271	1948:2025	519+0	52.2 : 0.0%
3/1+3/2	Blackbrook Ave N Left Ahead Right	U	N/A	N/A	A		1	48	-	436	1948:1837	731+82	53.6 : 53.6%
4/1+4/2	Insall Rd Right Left Ahead	U+O	N/A	N/A	D		1	31	-	261	1952:1811	468+52	50.2 : 50.2%
5/1		U	N/A	N/A	-		-	-	-	447	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	185	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	455	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	264	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	E		1	10	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	26	0	0	11.4	2.1	0.0	13.5	-	-	-	-
Unnamed Junction	-	-	26	0	0	11.4	2.1	0.0	13.5	-	-	-	-
1/1+1/2	383	383	-	-	-	2.7	0.5	-	3.2	29.9	8.7	0.5	9.2
2/1+2/2	271	271	0	0	0	2.8	0.5	0.0	3.4	44.7	7.7	0.5	8.2
3/1+3/2	436	436	-	-	-	3.2	0.6	-	3.7	30.9	10.1	0.6	10.7
4/1+4/2	261	261	26	0	0	2.7	0.5	0.0	3.2	44.6	7.0	0.5	7.5
5/1	447	447	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	185	185	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	455	455	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	264	264	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%):		67.9	Total Delay for Signalled Lanes (pcuHr):		13.53	Cycle Time (s): 120				
			PRC Over All Lanes (%):		67.9	Total Delay Over All Lanes(pcuHr):		13.53					

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.2.5947
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Filename: Birchwood Way_Blackbrook Avenue Existing Arrangement.j9
Report generation date: 25/01/2018 18:43:48

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
A1 - 2025 Do Minimum						
1 - A574 (E)	1.1	4.98	0.52	2.0	7.21	0.67
2 - Blackbrook Avenue (N)	0.9	5.76	0.48	0.7	6.01	0.43
3 - A574 (W)	2.0	8.68	0.67	2.0	7.93	0.67
4 - Blackbrook Avenue (S)	1.1	4.69	0.52	1.0	4.44	0.50
A1 - 2025 Do Something						
1 - A574 (E)	1.1	5.15	0.53	1.8	6.94	0.64
2 - Blackbrook Avenue (N)	1.1	6.48	0.53	0.9	6.31	0.47
3 - A574 (W)	2.1	8.98	0.68	2.5	9.34	0.72
4 - Blackbrook Avenue (S)	1.1	4.75	0.53	1.3	5.04	0.56
A1 - 2030 Do Minimum						
1 - A574 (E)	1.1	5.17	0.53	1.9	7.22	0.66
2 - Blackbrook Avenue (N)	1.0	6.17	0.51	0.8	6.16	0.45
3 - A574 (W)	1.9	8.26	0.65	2.3	8.83	0.70
4 - Blackbrook Avenue (S)	1.1	4.70	0.53	1.1	4.70	0.52
A1 - 2030 Do Something						
1 - A574 (E)	1.2	5.53	0.54	1.8	7.10	0.64
2 - Blackbrook Avenue (N)	1.0	6.41	0.51	1.0	6.76	0.50
3 - A574 (W)	2.8	11.15	0.74	2.6	9.90	0.73
4 - Blackbrook Avenue (S)	1.3	5.21	0.57	1.3	5.25	0.57
A1 - 2030 Through-Route						
1 - A574 (E)	1.1	5.32	0.53	2.1	7.77	0.68
2 - Blackbrook Avenue (N)	1.0	6.29	0.51	0.9	6.57	0.48
3 - A574 (W)	2.8	11.16	0.74	2.4	9.35	0.71
4 - Blackbrook Avenue (S)	1.3	5.23	0.57	1.3	5.20	0.57

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

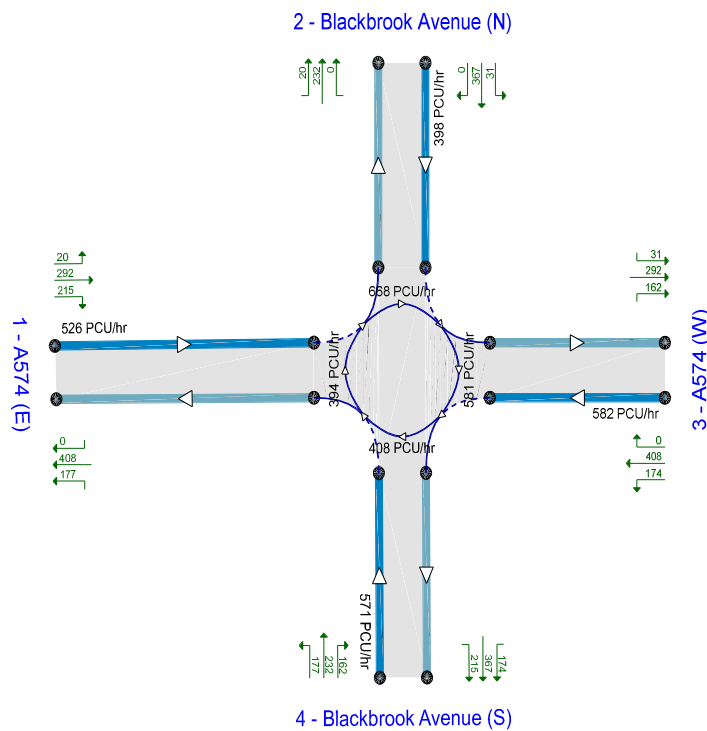
File summary

File Description

Title	(untitled)
Location	
Site number	
Date	12/07/2017
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	
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 modelled flow through junction (PCU/hr).
Time Segment: 08:00-08:15

The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025 Do Minimum	AM	ONE HOUR	08:00	09:30	15
D2	2025 Do Minimum	PM	ONE HOUR	17:00	18:30	15
D3	2025 Do Something	AM	ONE HOUR	08:00	09:30	15
D4	2025 Do Something	PM	ONE HOUR	17:00	18:30	15
D5	2030 Do Minimum	AM	ONE HOUR	08:00	09:30	15
D6	2030 Do Minimum	PM	ONE HOUR	17:00	18:30	15
D7	2030 Do Something	AM	ONE HOUR	08:00	09:30	15
D8	2030 Do Something	PM	ONE HOUR	17:00	18:30	15
D9	2030 Through-Route	AM	ONE HOUR	08:00	09:30	15
D10	2030 Through-Route	PM	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	(Default Analysis Set)	100.000

(Default Analysis Set) - 2025 Do Minimum, AM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Birchwood Way / Blackbrook Avenue RBT	Standard Roundabout	1, 2, 3, 4	6.09	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A574 (E)	Eastbound
2	Blackbrook Avenue (N)	Southbound
3	A574 (W)	Westbound
4	Blackbrook Avenue (S)	Northbound

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A574 (E)	3.60	8.30	20.2	21.0	39.9	34.0	
2 - Blackbrook Avenue (N)	3.70	8.20	16.1	16.9	39.9	21.0	
3 - A574 (W)	3.60	7.90	17.6	22.5	39.9	28.0	

4 - Blackbrook Avenue (S)	4.60	9.10	12.8	18.8	39.9	30.0	
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Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A574 (E)	0.676	1885
2 - Blackbrook Avenue (N)	0.685	1882
3 - A574 (W)	0.675	1845
4 - Blackbrook Avenue (S)	0.707	2029

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)
D1	2025 Do Minimum	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A574 (E)		✓	701	100.000
2 - Blackbrook Avenue (N)		✓	531	100.000
3 - A574 (W)		✓	776	100.000
4 - Blackbrook Avenue (S)		✓	761	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A574 (E)	2 - Blackbrook Avenue (N)	3 - A574 (W)	4 - Blackbrook Avenue (S)
From	1 - A574 (E)	0	26	389	286
	2 - Blackbrook Avenue (N)	0	0	42	489
	3 - A574 (W)	544	0	0	232
	4 - Blackbrook Avenue (S)	236	309	216	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A574 (E)	2 - Blackbrook Avenue (N)	3 - A574 (W)	4 - Blackbrook Avenue (S)
From	1 - A574 (E)	0	0	0	0
	2 - Blackbrook Avenue (N)	0	0	0	0
	3 - A574 (W)	0	0	0	0
	4 - Blackbrook Avenue (S)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A574 (E)	0.52	4.98	1.1	A
2 - Blackbrook Avenue (N)	0.48	5.76	0.9	A
3 - A574 (W)	0.67	8.68	2.0	A
4 - Blackbrook Avenue (S)	0.52	4.69	1.1	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	528	394	1619	0.326	526	0.5	3.288	A
2 - Blackbrook Avenue (N)	400	668	1424	0.281	398	0.4	3.506	A
3 - A574 (W)	584	581	1452	0.402	582	0.7	4.122	A
4 - Blackbrook Avenue (S)	573	408	1741	0.329	571	0.5	3.071	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	630	471	1567	0.402	629	0.7	3.838	A
2 - Blackbrook Avenue (N)	477	800	1334	0.358	477	0.6	4.201	A
3 - A574 (W)	698	696	1375	0.507	696	1.0	5.292	A
4 - Blackbrook Avenue (S)	684	488	1684	0.406	683	0.7	3.596	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	772	577	1495	0.516	770	1.1	4.956	A
2 - Blackbrook Avenue (N)	585	979	1211	0.483	583	0.9	5.720	A
3 - A574 (W)	854	851	1270	0.673	850	2.0	8.499	A
4 - Blackbrook Avenue (S)	838	596	1608	0.521	836	1.1	4.658	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	772	578	1495	0.516	772	1.1	4.980	A
2 - Blackbrook Avenue (N)	585	981	1210	0.483	585	0.9	5.759	A
3 - A574 (W)	854	853	1269	0.673	854	2.0	8.677	A
4 - Blackbrook Avenue (S)	838	599	1606	0.522	838	1.1	4.687	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	630	473	1565	0.403	632	0.7	3.862	A
2 - Blackbrook Avenue (N)	477	803	1332	0.358	479	0.6	4.228	A
3 - A574 (W)	698	699	1373	0.508	702	1.0	5.390	A
4 - Blackbrook Avenue (S)	684	492	1681	0.407	686	0.7	3.620	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	528	396	1618	0.326	529	0.5	3.306	A
2 - Blackbrook Avenue (N)	400	672	1422	0.281	400	0.4	3.529	A
3 - A574 (W)	584	584	1450	0.403	586	0.7	4.172	A
4 - Blackbrook Avenue (S)	573	411	1739	0.329	574	0.5	3.091	A

(Default Analysis Set) - 2025 Do Minimum, PM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Birchwood Way / Blackbrook Avenue RBT	Standard Roundabout	1, 2, 3, 4	6.54	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2025 Do Minimum	PM	ONE HOUR	17:00	18:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A574 (E)		✓	903	100.000
2 - Blackbrook Avenue (N)		✓	409	100.000
3 - A574 (W)		✓	824	100.000
4 - Blackbrook Avenue (S)		✓	733	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A574 (E)	2 - Blackbrook Avenue (N)	3 - A574 (W)	4 - Blackbrook Avenue (S)
From	1 - A574 (E)	0	25	600	278
	2 - Blackbrook Avenue (N)	0	0	36	373
	3 - A574 (W)	528	0	0	296
	4 - Blackbrook Avenue (S)	206	301	226	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A574 (E)	2 - Blackbrook Avenue (N)	3 - A574 (W)	4 - Blackbrook Avenue (S)
From	1 - A574 (E)	0	0	0	0
	2 - Blackbrook Avenue (N)	0	0	0	0
	3 - A574 (W)	0	0	0	0
	4 - Blackbrook Avenue (S)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A574 (E)	0.67	7.21	2.0	A
2 - Blackbrook Avenue (N)	0.43	6.01	0.7	A
3 - A574 (W)	0.67	7.93	2.0	A
4 - Blackbrook Avenue (S)	0.50	4.44	1.0	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	680	395	1618	0.420	677	0.7	3.815	A
2 - Blackbrook Avenue (N)	308	828	1315	0.234	307	0.3	3.566	A
3 - A574 (W)	620	488	1515	0.409	618	0.7	3.999	A
4 - Blackbrook Avenue (S)	552	396	1749	0.315	550	0.5	2.998	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	812	473	1565	0.519	810	1.1	4.760	A
2 - Blackbrook Avenue (N)	368	991	1203	0.306	367	0.4	4.305	A
3 - A574 (W)	741	584	1450	0.511	739	1.0	5.052	A
4 - Blackbrook Avenue (S)	659	474	1694	0.389	658	0.6	3.473	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	994	579	1494	0.666	991	1.9	7.107	A
2 - Blackbrook Avenue (N)	450	1212	1052	0.428	449	0.7	5.963	A
3 - A574 (W)	907	715	1362	0.666	904	1.9	7.785	A
4 - Blackbrook Avenue (S)	807	579	1620	0.498	806	1.0	4.415	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	994	580	1493	0.666	994	2.0	7.212	A
2 - Blackbrook Avenue (N)	450	1215	1049	0.429	450	0.7	6.012	A
3 - A574 (W)	907	717	1361	0.667	907	2.0	7.928	A
4 - Blackbrook Avenue (S)	807	581	1618	0.499	807	1.0	4.437	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	812	475	1564	0.519	815	1.1	4.828	A
2 - Blackbrook Avenue (N)	368	996	1199	0.307	369	0.4	4.343	A
3 - A574 (W)	741	587	1448	0.512	744	1.1	5.140	A
4 - Blackbrook Avenue (S)	659	477	1692	0.389	660	0.6	3.493	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	680	397	1617	0.421	681	0.7	3.854	A
2 - Blackbrook Avenue (N)	308	833	1311	0.235	308	0.3	3.593	A
3 - A574 (W)	620	491	1513	0.410	622	0.7	4.044	A
4 - Blackbrook Avenue (S)	552	398	1747	0.316	553	0.5	3.013	A

(Default Analysis Set) - 2025 Do Something, AM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Birchwood Way / Blackbrook Avenue RBT	Standard Roundabout	1, 2, 3, 4	6.34	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2025 Do Something	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A574 (E)		✓	704	100.000
2 - Blackbrook Avenue (N)		✓	576	100.000
3 - A574 (W)		✓	767	100.000
4 - Blackbrook Avenue (S)		✓	787	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A574 (E)	2 - Blackbrook Avenue (N)	3 - A574 (W)	4 - Blackbrook Avenue (S)
From	1 - A574 (E)	0	12	406	286
	2 - Blackbrook Avenue (N)	0	0	55	521
	3 - A574 (W)	520	0	0	247
	4 - Blackbrook Avenue (S)	235	327	225	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A574 (E)	2 - Blackbrook Avenue (N)	3 - A574 (W)	4 - Blackbrook Avenue (S)
From	1 - A574 (E)	0	0	0	0
	2 - Blackbrook Avenue (N)	0	0	0	0
	3 - A574 (W)	0	0	0	0
	4 - Blackbrook Avenue (S)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A574 (E)	0.53	5.15	1.1	A
2 - Blackbrook Avenue (N)	0.53	6.48	1.1	A
3 - A574 (W)	0.68	8.98	2.1	A
4 - Blackbrook Avenue (S)	0.53	4.75	1.1	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	530	414	1605	0.330	528	0.5	3.336	A
2 - Blackbrook Avenue (N)	434	688	1411	0.307	432	0.4	3.672	A
3 - A574 (W)	577	605	1436	0.402	575	0.7	4.167	A
4 - Blackbrook Avenue (S)	592	390	1754	0.338	590	0.5	3.090	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	633	496	1550	0.408	632	0.7	3.918	A
2 - Blackbrook Avenue (N)	518	823	1318	0.393	517	0.6	4.491	A
3 - A574 (W)	690	724	1356	0.509	688	1.0	5.381	A
4 - Blackbrook Avenue (S)	707	467	1699	0.416	707	0.7	3.623	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	775	607	1475	0.525	773	1.1	5.114	A
2 - Blackbrook Avenue (N)	634	1008	1191	0.532	632	1.1	6.416	A
3 - A574 (W)	844	886	1247	0.677	840	2.0	8.774	A
4 - Blackbrook Avenue (S)	867	570	1626	0.533	865	1.1	4.717	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	775	608	1474	0.526	775	1.1	5.147	A
2 - Blackbrook Avenue (N)	634	1010	1190	0.533	634	1.1	6.475	A
3 - A574 (W)	844	888	1245	0.678	844	2.1	8.976	A
4 - Blackbrook Avenue (S)	867	572	1624	0.533	866	1.1	4.749	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	633	497	1549	0.409	635	0.7	3.943	A
2 - Blackbrook Avenue (N)	518	826	1316	0.394	520	0.7	4.533	A
3 - A574 (W)	690	728	1353	0.509	694	1.1	5.490	A
4 - Blackbrook Avenue (S)	707	470	1697	0.417	709	0.7	3.653	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	530	416	1604	0.330	531	0.5	3.356	A
2 - Blackbrook Avenue (N)	434	691	1408	0.308	434	0.4	3.699	A
3 - A574 (W)	577	609	1434	0.403	579	0.7	4.219	A
4 - Blackbrook Avenue (S)	592	392	1752	0.338	593	0.5	3.109	A

(Default Analysis Set) - 2025 Do Something, PM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Birchwood Way / Blackbrook Avenue RBT	Standard Roundabout	1, 2, 3, 4	7.03	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2025 Do Something	PM	ONE HOUR	17:00	18:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A574 (E)		✓	834	100.000
2 - Blackbrook Avenue (N)		✓	463	100.000
3 - A574 (W)		✓	878	100.000
4 - Blackbrook Avenue (S)		✓	818	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A574 (E)	2 - Blackbrook Avenue (N)	3 - A574 (W)	4 - Blackbrook Avenue (S)
From	1 - A574 (E)	0	24	546	264
	2 - Blackbrook Avenue (N)	0	0	63	400
	3 - A574 (W)	533	0	0	345
	4 - Blackbrook Avenue (S)	215	350	253	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A574 (E)	2 - Blackbrook Avenue (N)	3 - A574 (W)	4 - Blackbrook Avenue (S)
From	1 - A574 (E)	0	0	0	0
	2 - Blackbrook Avenue (N)	0	0	0	0
	3 - A574 (W)	0	0	0	0
	4 - Blackbrook Avenue (S)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A574 (E)	0.64	6.94	1.8	A
2 - Blackbrook Avenue (N)	0.47	6.31	0.9	A
3 - A574 (W)	0.72	9.34	2.5	A
4 - Blackbrook Avenue (S)	0.56	5.04	1.3	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	628	452	1579	0.398	625	0.7	3.764	A
2 - Blackbrook Avenue (N)	349	797	1336	0.261	347	0.4	3.637	A
3 - A574 (W)	661	498	1509	0.438	658	0.8	4.216	A
4 - Blackbrook Avenue (S)	616	399	1747	0.353	614	0.5	3.172	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	750	541	1519	0.493	749	1.0	4.663	A
2 - Blackbrook Avenue (N)	416	954	1228	0.339	416	0.5	4.424	A
3 - A574 (W)	789	596	1442	0.547	788	1.2	5.483	A
4 - Blackbrook Avenue (S)	735	478	1691	0.435	734	0.8	3.759	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	918	663	1437	0.639	915	1.7	6.851	A
2 - Blackbrook Avenue (N)	510	1167	1082	0.471	508	0.9	6.254	A
3 - A574 (W)	967	729	1353	0.715	962	2.4	9.094	A
4 - Blackbrook Avenue (S)	901	584	1616	0.557	899	1.2	5.003	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	918	664	1437	0.639	918	1.8	6.942	A
2 - Blackbrook Avenue (N)	510	1170	1080	0.472	510	0.9	6.313	A
3 - A574 (W)	967	731	1351	0.715	967	2.5	9.343	A
4 - Blackbrook Avenue (S)	901	587	1614	0.558	901	1.3	5.043	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	750	543	1518	0.494	753	1.0	4.723	A
2 - Blackbrook Avenue (N)	416	959	1225	0.340	418	0.5	4.470	A
3 - A574 (W)	789	599	1440	0.548	794	1.2	5.616	A
4 - Blackbrook Avenue (S)	735	482	1688	0.436	737	0.8	3.795	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	628	455	1578	0.398	629	0.7	3.798	A
2 - Blackbrook Avenue (N)	349	802	1332	0.262	349	0.4	3.665	A
3 - A574 (W)	661	501	1507	0.439	663	0.8	4.276	A
4 - Blackbrook Avenue (S)	616	402	1745	0.353	617	0.5	3.196	A

(Default Analysis Set) - 2030 Do Minimum, AM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Birchwood Way / Blackbrook Avenue RBT	Standard Roundabout	1, 2, 3, 4	6.05	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2030 Do Minimum	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A574 (E)		✓	709	100.000
2 - Blackbrook Avenue (N)		✓	551	100.000
3 - A574 (W)		✓	742	100.000
4 - Blackbrook Avenue (S)		✓	792	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A574 (E)	2 - Blackbrook Avenue (N)	3 - A574 (W)	4 - Blackbrook Avenue (S)
From	1 - A574 (E)	0	18	398	293
	2 - Blackbrook Avenue (N)	0	0	47	504
	3 - A574 (W)	502	0	0	240
	4 - Blackbrook Avenue (S)	244	322	226	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A574 (E)	2 - Blackbrook Avenue (N)	3 - A574 (W)	4 - Blackbrook Avenue (S)
From	1 - A574 (E)	0	0	0	0
	2 - Blackbrook Avenue (N)	0	0	0	0
	3 - A574 (W)	0	0	0	0
	4 - Blackbrook Avenue (S)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A574 (E)	0.53	5.17	1.1	A
2 - Blackbrook Avenue (N)	0.51	6.17	1.0	A
3 - A574 (W)	0.65	8.26	1.9	A
4 - Blackbrook Avenue (S)	0.53	4.70	1.1	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	534	411	1607	0.332	532	0.5	3.342	A
2 - Blackbrook Avenue (N)	415	688	1411	0.294	413	0.4	3.603	A
3 - A574 (W)	559	598	1441	0.388	556	0.6	4.056	A
4 - Blackbrook Avenue (S)	596	376	1763	0.338	594	0.5	3.074	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	637	492	1553	0.411	637	0.7	3.926	A
2 - Blackbrook Avenue (N)	495	823	1318	0.376	495	0.6	4.370	A
3 - A574 (W)	667	715	1362	0.490	666	0.9	5.163	A
4 - Blackbrook Avenue (S)	712	450	1711	0.416	711	0.7	3.598	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	781	602	1478	0.528	779	1.1	5.135	A
2 - Blackbrook Avenue (N)	607	1008	1191	0.509	605	1.0	6.121	A
3 - A574 (W)	817	875	1254	0.652	813	1.8	8.108	A
4 - Blackbrook Avenue (S)	872	550	1640	0.532	870	1.1	4.666	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	781	603	1477	0.528	781	1.1	5.165	A
2 - Blackbrook Avenue (N)	607	1010	1190	0.510	607	1.0	6.170	A
3 - A574 (W)	817	877	1252	0.652	817	1.9	8.259	A
4 - Blackbrook Avenue (S)	872	553	1638	0.532	872	1.1	4.696	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	637	494	1551	0.411	639	0.7	3.953	A
2 - Blackbrook Avenue (N)	495	826	1316	0.377	497	0.6	4.406	A
3 - A574 (W)	667	719	1360	0.491	671	1.0	5.252	A
4 - Blackbrook Avenue (S)	712	454	1708	0.417	714	0.7	3.626	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	534	413	1606	0.332	535	0.5	3.364	A
2 - Blackbrook Avenue (N)	415	691	1408	0.295	416	0.4	3.631	A
3 - A574 (W)	559	601	1439	0.388	560	0.6	4.101	A
4 - Blackbrook Avenue (S)	596	379	1761	0.339	597	0.5	3.093	A

(Default Analysis Set) - 2030 Do Minimum, PM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Birchwood Way / Blackbrook Avenue RBT	Standard Roundabout	1, 2, 3, 4	6.88	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2030 Do Minimum	PM	ONE HOUR	17:00	18:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A574 (E)		✓	889	100.000
2 - Blackbrook Avenue (N)		✓	426	100.000
3 - A574 (W)		✓	853	100.000
4 - Blackbrook Avenue (S)		✓	762	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A574 (E)	2 - Blackbrook Avenue (N)	3 - A574 (W)	4 - Blackbrook Avenue (S)
From	1 - A574 (E)	0	25	581	283
	2 - Blackbrook Avenue (N)	0	0	38	388
	3 - A574 (W)	545	1	0	307
	4 - Blackbrook Avenue (S)	215	313	234	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A574 (E)	2 - Blackbrook Avenue (N)	3 - A574 (W)	4 - Blackbrook Avenue (S)
From	1 - A574 (E)	0	0	0	0
	2 - Blackbrook Avenue (N)	0	0	0	0
	3 - A574 (W)	0	0	0	0
	4 - Blackbrook Avenue (S)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A574 (E)	0.66	7.22	1.9	A
2 - Blackbrook Avenue (N)	0.45	6.16	0.8	A
3 - A574 (W)	0.70	8.83	2.3	A
4 - Blackbrook Avenue (S)	0.52	4.70	1.1	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	669	411	1607	0.416	666	0.7	3.815	A
2 - Blackbrook Avenue (N)	321	823	1318	0.243	319	0.3	3.601	A
3 - A574 (W)	642	503	1505	0.427	639	0.7	4.143	A
4 - Blackbrook Avenue (S)	574	409	1740	0.330	572	0.5	3.076	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	799	492	1553	0.515	798	1.0	4.760	A
2 - Blackbrook Avenue (N)	383	986	1207	0.317	382	0.5	4.365	A
3 - A574 (W)	767	602	1438	0.533	765	1.1	5.338	A
4 - Blackbrook Avenue (S)	685	490	1683	0.407	684	0.7	3.605	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	979	602	1478	0.662	975	1.9	7.108	A
2 - Blackbrook Avenue (N)	469	1205	1056	0.444	468	0.8	6.104	A
3 - A574 (W)	939	736	1348	0.697	935	2.2	8.627	A
4 - Blackbrook Avenue (S)	839	598	1606	0.522	837	1.1	4.674	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	979	603	1477	0.662	979	1.9	7.215	A
2 - Blackbrook Avenue (N)	469	1209	1054	0.445	469	0.8	6.158	A
3 - A574 (W)	939	739	1346	0.698	939	2.3	8.834	A
4 - Blackbrook Avenue (S)	839	601	1604	0.523	839	1.1	4.704	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	799	494	1551	0.515	803	1.1	4.829	A
2 - Blackbrook Avenue (N)	383	991	1203	0.318	384	0.5	4.404	A
3 - A574 (W)	767	606	1436	0.534	771	1.2	5.450	A
4 - Blackbrook Avenue (S)	685	494	1680	0.408	687	0.7	3.631	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	669	413	1606	0.417	671	0.7	3.854	A
2 - Blackbrook Avenue (N)	321	828	1314	0.244	321	0.3	3.629	A
3 - A574 (W)	642	506	1503	0.427	644	0.8	4.197	A
4 - Blackbrook Avenue (S)	574	412	1738	0.330	574	0.5	3.098	A

(Default Analysis Set) - 2030 Do Something, AM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Birchwood Way / Blackbrook Avenue RBT	Standard Roundabout	1, 2, 3, 4	7.22	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2030 Do Something	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A574 (E)		✓	702	100.000
2 - Blackbrook Avenue (N)		✓	537	100.000
3 - A574 (W)		✓	844	100.000
4 - Blackbrook Avenue (S)		✓	841	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A574 (E)	2 - Blackbrook Avenue (N)	3 - A574 (W)	4 - Blackbrook Avenue (S)
From	1 - A574 (E)	0	4	413	285
	2 - Blackbrook Avenue (N)	0	0	24	513
	3 - A574 (W)	530	0	0	314
	4 - Blackbrook Avenue (S)	221	352	268	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A574 (E)	2 - Blackbrook Avenue (N)	3 - A574 (W)	4 - Blackbrook Avenue (S)
From	1 - A574 (E)	0	0	0	0
	2 - Blackbrook Avenue (N)	0	0	0	0
	3 - A574 (W)	0	0	0	0
	4 - Blackbrook Avenue (S)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A574 (E)	0.54	5.53	1.2	A
2 - Blackbrook Avenue (N)	0.51	6.41	1.0	A
3 - A574 (W)	0.74	11.15	2.8	B
4 - Blackbrook Avenue (S)	0.57	5.21	1.3	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	529	465	1571	0.336	526	0.5	3.442	A
2 - Blackbrook Avenue (N)	404	725	1385	0.292	403	0.4	3.656	A
3 - A574 (W)	635	598	1441	0.441	632	0.8	4.436	A
4 - Blackbrook Avenue (S)	633	397	1748	0.362	631	0.6	3.214	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	631	557	1509	0.418	630	0.7	4.093	A
2 - Blackbrook Avenue (N)	483	867	1288	0.375	482	0.6	4.465	A
3 - A574 (W)	759	716	1361	0.557	757	1.2	5.939	A
4 - Blackbrook Avenue (S)	756	475	1693	0.447	755	0.8	3.834	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	773	681	1425	0.542	771	1.2	5.490	A
2 - Blackbrook Avenue (N)	591	1061	1155	0.512	589	1.0	6.350	A
3 - A574 (W)	929	876	1253	0.741	923	2.7	10.715	B
4 - Blackbrook Avenue (S)	926	580	1619	0.572	924	1.3	5.161	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	773	683	1424	0.543	773	1.2	5.529	A
2 - Blackbrook Avenue (N)	591	1064	1153	0.513	591	1.0	6.406	A
3 - A574 (W)	929	879	1252	0.742	929	2.8	11.146	B
4 - Blackbrook Avenue (S)	926	583	1617	0.573	926	1.3	5.211	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	631	559	1507	0.419	633	0.7	4.125	A
2 - Blackbrook Avenue (N)	483	871	1285	0.376	485	0.6	4.505	A
3 - A574 (W)	759	720	1359	0.558	765	1.3	6.120	A
4 - Blackbrook Avenue (S)	756	480	1690	0.447	758	0.8	3.873	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	529	467	1569	0.337	529	0.5	3.463	A
2 - Blackbrook Avenue (N)	404	728	1383	0.292	405	0.4	3.684	A
3 - A574 (W)	635	602	1438	0.442	637	0.8	4.505	A
4 - Blackbrook Avenue (S)	633	400	1746	0.363	634	0.6	3.241	A

(Default Analysis Set) - 2030 Do Something, PM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Birchwood Way / Blackbrook Avenue RBT	Standard Roundabout	1, 2, 3, 4	7.35	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2030 Do Something	PM	ONE HOUR	17:00	18:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A574 (E)		✓	834	100.000
2 - Blackbrook Avenue (N)		✓	487	100.000
3 - A574 (W)		✓	881	100.000
4 - Blackbrook Avenue (S)		✓	834	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A574 (E)	2 - Blackbrook Avenue (N)	3 - A574 (W)	4 - Blackbrook Avenue (S)
From	1 - A574 (E)	0	24	546	264
	2 - Blackbrook Avenue (N)	0	0	62	425
	3 - A574 (W)	546	0	0	335
	4 - Blackbrook Avenue (S)	215	351	268	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A574 (E)	2 - Blackbrook Avenue (N)	3 - A574 (W)	4 - Blackbrook Avenue (S)
From	1 - A574 (E)	0	0	0	0
	2 - Blackbrook Avenue (N)	0	0	0	0
	3 - A574 (W)	0	0	0	0
	4 - Blackbrook Avenue (S)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A574 (E)	0.64	7.10	1.8	A
2 - Blackbrook Avenue (N)	0.50	6.76	1.0	A
3 - A574 (W)	0.73	9.90	2.6	A
4 - Blackbrook Avenue (S)	0.57	5.25	1.3	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	628	464	1571	0.400	625	0.7	3.793	A
2 - Blackbrook Avenue (N)	367	808	1328	0.276	365	0.4	3.727	A
3 - A574 (W)	663	517	1496	0.443	660	0.8	4.290	A
4 - Blackbrook Avenue (S)	628	409	1740	0.361	626	0.6	3.223	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	750	556	1510	0.497	748	1.0	4.722	A
2 - Blackbrook Avenue (N)	438	968	1219	0.359	437	0.6	4.601	A
3 - A574 (W)	792	618	1427	0.555	790	1.2	5.634	A
4 - Blackbrook Avenue (S)	750	490	1683	0.446	749	0.8	3.850	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	918	680	1426	0.644	915	1.8	7.007	A
2 - Blackbrook Avenue (N)	536	1183	1071	0.501	534	1.0	6.686	A
3 - A574 (W)	970	756	1334	0.727	965	2.6	9.599	A
4 - Blackbrook Avenue (S)	918	598	1606	0.572	916	1.3	5.199	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	918	681	1425	0.645	918	1.8	7.105	A
2 - Blackbrook Avenue (N)	536	1187	1069	0.502	536	1.0	6.760	A
3 - A574 (W)	970	759	1333	0.728	970	2.6	9.902	A
4 - Blackbrook Avenue (S)	918	601	1604	0.572	918	1.3	5.247	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	750	558	1508	0.497	753	1.0	4.788	A
2 - Blackbrook Avenue (N)	438	973	1215	0.360	440	0.6	4.650	A
3 - A574 (W)	792	622	1425	0.556	797	1.3	5.786	A
4 - Blackbrook Avenue (S)	750	494	1680	0.446	752	0.8	3.887	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	628	467	1570	0.400	629	0.7	3.834	A
2 - Blackbrook Avenue (N)	367	813	1325	0.277	367	0.4	3.765	A
3 - A574 (W)	663	520	1494	0.444	665	0.8	4.353	A
4 - Blackbrook Avenue (S)	628	412	1738	0.361	629	0.6	3.248	A

(Default Analysis Set) - 2030 Through-Route, AM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Birchwood Way / Blackbrook Avenue RBT	Standard Roundabout	1, 2, 3, 4	7.16	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2030 Through-Route	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A574 (E)		✓	684	100.000
2 - Blackbrook Avenue (N)		✓	545	100.000
3 - A574 (W)		✓	840	100.000
4 - Blackbrook Avenue (S)		✓	833	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A574 (E)	2 - Blackbrook Avenue (N)	3 - A574 (W)	4 - Blackbrook Avenue (S)
From	1 - A574 (E)	0	7	400	277
	2 - Blackbrook Avenue (N)	0	0	17	528
	3 - A574 (W)	544	0	0	296
	4 - Blackbrook Avenue (S)	221	349	263	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A574 (E)	2 - Blackbrook Avenue (N)	3 - A574 (W)	4 - Blackbrook Avenue (S)
From	1 - A574 (E)	0	0	0	0
	2 - Blackbrook Avenue (N)	0	0	0	0
	3 - A574 (W)	0	0	0	0
	4 - Blackbrook Avenue (S)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A574 (E)	0.53	5.32	1.1	A
2 - Blackbrook Avenue (N)	0.51	6.29	1.0	A
3 - A574 (W)	0.74	11.16	2.8	B
4 - Blackbrook Avenue (S)	0.57	5.23	1.3	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	515	459	1575	0.327	513	0.5	3.384	A
2 - Blackbrook Avenue (N)	410	705	1399	0.293	409	0.4	3.629	A
3 - A574 (W)	632	604	1437	0.440	629	0.8	4.439	A
4 - Blackbrook Avenue (S)	627	408	1741	0.360	625	0.6	3.218	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	615	549	1514	0.406	614	0.7	3.998	A
2 - Blackbrook Avenue (N)	490	844	1304	0.376	489	0.6	4.417	A
3 - A574 (W)	755	723	1357	0.557	753	1.2	5.946	A
4 - Blackbrook Avenue (S)	749	488	1684	0.445	748	0.8	3.840	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	753	672	1431	0.526	751	1.1	5.286	A
2 - Blackbrook Avenue (N)	600	1033	1174	0.511	598	1.0	6.232	A
3 - A574 (W)	925	884	1248	0.741	919	2.7	10.742	B
4 - Blackbrook Avenue (S)	917	595	1608	0.570	915	1.3	5.176	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	753	674	1430	0.527	753	1.1	5.318	A
2 - Blackbrook Avenue (N)	600	1035	1173	0.512	600	1.0	6.285	A
3 - A574 (W)	925	886	1247	0.742	925	2.8	11.157	B
4 - Blackbrook Avenue (S)	917	599	1606	0.571	917	1.3	5.227	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	615	552	1512	0.407	617	0.7	4.027	A
2 - Blackbrook Avenue (N)	490	847	1301	0.377	492	0.6	4.455	A
3 - A574 (W)	755	726	1355	0.557	761	1.3	6.126	A
4 - Blackbrook Avenue (S)	749	493	1681	0.446	751	0.8	3.882	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	515	461	1573	0.327	516	0.5	3.408	A
2 - Blackbrook Avenue (N)	410	709	1396	0.294	411	0.4	3.659	A
3 - A574 (W)	632	607	1435	0.441	634	0.8	4.507	A
4 - Blackbrook Avenue (S)	627	411	1739	0.361	628	0.6	3.243	A

(Default Analysis Set) - 2030 Through-Route, PM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Birchwood Way / Blackbrook Avenue RBT	Standard Roundabout	1, 2, 3, 4	7.32	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D10	2030 Through-Route	PM	ONE HOUR	17:00	18:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A574 (E)		✓	879	100.000
2 - Blackbrook Avenue (N)		✓	453	100.000
3 - A574 (W)		✓	841	100.000
4 - Blackbrook Avenue (S)		✓	835	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A574 (E)	2 - Blackbrook Avenue (N)	3 - A574 (W)	4 - Blackbrook Avenue (S)
From	1 - A574 (E)	0	24	570	285
	2 - Blackbrook Avenue (N)	0	0	19	434
	3 - A574 (W)	537	0	0	304
	4 - Blackbrook Avenue (S)	224	359	252	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A574 (E)	2 - Blackbrook Avenue (N)	3 - A574 (W)	4 - Blackbrook Avenue (S)
From	1 - A574 (E)	0	0	0	0
	2 - Blackbrook Avenue (N)	0	0	0	0
	3 - A574 (W)	0	0	0	0
	4 - Blackbrook Avenue (S)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - A574 (E)	0.68	7.77	2.1	A
2 - Blackbrook Avenue (N)	0.48	6.57	0.9	A
3 - A574 (W)	0.71	9.35	2.4	A
4 - Blackbrook Avenue (S)	0.57	5.20	1.3	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	662	458	1575	0.420	659	0.7	3.916	A
2 - Blackbrook Avenue (N)	341	830	1313	0.260	340	0.3	3.693	A
3 - A574 (W)	633	539	1481	0.428	630	0.7	4.218	A
4 - Blackbrook Avenue (S)	629	402	1745	0.360	626	0.6	3.212	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	790	549	1514	0.522	789	1.1	4.950	A
2 - Blackbrook Avenue (N)	407	993	1201	0.339	407	0.5	4.527	A
3 - A574 (W)	756	645	1409	0.537	754	1.1	5.485	A
4 - Blackbrook Avenue (S)	751	482	1689	0.445	750	0.8	3.831	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	968	671	1432	0.676	964	2.0	7.635	A
2 - Blackbrook Avenue (N)	499	1214	1050	0.475	497	0.9	6.498	A
3 - A574 (W)	926	789	1312	0.706	921	2.3	9.099	A
4 - Blackbrook Avenue (S)	919	588	1613	0.570	917	1.3	5.157	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	968	673	1431	0.676	968	2.1	7.772	A
2 - Blackbrook Avenue (N)	499	1219	1047	0.476	499	0.9	6.568	A
3 - A574 (W)	926	792	1310	0.707	926	2.4	9.347	A
4 - Blackbrook Avenue (S)	919	591	1611	0.571	919	1.3	5.202	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	790	551	1513	0.522	794	1.1	5.033	A
2 - Blackbrook Avenue (N)	407	1000	1197	0.340	409	0.5	4.577	A
3 - A574 (W)	756	649	1407	0.538	761	1.2	5.614	A
4 - Blackbrook Avenue (S)	751	486	1686	0.445	753	0.8	3.866	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - A574 (E)	662	461	1574	0.420	663	0.7	3.959	A
2 - Blackbrook Avenue (N)	341	835	1310	0.260	342	0.4	3.721	A
3 - A574 (W)	633	542	1479	0.428	635	0.8	4.275	A
4 - Blackbrook Avenue (S)	629	405	1743	0.361	630	0.6	3.236	A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.2.5947
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Filename: Import of J20 - Capesthorpe Road_Poplars Avenue Existing Arrangement.j9
Report generation date: 25/01/2018 11:22:45

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2025 Do Minimum								
1 - Capesthorpe Road (W)	0.4	4.04	0.30	A	0.5	5.07	0.35	A
2 - Poplars Avenue (N)	0.6	4.38	0.36	A	0.3	3.70	0.24	A
3 - Capesthorpe Road (E)	1.2	7.96	0.56	A	2.3	10.95	0.70	B
4 - Poplars Avenue (S)	0.3	3.73	0.22	A	0.7	6.16	0.41	A
A1 - 2025 Do Something								
1 - Capesthorpe Road (W)	0.5	4.53	0.33	A	0.7	6.68	0.42	A
2 - Poplars Avenue (N)	0.8	5.24	0.46	A	0.7	4.82	0.42	A
3 - Capesthorpe Road (E)	1.8	10.25	0.65	B	11.7	46.52	0.94	E
4 - Poplars Avenue (S)	0.4	4.30	0.30	A	1.3	9.59	0.58	A
A1 - 2030 Do Minimum								
1 - Capesthorpe Road (W)	0.5	4.18	0.32	A	0.6	5.38	0.37	A
2 - Poplars Avenue (N)	0.6	4.63	0.38	A	0.3	3.82	0.26	A
3 - Capesthorpe Road (E)	1.3	8.25	0.57	A	3.6	15.50	0.79	C
4 - Poplars Avenue (S)	0.3	3.84	0.24	A	0.8	6.60	0.43	A
A1 - 2030 Do Something								
1 - Capesthorpe Road (W)	0.6	5.19	0.37	A	0.8	7.15	0.45	A
2 - Poplars Avenue (N)	1.2	6.29	0.54	A	0.7	5.01	0.43	A
3 - Capesthorpe Road (E)	3.8	17.66	0.80	C	14.8	55.41	0.96	F
4 - Poplars Avenue (S)	0.5	4.91	0.34	A	1.4	10.12	0.58	B
A1 - 2030 Through-Route								
1 - Capesthorpe Road (W)	0.6	4.98	0.36	A	0.6	5.73	0.39	A
2 - Poplars Avenue (N)	0.7	5.07	0.42	A	0.3	3.95	0.23	A
3 - Capesthorpe Road (E)	3.3	15.43	0.77	C	3.7	16.23	0.79	C
4 - Poplars Avenue (S)	0.5	4.70	0.33	A	1.3	8.12	0.56	A

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

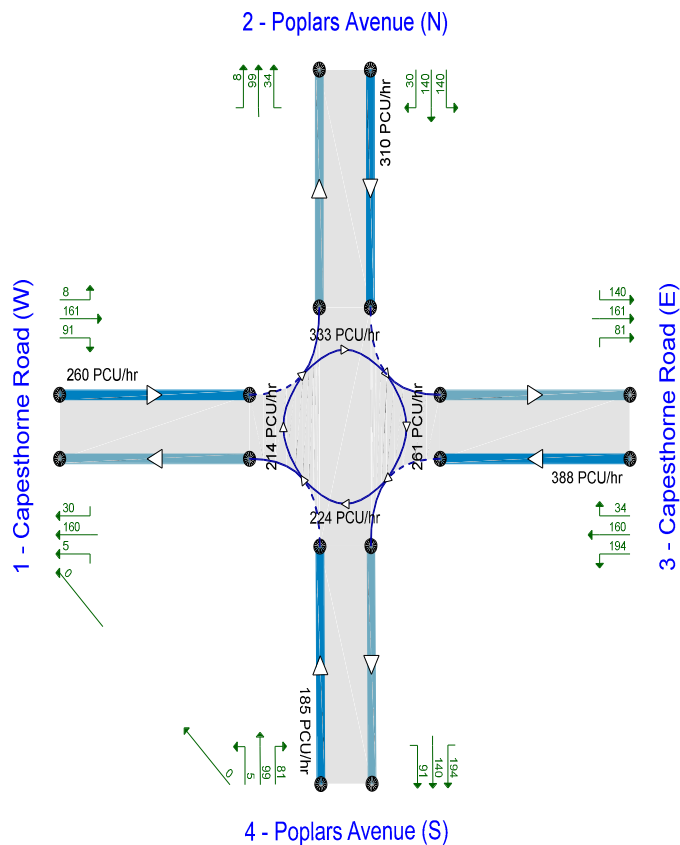
File summary

File Description

Title	(untitled)
Location	
Site number	
Date	16/11/2017
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	
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 modified flow through junction (PCU/hr).
Time Segment: 08:00-08:15

The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025 Do Minimum	AM	ONE HOUR	08:00	09:30	15
D2	2025 Do Minimum	PM	ONE HOUR	17:00	18:30	15
D3	2025 Do Something	AM	ONE HOUR	08:00	09:30	15
D4	2025 Do Something	PM	ONE HOUR	17:00	18:30	15
D5	2030 Do Minimum	AM	ONE HOUR	08:00	09:30	15
D6	2030 Do Minimum	PM	ONE HOUR	17:00	18:30	15
D7	2030 Do Something	AM	ONE HOUR	08:00	09:30	15
D8	2030 Do Something	PM	ONE HOUR	17:00	18:30	15
D9	2030 Through-Route	AM	ONE HOUR	08:00	09:30	15
D10	2030 Through-Route	PM	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	(Default Analysis Set)	100.000

(Default Analysis Set) - 2025 Do Minimum, AM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Capesthorpe Road/Poplars Avenue RBT	Standard Roundabout	1, 2, 3, 4	5.41	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Capesthorpe Road (W)	Eastbound
2	Poplars Avenue (N)	Southbound
3	Capesthorpe Road (E)	Westbound
4	Poplars Avenue (S)	Northbound

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - Capesthorne Road (W)	3.25	6.40	9.6	17.9	45.7	28.0	
2 - Poplars Avenue (N)	4.17	5.57	10.7	16.1	45.7	25.0	
3 - Capesthorne Road (E)	2.59	4.89	9.9	14.3	45.7	13.0	
4 - Poplars Avenue (S)	3.94	4.93	5.3	11.6	45.7	10.0	

Bypass

Arm	Arm has bypass	Bypass utilisation (%)
1 - Capesthorne Road (W)		
2 - Poplars Avenue (N)		
3 - Capesthorne Road (E)		
4 - Poplars Avenue (S)	✓	0

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Capesthorne Road (W)	0.578	1454
2 - Poplars Avenue (N)	0.602	1570
3 - Capesthorne Road (E)	0.546	1231
4 - Poplars Avenue (S)	0.583	1429

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)
D1	2025 Do Minimum	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Capesthorne Road (W)		✓	346	100.000
2 - Poplars Avenue (N)		✓	413	100.000
3 - Capesthorne Road (E)		✓	518	100.000
4 - Poplars Avenue (S)		✓	247	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Capesthorpe Road (W)	2 - Poplars Avenue (N)	3 - Capesthorpe Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorpe Road (W)	0	10	215	121
	2 - Poplars Avenue (N)	40	0	186	187
	3 - Capesthorpe Road (E)	214	45	0	259
	4 - Poplars Avenue (S)	7	132	108	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Capesthorpe Road (W)	2 - Poplars Avenue (N)	3 - Capesthorpe Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorpe Road (W)	0	0	0	0
	2 - Poplars Avenue (N)	0	0	0	0
	3 - Capesthorpe Road (E)	0	0	0	0
	4 - Poplars Avenue (S)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - Capesthorpe Road (W)	0.30	4.04	0.4	A
2 - Poplars Avenue (N)	0.36	4.38	0.6	A
3 - Capesthorpe Road (E)	0.56	7.96	1.2	A
4 - Poplars Avenue (S)	0.22	3.73	0.3	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	260	0	214	1330	0.196	260	0.2	3.359	A
2 - Poplars Avenue (N)	311	0	333	1370	0.227	310	0.3	3.393	A
3 - Capesthorpe Road (E)	390	0	261	1089	0.358	388	0.6	5.119	A
4 - Poplars Avenue (S)	186	0	224	1298	0.143	185	0.2	3.233	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	311	0	256	1306	0.238	311	0.3	3.618	A
2 - Poplars Avenue (N)	371	0	399	1330	0.279	371	0.4	3.749	A
3 - Capesthorpe Road (E)	466	0	313	1061	0.439	465	0.8	6.031	A
4 - Poplars Avenue (S)	222	0	268	1272	0.175	222	0.2	3.426	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	381	0	313	1273	0.299	380	0.4	4.034	A
2 - Poplars Avenue (N)	455	0	488	1277	0.356	454	0.5	4.373	A
3 - Capesthorpe Road (E)	570	0	383	1023	0.558	568	1.2	7.894	A
4 - Poplars Avenue (S)	272	0	328	1237	0.220	272	0.3	3.727	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	381	0	314	1272	0.299	381	0.4	4.038	A
2 - Poplars Avenue (N)	455	0	489	1276	0.356	455	0.6	4.382	A
3 - Capesthorpe Road (E)	570	0	383	1022	0.558	570	1.2	7.961	A
4 - Poplars Avenue (S)	272	0	329	1237	0.220	272	0.3	3.729	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	311	0	257	1305	0.238	311	0.3	3.625	A
2 - Poplars Avenue (N)	371	0	400	1330	0.279	372	0.4	3.762	A
3 - Capesthorpe Road (E)	466	0	313	1060	0.439	468	0.8	6.089	A
4 - Poplars Avenue (S)	222	0	270	1272	0.175	222	0.2	3.431	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	260	0	215	1330	0.196	261	0.2	3.368	A
2 - Poplars Avenue (N)	311	0	335	1369	0.227	311	0.3	3.404	A
3 - Capesthorpe Road (E)	390	0	262	1088	0.358	391	0.6	5.168	A
4 - Poplars Avenue (S)	186	0	226	1297	0.143	186	0.2	3.242	A

(Default Analysis Set) - 2025 Do Minimum, PM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Capesthorpe Road/Poplars Avenue RBT	Standard Roundabout	1, 2, 3, 4	7.50	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2025 Do Minimum	PM	ONE HOUR	17:00	18:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Capesthorne Road (W)		✓	349	100.000
2 - Poplars Avenue (N)		✓	273	100.000
3 - Capesthorne Road (E)		✓	691	100.000
4 - Poplars Avenue (S)		✓	371	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Capesthorne Road (W)	2 - Poplars Avenue (N)	3 - Capesthorne Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorne Road (W)	0	57	222	70
	2 - Poplars Avenue (N)	75	0	106	92
	3 - Capesthorne Road (E)	356	248	0	87
	4 - Poplars Avenue (S)	53	161	157	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Capesthorne Road (W)	2 - Poplars Avenue (N)	3 - Capesthorne Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorne Road (W)	0	0	0	0
	2 - Poplars Avenue (N)	0	0	0	0
	3 - Capesthorne Road (E)	0	0	0	0
	4 - Poplars Avenue (S)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - Capesthorne Road (W)	0.35	5.07	0.5	A
2 - Poplars Avenue (N)	0.24	3.70	0.3	A
3 - Capesthorne Road (E)	0.70	10.95	2.3	B
4 - Poplars Avenue (S)	0.41	6.16	0.7	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	263	0	424	1209	0.217	262	0.3	3.798	A
2 - Poplars Avenue (N)	206	0	337	1368	0.150	205	0.2	3.094	A
3 - Capesthorpe Road (E)	520	0	178	1134	0.459	517	0.8	5.798	A
4 - Poplars Avenue (S)	279	0	508	1133	0.247	278	0.3	4.206	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	314	0	508	1160	0.270	313	0.4	4.249	A
2 - Poplars Avenue (N)	245	0	403	1328	0.185	245	0.2	3.325	A
3 - Capesthorpe Road (E)	621	0	213	1115	0.557	620	1.2	7.240	A
4 - Poplars Avenue (S)	334	0	609	1074	0.311	333	0.4	4.856	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	384	0	621	1095	0.351	384	0.5	5.057	A
2 - Poplars Avenue (N)	301	0	493	1273	0.236	300	0.3	3.699	A
3 - Capesthorpe Road (E)	761	0	261	1089	0.699	757	2.2	10.699	B
4 - Poplars Avenue (S)	408	0	744	995	0.410	408	0.7	6.116	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	384	0	623	1094	0.351	384	0.5	5.074	A
2 - Poplars Avenue (N)	301	0	494	1273	0.236	301	0.3	3.701	A
3 - Capesthorpe Road (E)	761	0	261	1089	0.699	761	2.3	10.948	B
4 - Poplars Avenue (S)	408	0	747	993	0.411	408	0.7	6.156	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	314	0	511	1158	0.271	314	0.4	4.268	A
2 - Poplars Avenue (N)	245	0	405	1327	0.185	246	0.2	3.332	A
3 - Capesthorpe Road (E)	621	0	213	1115	0.557	625	1.3	7.410	A
4 - Poplars Avenue (S)	334	0	614	1071	0.311	334	0.5	4.894	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	263	0	427	1207	0.218	263	0.3	3.815	A
2 - Poplars Avenue (N)	206	0	339	1367	0.150	206	0.2	3.100	A
3 - Capesthorpe Road (E)	520	0	179	1134	0.459	522	0.9	5.899	A
4 - Poplars Avenue (S)	279	0	513	1130	0.247	280	0.3	4.238	A

(Default Analysis Set) - 2025 Do Something, AM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Capesthorpe Road/Poplars Avenue RBT	Standard Roundabout	1, 2, 3, 4	6.58	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2025 Do Something	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Capesthorpe Road (W)		✓	350	100.000
2 - Poplars Avenue (N)		✓	524	100.000
3 - Capesthorpe Road (E)		✓	588	100.000
4 - Poplars Avenue (S)		✓	322	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Capesthorpe Road (W)	2 - Poplars Avenue (N)	3 - Capesthorpe Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorpe Road (W)	0	12	217	121
	2 - Poplars Avenue (N)	41	0	257	226
	3 - Capesthorpe Road (E)	215	114	0	259
	4 - Poplars Avenue (S)	7	190	125	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Capesthorne Road (W)	2 - Poplars Avenue (N)	3 - Capesthorne Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorne Road (W)	0	0	0	0
	2 - Poplars Avenue (N)	0	0	0	0
	3 - Capesthorne Road (E)	0	0	0	0
	4 - Poplars Avenue (S)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - Capesthorne Road (W)	0.33	4.53	0.5	A
2 - Poplars Avenue (N)	0.46	5.24	0.8	A
3 - Capesthorne Road (E)	0.65	10.25	1.8	B
4 - Poplars Avenue (S)	0.30	4.30	0.4	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	263	0	322	1268	0.208	262	0.3	3.577	A
2 - Poplars Avenue (N)	394	0	347	1361	0.290	393	0.4	3.710	A
3 - Capesthorne Road (E)	443	0	291	1073	0.413	440	0.7	5.664	A
4 - Poplars Avenue (S)	242	0	277	1267	0.191	241	0.2	3.506	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	315	0	385	1231	0.256	314	0.3	3.926	A
2 - Poplars Avenue (N)	471	0	416	1320	0.357	470	0.6	4.234	A
3 - Capesthorne Road (E)	529	0	348	1041	0.508	527	1.0	6.988	A
4 - Poplars Avenue (S)	289	0	332	1235	0.234	289	0.3	3.805	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	385	0	471	1181	0.326	385	0.5	4.517	A
2 - Poplars Avenue (N)	577	0	509	1264	0.456	576	0.8	5.222	A
3 - Capesthorne Road (E)	647	0	426	999	0.648	644	1.8	10.070	B
4 - Poplars Avenue (S)	355	0	406	1192	0.297	354	0.4	4.293	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	385	0	472	1181	0.326	385	0.5	4.525	A
2 - Poplars Avenue (N)	577	0	510	1264	0.457	577	0.8	5.242	A
3 - Capesthorpe Road (E)	647	0	427	998	0.649	647	1.8	10.248	B
4 - Poplars Avenue (S)	355	0	407	1191	0.298	355	0.4	4.301	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	315	0	387	1230	0.256	315	0.3	3.936	A
2 - Poplars Avenue (N)	471	0	417	1319	0.357	472	0.6	4.255	A
3 - Capesthorpe Road (E)	529	0	350	1041	0.508	532	1.0	7.117	A
4 - Poplars Avenue (S)	289	0	334	1234	0.235	290	0.3	3.817	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	263	0	324	1267	0.208	264	0.3	3.592	A
2 - Poplars Avenue (N)	394	0	349	1360	0.290	395	0.4	3.733	A
3 - Capesthorpe Road (E)	443	0	293	1072	0.413	444	0.7	5.746	A
4 - Poplars Avenue (S)	242	0	279	1266	0.192	243	0.2	3.521	A

(Default Analysis Set) - 2025 Do Something, PM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Capesthorpe Road/Poplars Avenue RBT	Standard Roundabout	1, 2, 3, 4	22.89	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2025 Do Something	PM	ONE HOUR	17:00	18:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Capesthorpe Road (W)		✓	353	100.000
2 - Poplars Avenue (N)		✓	486	100.000
3 - Capesthorpe Road (E)		✓	875	100.000
4 - Poplars Avenue (S)		✓	465	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Capesthorpe Road (W)	2 - Poplars Avenue (N)	3 - Capesthorpe Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorpe Road (W)	0	58	227	68
	2 - Poplars Avenue (N)	78	0	204	204
	3 - Capesthorpe Road (E)	365	408	0	102
	4 - Poplars Avenue (S)	43	281	141	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Capesthorpe Road (W)	2 - Poplars Avenue (N)	3 - Capesthorpe Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorpe Road (W)	0	0	0	0
	2 - Poplars Avenue (N)	0	0	0	0
	3 - Capesthorpe Road (E)	0	0	0	0
	4 - Poplars Avenue (S)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - Capesthorpe Road (W)	0.42	6.68	0.7	A
2 - Poplars Avenue (N)	0.42	4.82	0.7	A
3 - Capesthorpe Road (E)	0.94	46.52	11.7	E
4 - Poplars Avenue (S)	0.58	9.59	1.3	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	266	0	620	1095	0.243	264	0.3	4.328	A
2 - Poplars Avenue (N)	366	0	327	1374	0.266	364	0.4	3.562	A
3 - Capesthorpe Road (E)	659	0	262	1088	0.605	653	1.5	8.159	A
4 - Poplars Avenue (S)	350	0	635	1059	0.331	348	0.5	5.055	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	317	0	743	1024	0.310	317	0.4	5.085	A
2 - Poplars Avenue (N)	437	0	391	1335	0.327	436	0.5	4.005	A
3 - Capesthorpe Road (E)	787	0	314	1060	0.742	782	2.7	12.711	B
4 - Poplars Avenue (S)	418	0	761	985	0.424	417	0.7	6.323	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	389	0	899	934	0.416	388	0.7	6.573	A
2 - Poplars Avenue (N)	535	0	478	1282	0.417	534	0.7	4.805	A
3 - Capesthorpe Road (E)	963	0	385	1021	0.943	935	9.7	34.091	D
4 - Poplars Avenue (S)	512	0	912	897	0.571	510	1.3	9.234	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	389	0	910	928	0.419	389	0.7	6.677	A
2 - Poplars Avenue (N)	535	0	480	1282	0.418	535	0.7	4.822	A
3 - Capesthorpe Road (E)	963	0	385	1021	0.943	956	11.7	46.521	E
4 - Poplars Avenue (S)	512	0	930	887	0.577	512	1.3	9.593	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	317	0	764	1012	0.314	318	0.5	5.197	A
2 - Poplars Avenue (N)	437	0	393	1334	0.328	438	0.5	4.024	A
3 - Capesthorpe Road (E)	787	0	315	1059	0.743	821	3.1	17.028	C
4 - Poplars Avenue (S)	418	0	796	965	0.433	420	0.8	6.634	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	266	0	629	1090	0.244	266	0.3	4.372	A
2 - Poplars Avenue (N)	366	0	329	1372	0.267	366	0.4	3.582	A
3 - Capesthorpe Road (E)	659	0	264	1087	0.606	665	1.6	8.632	A
4 - Poplars Avenue (S)	350	0	646	1052	0.333	351	0.5	5.142	A

(Default Analysis Set) - 2030 Do Minimum, AM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Capesthorne Road/Poplars Avenue RBT	Standard Roundabout	1, 2, 3, 4	5.59	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2030 Do Minimum	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Capesthorne Road (W)		✓	360	100.000
2 - Poplars Avenue (N)		✓	438	100.000
3 - Capesthorne Road (E)		✓	528	100.000
4 - Poplars Avenue (S)		✓	267	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Capesthorne Road (W)	2 - Poplars Avenue (N)	3 - Capesthorne Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorne Road (W)	0	11	223	126
	2 - Poplars Avenue (N)	41	0	208	189
	3 - Capesthorne Road (E)	220	48	0	260
	4 - Poplars Avenue (S)	7	141	119	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Capesthorne Road (W)	2 - Poplars Avenue (N)	3 - Capesthorne Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorne Road (W)	0	0	0	0
	2 - Poplars Avenue (N)	0	0	0	0
	3 - Capesthorne Road (E)	0	0	0	0
	4 - Poplars Avenue (S)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - Capesthorne Road (W)	0.32	4.18	0.5	A
2 - Poplars Avenue (N)	0.38	4.63	0.6	A
3 - Capesthorne Road (E)	0.57	8.25	1.3	A
4 - Poplars Avenue (S)	0.24	3.84	0.3	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	271	0	231	1320	0.205	270	0.3	3.425	A
2 - Poplars Avenue (N)	330	0	351	1359	0.243	328	0.3	3.488	A
3 - Capesthorne Road (E)	398	0	267	1086	0.366	395	0.6	5.197	A
4 - Poplars Avenue (S)	201	0	231	1294	0.155	200	0.2	3.290	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	324	0	277	1294	0.250	323	0.3	3.709	A
2 - Poplars Avenue (N)	394	0	420	1317	0.299	393	0.4	3.894	A
3 - Capesthorne Road (E)	475	0	320	1057	0.449	474	0.8	6.162	A
4 - Poplars Avenue (S)	240	0	277	1267	0.189	240	0.2	3.504	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	396	0	339	1258	0.315	396	0.5	4.172	A
2 - Poplars Avenue (N)	482	0	515	1261	0.383	481	0.6	4.615	A
3 - Capesthorne Road (E)	581	0	391	1018	0.571	579	1.3	8.173	A
4 - Poplars Avenue (S)	294	0	339	1231	0.239	294	0.3	3.839	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	396	0	339	1258	0.315	396	0.5	4.179	A
2 - Poplars Avenue (N)	482	0	515	1260	0.383	482	0.6	4.626	A
3 - Capesthorne Road (E)	581	0	392	1017	0.571	581	1.3	8.250	A
4 - Poplars Avenue (S)	294	0	340	1230	0.239	294	0.3	3.843	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	324	0	277	1293	0.250	324	0.3	3.718	A
2 - Poplars Avenue (N)	394	0	421	1317	0.299	395	0.4	3.907	A
3 - Capesthorne Road (E)	475	0	321	1056	0.449	477	0.8	6.229	A
4 - Poplars Avenue (S)	240	0	279	1266	0.190	240	0.2	3.509	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	271	0	232	1320	0.205	271	0.3	3.437	A
2 - Poplars Avenue (N)	330	0	353	1358	0.243	330	0.3	3.505	A
3 - Capesthorne Road (E)	398	0	268	1085	0.366	398	0.6	5.250	A
4 - Poplars Avenue (S)	201	0	233	1293	0.155	201	0.2	3.297	A

(Default Analysis Set) - 2030 Do Minimum, PM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Capesthorne Road/Poplars Avenue RBT	Standard Roundabout	1, 2, 3, 4	9.72	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2030 Do Minimum	PM	ONE HOUR	17:00	18:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Capesthorpe Road (W)		✓	362	100.000
2 - Poplars Avenue (N)		✓	294	100.000
3 - Capesthorpe Road (E)		✓	776	100.000
4 - Poplars Avenue (S)		✓	378	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Capesthorpe Road (W)	2 - Poplars Avenue (N)	3 - Capesthorpe Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorpe Road (W)	0	59	231	72
	2 - Poplars Avenue (N)	77	0	122	95
	3 - Capesthorpe Road (E)	369	282	0	125
	4 - Poplars Avenue (S)	54	166	158	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Capesthorpe Road (W)	2 - Poplars Avenue (N)	3 - Capesthorpe Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorpe Road (W)	0	0	0	0
	2 - Poplars Avenue (N)	0	0	0	0
	3 - Capesthorpe Road (E)	0	0	0	0
	4 - Poplars Avenue (S)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - Capesthorpe Road (W)	0.37	5.38	0.6	A
2 - Poplars Avenue (N)	0.26	3.82	0.3	A
3 - Capesthorpe Road (E)	0.79	15.50	3.6	C
4 - Poplars Avenue (S)	0.43	6.60	0.8	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	273	0	454	1192	0.229	271	0.3	3.907	A
2 - Poplars Avenue (N)	221	0	346	1362	0.162	221	0.2	3.151	A
3 - Capesthorpe Road (E)	584	0	183	1132	0.516	580	1.1	6.478	A
4 - Poplars Avenue (S)	285	0	544	1112	0.256	283	0.3	4.339	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	325	0	543	1140	0.286	325	0.4	4.417	A
2 - Poplars Avenue (N)	264	0	414	1321	0.200	264	0.2	3.405	A
3 - Capesthorpe Road (E)	698	0	219	1112	0.627	695	1.6	8.592	A
4 - Poplars Avenue (S)	340	0	652	1049	0.324	339	0.5	5.073	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	399	0	664	1070	0.372	398	0.6	5.349	A
2 - Poplars Avenue (N)	324	0	506	1266	0.256	323	0.3	3.818	A
3 - Capesthorpe Road (E)	854	0	268	1085	0.787	847	3.4	14.700	B
4 - Poplars Avenue (S)	416	0	795	965	0.431	415	0.7	6.530	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	399	0	667	1068	0.373	399	0.6	5.375	A
2 - Poplars Avenue (N)	324	0	508	1265	0.256	324	0.3	3.823	A
3 - Capesthorpe Road (E)	854	0	269	1085	0.788	854	3.6	15.504	C
4 - Poplars Avenue (S)	416	0	801	962	0.433	416	0.8	6.596	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	325	0	548	1137	0.286	326	0.4	4.446	A
2 - Poplars Avenue (N)	264	0	416	1320	0.200	265	0.3	3.410	A
3 - Capesthorpe Road (E)	698	0	220	1112	0.628	705	1.7	9.008	A
4 - Poplars Avenue (S)	340	0	661	1044	0.326	341	0.5	5.129	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	273	0	458	1189	0.229	273	0.3	3.932	A
2 - Poplars Avenue (N)	221	0	348	1361	0.163	222	0.2	3.158	A
3 - Capesthorpe Road (E)	584	0	184	1131	0.517	587	1.1	6.647	A
4 - Poplars Avenue (S)	285	0	550	1108	0.257	285	0.3	4.377	A

(Default Analysis Set) - 2030 Do Something, AM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Capesthorpe Road/Poplars Avenue RBT	Standard Roundabout	1, 2, 3, 4	9.89	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2030 Do Something	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Capesthorpe Road (W)		✓	366	100.000
2 - Poplars Avenue (N)		✓	605	100.000
3 - Capesthorpe Road (E)		✓	723	100.000
4 - Poplars Avenue (S)		✓	345	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Capesthorpe Road (W)	2 - Poplars Avenue (N)	3 - Capesthorpe Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorpe Road (W)	0	17	227	122
	2 - Poplars Avenue (N)	43	0	338	224
	3 - Capesthorpe Road (E)	226	224	0	273
	4 - Poplars Avenue (S)	7	186	152	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Capesthorne Road (W)	2 - Poplars Avenue (N)	3 - Capesthorne Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorne Road (W)	0	0	0	0
	2 - Poplars Avenue (N)	0	0	0	0
	3 - Capesthorne Road (E)	0	0	0	0
	4 - Poplars Avenue (S)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - Capesthorne Road (W)	0.37	5.19	0.6	A
2 - Poplars Avenue (N)	0.54	6.29	1.2	A
3 - Capesthorne Road (E)	0.80	17.66	3.8	C
4 - Poplars Avenue (S)	0.34	4.91	0.5	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	276	0	421	1211	0.228	274	0.3	3.841	A
2 - Poplars Avenue (N)	455	0	376	1344	0.339	453	0.5	4.032	A
3 - Capesthorne Road (E)	544	0	292	1072	0.508	540	1.0	6.716	A
4 - Poplars Avenue (S)	260	0	368	1214	0.214	259	0.3	3.765	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	329	0	504	1162	0.283	329	0.4	4.316	A
2 - Poplars Avenue (N)	544	0	450	1300	0.418	543	0.7	4.753	A
3 - Capesthorne Road (E)	650	0	349	1041	0.624	648	1.6	9.096	A
4 - Poplars Avenue (S)	310	0	442	1171	0.265	310	0.4	4.176	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	403	0	616	1098	0.367	402	0.6	5.170	A
2 - Poplars Avenue (N)	666	0	551	1239	0.538	664	1.1	6.246	A
3 - Capesthorne Road (E)	796	0	427	998	0.797	788	3.6	16.525	C
4 - Poplars Avenue (S)	380	0	538	1115	0.341	379	0.5	4.886	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	403	0	619	1096	0.368	403	0.6	5.192	A
2 - Poplars Avenue (N)	666	0	552	1238	0.538	666	1.2	6.289	A
3 - Capesthorpe Road (E)	796	0	428	998	0.798	795	3.8	17.663	C
4 - Poplars Avenue (S)	380	0	542	1113	0.341	380	0.5	4.912	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	329	0	508	1160	0.284	330	0.4	4.340	A
2 - Poplars Avenue (N)	544	0	451	1299	0.419	546	0.7	4.792	A
3 - Capesthorpe Road (E)	650	0	351	1040	0.625	658	1.7	9.623	A
4 - Poplars Avenue (S)	310	0	448	1167	0.266	311	0.4	4.205	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	276	0	424	1208	0.228	276	0.3	3.861	A
2 - Poplars Avenue (N)	455	0	378	1343	0.339	456	0.5	4.063	A
3 - Capesthorpe Road (E)	544	0	293	1071	0.508	547	1.0	6.901	A
4 - Poplars Avenue (S)	260	0	373	1211	0.214	260	0.3	3.784	A

(Default Analysis Set) - 2030 Do Something, PM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Capesthorpe Road/Poplars Avenue RBT	Standard Roundabout	1, 2, 3, 4	27.18	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2030 Do Something	PM	ONE HOUR	17:00	18:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Capesthorpe Road (W)		✓	370	100.000
2 - Poplars Avenue (N)		✓	490	100.000
3 - Capesthorpe Road (E)		✓	919	100.000
4 - Poplars Avenue (S)		✓	449	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Capesthorpe Road (W)	2 - Poplars Avenue (N)	3 - Capesthorpe Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorpe Road (W)	0	61	238	71
	2 - Poplars Avenue (N)	80	0	258	152
	3 - Capesthorpe Road (E)	370	463	0	86
	4 - Poplars Avenue (S)	53	233	163	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Capesthorpe Road (W)	2 - Poplars Avenue (N)	3 - Capesthorpe Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorpe Road (W)	0	0	0	0
	2 - Poplars Avenue (N)	0	0	0	0
	3 - Capesthorpe Road (E)	0	0	0	0
	4 - Poplars Avenue (S)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - Capesthorpe Road (W)	0.45	7.15	0.8	A
2 - Poplars Avenue (N)	0.43	5.01	0.7	A
3 - Capesthorpe Road (E)	0.96	55.41	14.8	F
4 - Poplars Avenue (S)	0.58	10.12	1.4	B

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	279	0	642	1083	0.257	277	0.3	4.461	A
2 - Poplars Avenue (N)	369	0	353	1358	0.272	367	0.4	3.631	A
3 - Capesthorpe Road (E)	692	0	227	1107	0.625	685	1.6	8.406	A
4 - Poplars Avenue (S)	338	0	681	1032	0.328	336	0.5	5.160	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	333	0	769	1010	0.329	332	0.5	5.309	A
2 - Poplars Avenue (N)	440	0	423	1316	0.335	440	0.5	4.109	A
3 - Capesthorpe Road (E)	826	0	272	1083	0.763	821	3.0	13.426	B
4 - Poplars Avenue (S)	404	0	816	953	0.423	403	0.7	6.523	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	407	0	926	918	0.444	406	0.8	7.006	A
2 - Poplars Avenue (N)	540	0	518	1259	0.429	539	0.7	4.993	A
3 - Capesthorpe Road (E)	1012	0	333	1050	0.964	977	11.7	38.102	E
4 - Poplars Avenue (S)	494	0	974	861	0.574	492	1.3	9.682	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	407	0	939	911	0.447	407	0.8	7.150	A
2 - Poplars Avenue (N)	540	0	520	1258	0.429	539	0.7	5.012	A
3 - Capesthorpe Road (E)	1012	0	334	1049	0.964	1000	14.8	55.405	F
4 - Poplars Avenue (S)	494	0	994	849	0.582	494	1.4	10.123	B

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	333	0	797	993	0.335	334	0.5	5.472	A
2 - Poplars Avenue (N)	440	0	426	1314	0.335	441	0.5	4.132	A
3 - Capesthorpe Road (E)	826	0	273	1082	0.763	872	3.5	20.181	C
4 - Poplars Avenue (S)	404	0	862	926	0.436	406	0.8	6.950	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	279	0	651	1077	0.259	279	0.4	4.515	A
2 - Poplars Avenue (N)	369	0	356	1356	0.272	369	0.4	3.650	A
3 - Capesthorpe Road (E)	692	0	228	1107	0.625	699	1.7	8.970	A
4 - Poplars Avenue (S)	338	0	694	1024	0.330	339	0.5	5.261	A

(Default Analysis Set) - 2030 Through-Route, AM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Capesthorpe Road/Poplars Avenue RBT	Standard Roundabout	1, 2, 3, 4	8.91	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2030 Through-Route	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Capesthorpe Road (W)		✓	367	100.000
2 - Poplars Avenue (N)		✓	466	100.000
3 - Capesthorpe Road (E)		✓	717	100.000
4 - Poplars Avenue (S)		✓	342	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Capesthorpe Road (W)	2 - Poplars Avenue (N)	3 - Capesthorpe Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorpe Road (W)	0	16	229	122
	2 - Poplars Avenue (N)	42	0	238	186
	3 - Capesthorpe Road (E)	225	179	0	313
	4 - Poplars Avenue (S)	7	161	174	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Capesthorne Road (W)	2 - Poplars Avenue (N)	3 - Capesthorne Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorne Road (W)	0	0	0	0
	2 - Poplars Avenue (N)	0	0	0	0
	3 - Capesthorne Road (E)	0	0	0	0
	4 - Poplars Avenue (S)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - Capesthorne Road (W)	0.36	4.98	0.6	A
2 - Poplars Avenue (N)	0.42	5.07	0.7	A
3 - Capesthorne Road (E)	0.77	15.43	3.3	C
4 - Poplars Avenue (S)	0.33	4.70	0.5	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	276	0	385	1231	0.224	275	0.3	3.760	A
2 - Poplars Avenue (N)	351	0	394	1333	0.263	349	0.4	3.654	A
3 - Capesthorne Road (E)	540	0	262	1088	0.496	536	1.0	6.473	A
4 - Poplars Avenue (S)	257	0	333	1234	0.209	256	0.3	3.678	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	330	0	461	1187	0.278	330	0.4	4.196	A
2 - Poplars Avenue (N)	419	0	471	1287	0.326	418	0.5	4.145	A
3 - Capesthorne Road (E)	645	0	314	1060	0.608	642	1.5	8.576	A
4 - Poplars Avenue (S)	307	0	400	1196	0.257	307	0.3	4.050	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	404	0	564	1128	0.358	403	0.6	4.965	A
2 - Poplars Avenue (N)	513	0	577	1223	0.420	512	0.7	5.058	A
3 - Capesthorne Road (E)	789	0	385	1021	0.773	783	3.2	14.681	B
4 - Poplars Avenue (S)	377	0	487	1145	0.329	376	0.5	4.680	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	404	0	566	1127	0.359	404	0.6	4.981	A
2 - Poplars Avenue (N)	513	0	578	1223	0.420	513	0.7	5.073	A
3 - Capesthorne Road (E)	789	0	385	1021	0.773	789	3.3	15.434	C
4 - Poplars Avenue (S)	377	0	491	1143	0.330	377	0.5	4.698	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	330	0	464	1185	0.278	331	0.4	4.214	A
2 - Poplars Avenue (N)	419	0	473	1286	0.326	420	0.5	4.163	A
3 - Capesthorne Road (E)	645	0	315	1059	0.608	651	1.6	8.966	A
4 - Poplars Avenue (S)	307	0	405	1193	0.258	308	0.3	4.072	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	276	0	388	1230	0.225	277	0.3	3.781	A
2 - Poplars Avenue (N)	351	0	396	1332	0.263	351	0.4	3.674	A
3 - Capesthorne Road (E)	540	0	264	1087	0.496	542	1.0	6.630	A
4 - Poplars Avenue (S)	257	0	337	1232	0.209	258	0.3	3.697	A

(Default Analysis Set) - 2030 Through-Route, PM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Capesthorne Road/Poplars Avenue RBT	Standard Roundabout	1, 2, 3, 4	10.38	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D10	2030 Through-Route	PM	ONE HOUR	17:00	18:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Capesthorpe Road (W)		✓	370	100.000
2 - Poplars Avenue (N)		✓	252	100.000
3 - Capesthorpe Road (E)		✓	773	100.000
4 - Poplars Avenue (S)		✓	520	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Capesthorpe Road (W)	2 - Poplars Avenue (N)	3 - Capesthorpe Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorpe Road (W)	0	60	238	72
	2 - Poplars Avenue (N)	79	0	57	116
	3 - Capesthorpe Road (E)	373	192	0	208
	4 - Poplars Avenue (S)	54	200	266	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Capesthorpe Road (W)	2 - Poplars Avenue (N)	3 - Capesthorpe Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorpe Road (W)	0	0	0	0
	2 - Poplars Avenue (N)	0	0	0	0
	3 - Capesthorpe Road (E)	0	0	0	0
	4 - Poplars Avenue (S)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - Capesthorpe Road (W)	0.39	5.73	0.6	A
2 - Poplars Avenue (N)	0.23	3.95	0.3	A
3 - Capesthorpe Road (E)	0.79	16.23	3.7	C
4 - Poplars Avenue (S)	0.56	8.12	1.3	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	279	0	492	1169	0.238	277	0.3	4.031	A
2 - Poplars Avenue (N)	190	0	432	1311	0.145	189	0.2	3.208	A
3 - Capesthorpe Road (E)	582	0	200	1122	0.519	578	1.1	6.562	A
4 - Poplars Avenue (S)	391	0	482	1148	0.341	389	0.5	4.733	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	333	0	590	1113	0.299	332	0.4	4.611	A
2 - Poplars Avenue (N)	227	0	517	1259	0.180	226	0.2	3.485	A
3 - Capesthorpe Road (E)	695	0	240	1101	0.631	692	1.7	8.768	A
4 - Poplars Avenue (S)	467	0	577	1092	0.428	467	0.7	5.744	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	407	0	721	1037	0.393	407	0.6	5.699	A
2 - Poplars Avenue (N)	277	0	632	1190	0.233	277	0.3	3.944	A
3 - Capesthorpe Road (E)	851	0	294	1071	0.795	843	3.6	15.306	C
4 - Poplars Avenue (S)	573	0	703	1019	0.562	570	1.3	7.991	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	407	0	724	1035	0.394	407	0.6	5.734	A
2 - Poplars Avenue (N)	277	0	634	1189	0.233	277	0.3	3.950	A
3 - Capesthorpe Road (E)	851	0	294	1071	0.795	851	3.7	16.225	C
4 - Poplars Avenue (S)	573	0	709	1016	0.564	572	1.3	8.117	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	333	0	595	1110	0.300	333	0.4	4.644	A
2 - Poplars Avenue (N)	227	0	520	1258	0.180	227	0.2	3.492	A
3 - Capesthorpe Road (E)	695	0	240	1100	0.632	703	1.8	9.228	A
4 - Poplars Avenue (S)	467	0	585	1088	0.430	470	0.8	5.842	A

18:15 - 18:30

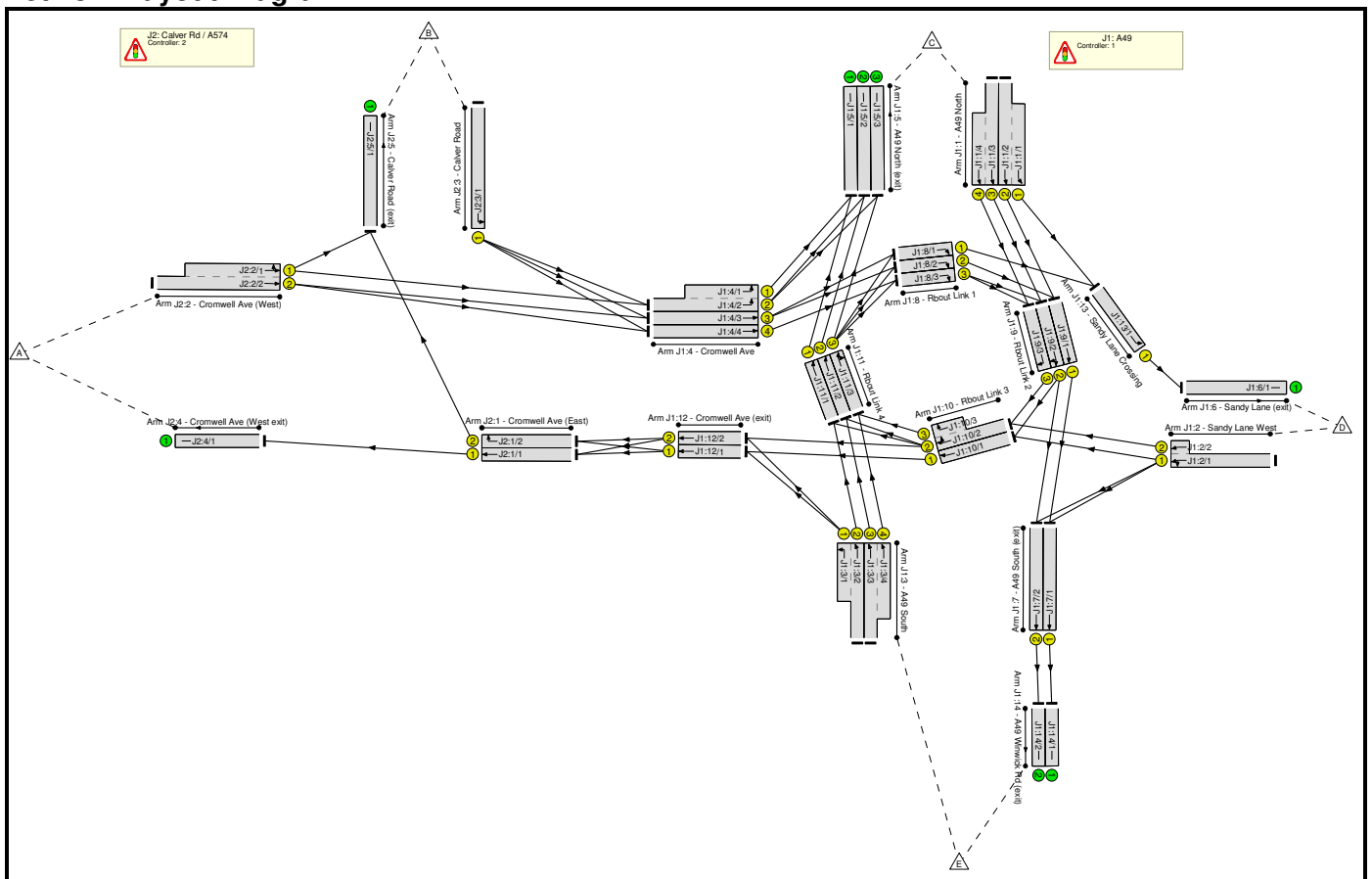
Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	279	0	497	1167	0.239	279	0.3	4.058	A
2 - Poplars Avenue (N)	190	0	435	1309	0.145	190	0.2	3.217	A
3 - Capesthorpe Road (E)	582	0	201	1122	0.519	585	1.1	6.736	A
4 - Poplars Avenue (S)	391	0	487	1145	0.342	392	0.5	4.791	A

Full Input Data And Results
Full Input Data And Results

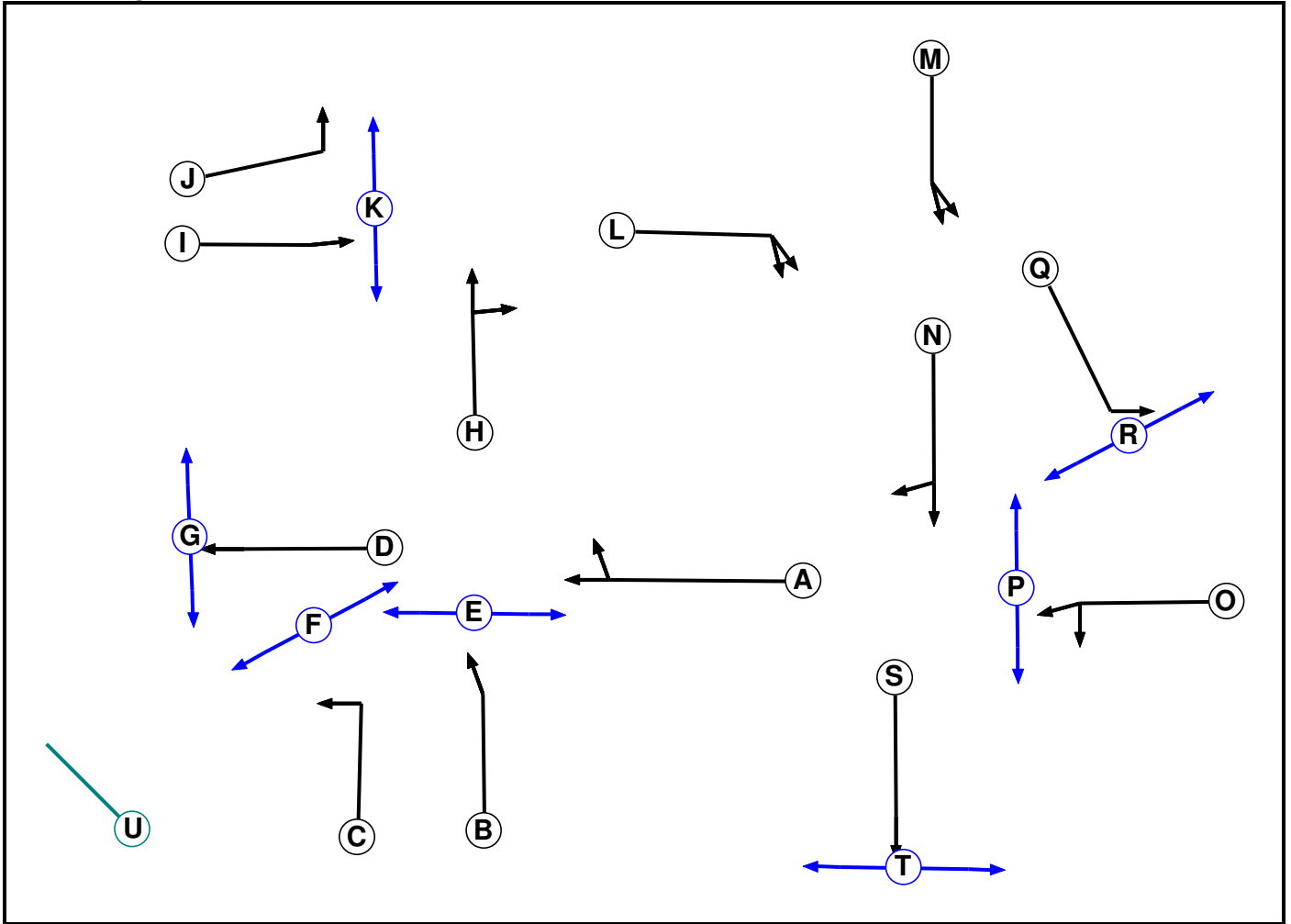
User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	LINSIG A49_Sandy Lane_v2 - Existing Situation.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



C1
Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Traffic	1		7	7
D	Traffic	7		7	7
E	Pedestrian	1		6	6
F	Pedestrian	1		6	6
G	Pedestrian	7		7	7
H	Traffic	2		7	7
I	Traffic	2		7	7
J	Traffic	2		7	7
K	Pedestrian	2		9	9
L	Traffic	3		7	7
M	Traffic	3		7	7
N	Traffic	4		7	7
O	Traffic	4		7	7
P	Pedestrian	4		7	7
Q	Traffic	5		7	7
R	Pedestrian	5		6	6
S	Traffic	6		7	7
T	Pedestrian	6		6	6
U	Dummy	1		0	0

Phase Intergreens Matrix

		Starting Phase																				
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
Terminating Phase	A		5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	B	7		-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
	C	6	-		-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
	D	-	-	-		-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	E	-	9	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	F	-	-	7	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	G	-	-	-	-	8	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-
	H	-	-	-	-	-	-	-	-		6	6	-	-	-	-	-	-	-	-	-	-
	I	-	-	-	-	-	-	-	6	-		-	5	-	-	-	-	-	-	-	-	-
	J	-	-	-	-	-	-	-	6	-	-		5	-	-	-	-	-	-	-	-	-
	K	-	-	-	-	-	-	-	-	12	12	-		-	-	-	-	-	-	-	-	-
	L	-	-	-	-	-	-	-	-	-	-	-	-		5	-	-	-	-	-	-	-
	M	-	-	-	-	-	-	-	-	-	-	-	7	-		-	-	-	-	-	-	-
	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-		5	-	-	-	-	-
	O	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-		5	-	-	-	-
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Phases in Stage

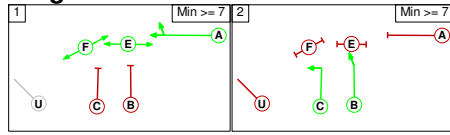
Stream	Stage No.	Phases in Stage
1	1	A E F
1	2	B C
2	1	H K
2	2	I J
3	1	L
3	2	M
4	1	N P
4	2	O
5	1	Q
5	2	R
6	1	S
6	2	T

Full Input Data And Results

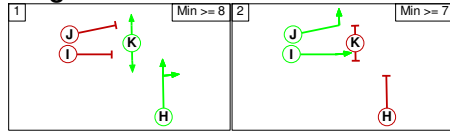
7	1	D
7	2	G

Stage Diagram

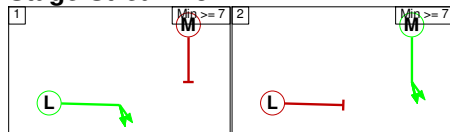
Stage Stream: 1



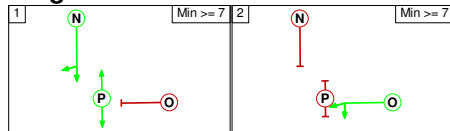
Stage Stream: 2



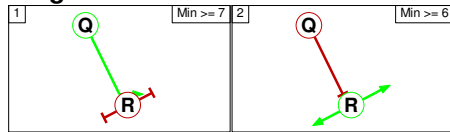
Stage Stream: 3



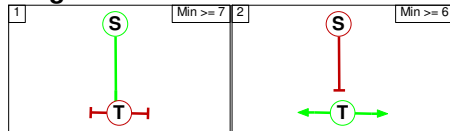
Stage Stream: 4



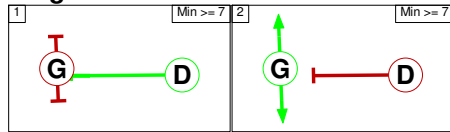
Stage Stream: 5



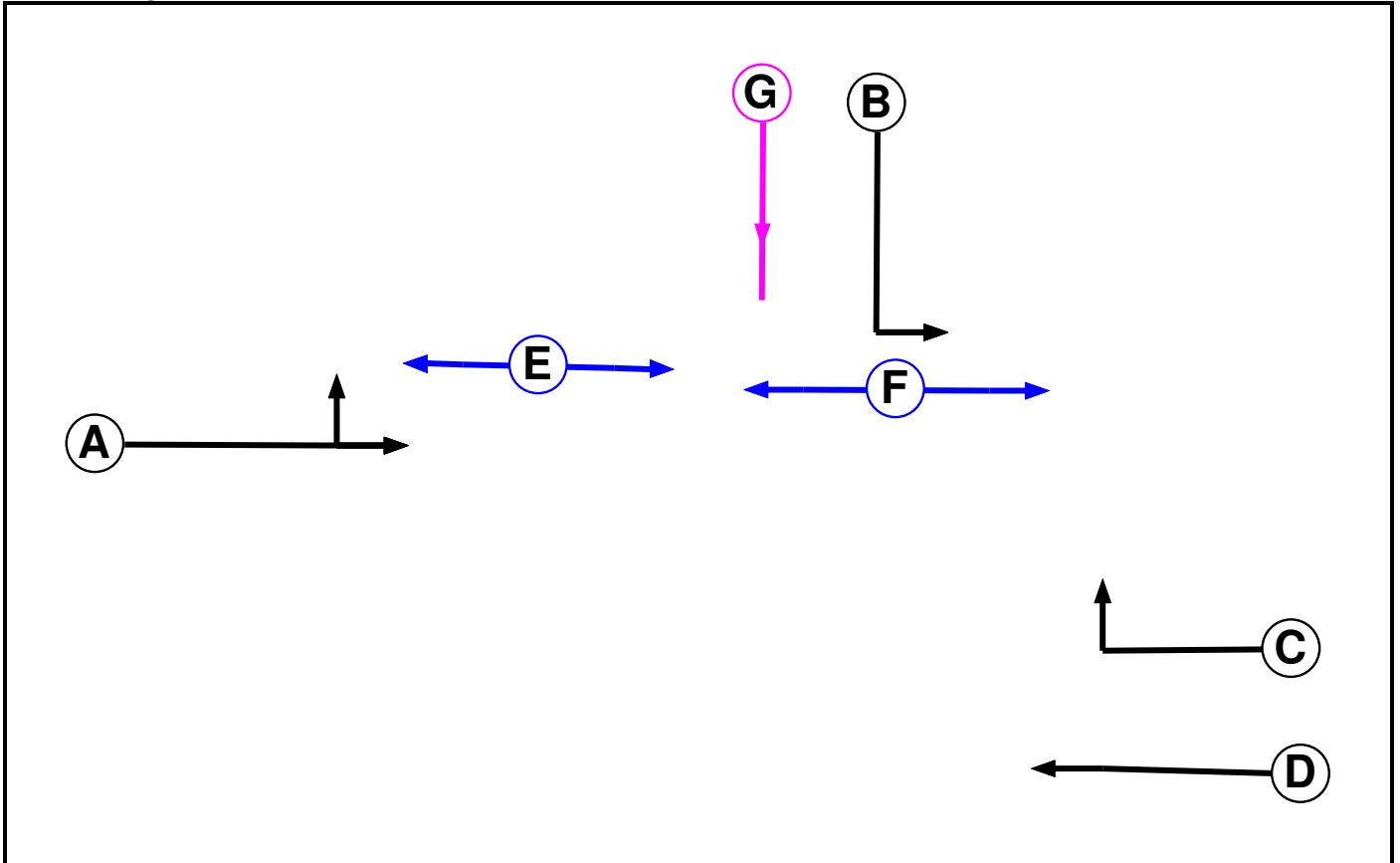
Stage Stream: 6



Stage Stream: 7



C2
Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Pedestrian		5	5
F	Pedestrian		5	5
G	Cycle		7	7

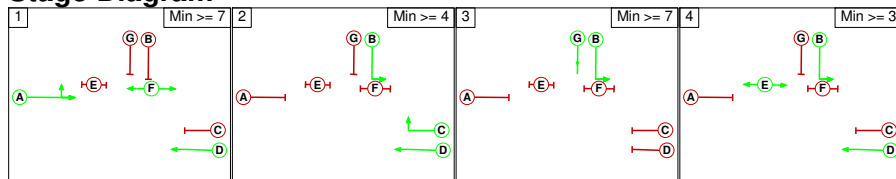
Phase Intergrens Matrix

		Starting Phase						
		A	B	C	D	E	F	G
Terminating Phase	A		8	5	-	8	-	8
	B	5		-	-	-	5	-
	C	7	-		-	8	-	7
	D	-	-	-		-	-	7
	E	0	-	0	-		-	0
	F	-	0	-	-	-		-
	G	7	-	7	7	5	-	

Phases in Stage

Stage No.	Phases in Stage
1	A D F
2	B C D
3	B G
4	B D E

Stage Diagram



Full Input Data And Results

Give-Way Lane Input Data

Junction: J1: A49

There are no Opposed Lanes in this Junction

Junction: J2: Calver Rd / A574

There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: J1: A49												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
J1:1/1 (A49 North)	U	M	2	3	11.0	Geom	-	3.30	0.00	Y	Arm J1:13 Ahead	Inf
J1:1/2 (A49 North)	U	M	2	3	60.0	Geom	-	3.65	0.00	N	Arm J1:9 Ahead	Inf
J1:1/3 (A49 North)	U	M	2	3	60.0	Geom	-	3.30	0.00	N	Arm J1:9 Ahead	Inf
J1:1/4 (A49 North)	U	M	2	3	8.2	Geom	-	3.90	0.00	N	Arm J1:9 Ahead	Inf
J1:2/1 (Sandy Lane West)	U	O	2	3	60.0	Geom	-	3.50	0.00	Y	Arm J1:7 Left	35.00
											Arm J1:10 Ahead	Inf
J1:2/2 (Sandy Lane West)	U	O	2	3	2.1	Geom	-	3.40	0.00	N	Arm J1:10 Ahead	Inf
J1:3/1 (A49 South)	U	C	2	3	6.6	Geom	-	5.00	0.00	Y	Arm J1:12 Left	60.00
J1:3/2 (A49 South)	U	B	2	3	60.0	Geom	-	3.30	0.00	N	Arm J1:11 Ahead	215.00
J1:3/3 (A49 South)	U	B	2	3	60.0	Geom	-	3.40	0.00	N	Arm J1:11 Ahead	215.00
J1:3/4 (A49 South)	U	B	2	3	13.0	Geom	-	3.30	0.00	N	Arm J1:11 Ahead	215.00
J1:4/1 (Cromwell Ave)	U	J	2	3	8.3	Geom	-	4.00	0.00	Y	Arm J1:5 Left	22.00
J1:4/2 (Cromwell Ave)	U	J	2	3	13.0	Geom	-	4.00	0.00	N	Arm J1:5 Left	75.00
J1:4/3 (Cromwell Ave)	U	I	2	3	21.7	Geom	-	3.70	0.00	N	Arm J1:8 Ahead	75.00
J1:4/4 (Cromwell Ave)	U	I	2	3	21.7	Geom	-	3.70	0.00	N	Arm J1:8 Ahead	80.00
J1:5/1 (A49 North (exit))	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:5/2 (A49 North (exit))	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

J1:5/3 (A49 North exit))	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:6/1 (Sandy Lane exit))	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:7/1 (A49 South exit))	U	S	2	3	11.0	Geom	-	3.75	0.00	Y	Arm J1:14 Ahead	Inf
J1:7/2 (A49 South exit))	U	S	2	3	11.0	Geom	-	3.75	0.00	N	Arm J1:14 Ahead	Inf
J1:8/1 (Rbout Link 1)	U	L	2	3	8.9	Geom	-	4.00	0.00	Y	Arm J1:13 Right	Inf
J1:8/2 (Rbout Link 1)	U	L	2	3	8.0	Geom	-	3.80	0.00	N	Arm J1:9 Right	34.00
J1:8/3 (Rbout Link 1)	U	L	2	3	7.1	Geom	-	4.10	0.00	N	Arm J1:9 Right	30.00
J1:9/1 (Rbout Link 2)	U	N	2	3	11.3	Geom	-	3.70	0.00	Y	Arm J1:7 Ahead	Inf
J1:9/2 (Rbout Link 2)	U	N	2	3	10.1	Geom	-	3.70	0.00	N	Arm J1:7 Ahead	Inf
											Arm J1:10 Right	35.00
J1:9/3 (Rbout Link 2)	U	N	2	3	4.9	Geom	-	3.70	0.00	N	Arm J1:10 Right	25.00
J1:10/1 (Rbout Link 3)	U	A	2	3	8.3	Geom	-	3.50	0.00	Y	Arm J1:12 Ahead	Inf
J1:10/2 (Rbout Link 3)	U	A	2	3	7.7	Geom	-	3.40	0.00	N	Arm J1:11 Right	30.00
											Arm J1:12 Ahead	Inf
J1:10/3 (Rbout Link 3)	U	A	2	3	3.7	Geom	-	3.40	0.00	N	Arm J1:11 Right	27.00
J1:11/1 (Rbout Link 4)	U	H	2	3	7.8	Geom	-	3.75	0.00	Y	Arm J1:5 Ahead	Inf
J1:11/2 (Rbout Link 4)	U	H	2	3	7.0	Geom	-	3.75	0.00	N	Arm J1:5 Ahead	Inf
J1:11/3 (Rbout Link 4)	U	H	2	3	6.1	Geom	-	3.75	0.00	Y	Arm J1:5 Ahead	Inf
											Arm J1:8 Right	24.00

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J1:12/1 (Cromwell Ave (exit))	U	D	2	3	4.5	Geom	-	4.90	0.00	Y	Arm J2:1 Ahead	Inf
J1:12/2 (Cromwell Ave (exit))	U	D	2	3	4.5	Geom	-	3.55	0.00	N	Arm J2:1 Ahead	Inf
J1:13/1 (Sandy Lane Crossing)	U	Q	2	3	9.6	Geom	-	4.90	0.00	Y	Arm J1:6 Left	10.00
J1:14/1 (A49 Winwick Rd (exit))	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:14/2 (A49 Winwick Rd (exit))	U		2	3	60.0	Inf	-	-	-	-	-	-

Junction: J2: Calver Rd / A574

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
J2:1/1 (Cromwell Ave (East))	U	D	2	3	16.0	Geom	-	3.50	0.00	Y	Arm J2:4 Ahead	Inf
J2:1/2 (Cromwell Ave (East))	U	C	2	3	16.0	Geom	-	3.50	0.00	N	Arm J2:5 Right	10.00
J2:2/1 (Cromwell Ave (West))	U	A	2	3	10.8	Geom	-	3.00	0.00	Y	Arm J1:4 Ahead	Inf
											Arm J2:5 Left	20.00
J2:2/2 (Cromwell Ave (West))	U	A	2	3	60.0	Geom	-	3.00	0.00	N	Arm J1:4 Ahead	Inf
J2:3/1 (Calver Road)	U	B	2	3	60.0	Geom	-	5.00	0.00	Y	Arm J1:4 Left	25.00
J2:4/1 (Cromwell Ave (West exit))	U		2	3	60.0	Inf	-	-	-	-	-	-
J2:5/1 (Calver Road (exit))	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2025 Do Min AM'	08:00	09:00	01:00	
2: '2025 Do Min PM'	17:00	18:00	01:00	
3: '2025 Do Something AM'	08:00	09:00	01:00	
4: '2025 Do Something PM'	17:00	18:00	01:00	
5: '2030 Do Min AM'	08:00	09:00	01:00	
6: '2030 Do Min PM'	17:00	18:00	01:00	
7: '2030 Do Something AM'	08:00	09:00	01:00	
8: '2030 Do Something PM'	17:00	18:00	01:00	
9: '2030 Through AM'	08:00	09:00	01:00	
10: '2030 Through PM'	17:00	18:00	01:00	

Scenario 1: '2025 Do Min AM' (FG1: '2025 Do Min AM', Plan 1: 'Network Control Plan 1')

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	55	110	301	206	391	1063
	B	29	0	160	110	208	507
	C	248	102	21	225	1478	2074
	D	185	76	168	0	51	480
	E	259	107	1055	93	0	1514
	Tot.	776	395	1705	634	2128	5638

Scenario 2: '2025 Do Min PM' (FG2: '2025 Do Min PM', Plan 1: 'Network Control Plan 1')

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	56	130	222	63	255	726
	B	61	0	243	69	279	652
	C	312	124	0	303	810	1549
	D	267	106	328	0	59	760
	E	480	190	1343	64	2	2079
	Tot.	1176	550	2136	499	1405	5766

Full Input Data And Results

Scenario 3: '2025 Do Something AM' (FG3: '2025 Do Something AM', Plan 1: 'Network Control Plan 1')

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	57	110	301	239	404	1111
	B	29	0	152	121	204	506
	C	249	100	22	263	1475	2109
	D	211	85	201	0	82	579
	E	260	105	1057	139	0	1561
	Tot.	806	400	1733	762	2165	5866

Scenario 4: '2025 Do something PM' (FG4: '2025 Do Something PM', Plan 1: 'Network Control Plan 1')

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	57	130	223	71	257	738
	B	61	0	241	76	278	656
	C	311	121	1	334	807	1574
	D	290	112	404	0	113	919
	E	478	186	1375	67	1	2107
	Tot.	1197	549	2244	548	1456	5994

Scenario 5: '2030 Do Min AM' (FG5: '2030 Do Min AM', Plan 1: 'Network Control Plan 1')

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	57	114	307	214	410	1102
	B	30	0	163	113	217	523
	C	253	105	22	265	1489	2134
	D	192	80	175	0	53	500
	E	267	111	1089	104	0	1571
	Tot.	799	410	1756	696	2169	5830

Full Input Data And Results

Scenario 6: '2030 Do Min PM' (FG6: '2030 Do Min PM', Plan 1: 'Network Control Plan 1')

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	58	134	231	64	266	753
	B	64	0	253	70	290	677
	C	320	126	0	316	820	1582
	D	277	110	362	0	64	813
	E	488	193	1353	63	0	2097
	Tot.	1207	563	2199	513	1440	5922

Scenario 7: '2030 Do Something AM' (FG7: '2030 Do Something AM', Plan 1: 'Network Control Plan 1')

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	58	114	313	243	427	1155
	B	29	0	157	122	215	523
	C	253	100	22	317	1483	2175
	D	238	94	222	0	84	638
	E	272	107	1093	144	0	1616
	Tot.	850	415	1807	826	2209	6107

Scenario 8: '2030 Do something PM' (FG8: '2030 Do Something PM', Plan 1: 'Network Control Plan 1')

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	58	134	235	77	266	770
	B	63	0	254	83	286	686
	C	318	122	1	358	824	1623
	D	312	120	411	0	96	939
	E	487	187	1384	63	1	2122
	Tot.	1238	563	2285	581	1473	6140

Full Input Data And Results

Scenario 9: '2030 Through AM' (FG9: '2030 Through AM', Plan 1: 'Network Control Plan 1')

Desired Flow :

	Destination						
		A	B	C	D	E	Tot.
Origin	A	58	114	350	207	426	1155
	B	29	0	176	104	214	523
	C	273	107	27	298	1494	2199
	D	219	86	125	0	53	483
	E	273	107	1129	106	0	1615
	Tot.	852	414	1807	715	2187	5975

Scenario 10: '2030 Through PM' (FG10: '2030 Through PM', Plan 1: 'Network Control Plan 1')

Desired Flow :

	Destination						
		A	B	C	D	E	Tot.
Origin	A	59	134	248	62	268	771
	B	63	0	267	67	288	685
	C	360	138	11	283	767	1559
	D	276	106	243	0	78	703
	E	485	186	1389	52	0	2112
	Tot.	1243	564	2158	464	1401	5830

Full Input Data And Results

Scenario 1: '2025 Do Min AM' (FG1: '2025 Do Min AM', Plan 1: 'Network Control Plan 1')

Network Results

Item	Lane Description	Lane Type	Total Green (s)	Demand Flow (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	87.1%	75.9	-	-
J1: A49	-	-	-	-	87.1%	56.6	-	-
1/2+1/1	A49 North Ahead Ahead2	U	62	979	74.9 : 74.9%	4.2	15.4	12.8
1/3+1/4	A49 North Ahead	U	62	1095	79.9 : 79.9%	5.0	16.4	15.0
2/1+2/2	Sandy Lane West Left Ahead	U	28	480	86.0 : 86.0%	5.9	44.3	9.7
3/2+3/1	A49 South Ahead Left	U	38:42	747	67.5 : 67.5%	4.5	21.5	7.5
3/3+3/4	A49 South Ahead	U	38	767	62.8 : 62.8%	4.6	21.4	8.4
4/2+4/1	Cromwell Ave Left	U	44	461	37.5 : 37.5%	1.6	12.5	3.3
4/3	Cromwell Ave Ahead	U	44	570	71.4%	3.1	19.3	9.0
4/4	Cromwell Ave Ahead	U	44	429	53.6%	1.8	15.4	5.3
5/1	A49 North (exit)	U	-	638	0.0%	0.0	0.0	0.0
5/2	A49 North (exit)	U	-	586	0.0%	0.0	0.0	0.0
5/3	A49 North (exit)	U	-	481	0.0%	0.0	0.0	0.0
6/1	Sandy Lane (exit)	U	-	634	0.0%	0.0	0.0	0.0
7/1	A49 South (exit) Ahead	U	112	1031	55.0%	0.6	2.1	0.7
7/2	A49 South (exit) Ahead	U	112	1097	54.7%	0.6	2.0	0.7
8/1	Rbout Link 1 Right	U	34	409	67.7%	2.4	20.9	7.8
8/2	Rbout Link 1 Right	U	34	254	41.4%	0.6	9.0	3.8
8/3	Rbout Link 1 Right	U	34	429	69.4%	1.8	14.8	7.8
9/1	Rbout Link 2 Ahead	U	68	1008	87.1%	4.7	16.7	11.5
9/2	Rbout Link 2 Ahead Right	U	68	1069	86.2%	4.7	15.7	11.5
9/3	Rbout Link 2 Right	U	68	455	38.9%	0.8	6.3	2.5
10/1	Rbout Link 3 Ahead	U	50	261	30.7%	1.4	19.5	4.1
10/2+10/3	Rbout Link 3 Right Ahead	U	50	623	63.8 : 63.8%	2.8	16.1	8.0

Full Input Data And Results

11/1	Rbout Link 4 Ahead	U	40	401	57.6%	1.2	10.4	6.0
11/2	Rbout Link 4 Ahead	U	40	474	63.6%	1.5	11.6	7.2
11/3	Rbout Link 4 Ahead Right	U	40	462	67.2%	1.9	15.0	8.3
12/1	Cromwell Ave (exit) Ahead	U	100	476	26.9%	0.3	2.2	1.3
12/2	Cromwell Ave (exit) Ahead	U	100	585	32.9%	0.3	1.9	1.0
13/1	Sandy Lane Crossing Left	U	102	634	40.4%	0.4	2.4	4.5
14/1	A49 Winwick Rd (exit)	U	-	1031	0.0%	0.0	0.0	0.0
14/2	A49 Winwick Rd (exit)	U	-	1097	0.0%	0.0	0.0	0.0
J2: Calver Rd / A574	-	-	-	-	85.5%	19.4	-	-
1/1	Cromwell Ave (East) Ahead	U	99	776	47.4%	0.9	4.2	5.5
1/2	Cromwell Ave (East) Right	U	25	285	71.9%	4.4	55.3	9.4
2/2+2/1	Cromwell Ave (West) Ahead Left	U	61	1063	85.5 : 85.5%	9.0	30.5	24.4
3/1	Calver Road Left	U	46	507	64.9%	5.1	36.3	14.6
4/1	Cromwell Ave (West exit)	U	-	776	0.0%	0.0	0.0	0.0
5/1	Calver Road (exit)	U	-	395	0.0%	0.0	0.0	0.0
			C1 Stream: 1 PRC for Signalled Lanes (%):	33.3	Total Delay for Signalled Lanes (pcuHr):	13.21	Cycle Time (s):	120
			C1 Stream: 2 PRC for Signalled Lanes (%):	26.1	Total Delay for Signalled Lanes (pcuHr):	11.11	Cycle Time (s):	120
			C1 Stream: 3 PRC for Signalled Lanes (%):	12.7	Total Delay for Signalled Lanes (pcuHr):	13.95	Cycle Time (s):	120
			C1 Stream: 4 PRC for Signalled Lanes (%):	3.4	Total Delay for Signalled Lanes (pcuHr):	16.04	Cycle Time (s):	120
			C1 Stream: 5 PRC for Signalled Lanes (%):	123.0	Total Delay for Signalled Lanes (pcuHr):	0.43	Cycle Time (s):	120
			C1 Stream: 6 PRC for Signalled Lanes (%):	63.6	Total Delay for Signalled Lanes (pcuHr):	1.22	Cycle Time (s):	120
			C1 Stream: 7 PRC for Signalled Lanes (%):	173.2	Total Delay for Signalled Lanes (pcuHr):	0.60	Cycle Time (s):	120
			C2 PRC for Signalled Lanes (%):	5.3	Total Delay for Signalled Lanes (pcuHr):	19.39	Cycle Time (s):	120
			PRC Over All Lanes (%):	3.4	Total Delay Over All Lanes(pcuHr):	75.94		

Full Input Data And Results

Scenario 2: '2025 Do Min PM' (FG2: '2025 Do Min PM', Plan 1: 'Network Control Plan 1')

Network Results

Item	Lane Description	Lane Type	Total Green (s)	Demand Flow (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	90.4%	80.9	-	-
J1: A49	-	-	-	-	90.4%	64.4	-	-
1/2+1/1	A49 North Ahead Ahead2	U	59	722	47.2 : 47.2%	2.2	11.1	5.0
1/3+1/4	A49 North Ahead	U	59	827	53.6 : 53.6%	2.7	11.6	5.3
2/1+2/2	Sandy Lane West Left Ahead	U	45	760	87.0 : 87.0%	6.5	30.8	14.5
3/2+3/1	A49 South Ahead Left	U	43:47	910	89.3 : 89.3%	7.8	30.8	15.4
3/3+3/4	A49 South Ahead	U	43	1167	87.4 : 87.4%	8.7	26.8	13.8
4/2+4/1	Cromwell Ave Left	U	31	465	49.1 : 49.1%	1.9	14.5	3.8
4/3	Cromwell Ave Ahead	U	31	402	70.2%	2.6	23.7	8.3
4/4	Cromwell Ave Ahead	U	31	381	66.4%	2.3	21.9	6.9
5/1	A49 North (exit)	U	-	614	0.0%	0.0	0.0	0.0
5/2	A49 North (exit)	U	-	812	0.0%	0.0	0.0	0.0
5/3	A49 North (exit)	U	-	710	0.0%	0.0	0.0	0.0
6/1	Sandy Lane (exit)	U	-	499	0.0%	0.0	0.0	0.0
7/1	A49 South (exit) Ahead	U	112	690	36.8%	0.3	1.5	0.3
7/2	A49 South (exit) Ahead	U	112	713	35.5%	0.3	1.4	0.4
8/1	Rbout Link 1 Right	U	37	196	29.9%	0.8	13.8	1.6
8/2	Rbout Link 1 Right	U	37	270	40.6%	0.4	5.0	0.6
8/3	Rbout Link 1 Right	U	37	381	56.9%	0.7	6.6	1.3
9/1	Rbout Link 2 Ahead	U	51	689	78.6%	4.7	24.7	12.4
9/2	Rbout Link 2 Ahead Right	U	51	731	78.2%	4.9	24.1	12.5
9/3	Rbout Link 2 Right	U	51	477	53.9%	2.1	15.9	7.5
10/1	Rbout Link 3 Ahead	U	45	449	58.3%	2.5	20.3	8.3
10/2+10/3	Rbout Link 3 Right Ahead	U	45	805	90.4 : 90.4%	5.9	26.5	7.9

Full Input Data And Results

11/1	Rbout Link 4 Ahead	U	53	375	41.1%	1.1	10.8	4.9
11/2	Rbout Link 4 Ahead	U	53	699	71.6%	1.5	7.6	3.1
11/3	Rbout Link 4 Ahead Right	U	53	661	72.9%	2.4	13.3	11.5
12/1	Cromwell Ave (exit) Ahead	U	100	783	44.2%	0.8	3.7	5.8
12/2	Cromwell Ave (exit) Ahead	U	100	813	45.8%	0.8	3.8	5.9
13/1	Sandy Lane Crossing Left	U	102	499	31.8%	0.3	2.5	1.5
14/1	A49 Winwick Rd (exit)	U	-	690	0.0%	0.0	0.0	0.0
14/2	A49 Winwick Rd (exit)	U	-	713	0.0%	0.0	0.0	0.0
J2: Calver Rd / A574	-	-	-	-	74.3%	16.5	-	-
1/1	Cromwell Ave (East) Ahead	U	99	1176	71.8%	1.5	4.7	8.9
1/2	Cromwell Ave (East) Right	U	47	420	57.4%	3.3	28.7	11.2
2/2+2/1	Cromwell Ave (West) Ahead Left	U	39	726	74.3 : 74.3%	8.0	39.8	11.5
3/1	Calver Road Left	U	68	652	56.8%	3.6	19.7	14.2
4/1	Cromwell Ave (West exit)	U	-	1176	0.0%	0.0	0.0	0.0
5/1	Calver Road (exit)	U	-	550	0.0%	0.0	0.0	0.0
			C1 Stream: 1 PRC for Signalled Lanes (%):	-0.4	Total Delay for Signalled Lanes (pcuHr):	24.93	Cycle Time (s):	120
			C1 Stream: 2 PRC for Signalled Lanes (%):	23.4	Total Delay for Signalled Lanes (pcuHr):	11.90	Cycle Time (s):	120
			C1 Stream: 3 PRC for Signalled Lanes (%):	58.3	Total Delay for Signalled Lanes (pcuHr):	6.73	Cycle Time (s):	120
			C1 Stream: 4 PRC for Signalled Lanes (%):	3.5	Total Delay for Signalled Lanes (pcuHr):	18.24	Cycle Time (s):	120
			C1 Stream: 5 PRC for Signalled Lanes (%):	183.3	Total Delay for Signalled Lanes (pcuHr):	0.34	Cycle Time (s):	120
			C1 Stream: 6 PRC for Signalled Lanes (%):	144.4	Total Delay for Signalled Lanes (pcuHr):	0.57	Cycle Time (s):	120
			C1 Stream: 7 PRC for Signalled Lanes (%):	96.6	Total Delay for Signalled Lanes (pcuHr):	1.66	Cycle Time (s):	120
			C2 PRC for Signalled Lanes (%):	21.1	Total Delay for Signalled Lanes (pcuHr):	16.50	Cycle Time (s):	120
			PRC Over All Lanes (%):	-0.4	Total Delay Over All Lanes(pcuHr):	80.87		

Full Input Data And Results

Scenario 3: '2025 Do Something AM' (FG3: '2025 Do Something AM', Plan 1: 'Network Control Plan 1')

Network Results

Item	Lane Description	Lane Type	Total Green (s)	Demand Flow (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	92.9%	90.4	-	-
J1: A49	-	-	-	-	92.9%	69.3	-	-
1/2+1/1	A49 North Ahead Ahead2	U	60	1020	78.2 : 78.2%	4.7	16.5	11.4
1/3+1/4	A49 North Ahead	U	60	1089	81.4 : 81.4%	5.2	17.1	12.5
2/1+2/2	Sandy Lane West Left Ahead	U	32	579	92.9 : 92.9%	8.5	53.0	14.1
3/2+3/1	A49 South Ahead Left	U	41:45	759	66.3 : 66.3%	4.0	19.1	6.3
3/3+3/4	A49 South Ahead	U	41	802	60.0 : 60.0%	4.2	18.7	6.9
4/2+4/1	Cromwell Ave Left	U	44	453	36.4 : 36.4%	1.6	12.4	3.1
4/3	Cromwell Ave Ahead	U	44	610	76.4%	3.6	21.4	9.9
4/4	Cromwell Ave Ahead	U	44	444	55.5%	1.9	15.6	5.9
5/1	A49 North (exit)	U	-	671	0.0%	0.0	0.0	0.0
5/2	A49 North (exit)	U	-	613	0.0%	0.0	0.0	0.0
5/3	A49 North (exit)	U	-	449	0.0%	0.0	0.0	0.0
6/1	Sandy Lane (exit)	U	-	762	0.0%	0.0	0.0	0.0
7/1	A49 South (exit) Ahead	U	112	1054	56.2%	0.7	2.2	0.9
7/2	A49 South (exit) Ahead	U	112	1111	55.4%	0.6	2.0	0.8
8/1	Rbout Link 1 Right	U	36	499	78.2%	3.8	27.1	9.9
8/2	Rbout Link 1 Right	U	36	250	38.6%	0.5	7.1	3.5
8/3	Rbout Link 1 Right	U	36	444	68.0%	1.7	14.1	8.1
9/1	Rbout Link 2 Ahead	U	64	1007	92.2%	7.3	26.1	21.6
9/2	Rbout Link 2 Ahead Right	U	64	1076	92.1%	7.6	25.5	22.7
9/3	Rbout Link 2 Right	U	64	457	41.4%	0.9	7.2	2.8
10/1	Rbout Link 3 Ahead	U	47	296	36.9%	1.9	22.9	5.6
10/2+10/3	Rbout Link 3 Right Ahead	U	47	658	71.8 : 71.8%	2.9	15.9	6.1

Full Input Data And Results

11/1	Rbout Link 4 Ahead	U	40	442	63.5%	2.1	16.7	7.6
11/2	Rbout Link 4 Ahead	U	40	501	67.2%	2.3	16.6	8.5
11/3	Rbout Link 4 Ahead Right	U	40	476	69.6%	2.2	16.6	7.2
12/1	Cromwell Ave (exit) Ahead	U	100	500	28.2%	0.3	2.1	1.1
12/2	Cromwell Ave (exit) Ahead	U	100	596	33.6%	0.3	2.0	1.0
13/1	Sandy Lane Crossing Left	U	102	762	48.5%	0.6	2.8	6.2
14/1	A49 Winwick Rd (exit)	U	-	1054	0.0%	0.0	0.0	0.0
14/2	A49 Winwick Rd (exit)	U	-	1111	0.0%	0.0	0.0	0.0
J2: Calver Rd / A574	-	-	-	-	87.9%	21.1	-	-
1/1	Cromwell Ave (East) Ahead	U	99	806	49.2%	0.9	4.2	6.1
1/2	Cromwell Ave (East) Right	U	23	290	79.2%	5.0	61.6	10.5
2/2+2/1	Cromwell Ave (West) Ahead Left	U	63	1111	87.9 : 87.9%	9.8	31.7	27.7
3/1	Calver Road Left	U	44	506	67.6%	5.5	38.8	15.1
4/1	Cromwell Ave (West exit)	U	-	806	0.0%	0.0	0.0	0.0
5/1	Calver Road (exit)	U	-	400	0.0%	0.0	0.0	0.0
			C1 Stream: 1 PRC for Signalled Lanes (%):	25.3	Total Delay for Signalled Lanes (pcuHr):	12.98	Cycle Time (s):	120
			C1 Stream: 2 PRC for Signalled Lanes (%):	17.8	Total Delay for Signalled Lanes (pcuHr):	13.67	Cycle Time (s):	120
			C1 Stream: 3 PRC for Signalled Lanes (%):	10.5	Total Delay for Signalled Lanes (pcuHr):	15.82	Cycle Time (s):	120
			C1 Stream: 4 PRC for Signalled Lanes (%):	-3.2	Total Delay for Signalled Lanes (pcuHr):	24.34	Cycle Time (s):	120
			C1 Stream: 5 PRC for Signalled Lanes (%):	85.5	Total Delay for Signalled Lanes (pcuHr):	0.60	Cycle Time (s):	120
			C1 Stream: 6 PRC for Signalled Lanes (%):	60.0	Total Delay for Signalled Lanes (pcuHr):	1.28	Cycle Time (s):	120
			C1 Stream: 7 PRC for Signalled Lanes (%):	168.2	Total Delay for Signalled Lanes (pcuHr):	0.61	Cycle Time (s):	120
			C2 PRC for Signalled Lanes (%):	2.4	Total Delay for Signalled Lanes (pcuHr):	21.12	Cycle Time (s):	120
			PRC Over All Lanes (%):	-3.2	Total Delay Over All Lanes(pcuHr):	90.42		

Full Input Data And Results

Scenario 4: '2025 Do something PM' (FG4: '2025 Do Something PM', Plan 1: 'Network Control Plan 1')

Network Results

Item	Lane Description	Lane Type	Total Green (s)	Demand Flow (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	94.1%	95.8	-	-
J1: A49	-	-	-	-	94.1%	78.4	-	-
1/2+1/1	A49 North Ahead Ahead2	U	59	775	50.0 : 50.0%	2.5	11.5	5.6
1/3+1/4	A49 North Ahead	U	59	799	57.9 : 57.9%	2.8	12.4	6.7
2/1+2/2	Sandy Lane West Left Ahead	U	51	919	94.1 : 94.1%	10.3	40.3	19.4
3/2+3/1	A49 South Ahead Left	U	41:45	819	87.7 : 87.7%	7.0	30.9	14.3
3/3+3/4	A49 South Ahead	U	41	1287	89.2 : 89.2%	10.3	28.9	14.5
4/2+4/1	Cromwell Ave Left	U	32	464	49.6 : 49.6%	1.8	13.9	3.4
4/3	Cromwell Ave Ahead	U	32	422	71.5%	2.7	22.8	7.6
4/4	Cromwell Ave Ahead	U	32	378	64.0%	2.1	20.3	5.8
5/1	A49 North (exit)	U	-	700	0.0%	0.0	0.0	0.0
5/2	A49 North (exit)	U	-	830	0.0%	0.0	0.0	0.0
5/3	A49 North (exit)	U	-	714	0.0%	0.0	0.0	0.0
6/1	Sandy Lane (exit)	U	-	548	0.0%	0.0	0.0	0.0
7/1	A49 South (exit) Ahead	U	112	720	38.4%	0.3	1.6	0.3
7/2	A49 South (exit) Ahead	U	112	735	36.6%	0.3	1.5	0.5
8/1	Rbout Link 1 Right	U	37	214	32.7%	0.8	13.0	1.6
8/2	Rbout Link 1 Right	U	37	275	41.4%	0.5	5.9	0.6
8/3	Rbout Link 1 Right	U	37	378	56.4%	0.8	7.3	0.9
9/1	Rbout Link 2 Ahead	U	45	716	92.1%	7.1	35.7	16.1
9/2	Rbout Link 2 Ahead Right	U	45	765	92.6%	7.7	36.3	13.7
9/3	Rbout Link 2 Right	U	45	412	52.5%	1.6	13.9	4.0
10/1	Rbout Link 3 Ahead	U	47	541	67.4%	2.8	18.5	6.1
10/2+10/3	Rbout Link 3 Right Ahead	U	47	816	92.9 : 92.9%	9.2	40.7	18.2

Full Input Data And Results

11/1	Rbout Link 4 Ahead	U	52	446	49.8%	2.2	17.6	6.9
11/2	Rbout Link 4 Ahead	U	52	725	75.6%	1.9	9.2	2.7
11/3	Rbout Link 4 Ahead Right	U	52	676	75.9%	1.9	9.9	8.7
12/1	Cromwell Ave (exit) Ahead	U	100	844	47.6%	0.8	3.6	5.6
12/2	Cromwell Ave (exit) Ahead	U	100	772	43.5%	0.8	3.8	6.4
13/1	Sandy Lane Crossing Left	U	102	548	34.9%	0.4	2.6	1.7
14/1	A49 Winwick Rd (exit)	U	-	720	0.0%	0.0	0.0	0.0
14/2	A49 Winwick Rd (exit)	U	-	735	0.0%	0.0	0.0	0.0
J2: Calver Rd / A574	-	-	-	-	73.1%	17.3	-	-
1/1	Cromwell Ave (East) Ahead	U	99	1197	73.1%	2.0	6.0	10.9
1/2	Cromwell Ave (East) Right	U	44	419	61.1%	3.8	32.2	11.4
2/2+2/1	Cromwell Ave (West) Ahead Left	U	42	738	72.5 : 72.5%	7.5	36.8	11.4
3/1	Calver Road Left	U	65	656	59.8%	4.0	22.2	15.3
4/1	Cromwell Ave (West exit)	U	-	1197	0.0%	0.0	0.0	0.0
5/1	Calver Road (exit)	U	-	549	0.0%	0.0	0.0	0.0
			C1 Stream: 1 PRC for Signalled Lanes (%):	-3.2	Total Delay for Signalled Lanes (pcuHr):	29.37	Cycle Time (s):	120
			C1 Stream: 2 PRC for Signalled Lanes (%):	18.5	Total Delay for Signalled Lanes (pcuHr):	12.49	Cycle Time (s):	120
			C1 Stream: 3 PRC for Signalled Lanes (%):	55.3	Total Delay for Signalled Lanes (pcuHr):	7.22	Cycle Time (s):	120
			C1 Stream: 4 PRC for Signalled Lanes (%):	-4.6	Total Delay for Signalled Lanes (pcuHr):	26.70	Cycle Time (s):	120
			C1 Stream: 5 PRC for Signalled Lanes (%):	158.0	Total Delay for Signalled Lanes (pcuHr):	0.40	Cycle Time (s):	120
			C1 Stream: 6 PRC for Signalled Lanes (%):	134.2	Total Delay for Signalled Lanes (pcuHr):	0.61	Cycle Time (s):	120
			C1 Stream: 7 PRC for Signalled Lanes (%):	88.9	Total Delay for Signalled Lanes (pcuHr):	1.65	Cycle Time (s):	120
			C2 PRC for Signalled Lanes (%):	23.1	Total Delay for Signalled Lanes (pcuHr):	17.31	Cycle Time (s):	120
			PRC Over All Lanes (%):	-4.6	Total Delay Over All Lanes(pcuHr):	95.76		

Full Input Data And Results

Scenario 5: '2030 Do Min AM' (FG5: '2030 Do Min AM', Plan 1: 'Network Control Plan 1')

Network Results

Item	Lane Description	Lane Type	Total Green (s)	Demand Flow (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	89.6%	84.7	-	-
J1: A49	-	-	-	-	89.6%	63.1	-	-
1/2+1/1	A49 North Ahead Ahead2	U	61	1018	76.9 : 76.9%	4.4	15.7	11.7
1/3+1/4	A49 North Ahead	U	61	1116	82.4 : 82.4%	5.4	17.3	13.9
2/1+2/2	Sandy Lane West Left Ahead	U	28	500	89.6 : 89.6%	6.7	48.5	11.6
3/2+3/1	A49 South Ahead Left	U	43:47	782	66.2 : 66.2%	4.0	18.2	6.2
3/3+3/4	A49 South Ahead	U	43	789	60.6 : 60.6%	4.0	18.1	6.9
4/2+4/1	Cromwell Ave Left	U	44	470	38.3 : 38.3%	1.6	12.6	3.0
4/3	Cromwell Ave Ahead	U	44	600	75.1%	3.5	21.2	10.9
4/4	Cromwell Ave Ahead	U	44	441	55.2%	2.0	16.2	6.5
5/1	A49 North (exit)	U	-	673	0.0%	0.0	0.0	0.0
5/2	A49 North (exit)	U	-	601	0.0%	0.0	0.0	0.0
5/3	A49 North (exit)	U	-	482	0.0%	0.0	0.0	0.0
6/1	Sandy Lane (exit)	U	-	696	0.0%	0.0	0.0	0.0
7/1	A49 South (exit) Ahead	U	112	1047	55.9%	0.6	2.2	0.7
7/2	A49 South (exit) Ahead	U	112	1122	55.9%	0.6	2.1	0.8
8/1	Rbout Link 1 Right	U	35	431	69.4%	2.7	22.3	7.5
8/2	Rbout Link 1 Right	U	35	273	43.3%	1.4	18.2	5.1
8/3	Rbout Link 1 Right	U	35	441	69.4%	3.2	25.9	8.6
9/1	Rbout Link 2 Ahead	U	68	1026	88.6%	5.5	19.3	19.7
9/2	Rbout Link 2 Ahead Right	U	68	1090	87.9%	5.5	18.1	20.3
9/3	Rbout Link 2 Right	U	68	467	39.9%	0.8	6.3	2.6
10/1	Rbout Link 3 Ahead	U	45	272	35.3%	1.2	16.4	5.3
10/2+10/3	Rbout Link 3 Right Ahead	U	45	642	71.3 : 71.3%	2.9	16.2	6.3

Full Input Data And Results

11/1	Rbout Link 4 Ahead	U	40	431	61.9%	1.6	13.5	7.3
11/2	Rbout Link 4 Ahead	U	40	487	65.3%	1.8	13.4	8.5
11/3	Rbout Link 4 Ahead Right	U	40	472	68.7%	2.5	18.9	8.2
12/1	Cromwell Ave (exit) Ahead	U	100	496	28.0%	0.3	2.1	1.1
12/2	Cromwell Ave (exit) Ahead	U	100	599	33.7%	0.3	1.9	0.9
13/1	Sandy Lane Crossing Left	U	102	696	44.3%	0.5	2.6	4.5
14/1	A49 Winwick Rd (exit)	U	-	1047	0.0%	0.0	0.0	0.0
14/2	A49 Winwick Rd (exit)	U	-	1122	0.0%	0.0	0.0	0.0
J2: Calver Rd / A574	-	-	-	-	87.7%	21.6	-	-
1/1	Cromwell Ave (East) Ahead	U	99	799	48.8%	1.1	5.0	6.9
1/2	Cromwell Ave (East) Right	U	24	296	77.6%	5.2	62.7	10.5
2/2+2/1	Cromwell Ave (West) Ahead Left	U	62	1102	87.7 : 87.7%	9.8	31.9	26.7
3/1	Calver Road Left	U	45	523	68.4%	5.6	38.3	15.6
4/1	Cromwell Ave (West exit)	U	-	799	0.0%	0.0	0.0	0.0
5/1	Calver Road (exit)	U	-	410	0.0%	0.0	0.0	0.0
			C1 Stream: 1 PRC for Signalled Lanes (%):	26.3	Total Delay for Signalled Lanes (pcuHr):	12.05	Cycle Time (s):	120
			C1 Stream: 2 PRC for Signalled Lanes (%):	19.8	Total Delay for Signalled Lanes (pcuHr):	13.07	Cycle Time (s):	120
			C1 Stream: 3 PRC for Signalled Lanes (%):	9.3	Total Delay for Signalled Lanes (pcuHr):	17.03	Cycle Time (s):	120
			C1 Stream: 4 PRC for Signalled Lanes (%):	0.4	Total Delay for Signalled Lanes (pcuHr):	18.53	Cycle Time (s):	120
			C1 Stream: 5 PRC for Signalled Lanes (%):	103.1	Total Delay for Signalled Lanes (pcuHr):	0.50	Cycle Time (s):	120
			C1 Stream: 6 PRC for Signalled Lanes (%):	60.9	Total Delay for Signalled Lanes (pcuHr):	1.28	Cycle Time (s):	120
			C1 Stream: 7 PRC for Signalled Lanes (%):	166.8	Total Delay for Signalled Lanes (pcuHr):	0.61	Cycle Time (s):	120
			C2 PRC for Signalled Lanes (%):	2.6	Total Delay for Signalled Lanes (pcuHr):	21.61	Cycle Time (s):	120
			PRC Over All Lanes (%):	0.4	Total Delay Over All Lanes(pcuHr):	84.67		

Full Input Data And Results

Scenario 6: '2030 Do Min PM' (FG6: '2030 Do Min PM', Plan 1: 'Network Control Plan 1')

Network Results

Item	Lane Description	Lane Type	Total Green (s)	Demand Flow (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	90.4%	90.0	-	-
J1: A49	-	-	-	-	90.4%	72.2	-	-
1/2+1/1	A49 North Ahead Ahead2	U	59	756	49.6 : 49.6%	2.5	11.9	6.1
1/3+1/4	A49 North Ahead	U	59	826	59.0 : 59.0%	2.9	12.9	7.3
2/1+2/2	Sandy Lane West Left Ahead	U	47	813	89.0 : 89.0%	7.2	31.9	14.5
3/2+3/1	A49 South Ahead Left	U	42:46	884	90.4 : 90.4%	8.3	33.9	17.8
3/3+3/4	A49 South Ahead	U	42	1213	90.2 : 90.2%	10.2	30.3	16.6
4/2+4/1	Cromwell Ave Left	U	30	484	51.5 : 51.5%	2.0	14.5	3.8
4/3	Cromwell Ave Ahead	U	30	419	75.4%	3.0	25.7	8.5
4/4	Cromwell Ave Ahead	U	30	393	70.6%	2.5	23.4	7.2
5/1	A49 North (exit)	U	-	651	0.0%	0.0	0.0	0.0
5/2	A49 North (exit)	U	-	825	0.0%	0.0	0.0	0.0
5/3	A49 North (exit)	U	-	723	0.0%	0.0	0.0	0.0
6/1	Sandy Lane (exit)	U	-	513	0.0%	0.0	0.0	0.0
7/1	A49 South (exit) Ahead	U	112	728	38.8%	0.3	1.6	0.3
7/2	A49 South (exit) Ahead	U	112	712	35.5%	0.3	1.4	0.6
8/1	Rbout Link 1 Right	U	37	197	30.1%	0.8	15.3	3.0
8/2	Rbout Link 1 Right	U	37	285	42.9%	0.8	9.8	4.5
8/3	Rbout Link 1 Right	U	37	393	58.6%	1.3	12.2	6.4
9/1	Rbout Link 2 Ahead	U	49	725	85.9%	5.5	27.5	15.1
9/2	Rbout Link 2 Ahead Right	U	49	774	86.3%	5.6	26.1	15.7
9/3	Rbout Link 2 Right	U	49	445	52.2%	1.5	12.3	6.2
10/1	Rbout Link 3 Ahead	U	46	510	64.9%	3.3	23.6	8.4
10/2+10/3	Rbout Link 3 Right Ahead	U	46	807	90.0 : 90.0%	6.4	28.4	14.5

Full Input Data And Results

11/1	Rbout Link 4 Ahead	U	54	397	42.7%	0.9	8.3	3.9
11/2	Rbout Link 4 Ahead	U	54	710	71.4%	2.3	11.5	11.9
11/3	Rbout Link 4 Ahead Right	U	54	671	72.7%	2.2	11.8	10.7
12/1	Cromwell Ave (exit) Ahead	U	100	836	47.2%	0.9	3.9	6.4
12/2	Cromwell Ave (exit) Ahead	U	100	800	45.0%	0.9	4.2	6.8
13/1	Sandy Lane Crossing Left	U	102	513	32.7%	0.4	2.5	1.5
14/1	A49 Winwick Rd (exit)	U	-	728	0.0%	0.0	0.0	0.0
14/2	A49 Winwick Rd (exit)	U	-	712	0.0%	0.0	0.0	0.0
J2: Calver Rd / A574	-	-	-	-	75.8%	17.8	-	-
1/1	Cromwell Ave (East) Ahead	U	99	1207	73.7%	1.7	5.2	9.3
1/2	Cromwell Ave (East) Right	U	46	429	59.9%	3.8	32.0	11.3
2/2+2/1	Cromwell Ave (West) Ahead Left	U	40	753	75.8 : 75.8%	8.3	39.6	12.0
3/1	Calver Road Left	U	67	677	59.9%	4.0	21.0	15.4
4/1	Cromwell Ave (West exit)	U	-	1207	0.0%	0.0	0.0	0.0
5/1	Calver Road (exit)	U	-	563	0.0%	0.0	0.0	0.0
			C1 Stream: 1 PRC for Signalled Lanes (%):	-0.5	Total Delay for Signalled Lanes (pcuHr):	28.26	Cycle Time (s):	120
			C1 Stream: 2 PRC for Signalled Lanes (%):	19.3	Total Delay for Signalled Lanes (pcuHr):	12.86	Cycle Time (s):	120
			C1 Stream: 3 PRC for Signalled Lanes (%):	52.5	Total Delay for Signalled Lanes (pcuHr):	8.38	Cycle Time (s):	120
			C1 Stream: 4 PRC for Signalled Lanes (%):	1.1	Total Delay for Signalled Lanes (pcuHr):	19.86	Cycle Time (s):	120
			C1 Stream: 5 PRC for Signalled Lanes (%):	175.6	Total Delay for Signalled Lanes (pcuHr):	0.36	Cycle Time (s):	120
			C1 Stream: 6 PRC for Signalled Lanes (%):	131.7	Total Delay for Signalled Lanes (pcuHr):	0.60	Cycle Time (s):	120
			C1 Stream: 7 PRC for Signalled Lanes (%):	90.7	Total Delay for Signalled Lanes (pcuHr):	1.85	Cycle Time (s):	120
			C2 PRC for Signalled Lanes (%):	18.7	Total Delay for Signalled Lanes (pcuHr):	17.78	Cycle Time (s):	120
			PRC Over All Lanes (%):	-0.5	Total Delay Over All Lanes(pcuHr):	89.96		

Full Input Data And Results

Scenario 7: '2030 Do Something AM' (FG7: '2030 Do Something AM', Plan 1: 'Network Control Plan 1')

Network Results

Item	Lane Description	Lane Type	Total Green (s)	Demand Flow (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	97.1%	113.7	-	-
J1: A49	-	-	-	-	97.1%	88.9	-	-
1/2+1/1	A49 North Ahead Ahead2	U	60	1084	80.5 : 80.5%	5.1	17.1	12.7
1/3+1/4	A49 North Ahead	U	60	1091	81.3 : 81.3%	5.2	17.2	13.4
2/1+2/2	Sandy Lane West Left Ahead	U	34	638	97.1 : 97.1%	12.6	71.2	18.7
3/2+3/1	A49 South Ahead Left	U	40:44	787	69.8 : 69.8%	4.4	20.3	7.0
3/3+3/4	A49 South Ahead	U	40	829	65.5 : 65.5%	4.6	20.2	8.1
4/2+4/1	Cromwell Ave Left	U	43	470	39.1 : 39.1%	1.7	13.4	3.8
4/3	Cromwell Ave Ahead	U	43	623	79.8%	4.2	24.5	12.6
4/4	Cromwell Ave Ahead	U	43	471	60.2%	2.3	17.5	8.0
5/1	A49 North (exit)	U	-	706	0.0%	0.0	0.0	0.0
5/2	A49 North (exit)	U	-	634	0.0%	0.0	0.0	0.0
5/3	A49 North (exit)	U	-	467	0.0%	0.0	0.0	0.0
6/1	Sandy Lane (exit)	U	-	826	0.0%	0.0	0.0	0.0
7/1	A49 South (exit) Ahead	U	112	1071	57.2%	0.7	2.3	0.8
7/2	A49 South (exit) Ahead	U	112	1138	56.7%	0.7	2.1	0.8
8/1	Rbout Link 1 Right	U	36	509	79.8%	4.2	29.5	10.6
8/2	Rbout Link 1 Right	U	36	258	39.8%	0.9	12.1	3.9
8/3	Rbout Link 1 Right	U	36	471	72.1%	2.8	21.6	10.2
9/1	Rbout Link 2 Ahead	U	62	1025	96.8%	12.7	44.8	26.8
9/2	Rbout Link 2 Ahead Right	U	62	1100	97.1%	14.4	47.1	27.7
9/3	Rbout Link 2 Right	U	62	462	43.2%	1.3	10.0	6.3
10/1	Rbout Link 3 Ahead	U	48	332	40.5%	1.2	13.3	6.3
10/2+10/3	Rbout Link 3 Right Ahead	U	48	684	72.3 : 72.3%	2.4	12.8	4.2

Full Input Data And Results

11/1	Rbout Link 4 Ahead	U	41	462	64.8%	1.5	11.8	3.2
11/2	Rbout Link 4 Ahead	U	41	521	68.3%	1.6	11.3	2.3
11/3	Rbout Link 4 Ahead Right	U	41	498	71.1%	2.8	20.3	9.0
12/1	Cromwell Ave (exit) Ahead	U	100	546	30.8%	0.3	2.1	1.1
12/2	Cromwell Ave (exit) Ahead	U	100	605	34.1%	0.3	2.0	1.0
13/1	Sandy Lane Crossing Left	U	102	826	52.6%	0.7	3.1	6.9
14/1	A49 Winwick Rd (exit)	U	-	1071	0.0%	0.0	0.0	0.0
14/2	A49 Winwick Rd (exit)	U	-	1138	0.0%	0.0	0.0	0.0
J2: Calver Rd / A574	-	-	-	-	90.2%	24.8	-	-
1/1	Cromwell Ave (East) Ahead	U	99	850	51.9%	1.3	5.5	10.5
1/2	Cromwell Ave (East) Right	U	22	301	85.8%	6.6	79.2	12.6
2/2+2/1	Cromwell Ave (West) Ahead Left	U	64	1155	90.2 : 90.2%	10.9	33.9	30.4
3/1	Calver Road Left	U	43	523	71.5%	6.0	41.1	16.2
4/1	Cromwell Ave (West exit)	U	-	850	0.0%	0.0	0.0	0.0
5/1	Calver Road (exit)	U	-	415	0.0%	0.0	0.0	0.0
			C1 Stream: 1 PRC for Signalled Lanes (%):	24.4	Total Delay for Signalled Lanes (pcuHr):	12.73	Cycle Time (s):	120
			C1 Stream: 2 PRC for Signalled Lanes (%):	12.8	Total Delay for Signalled Lanes (pcuHr):	14.24	Cycle Time (s):	120
			C1 Stream: 3 PRC for Signalled Lanes (%):	10.6	Total Delay for Signalled Lanes (pcuHr):	18.23	Cycle Time (s):	120
			C1 Stream: 4 PRC for Signalled Lanes (%):	-7.9	Total Delay for Signalled Lanes (pcuHr):	41.03	Cycle Time (s):	120
			C1 Stream: 5 PRC for Signalled Lanes (%):	71.1	Total Delay for Signalled Lanes (pcuHr):	0.71	Cycle Time (s):	120
			C1 Stream: 6 PRC for Signalled Lanes (%):	57.5	Total Delay for Signalled Lanes (pcuHr):	1.33	Cycle Time (s):	120
			C1 Stream: 7 PRC for Signalled Lanes (%):	164.2	Total Delay for Signalled Lanes (pcuHr):	0.65	Cycle Time (s):	120
			C2 PRC for Signalled Lanes (%):	-0.3	Total Delay for Signalled Lanes (pcuHr):	24.76	Cycle Time (s):	120
			PRC Over All Lanes (%):	-7.9	Total Delay Over All Lanes(pcuHr):	113.69		

Full Input Data And Results

Scenario 8: '2030 Do something PM' (FG8: '2030 Do Something PM', Plan 1: 'Network Control Plan 1')

Network Results

Item	Lane Description	Lane Type	Total Green (s)	Demand Flow (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	95.4%	108.3	-	-
J1: A49	-	-	-	-	95.4%	89.4	-	-
1/2+1/1	A49 North Ahead Ahead2	U	61	801	49.5 : 49.5%	2.4	10.7	5.3
1/3+1/4	A49 North Ahead	U	61	822	56.8 : 56.8%	2.6	11.4	6.0
2/1+2/2	Sandy Lane West Left Ahead	U	52	939	94.6 : 94.6%	10.7	41.1	19.9
3/2+3/1	A49 South Ahead Left	U	40:44	842	91.2 : 91.2%	8.6	36.6	16.3
3/3+3/4	A49 South Ahead	U	40	1279	92.9 : 92.9%	12.3	34.7	16.9
4/2+4/1	Cromwell Ave Left	U	32	489	48.9 : 48.9%	1.9	14.0	3.4
4/3	Cromwell Ave Ahead	U	32	437	74.0%	2.9	24.1	7.9
4/4	Cromwell Ave Ahead	U	32	396	67.0%	2.3	21.3	6.4
5/1	A49 North (exit)	U	-	715	0.0%	0.0	0.0	0.0
5/2	A49 North (exit)	U	-	837	0.0%	0.0	0.0	0.0
5/3	A49 North (exit)	U	-	733	0.0%	0.0	0.0	0.0
6/1	Sandy Lane (exit)	U	-	581	0.0%	0.0	0.0	0.0
7/1	A49 South (exit) Ahead	U	112	723	38.6%	0.3	1.6	0.3
7/2	A49 South (exit) Ahead	U	112	749	37.3%	0.3	1.5	0.4
8/1	Rbout Link 1 Right	U	35	223	35.9%	0.8	12.8	1.6
8/2	Rbout Link 1 Right	U	35	277	43.9%	0.5	6.4	0.6
8/3	Rbout Link 1 Right	U	35	396	62.3%	1.0	8.7	1.1
9/1	Rbout Link 2 Ahead	U	44	720	94.6%	8.9	44.6	19.0
9/2	Rbout Link 2 Ahead Right	U	44	772	95.4%	9.9	46.4	20.7
9/3	Rbout Link 2 Right	U	44	446	58.0%	1.9	15.3	5.0
10/1	Rbout Link 3 Ahead	U	48	548	66.9%	2.7	18.1	5.5
10/2+10/3	Rbout Link 3 Right Ahead	U	48	857	95.0 : 95.0%	11.2	46.9	20.9

Full Input Data And Results

11/1	Rbout Link 4 Ahead	U	52	462	51.6%	2.0	15.9	6.9
11/2	Rbout Link 4 Ahead	U	52	719	75.0%	1.8	9.2	2.8
11/3	Rbout Link 4 Ahead Right	U	52	678	76.1%	2.0	10.7	8.3
12/1	Cromwell Ave (exit) Ahead	U	100	860	48.5%	0.9	3.7	5.6
12/2	Cromwell Ave (exit) Ahead	U	100	807	45.4%	0.9	4.0	6.2
13/1	Sandy Lane Crossing Left	U	102	581	37.0%	0.4	2.7	1.8
14/1	A49 Winwick Rd (exit)	U	-	723	0.0%	0.0	0.0	0.0
14/2	A49 Winwick Rd (exit)	U	-	749	0.0%	0.0	0.0	0.0
J2: Calver Rd / A574	-	-	-	-	76.8%	19.0	-	-
1/1	Cromwell Ave (East) Ahead	U	99	1238	75.6%	2.6	7.5	13.2
1/2	Cromwell Ave (East) Right	U	45	429	61.2%	3.8	32.0	11.8
2/2+2/1	Cromwell Ave (West) Ahead Left	U	41	770	76.8 : 76.8%	8.4	39.2	12.3
3/1	Calver Road Left	U	66	686	61.6%	4.2	22.0	16.0
4/1	Cromwell Ave (West exit)	U	-	1238	0.0%	0.0	0.0	0.0
5/1	Calver Road (exit)	U	-	563	0.0%	0.0	0.0	0.0
			C1 Stream: 1 PRC for Signalled Lanes (%):	-5.6	Total Delay for Signalled Lanes (pcuHr):	34.81	Cycle Time (s):	120
			C1 Stream: 2 PRC for Signalled Lanes (%):	18.2	Total Delay for Signalled Lanes (pcuHr):	13.05	Cycle Time (s):	120
			C1 Stream: 3 PRC for Signalled Lanes (%):	44.5	Total Delay for Signalled Lanes (pcuHr):	7.24	Cycle Time (s):	120
			C1 Stream: 4 PRC for Signalled Lanes (%):	-6.0	Total Delay for Signalled Lanes (pcuHr):	31.45	Cycle Time (s):	120
			C1 Stream: 5 PRC for Signalled Lanes (%):	143.3	Total Delay for Signalled Lanes (pcuHr):	0.43	Cycle Time (s):	120
			C1 Stream: 6 PRC for Signalled Lanes (%):	133.3	Total Delay for Signalled Lanes (pcuHr):	0.62	Cycle Time (s):	120
			C1 Stream: 7 PRC for Signalled Lanes (%):	85.4	Total Delay for Signalled Lanes (pcuHr):	1.76	Cycle Time (s):	120
			C2 PRC for Signalled Lanes (%):	17.2	Total Delay for Signalled Lanes (pcuHr):	18.96	Cycle Time (s):	120
			PRC Over All Lanes (%):	-6.0	Total Delay Over All Lanes(pcuHr):	108.32		

Full Input Data And Results

Scenario 9: '2030 Through AM' (FG9: '2030 Through AM', Plan 1: 'Network Control Plan 1')

Network Results

Item	Lane Description	Lane Type	Total Green (s)	Demand Flow (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	89.6%	88.0	-	-
J1: A49	-	-	-	-	89.6%	65.4	-	-
1/2+1/1	A49 North Ahead Ahead2	U	63	1056	76.3 : 76.3%	4.3	14.6	10.6
1/3+1/4	A49 North Ahead	U	63	1143	81.1 : 81.1%	5.0	15.7	11.9
2/1+2/2	Sandy Lane West Left Ahead	U	28	483	89.6 : 89.6%	6.7	49.6	11.5
3/2+3/1	A49 South Ahead Left	U	38:42	778	70.5 : 70.5%	4.7	22.0	7.8
3/3+3/4	A49 South Ahead	U	38	837	65.8 : 65.8%	5.0	21.7	8.8
4/2+4/1	Cromwell Ave Left	U	41	526	43.5 : 43.5%	2.2	15.0	3.8
4/3	Cromwell Ave Ahead	U	41	588	78.8%	4.2	25.8	11.7
4/4	Cromwell Ave Ahead	U	41	450	60.2%	2.4	19.6	7.4
5/1	A49 North (exit)	U	-	683	0.0%	0.0	0.0	0.0
5/2	A49 North (exit)	U	-	638	0.0%	0.0	0.0	0.0
5/3	A49 North (exit)	U	-	486	0.0%	0.0	0.0	0.0
6/1	Sandy Lane (exit)	U	-	715	0.0%	0.0	0.0	0.0
7/1	A49 South (exit) Ahead	U	112	1064	56.8%	0.7	2.2	0.9
7/2	A49 South (exit) Ahead	U	112	1123	56.0%	0.6	2.0	0.9
8/1	Rbout Link 1 Right	U	33	417	71.0%	2.7	23.7	7.7
8/2	Rbout Link 1 Right	U	33	277	46.4%	1.1	14.8	5.4
8/3	Rbout Link 1 Right	U	33	450	74.8%	3.1	24.5	9.8
9/1	Rbout Link 2 Ahead	U	68	1035	89.4%	6.0	20.9	20.0
9/2	Rbout Link 2 Ahead Right	U	68	1099	88.7%	5.9	19.4	20.5
9/3	Rbout Link 2 Right	U	68	494	42.2%	0.8	6.1	2.6
10/1	Rbout Link 3 Ahead	U	50	292	34.3%	1.2	14.9	5.8
10/2+10/3	Rbout Link 3 Right Ahead	U	50	632	66.2 : 66.2%	2.3	12.9	5.1

Full Input Data And Results

11/1	Rbout Link 4 Ahead	U	43	421	56.4%	1.4	12.0	6.4
11/2	Rbout Link 4 Ahead	U	43	506	63.3%	1.8	12.8	7.6
11/3	Rbout Link 4 Ahead Right	U	43	460	62.5%	1.6	12.7	7.3
12/1	Cromwell Ave (exit) Ahead	U	100	504	28.4%	0.5	3.4	3.0
12/2	Cromwell Ave (exit) Ahead	U	100	648	36.5%	0.5	2.9	2.6
13/1	Sandy Lane Crossing Left	U	102	715	45.5%	0.5	2.7	4.2
14/1	A49 Winwick Rd (exit)	U	-	1064	0.0%	0.0	0.0	0.0
14/2	A49 Winwick Rd (exit)	U	-	1123	0.0%	0.0	0.0	0.0
J2: Calver Rd / A574	-	-	-	-	89.6%	22.6	-	-
1/1	Cromwell Ave (East) Ahead	U	99	852	52.0%	0.8	3.4	6.2
1/2	Cromwell Ave (East) Right	U	23	300	82.0%	5.4	64.5	10.9
2/2+2/1	Cromwell Ave (West) Ahead Left	U	63	1155	89.6 : 89.6%	10.6	33.1	28.9
3/1	Calver Road Left	U	44	523	69.9%	5.8	39.7	15.8
4/1	Cromwell Ave (West exit)	U	-	852	0.0%	0.0	0.0	0.0
5/1	Calver Road (exit)	U	-	414	0.0%	0.0	0.0	0.0
			C1 Stream: 1 PRC for Signalled Lanes (%):	27.7	Total Delay for Signalled Lanes (pcuHr):	13.27	Cycle Time (s):	120
			C1 Stream: 2 PRC for Signalled Lanes (%):	14.2	Total Delay for Signalled Lanes (pcuHr):	13.69	Cycle Time (s):	120
			C1 Stream: 3 PRC for Signalled Lanes (%):	10.9	Total Delay for Signalled Lanes (pcuHr):	16.21	Cycle Time (s):	120
			C1 Stream: 4 PRC for Signalled Lanes (%):	0.4	Total Delay for Signalled Lanes (pcuHr):	19.44	Cycle Time (s):	120
			C1 Stream: 5 PRC for Signalled Lanes (%):	97.7	Total Delay for Signalled Lanes (pcuHr):	0.54	Cycle Time (s):	120
			C1 Stream: 6 PRC for Signalled Lanes (%):	58.5	Total Delay for Signalled Lanes (pcuHr):	1.30	Cycle Time (s):	120
			C1 Stream: 7 PRC for Signalled Lanes (%):	146.7	Total Delay for Signalled Lanes (pcuHr):	1.00	Cycle Time (s):	120
			C2 PRC for Signalled Lanes (%):	0.5	Total Delay for Signalled Lanes (pcuHr):	22.57	Cycle Time (s):	120
			PRC Over All Lanes (%):	0.4	Total Delay Over All Lanes(pcuHr):	88.02		

Full Input Data And Results

Scenario 10: '2030 Through PM' (FG10: '2030 Through PM', Plan 1: 'Network Control Plan 1')

Network Results

Item	Lane Description	Lane Type	Total Green (s)	Demand Flow (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	88.0%	81.8	-	-
J1: A49	-	-	-	-	88.0%	62.9	-	-
1/2+1/1	A49 North Ahead Ahead2	U	58	721	49.3 : 49.3%	2.3	11.7	5.5
1/3+1/4	A49 North Ahead	U	58	838	58.7 : 58.7%	2.9	12.6	6.2
2/1+2/2	Sandy Lane West Left Ahead	U	43	703	86.8 : 86.8%	6.3	32.3	13.1
3/2+3/1	A49 South Ahead Left	U	46:50	951	86.9 : 86.9%	6.9	26.1	14.2
3/3+3/4	A49 South Ahead	U	46	1161	78.7 : 78.7%	6.7	20.7	10.7
4/2+4/1	Cromwell Ave Left	U	31	515	53.2 : 53.2%	2.2	15.5	4.4
4/3	Cromwell Ave Ahead	U	31	413	72.1%	2.7	23.8	9.1
4/4	Cromwell Ave Ahead	U	31	394	68.7%	2.5	23.2	7.6
5/1	A49 North (exit)	U	-	676	0.0%	0.0	0.0	0.0
5/2	A49 North (exit)	U	-	793	0.0%	0.0	0.0	0.0
5/3	A49 North (exit)	U	-	689	0.0%	0.0	0.0	0.0
6/1	Sandy Lane (exit)	U	-	464	0.0%	0.0	0.0	0.0
7/1	A49 South (exit) Ahead	U	112	724	38.6%	0.3	1.6	0.3
7/2	A49 South (exit) Ahead	U	112	677	33.8%	0.3	1.4	0.4
8/1	Rbout Link 1 Right	U	38	181	26.9%	0.7	13.2	2.6
8/2	Rbout Link 1 Right	U	38	284	41.7%	1.2	15.7	5.9
8/3	Rbout Link 1 Right	U	38	394	57.3%	2.1	19.5	7.7
9/1	Rbout Link 2 Ahead	U	53	722	79.4%	3.8	19.0	9.8
9/2	Rbout Link 2 Ahead Right	U	53	768	79.6%	3.9	18.2	9.6
9/3	Rbout Link 2 Right	U	53	464	50.5%	1.4	11.2	4.0
10/1	Rbout Link 3 Ahead	U	42	542	75.2%	4.4	29.1	10.0
10/2+10/3	Rbout Link 3 Right Ahead	U	42	714	88.0 : 88.0%	5.7	28.5	11.0

Full Input Data And Results

11/1	Rbout Link 4 Ahead	U	53	409	44.8%	1.2	10.6	5.1
11/2	Rbout Link 4 Ahead	U	53	669	68.5%	1.6	8.7	11.1
11/3	Rbout Link 4 Ahead Right	U	53	617	68.0%	1.8	10.4	9.9
12/1	Cromwell Ave (exit) Ahead	U	100	866	48.9%	0.8	3.2	2.9
12/2	Cromwell Ave (exit) Ahead	U	100	807	45.4%	0.7	3.3	3.0
13/1	Sandy Lane Crossing Left	U	102	464	29.5%	0.3	2.4	1.4
14/1	A49 Winwick Rd (exit)	U	-	724	0.0%	0.0	0.0	0.0
14/2	A49 Winwick Rd (exit)	U	-	677	0.0%	0.0	0.0	0.0
J2: Calver Rd / A574	-	-	-	-	77.0%	19.0	-	-
1/1	Cromwell Ave (East) Ahead	U	99	1243	75.9%	2.6	7.6	11.7
1/2	Cromwell Ave (East) Right	U	46	430	60.0%	3.7	31.3	11.3
2/2+2/1	Cromwell Ave (West) Ahead Left	U	40	771	77.0 : 77.0%	8.6	40.1	12.2
3/1	Calver Road Left	U	67	685	60.6%	4.0	21.2	15.8
4/1	Cromwell Ave (West exit)	U	-	1243	0.0%	0.0	0.0	0.0
5/1	Calver Road (exit)	U	-	564	0.0%	0.0	0.0	0.0
			C1 Stream: 1 PRC for Signalled Lanes (%):	2.3	Total Delay for Signalled Lanes (pcuHr):	23.62	Cycle Time (s):	120
			C1 Stream: 2 PRC for Signalled Lanes (%):	24.8	Total Delay for Signalled Lanes (pcuHr):	12.09	Cycle Time (s):	120
			C1 Stream: 3 PRC for Signalled Lanes (%):	53.4	Total Delay for Signalled Lanes (pcuHr):	9.30	Cycle Time (s):	120
			C1 Stream: 4 PRC for Signalled Lanes (%):	3.7	Total Delay for Signalled Lanes (pcuHr):	15.45	Cycle Time (s):	120
			C1 Stream: 5 PRC for Signalled Lanes (%):	204.7	Total Delay for Signalled Lanes (pcuHr):	0.31	Cycle Time (s):	120
			C1 Stream: 6 PRC for Signalled Lanes (%):	132.9	Total Delay for Signalled Lanes (pcuHr):	0.57	Cycle Time (s):	120
			C1 Stream: 7 PRC for Signalled Lanes (%):	84.1	Total Delay for Signalled Lanes (pcuHr):	1.52	Cycle Time (s):	120
			C2 PRC for Signalled Lanes (%):	16.8	Total Delay for Signalled Lanes (pcuHr):	18.98	Cycle Time (s):	120
			PRC Over All Lanes (%):	2.3	Total Delay Over All Lanes(pcuHr):	81.83		

Appendix 74

Enfield Park Road/Crab Lane MCC and Enfield Park Road ATC Comparison Summary

Warrington - Manual Traffic Survey, Thursday 14th December 2017

Produced by Road Data Services Ltd

Junction: Enfield Park Road / Crab Lane

Approach: Enfield Park Road (North)

TIME	Left to Crab Lane								S/B to Enfield Park Road (South)							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0700 - 0715	0	0	54	2	0	0	0	56	0	0	1	0	0	0	0	1
0715 - 0730	0	0	44	4	0	0	0	48	0	0	1	0	0	0	0	1
0730 - 0745	0	0	61	4	0	0	1	66	0	0	1	1	0	0	1	3
0745 - 0800	0	0	60	1	0	0	0	61	0	0	0	2	0	0	1	3
Hourly Total	0	0	219	11	0	0	1	231	0	0	3	3	0	0	2	8
0800 - 0815	0	0	71	1	1	0	0	73	0	0	1	0	0	0	1	2
0815 - 0830	0	0	72	3	1	0	0	76	0	0	2	0	0	0	0	2
0830 - 0845	0	0	71	3	0	0	0	74	0	0	3	1	0	0	0	4
0845 - 0900	0	1	60	2	0	0	0	63	0	0	5	0	0	0	0	5
Hourly Total	0	1	274	9	2	0	0	286	0	0	11	1	0	0	1	13
0900 - 0915	0	0	49	1	0	0	0	50	0	0	5	0	0	0	0	5
0915 - 0930	0	0	42	0	0	0	0	42	0	0	6	0	0	0	0	6
0930 - 0945	0	0	39	5	0	0	1	45	0	0	5	0	0	0	0	5
0945 - 1000	0	0	21	1	0	0	0	22	0	0	5	0	0	0	0	5
Hourly Total	0	0	151	7	0	0	1	159	0	0	21	0	0	0	0	21

Session Total	0	1	644	27	2	0	2	676	0	0	35	4	0	0	3	42
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1600 - 1615	0	0	22	2	0	0	0	24	0	0	7	0	0	0	1	8
1615 - 1630	0	0	26	0	0	0	0	26	0	0	3	0	0	0	0	3
1630 - 1645	0	0	24	3	0	0	0	27	0	1	4	0	0	0	0	5
1645 - 1700	0	0	25	0	0	0	0	25	0	0	4	0	0	0	1	5
Hourly Total	0	0	97	5	0	0	0	102	0	1	18	0	0	0	2	21
1700 - 1715	0	0	17	0	0	0	0	17	0	0	4	0	0	0	0	4
1715 - 1730	0	0	19	1	0	0	0	20	0	0	10	0	0	0	1	11
1730 - 1745	0	0	15	5	0	0	1	21	0	0	6	0	0	0	0	6
1745 - 1800	0	0	20	1	0	0	0	21	0	0	6	0	0	0	1	7
Hourly Total	0	0	71	7	0	0	1	79	0	0	26	0	0	0	2	28
1800 - 1815	0	0	17	2	0	0	0	19	0	0	6	0	0	0	1	7
1815 - 1830	0	0	22	0	0	0	0	22	0	0	10	1	0	0	0	11
1830 - 1845	0	0	20	0	0	0	0	20	0	0	7	0	0	0	1	8
1845 - 1900	0	0	9	0	0	0	0	9	0	0	4	2	0	0	1	7
Hourly Total	0	0	68	2	0	0	0	70	0	0	27	3	0	0	3	33

Session Total	0	0	236	14	0	0	1	251	0	1	71	3	0	0	7	82
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Warrington - Manual Traffic Survey, Thursday 14th December 2017

Produced by Road Data Services Ltd

Junction: Enfield Park Road / Crab Lane

Approach: Crab Lane

TIME	Left to Enfield Park Road (South)								Right to Enfield Park Road (North)							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0700 - 0715	0	0	14	3	0	0	1	18	0	0	7	3	0	0	0	10
0715 - 0730	0	0	17	1	0	0	0	18	0	0	8	0	2	0	0	10
0730 - 0745	0	0	37	4	0	0	1	42	0	0	4	0	0	0	0	4
0745 - 0800	0	0	33	0	0	0	2	35	0	0	12	1	0	0	0	13
Hourly Total	0	0	101	8	0	0	4	113	0	0	31	4	2	0	0	37
0800 - 0815	1	0	42	5	0	0	1	49	0	0	13	1	0	0	0	14
0815 - 0830	0	0	45	2	0	0	2	49	0	0	15	3	0	0	0	18
0830 - 0845	1	0	60	1	0	0	1	63	0	0	10	1	1	0	0	12
0845 - 0900	0	0	48	2	0	0	1	51	0	0	8	0	0	0	0	8
Hourly Total	2	0	195	10	0	0	5	212	0	0	46	5	1	0	0	52
0900 - 0915	0	0	45	5	0	0	1	51	0	0	11	2	0	0	0	13
0915 - 0930	0	0	24	4	1	0	0	29	0	0	13	0	0	0	0	13
0930 - 0945	0	0	20	0	0	0	1	21	0	0	11	2	0	0	0	13
0945 - 1000	0	0	22	3	1	0	1	27	0	0	16	0	0	0	0	16
Hourly Total	0	0	111	12	2	0	3	128	0	0	51	4	0	0	0	55

Session Total	2	0	407	30	2	0	12	453	0	0	128	13	3	0	0	144
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1600 - 1615	0	1	78	7	0	0	1	87	0	0	39	5	0	0	0	44
1615 - 1630	0	0	84	4	0	0	0	88	0	0	33	5	0	0	0	38
1630 - 1645	0	0	85	3	0	0	0	88	0	0	32	3	0	0	0	35
1645 - 1700	0	0	66	7	0	0	2	75	1	0	37	3	0	0	0	41
Hourly Total	0	1	313	21	0	0	3	338	1	0	141	16	0	0	0	158
1700 - 1715	0	1	98	4	1	0	0	104	0	1	35	2	0	0	0	38
1715 - 1730	0	0	81	9	0	0	0	90	0	0	55	4	0	0	0	59
1730 - 1745	0	0	76	7	2	0	1	86	0	0	41	3	2	0	0	46
1745 - 1800	0	1	65	2	0	0	0	68	0	1	32	1	0	0	0	34
Hourly Total	0	2	320	22	3	0	1	348	0	2	163	10	2	0	0	177
1800 - 1815	0	0	69	2	0	0	2	73	0	0	56	2	0	0	0	58
1815 - 1830	0	0	46	0	0	0	1	47	0	0	26	2	0	0	0	28
1830 - 1845	0	0	47	5	0	0	0	52	0	0	28	2	0	0	0	30
1845 - 1900	0	0	18	2	0	0	1	21	0	0	12	2	0	0	0	14
Hourly Total	0	0	180	9	0	0	4	193	0	0	122	8	0	0	0	130

Session Total	0	3	813	52	3	0	8	879	1	2	426	34	2	0	0	465
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Warrington - Manual Traffic Survey, Thursday 14th December 2017

Produced by Road Data Services Ltd

Junction: Enfield Park Road / Crab Lane

Approach: Enfield Park Road (South)

TIME	N/B to Enfield Park Road (North)								Right to Crab Lane							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0700 - 0715	0	0	7	0	0	0	0	7	0	1	48	7	1	0	1	58
0715 - 0730	0	0	5	0	0	0	1	6	0	0	60	0	2	0	0	62
0730 - 0745	0	0	5	0	0	0	1	6	0	1	87	6	0	0	1	95
0745 - 0800	0	0	6	2	0	0	2	10	0	0	111	17	0	0	1	129
Hourly Total	0	0	23	2	0	0	4	29	0	2	306	30	3	0	3	344
0800 - 0815	0	0	8	2	0	0	0	10	2	0	94	8	0	0	0	104
0815 - 0830	0	0	9	0	0	0	0	9	0	0	98	6	0	0	2	106
0830 - 0845	0	1	12	2	0	0	1	16	0	0	85	6	1	0	1	93
0845 - 0900	1	0	6	1	1	0	0	9	0	0	79	7	0	0	1	87
Hourly Total	1	1	35	5	1	0	1	44	2	0	356	27	1	0	4	390
0900 - 0915	0	0	11	1	0	0	1	13	0	0	58	1	1	0	0	60
0915 - 0930	0	0	8	1	0	0	0	9	0	1	43	0	0	0	1	45
0930 - 0945	1	0	9	1	0	0	1	12	0	0	37	2	2	0	0	41
0945 - 1000	0	1	5	0	0	0	0	6	0	0	23	1	1	0	2	27
Hourly Total	1	1	33	3	0	0	2	40	0	1	161	4	4	0	3	173

Session Total	2	2	91	10	1	0	7	113	2	3	823	61	8	0	10	907
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1600 - 1615	0	0	5	0	0	0	0	5	1	0	46	2	0	0	0	49
1615 - 1630	0	0	8	2	0	0	0	10	0	0	43	7	0	0	2	52
1630 - 1645	0	0	7	0	0	0	0	7	0	0	43	4	0	0	0	47
1645 - 1700	0	0	9	0	0	0	0	9	0	0	41	1	0	0	2	44
Hourly Total	0	0	29	2	0	0	0	31	1	0	173	14	0	0	4	192
1700 - 1715	0	0	5	0	0	0	0	5	0	1	40	2	0	0	0	43
1715 - 1730	0	0	12	1	0	0	0	13	0	0	40	3	0	0	0	43
1730 - 1745	0	0	6	0	0	0	0	6	0	0	42	1	2	0	0	45
1745 - 1800	0	0	10	1	0	0	0	11	0	0	39	0	1	0	1	41
Hourly Total	0	0	33	2	0	0	0	35	0	1	161	6	3	0	1	172
1800 - 1815	0	0	7	0	0	0	0	7	0	0	35	2	0	0	1	38
1815 - 1830	0	0	8	0	0	0	0	8	0	0	31	2	0	0	1	34
1830 - 1845	0	0	5	0	0	0	0	5	0	0	36	3	0	0	1	40
1845 - 1900	0	0	3	0	0	0	0	3	0	0	23	0	0	0	0	23
Hourly Total	0	0	23	0	0	0	0	23	0	0	125	7	0	0	3	135

Session Total	0	0	85	4	0	0	0	89	1	1	459	27	3	0	8	499
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December 2017

MCC count data has been obtained for the junction of Enfield Park Road and Crab Lane for Thursday 14th December 2017.

ATC count data has been obtained for Enfield Park Road to the south of this junction for the period of 5th February 2016 through 11th February 2016.

The MCC data has been compared with the weekday average ATC data. An overview of the comparison is provided below.

MCC count during the AM northbound carried 166 additional vehicles when compared with the ATC over the 07:00-10:00 period.

MCC count during the PM northbound carried 28 additional vehicles when compared with the ATC over the same 16:00-19:00 period.

MCC count during the AM southbound carried 36 fewer vehicles when compared with the ATC over the 07:00-10:00 period.

MCC count during the PM southbound carried 5 additional vehicles when compared with the ATC over the 16:00-19:00 period.

The MCC and ATC data therefore appear to correlate well during the majority of periods in each direction excluding possibly westbound along Crab Lane.

Appendix 75

Revised Enfield Park Road/Crab Lane Base Model

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.0.2.5947
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Filename: 18122017 Enfield Park Rd Crab Lane Existing Arrangement.j9
Report generation date: 25/01/2018 11:32:26

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2025								
Stream B-C	0.6	8.15	0.36	A	32.6	177.28	1.09	F
Stream B-A	0.3	16.04	0.22	C	12.5	229.69	1.06	F
Stream C-AB	18.4	103.28	1.00	F	0.7	9.22	0.41	A
A1 - 2030								
Stream B-C	0.7	9.00	0.41	A	30.9	172.06	1.08	F
Stream B-A	0.4	21.32	0.28	C	12.2	224.10	1.06	F
Stream C-AB	51.5	257.93	1.13	F	0.9	10.16	0.46	B
A1 - 2030 Through Route								
Stream B-C	0.7	9.48	0.43	A	29.5	166.27	1.08	F
Stream B-A	0.4	24.64	0.31	C	11.9	218.29	1.05	F
Stream C-AB	66.6	356.02	1.18	F	0.9	10.32	0.47	B
A1 - Base Model								
Stream B-C	0.5	7.53	0.32	A	1.7	15.59	0.63	C
Stream B-A	0.2	12.81	0.19	B	1.0	17.90	0.50	C
Stream C-AB	4.4	30.37	0.82	D	0.4	7.96	0.31	A

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

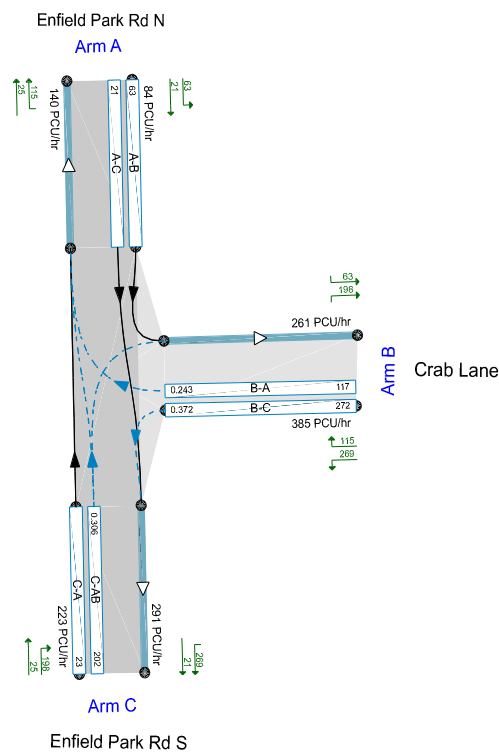
File summary

File Description

Title	(untitled)
Location	
Site number	
Date	14/11/2017
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	
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 modelled flow through junction (PCU/hr).
Streams (upstream end) show Total Demand (PCU/hr); Streams (downstream end) show RFC (.)
Time Segment: 16:45-17:00

The junction diagram reflects the last run of Junctions.

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025	AM	ONE HOUR	07:45	09:15	15	✓
D2	2025	PM	ONE HOUR	16:45	18:15	15	✓
D3	2030	AM	ONE HOUR	07:45	09:15	15	✓
D4	2030	PM	ONE HOUR	16:45	18:15	15	✓
D5	2030 Through Route	AM	ONE HOUR	07:45	09:15	15	✓
D6	2030 Through Route	PM	ONE HOUR	16:45	18:15	15	✓
D7	Base Model	AM	ONE HOUR	07:45	09:15	15	✓
D8	Base Model	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	(Default Analysis Set)	✓	100.000	100.000

(Default Analysis Set) - 2025, AM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Enfield Park Rd / Crab Lane	T-Junction	Two-way	52.80	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Enfield Park Rd N		Major
B	Crab's Lane		Minor
C	Enfield Park Rd S		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.80			170.0	✓	1.00

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

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	5.20	3.65	3.65	3.65	✓	1.00	99	138

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	581	0.102	0.258	0.163	0.369
1	B-C	783	0.116	0.293	-	-
1	C-B	672	0.251	0.251	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	299	100.000
B		ONE HOUR	✓	285	100.000
C		ONE HOUR	✓	583	100.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.36	8.15	0.6	A	208	312
B-A	0.22	16.04	0.3	C	53	80
C-AB	1.00	103.28	18.4	F	523	784
C-A					12	18
A-B					262	394
A-C					12	18

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	171	43	733	0.233	170	0.0	0.3	6.376	A
B-A	44	11	398	0.110	43	0.0	0.1	10.138	B
C-AB	418	105	639	0.654	411	0.0	1.9	15.320	C
C-A	21	5			21				
A-B	215	54			215				
A-C	10	2			10				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	204	51	719	0.284	204	0.3	0.4	6.980	A
B-A	52	13	357	0.146	52	0.1	0.2	11.779	B
C-AB	508	127	639	0.795	501	1.9	3.6	25.071	D
C-A	16	4			16				
A-B	257	64			257				
A-C	12	3			12				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	250	62	695	0.360	249	0.4	0.6	8.071	A
B-A	64	16	301	0.212	63	0.2	0.3	15.123	C
C-AB	642	160	642	0.999	604	3.6	13.1	64.510	F
C-A	0.10	0.03			0.10				
A-B	315	79			315				
A-C	14	4			14				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	250	62	692	0.361	250	0.6	0.6	8.150	A
B-A	64	16	288	0.222	64	0.3	0.3	16.044	C
C-AB	642	160	642	0.999	621	13.1	18.4	103.278	F
C-A	0.10	0.03			0.10				
A-B	315	79			315				
A-C	14	4			14				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	204	51	716	0.285	205	0.6	0.4	7.046	A
B-A	52	13	335	0.156	53	0.3	0.2	12.783	B
C-AB	508	127	639	0.795	562	18.4	4.8	59.459	F
C-A	16	4			16				
A-B	257	64			257				
A-C	12	3			12				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	171	43	732	0.233	171	0.4	0.3	6.421	A
B-A	44	11	391	0.112	44	0.2	0.1	10.380	B
C-AB	418	105	639	0.654	429	4.8	2.1	17.959	C
C-A	21	5			21				
A-B	215	54			215				
A-C	10	2			10				

(Default Analysis Set) - 2025, PM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Enfield Park Rd / Crab Lane	T-Junction	Two-way	128.22	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2025	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	112	100.000
B		ONE HOUR	✓	752	100.000
C		ONE HOUR	✓	269	100.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	1.09	177.28	32.6	F	519	779
B-A	1.06	229.69	12.5	F	171	256
C-AB	0.41	9.22	0.7	A	220	330
C-A					27	40
A-B					77	116
A-C					26	39

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	426	107	684	0.623	420	0.0	1.6	13.319	B
B-A	140	35	409	0.343	138	0.0	0.5	13.199	B
C-AB	180	45	658	0.273	178	0.0	0.4	7.479	A
C-A	23	6			23				
A-B	63	16			63				
A-C	21	5			21				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	509	127	642	0.792	502	1.6	3.4	24.383	C
B-A	167	42	312	0.536	165	0.5	1.1	24.090	C
C-AB	215	54	657	0.328	215	0.4	0.5	8.138	A
C-A	26	7			26				
A-B	76	19			76				
A-C	25	6			25				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	623	156	586	1.064	563	3.4	18.3	87.700	F
B-A	205	51	192	1.065	175	1.1	8.5	131.758	F
C-AB	266	66	656	0.405	265	0.5	0.7	9.188	A
C-A	30	8			30				
A-B	92	23			92				
A-C	31	8			31				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	623	156	572	1.090	566	18.3	32.6	177.279	F
B-A	205	51	196	1.044	189	8.5	12.5	229.685	F
C-AB	266	66	656	0.405	266	0.7	0.7	9.225	A
C-A	30	8			30				
A-B	92	23			92				
A-C	31	8			31				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	509	127	590	0.863	572	32.6	16.8	159.796	F
B-A	167	42	200	0.834	188	12.5	7.5	200.809	F
C-AB	215	54	657	0.328	216	0.7	0.5	8.185	A
C-A	26	7			26				
A-B	76	19			76				
A-C	25	6			25				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	426	107	652	0.654	485	16.8	2.0	28.808	D
B-A	140	35	348	0.403	167	7.5	0.7	22.853	C
C-AB	180	45	658	0.273	180	0.5	0.4	7.541	A
C-A	23	6			23				
A-B	63	16			63				
A-C	21	5			21				

(Default Analysis Set) - 2030, AM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Enfield Park Rd / Crab Lane	T-Junction	Two-way	134.51	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2030	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	299	100.000
B		ONE HOUR	✓	309	100.000
C		ONE HOUR	✓	653	100.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.41	9.00	0.7	A	230	345
B-A	0.28	21.32	0.4	C	53	80
C-AB	1.13	257.93	51.5	F	591	886
C-A					8	12
A-B					262	394
A-C					12	18

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	189	47	733	0.258	188	0.0	0.3	6.588	A
B-A	44	11	376	0.116	43	0.0	0.1	10.815	B
C-AB	475	119	643	0.740	464	0.0	2.7	19.272	C
C-A	16	4			16				
A-B	215	54			215				
A-C	10	2			10				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	226	56	717	0.315	225	0.3	0.5	7.313	A
B-A	52	13	330	0.158	52	0.1	0.2	12.955	B
C-AB	579	145	644	0.899	563	2.7	6.6	39.371	E
C-A	8	2			8				
A-B	257	64			257				
A-C	12	3			12				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	276	69	687	0.402	276	0.5	0.7	8.727	A
B-A	64	16	264	0.242	63	0.2	0.3	17.875	C
C-AB	719	180	636	1.130	625	6.6	30.1	122.240	F
C-A	0	0			0				
A-B	315	79			315				
A-C	14	4			14				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	276	69	676	0.409	276	0.7	0.7	8.999	A
B-A	64	16	232	0.275	64	0.3	0.4	21.324	C
C-AB	719	180	636	1.130	634	30.1	51.5	244.373	F
C-A	0	0			0				
A-B	315	79			315				
A-C	14	4			14				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	226	56	705	0.320	226	0.7	0.5	7.529	A
B-A	52	13	262	0.199	53	0.4	0.3	17.213	C
C-AB	579	145	644	0.899	645	51.5	35.0	257.930	F
C-A	8	2			8				
A-B	257	64			257				
A-C	12	3			12				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	189	47	728	0.260	189	0.5	0.4	6.694	A
B-A	44	11	326	0.134	44	0.3	0.2	12.770	B
C-AB	475	119	643	0.740	601	35.0	3.6	108.011	F
C-A	16	4			16				
A-B	215	54			215				
A-C	10	2			10				

(Default Analysis Set) - 2030, PM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Enfield Park Rd / Crab Lane	T-Junction	Two-way	121.18	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2030	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	112	100.000
B		ONE HOUR	✓	741	100.000
C		ONE HOUR	✓	302	100.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	1.08	172.06	30.9	F	509	764
B-A	1.06	224.10	12.2	F	171	256
C-AB	0.46	10.16	0.9	B	252	377
C-A					26	38
A-B					77	116
A-C					26	39

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	418	104	682	0.612	412	0.0	1.5	13.031	B
B-A	140	35	406	0.345	138	0.0	0.5	13.318	B
C-AB	205	51	659	0.311	203	0.0	0.5	7.868	A
C-A	22	6			22				
A-B	63	16			63				
A-C	21	5			21				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	499	125	639	0.781	492	1.5	3.2	23.498	C
B-A	167	42	313	0.534	165	0.5	1.1	23.922	C
C-AB	246	61	658	0.374	245	0.5	0.6	8.708	A
C-A	26	6			26				
A-B	76	19			76				
A-C	25	6			25				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	611	153	577	1.059	554	3.2	17.5	85.633	F
B-A	205	51	193	1.058	176	1.1	8.3	129.399	F
C-AB	304	76	658	0.462	303	0.6	0.9	10.105	B
C-A	29	7			29				
A-B	92	23			92				
A-C	31	8			31				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	611	153	563	1.085	557	17.5	30.9	172.064	F
B-A	205	51	197	1.039	189	8.3	12.2	224.095	F
C-AB	304	76	658	0.462	304	0.9	0.9	10.162	B
C-A	29	7			29				
A-B	92	23			92				
A-C	31	8			31				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	499	125	583	0.856	565	30.9	14.5	150.303	F
B-A	167	42	202	0.827	188	12.2	7.0	192.120	F
C-AB	246	61	658	0.374	247	0.9	0.6	8.780	A
C-A	26	6			26				
A-B	76	19			76				
A-C	25	6			25				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	418	104	652	0.641	468	14.5	1.9	24.766	C
B-A	140	35	356	0.393	165	7.0	0.7	21.334	C
C-AB	205	51	659	0.311	206	0.6	0.5	7.951	A
C-A	22	6			22				
A-B	63	16			63				
A-C	21	5			21				

(Default Analysis Set) - 2030 Through Route, AM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Enfield Park Rd / Crab Lane	T-Junction	Two-way	187.27	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2030 Through Route	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	299	100.000
B		ONE HOUR	✓	319	100.000
C		ONE HOUR	✓	678	100.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.43	9.48	0.7	A	239	359
B-A	0.31	24.64	0.4	C	53	80
C-AB	1.18	356.02	66.6	F	615	923
C-A					7	10
A-B					262	394
A-C					12	18

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	196	49	733	0.268	195	0.0	0.4	6.681	A
B-A	44	11	367	0.119	43	0.0	0.1	11.082	B
C-AB	496	124	644	0.770	483	0.0	3.1	21.156	C
C-A	15	4			15				
A-B	215	54			215				
A-C	10	2			10				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	235	59	716	0.328	234	0.4	0.5	7.461	A
B-A	52	13	319	0.163	52	0.1	0.2	13.450	B
C-AB	604	151	645	0.936	583	3.1	8.5	47.430	E
C-A	5	1			5				
A-B	257	64			257				
A-C	12	3			12				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	287	72	683	0.421	286	0.5	0.7	9.048	A
B-A	64	16	250	0.256	63	0.2	0.3	19.249	C
C-AB	746	187	635	1.176	627	8.5	38.3	150.171	F
C-A	0	0			0				
A-B	315	79			315				
A-C	14	4			14				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	287	72	667	0.431	287	0.7	0.7	9.483	A
B-A	64	16	209	0.305	63	0.3	0.4	24.637	C
C-AB	746	187	635	1.176	633	38.3	66.6	309.318	F
C-A	0	0			0				
A-B	315	79			315				
A-C	14	4			14				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	235	59	698	0.336	236	0.7	0.5	7.804	A
B-A	52	13	232	0.225	53	0.4	0.3	20.163	C
C-AB	604	151	645	0.936	646	66.6	56.3	356.019	F
C-A	5	1			5				
A-B	257	64			257				
A-C	12	3			12				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	196	49	724	0.272	197	0.5	0.4	6.841	A
B-A	44	11	289	0.151	44	0.3	0.2	14.741	B
C-AB	496	124	644	0.770	648	56.3	18.2	228.099	F
C-A	15	4			15				
A-B	215	54			215				
A-C	10	2			10				

(Default Analysis Set) - 2030 Through Route, PM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Enfield Park Rd / Crab Lane	T-Junction	Two-way	116.83	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2030 Through Route	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	112	100.000
B		ONE HOUR	✓	736	100.000
C		ONE HOUR	✓	307	100.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	1.08	166.27	29.5	F	505	757
B-A	1.05	218.29	11.9	F	171	256
C-AB	0.47	10.32	0.9	B	256	385
C-A					25	38
A-B					77	116
A-C					26	39

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	414	104	682	0.607	408	0.0	1.5	12.874	B
B-A	140	35	408	0.344	138	0.0	0.5	13.260	B
C-AB	209	52	659	0.317	207	0.0	0.5	7.931	A
C-A	22	6			22				
A-B	63	16			63				
A-C	21	5			21				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	494	124	639	0.774	488	1.5	3.1	22.941	C
B-A	167	42	316	0.529	165	0.5	1.1	23.471	C
C-AB	251	63	658	0.381	250	0.5	0.6	8.804	A
C-A	25	6			25				
A-B	76	19			76				
A-C	25	6			25				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	606	151	575	1.053	551	3.1	16.8	83.474	F
B-A	205	51	195	1.053	176	1.1	8.2	127.049	F
C-AB	310	77	658	0.470	309	0.6	0.9	10.260	B
C-A	28	7			28				
A-B	92	23			92				
A-C	31	8			31				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	606	151	561	1.079	555	16.8	29.5	166.269	F
B-A	205	51	198	1.033	190	8.2	11.9	218.289	F
C-AB	310	77	658	0.470	310	0.9	0.9	10.322	B
C-A	28	7			28				
A-B	92	23			92				
A-C	31	8			31				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	494	124	581	0.851	562	29.5	12.6	141.257	F
B-A	167	42	204	0.821	188	11.9	6.6	184.053	F
C-AB	251	63	658	0.381	252	0.9	0.6	8.878	A
C-A	25	6			25				
A-B	76	19			76				
A-C	25	6			25				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	414	104	653	0.634	457	12.6	1.8	22.152	C
B-A	140	35	365	0.384	164	6.6	0.6	20.012	C
C-AB	209	52	659	0.317	209	0.6	0.5	8.019	A
C-A	22	6			22				
A-B	63	16			63				
A-C	21	5			21				

(Default Analysis Set) - Base Model, AM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Enfield Park Rd / Crab Lane	T-Junction	Two-way	15.55	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

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

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	299	100.000
B		ONE HOUR	✓	260	100.000
C		ONE HOUR	✓	485	100.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.32	7.53	0.5	A	185	278
B-A	0.19	12.81	0.2	B	53	80
C-AB	0.82	30.37	4.4	D	422	633
C-A					23	34
A-B					262	394
A-C					12	18

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	152	38	734	0.207	151	0.0	0.3	6.168	A
B-A	44	11	428	0.102	43	0.0	0.1	9.338	A
C-AB	339	85	635	0.534	335	0.0	1.1	11.822	B
C-A	26	6			26				
A-B	215	54			215				
A-C	10	2			10				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	182	45	721	0.252	181	0.3	0.3	6.665	A
B-A	52	13	395	0.132	52	0.1	0.2	10.501	B
C-AB	411	103	633	0.650	408	1.1	1.8	15.865	C
C-A	25	6			25				
A-B	257	64			257				
A-C	12	3			12				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	222	56	701	0.317	222	0.3	0.5	7.503	A
B-A	64	16	348	0.183	64	0.2	0.2	12.640	B
C-AB	516	129	633	0.816	507	1.8	4.1	27.273	D
C-A	18	4			18				
A-B	315	79			315				
A-C	14	4			14				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	222	56	701	0.318	222	0.5	0.5	7.528	A
B-A	64	16	345	0.185	64	0.2	0.2	12.806	B
C-AB	516	129	633	0.816	515	4.1	4.4	30.368	D
C-A	18	4			18				
A-B	315	79			315				
A-C	14	4			14				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	182	45	721	0.252	182	0.5	0.3	6.693	A
B-A	52	13	390	0.134	52	0.2	0.2	10.669	B
C-AB	411	103	633	0.650	420	4.4	2.0	17.668	C
C-A	25	6			25				
A-B	257	64			257				
A-C	12	3			12				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	152	38	733	0.207	152	0.3	0.3	6.202	A
B-A	44	11	425	0.103	44	0.2	0.1	9.438	A
C-AB	339	85	635	0.534	343	2.0	1.2	12.453	B
C-A	26	6			26				
A-B	215	54			215				
A-C	10	2			10				

(Default Analysis Set) - Base Model, PM

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Enfield Park Rd / Crab Lane	T-Junction	Two-way	11.94	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	Base Model	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	112	100.000
B		ONE HOUR	✓	547	100.000
C		ONE HOUR	✓	212	100.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.63	15.59	1.7	C	331	497
B-A	0.50	17.90	1.0	C	171	256
C-AB	0.31	7.96	0.4	A	166	250
C-A					28	42
A-B					77	116
A-C					26	39

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	272	68	714	0.381	269	0.0	0.6	8.055	A
B-A	140	35	507	0.276	139	0.0	0.4	9.725	A
C-AB	136	34	656	0.207	135	0.0	0.3	6.886	A
C-A	24	6			24				
A-B	63	16			63				
A-C	21	5			21				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	325	81	684	0.475	323	0.6	0.9	9.954	A
B-A	167	42	472	0.354	167	0.4	0.5	11.753	B
C-AB	163	41	654	0.249	162	0.3	0.3	7.314	A
C-A	28	7			28				
A-B	76	19			76				
A-C	25	6			25				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	397	99	630	0.631	394	0.9	1.6	15.083	C
B-A	205	51	408	0.502	203	0.5	1.0	17.405	C
C-AB	201	50	653	0.307	200	0.3	0.4	7.949	A
C-A	33	8			33				
A-B	92	23			92				
A-C	31	8			31				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	397	99	628	0.633	397	1.6	1.7	15.590	C
B-A	205	51	406	0.505	205	1.0	1.0	17.896	C
C-AB	201	50	653	0.307	201	0.4	0.4	7.963	A
C-A	33	8			33				
A-B	92	23			92				
A-C	31	8			31				

17:45 - 18:00

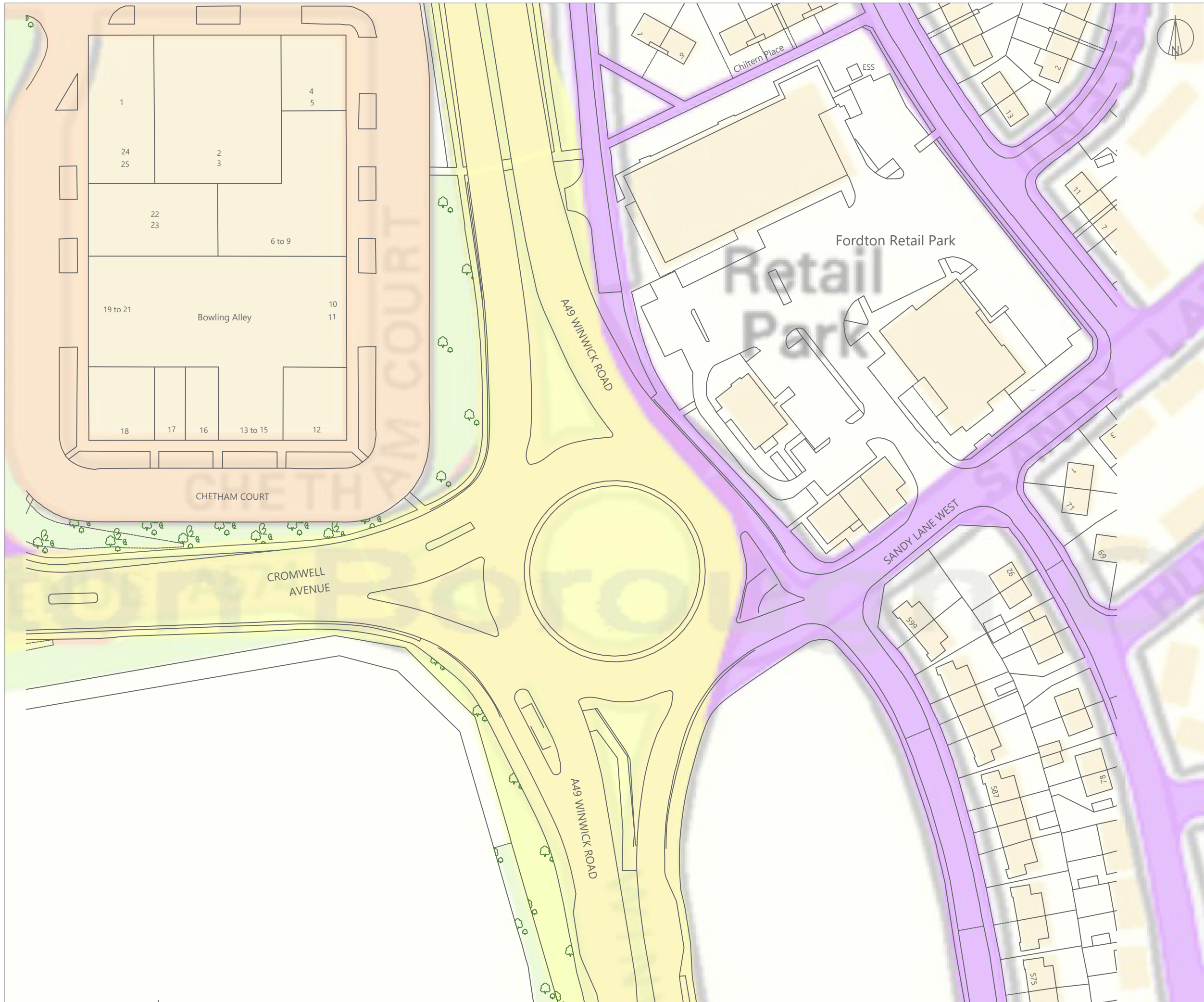
Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	325	81	681	0.476	328	1.7	0.9	10.258	B
B-A	167	42	470	0.356	169	1.0	0.6	12.032	B
C-AB	163	41	654	0.249	163	0.4	0.3	7.336	A
C-A	28	7			28				
A-B	76	19			76				
A-C	25	6			25				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	272	68	712	0.382	273	0.9	0.6	8.222	A
B-A	140	35	506	0.277	141	0.6	0.4	9.886	A
C-AB	136	34	656	0.207	136	0.3	0.3	6.926	A
C-A	24	6			24				
A-B	63	16			63				
A-C	21	5			21				

Appendix 76

Highway Ownership



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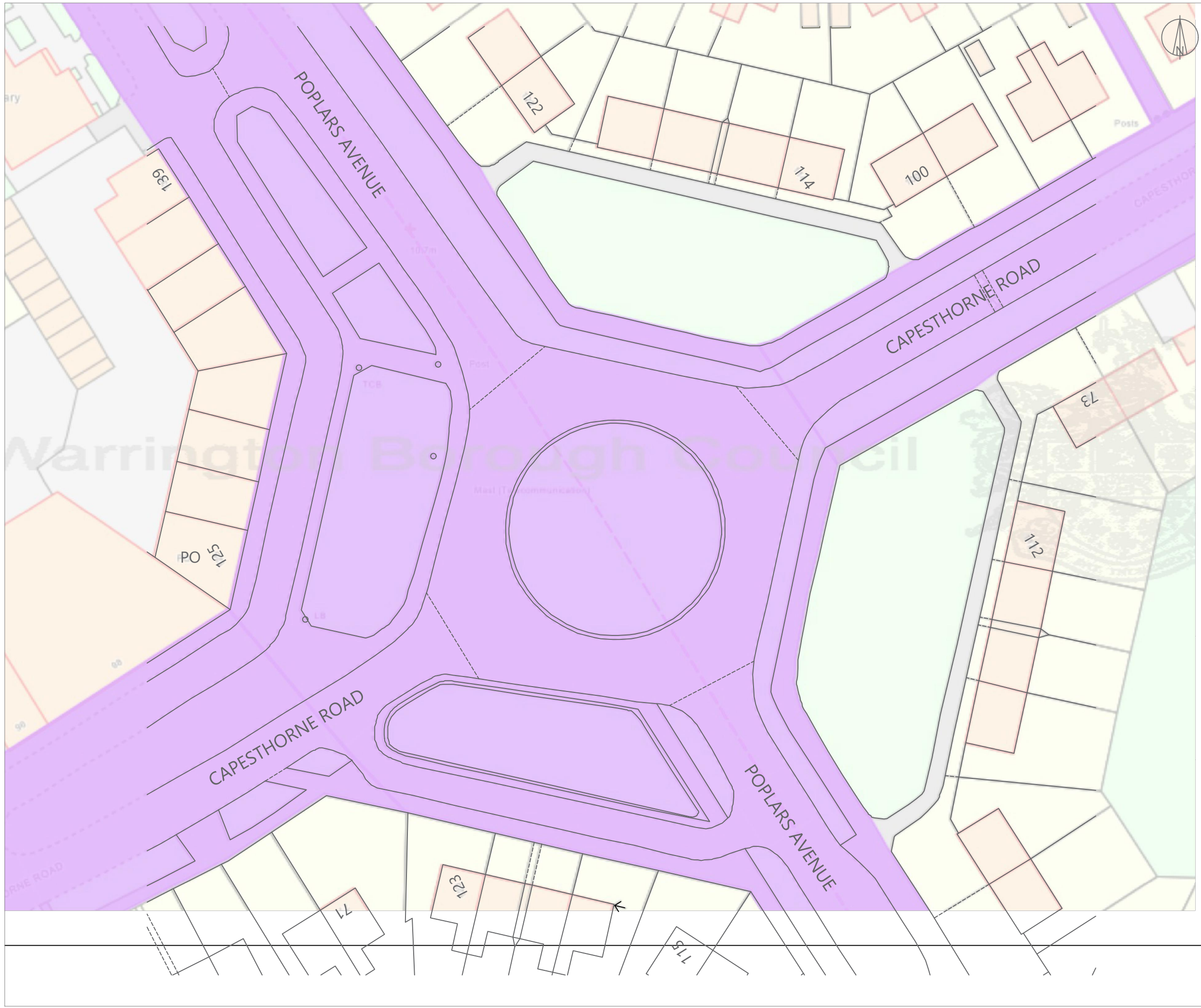
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**SANDY LANE WEST/A49 WITH HIGHWAYS
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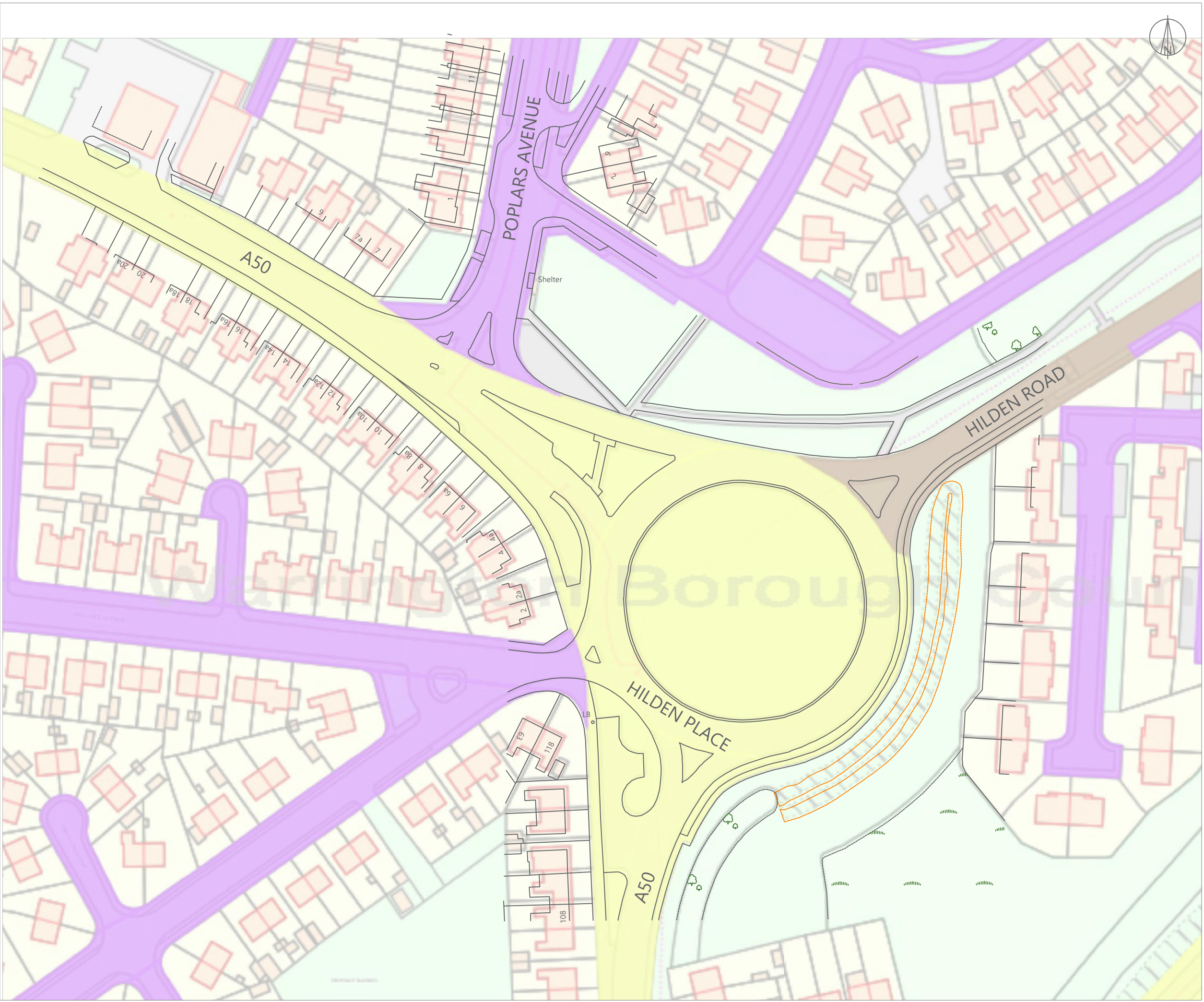
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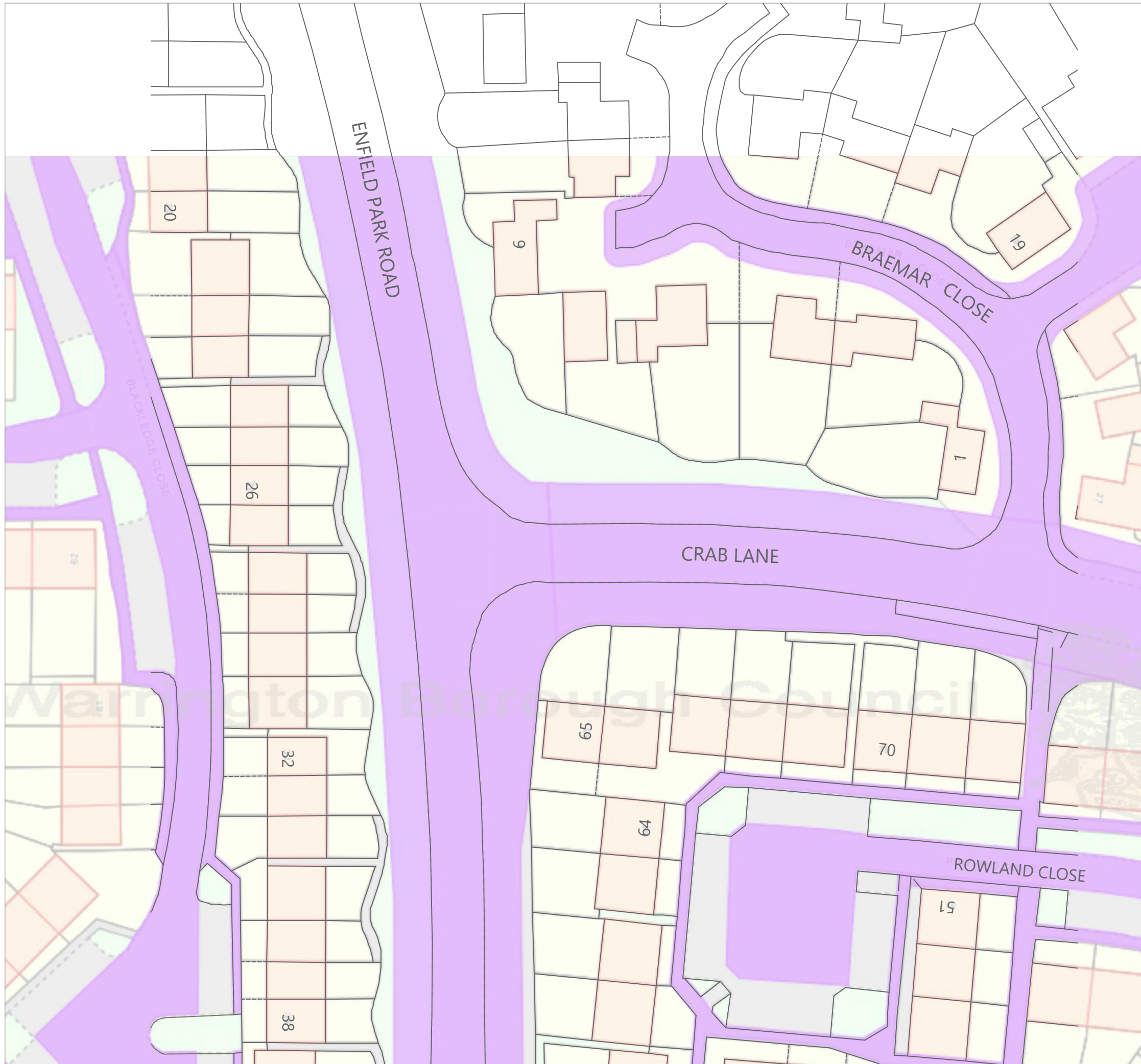
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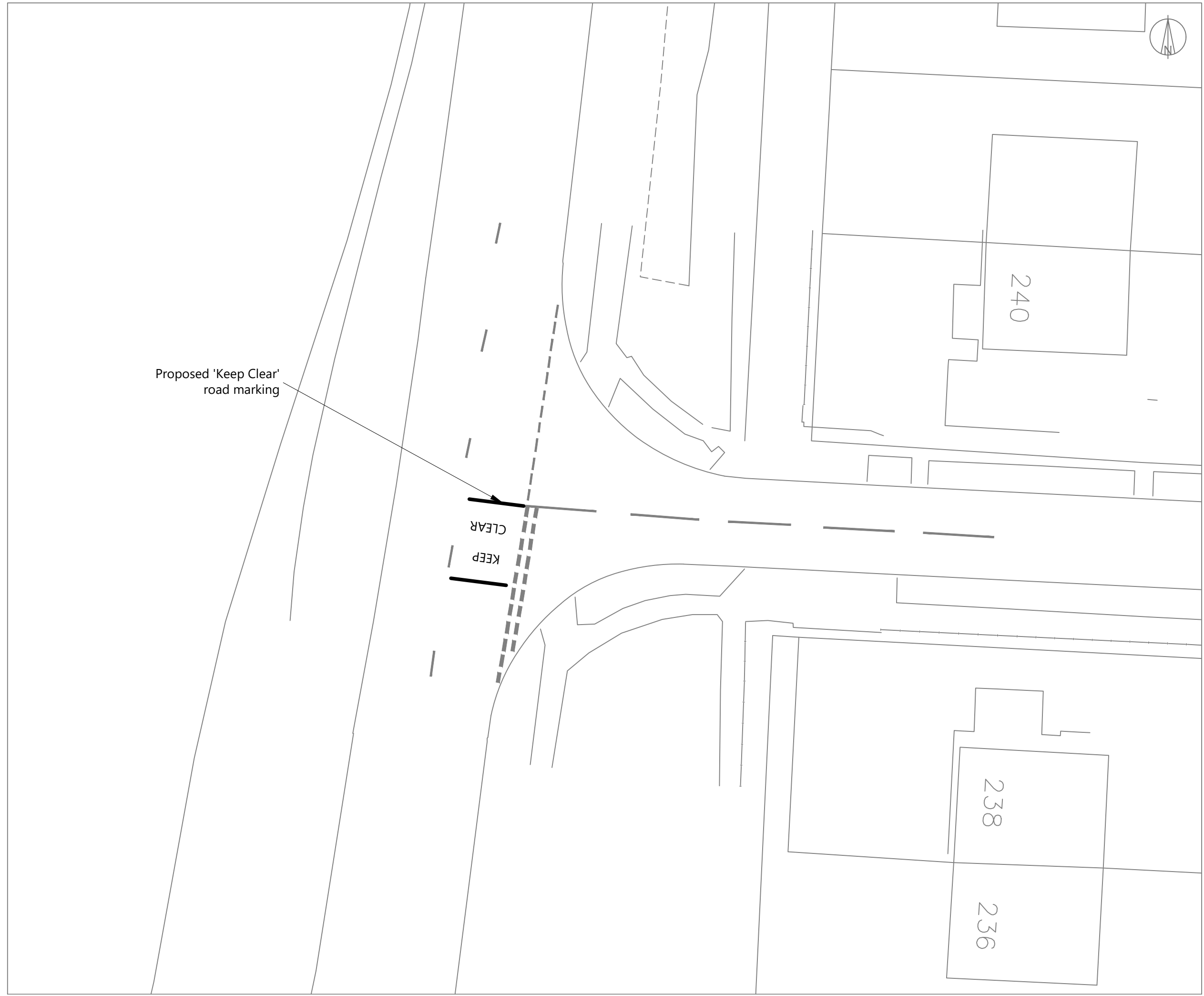
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Appendix 77

Mitigation Plans (Local Highway Network) Option A



Proposed 'Keep Clear'
road marking



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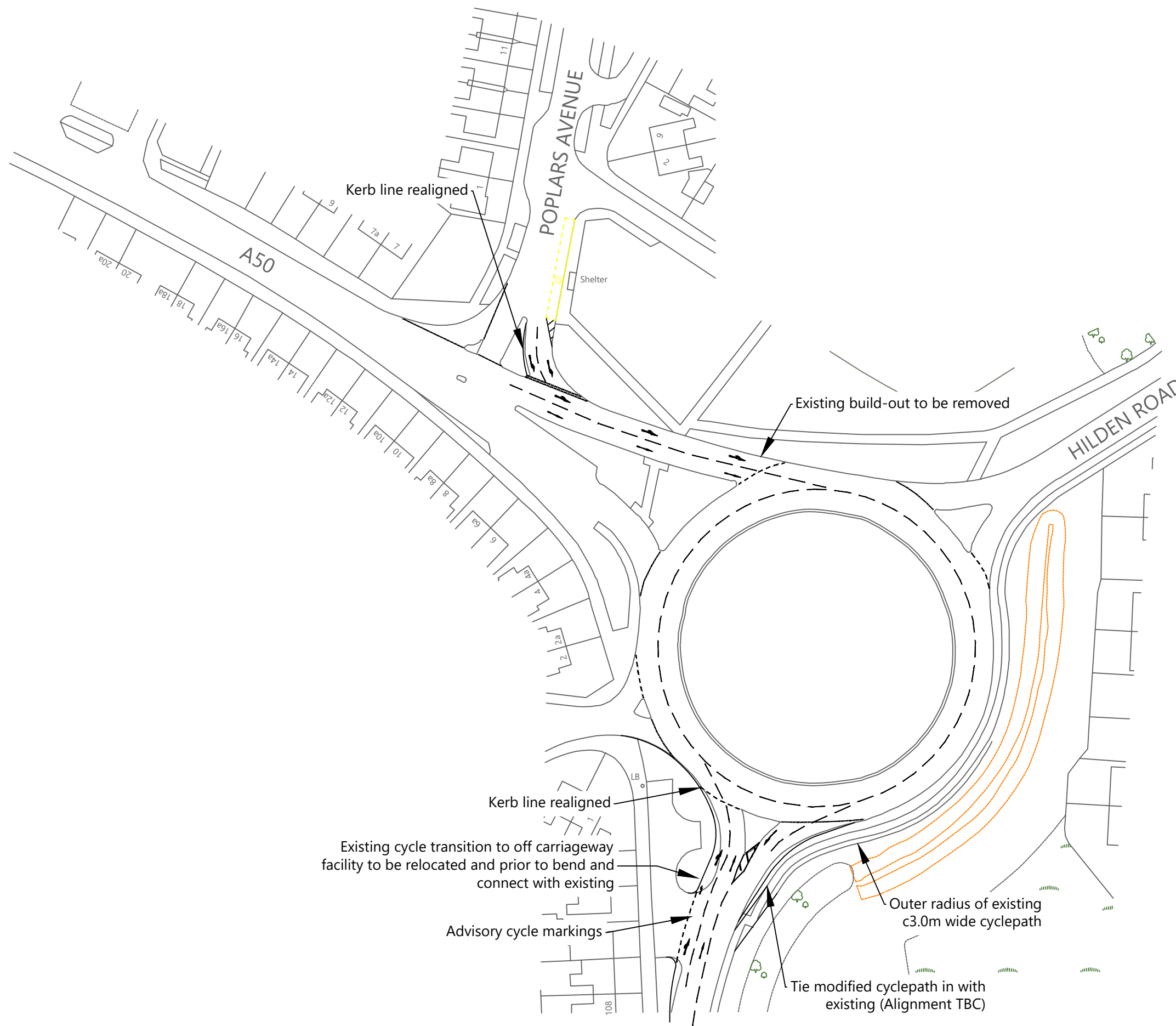
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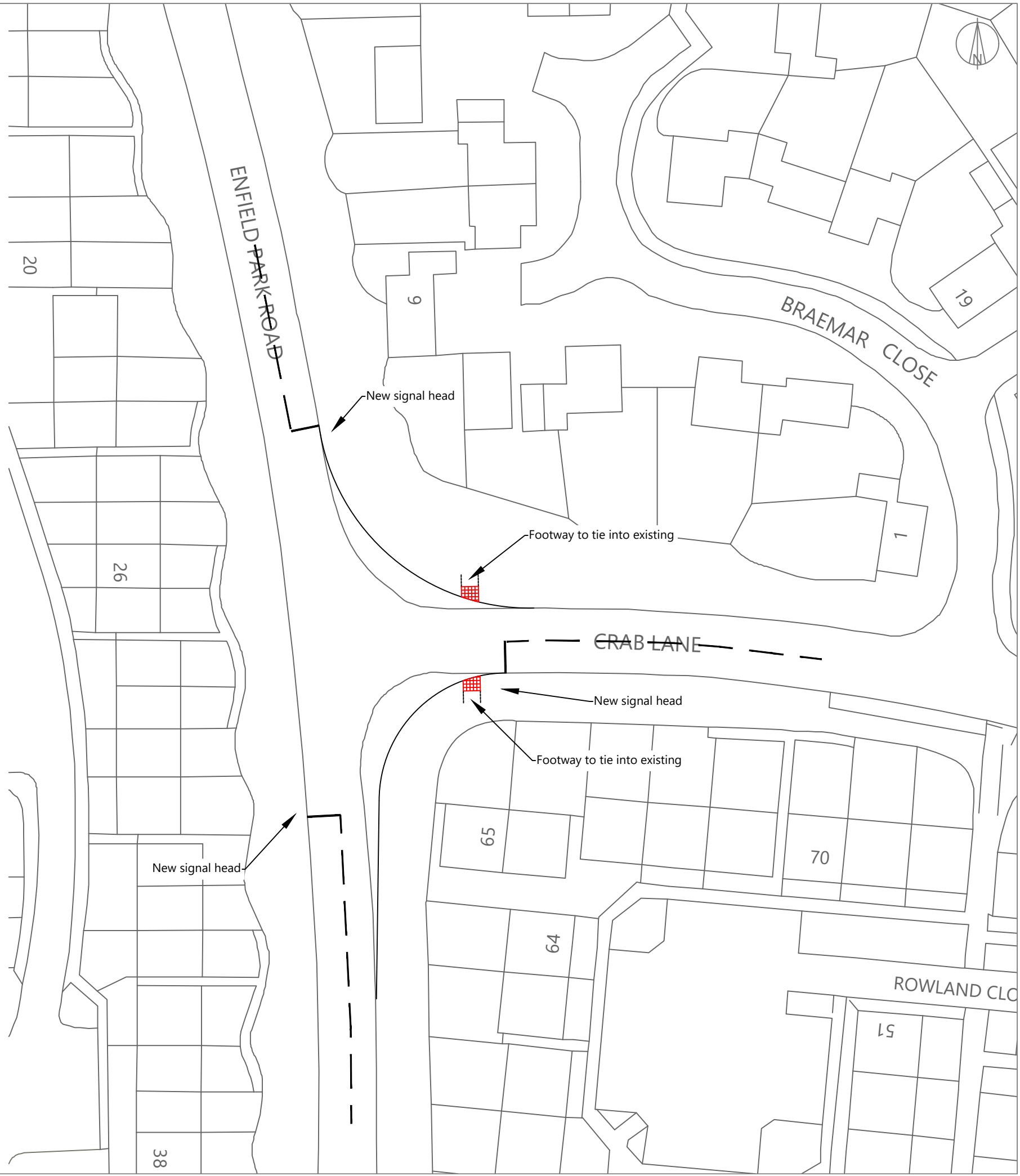
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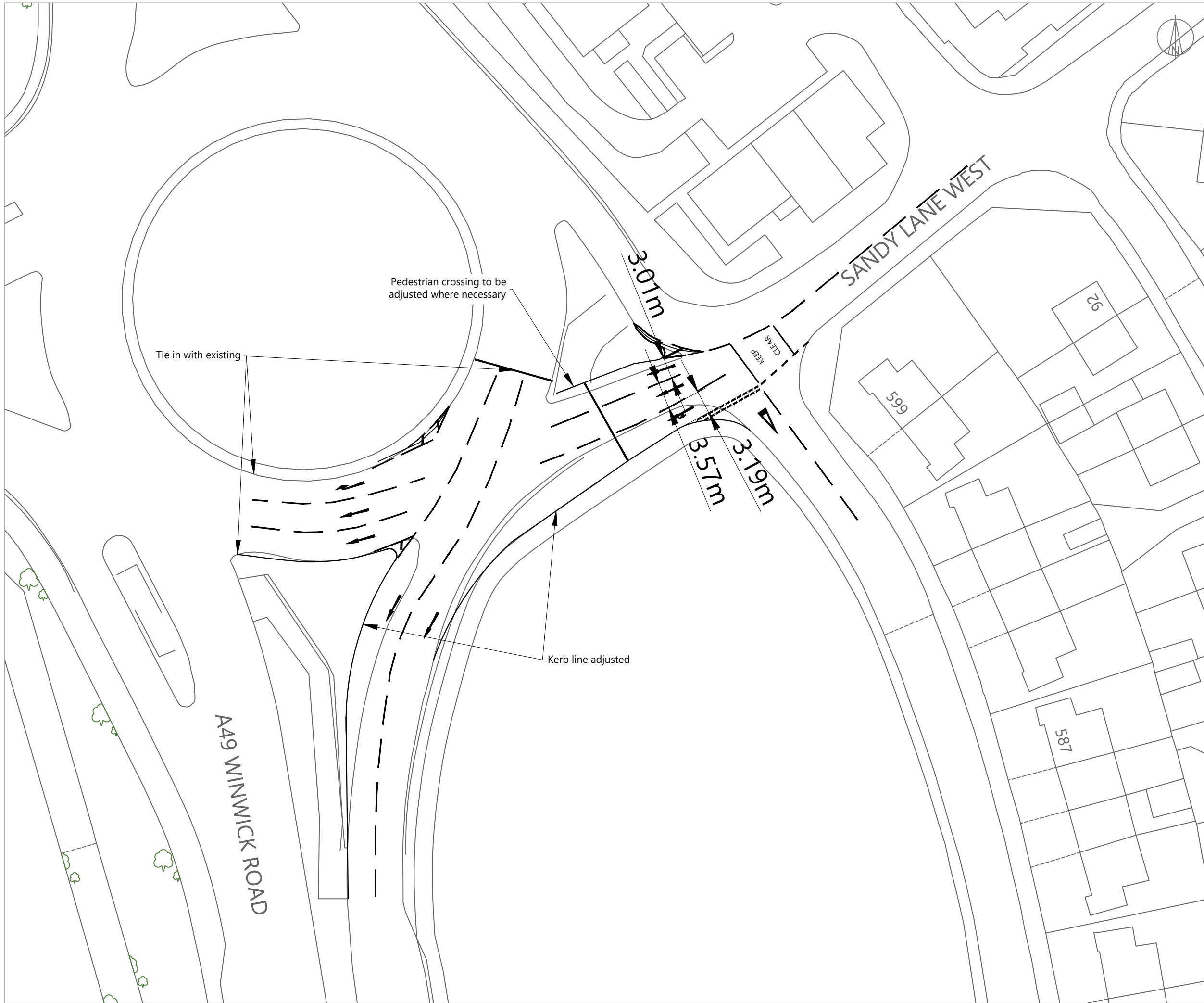
CLIENT:
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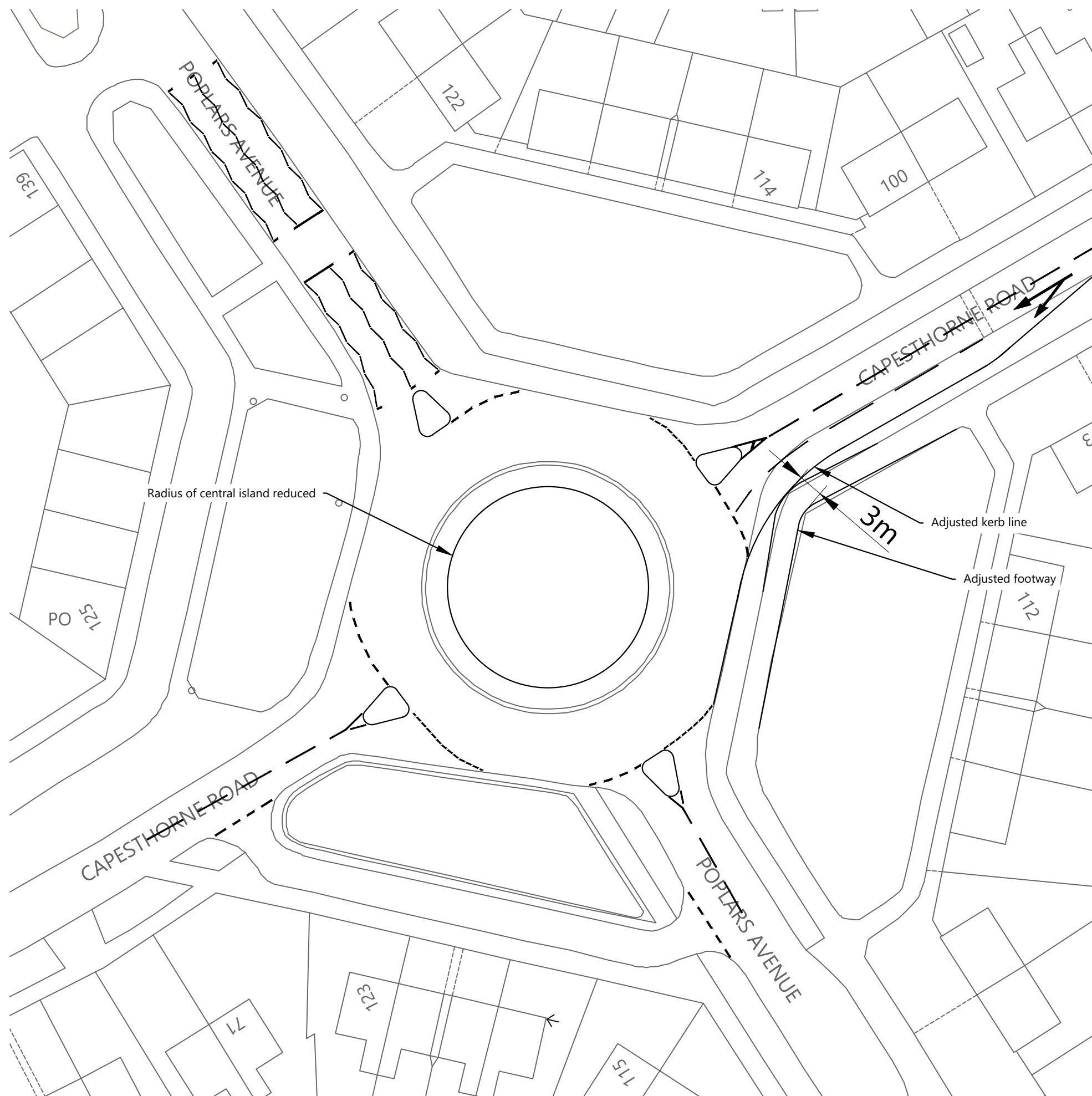
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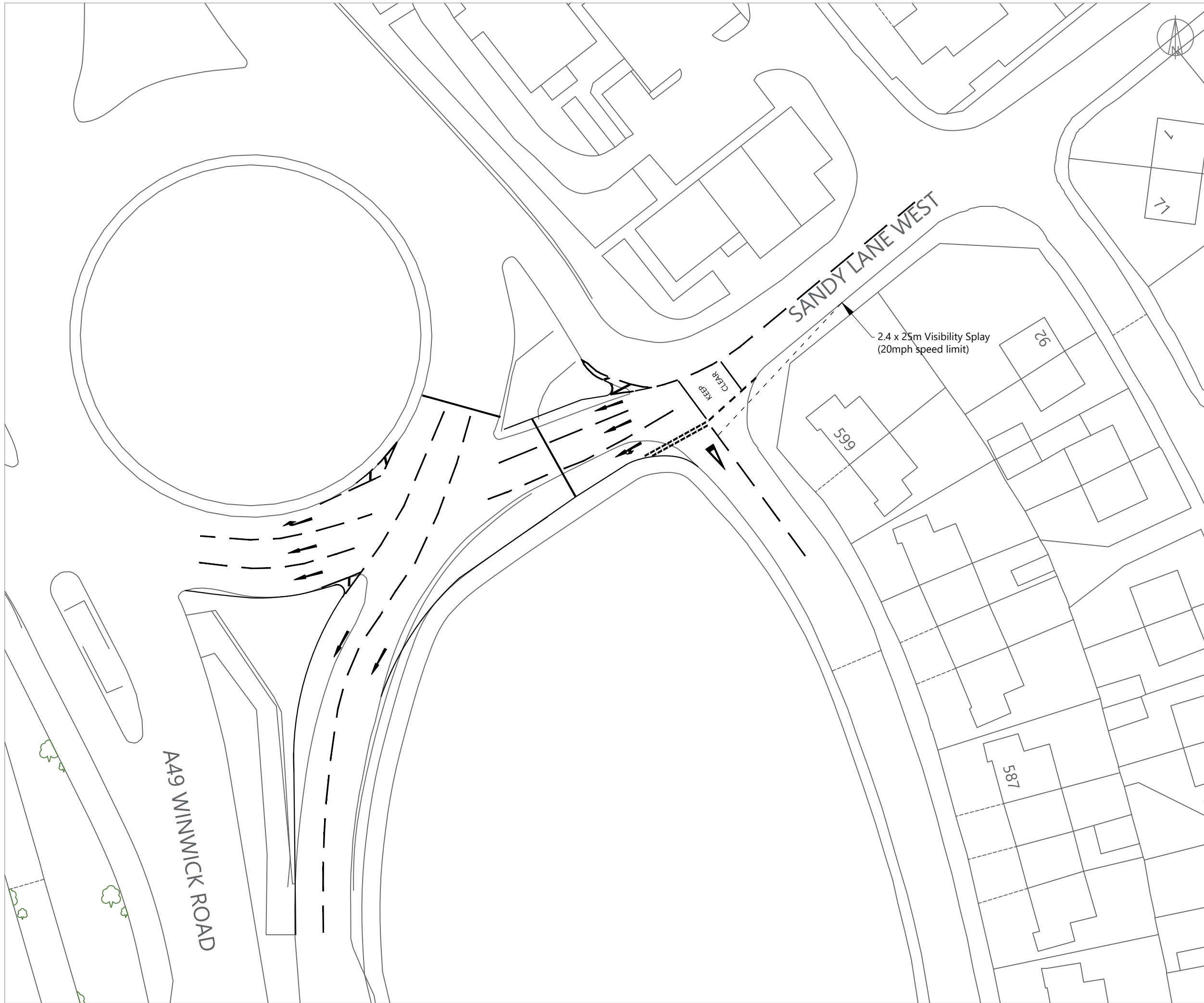
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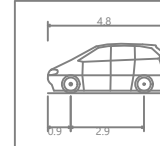
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Standard Design Vehicle (SDV)
 Overall Length 4.800m
 Overall Width 2.000m
 Overall Body Height 1.950m
 Min Body Ground Clearance 0.100m
 Track Width 2.000m
 Lock to lock time 4.00s
 Wall to Wall Turning Radius 6.000m

ISSUE	REASON FOR REVISION	DATE

PROJECT:
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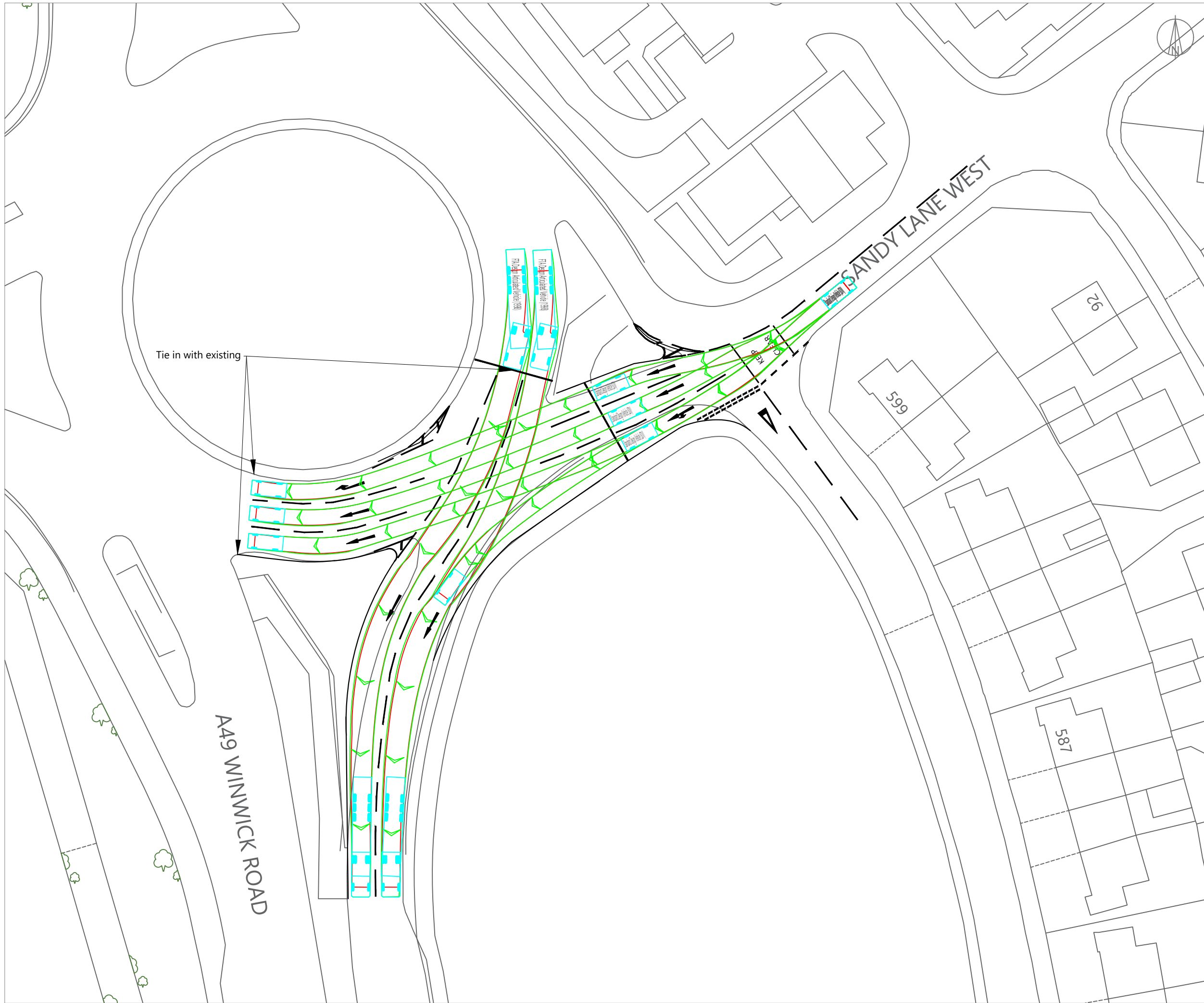
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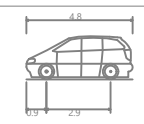
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 ROAD/POPLARS AVENUE WITH POTENTIAL
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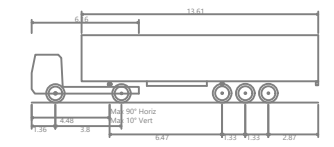
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Standard Design Vehicle (SDV)
 Overall Length 4.800m
 Overall Width 2.000m
 Overall Body Height 1.950m
 Min Body Ground Clearance 0.100m
 Track Width 2.000m
 Lock to lock time 4.00s
 Wall to Wall Turning Radius 6.000m



FTA Design Articulated Vehicle (1998)
 Overall Length 16.480m
 Overall Width 2.550m
 Overall Body Height 3.870m
 Min Body Ground Clearance 0.515m
 Max Track Width 2.470m
 Lock to lock time 3.00s
 Kerb to Kerb Turning Radius 6.550m

ISSUE	REASON FOR REVISION	DATE

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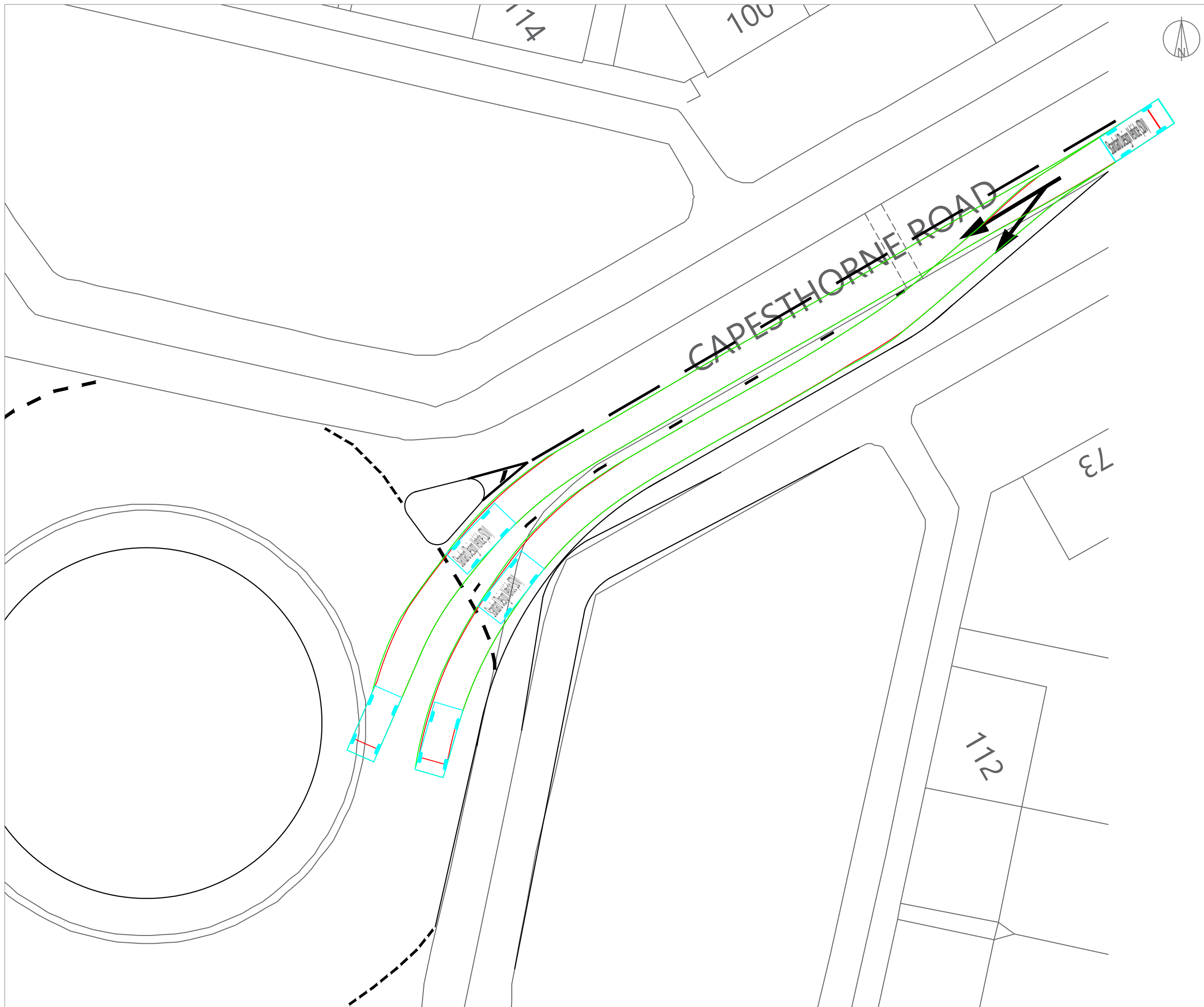
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1107	TR74/A	1:500 @ A3

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Note: Location of traffic islands estimated.

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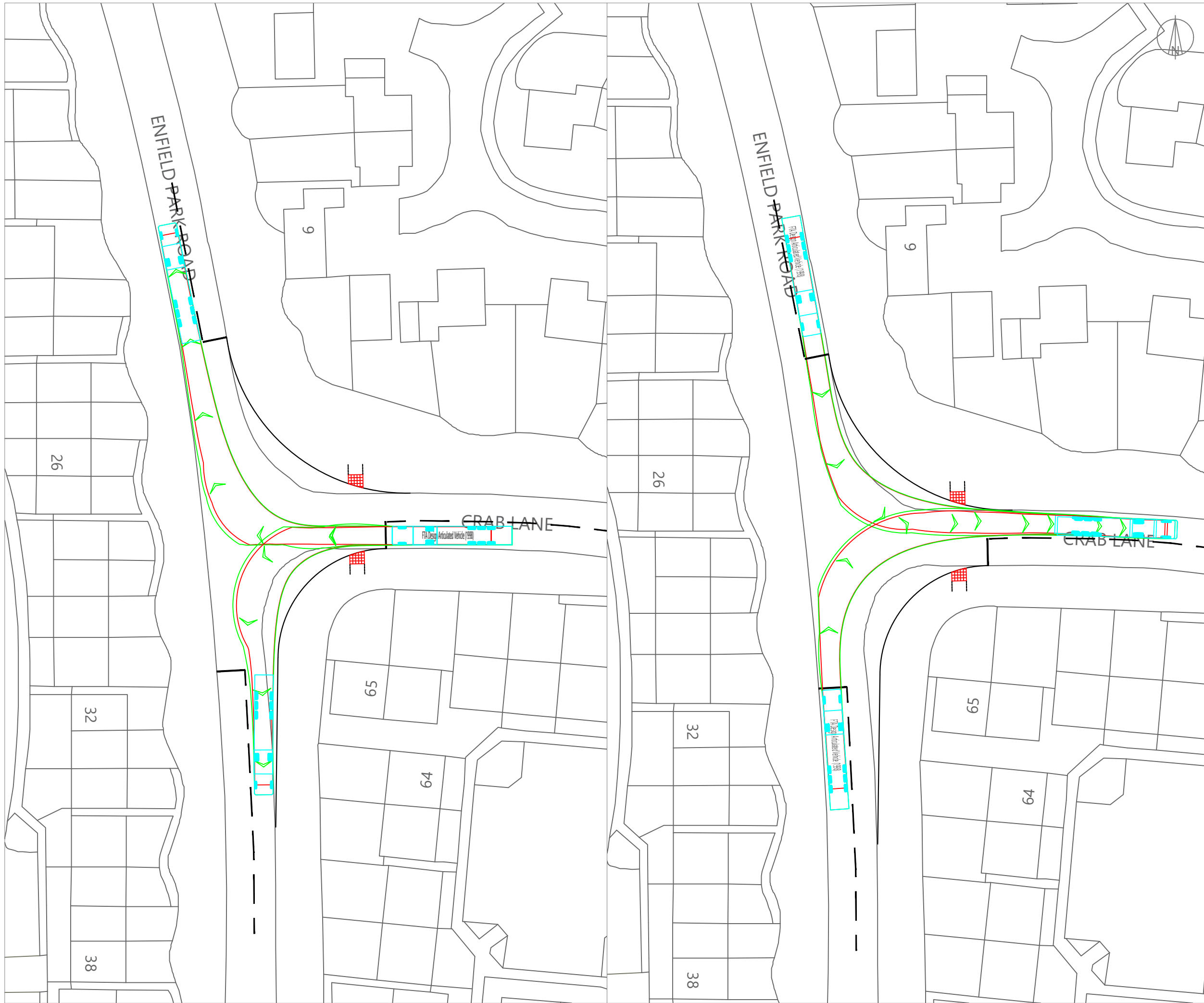
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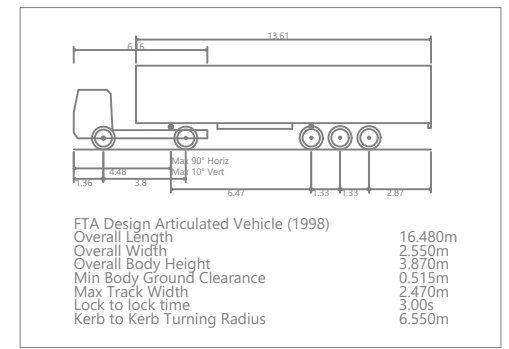
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 PATH ANALYSIS**

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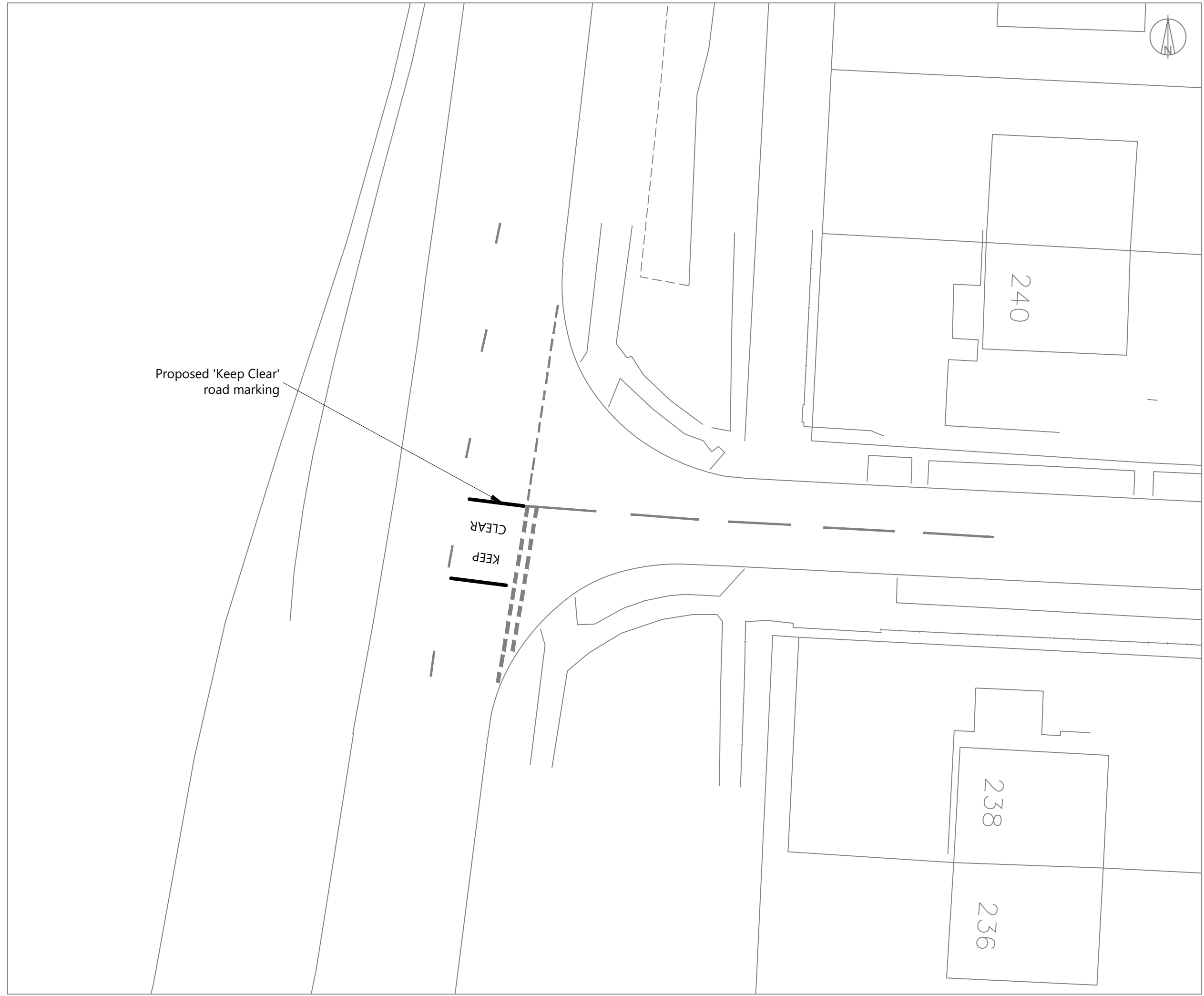
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 LANE/ENFIELD PARK ROAD TRACKING**

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Appendix 78

Mitigation Plans (Local Highway Network) Option B



Proposed 'Keep Clear'
road marking



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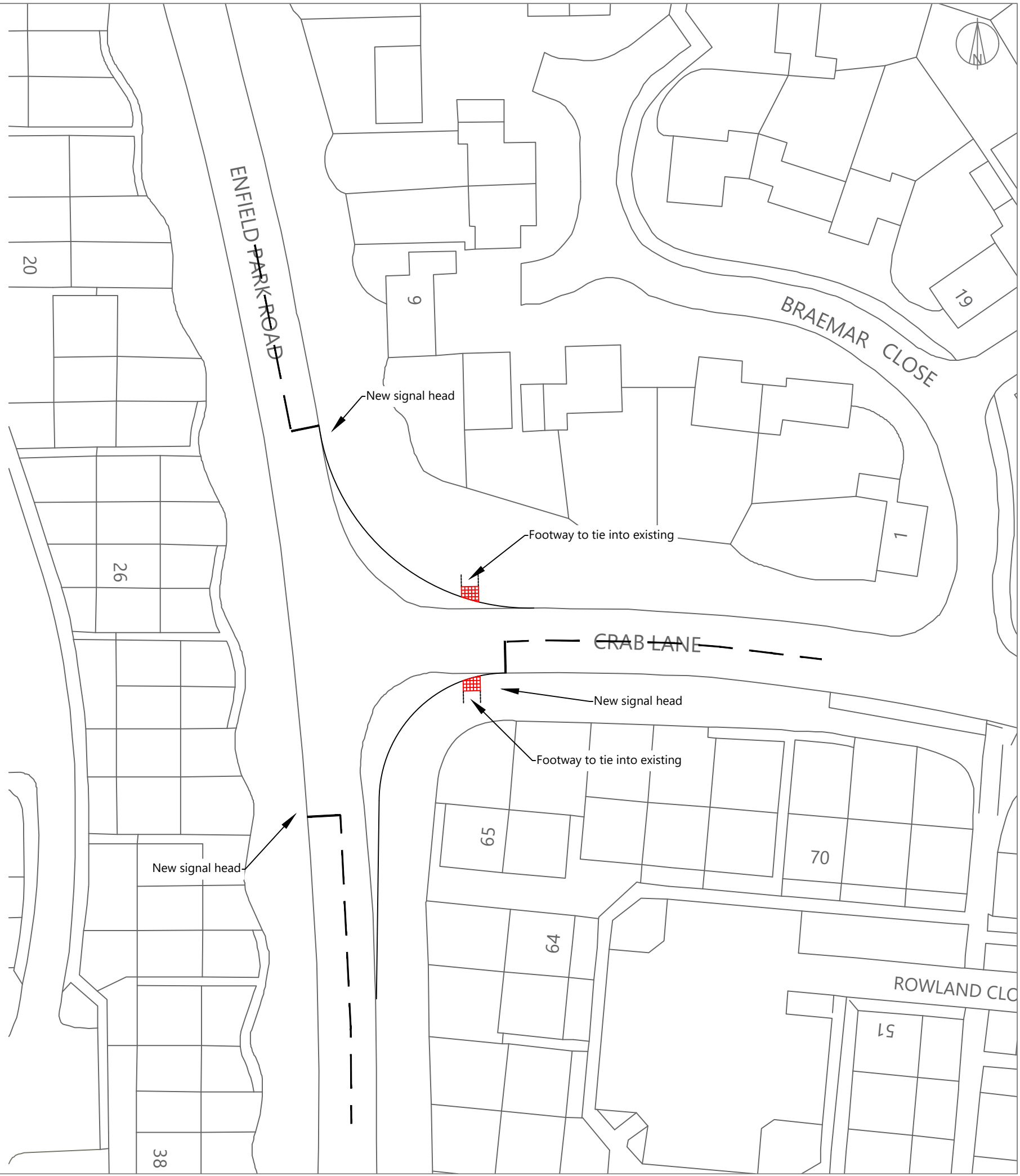
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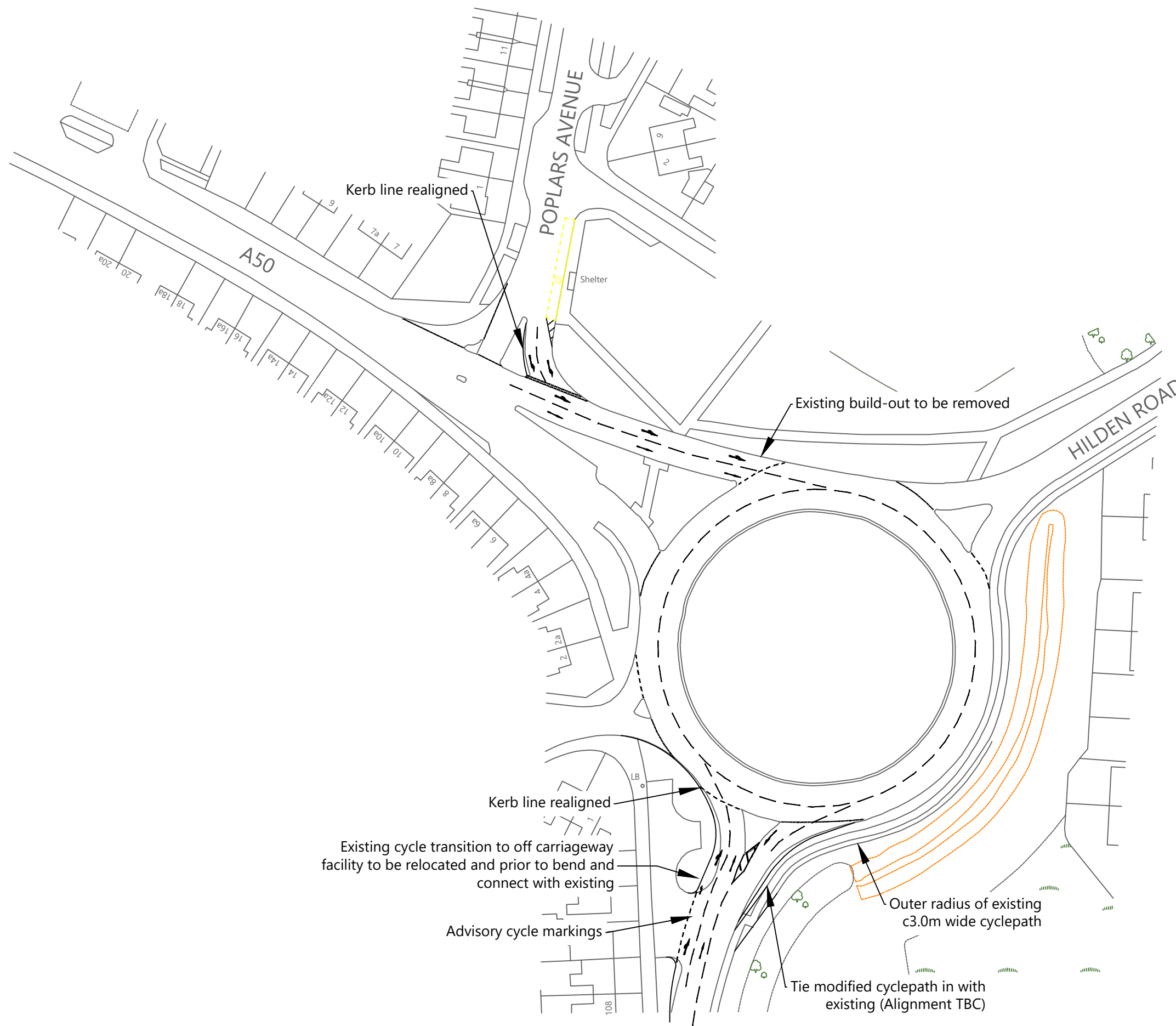
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TITLE:
**PEEL HALL POTENTIAL MITIGATION - CRAB
 LANE/ENFIELD PARK ROAD**

DATE:	DRAWN BY:	CHECKED:
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ISSUE	REASON FOR REVISION	DATE

PROJECT:
**PEEL HALL,
 WARRINGTON**

CLIENT:
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 LTD**

PROJECT REFERENCE:	DRAWING NUMBER:	SCALE:
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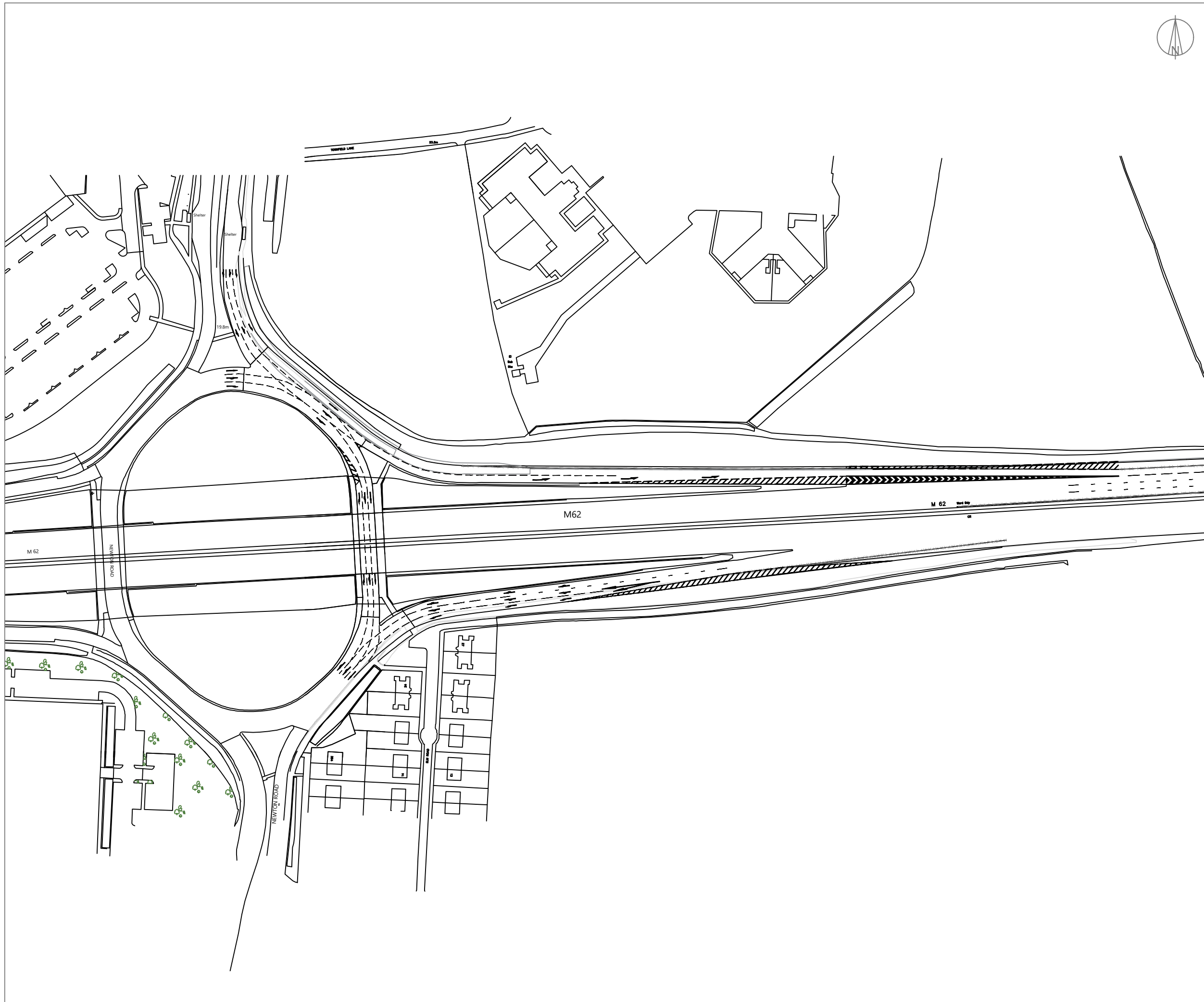
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TITLE:
**PEEL HALL POTENTIAL MITIGATION - A50/HILDEN
 ROAD/POPLARS AVENUE WITH POTENTIAL
 IMPROVEMENTS**

DATE:	DRAWN BY:	CHECKED:
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Appendix 79

Potential Mitigation (Strategic Highway Network)



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Note: Lane markings and arrows revised were necessary

ISSUE	REASON FOR REVISION	DATE

PROJECT:
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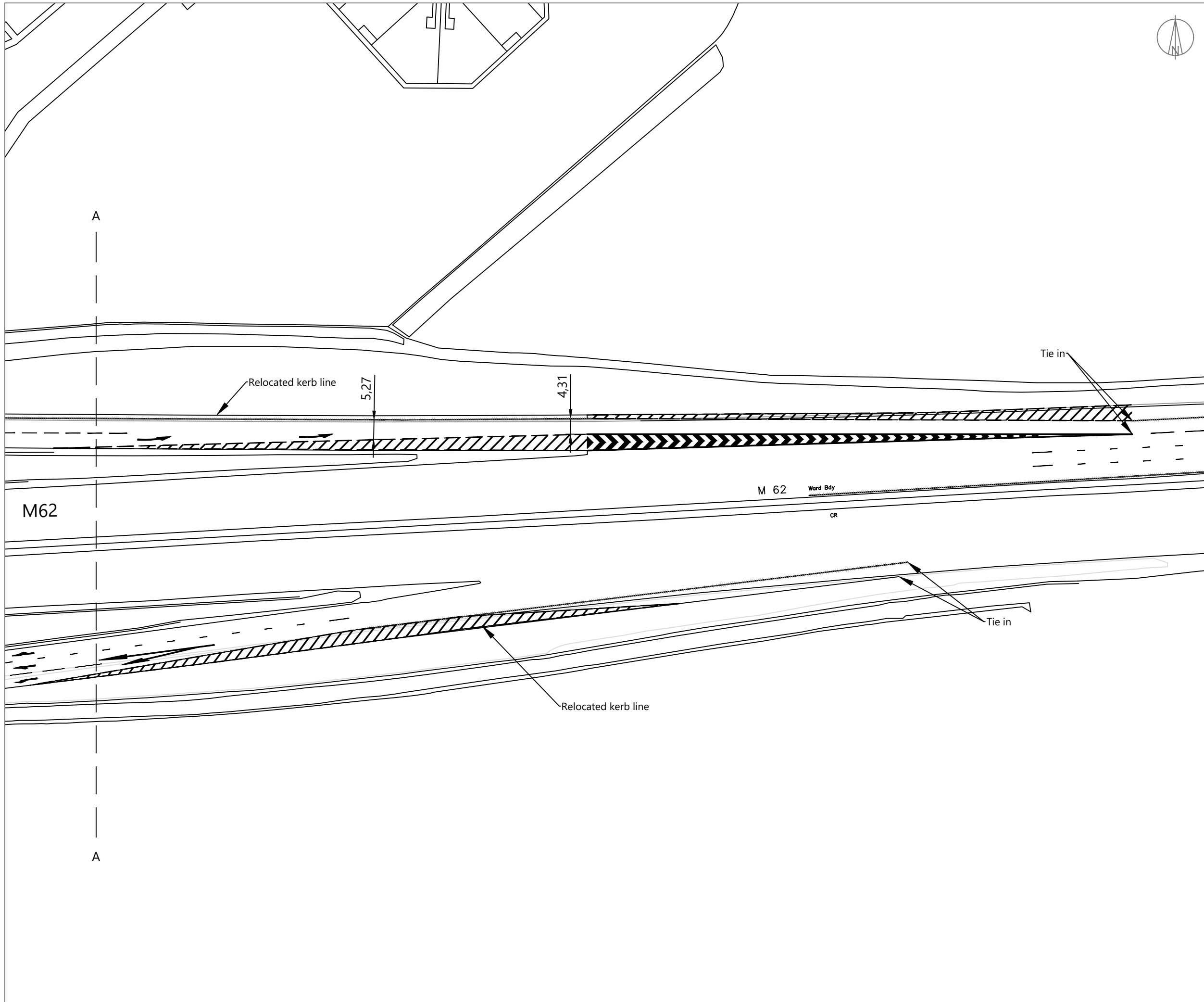
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TITLE:
**PEEL HALL - JUNCTION 9 M62 WITH POTENTIAL
 IMPROVEMENTS OVERVIEW**

DATE:	DRAWN BY:	CHECKED:
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ISSUE	REASON FOR REVISION	DATE

PROJECT:
**PEEL HALL,
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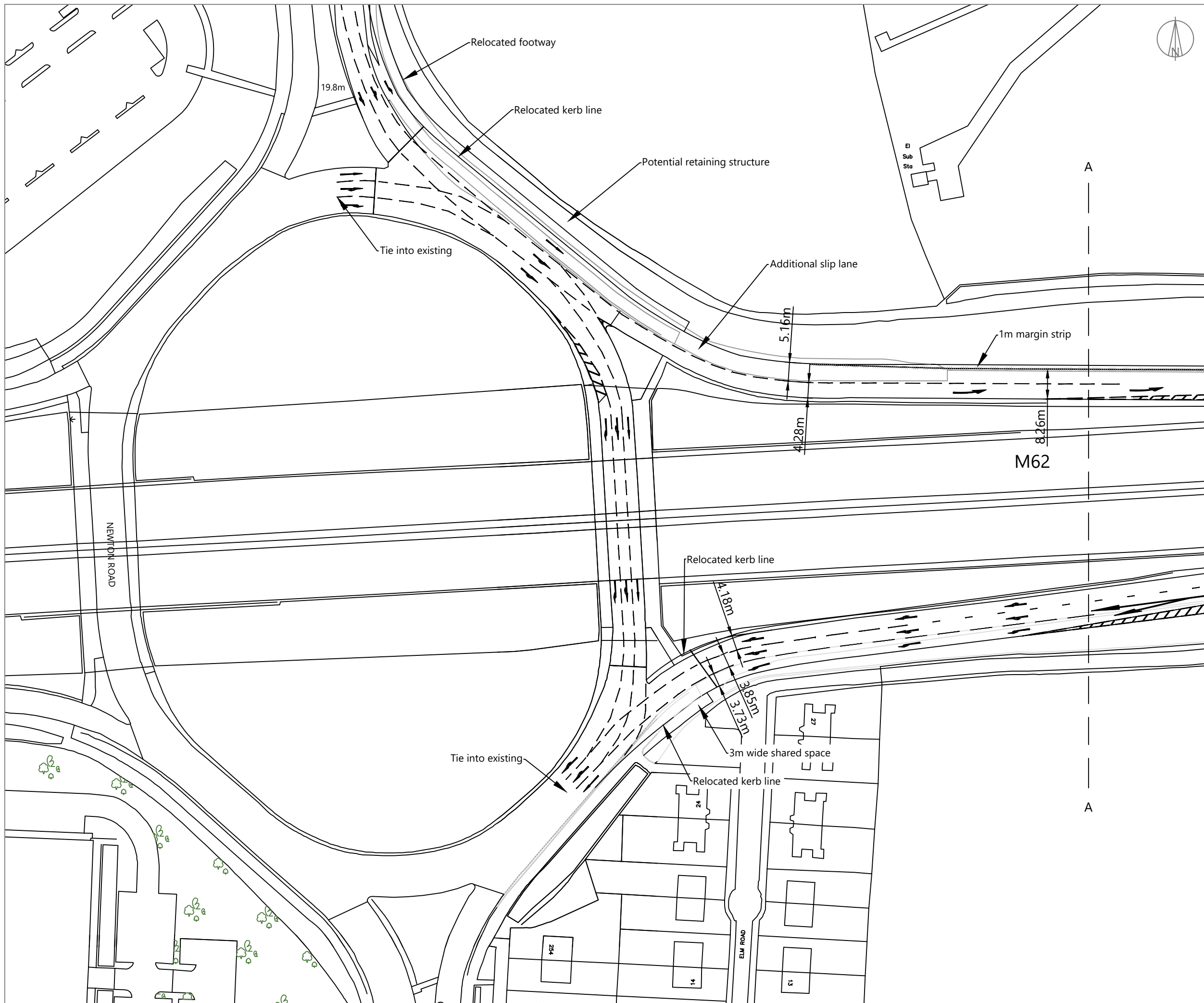
CLIENT:
**SATNAM MILLENNIUM
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PROJECT REFERENCE:	DRAWING NUMBER:	SCALE:
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TITLE:
**PEEL HALL - JUNCTION 9 M62 WITH POTENTIAL
 IMPROVEMENTS - EASTERN SECTION**

DATE:	DRAWN BY:	CHECKED:
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Note: Lane markings and arrows revised where necessary

ISSUE	REASON FOR REVISION	DATE

PROJECT:
**PEEL HALL,
 WARRINGTON**

CLIENT:
**SATNAM MILLENNIUM
 LTD**

PROJECT REFERENCE:	DRAWING NUMBER:	SCALE:
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TITLE:
**PEEL HALL - JUNCTION 9 M62 WITH POTENTIAL
 IMPROVEMENTS - WESTERN SECTION**

DATE:	DRAWN BY:	CHECKED:
15/12/17	BL	FB

Legend

HAPMS

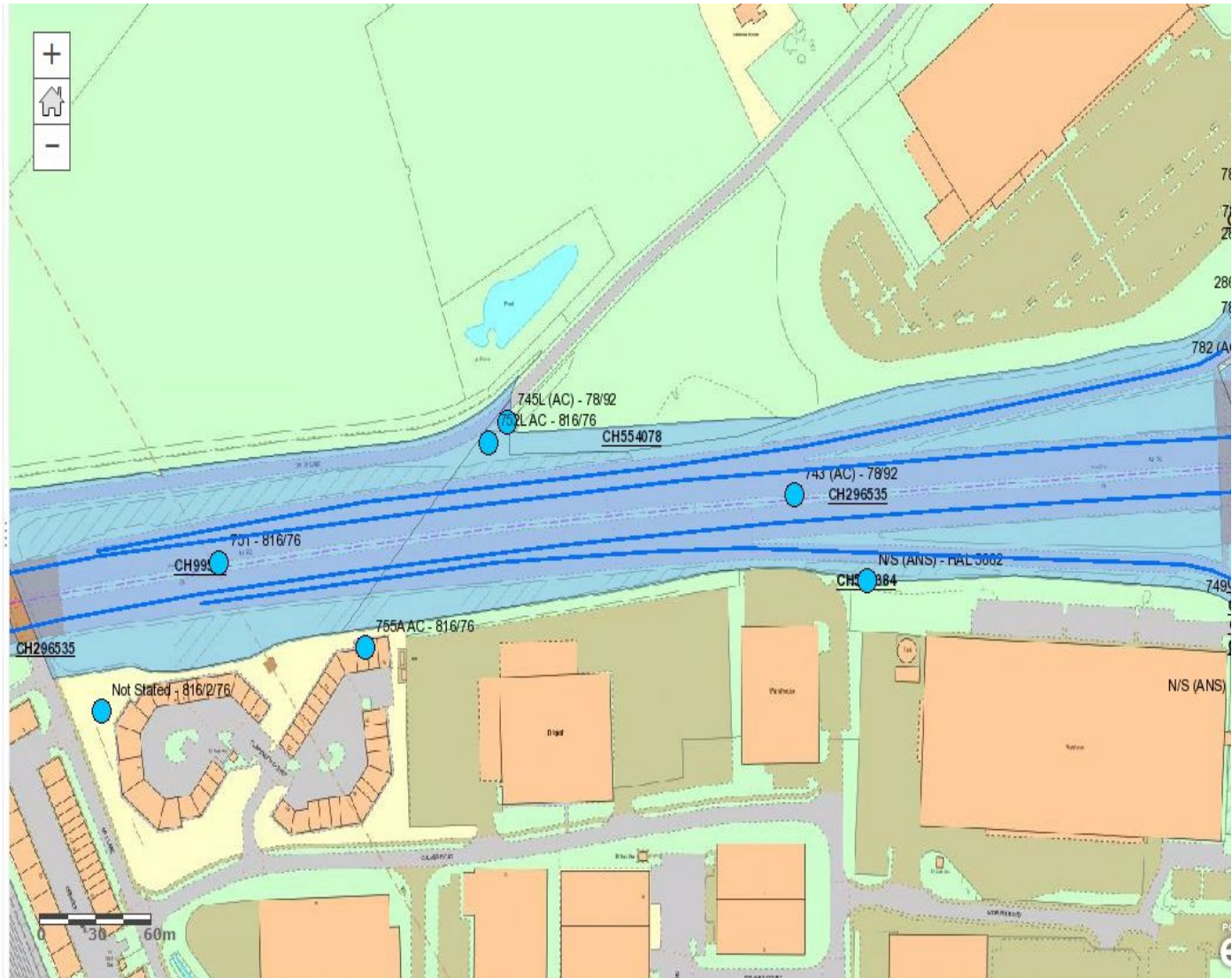
- HAPMS
- A
- A(M)
- M

Lands

- Terrier Locate
- Acquired
- Not Acquired
- Terrier Locate Request
- HE Managed sites
- Heathrow Affected Area

Land Registry

- Highways England SRN
- Freehold
- Leasehold



Legend

HAPMS

HAPMS

- A
- A(M)
- M

Lands

Terrier Locate

- Acquired
- Not Acquired

Terrier Locate Request



HE Managed sites



Heathrow Affected Area



Land Registry

Highways England SRN

- Freehold
- Leasehold



Legend

HAPMS

- HAPMS
- A
- A(M)
- M

Lands

- Terrier Locate
- Acquired
- Not Acquired
- Terrier Locate Request
- HE Managed sites
- Heathrow Affected Area

Land Registry

- Highways England SRN
- Freehold
- Leasehold



Legend

HAPMS

- HAPMS
- A
 - A(M)
 - M

Lands

- Terrier Locate
- Acquired
 - Not Acquired
- Terrier Locate Request
-
- HE Managed sites
-
- Heathrow Affected Area
-

Land Registry

- Highways England SRN
- Freehold
 - Leasehold



Appendix 80

Mitigation Modelling

Junctions 9

ARCADY 9 - Roundabout Module PICADY 9 - Priority Intersection Module

Version: 9.0.2.5947
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Filename: Peel Hall Advanced Mode with Mitigation.j9
Report generation date: 25/01/2018 10:56:06

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
A50-Conjunction [Lane Simulation] - 2025 DM								
1 - A50/Hilden Rd Roundabout - 1 - Hilden Rd	0.7	7.10		A	0.6	6.74		A
1 - A50/Hilden Rd Roundabout - 2 - Orford Rd	1.5	7.05		A	2.4	8.61		A
1 - A50/Hilden Rd Roundabout - 3 - Smith Drive	0.7	7.84		A	2.3	16.29		C
1 - A50/Hilden Rd Roundabout - 4 - A50	1.8	5.82		A	1.4	5.46		A
2 - Poplars Ave/A50 - A - A50 W	0.0	0.35		A	0.1	0.17		A
2 - Poplars Ave/A50 - B - Poplars Ave	32.0	157.13		F	0.9	11.78		B
2 - Poplars Ave/A50 - C - A50 E	1.6	4.82		A	1.9	5.73		A
A50-Conjunction [Lane Simulation] - 2025 DS								
1 - A50/Hilden Rd Roundabout - 1 - Hilden Rd	0.7	7.18		A	0.8	9.54		A
1 - A50/Hilden Rd Roundabout - 2 - Orford Rd	2.5	8.89		A	9.2	26.24		D
1 - A50/Hilden Rd Roundabout - 3 - Smith Drive	0.6	8.24		A	3.8	26.70		D
1 - A50/Hilden Rd Roundabout - 4 - A50	1.8	5.73		A	1.9	6.20		A
2 - Poplars Ave/A50 - A - A50 W	0.1	0.36		A	0.2	0.58		A
2 - Poplars Ave/A50 - B - Poplars Ave	39.7	186.92		F	2.7	26.09		D
2 - Poplars Ave/A50 - C - A50 E	2.0	5.97		A	3.1	9.02		A
A50-Conjunction [Lane Simulation] - 2030 DM								
1 - A50/Hilden Rd Roundabout - 1 - Hilden Rd	0.7	7.14		A	0.6	7.22		A
1 - A50/Hilden Rd Roundabout - 2 - Orford Rd	1.8	7.53		A	2.7	9.48		A
1 - A50/Hilden Rd Roundabout - 3 - Smith Drive	0.6	7.52		A	2.8	19.16		C
1 - A50/Hilden Rd Roundabout - 4 - A50	1.8	5.68		A	1.8	5.89		A
2 - Poplars Ave/A50 - A - A50 W	0.0	0.27		A	0.1	0.36		A
2 - Poplars Ave/A50 - B - Poplars Ave	27.9	138.11		F	1.3	15.47		C
2 - Poplars Ave/A50 - C - A50 E	1.4	4.67		A	1.9	5.83		A
A50-Conjunction [Lane Simulation] - 2030 DS								
1 - A50/Hilden Rd Roundabout - 1 - Hilden Rd	1.1	9.19		A	1.8	14.52		B
1 - A50/Hilden Rd Roundabout - 2 - Orford Rd	3.9	12.75		B	12.7	40.90		E
1 - A50/Hilden Rd Roundabout - 3 - Smith Drive	0.8	9.27		A	6.5	44.24		E
1 - A50/Hilden Rd Roundabout - 4 - A50	1.8	5.95		A	1.6	6.01		A
2 - Poplars Ave/A50 - A - A50 W	0.2	0.45		A	0.1	0.55		A

2 - Poplars Ave/A50 - B - Poplars Ave	48.5	227.89		F	1.4	17.96		C
2 - Poplars Ave/A50 - C - A50 E	2.5	7.25		A	3.4	9.36		A
A50-Conjunction [Lane Simulation] - 2030 Through Route Scenario								
1 - A50/Hilden Rd Roundabout - 1 - Hilden Rd	1.0	9.43		A	0.8	8.87		A
1 - A50/Hilden Rd Roundabout - 2 - Orford Rd	3.3	11.15		B	7.3	24.94		C
1 - A50/Hilden Rd Roundabout - 3 - Smith Drive	0.9	8.97		A	4.1	29.42		D
1 - A50/Hilden Rd Roundabout - 4 - A50	1.9	5.97		A	1.7	6.04		A
2 - Poplars Ave/A50 - A - A50 W	0.1	0.39		A	0.1	0.44		A
2 - Poplars Ave/A50 - B - Poplars Ave	47.1	224.34		F	2.6	23.58		C
2 - Poplars Ave/A50 - C - A50 E	2.2	6.73		A	2.9	8.67		A

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Arm and junction delays are averages for all movements, including movements with zero delay.

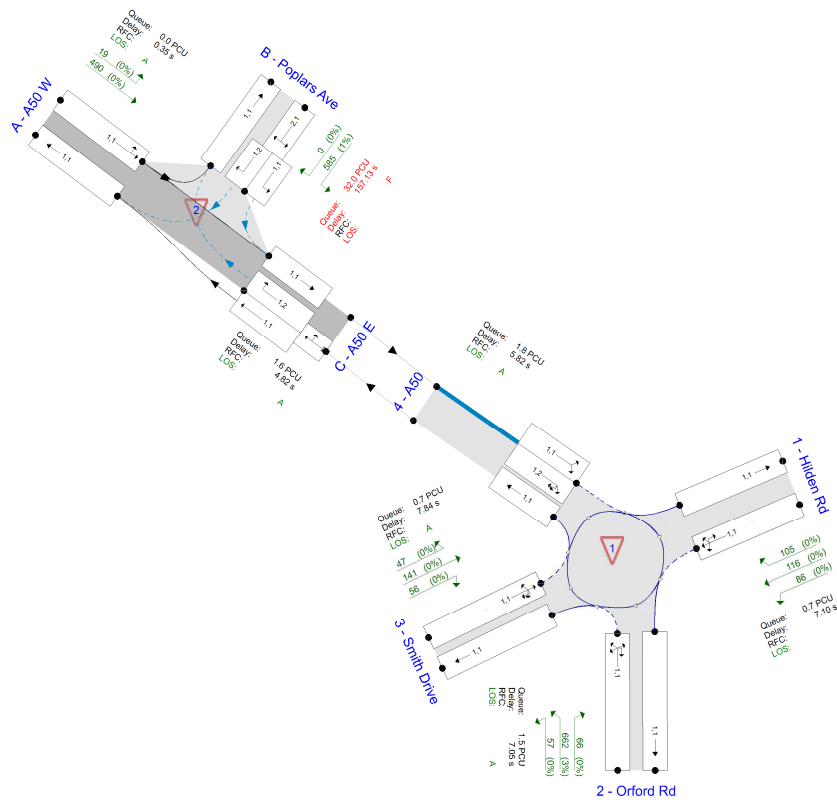
File summary

File Description

Title	(untitled)
Location	
Site number	
Date	16/11/2017
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	
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)
Lane simulation visualisation time: 08:00:00

The junction diagram reflects the last run of Junctions.

Analysis Options

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

Lane Simulation options

Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Use crossings quick response	Last run random seed	Last run number of trials	Last run time taken (s)
1.00	100000	100000	-1	3	1	✓	737106758	183	45.66

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	2025 DM	AM	ONE HOUR	08:00	09:30	15	✓
D2	2025 DM	PM	ONE HOUR	17:00	18:30	15	✓
D3	2025 DS	AM	ONE HOUR	08:00	09:30	15	✓
D4	2025 DS	PM	ONE HOUR	17:00	18:30	15	✓
D5	2030 DM	AM	ONE HOUR	08:00	09:30	15	✓
D6	2030 DM	PM	ONE HOUR	17:00	18:30	15	✓
D7	2030 DS	AM	ONE HOUR	08:00	09:30	15	✓
D8	2030 DS	PM	ONE HOUR	17:00	18:30	15	✓
D9	2030 Through Route Scenario	AM	ONE HOUR	08:00	09:30	15	✓
D10	2030 Through Route Scenario	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
AV-1	A50-Conjunction	✓	✓	100.000	100.000

A50-Conjunction - 2025 DM, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	AV-1 - A50-Conjunction [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Arm order	Junction Delay (s)	Junction LOS
1	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	6.59	A
2	Poplars Ave/A50	T-Junction	Two-way		46.06	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Name	Description	Arm type
1 - A50/Hilden Rd Roundabout	1	Hilden Rd	Hilden Rd	
	2	Orford Rd		
	3	Smith Drive		
	4	A50		
2 - Poplars Ave/A50	A	A50 W		Major
	B	Poplars Ave		Minor
	C	A50 E		Major

Roundabout Geometry

Junction	Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	3.70	5.50	11.3	31.3	78.0	54.5	
	2 - Orford Rd	4.35	6.50	50.0	29.5	78.0	25.1	
	3 - Smith Drive	3.60	4.40	3.8	15.0	78.0	32.0	
	4 - A50	6.00	7.40	10.0	48.7	78.0	20.5	

Major Arm Geometry

Junction	Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
2 - Poplars Ave/A50	C - A50 E	11.00		✓	3.00	120.0	✓	3.00

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

Minor Arm Geometry

Junction	Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
2 - Poplars Ave/A50	B - Poplars Ave	One lane plus flare	10.00	7.00	5.90	4.36	4.36	✓	2.00	120	52

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Final slope	Final intercept (PCU/hr)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	0.415	1383
	2 - Orford Rd	0.522	1953
	3 - Smith Drive	0.399	1207
	4 - A50	0.572	2241

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

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
2	B-A	523	0.075	0.188	0.118	0.269
2	B-C	771	0.093	0.234	-	-
2	C-B	699	0.212	0.212	-	-

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

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

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

Lane Simulation: Arm options

Junction	Arm	Lane capacity source	Traffic Considering Secondary Lanes (%)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Evenly split	10.00
	2 - Orford Rd	Evenly split	10.00
	3 - Smith Drive	Evenly split	10.00
	4 - A50	Evenly split	10.00
2 - Poplars Ave/A50	A - A50 W		
	B - Poplars Ave		
	C - A50 E		

Lanes

Junction	Arm	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	1 [Give-way line]	1	1, 2, 3, 4		Infinity	0	99999	
	2 - Orford Rd	1 [Give-way line]	1	1, 2, 3, 4		Infinity	0	99999	
	3 - Smith Drive	1 [Give-way line]	1	1, 2, 3, 4		Infinity	0	99999	
	4 - A50	1 [Give-way line]	1	1, 2	✓	3.00	0	99999	
2			2, 3, 4	✓	3.00	0	99999		
2 - Poplars Ave/A50	A - A50 W	1 [Give-way line]	1	B, C		Infinity	0	99999	
	B - Poplars Ave	1 [Give-way line]	1	C	✓	2.00	0	99999	
			2	A	✓	2.00	0	99999	
	C - A50 E	1 [Give-way line]	2	1	(A, C)		Infinity		
			1	1	A	✓	3.00	0	99999
			2	2	B	✓	3.00	0	99999
2			1	(A, B)	✓	3.00			

Entry Lane slope and intercept

Junction	Arm	Lane level	Lane	Final slope	Final intercept (PCU/hr)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	1 [Give-way line]	1	0.415	1383
	2 - Orford Rd	1 [Give-way line]	1	0.522	1953
	3 - Smith Drive	1 [Give-way line]	1	0.399	1207
	4 - A50	1 [Give-way line]	1	0.286	1121
2			0.286	1121	

Lane Movements

Junction	Arm	Lane Level	Lane	Destination arm			
				Hilden Rd	Orford Rd	Smith Drive	A50
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	1 [Give-way line]	1	✓	✓	✓	✓
	2 - Orford Rd	1 [Give-way line]	1	✓	✓	✓	✓
	3 - Smith Drive	1 [Give-way line]	1	✓	✓	✓	✓
	4 - A50	1 [Give-way line]	1	✓	✓		
2				✓	✓	✓	

Lane Movements

Junction	Arm	Lane Level	Lane	Destination arm			
				A50 W	Poplars Ave	A50 E	
2 - Poplars Ave/A50	A - A50 W	1 [Give-way line]	1		✓	✓	
	B - Poplars Ave	1 [Give-way line]	1			✓	
			2	✓			
			2	1	✓		✓
	C - A50 E	1 [Give-way line]	1	1	✓		
			2	2		✓	
2			1	✓	✓		

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025 DM	AM	ONE HOUR	08:00	09:30	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - A50/Hilden Rd Roundabout	4 - A50	2	C	Simple (vertical queueing)	Normal	0	100.00	
2 - Poplars Ave/A50	C - A50 E	1	4	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd		ONE HOUR	✓	308	100.000
	2 - Orford Rd		ONE HOUR	✓	785	100.000
	3 - Smith Drive		ONE HOUR	✓	244	100.000
	4 - A50	✓				
2 - Poplars Ave/A50	A - A50 W		ONE HOUR	✓	509	100.000
	B - Poplars Ave		ONE HOUR	✓	585	100.000
	C - A50 E	✓				

Origin-Destination Data

Demand (PCU/hr)

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	86	116	105
	2 - Orford Rd	66	0	57	662
	3 - Smith Drive	141	56	0	47
	4 - A50	45	621	161	168

Demand (PCU/hr)

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	19	490
	B - Poplars Ave	0	0	585
	C - A50 E	687	299	0

Vehicle Mix

Heavy Vehicle Percentages

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	0	0	0
	2 - Orford Rd	0	0	0	3
	3 - Smith Drive	0	0	0	0
	4 - A50	0	1	0	0

Heavy Vehicle Percentages

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	0	0
	B - Poplars Ave	0	0	1
	C - A50 E	1	6	0

Results

Results Summary for whole modelled period

Junction	Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	7.10	0.7	A	283	424
	2 - Orford Rd	7.05	1.5	A	719	1078
	3 - Smith Drive	7.84	0.7	A	223	335
	4 - A50	5.82	1.8	A	979	1468
2 - Poplars Ave/A50	A - A50 W	0.35	0.0	A	468	702
	B - Poplars Ave	157.13	32.0	F	534	800
	C - A50 E	4.82	1.6	A	918	1378

Main Results for each time segment

08:00 - 08:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	235	59	811	234	191	0.0	0.3	4.248	A
	2 - Orford Rd	597	149	431	596	615	0.0	0.7	3.247	A
	3 - Smith Drive	183	46	769	183	258	0.0	0.3	4.796	A
	4 - A50	805	201	197	805	755	0.0	1.1	4.512	A
2 - Poplars Ave/A50	A - A50 W	380	95		380	532	0.0	0.0	0.017	A
	B - Poplars Ave	438	110		438	241	0.0	1.9	14.029	B
	C - A50 E	758	190		759	804	0.0	0.6	2.869	A

08:15 - 08:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	277	69	971	277	233	0.3	0.5	5.162	A
	2 - Orford Rd	709	177	519	709	728	0.7	0.8	4.121	A
	3 - Smith Drive	220	55	919	220	310	0.3	0.4	5.744	A
	4 - A50	967	242	237	967	902	1.1	1.3	5.051	A
2 - Poplars Ave/A50	A - A50 W	464	116		464	626	0.0	0.0	0.122	A
	B - Poplars Ave	531	133		519	298	1.9	4.9	26.647	D
	C - A50 E	904	226		905	966	0.6	0.9	3.573	A

08:30 - 08:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	343	86	1134	342	274	0.5	0.7	6.877	A
	2 - Orford Rd	844	211	622	842	855	0.8	1.4	6.059	A
	3 - Smith Drive	264	66	1089	264	375	0.4	0.6	7.224	A
	4 - A50	1120	280	286	1122	1066	1.3	1.8	5.749	A
2 - Poplars Ave/A50	A - A50 W	554	139		554	743	0.0	0.0	0.316	A
	B - Poplars Ave	629	157		585	346	4.9	19.5	82.133	F
	C - A50 E	1070	267		1068	1119	0.9	1.5	4.507	A

08:45 - 09:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	333	83	1144	335	276	0.7	0.6	7.103	A
	2 - Orford Rd	859	215	609	864	870	1.4	1.5	7.046	A
	3 - Smith Drive	266	67	1101	266	372	0.6	0.7	7.836	A
	4 - A50	1134	283	284	1136	1085	1.8	1.8	5.824	A
2 - Poplars Ave/A50	A - A50 W	568	142		568	765	0.0	0.0	0.351	A
	B - Poplars Ave	637	159		585	346	19.5	32.0	157.131	F
	C - A50 E	1090	273		1091	1132	1.5	1.6	4.816	A

09:00 - 09:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	281	70	1024	281	237	0.6	0.4	5.592	A
	2 - Orford Rd	709	177	538	711	767	1.5	0.8	4.413	A
	3 - Smith Drive	219	55	936	218	313	0.7	0.3	6.187	A
	4 - A50	1024	256	237	1024	916	1.8	1.5	5.288	A
2 - Poplars Ave/A50	A - A50 W	462	116		462	634	0.0	0.0	0.132	A
	B - Poplars Ave	528	132		580	305	32.0	14.5	131.902	F
	C - A50 E	923	231		921	1024	1.6	1.1	3.773	A

09:15 - 09:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	229	57	830	228	197	0.4	0.3	4.833	A
	2 - Orford Rd	596	149	441	597	617	0.8	0.5	3.500	A
	3 - Smith Drive	189	47	776	190	262	0.3	0.3	5.338	A
	4 - A50	824	206	204	822	761	1.5	1.1	4.730	A
2 - Poplars Ave/A50	A - A50 W	380	95		380	538	0.0	0.0	0.064	A
	B - Poplars Ave	439	110		455	242	14.5	2.6	40.168	E
	C - A50 E	766	192		767	822	1.1	0.8	3.111	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

08:00 - 08:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	235	1046	0.224	234	0.0	0.3	4.248	A
		Exit	1	1		191			191	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	597	1728	0.346	596	0.0	0.7	3.247	A
		Exit	1	1		615			615	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	183	900	0.203	183	0.0	0.3	4.796	A
		Exit	1	1		258			258	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	330	1064	0.310	330	0.0	0.4	4.114	A
				2	2, 3, 4	475	1064	0.446	475	0.0	0.7	4.782	A
		Exit	1	1		755			755	0.0	0.0	0.093	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	380			380	0.0	0.0	0.017
Exit			1	1		532			532	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	438			438	0.0	1.1	8.555	A
				2	A	0			0	0.0	0.0	0.000	A
		Exit	1	1	(A, C)	438			438	0.0	0.9	5.448	A
						241			241	0.0	0.0	0.000	A
C - A50 E		Entry	1	1	A	532			532	0.0	0.0	0.000	A
				2	B	227			227	0.0	0.6	8.800	A
				1	(A, B)	758			759	0.0	0.0	0.309	A
		Exit	1	1		804			804	0.0	0.1	0.200	A

08:15 - 08:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	277	980	0.283	277	0.3	0.5	5.162	A
		Exit	1	1		233			233	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	709	1681	0.422	709	0.7	0.8	4.121	A
		Exit	1	1		728			728	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	220	840	0.261	220	0.3	0.4	5.744	A
		Exit	1	1		310			310	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	398	1053	0.378	398	0.4	0.5	4.503	A
				2	2, 3, 4	569	1053	0.540	569	0.7	0.8	5.434	A
		Exit	1	1		902			902	0.0	0.1	0.260	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	464			464	0.0	0.0	0.122
Exit			1	1		626			626	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	521			519	1.1	1.6	9.931	A
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	531			521	0.9	3.3	16.683	C	
Exit		1	1		298			298	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	626			626	0.0	0.0	0.000	A
				2	B	279			280	0.6	0.7	9.851	A
		2	1	(A, B)	904			904	0.0	0.2	0.640	A	
Exit		1	1		965			966	0.1	0.1	0.469	A	

08:30 - 08:45

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	343	912	0.376	342	0.5	0.7	6.877	A
		Exit	1	1		274			274	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	844	1628	0.518	842	0.8	1.4	6.059	A
		Exit	1	1		855			855	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	264	773	0.342	264	0.4	0.6	7.224	A
		Exit	1	1		375			375	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	471	1039	0.453	473	0.5	0.7	5.010	A
				2	2, 3, 4	649	1039	0.624	650	0.8	1.1	6.285	A
		Exit	1	1		1066			1066	0.1	0.2	0.535	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	554			554	0.0	0.0	0.316
Exit			1	1		743			743	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	585			585	1.6	1.9	11.541	B
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	629			585	3.3	17.5	70.603	F	
Exit		1	1			346			346	0.0	0.0	0.000	A
C - A50 E		Entry	1	1	A	743			743	0.0	0.0	0.000	A
				2	B	326			325	0.7	1.1	11.551	B
		2	1	(A, B)	1070			1069	0.2	0.4	1.123	A	
Exit	1	1			1119			1119	0.1	0.3	0.841	A	

08:45 - 09:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	333	908	0.367	335	0.7	0.6	7.103	A
		Exit	1	1		276			276	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	859	1635	0.525	864	1.4	1.5	7.046	A
		Exit	1	1		870			870	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	266	768	0.347	266	0.6	0.7	7.836	A
		Exit	1	1		372			372	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	488	1040	0.469	489	0.7	0.7	5.042	A
				2	2, 3, 4	646	1040	0.621	647	1.1	1.1	6.404	A
		Exit	1	1		1084			1085	0.2	0.2	0.661	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	568			568	0.0	0.0	0.351
Exit			1	1		765			765	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	584			585	1.9	2.0	11.854	B
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	637			584	17.5	30.1	145.311	F	
Exit		1	1		346			346	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	765			765	0.0	0.0	0.000	A
				2	B	325			326	1.1	1.1	11.841	B
		2	1	(A, B)	1090			1090	0.4	0.5	1.368	A	
Exit		1	1		1132			1132	0.3	0.2	0.918	A	

09:00 - 09:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	281	957	0.293	281	0.6	0.4	5.592	A
		Exit	1	1		237			237	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	709	1672	0.424	711	1.5	0.8	4.413	A
		Exit	1	1		767			767	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	219	834	0.262	218	0.7	0.3	6.187	A
		Exit	1	1		313			313	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	429	1053	0.407	430	0.7	0.6	4.641	A
				2	2, 3, 4	595	1053	0.565	594	1.1	0.9	5.755	A
		Exit	1	1		917			916	0.2	0.1	0.288	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	462			462	0.0	0.0	0.132
Exit			1	1		634			634	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	578			580	2.0	1.7	10.974	B
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	528			578	30.1	12.8	121.031	F	
Exit		1	1		305			305	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	634			634	0.0	0.0	0.000	A
				2	B	288			287	1.1	0.9	10.375	B
		2	1	(A, B)	923			922	0.5	0.2	0.724	A	
Exit		1	1		1024			1024	0.2	0.1	0.586	A	

09:15 - 09:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	229	1038	0.220	228	0.4	0.3	4.833	A
		Exit	1	1		197			197	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	596	1722	0.346	597	0.8	0.5	3.500	A
		Exit	1	1		617			617	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	189	897	0.210	190	0.3	0.3	5.338	A
		Exit	1	1		262			262	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	338	1062	0.318	336	0.6	0.4	4.237	A
				2	2, 3, 4	486	1062	0.458	486	0.9	0.8	5.072	A
		Exit	1	1		762			761	0.1	0.1	0.144	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	380			380	0.0	0.0	0.064
Exit			1	1		538			538	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	453			455	1.7	1.1	9.420	A
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	439			453	12.8	1.5	30.783	D	
Exit		1	1			242			242	0.0	0.0	0.000	A
C - A50 E		Entry	1	1	A	538			538	0.0	0.0	0.000	A
				2	B	228			229	0.9	0.6	9.297	A
		Exit	1	1	2	(A, B)	766			766	0.2	0.1	0.403

A50-Conjunction - 2025 DM, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	AV-1 - A50-Conjunction [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Arm order	Junction Delay (s)	Junction LOS
1	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	8.67	A
2	Poplars Ave/A50	T-Junction	Two-way		4.24	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2025 DM	PM	ONE HOUR	17:00	18:30	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - A50/Hilden Rd Roundabout	4 - A50	2	C	Simple (vertical queueing)	Normal	0	100.00	
2 - Poplars Ave/A50	C - A50 E	1	4	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd		ONE HOUR	✓	279	100.000
	2 - Orford Rd		ONE HOUR	✓	902	100.000
	3 - Smith Drive		ONE HOUR	✓	441	100.000
	4 - A50	✓				
2 - Poplars Ave/A50	A - A50 W		ONE HOUR	✓	799	100.000
	B - Poplars Ave		ONE HOUR	✓	231	100.000
	C - A50 E	✓				

Origin-Destination Data

Demand (PCU/hr)

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	100	41	138
	2 - Orford Rd	135	0.95	71	694
	3 - Smith Drive	205	93	0	143
	4 - A50	82	608	160	19

Demand (PCU/hr)

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	161	638
	B - Poplars Ave	0	0	231
	C - A50 E	708	292	0

Vehicle Mix

Heavy Vehicle Percentages

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	0	0	0
	2 - Orford Rd	0	0	0	1
	3 - Smith Drive	0	0	0	0
	4 - A50	0	2	0	0

Heavy Vehicle Percentages

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	0	2
	B - Poplars Ave	0	0	0
	C - A50 E	0	3	0

Results

Results Summary for whole modelled period

Junction	Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	6.74	0.6	A	258	387
	2 - Orford Rd	8.61	2.4	A	830	1246
	3 - Smith Drive	16.29	2.3	C	408	611
	4 - A50	5.46	1.4	A	797	1195
2 - Poplars Ave/A50	A - A50 W	0.17	0.1	A	732	1098
	B - Poplars Ave	11.78	0.9	B	213	320
	C - A50 E	5.73	1.9	A	915	1373

Main Results for each time segment

17:00 - 17:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	208	52	667	208	323	0.0	0.2	3.880	A
	2 - Orford Rd	684	171	268	683	606	0.0	0.7	3.228	A
	3 - Smith Drive	336	84	746	336	205	0.0	0.7	5.963	A
	4 - A50	658	164	332	658	750	0.0	0.9	4.280	A
2 - Poplars Ave/A50	A - A50 W	604	151		604	532	0.0	0.0	0.011	A
	B - Poplars Ave	176	44		176	340	0.0	0.3	7.255	A
	C - A50 E	751	188		750	658	0.0	0.7	2.942	A

17:15 - 17:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	258	64	788	258	381	0.2	0.3	4.679	A
	2 - Orford Rd	807	202	326	807	721	0.7	0.9	4.095	A
	3 - Smith Drive	400	100	887	398	245	0.7	1.0	8.271	A
	4 - A50	778	195	390	778	894	0.9	1.0	4.713	A
2 - Poplars Ave/A50	A - A50 W	715	179		715	633	0.0	0.0	0.034	A
	B - Poplars Ave	204	51		204	403	0.3	0.5	8.887	A
	C - A50 E	896	224		895	779	0.7	1.1	4.020	A

17:30 - 17:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	308	77	969	308	468	0.3	0.5	6.231	A
	2 - Orford Rd	1007	252	393	1005	884	0.9	2.3	7.226	A
	3 - Smith Drive	487	122	1097	484	300	1.0	2.3	14.120	B
	4 - A50	957	239	480	957	1100	1.0	1.4	5.342	A
2 - Poplars Ave/A50	A - A50 W	877	219		877	779	0.0	0.1	0.147	A
	B - Poplars Ave	259	65		259	501	0.5	0.8	11.778	B
	C - A50 E	1102	275		1100	957	1.1	1.9	5.558	A

17:45 - 18:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	309	77	972	310	468	0.5	0.6	6.735	A
	2 - Orford Rd	992	248	398	994	883	2.3	2.4	8.613	A
	3 - Smith Drive	490	123	1087	489	306	2.3	2.3	16.287	C
	4 - A50	956	239	483	957	1094	1.4	1.4	5.459	A
2 - Poplars Ave/A50	A - A50 W	875	219		875	778	0.1	0.0	0.174	A
	B - Poplars Ave	258	65		257	498	0.8	0.9	11.663	B
	C - A50 E	1096	274		1098	956	1.9	1.7	5.731	A

18:00 - 18:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	250	62	788	250	379	0.6	0.3	4.977	A
	2 - Orford Rd	813	203	324	813	714	2.4	1.0	4.872	A
	3 - Smith Drive	399	100	890	397	247	2.3	1.0	9.475	A
	4 - A50	777	194	389	778	898	1.4	1.0	4.761	A
2 - Poplars Ave/A50	A - A50 W	717	179		717	640	0.0	0.0	0.035	A
	B - Poplars Ave	207	52		207	404	0.9	0.5	9.027	A
	C - A50 E	899	225		898	778	1.7	1.1	4.212	A

18:15 - 18:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	215	54	664	214	321	0.3	0.3	4.139	A
	2 - Orford Rd	679	170	272	678	607	1.0	0.7	3.395	A
	3 - Smith Drive	334	84	742	334	208	1.0	0.6	6.507	A
	4 - A50	655	164	331	655	745	1.0	0.9	4.387	A
2 - Poplars Ave/A50	A - A50 W	603	151		603	531	0.0	0.0	0.014	A
	B - Poplars Ave	176	44		175	339	0.5	0.4	7.733	A
	C - A50 E	747	187		748	656	1.1	0.7	3.153	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

17:00 - 17:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	208	1106	0.188	208	0.0	0.2	3.880	A
		Exit	1	1		323			323	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	684	1813	0.377	683	0.0	0.7	3.228	A
		Exit	1	1		606			606	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	336	909	0.369	336	0.0	0.7	5.963	A
		Exit	1	1		205			205	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	304	1026	0.296	304	0.0	0.4	4.201	A
				2	2, 3, 4	354	1026	0.345	354	0.0	0.5	4.346	A
		Exit	1	1		750			750	0.0	0.0	0.099	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	604			604	0.0	0.0	0.011
Exit			1	1		532			532	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	176			176	0.0	0.3	6.773	A
				2	A	0			0	0.0	0.0	0.000	A
		Exit	1	1	(A, C)	176			176	0.0	0.0	0.481	A
						340			340	0.0	0.0	0.000	A
C - A50 E		Entry	1	1	A	532			532	0.0	0.0	0.000	A
				2	B	219			218	0.0	0.6	9.249	A
				1	(A, B)	751			751	0.0	0.1	0.310	A
		Exit	1	1		658			658	0.0	0.0	0.091	A

17:15 - 17:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	258	1056	0.244	258	0.2	0.3	4.679	A
		Exit	1	1		381			381	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	807	1783	0.453	807	0.7	0.9	4.095	A
		Exit	1	1		721			721	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	400	853	0.468	398	0.7	1.0	8.271	A
		Exit	1	1		245			245	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	363	1009	0.360	363	0.4	0.4	4.566	A
				2	2, 3, 4	415	1009	0.411	415	0.5	0.6	4.840	A
		Exit	1	1		895			894	0.0	0.1	0.288	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	715			715	0.0	0.0	0.034
Exit			1	1		633			633	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	205			204	0.3	0.4	7.771	A
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	204			205	0.0	0.0	1.111	A	
Exit		1	1		403			403	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	633			633	0.0	0.0	0.000	A
				2	B	262			262	0.6	0.9	11.560	B
		2	1	(A, B)	896			895	0.1	0.2	0.718	A	
Exit		1	1		779			779	0.0	0.0	0.209	A	

17:30 - 17:45

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	308	980	0.314	308	0.3	0.5	6.231	A
		Exit	1	1		468			468	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	1007	1748	0.576	1005	0.9	2.3	7.226	A
		Exit	1	1		884			884	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	487	769	0.632	484	1.0	2.3	14.120	B
		Exit	1	1		300			300	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	450	983	0.458	450	0.4	0.6	5.111	A
				2	2, 3, 4	507	983	0.515	507	0.6	0.8	5.544	A
		Exit	1	1		1100			1100	0.1	0.3	0.814	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	877			877	0.0	0.1	0.147
Exit			1	1		779			779	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	260			259	0.4	0.6	9.143	A
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	259			260	0.0	0.2	2.628	A	
Exit		1	1		501			501	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	779			779	0.0	0.0	0.000	A
				2	B	322			322	0.9	1.3	13.734	B
		2	1	(A, B)	1102			1101	0.2	0.6	1.612	A	
Exit		1	1		957			957	0.0	0.1	0.512	A	

17:45 - 18:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	309	979	0.316	310	0.5	0.6	6.735	A
		Exit	1	1		468			468	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	992	1745	0.568	994	2.3	2.4	8.613	A
		Exit	1	1		883			883	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	490	773	0.634	489	2.3	2.3	16.287	C
		Exit	1	1		306			306	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	446	983	0.454	446	0.6	0.6	5.206	A
				2	2, 3, 4	510	983	0.519	510	0.8	0.8	5.683	A
		Exit	1	1		1093			1094	0.3	0.3	0.899	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	875			875	0.1	0.0	0.174
Exit			1	1		778			778	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	258			257	0.6	0.7	9.141	A
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	258			258	0.2	0.2	2.521	A	
Exit		1	1		498			498	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	778			778	0.0	0.0	0.000	A
				2	B	319			320	1.3	1.2	14.144	B
		2	1	(A, B)	1096			1096	0.6	0.5	1.719	A	
Exit		1	1		955			956	0.1	0.1	0.538	A	

18:00 - 18:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	250	1055	0.237	250	0.6	0.3	4.977	A
		Exit	1	1		379			379	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	813	1783	0.456	813	2.4	1.0	4.872	A
		Exit	1	1		714			714	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	399	852	0.468	397	2.3	1.0	9.475	A
		Exit	1	1		247			247	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	360	1010	0.356	360	0.6	0.4	4.584	A
				2	2, 3, 4	418	1010	0.414	418	0.8	0.6	4.915	A
		Exit	1	1		899			898	0.3	0.1	0.409	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	717			717	0.0	0.0	0.035
Exit			1	1		640			640	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	207			207	0.7	0.4	7.956	A
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	207			207	0.2	0.1	1.082	A	
Exit		1	1		404			404	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	640			640	0.0	0.0	0.000	A
				2	B	259			258	1.2	0.9	11.670	B
		2	1	(A, B)	899			899	0.5	0.2	0.897	A	
Exit		1	1		778			778	0.1	0.0	0.227	A	

18:15 - 18:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	215	1107	0.194	214	0.3	0.3	4.139	A
		Exit	1	1		321			321	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	679	1811	0.375	678	1.0	0.7	3.395	A
		Exit	1	1		607			607	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	334	911	0.367	334	1.0	0.6	6.507	A
		Exit	1	1		208			208	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	305	1026	0.297	305	0.4	0.4	4.234	A
				2	2, 3, 4	351	1026	0.342	350	0.6	0.5	4.518	A
		Exit	1	1		745			745	0.1	0.0	0.132	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	603			603	0.0	0.0	0.014
Exit			1	1		531			531	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	176			175	0.4	0.4	7.134	A
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	176			176	0.1	0.0	0.612	A	
Exit		1	1		339			339	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	531			531	0.0	0.0	0.000	A
				2	B	216			217	0.9	0.6	9.865	A
		2	1	(A, B)	747			747	0.2	0.1	0.378	A	
Exit		1	1		656			656	0.0	0.0	0.114	A	

A50-Conjunction - 2025 DS, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	AV-1 - A50-Conjunction [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Arm order	Junction Delay (s)	Junction LOS
1	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	7.27	A
2	Poplars Ave/A50	T-Junction	Two-way		58.27	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2025 DS	AM	ONE HOUR	08:00	09:30	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - A50/Hilden Rd Roundabout	4 - A50	2	C	Simple (vertical queueing)	Normal	0	100.00	
2 - Poplars Ave/A50	C - A50 E	1	4	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd		ONE HOUR	✓	317	100.000
	2 - Orford Rd		ONE HOUR	✓	839	100.000
	3 - Smith Drive		ONE HOUR	✓	245	100.000
	4 - A50	✓				
2 - Poplars Ave/A50	A - A50 W		ONE HOUR	✓	450	100.000
	B - Poplars Ave		ONE HOUR	✓	621	100.000
	C - A50 E	✓				

Origin-Destination Data

Demand (PCU/hr)

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	70	158	89
	2 - Orford Rd	63	0	55	720
	3 - Smith Drive	145	52	0	48
	4 - A50	54	638	156	164

Demand (PCU/hr)

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	37	413
	B - Poplars Ave	0	0	621
	C - A50 E	688	356	0

Vehicle Mix

Heavy Vehicle Percentages

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	0	0	0
	2 - Orford Rd	0	0	0	3
	3 - Smith Drive	0	0	0	0
	4 - A50	0	1	0	0

Heavy Vehicle Percentages

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	5	0
	B - Poplars Ave	0	0	1
	C - A50 E	1	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	7.18	0.7	A	291	437
	2 - Orford Rd	8.89	2.5	A	772	1157
	3 - Smith Drive	8.24	0.6	A	226	340
	4 - A50	5.73	1.8	A	944	1416
2 - Poplars Ave/A50	A - A50 W	0.36	0.1	A	415	623
	B - Poplars Ave	186.92	39.7	F	570	854
	C - A50 E	5.97	2.0	A	941	1412

Main Results for each time segment

08:00 - 08:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	235	59	777	235	202	0.0	0.3	4.127	A
	2 - Orford Rd	626	156	431	626	581	0.0	0.6	3.367	A
	3 - Smith Drive	188	47	780	188	276	0.0	0.3	4.852	A
	4 - A50	777	194	200	778	768	0.0	0.9	4.472	A
2 - Poplars Ave/A50	A - A50 W	339	85		339	505	0.0	0.0	0.020	A
	B - Poplars Ave	465	116		466	290	0.0	2.2	15.406	C
	C - A50 E	768	192		767	777	0.0	0.9	3.510	A

08:15 - 08:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	286	72	921	286	237	0.3	0.4	5.086	A
	2 - Orford Rd	757	189	514	755	693	0.6	1.0	4.405	A
	3 - Smith Drive	216	54	937	215	332	0.3	0.3	5.846	A
	4 - A50	926	232	232	926	921	0.9	1.3	4.853	A
2 - Poplars Ave/A50	A - A50 W	403	101		403	607	0.0	0.0	0.068	A
	B - Poplars Ave	566	141		558	350	2.2	5.3	28.676	D
	C - A50 E	921	230		923	927	0.9	1.1	4.467	A

08:30 - 08:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	353	88	1074	353	288	0.4	0.7	6.759	A
	2 - Orford Rd	940	235	617	941	810	1.0	2.5	8.681	A
	3 - Smith Drive	270	67	1153	269	405	0.3	0.6	7.756	A
	4 - A50	1076	269	286	1075	1135	1.3	1.7	5.596	A
2 - Poplars Ave/A50	A - A50 W	502	125		502	751	0.0	0.0	0.283	A
	B - Poplars Ave	679	170		617	427	5.3	23.4	91.346	F
	C - A50 E	1135	284		1134	1076	1.1	1.8	5.887	A

08:45 - 09:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	343	86	1079	344	295	0.7	0.6	7.182	A
	2 - Orford Rd	922	231	610	928	814	2.5	1.8	8.893	A
	3 - Smith Drive	272	68	1136	273	402	0.6	0.5	8.243	A
	4 - A50	1083	271	292	1082	1117	1.7	1.8	5.726	A
2 - Poplars Ave/A50	A - A50 W	504	126		504	737	0.0	0.1	0.360	A
	B - Poplars Ave	682	171		619	418	23.4	39.7	186.916	F
	C - A50 E	1116	279		1115	1083	1.8	2.0	5.974	A

09:00 - 09:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	289	72	984	289	244	0.6	0.5	5.610	A
	2 - Orford Rd	760	190	542	760	732	1.8	1.1	5.065	A
	3 - Smith Drive	226	56	952	224	350	0.5	0.4	6.205	A
	4 - A50	990	247	238	990	937	1.8	1.5	5.206	A
2 - Poplars Ave/A50	A - A50 W	399	100		399	614	0.1	0.0	0.124	A
	B - Poplars Ave	561	140		622	352	39.7	21.5	168.682	F
	C - A50 E	936	234		935	989	2.0	1.4	4.705	A

09:15 - 09:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	241	60	813	242	201	0.5	0.2	4.669	A
	2 - Orford Rd	626	156	448	625	606	1.1	0.6	3.663	A
	3 - Smith Drive	188	47	784	187	289	0.4	0.3	5.214	A
	4 - A50	814	204	199	814	772	1.5	1.1	4.686	A
2 - Poplars Ave/A50	A - A50 W	344	86		344	503	0.0	0.0	0.039	A
	B - Poplars Ave	464	116		497	295	21.5	3.7	57.277	F
	C - A50 E	773	193		770	814	1.4	0.9	3.755	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

08:00 - 08:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	235	1060	0.222	235	0.0	0.3	4.127	A
		Exit	1	1		202			202	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	626	1728	0.362	626	0.0	0.6	3.367	A
		Exit	1	1		581			581	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	188	896	0.210	188	0.0	0.3	4.852	A
		Exit	1	1		276			276	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	320	1063	0.301	321	0.0	0.3	4.120	A
				2	2, 3, 4	457	1063	0.429	458	0.0	0.6	4.717	A
		Exit	1	1		768			768	0.0	0.1	0.142	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	339			339	0.0	0.0	0.020
Exit			1	1		505			505	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	466			466	0.0	1.1	8.501	A
				2	A	0			0	0.0	0.0	0.000	A
		Exit	1	1	(A, C)	465			466	0.0	1.0	6.887	A
						290			290	0.0	0.0	0.000	A
C - A50 E		Entry	1	1	A	505			505	0.0	0.0	0.000	A
				2	B	262			262	0.0	0.7	9.144	A
				1	(A, B)	768			768	0.0	0.1	0.458	A
		Exit	1	1		777			777	0.0	0.0	0.190	A

08:15 - 08:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	286	1000	0.286	286	0.3	0.4	5.086	A
		Exit	1	1		237			237	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	757	1684	0.449	755	0.6	1.0	4.405	A
		Exit	1	1		693			693	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	216	833	0.259	215	0.3	0.3	5.846	A
		Exit	1	1		332			332	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	391	1054	0.370	391	0.3	0.5	4.367	A
				2	2, 3, 4	536	1054	0.508	535	0.6	0.8	5.206	A
		Exit	1	1		920			921	0.1	0.1	0.347	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	403			403	0.0	0.0	0.068
Exit			1	1		607			607	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	558			558	1.1	1.5	9.696	A
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	566			558	1.0	3.7	18.959	C	
Exit		1	1		350			350	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	607			607	0.0	0.0	0.000	A
				2	B	315			317	0.7	0.9	10.559	B
		2	1	(A, B)	921			921	0.1	0.2	0.902	A	
Exit		1	1		927			927	0.0	0.1	0.325	A	

08:30 - 08:45

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	353	937	0.377	353	0.4	0.7	6.759	A
		Exit	1	1		288			288	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	940	1631	0.576	941	1.0	2.5	8.681	A
		Exit	1	1		810			810	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	270	747	0.361	269	0.3	0.6	7.756	A
		Exit	1	1		405			405	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	460	1039	0.443	461	0.5	0.6	4.876	A
				2	2, 3, 4	615	1039	0.592	615	0.8	1.1	6.132	A
		Exit	1	1		1136			1135	0.1	0.3	0.869	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	502			502	0.0	0.0	0.283
Exit			1	1		751			751	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	618			617	1.5	2.0	11.101	B
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	679			618	3.7	21.4	80.184	F	
Exit		1	1		427			427	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	751			751	0.0	0.0	0.000	A
				2	B	383			384	0.9	1.2	12.379	B
		2	1	(A, B)	1135			1134	0.2	0.6	1.763	A	
Exit		1	1		1076			1076	0.1	0.2	0.752	A	

08:45 - 09:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	343	935	0.367	344	0.7	0.6	7.182	A
		Exit	1	1		295			295	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	922	1634	0.564	928	2.5	1.8	8.893	A
		Exit	1	1		814			814	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	272	754	0.361	273	0.6	0.5	8.243	A
		Exit	1	1		402			402	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	465	1037	0.448	464	0.6	0.7	4.933	A
				2	2, 3, 4	618	1037	0.596	617	1.1	1.1	6.323	A
		Exit	1	1		1117			1117	0.3	0.3	0.919	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	504			504	0.0	0.1	0.360
Exit			1	1		737			737	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	619			619	2.0	2.0	11.473	B
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	682			619	21.4	37.7	175.566	F	
Exit		1	1		418			418	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	737			737	0.0	0.0	0.000	A
				2	B	379			378	1.2	1.4	12.464	B
		2	1	(A, B)	1116			1116	0.6	0.6	1.833	A	
Exit		1	1		1083			1083	0.2	0.2	0.817	A	

09:00 - 09:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	289	974	0.297	289	0.6	0.5	5.610	A
		Exit	1	1		244			244	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	760	1670	0.455	760	1.8	1.1	5.065	A
		Exit	1	1		732			732	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	226	827	0.273	224	0.5	0.4	6.205	A
		Exit	1	1		350			350	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	419	1053	0.398	419	0.7	0.5	4.638	A
				2	2, 3, 4	571	1053	0.543	571	1.1	0.9	5.622	A
		Exit	1	1		937			937	0.3	0.1	0.447	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	399			399	0.1	0.0	0.124
Exit			1	1		614			614	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	620			622	2.0	1.8	10.745	B
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	561			620	37.7	19.7	158.014	F	
Exit		1	1		352			352	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	614			614	0.0	0.0	0.000	A
				2	B	321			321	1.4	1.1	10.935	B
		2	1	(A, B)	936			936	0.6	0.3	1.042	A	
Exit		1	1		990			989	0.2	0.1	0.514	A	

09:15 - 09:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	241	1045	0.230	242	0.5	0.2	4.669	A
		Exit	1	1		201			201	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	626	1719	0.364	625	1.1	0.6	3.663	A
		Exit	1	1		606			606	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	188	894	0.210	187	0.4	0.3	5.214	A
		Exit	1	1		289			289	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	338	1064	0.318	338	0.5	0.4	4.276	A
				2	2, 3, 4	476	1064	0.447	476	0.9	0.6	4.980	A
		Exit	1	1		773			772	0.1	0.0	0.187	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	344			344	0.0	0.0	0.039
Exit			1	1		503			503	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	496			497	1.8	1.3	9.525	A
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	464			496	19.7	2.4	47.665	E	
Exit		1	1		295			295	0.0	0.0	0.000	A	
		1	1	A	503			503	0.0	0.0	0.000	A	
C - A50 E		Entry	2	1	B	269			268	1.1	0.8	9.555	A
				2	1	(A, B)	773			772	0.3	0.1	0.550
		Exit	1	1		814			814	0.1	0.1	0.276	A

A50-Conjunction - 2025 DS, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	AV-1 - A50-Conjunction [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Arm order	Junction Delay (s)	Junction LOS
1	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	17.26	C
2	Poplars Ave/A50	T-Junction	Two-way		8.64	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2025 DS	PM	ONE HOUR	17:00	18:30	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - A50/Hilden Rd Roundabout	4 - A50	2	C	Simple (vertical queueing)	Normal	0	100.00	
2 - Poplars Ave/A50	C - A50 E	1	4	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd		ONE HOUR	✓	288	100.000
	2 - Orford Rd		ONE HOUR	✓	986	100.000
	3 - Smith Drive		ONE HOUR	✓	442	100.000
	4 - A50	✓				
2 - Poplars Ave/A50	A - A50 W		ONE HOUR	✓	786	100.000
	B - Poplars Ave		ONE HOUR	✓	336	100.000
	C - A50 E	✓				

Origin-Destination Data

Demand (PCU/hr)

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	102	46	140
	2 - Orford Rd	149	0	55	782
	3 - Smith Drive	247	77	0	118
	4 - A50	82	672	177	43

Demand (PCU/hr)

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	148	638
	B - Poplars Ave	0	0	336
	C - A50 E	740	377	0

Vehicle Mix

Heavy Vehicle Percentages

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	0	0	0
	2 - Orford Rd	0	0	0	1
	3 - Smith Drive	0	0	0	0
	4 - A50	0	2	0	0

Heavy Vehicle Percentages

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	0	2
	B - Poplars Ave	0	0	0
	C - A50 E	1	1	0

Results

Results Summary for whole modelled period

Junction	Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	9.54	0.8	A	266	399
	2 - Orford Rd	26.24	9.2	D	908	1362
	3 - Smith Drive	26.70	3.8	D	402	604
	4 - A50	6.20	1.9	A	895	1343
2 - Poplars Ave/A50	A - A50 W	0.58	0.2	A	720	1080
	B - Poplars Ave	26.09	2.7	D	311	467
	C - A50 E	9.02	3.1	A	997	1496

Main Results for each time segment

17:00 - 17:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	220	55	727	219	359	0.0	0.3	4.035	A
	2 - Orford Rd	742	186	304	741	643	0.0	0.8	3.525	A
	3 - Smith Drive	335	84	836	335	209	0.0	0.6	6.214	A
	4 - A50	731	183	356	731	815	0.0	1.0	4.445	A
2 - Poplars Ave/A50	A - A50 W	588	147		588	541	0.0	0.0	0.014	A
	B - Poplars Ave	255	64		256	390	0.0	0.6	8.556	A
	C - A50 E	818	204		818	731	0.0	0.9	3.936	A

17:15 - 17:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	261	65	868	261	427	0.3	0.3	5.203	A
	2 - Orford Rd	888	222	363	888	766	0.8	1.5	5.758	A
	3 - Smith Drive	399	100	1004	397	247	0.6	1.1	9.357	A
	4 - A50	873	218	424	872	976	1.0	1.4	5.058	A
2 - Poplars Ave/A50	A - A50 W	707	177		707	652	0.0	0.0	0.070	A
	B - Poplars Ave	302	75		300	458	0.6	1.0	11.314	B
	C - A50 E	979	245		977	873	0.9	1.7	5.556	A

17:30 - 17:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	317	79	1068	318	518	0.3	0.8	8.305	A
	2 - Orford Rd	1085	271	447	1078	940	1.5	6.5	17.429	C
	3 - Smith Drive	483	121	1219	480	306	1.1	3.4	20.773	C
	4 - A50	1078	269	510	1076	1190	1.4	1.9	6.078	A
2 - Poplars Ave/A50	A - A50 W	865	216		864	792	0.0	0.2	0.481	A
	B - Poplars Ave	374	93		372	562	1.0	2.5	22.046	C
	C - A50 E	1193	298		1194	1076	1.7	2.8	8.250	A

17:45 - 18:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	318	80	1072	318	521	0.8	0.8	9.536	A
	2 - Orford Rd	1098	275	447	1090	944	6.5	9.2	26.238	D
	3 - Smith Drive	478	120	1230	479	307	3.4	3.8	26.700	D
	4 - A50	1078	270	514	1078	1194	1.9	1.9	6.200	A
2 - Poplars Ave/A50	A - A50 W	862	216		861	792	0.2	0.2	0.578	A
	B - Poplars Ave	376	94		378	566	2.5	2.7	26.088	D
	C - A50 E	1198	299		1197	1077	2.8	3.1	9.017	A

18:00 - 18:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	262	65	871	263	434	0.8	0.3	5.955	A
	2 - Orford Rd	889	222	368	892	765	9.2	1.6	11.085	B
	3 - Smith Drive	394	99	1010	396	249	3.8	1.1	13.211	B
	4 - A50	875	219	430	875	978	1.9	1.2	5.277	A
2 - Poplars Ave/A50	A - A50 W	705	176		706	651	0.2	0.0	0.145	A
	B - Poplars Ave	302	75		302	465	2.7	1.0	13.729	B
	C - A50 E	981	245		982	874	3.1	1.5	6.559	A

18:15 - 18:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	219	55	734	219	357	0.3	0.3	4.449	A
	2 - Orford Rd	746	186	307	747	646	1.6	0.8	4.030	A
	3 - Smith Drive	326	81	841	325	213	1.1	0.6	7.166	A
	4 - A50	737	184	354	737	813	1.2	1.0	4.629	A
2 - Poplars Ave/A50	A - A50 W	592	148		592	537	0.0	0.0	0.024	A
	B - Poplars Ave	259	65		258	391	1.0	0.7	9.409	A
	C - A50 E	815	204		817	738	1.5	0.9	4.585	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

17:00 - 17:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	220	1081	0.203	219	0.0	0.3	4.035	A
		Exit	1	1		359			359	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	742	1794	0.414	741	0.0	0.8	3.525	A
		Exit	1	1		643			643	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	335	874	0.383	335	0.0	0.6	6.214	A
		Exit	1	1		209			209	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	334	1019	0.328	334	0.0	0.4	4.262	A
				2	2, 3, 4	397	1019	0.390	397	0.0	0.5	4.599	A
		Exit	1	1		815			815	0.0	0.0	0.188	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	588			588	0.0	0.0	0.014
Exit			1	1		541			541	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	255			256	0.0	0.5	7.391	A
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	255			255	0.0	0.1	1.160	A	
C - A50 E		Entry	1	1	A	541			541	0.0	0.0	0.000	A
				2	B	277			277	0.0	0.8	10.047	B
		Exit	1	1	(A, B)	818			818	0.0	0.1	0.546	A
						731			731	0.0	0.0	0.140	A

17:15 - 17:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	261	1022	0.255	261	0.3	0.3	5.203	A
		Exit	1	1		427			427	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	888	1763	0.503	888	0.8	1.5	5.758	A
		Exit	1	1		766			766	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	399	806	0.494	397	0.6	1.1	9.357	A
		Exit	1	1		247			247	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	402	1000	0.402	401	0.4	0.6	4.799	A
				2	2, 3, 4	471	1000	0.471	470	0.5	0.8	5.278	A
		Exit	1	1		977			976	0.0	0.2	0.634	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	707			707	0.0	0.0	0.070
Exit			1	1		652			652	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	300			300	0.5	0.7	8.618	A
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	302			300	0.1	0.3	2.683	A	
Exit		1	1		458			458	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	652			652	0.0	0.0	0.000	A
				2	B	326			325	0.8	1.2	12.386	B
		2	1	(A, B)	979			978	0.1	0.5	1.367	A	
Exit		1	1		874			873	0.0	0.1	0.342	A	

17:30 - 17:45

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	317	939	0.338	318	0.3	0.8	8.305	A
		Exit	1	1		518			518	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	1085	1719	0.631	1078	1.5	6.5	17.429	C
		Exit	1	1		940			940	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	483	721	0.670	480	1.1	3.4	20.773	C
		Exit	1	1		306			306	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	504	975	0.517	503	0.6	0.9	5.608	A
				2	2, 3, 4	573	975	0.588	573	0.8	1.1	6.484	A
		Exit	1	1		1189			1190	0.2	0.6	1.726	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	865			864	0.0	0.2	0.481
Exit			1	1		792			792	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	372			372	0.7	1.1	11.052	B
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	374			372	0.3	1.4	10.952	B	
Exit		1	1		562			562	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	792			792	0.0	0.0	0.000	A
				2	B	402			403	1.2	1.7	15.516	C
		2	1	(A, B)	1193			1194	0.5	1.0	3.020	A	
Exit		1	1		1076			1076	0.1	0.3	0.948	A	

17:45 - 18:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	318	938	0.340	318	0.8	0.8	9.536	A
		Exit	1	1		521			521	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	1098	1719	0.639	1090	6.5	9.2	26.238	D
		Exit	1	1		944			944	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	478	716	0.667	479	3.4	3.8	26.700	D
		Exit	1	1		307			307	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	503	974	0.516	503	0.9	0.8	5.656	A
				2	2, 3, 4	576	974	0.591	575	1.1	1.1	6.672	A
		Exit	1	1		1194			1194	0.6	0.7	2.109	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	862			861	0.2	0.2	0.578
Exit			1	1		792			792	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	378			378	1.1	1.2	11.370	B
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	376			378	1.4	1.6	14.728	B	
Exit		1	1		566			566	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	792			792	0.0	0.0	0.000	A
				2	B	405			405	1.7	1.9	16.291	C
		2	1	(A, B)	1198			1198	1.0	1.2	3.508	A	
Exit		1	1		1078			1077	0.3	0.4	1.047	A	

18:00 - 18:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	262	1021	0.256	263	0.8	0.3	5.955	A
		Exit	1	1		434			434	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	889	1761	0.505	892	9.2	1.6	11.085	B
		Exit	1	1		765			765	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	394	804	0.490	396	3.8	1.1	13.211	B
		Exit	1	1		249			249	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	399	998	0.400	400	0.8	0.6	4.985	A
				2	2, 3, 4	476	998	0.477	475	1.1	0.7	5.525	A
		Exit	1	1		977			978	0.7	0.2	1.046	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	705			706	0.2	0.0	0.145
Exit			1	1		651			651	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	302			302	1.2	0.7	9.073	A
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	302			302	1.6	0.3	4.734	A	
Exit		1	1		465			465	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	651			651	0.0	0.0	0.000	A
				2	B	329			331	1.9	1.1	13.551	B
		2	1	(A, B)	981			980	1.2	0.4	1.997	A	
Exit		1	1		873			874	0.4	0.1	0.437	A	

18:15 - 18:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS		
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	219	1078	0.203	219	0.3	0.3	4.449	A		
		Exit	1	1		357			357	0.0	0.0	0.000	A		
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	746	1792	0.416	747	1.6	0.8	4.030	A		
		Exit	1	1		646			646	0.0	0.0	0.000	A		
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	326	872	0.374	325	1.1	0.6	7.166	A		
		Exit	1	1		213			213	0.0	0.0	0.000	A		
	4 - A50	Entry	1	1	1, 2	337	1020	0.330	336	0.6	0.5	4.389	A		
				2	2, 3, 4	401	1020	0.393	401	0.7	0.5	4.832	A		
		Exit	1	1		812			813	0.2	0.1	0.327	A		
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	592			592	0.0	0.0	0.024	A	
Exit			1	1		537			537	0.0	0.0	0.000	A		
B - Poplars Ave		Entry	1	1	C	259			258	0.7	0.6	7.863	A		
				2	A	0			0	0.0	0.0	0.000	A		
		2	1	(A, C)	259			259	0.3	0.1	1.564	A			
C - A50 E		Entry	1	1	A	537			537	0.0	0.0	0.000	A		
				2	B	278			280	1.1	0.7	11.110	B		
				2	1	(A, B)	815			815	0.4	0.1	0.831	A	
				Exit	1	1		738			738	0.1	0.0	0.180	A
				Exit	1	1		738			738	0.1	0.0	0.180	A

A50-Conjunction - 2030 DM, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	AV-1 - A50-Conjunction [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Arm order	Junction Delay (s)	Junction LOS
1	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	6.70	A
2	Poplars Ave/A50	T-Junction	Two-way		43.51	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2030 DM	AM	ONE HOUR	08:00	09:30	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - A50/Hilden Rd Roundabout	4 - A50	2	C	Simple (vertical queueing)	Normal	0	100.00	
2 - Poplars Ave/A50	C - A50 E	1	4	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd		ONE HOUR	✓	319	100.000
	2 - Orford Rd		ONE HOUR	✓	817	100.000
	3 - Smith Drive		ONE HOUR	✓	254	100.000
	4 - A50	✓				
2 - Poplars Ave/A50	A - A50 W		ONE HOUR	✓	438	100.000
	B - Poplars Ave		ONE HOUR	✓	596	100.000
	C - A50 E	✓				

Origin-Destination Data

Demand (PCU/hr)

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	88	121	110
	2 - Orford Rd	71	0	58	688
	3 - Smith Drive	163	42	0	49
	4 - A50	53	621	225	116

Demand (PCU/hr)

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	20	418
	B - Poplars Ave	0	0	596
	C - A50 E	703	320	0

Vehicle Mix

Heavy Vehicle Percentages

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	0	0	0
	2 - Orford Rd	0	0	0	3
	3 - Smith Drive	0	0	0	0
	4 - A50	0	1	0	0

Heavy Vehicle Percentages

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	0	0
	B - Poplars Ave	0	0	1
	C - A50 E	0	7	0

Results

Results Summary for whole modelled period

Junction	Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	7.14	0.7	A	294	441
	2 - Orford Rd	7.53	1.8	A	751	1126
	3 - Smith Drive	7.52	0.6	A	233	350
	4 - A50	5.68	1.8	A	925	1388
2 - Poplars Ave/A50	A - A50 W	0.27	0.0	A	401	602
	B - Poplars Ave	138.11	27.9	F	545	818
	C - A50 E	4.67	1.4	A	882	1323

Main Results for each time segment

08:00 - 08:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	243	61	750	244	218	0.0	0.3	4.178	A
	2 - Orford Rd	622	155	430	622	564	0.0	0.6	3.319	A
	3 - Smith Drive	195	49	748	196	304	0.0	0.2	4.783	A
	4 - A50	759	190	210	758	735	0.0	0.9	4.492	A
2 - Poplars Ave/A50	A - A50 W	327	82		326	505	0.0	0.0	0.024	A
	B - Poplars Ave	442	110		448	245	0.0	1.6	14.013	B
	C - A50 E	735	184		736	760	0.0	0.6	3.005	A

08:15 - 08:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	292	73	897	291	247	0.3	0.4	4.966	A
	2 - Orford Rd	740	185	512	738	677	0.6	1.0	4.162	A
	3 - Smith Drive	224	56	887	223	362	0.2	0.4	5.876	A
	4 - A50	906	227	238	906	872	0.9	1.1	4.904	A
2 - Poplars Ave/A50	A - A50 W	398	99		397	596	0.0	0.0	0.074	A
	B - Poplars Ave	532	133		528	291	1.6	4.1	24.534	C
	C - A50 E	869	217		870	907	0.6	0.9	3.521	A

08:30 - 08:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	351	88	1059	353	312	0.4	0.6	6.543	A
	2 - Orford Rd	899	225	610	899	801	1.0	1.8	6.518	A
	3 - Smith Drive	283	71	1070	283	439	0.4	0.6	7.249	A
	4 - A50	1065	266	304	1067	1048	1.1	1.7	5.523	A
2 - Poplars Ave/A50	A - A50 W	478	119		478	724	0.0	0.0	0.192	A
	B - Poplars Ave	660	165		607	344	4.1	18.7	72.958	F
	C - A50 E	1046	261		1046	1065	0.9	1.4	4.445	A

08:45 - 09:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	352	88	1075	354	317	0.6	0.7	7.138	A
	2 - Orford Rd	896	224	623	898	806	1.8	1.8	7.533	A
	3 - Smith Drive	283	71	1078	283	443	0.6	0.6	7.524	A
	4 - A50	1083	271	310	1082	1049	1.7	1.8	5.685	A
2 - Poplars Ave/A50	A - A50 W	481	120		481	719	0.0	0.0	0.272	A
	B - Poplars Ave	657	164		623	351	18.7	27.9	138.114	F
	C - A50 E	1049	262		1048	1083	1.4	1.3	4.667	A

09:00 - 09:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	286	71	955	286	266	0.7	0.4	5.541	A
	2 - Orford Rd	738	185	536	738	706	1.8	0.8	4.748	A
	3 - Smith Drive	227	57	898	227	375	0.6	0.4	6.162	A
	4 - A50	971	243	250	972	876	1.8	1.4	5.214	A
2 - Poplars Ave/A50	A - A50 W	397	99		397	603	0.0	0.0	0.094	A
	B - Poplars Ave	537	134		594	291	27.9	10.1	103.215	F
	C - A50 E	874	219		875	972	1.3	0.9	3.855	A

09:15 - 09:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	239	60	758	239	215	0.4	0.3	4.574	A
	2 - Orford Rd	608	152	435	610	563	0.8	0.6	3.602	A
	3 - Smith Drive	189	47	736	189	308	0.4	0.3	5.121	A
	4 - A50	766	192	206	768	719	1.4	0.9	4.659	A
2 - Poplars Ave/A50	A - A50 W	326	81		326	493	0.0	0.0	0.039	A
	B - Poplars Ave	443	111		455	239	10.1	1.8	26.810	D
	C - A50 E	717	179		718	766	0.9	0.6	3.102	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

08:00 - 08:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	243	1071	0.227	244	0.0	0.3	4.178	A
		Exit	1	1		218			218	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	622	1728	0.360	622	0.0	0.6	3.319	A
		Exit	1	1		564			564	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	195	908	0.214	196	0.0	0.2	4.783	A
		Exit	1	1		304			304	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	308	1061	0.291	309	0.0	0.3	4.049	A
				2	2, 3, 4	451	1061	0.425	450	0.0	0.6	4.794	A
		Exit	1	1		734			735	0.0	0.0	0.112	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	327			326	0.0	0.0	0.024
Exit			1	1		505			505	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	447			448	0.0	1.1	8.362	A
				2	A	0			0	0.0	0.0	0.000	A
		Exit	1	1	(A, C)	442			447	0.0	0.6	5.639	A
						245			245	0.0	0.0	0.000	A
C - A50 E		Entry	1	1	A	505			505	0.0	0.0	0.000	A
				2	B	231			231	0.0	0.6	8.937	A
				1	(A, B)	735			736	0.0	0.0	0.360	A
		Exit	1	1		760			760	0.0	0.0	0.181	A

08:15 - 08:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	292	1010	0.289	291	0.3	0.4	4.966	A
		Exit	1	1		247			247	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	740	1685	0.439	738	0.6	1.0	4.162	A
		Exit	1	1		677			677	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	224	853	0.263	223	0.2	0.4	5.876	A
		Exit	1	1		362			362	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	374	1053	0.355	373	0.3	0.4	4.390	A
				2	2, 3, 4	533	1053	0.506	533	0.6	0.7	5.264	A
		Exit	1	1		872			872	0.0	0.0	0.215	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	398			397	0.0	0.0	0.074
Exit			1	1		596			596	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	529			528	1.1	1.4	9.611	A
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	532			529	0.6	2.7	14.921	B	
C - A50 E		Exit	1	1		291			291	0.0	0.0	0.000	A
				2	1	(A, B)	869			870	0.0	0.1	0.586
		Entry	1	1	A	596			596	0.0	0.0	0.000	A
				2	B	273			273	0.6	0.8	9.816	A
Exit		1	1		907			907	0.0	0.2	0.362	A	

08:30 - 08:45

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	351	943	0.372	353	0.4	0.6	6.543	A
		Exit	1	1		312			312	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	899	1634	0.550	899	1.0	1.8	6.518	A
		Exit	1	1		801			801	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	283	780	0.363	283	0.4	0.6	7.249	A
		Exit	1	1		439			439	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	450	1034	0.436	451	0.4	0.6	4.809	A
				2	2, 3, 4	615	1034	0.595	615	0.7	1.1	6.044	A
		Exit	1	1		1048			1048	0.0	0.2	0.539	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	478			478	0.0	0.0	0.192
Exit			1	1		724			724	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	607			607	1.4	1.9	10.933	B
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	660			607	2.7	16.8	61.965	F	
Exit		1	1		344			344	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	724			724	0.0	0.0	0.000	A
				2	B	322			322	0.8	1.1	11.169	B
		2	1	(A, B)	1046			1046	0.1	0.3	1.143	A	
Exit		1	1		1064			1065	0.2	0.2	0.687	A	

08:45 - 09:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	352	936	0.376	354	0.6	0.7	7.138	A
		Exit	1	1		317			317	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	896	1627	0.551	898	1.8	1.8	7.533	A
		Exit	1	1		806			806	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	283	777	0.365	283	0.6	0.6	7.524	A
		Exit	1	1		443			443	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	454	1032	0.440	455	0.6	0.5	4.930	A
				2	2, 3, 4	628	1032	0.609	627	1.1	1.2	6.230	A
		Exit	1	1		1050			1049	0.2	0.2	0.624	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	481			481	0.0	0.0	0.272
Exit			1	1		719			719	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	623			623	1.9	2.0	11.255	B
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	657			623	16.8	25.9	126.868	F	
Exit		1	1		351			351	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	719			719	0.0	0.0	0.000	A
				2	B	330			329	1.1	1.0	11.343	B
		2	1	(A, B)	1049			1049	0.3	0.3	1.273	A	
Exit		1	1		1082			1083	0.2	0.3	0.803	A	

09:00 - 09:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	286	986	0.290	286	0.7	0.4	5.541	A
		Exit	1	1		266			266	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	738	1673	0.441	738	1.8	0.8	4.748	A
		Exit	1	1		706			706	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	227	849	0.267	227	0.6	0.4	6.162	A
		Exit	1	1		375			375	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	405	1049	0.386	405	0.5	0.5	4.674	A
				2	2, 3, 4	567	1049	0.540	567	1.2	0.8	5.599	A
		Exit	1	1		875			876	0.2	0.1	0.309	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	397			397	0.0	0.0	0.094
Exit			1	1		603			603	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	593			594	2.0	1.6	10.448	B
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	537			593	25.9	8.5	92.914	F	
Exit		1	1		291			291	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	603			603	0.0	0.0	0.000	A
				2	B	272			272	1.0	0.8	10.355	B
		2	1	(A, B)	874			875	0.3	0.1	0.779	A	
Exit		1	1		973			972	0.3	0.2	0.498	A	

09:15 - 09:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	239	1068	0.224	239	0.4	0.3	4.574	A
		Exit	1	1		215			215	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	608	1726	0.353	610	0.8	0.6	3.602	A
		Exit	1	1		563			563	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	189	913	0.207	189	0.4	0.3	5.121	A
		Exit	1	1		308			308	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	309	1062	0.291	310	0.5	0.3	4.253	A
				2	2, 3, 4	457	1062	0.430	458	0.8	0.6	4.937	A
		Exit	1	1		719			719	0.1	0.0	0.124	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	326			326	0.0	0.0	0.039
Exit			1	1		493			493	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	453			455	1.6	1.0	8.962	A
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	443			453	8.5	0.8	17.914	C	
C - A50 E		Exit	1	1		239			239	0.0	0.0	0.000	A
				2									
		Entry	1	1	A	493			493	0.0	0.0	0.000	A
				2	B	224			224	0.8	0.5	9.011	A
		2	1	(A, B)	717			717	0.1	0.1	0.400	A	
Exit	1	1		766			766	0.2	0.0	0.254	A		

A50-Conjunction - 2030 DM, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	AV-1 - A50-Conjunction [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Arm order	Junction Delay (s)	Junction LOS
1	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	9.62	A
2	Poplars Ave/A50	T-Junction	Two-way		4.86	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2030 DM	PM	ONE HOUR	17:00	18:30	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - A50/Hilden Rd Roundabout	4 - A50	2	C	Simple (vertical queueing)	Normal	0	100.00	
2 - Poplars Ave/A50	C - A50 E	1	4	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd		ONE HOUR	✓	293	100.000
	2 - Orford Rd		ONE HOUR	✓	895	100.000
	3 - Smith Drive		ONE HOUR	✓	458	100.000
	4 - A50	✓				
2 - Poplars Ave/A50	A - A50 W		ONE HOUR	✓	842	100.000
	B - Poplars Ave		ONE HOUR	✓	262	100.000
	C - A50 E	✓				

Origin-Destination Data

Demand (PCU/hr)

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	105	44	144
	2 - Orford Rd	142	0	61	693
	3 - Smith Drive	212	97	0	150
	4 - A50	80	603	198	28

Demand (PCU/hr)

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	158	684
	B - Poplars Ave	0	0	262
	C - A50 E	730	292	0

Vehicle Mix

Heavy Vehicle Percentages

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	0	0	0
	2 - Orford Rd	0	0	0	1
	3 - Smith Drive	0	0	0	0
	4 - A50	0	2	0	0

Heavy Vehicle Percentages

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	0	2
	B - Poplars Ave	0	0	0
	C - A50 E	0	3	0

Results

Results Summary for whole modelled period

Junction	Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	7.22	0.6	A	268	402
	2 - Orford Rd	9.48	2.7	A	821	1232
	3 - Smith Drive	19.16	2.8	C	421	631
	4 - A50	5.89	1.8	A	869	1303
2 - Poplars Ave/A50	A - A50 W	0.36	0.1	A	773	1160
	B - Poplars Ave	15.47	1.3	C	242	362
	C - A50 E	5.83	1.9	A	933	1399

Main Results for each time segment

17:00 - 17:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	218	54	728	218	327	0.0	0.3	4.018	A
	2 - Orford Rd	677	169	321	677	625	0.0	0.7	3.297	A
	3 - Smith Drive	345	86	760	344	237	0.0	0.6	6.015	A
	4 - A50	718	179	337	718	768	0.0	0.9	4.442	A
2 - Poplars Ave/A50	A - A50 W	646	161		646	548	0.0	0.0	0.021	A
	B - Poplars Ave	195	49		196	341	0.0	0.4	7.917	A
	C - A50 E	769	192		768	720	0.0	0.8	3.088	A

17:15 - 17:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	266	67	862	266	391	0.3	0.4	4.923	A
	2 - Orford Rd	806	202	383	808	745	0.7	1.0	4.275	A
	3 - Smith Drive	411	103	910	410	280	0.6	1.0	8.558	A
	4 - A50	848	212	404	849	916	0.9	1.2	4.967	A
2 - Poplars Ave/A50	A - A50 W	754	189		754	657	0.0	0.0	0.068	A
	B - Poplars Ave	236	59		236	402	0.4	0.7	10.079	B
	C - A50 E	916	229		918	848	0.8	1.0	3.875	A

17:30 - 17:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	321	80	1051	322	479	0.4	0.6	7.221	A
	2 - Orford Rd	980	245	466	976	908	1.0	2.7	8.605	A
	3 - Smith Drive	505	126	1102	504	340	1.0	2.6	16.153	C
	4 - A50	1037	259	494	1036	1112	1.2	1.7	5.792	A
2 - Poplars Ave/A50	A - A50 W	922	231		923	795	0.0	0.1	0.328	A
	B - Poplars Ave	288	72		288	490	0.7	1.3	14.577	B
	C - A50 E	1113	278		1112	1037	1.0	1.9	5.599	A

17:45 - 18:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	320	80	1063	320	482	0.6	0.6	7.170	A
	2 - Orford Rd	986	246	465	988	917	2.7	2.7	9.477	A
	3 - Smith Drive	502	126	1111	504	343	2.6	2.8	19.160	C
	4 - A50	1046	262	499	1046	1117	1.7	1.8	5.889	A
2 - Poplars Ave/A50	A - A50 W	929	232		929	799	0.1	0.1	0.365	A
	B - Poplars Ave	293	73		292	495	1.3	1.3	15.467	C
	C - A50 E	1119	280		1121	1048	1.9	1.8	5.833	A

18:00 - 18:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	265	66	854	265	394	0.6	0.3	5.216	A
	2 - Orford Rd	811	203	379	811	740	2.7	0.9	4.829	A
	3 - Smith Drive	412	103	914	412	276	2.8	1.0	9.870	A
	4 - A50	841	210	407	842	920	1.8	1.2	5.041	A
2 - Poplars Ave/A50	A - A50 W	750	188		750	661	0.1	0.0	0.097	A
	B - Poplars Ave	235	59		234	401	1.3	0.7	10.589	B
	C - A50 E	921	230		921	842	1.8	1.0	4.360	A

18:15 - 18:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	219	55	733	219	333	0.3	0.3	4.253	A
	2 - Orford Rd	668	167	319	668	633	0.9	0.6	3.451	A
	3 - Smith Drive	348	87	752	348	235	1.0	0.7	6.833	A
	4 - A50	722	181	343	723	758	1.2	0.9	4.535	A
2 - Poplars Ave/A50	A - A50 W	638	160		638	545	0.0	0.0	0.026	A
	B - Poplars Ave	203	51		203	335	0.7	0.4	8.246	A
	C - A50 E	759	190		760	721	1.0	0.7	3.246	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

17:00 - 17:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	218	1080	0.202	218	0.0	0.3	4.018	A
		Exit	1	1		327			327	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	677	1785	0.379	677	0.0	0.7	3.297	A
		Exit	1	1		625			625	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	345	904	0.382	344	0.0	0.6	6.015	A
		Exit	1	1		237			237	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	321	1024	0.313	321	0.0	0.4	4.220	A
				2	2, 3, 4	397	1024	0.388	397	0.0	0.5	4.621	A
		Exit	1	1		768			768	0.0	0.0	0.114	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	646			646	0.0	0.0	0.021
Exit			1	1		548			548	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	196			196	0.0	0.4	7.188	A
				2	A	0			0	0.0	0.0	0.000	A
		Exit	1	1	(A, C)	195			196	0.0	0.0	0.725	A
						341			341	0.0	0.0	0.000	A
C - A50 E		Entry	1	1	A	548			548	0.0	0.0	0.000	A
				2	B	220			220	0.0	0.7	9.826	A
				1	(A, B)	769			769	0.0	0.1	0.345	A
		Exit	1	1		720			720	0.0	0.0	0.148	A

17:15 - 17:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	266	1025	0.260	266	0.3	0.4	4.923	A
		Exit	1	1		391			391	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	806	1753	0.460	808	0.7	1.0	4.275	A
		Exit	1	1		745			745	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	411	844	0.487	410	0.6	1.0	8.558	A
		Exit	1	1		280			280	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	382	1005	0.380	382	0.4	0.5	4.707	A
				2	2, 3, 4	466	1005	0.464	467	0.5	0.7	5.179	A
		Exit	1	1		916			916	0.0	0.1	0.290	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	754			754	0.0	0.0	0.068
Exit			1	1		657			657	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	236			236	0.4	0.6	8.332	A
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	236			236	0.0	0.1	1.741	A	
Exit		1	1		402			402	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	657			657	0.0	0.0	0.000	A
				2	B	259			260	0.7	0.8	11.435	B
		2	1	(A, B)	916			916	0.1	0.2	0.702	A	
Exit		1	1		848			848	0.0	0.1	0.315	A	

17:30 - 17:45

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	321	946	0.339	322	0.4	0.6	7.221	A
		Exit	1	1		479			479	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	980	1710	0.573	976	1.0	2.7	8.605	A
		Exit	1	1		908			908	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	505	767	0.658	504	1.0	2.6	16.153	C
		Exit	1	1		340			340	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	474	980	0.484	474	0.5	0.8	5.433	A
				2	2, 3, 4	563	980	0.574	562	0.7	1.0	6.095	A
		Exit	1	1		1113			1112	0.1	0.3	0.858	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	922			923	0.0	0.1	0.328
Exit			1	1		795			795	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	289			288	0.6	0.9	10.056	B
				2	A	0			0	0.0	0.0	0.000	A
		Exit	1	1	(A, C)	288			289	0.1	0.4	4.502	A
						490			490	0.0	0.0	0.000	A
C - A50 E		Entry	1	1	A	795			795	0.0	0.0	0.000	A
				2	B	317			317	0.8	1.4	14.121	B
		Exit	1	1	(A, B)	1113			1113	0.2	0.6	1.643	A
		Exit	1	1		1037			1037	0.1	0.3	0.781	A

17:45 - 18:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	320	942	0.340	320	0.6	0.6	7.170	A
		Exit	1	1		482			482	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	986	1710	0.576	988	2.7	2.7	9.477	A
		Exit	1	1		917			917	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	502	764	0.657	504	2.6	2.8	19.160	C
		Exit	1	1		343			343	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	479	978	0.490	479	0.8	0.7	5.473	A
				2	2, 3, 4	567	978	0.580	567	1.0	1.0	6.238	A
		Exit	1	1		1116			1117	0.3	0.3	0.958	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	929			929	0.1	0.1	0.365
Exit			1	1		799			799	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	293			292	0.9	0.9	10.366	B
				2	A	0			0	0.0	0.0	0.000	A
		Exit	1	1	(A, C)	293			293	0.4	0.4	5.099	A
						495			495	0.0	0.0	0.000	A
C - A50 E		Entry	1	1	A	799			799	0.0	0.0	0.000	A
				2	B	321			322	1.4	1.3	14.370	B
		Exit	1	1	(A, B)	1119			1120	0.6	0.5	1.803	A
						1047			1048	0.3	0.2	0.848	A

18:00 - 18:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	265	1028	0.258	265	0.6	0.3	5.216	A
		Exit	1	1		394			394	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	811	1755	0.462	811	2.7	0.9	4.829	A
		Exit	1	1		740			740	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	412	842	0.489	412	2.8	1.0	9.870	A
		Exit	1	1		276			276	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	383	1004	0.381	384	0.7	0.5	4.757	A
				2	2, 3, 4	458	1004	0.456	458	1.0	0.7	5.275	A
		Exit	1	1		919			920	0.3	0.1	0.429	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	750			750	0.1	0.0	0.097
Exit			1	1		661			661	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	235			234	0.9	0.5	8.630	A
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	235			235	0.4	0.1	1.993	A	
Exit		1	1		401			401	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	661			661	0.0	0.0	0.000	A
				2	B	260			259	1.3	0.9	12.263	B
		2	1	(A, B)	921			921	0.5	0.2	0.957	A	
Exit		1	1		843			842	0.2	0.1	0.352	A	

18:15 - 18:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	219	1078	0.203	219	0.3	0.3	4.253	A
		Exit	1	1		333			333	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	668	1786	0.374	668	0.9	0.6	3.451	A
		Exit	1	1		633			633	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	348	907	0.384	348	1.0	0.7	6.833	A
		Exit	1	1		235			235	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	322	1023	0.315	322	0.5	0.4	4.322	A
				2	2, 3, 4	400	1023	0.392	401	0.7	0.5	4.706	A
		Exit	1	1		758			758	0.1	0.0	0.142	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	638			638	0.0	0.0	0.026
Exit			1	1		545			545	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	203			203	0.5	0.4	7.416	A
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	203			203	0.1	0.0	0.844	A	
Exit		1	1		335			335	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	545			545	0.0	0.0	0.000	A
				2	B	214			214	0.9	0.6	10.209	B
		2	1	(A, B)	759			760	0.2	0.0	0.402	A	
Exit		1	1		721			721	0.1	0.0	0.159	A	

A50-Conjunction - 2030 DS, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	AV-1 - A50-Conjunction [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Arm order	Junction Delay (s)	Junction LOS
1	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	9.14	A
2	Poplars Ave/A50	T-Junction	Two-way		71.34	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2030 DS	AM	ONE HOUR	08:00	09:30	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - A50/Hilden Rd Roundabout	4 - A50	2	C	Simple (vertical queueing)	Normal	0	100.00	
2 - Poplars Ave/A50	C - A50 E	1	4	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd		ONE HOUR	✓	378	100.000
	2 - Orford Rd		ONE HOUR	✓	925	100.000
	3 - Smith Drive		ONE HOUR	✓	254	100.000
	4 - A50	✓				
2 - Poplars Ave/A50	A - A50 W		ONE HOUR	✓	480	100.000
	B - Poplars Ave		ONE HOUR	✓	632	100.000
	C - A50 E	✓				

Origin-Destination Data

Demand (PCU/hr)

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	134	123	121
	2 - Orford Rd	122	23	53	727
	3 - Smith Drive	149	55	0	49
	4 - A50	55	708	159	102

Demand (PCU/hr)

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	47	433
	B - Poplars Ave	0	0	632
	C - A50 E	647	369	0

Vehicle Mix

Heavy Vehicle Percentages

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	0	0	0
	2 - Orford Rd	0	0	0	3
	3 - Smith Drive	0	0	0	0
	4 - A50	0	1	0	0

Heavy Vehicle Percentages

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	4	0
	B - Poplars Ave	0	0	1
	C - A50 E	4	5	0

Results

Results Summary for whole modelled period

Junction	Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	9.19	1.1	A	347	521
	2 - Orford Rd	12.75	3.9	B	848	1272
	3 - Smith Drive	9.27	0.8	A	231	346
	4 - A50	5.95	1.8	A	971	1456
2 - Poplars Ave/A50	A - A50 W	0.45	0.2	A	441	661
	B - Poplars Ave	227.89	48.5	F	584	876
	C - A50 E	7.25	2.5	A	938	1407

Main Results for each time segment

08:00 - 08:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	281	70	814	282	244	0.0	0.4	4.507	A
	2 - Orford Rd	696	174	387	698	709	0.0	0.7	3.570	A
	3 - Smith Drive	184	46	825	184	260	0.0	0.3	4.897	A
	4 - A50	799	200	259	799	750	0.0	1.0	4.439	A
2 - Poplars Ave/A50	A - A50 W	359	90		359	490	0.0	0.0	0.014	A
	B - Poplars Ave	478	120		477	317	0.0	2.4	16.458	C
	C - A50 E	768	192		770	799	0.0	0.9	4.059	A

08:15 - 08:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	345	86	971	345	293	0.4	0.5	5.965	A
	2 - Orford Rd	825	206	468	827	848	0.7	1.0	5.087	A
	3 - Smith Drive	225	56	988	224	306	0.3	0.4	6.347	A
	4 - A50	951	238	313	952	900	1.0	1.4	5.055	A
2 - Poplars Ave/A50	A - A50 W	429	107		429	584	0.0	0.0	0.089	A
	B - Poplars Ave	572	143		565	377	2.4	6.2	32.213	D
	C - A50 E	919	230		918	950	0.9	1.4	5.022	A

08:30 - 08:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	419	105	1127	419	351	0.5	1.1	8.496	A
	2 - Orford Rd	1018	255	550	1013	996	1.0	3.9	10.735	B
	3 - Smith Drive	274	68	1200	274	363	0.4	0.6	8.634	A
	4 - A50	1099	275	379	1099	1095	1.4	1.8	5.771	A
2 - Poplars Ave/A50	A - A50 W	537	134		536	710	0.0	0.2	0.313	A
	B - Poplars Ave	704	176		616	459	6.2	27.7	103.248	F
	C - A50 E	1117	279		1116	1098	1.4	2.5	6.892	A

08:45 - 09:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	417	104	1125	419	363	1.1	1.0	9.191	A
	2 - Orford Rd	1023	256	551	1028	993	3.9	3.4	12.748	B
	3 - Smith Drive	280	70	1216	279	362	0.6	0.8	9.272	A
	4 - A50	1096	274	391	1097	1105	1.8	1.7	5.949	A
2 - Poplars Ave/A50	A - A50 W	526	132		527	720	0.2	0.0	0.446	A
	B - Poplars Ave	699	175		618	461	27.7	48.5	227.886	F
	C - A50 E	1129	282		1130	1094	2.5	2.3	7.254	A

09:00 - 09:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	339	85	1042	339	298	1.0	0.6	6.679	A
	2 - Orford Rd	824	206	484	823	897	3.4	1.2	6.294	A
	3 - Smith Drive	228	57	986	227	320	0.8	0.4	6.972	A
	4 - A50	1028	257	312	1028	901	1.7	1.5	5.406	A
2 - Poplars Ave/A50	A - A50 W	439	110		439	589	0.0	0.0	0.155	A
	B - Poplars Ave	569	142		630	372	48.5	30.3	218.849	F
	C - A50 E	921	230		919	1027	2.3	1.5	5.573	A

09:15 - 09:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	283	71	871	284	253	0.6	0.3	5.259	A
	2 - Orford Rd	701	175	397	700	757	1.2	0.8	3.892	A
	3 - Smith Drive	194	49	835	193	263	0.4	0.3	5.450	A
	4 - A50	852	213	269	854	759	1.5	1.0	4.829	A
2 - Poplars Ave/A50	A - A50 W	355	89		355	498	0.0	0.0	0.059	A
	B - Poplars Ave	480	120		530	314	30.3	7.3	89.582	F
	C - A50 E	776	194		777	851	1.5	0.9	4.255	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

08:00 - 08:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	281	1045	0.269	282	0.0	0.4	4.507	A
		Exit	1	1		244			244	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	696	1751	0.398	698	0.0	0.7	3.570	A
		Exit	1	1		709			709	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	184	878	0.210	184	0.0	0.3	4.897	A
		Exit	1	1		260			260	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	348	1047	0.333	348	0.0	0.4	4.179	A
				2	2, 3, 4	451	1047	0.431	450	0.0	0.6	4.640	A
		Exit	1	1		750			750	0.0	0.1	0.197	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	359			359	0.0	0.0	0.014
Exit			1	1		490			490	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	477			477	0.0	1.2	8.621	A
				2	A	0			0	0.0	0.0	0.000	A
		Exit	1	1	(A, C)	478			477	0.0	1.3	7.819	A
						317			317	0.0	0.0	0.000	A
C - A50 E		Entry	1	1	A	490			490	0.0	0.0	0.000	A
				2	B	279			280	0.0	0.8	9.605	A
				1	(A, B)	768			768	0.0	0.1	0.593	A
		Exit	1	1		799			799	0.0	0.0	0.159	A

08:15 - 08:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	345	980	0.352	345	0.4	0.5	5.965	A
		Exit	1	1		293			293	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	825	1708	0.483	827	0.7	1.0	5.087	A
		Exit	1	1		848			848	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	225	813	0.277	224	0.3	0.4	6.347	A
		Exit	1	1		306			306	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	420	1031	0.407	421	0.4	0.5	4.711	A
				2	2, 3, 4	531	1031	0.515	531	0.6	0.9	5.328	A
		Exit	1	1		900			900	0.1	0.2	0.485	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	429			429	0.0	0.0	0.089
Exit			1	1		584			584	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	565			565	1.2	1.6	9.905	A
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	572			565	1.3	4.5	22.281	C	
Exit		1	1		377			377	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	584			584	0.0	0.0	0.000	A
				2	B	334			334	0.8	1.0	10.839	B
		2	1	(A, B)	919			918	0.1	0.3	1.114	A	
Exit		1	1		951			950	0.0	0.1	0.385	A	

08:30 - 08:45

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	419	915	0.458	419	0.5	1.1	8.496	A
		Exit	1	1		351			351	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	1018	1665	0.611	1013	1.0	3.9	10.735	B
		Exit	1	1		996			996	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	274	728	0.376	274	0.4	0.6	8.634	A
		Exit	1	1		363			363	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	499	1012	0.493	500	0.5	0.7	5.163	A
				2	2, 3, 4	600	1012	0.592	599	0.9	1.1	6.267	A
		Exit	1	1		1095			1095	0.2	0.5	1.156	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	537			536	0.0	0.2	0.313
Exit			1	1		710			710	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	616			616	1.6	2.0	11.264	B
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	704			616	4.5	25.7	91.907	F	
Exit		1	1		459			459	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	710			710	0.0	0.0	0.000	A
				2	B	407			407	1.0	1.6	13.002	B
		Exit	1	1	(A, B)	1117			1116	0.3	0.9	2.201	A
Exit		1	1		1099			1098	0.1	0.3	0.775	A	

08:45 - 09:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	417	916	0.456	419	1.1	1.0	9.191	A
		Exit	1	1		363			363	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	1023	1665	0.614	1028	3.9	3.4	12.748	B
		Exit	1	1		993			993	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	280	722	0.388	279	0.6	0.8	9.272	A
		Exit	1	1		362			362	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	496	1009	0.492	497	0.7	0.7	5.262	A
				2	2, 3, 4	599	1009	0.594	600	1.1	1.0	6.516	A
		Exit	1	1		1104			1105	0.5	0.4	1.341	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	526			527	0.2	0.0	0.446
Exit			1	1		720			720	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	618			618	2.0	2.0	11.635	B
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	699			618	25.7	46.4	216.405	F	
Exit		1	1		461			461	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	720			720	0.0	0.0	0.000	A
				2	B	409			410	1.6	1.5	13.234	B
		2	1	(A, B)	1129			1129	0.9	0.8	2.485	A	
Exit		1	1		1093			1094	0.3	0.2	0.887	A	

09:00 - 09:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	339	950	0.357	339	1.0	0.6	6.679	A
		Exit	1	1		298			298	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	824	1700	0.484	823	3.4	1.2	6.294	A
		Exit	1	1		897			897	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	228	813	0.280	227	0.8	0.4	6.972	A
		Exit	1	1		320			320	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	457	1031	0.443	457	0.7	0.6	4.895	A
				2	2, 3, 4	571	1031	0.554	571	1.0	0.9	5.819	A
		Exit	1	1		902			901	0.4	0.2	0.676	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	439			439	0.0	0.0	0.155
Exit			1	1		589			589	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	629			630	2.0	1.9	10.906	B
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	569			629	46.4	28.4	208.036	F	
Exit		1	1		372			372	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	589			589	0.0	0.0	0.000	A
				2	B	331			330	1.5	1.1	11.454	B
		2	1	(A, B)	921			920	0.8	0.4	1.445	A	
Exit		1	1		1026			1027	0.2	0.1	0.548	A	

09:15 - 09:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	283	1021	0.277	284	0.6	0.3	5.259	A
		Exit	1	1		253			253	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	701	1745	0.402	700	1.2	0.8	3.892	A
		Exit	1	1		757			757	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	194	874	0.222	193	0.4	0.3	5.450	A
		Exit	1	1		263			263	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	373	1044	0.357	374	0.6	0.4	4.508	A
				2	2, 3, 4	479	1044	0.459	480	0.9	0.6	5.081	A
		Exit	1	1		759			759	0.2	0.0	0.252	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	355			355	0.0	0.0	0.059
Exit			1	1		498			498	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	530			530	1.9	1.4	9.915	A
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	480			530	28.4	5.9	79.547	F	
Exit		1	1		314			314	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	498			498	0.0	0.0	0.000	A
				2	B	278			279	1.1	0.7	9.920	A
		2	1	(A, B)	776			776	0.4	0.1	0.709	A	
Exit		1	1		851			851	0.1	0.0	0.307	A	

A50-Conjunction - 2030 DS, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	AV-1 - A50-Conjunction [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Arm order	Junction Delay (s)	Junction LOS
1	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	26.14	D
2	Poplars Ave/A50	T-Junction	Two-way		7.24	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2030 DS	PM	ONE HOUR	17:00	18:30	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - A50/Hilden Rd Roundabout	4 - A50	2	C	Simple (vertical queueing)	Normal	0	100.00	
2 - Poplars Ave/A50	C - A50 E	1	4	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd		ONE HOUR	✓	354	100.000
	2 - Orford Rd		ONE HOUR	✓	967	100.000
	3 - Smith Drive		ONE HOUR	✓	461	100.000
	4 - A50	✓				
2 - Poplars Ave/A50	A - A50 W		ONE HOUR	✓	805	100.000
	B - Poplars Ave		ONE HOUR	✓	274	100.000
	C - A50 E	✓				

Origin-Destination Data

Demand (PCU/hr)

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	115	53	186
	2 - Orford Rd	142	0.94	61	763
	3 - Smith Drive	213	96	0	152
	4 - A50	86	650	168	31

Demand (PCU/hr)

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	144	661
	B - Poplars Ave	0	0	274
	C - A50 E	772	371	0

Vehicle Mix

Heavy Vehicle Percentages

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	0	0	0
	2 - Orford Rd	0	0	0	1
	3 - Smith Drive	0	0	0	0
	4 - A50	0	2	0	0

Heavy Vehicle Percentages

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	0	5
	B - Poplars Ave	0	0	0
	C - A50 E	4	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	14.52	1.8	B	326	490
	2 - Orford Rd	40.90	12.7	E	886	1330
	3 - Smith Drive	44.24	6.5	E	420	631
	4 - A50	6.01	1.6	A	840	1260
2 - Poplars Ave/A50	A - A50 W	0.55	0.1	A	738	1108
	B - Poplars Ave	17.96	1.4	C	251	376
	C - A50 E	9.36	3.4	A	1066	1600

Main Results for each time segment

17:00 - 17:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	269	67	696	268	330	0.0	0.4	4.355	A
	2 - Orford Rd	729	182	324	729	640	0.0	0.8	3.833	A
	3 - Smith Drive	348	87	843	348	209	0.0	0.7	6.790	A
	4 - A50	685	171	341	685	850	0.0	0.8	4.363	A
2 - Poplars Ave/A50	A - A50 W	602	150		602	589	0.0	0.0	0.022	A
	B - Poplars Ave	207	52		207	395	0.0	0.5	7.948	A
	C - A50 E	876	219		874	700	0.0	1.3	4.304	A

17:15 - 17:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	321	80	830	320	393	0.4	0.6	6.185	A
	2 - Orford Rd	875	219	395	870	755	0.8	2.0	6.634	A
	3 - Smith Drive	408	102	1012	406	254	0.7	1.4	10.805	B
	4 - A50	819	205	403	820	1015	0.8	1.1	4.889	A
2 - Poplars Ave/A50	A - A50 W	724	181		724	706	0.0	0.0	0.065	A
	B - Poplars Ave	241	60		242	470	0.5	0.7	10.065	B
	C - A50 E	1049	262		1048	837	1.3	1.9	5.890	A

17:30 - 17:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	393	98	1017	389	470	0.6	1.8	12.321	B
	2 - Orford Rd	1059	265	478	1029	927	2.0	10.1	23.973	C
	3 - Smith Drive	504	126	1201	491	306	1.4	5.7	31.217	D
	4 - A50	1009	252	479	1008	1211	1.1	1.6	5.836	A
2 - Poplars Ave/A50	A - A50 W	888	222		888	838	0.0	0.1	0.347	A
	B - Poplars Ave	298	74		299	566	0.7	1.3	15.197	C
	C - A50 E	1251	313		1247	1030	1.9	3.4	8.711	A

7:45 - 18:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	389	97	1030	388	479	1.8	1.5	14.521	B
	2 - Orford Rd	1063	266	479	1056	940	10.1	12.7	40.899	E
	3 - Smith Drive	507	127	1225	508	310	5.7	6.5	44.236	E
	4 - A50	1012	253	496	1013	1236	1.6	1.6	6.005	A
2 - Poplars Ave/A50	A - A50 W	887	222		887	860	0.1	0.1	0.553	A
	B - Poplars Ave	304	76		306	574	1.3	1.4	17.956	C
	C - A50 E	1277	319		1275	1035	3.4	3.4	9.357	A

18:00 - 18:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	318	79	834	318	396	1.5	0.6	8.385	A
	2 - Orford Rd	863	216	392	876	761	12.7	2.2	19.058	C
	3 - Smith Drive	410	102	1017	416	250	6.5	1.5	22.040	C
	4 - A50	823	206	407	823	1024	1.6	1.2	5.107	A
2 - Poplars Ave/A50	A - A50 W	724	181		724	716	0.1	0.0	0.179	A
	B - Poplars Ave	246	62		247	473	1.4	0.7	11.036	B
	C - A50 E	1061	265		1059	841	3.4	2.0	7.118	A

18:15 - 18:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	269	67	702	269	324	0.6	0.3	4.845	A
	2 - Orford Rd	729	182	329	728	642	2.2	0.9	4.480	A
	3 - Smith Drive	346	87	846	346	211	1.5	0.7	7.830	A
	4 - A50	690	173	336	690	855	1.2	0.9	4.512	A
2 - Poplars Ave/A50	A - A50 W	605	151		605	596	0.0	0.0	0.027	A
	B - Poplars Ave	208	52		208	394	0.7	0.4	8.634	A
	C - A50 E	884	221		883	706	2.0	1.2	4.797	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

17:00 - 17:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	269	1094	0.246	268	0.0	0.4	4.355	A
		Exit	1	1		330			330	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	729	1783	0.409	729	0.0	0.8	3.833	A
		Exit	1	1		640			640	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	348	871	0.400	348	0.0	0.7	6.790	A
		Exit	1	1		209			209	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	317	1023	0.310	317	0.0	0.4	4.217	A
				2	2, 3, 4	368	1023	0.360	368	0.0	0.5	4.488	A
		Exit	1	1		850			850	0.0	0.1	0.346	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	602			602	0.0	0.0	0.022
Exit			1	1		589			589	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	207			207	0.0	0.4	7.148	A
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	207			207	0.0	0.1	0.793	A	
C - A50 E		Entry	1	1	A	589			589	0.0	0.0	0.000	A
				2	B	287			286	0.0	1.0	10.753	B
		Exit	1	1	(A, B)	876			876	0.0	0.3	0.814	A
						700			700	0.0	0.0	0.118	A

17:15 - 17:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	321	1038	0.309	320	0.4	0.6	6.185	A
		Exit	1	1		393			393	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	875	1746	0.501	870	0.8	2.0	6.634	A
		Exit	1	1		755			755	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	408	803	0.508	406	0.7	1.4	10.805	B
		Exit	1	1		254			254	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	383	1006	0.381	385	0.4	0.5	4.663	A
				2	2, 3, 4	436	1006	0.434	436	0.5	0.6	5.085	A
		Exit	1	1		1016			1015	0.1	0.3	0.880	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	724			724	0.0	0.0	0.065
Exit			1	1		706			706	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	242			242	0.4	0.6	8.270	A
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	241			242	0.1	0.1	1.791	A	
Exit		1	1		470			470	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	706			706	0.0	0.0	0.000	A
				2	B	342			342	1.0	1.3	13.062	B
		2	1	(A, B)	1049			1048	0.3	0.6	1.676	A	
Exit		1	1		838			837	0.0	0.1	0.258	A	

17:30 - 17:45

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	393	961	0.409	389	0.6	1.8	12.321	B
		Exit	1	1		470			470	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	1059	1703	0.622	1029	2.0	10.1	23.973	C
		Exit	1	1		927			927	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	504	728	0.692	491	1.4	5.7	31.217	D
		Exit	1	1		306			306	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	477	984	0.485	477	0.5	0.7	5.411	A
				2	2, 3, 4	531	984	0.540	531	0.6	0.9	6.214	A
		Exit	1	1		1212			1211	0.3	0.8	2.181	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	888			888	0.0	0.1	0.347
Exit			1	1		838			838	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	298			299	0.6	0.9	10.156	B
				2	A	0			0	0.0	0.0	0.000	A
		Exit	1	1	(A, C)	298			298	0.1	0.4	5.021	A
							566			566	0.0	0.0	0.000
C - A50 E		Entry	1	1	A	838			838	0.0	0.0	0.000	A
				2	B	411			409	1.3	2.0	16.095	C
		Exit	1	1	(A, B)	1251			1249	0.6	1.4	3.456	A
				1	1				1030	0.1	0.2	0.770	A

17:45 - 18:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	389	955	0.407	388	1.8	1.5	14.521	B
		Exit	1	1		479			479	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	1063	1703	0.625	1056	10.1	12.7	40.899	E
		Exit	1	1		940			940	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	507	718	0.706	508	5.7	6.5	44.236	E
		Exit	1	1		310			310	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	477	979	0.488	478	0.7	0.7	5.504	A
				2	2, 3, 4	535	979	0.546	535	0.9	0.9	6.452	A
		Exit	1	1		1237			1236	0.8	0.9	2.559	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	887			887	0.1	0.1	0.553
Exit			1	1		860			860	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	305			306	0.9	0.8	10.556	B
				2	A	0			0	0.0	0.0	0.000	A
		Exit	1	1	(A, C)	304			305	0.4	0.5	7.406	A
							574			574	0.0	0.0	0.000
C - A50 E		Entry	1	1	A	860			860	0.0	0.0	0.000	A
				2	B	416			415	2.0	2.0	16.806	C
		Exit	1	1	(A, B)	1277			1276	1.4	1.5	3.920	A
		Exit	1	1		1034			1035	0.2	0.2	0.894	A

18:00 - 18:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	318	1036	0.306	318	1.5	0.6	8.385	A
		Exit	1	1		396			396	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	863	1748	0.494	876	12.7	2.2	19.058	C
		Exit	1	1		761			761	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	410	801	0.511	416	6.5	1.5	22.040	C
		Exit	1	1		250			250	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	385	1004	0.383	385	0.7	0.6	4.820	A
				2	2, 3, 4	439	1004	0.437	439	0.9	0.6	5.359	A
		Exit	1	1		1025			1024	0.9	0.4	1.490	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	724			724	0.1	0.0	0.179
Exit			1	1		716			716	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	247			247	0.8	0.6	8.693	A
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	246			247	0.5	0.1	2.367	A	
Exit		1	1		473			473	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	716			716	0.0	0.0	0.000	A
				2	B	344			343	2.0	1.4	14.277	B
		2	1	(A, B)	1061			1060	1.5	0.6	2.493	A	
Exit		1	1		841			841	0.2	0.1	0.378	A	

18:15 - 18:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	269	1091	0.247	269	0.6	0.3	4.845	A
		Exit	1	1		324			324	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	729	1781	0.409	728	2.2	0.9	4.480	A
		Exit	1	1		642			642	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	346	870	0.398	346	1.5	0.7	7.830	A
		Exit	1	1		211			211	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	317	1025	0.309	316	0.6	0.4	4.352	A
				2	2, 3, 4	373	1025	0.364	373	0.6	0.5	4.649	A
		Exit	1	1		856			855	0.4	0.1	0.486	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	605			605	0.0	0.0	0.027
Exit			1	1		596			596	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	208			208	0.6	0.4	7.631	A
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	208			208	0.1	0.0	1.016	A	
Exit		1	1		394			394	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	596			596	0.0	0.0	0.000	A
				2	B	287			287	1.4	0.9	11.483	B
		2	1	(A, B)	884			883	0.6	0.2	1.081	A	
Exit		1	1		706			706	0.1	0.0	0.149	A	

A50-Conjunction - 2030 Through Route Scenario, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	AV-1 - A50-Conjunction [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Arm order	Junction Delay (s)	Junction LOS
1	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	8.59	A
2	Poplars Ave/A50	T-Junction	Two-way		70.67	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2030 Through Route Scenario	AM	ONE HOUR	08:00	09:30	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - A50/Hilden Rd Roundabout	4 - A50	2	C	Simple (vertical queueing)	Normal	0	100.00	
2 - Poplars Ave/A50	C - A50 E	1	4	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd		ONE HOUR	✓	374	100.000
	2 - Orford Rd		ONE HOUR	✓	922	100.000
	3 - Smith Drive		ONE HOUR	✓	255	100.000
	4 - A50	✓				
2 - Poplars Ave/A50	A - A50 W		ONE HOUR	✓	485	100.000
	B - Poplars Ave		ONE HOUR	✓	634	100.000
	C - A50 E	✓				

Origin-Destination Data

Demand (PCU/hr)

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	135	125	114
	2 - Orford Rd	139	33	52	698
	3 - Smith Drive	146	59	0	50
	4 - A50	45	702	159	118

Demand (PCU/hr)

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	53	432
	B - Poplars Ave	0	0	634
	C - A50 E	647	360	0

Vehicle Mix

Heavy Vehicle Percentages

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	0	0	0
	2 - Orford Rd	0	0	0	3
	3 - Smith Drive	0	0	0	0
	4 - A50	0	0	0	0

Heavy Vehicle Percentages

2 - Poplars Ave/A50

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
From	A - A50 W	0	4	0
	B - Poplars Ave	0	0	0
	C - A50 E	0	6	0

Results

Results Summary for whole modelled period

Junction	Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	9.43	1.0	A	345	517
	2 - Orford Rd	11.15	3.3	B	843	1264
	3 - Smith Drive	8.97	0.9	A	236	354
	4 - A50	5.97	1.9	A	970	1455
2 - Poplars Ave/A50	A - A50 W	0.39	0.1	A	446	669
	B - Poplars Ave	224.34	47.1	F	579	869
	C - A50 E	6.73	2.2	A	902	1353

Main Results for each time segment

08:00 - 08:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	283	71	842	281	247	0.0	0.5	4.609	A
	2 - Orford Rd	688	172	402	688	722	0.0	0.7	3.658	A
	3 - Smith Drive	193	48	832	193	258	0.0	0.3	4.993	A
	4 - A50	806	201	284	806	742	0.0	1.1	4.475	A
2 - Poplars Ave/A50	A - A50 W	369	92		369	475	0.0	0.0	0.022	A
	B - Poplars Ave	478	119		477	305	0.0	2.4	16.282	C
	C - A50 E	741	185		740	806	0.0	0.9	3.702	A

08:15 - 08:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	337	84	997	337	300	0.5	0.6	5.942	A
	2 - Orford Rd	834	208	473	834	861	0.7	1.2	5.245	A
	3 - Smith Drive	231	58	998	230	309	0.3	0.5	6.452	A
	4 - A50	950	238	345	951	882	1.1	1.4	5.099	A
2 - Poplars Ave/A50	A - A50 W	440	110		440	561	0.0	0.0	0.078	A
	B - Poplars Ave	560	140		560	371	2.4	5.5	31.171	D
	C - A50 E	883	221		882	950	0.9	1.3	4.861	A

08:30 - 08:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	412	103	1144	412	359	0.6	1.0	8.531	A
	2 - Orford Rd	999	250	563	1003	993	1.2	2.6	9.620	A
	3 - Smith Drive	285	71	1204	283	363	0.5	0.9	8.730	A
	4 - A50	1091	273	413	1090	1075	1.4	1.9	5.824	A
2 - Poplars Ave/A50	A - A50 W	537	134		537	690	0.0	0.1	0.365	A
	B - Poplars Ave	704	176		613	443	5.5	28.6	105.607	F
	C - A50 E	1074	268		1074	1091	1.3	2.2	6.293	A

08:45 - 09:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	415	104	1152	417	360	1.0	1.0	9.430	A
	2 - Orford Rd	1008	252	569	1003	1000	2.6	3.3	11.148	B
	3 - Smith Drive	286	71	1204	285	368	0.9	0.8	8.966	A
	4 - A50	1098	274	415	1096	1072	1.9	1.9	5.968	A
2 - Poplars Ave/A50	A - A50 W	530	132		530	684	0.1	0.0	0.393	A
	B - Poplars Ave	692	173		626	444	28.6	47.1	224.340	F
	C - A50 E	1073	268		1070	1098	2.2	2.2	6.734	A

09:00 - 09:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	337	84	1069	338	306	1.0	0.6	6.735	A
	2 - Orford Rd	832	208	495	833	912	3.3	1.2	6.128	A
	3 - Smith Drive	233	58	1009	234	319	0.8	0.4	6.800	A
	4 - A50	1031	258	346	1029	897	1.9	1.6	5.386	A
2 - Poplars Ave/A50	A - A50 W	437	109		437	575	0.0	0.0	0.174	A
	B - Poplars Ave	567	142		640	368	47.1	29.0	213.005	F
	C - A50 E	897	224		898	1031	2.2	1.3	5.140	A

09:15 - 09:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	284	71	878	284	256	0.6	0.4	5.347	A
	2 - Orford Rd	697	174	407	696	755	1.2	0.7	3.934	A
	3 - Smith Drive	191	48	839	193	264	0.4	0.2	5.471	A
	4 - A50	844	211	289	845	743	1.6	1.0	4.834	A
2 - Poplars Ave/A50	A - A50 W	363	91		363	474	0.0	0.0	0.047	A
	B - Poplars Ave	474	119		521	308	29.0	6.9	85.637	F
	C - A50 E	743	186		742	844	1.3	0.8	4.083	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

08:00 - 08:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	283	1033	0.274	281	0.0	0.5	4.609	A
		Exit	1	1		247			247	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	688	1743	0.395	688	0.0	0.7	3.658	A
		Exit	1	1		722			722	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	193	875	0.220	193	0.0	0.3	4.993	A
		Exit	1	1		258			258	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	345	1040	0.332	345	0.0	0.4	4.155	A
				2	2, 3, 4	461	1040	0.443	461	0.0	0.6	4.712	A
		Exit	1	1		742			742	0.0	0.0	0.162	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	369			369	0.0	0.0	0.022
Exit			1	1		475			475	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	477			477	0.0	1.2	8.692	A
				2	A	0			0	0.0	0.0	0.000	A
		Exit	1	1	(A, C)	478			477	0.0	1.2	7.562	A
						305			305	0.0	0.0	0.000	A
C - A50 E		Entry	1	1	A	475			475	0.0	0.0	0.000	A
				2	B	266			266	0.0	0.8	9.261	A
				1	(A, B)	741			740	0.0	0.1	0.496	A
		Exit	1	1		806			806	0.0	0.0	0.168	A

08:15 - 08:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	337	969	0.347	337	0.5	0.6	5.942	A
		Exit	1	1		300			300	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	834	1706	0.489	834	0.7	1.2	5.245	A
		Exit	1	1		861			861	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	231	809	0.285	230	0.3	0.5	6.452	A
		Exit	1	1		309			309	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	420	1022	0.411	421	0.4	0.5	4.626	A
				2	2, 3, 4	530	1022	0.519	530	0.6	0.8	5.469	A
		Exit	1	1		882			882	0.0	0.1	0.435	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	440			440	0.0	0.0	0.078
Exit			1	1		561			561	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	560			560	1.2	1.6	9.843	A
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	560			560	1.2	3.9	21.312	C	
Exit		1	1		371			371	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	561			561	0.0	0.0	0.000	A
				2	B	321			321	0.8	1.0	10.883	B
		2	1	(A, B)	883			882	0.1	0.3	1.061	A	
Exit		1	1		950			950	0.0	0.1	0.377	A	

08:30 - 08:45

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	412	908	0.454	412	0.6	1.0	8.531	A
		Exit	1	1		359			359	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	999	1659	0.602	1003	1.2	2.6	9.620	A
		Exit	1	1		993			993	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	285	727	0.392	283	0.5	0.9	8.730	A
		Exit	1	1		363			363	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	485	1003	0.483	484	0.5	0.8	5.156	A
				2	2, 3, 4	606	1003	0.604	607	0.8	1.0	6.356	A
		Exit	1	1		1074			1075	0.1	0.3	0.981	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	537			537	0.0	0.1	0.365
Exit			1	1		690			690	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	613			613	1.6	2.0	11.332	B
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	704			613	3.9	26.7	94.249	F	
Exit		1	1		443			443	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	690			690	0.0	0.0	0.000	A
				2	B	384			384	1.0	1.5	12.641	B
		2	1	(A, B)	1074			1074	0.3	0.7	1.960	A	
Exit		1	1		1090			1091	0.1	0.2	0.777	A	

08:45 - 09:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	415	905	0.459	417	1.0	1.0	9.430	A
		Exit	1	1		360			360	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	1008	1656	0.609	1003	2.6	3.3	11.148	B
		Exit	1	1		1000			1000	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	286	727	0.393	285	0.9	0.8	8.966	A
		Exit	1	1		368			368	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	489	1002	0.488	489	0.8	0.7	5.204	A
				2	2, 3, 4	608	1002	0.607	607	1.0	1.2	6.581	A
		Exit	1	1		1073			1072	0.3	0.4	1.130	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	530			530	0.1	0.0	0.393
Exit			1	1		684			684	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	625			626	2.0	2.0	11.512	B
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	692			625	26.7	45.1	212.906	F	
Exit		1	1		444			444	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	684			684	0.0	0.0	0.000	A
				2	B	387			386	1.5	1.4	13.150	B
		2	1	(A, B)	1073			1071	0.7	0.8	2.182	A	
Exit		1	1		1098			1098	0.2	0.3	0.861	A	

09:00 - 09:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	337	939	0.359	338	1.0	0.6	6.735	A
		Exit	1	1		306			306	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	832	1694	0.491	833	3.3	1.2	6.128	A
		Exit	1	1		912			912	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	233	805	0.289	234	0.8	0.4	6.800	A
		Exit	1	1		319			319	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	454	1022	0.444	454	0.7	0.6	4.846	A
				2	2, 3, 4	577	1022	0.564	576	1.2	0.9	5.814	A
		Exit	1	1		897			897	0.4	0.1	0.566	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	437			437	0.0	0.0	0.174
Exit			1	1		575			575	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	639			640	2.0	1.9	10.890	B
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	567			639	45.1	27.1	202.229	F	
Exit		1	1		368			368	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	575			575	0.0	0.0	0.000	A
				2	B	322			323	1.4	1.0	11.254	B
		2	1	(A, B)	897			897	0.8	0.3	1.251	A	
Exit		1	1		1031			1031	0.3	0.1	0.530	A	

09:15 - 09:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	284	1018	0.279	284	0.6	0.4	5.347	A
		Exit	1	1		256			256	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	697	1740	0.400	696	1.2	0.7	3.934	A
		Exit	1	1		755			755	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	191	872	0.219	193	0.4	0.2	5.471	A
		Exit	1	1		264			264	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	361	1038	0.348	362	0.6	0.4	4.459	A
				2	2, 3, 4	483	1038	0.465	483	0.9	0.6	5.119	A
		Exit	1	1		743			743	0.1	0.0	0.258	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	363			363	0.0	0.0	0.047
Exit			1	1		474			474	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	520			521	1.9	1.4	9.872	A
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	474			520	27.1	5.5	75.629	F	
Exit		1	1		308			308	0.0	0.0	0.000	A	
		1	1		308			308	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	474			474	0.0	0.0	0.000	A
				2	B	268			268	1.0	0.7	9.842	A
		Exit	2	1	(A, B)	743			742	0.3	0.1	0.696	A
	1		1		844			844	0.1	0.1	0.298	A	

A50-Conjunction - 2030 Through Route Scenario, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	AV-1 - A50-Conjunction [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Arm order	Junction Delay (s)	Junction LOS
1	A50/Hilden Rd Roundabout	Standard Roundabout		1, 2, 3, 4	17.36	C
2	Poplars Ave/A50	T-Junction	Two-way		8.14	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2030 Through Route Scenario	PM	ONE HOUR	17:00	18:30	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - A50/Hilden Rd Roundabout	4 - A50	2	C	Simple (vertical queueing)	Normal	0	100.00	
2 - Poplars Ave/A50	C - A50 E	1	4	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd		ONE HOUR	✓	280	100.000
	2 - Orford Rd		ONE HOUR	✓	976	100.000
	3 - Smith Drive		ONE HOUR	✓	461	100.000
	4 - A50	✓				
2 - Poplars Ave/A50	A - A50 W		ONE HOUR	✓	785	100.000
	B - Poplars Ave		ONE HOUR	✓	355	100.000
	C - A50 E	✓				

Origin-Destination Data

Demand (PCU/hr)

1 - A50/Hilden Rd Roundabout

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
From	1 - Hilden Rd	0	100	43	137
	2 - Orford Rd	140	2	66	767
	3 - Smith Drive	255	79	0	126
	4 - A50	50	665	174	47

Demand (PCU/hr)

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
2 - Poplars Ave/A50	From			
	A - A50 W	0	205	580
	B - Poplars Ave	0	0	355
	C - A50 E	741	371	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Hilden Rd	2 - Orford Rd	3 - Smith Drive	4 - A50
1 - A50/Hilden Rd Roundabout	From				
	1 - Hilden Rd	0	0	0	0
	2 - Orford Rd	0	0	0	1
	3 - Smith Drive	0	0	0	0
	4 - A50	0	0	0	0

Heavy Vehicle Percentages

		To		
		A - A50 W	B - Poplars Ave	C - A50 E
2 - Poplars Ave/A50	From			
	A - A50 W	0	0	0
	B - Poplars Ave	0	0	0
	C - A50 E	0	2	0

Results

Results Summary for whole modelled period

Junction	Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	8.87	0.8	A	256	384
	2 - Orford Rd	24.94	7.3	C	897	1345
	3 - Smith Drive	29.42	4.1	D	421	632
	4 - A50	6.04	1.7	A	858	1288
2 - Poplars Ave/A50	A - A50 W	0.44	0.1	A	720	1080
	B - Poplars Ave	23.58	2.6	C	325	488
	C - A50 E	8.67	2.9	A	987	1480

Main Results for each time segment

17:00 - 17:15

Junction	Arm	Total Demand	Junction Arrivals	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue	End queue	Delay (s)	LOS
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		(PCU/hr)	(PCU)				(PCU)	(PCU)		
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	208	52	724	208	336	0.0	0.2	4.001	A
	2 - Orford Rd	738	185	300	738	632	0.0	0.8	3.640	A
	3 - Smith Drive	344	86	827	344	211	0.0	0.7	6.482	A
	4 - A50	703	176	356	703	814	0.0	0.8	4.383	A
2 - Poplars Ave/A50	A - A50 W	591	148		591	544	0.0	0.0	0.015	A
	B - Poplars Ave	267	67		267	427	0.0	0.7	8.917	A
	C - A50 E	813	203		815	703	0.0	0.9	4.031	A

17:15 - 17:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	252	63	871	252	402	0.2	0.3	5.159	A
	2 - Orford Rd	880	220	360	879	763	0.8	1.3	5.220	A
	3 - Smith Drive	413	103	987	414	253	0.7	1.0	9.381	A
	4 - A50	839	210	433	840	969	0.8	1.1	4.868	A
2 - Poplars Ave/A50	A - A50 W	704	176		705	646	0.0	0.0	0.045	A
	B - Poplars Ave	313	78		314	502	0.7	1.0	11.555	B
	C - A50 E	969	242		967	839	0.9	1.6	5.289	A

17:30 - 17:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	309	77	1056	309	482	0.3	0.8	8.498	A
	2 - Orford Rd	1077	269	441	1064	924	1.3	7.0	17.754	C
	3 - Smith Drive	503	126	1193	498	312	1.0	3.9	22.244	C
	4 - A50	1024	256	515	1023	1175	1.1	1.7	5.803	A
2 - Poplars Ave/A50	A - A50 W	865	216		866	778	0.0	0.1	0.387	A
	B - Poplars Ave	390	97		388	625	1.0	2.6	21.043	C
	C - A50 E	1174	294		1174	1024	1.6	2.9	8.166	A

17:45 - 18:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	307	77	1067	307	497	0.8	0.7	8.869	A
	2 - Orford Rd	1077	269	441	1081	933	7.0	7.3	24.944	C
	3 - Smith Drive	504	126	1210	507	312	3.9	4.1	29.425	D
	4 - A50	1033	258	530	1035	1187	1.7	1.6	6.043	A
2 - Poplars Ave/A50	A - A50 W	863	216		864	791	0.1	0.1	0.439	A
	B - Poplars Ave	392	98		396	619	2.6	2.3	23.577	C
	C - A50 E	1187	297		1184	1033	2.9	2.9	8.673	A

18:00 - 18:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	249	62	876	250	403	0.7	0.3	5.973	A
	2 - Orford Rd	875	219	359	878	767	7.3	1.4	9.388	A
	3 - Smith Drive	416	104	983	417	254	4.1	1.1	13.433	B
	4 - A50	847	212	431	848	969	1.6	1.1	5.087	A
2 - Poplars Ave/A50	A - A50 W	707	177		707	645	0.1	0.0	0.079	A
	B - Poplars Ave	320	80		322	506	2.3	1.0	13.231	B
	C - A50 E	969	242		969	847	2.9	1.6	6.236	A

18:15 - 18:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	212	53	729	213	337	0.3	0.2	4.351	A
	2 - Orford Rd	734	184	302	736	639	1.4	0.7	4.073	A
	3 - Smith Drive	347	87	823	347	215	1.1	0.6	7.299	A
	4 - A50	704	176	361	705	808	1.1	0.9	4.498	A
2 - Poplars Ave/A50	A - A50 W	588	147		588	536	0.0	0.0	0.014	A
	B - Poplars Ave	269	67		269	423	1.0	0.7	9.611	A
	C - A50 E	808	202		807	704	1.6	1.0	4.295	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

17:00 - 17:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	208	1082	0.192	208	0.0	0.2	4.001	A
		Exit	1	1		336			336	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	738	1796	0.411	738	0.0	0.8	3.640	A
		Exit	1	1		632			632	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	344	877	0.392	344	0.0	0.7	6.482	A
		Exit	1	1		211			211	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	312	1019	0.307	313	0.0	0.3	4.136	A
				2	2, 3, 4	390	1019	0.383	391	0.0	0.5	4.579	A
		Exit	1	1		814			814	0.0	0.1	0.213	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	591			591	0.0	0.0	0.015
Exit			1	1		544			544	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	267			267	0.0	0.6	7.516	A
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	267			267	0.0	0.1	1.391	A	
C - A50 E		Exit	1	1		427			427	0.0	0.0	0.000	A
				1	1		427			427	0.0	0.0	0.000
		Entry	1	1	A	544			544	0.0	0.0	0.000	A
				2	B	270			271	0.0	0.8	10.285	B
		Exit	1	1	(A, B)	813			814	0.0	0.2	0.617	A
Exit	1	1		703			703	0.0	0.0	0.104	A		

17:15 - 17:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	252	1021	0.247	252	0.2	0.3	5.159	A
		Exit	1	1		402			402	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	880	1765	0.498	879	0.8	1.3	5.220	A
		Exit	1	1		763			763	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	413	813	0.508	414	0.7	1.0	9.381	A
		Exit	1	1		253			253	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	376	997	0.377	376	0.3	0.5	4.591	A
				2	2, 3, 4	463	997	0.464	464	0.5	0.6	5.093	A
		Exit	1	1		968			969	0.1	0.2	0.571	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	704			705	0.0	0.0	0.045
Exit			1	1		646			646	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	314			314	0.6	0.8	8.626	A
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	313			314	0.1	0.3	2.925	A	
Exit		1	1		502			502	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	646			646	0.0	0.0	0.000	A
				2	B	323			322	0.8	1.2	12.246	B
		2	1	(A, B)	969			969	0.2	0.4	1.262	A	
Exit		1	1		838			839	0.0	0.0	0.233	A	

17:30 - 17:45

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	309	944	0.327	309	0.3	0.8	8.498	A
		Exit	1	1		482			482	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	1077	1722	0.625	1064	1.3	7.0	17.754	C
		Exit	1	1		924			924	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	503	731	0.688	498	1.0	3.9	22.244	C
		Exit	1	1		312			312	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	467	973	0.479	467	0.5	0.6	5.211	A
				2	2, 3, 4	557	973	0.572	556	0.6	1.0	6.299	A
		Exit	1	1		1176			1175	0.2	0.7	1.733	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	865			866	0.0	0.1	0.387
Exit			1	1		778			778	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	389			388	0.8	1.2	10.537	B
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	390			389	0.3	1.4	10.465	B	
Exit		1	1		625			625	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	778			778	0.0	0.0	0.000	A
				2	B	396			396	1.2	1.7	15.570	C
		2	1	(A, B)	1174			1174	0.4	1.1	3.004	A	
Exit		1	1		1024			1024	0.0	0.3	0.728	A	

17:45 - 18:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	307	940	0.326	307	0.8	0.7	8.869	A
		Exit	1	1		497			497	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	1077	1722	0.625	1081	7.0	7.3	24.944	C
		Exit	1	1		933			933	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	504	724	0.696	507	3.9	4.1	29.425	D
		Exit	1	1		312			312	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	474	969	0.489	475	0.6	0.6	5.481	A
				2	2, 3, 4	560	969	0.577	560	1.0	0.9	6.517	A
		Exit	1	1		1187			1187	0.7	0.7	1.983	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	863			864	0.1	0.1	0.439
Exit			1	1		791			791	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	395			396	1.2	1.1	10.927	B
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	392			395	1.4	1.2	12.665	B	
Exit		1	1		619			619	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	791			791	0.0	0.0	0.000	A
				2	B	394			393	1.7	1.8	16.076	C
		2	1	(A, B)	1187			1185	1.1	1.2	3.364	A	
Exit		1	1		1033			1033	0.3	0.2	0.842	A	

18:00 - 18:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	249	1019	0.244	250	0.7	0.3	5.973	A
		Exit	1	1		403			403	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	875	1765	0.496	878	7.3	1.4	9.388	A
		Exit	1	1		767			767	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	416	815	0.511	417	4.1	1.1	13.433	B
		Exit	1	1		254			254	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	381	998	0.382	381	0.6	0.5	4.718	A
				2	2, 3, 4	466	998	0.467	467	0.9	0.6	5.390	A
		Exit	1	1		969			969	0.7	0.2	0.941	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	707			707	0.1	0.0	0.079
Exit			1	1		645			645	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	321			322	1.1	0.7	9.050	A
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	320			321	1.2	0.2	4.229	A	
Exit		1	1		506			506	0.0	0.0	0.000	A	
C - A50 E		Entry	1	1	A	645			645	0.0	0.0	0.000	A
				2	B	323			324	1.8	1.1	13.365	B
		2	1	(A, B)	969			968	1.2	0.4	1.839	A	
Exit		1	1		847			847	0.2	0.0	0.319	A	

18:15 - 18:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A50/Hilden Rd Roundabout	1 - Hilden Rd	Entry	1	1	1, 2, 3, 4	212	1080	0.197	213	0.3	0.2	4.351	A
		Exit	1	1		337			337	0.0	0.0	0.000	A
	2 - Orford Rd	Entry	1	1	1, 2, 3, 4	734	1795	0.409	736	1.4	0.7	4.073	A
		Exit	1	1		639			639	0.0	0.0	0.000	A
	3 - Smith Drive	Entry	1	1	1, 2, 3, 4	347	879	0.394	347	1.1	0.6	7.299	A
		Exit	1	1		215			215	0.0	0.0	0.000	A
	4 - A50	Entry	1	1	1, 2	310	1018	0.304	310	0.5	0.4	4.258	A
				2	2, 3, 4	395	1018	0.388	395	0.6	0.5	4.688	A
		Exit	1	1		809			808	0.2	0.1	0.305	A
	2 - Poplars Ave/A50	A - A50 W	Entry	1	1	B, C	588			588	0.0	0.0	0.014
Exit			1	1		536			536	0.0	0.0	0.000	A
B - Poplars Ave		Entry	1	1	C	269			269	0.7	0.6	7.923	A
				2	A	0			0	0.0	0.0	0.000	A
		2	1	(A, C)	269			269	0.2	0.1	1.705	A	
C - A50 E		Exit	1	1		423			423	0.0	0.0	0.000	A
				1	A	536			536	0.0	0.0	0.000	A
				2	B	271			270	1.1	0.8	10.887	B
				2	1	(A, B)	808			808	0.4	0.2	0.754
Exit		1	1		704			704	0.0	0.0	0.123	A	

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.2.5947
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Filename: Capesthorpe Road_Poplars Avenue with Mitigation 240118.j9
Report generation date: 30/01/2018 12:05:21

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2025 Do Minimum								
1 - Capesthorpe Road (W)	0.4	4.04	0.30	A	0.5	5.08	0.35	A
2 - Poplars Avenue (N)	0.6	4.38	0.36	A	0.3	3.70	0.24	A
3 - Capesthorpe Road (E)	0.5	3.03	0.32	A	0.7	3.32	0.41	A
4 - Poplars Avenue (S)	0.3	3.73	0.22	A	0.7	6.16	0.41	A
A1 - 2025 Do Something								
1 - Capesthorpe Road (W)	0.5	4.53	0.33	A	0.7	6.71	0.42	A
2 - Poplars Avenue (N)	0.8	5.24	0.46	A	0.7	4.82	0.42	A
3 - Capesthorpe Road (E)	0.6	3.33	0.37	A	1.2	4.54	0.55	A
4 - Poplars Avenue (S)	0.4	4.30	0.30	A	1.4	9.70	0.58	A
A1 - 2030 Do Minimum								
1 - Capesthorpe Road (W)	0.5	4.18	0.32	A	0.6	5.38	0.37	A
2 - Poplars Avenue (N)	0.6	4.63	0.38	A	0.3	3.82	0.26	A
3 - Capesthorpe Road (E)	0.5	3.07	0.33	A	0.9	3.65	0.46	A
4 - Poplars Avenue (S)	0.3	3.84	0.24	A	0.8	6.60	0.43	A
A1 - 2030 Do Something								
1 - Capesthorpe Road (W)	0.6	5.20	0.37	A	0.8	7.21	0.45	A
2 - Poplars Avenue (N)	1.2	6.29	0.54	A	0.7	5.01	0.43	A
3 - Capesthorpe Road (E)	0.9	3.87	0.46	A	1.3	4.61	0.56	A
4 - Poplars Avenue (S)	0.5	4.91	0.34	A	1.4	10.32	0.59	B
A1 - 2030 Through-Route								
1 - Capesthorpe Road (W)	0.6	4.99	0.36	A	0.6	5.74	0.39	A
2 - Poplars Avenue (N)	0.7	5.07	0.42	A	0.3	3.95	0.23	A
3 - Capesthorpe Road (E)	0.8	3.72	0.45	A	0.9	3.71	0.47	A
4 - Poplars Avenue (S)	0.5	4.70	0.33	A	1.3	8.12	0.56	A

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

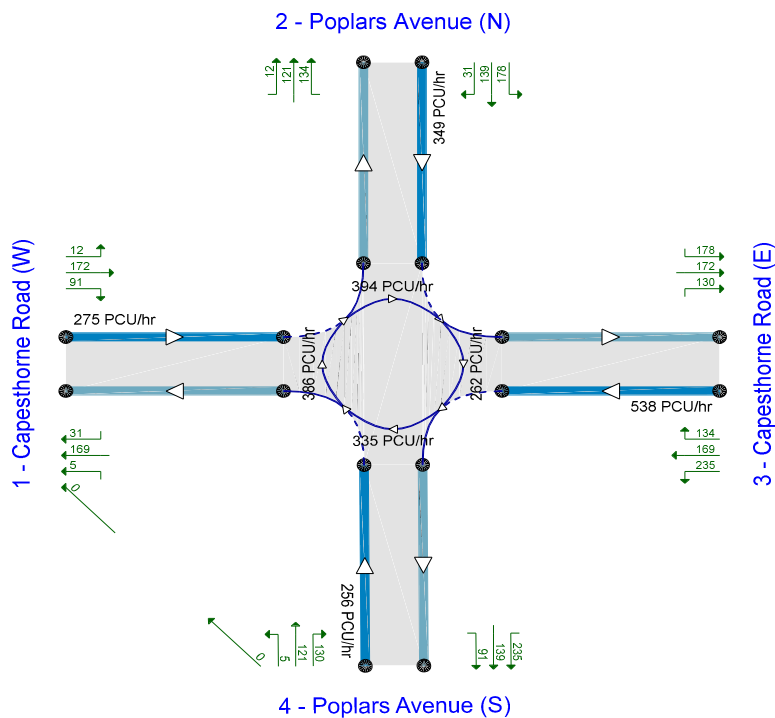
File summary

File Description

Title	(untitled)
Location	
Site number	
Date	12/07/2017
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	
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 modelled flow through junction (PCU/hr).
Time Segment: 08:00-08:15

The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025 Do Minimum	AM	ONE HOUR	08:00	09:30	15
D2	2025 Do Minimum	PM	ONE HOUR	17:00	18:30	15
D3	2025 Do Something	AM	ONE HOUR	08:00	09:30	15
D4	2025 Do Something	PM	ONE HOUR	17:00	18:30	15
D5	2030 Do Minimum	AM	ONE HOUR	08:00	09:30	15
D6	2030 Do Minimum	PM	ONE HOUR	17:00	18:30	15
D7	2030 Do Something	AM	ONE HOUR	08:00	09:30	15
D8	2030 Do Something	PM	ONE HOUR	17:00	18:30	15
D9	2030 Through-Route	AM	ONE HOUR	08:00	09:30	15
D10	2030 Through-Route	PM	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	(Default Analysis Set)	100.000

(Default Analysis Set) - 2025 Do Minimum, AM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Capesthorpe Road/Poplars Avenue RBT	Standard Roundabout	1, 2, 3, 4	3.74	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Capesthorpe Road (W)	Eastbound
2	Poplars Avenue (N)	Southbound
3	Capesthorpe Road (E)	Westbound
4	Poplars Avenue (S)	Northbound

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - Capesthorne Road (W)	3.25	6.40	9.6	17.9	45.7	28.0	
2 - Poplars Avenue (N)	4.17	5.57	10.7	16.1	45.7	25.0	
3 - Capesthorne Road (E)	2.59	7.40	50.0	25.0	45.7	13.0	
4 - Poplars Avenue (S)	3.94	4.93	5.3	11.6	45.7	10.0	

Bypass

Arm	Arm has bypass	Bypass utilisation (%)
1 - Capesthorne Road (W)		
2 - Poplars Avenue (N)		
3 - Capesthorne Road (E)		
4 - Poplars Avenue (S)	✓	0

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Capesthorne Road (W)	0.578	1453
2 - Poplars Avenue (N)	0.602	1570
3 - Capesthorne Road (E)	0.710	2030
4 - Poplars Avenue (S)	0.583	1429

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)
D1	2025 Do Minimum	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Capesthorne Road (W)		✓	346	100.000
2 - Poplars Avenue (N)		✓	413	100.000
3 - Capesthorne Road (E)		✓	518	100.000
4 - Poplars Avenue (S)		✓	247	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Capesthorpe Road (W)	2 - Poplars Avenue (N)	3 - Capesthorpe Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorpe Road (W)	0	10	215	121
	2 - Poplars Avenue (N)	40	0	186	187
	3 - Capesthorpe Road (E)	214	45	0	259
	4 - Poplars Avenue (S)	7	132	108	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Capesthorpe Road (W)	2 - Poplars Avenue (N)	3 - Capesthorpe Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorpe Road (W)	0	0	0	0
	2 - Poplars Avenue (N)	0	0	0	0
	3 - Capesthorpe Road (E)	0	0	0	0
	4 - Poplars Avenue (S)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - Capesthorpe Road (W)	0.30	4.04	0.4	A
2 - Poplars Avenue (N)	0.36	4.38	0.6	A
3 - Capesthorpe Road (E)	0.32	3.03	0.5	A
4 - Poplars Avenue (S)	0.22	3.73	0.3	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	260	0	214	1329	0.196	260	0.2	3.362	A
2 - Poplars Avenue (N)	311	0	333	1370	0.227	310	0.3	3.393	A
3 - Capesthorpe Road (E)	390	0	261	1845	0.211	389	0.3	2.471	A
4 - Poplars Avenue (S)	186	0	224	1298	0.143	185	0.2	3.234	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	311	0	256	1305	0.238	311	0.3	3.622	A
2 - Poplars Avenue (N)	371	0	399	1330	0.279	371	0.4	3.749	A
3 - Capesthorpe Road (E)	466	0	313	1808	0.258	465	0.3	2.680	A
4 - Poplars Avenue (S)	222	0	269	1272	0.175	222	0.2	3.427	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	381	0	313	1271	0.300	380	0.4	4.039	A
2 - Poplars Avenue (N)	455	0	488	1277	0.356	454	0.5	4.373	A
3 - Capesthorpe Road (E)	570	0	383	1759	0.324	570	0.5	3.026	A
4 - Poplars Avenue (S)	272	0	329	1237	0.220	272	0.3	3.729	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	381	0	314	1271	0.300	381	0.4	4.043	A
2 - Poplars Avenue (N)	455	0	489	1276	0.356	455	0.6	4.382	A
3 - Capesthorpe Road (E)	570	0	383	1758	0.324	570	0.5	3.029	A
4 - Poplars Avenue (S)	272	0	329	1237	0.220	272	0.3	3.729	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	311	0	257	1304	0.238	311	0.3	3.626	A
2 - Poplars Avenue (N)	371	0	400	1330	0.279	372	0.4	3.762	A
3 - Capesthorpe Road (E)	466	0	313	1808	0.258	466	0.3	2.685	A
4 - Poplars Avenue (S)	222	0	269	1272	0.175	222	0.2	3.430	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	260	0	215	1329	0.196	261	0.2	3.374	A
2 - Poplars Avenue (N)	311	0	335	1369	0.227	311	0.3	3.406	A
3 - Capesthorpe Road (E)	390	0	262	1844	0.211	390	0.3	2.476	A
4 - Poplars Avenue (S)	186	0	225	1297	0.143	186	0.2	3.239	A

(Default Analysis Set) - 2025 Do Minimum, PM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Capesthorpe Road/Poplars Avenue RBT	Standard Roundabout	1, 2, 3, 4	4.37	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2025 Do Minimum	PM	ONE HOUR	17:00	18:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Capesthorpe Road (W)		✓	349	100.000
2 - Poplars Avenue (N)		✓	273	100.000
3 - Capesthorpe Road (E)		✓	691	100.000
4 - Poplars Avenue (S)		✓	371	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Capesthorpe Road (W)	2 - Poplars Avenue (N)	3 - Capesthorpe Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorpe Road (W)	0	57	222	70
	2 - Poplars Avenue (N)	75	0	106	92
	3 - Capesthorpe Road (E)	356	248	0	87
	4 - Poplars Avenue (S)	53	161	157	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Capesthorne Road (W)	2 - Poplars Avenue (N)	3 - Capesthorne Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorne Road (W)	0	0	0	0
	2 - Poplars Avenue (N)	0	0	0	0
	3 - Capesthorne Road (E)	0	0	0	0
	4 - Poplars Avenue (S)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - Capesthorne Road (W)	0.35	5.08	0.5	A
2 - Poplars Avenue (N)	0.24	3.70	0.3	A
3 - Capesthorne Road (E)	0.41	3.32	0.7	A
4 - Poplars Avenue (S)	0.41	6.16	0.7	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	263	0	424	1207	0.218	262	0.3	3.804	A
2 - Poplars Avenue (N)	206	0	337	1368	0.150	205	0.2	3.094	A
3 - Capesthorne Road (E)	520	0	178	1904	0.273	519	0.4	2.596	A
4 - Poplars Avenue (S)	279	0	510	1132	0.247	278	0.3	4.211	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	314	0	508	1159	0.271	313	0.4	4.255	A
2 - Poplars Avenue (N)	245	0	403	1328	0.185	245	0.2	3.325	A
3 - Capesthorne Road (E)	621	0	213	1879	0.331	621	0.5	2.861	A
4 - Poplars Avenue (S)	334	0	610	1073	0.311	333	0.4	4.860	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	384	0	622	1093	0.351	384	0.5	5.069	A
2 - Poplars Avenue (N)	301	0	493	1273	0.236	300	0.3	3.699	A
3 - Capesthorne Road (E)	761	0	261	1845	0.412	760	0.7	3.316	A
4 - Poplars Avenue (S)	408	0	747	994	0.411	408	0.7	6.133	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	384	0	623	1093	0.352	384	0.5	5.081	A
2 - Poplars Avenue (N)	301	0	494	1273	0.236	301	0.3	3.701	A
3 - Capesthorpe Road (E)	761	0	261	1845	0.412	761	0.7	3.319	A
4 - Poplars Avenue (S)	408	0	748	993	0.411	408	0.7	6.157	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	314	0	510	1158	0.271	314	0.4	4.270	A
2 - Poplars Avenue (N)	245	0	405	1327	0.185	246	0.2	3.330	A
3 - Capesthorpe Road (E)	621	0	213	1879	0.331	622	0.5	2.865	A
4 - Poplars Avenue (S)	334	0	611	1073	0.311	334	0.5	4.883	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	263	0	427	1206	0.218	263	0.3	3.818	A
2 - Poplars Avenue (N)	206	0	339	1367	0.150	206	0.2	3.100	A
3 - Capesthorpe Road (E)	520	0	179	1903	0.273	521	0.4	2.605	A
4 - Poplars Avenue (S)	279	0	512	1131	0.247	280	0.3	4.233	A

(Default Analysis Set) - 2025 Do Something, AM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Capesthorpe Road/Poplars Avenue RBT	Standard Roundabout	1, 2, 3, 4	4.30	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2025 Do Something	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Capesthorne Road (W)		✓	350	100.000
2 - Poplars Avenue (N)		✓	524	100.000
3 - Capesthorne Road (E)		✓	588	100.000
4 - Poplars Avenue (S)		✓	322	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Capesthorne Road (W)	2 - Poplars Avenue (N)	3 - Capesthorne Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorne Road (W)	0	12	217	121
	2 - Poplars Avenue (N)	41	0	257	226
	3 - Capesthorne Road (E)	215	114	0	259
	4 - Poplars Avenue (S)	7	190	125	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Capesthorne Road (W)	2 - Poplars Avenue (N)	3 - Capesthorne Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorne Road (W)	0	0	0	0
	2 - Poplars Avenue (N)	0	0	0	0
	3 - Capesthorne Road (E)	0	0	0	0
	4 - Poplars Avenue (S)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - Capesthorne Road (W)	0.33	4.53	0.5	A
2 - Poplars Avenue (N)	0.46	5.24	0.8	A
3 - Capesthorne Road (E)	0.37	3.33	0.6	A
4 - Poplars Avenue (S)	0.30	4.30	0.4	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	263	0	322	1267	0.208	262	0.3	3.582	A
2 - Poplars Avenue (N)	394	0	347	1361	0.290	393	0.4	3.710	A
3 - Capesthorpe Road (E)	443	0	291	1824	0.243	441	0.3	2.602	A
4 - Poplars Avenue (S)	242	0	278	1267	0.191	241	0.2	3.507	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	315	0	385	1230	0.256	314	0.3	3.931	A
2 - Poplars Avenue (N)	471	0	416	1320	0.357	470	0.6	4.234	A
3 - Capesthorpe Road (E)	529	0	348	1783	0.296	528	0.4	2.869	A
4 - Poplars Avenue (S)	289	0	332	1235	0.234	289	0.3	3.806	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	385	0	472	1180	0.327	385	0.5	4.524	A
2 - Poplars Avenue (N)	577	0	509	1264	0.456	576	0.8	5.222	A
3 - Capesthorpe Road (E)	647	0	426	1728	0.375	647	0.6	3.329	A
4 - Poplars Avenue (S)	355	0	407	1192	0.298	354	0.4	4.297	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	385	0	472	1180	0.327	385	0.5	4.531	A
2 - Poplars Avenue (N)	577	0	510	1264	0.457	577	0.8	5.242	A
3 - Capesthorpe Road (E)	647	0	427	1727	0.375	647	0.6	3.333	A
4 - Poplars Avenue (S)	355	0	407	1191	0.298	355	0.4	4.301	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	315	0	386	1229	0.256	315	0.3	3.941	A
2 - Poplars Avenue (N)	471	0	417	1319	0.357	472	0.6	4.255	A
3 - Capesthorpe Road (E)	529	0	350	1782	0.297	529	0.4	2.876	A
4 - Poplars Avenue (S)	289	0	333	1235	0.234	290	0.3	3.814	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	263	0	323	1266	0.208	264	0.3	3.595	A
2 - Poplars Avenue (N)	394	0	349	1360	0.290	395	0.4	3.730	A
3 - Capesthorpe Road (E)	443	0	293	1823	0.243	443	0.3	2.611	A
4 - Poplars Avenue (S)	242	0	279	1266	0.191	243	0.2	3.520	A

(Default Analysis Set) - 2025 Do Something, PM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Capesthorne Road/Poplars Avenue RBT	Standard Roundabout	1, 2, 3, 4	6.06	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2025 Do Something	PM	ONE HOUR	17:00	18:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Capesthorne Road (W)		✓	353	100.000
2 - Poplars Avenue (N)		✓	486	100.000
3 - Capesthorne Road (E)		✓	875	100.000
4 - Poplars Avenue (S)		✓	465	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Capesthorne Road (W)	2 - Poplars Avenue (N)	3 - Capesthorne Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorne Road (W)	0	58	227	68
	2 - Poplars Avenue (N)	78	0	204	204
	3 - Capesthorne Road (E)	365	408	0	102
	4 - Poplars Avenue (S)	43	281	141	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Capesthorne Road (W)	2 - Poplars Avenue (N)	3 - Capesthorne Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorne Road (W)	0	0	0	0
	2 - Poplars Avenue (N)	0	0	0	0
	3 - Capesthorne Road (E)	0	0	0	0
	4 - Poplars Avenue (S)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - Capesthorne Road (W)	0.42	6.71	0.7	A
2 - Poplars Avenue (N)	0.42	4.82	0.7	A
3 - Capesthorne Road (E)	0.55	4.54	1.2	A
4 - Poplars Avenue (S)	0.58	9.70	1.4	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	266	0	622	1093	0.243	264	0.3	4.338	A
2 - Poplars Avenue (N)	366	0	327	1374	0.266	364	0.4	3.562	A
3 - Capesthorne Road (E)	659	0	262	1844	0.357	657	0.6	3.027	A
4 - Poplars Avenue (S)	350	0	638	1057	0.331	348	0.5	5.066	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	317	0	745	1022	0.310	317	0.4	5.100	A
2 - Poplars Avenue (N)	437	0	391	1335	0.327	436	0.5	4.005	A
3 - Capesthorne Road (E)	787	0	314	1807	0.435	786	0.8	3.521	A
4 - Poplars Avenue (S)	418	0	764	983	0.425	417	0.7	6.346	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	389	0	911	926	0.420	388	0.7	6.667	A
2 - Poplars Avenue (N)	535	0	478	1282	0.417	534	0.7	4.805	A
3 - Capesthorne Road (E)	963	0	385	1757	0.548	962	1.2	4.515	A
4 - Poplars Avenue (S)	512	0	935	884	0.579	510	1.3	9.559	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	389	0	914	925	0.420	389	0.7	6.714	A
2 - Poplars Avenue (N)	535	0	480	1281	0.418	535	0.7	4.822	A
3 - Capesthorne Road (E)	963	0	385	1757	0.548	963	1.2	4.537	A
4 - Poplars Avenue (S)	512	0	937	883	0.580	512	1.4	9.703	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	317	0	749	1020	0.311	318	0.5	5.139	A
2 - Poplars Avenue (N)	437	0	394	1334	0.328	438	0.5	4.022	A
3 - Capesthorne Road (E)	787	0	315	1806	0.435	788	0.8	3.541	A
4 - Poplars Avenue (S)	418	0	767	982	0.426	420	0.8	6.438	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	266	0	626	1091	0.244	266	0.3	4.370	A
2 - Poplars Avenue (N)	366	0	329	1372	0.267	366	0.4	3.579	A
3 - Capesthorne Road (E)	659	0	264	1843	0.357	660	0.6	3.043	A
4 - Poplars Avenue (S)	350	0	642	1055	0.332	351	0.5	5.121	A

(Default Analysis Set) - 2030 Do Minimum, AM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Capesthorne Road/Poplars Avenue RBT	Standard Roundabout	1, 2, 3, 4	3.88	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2030 Do Minimum	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Capesthorne Road (W)		✓	360	100.000
2 - Poplars Avenue (N)		✓	438	100.000
3 - Capesthorne Road (E)		✓	528	100.000
4 - Poplars Avenue (S)		✓	267	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Capesthorne Road (W)	2 - Poplars Avenue (N)	3 - Capesthorne Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorne Road (W)	0	11	223	126
	2 - Poplars Avenue (N)	41	0	208	189
	3 - Capesthorne Road (E)	220	48	0	260
	4 - Poplars Avenue (S)	7	141	119	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Capesthorne Road (W)	2 - Poplars Avenue (N)	3 - Capesthorne Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorne Road (W)	0	0	0	0
	2 - Poplars Avenue (N)	0	0	0	0
	3 - Capesthorne Road (E)	0	0	0	0
	4 - Poplars Avenue (S)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - Capesthorne Road (W)	0.32	4.18	0.5	A
2 - Poplars Avenue (N)	0.38	4.63	0.6	A
3 - Capesthorne Road (E)	0.33	3.07	0.5	A
4 - Poplars Avenue (S)	0.24	3.84	0.3	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	271	0	231	1319	0.205	270	0.3	3.428	A
2 - Poplars Avenue (N)	330	0	351	1359	0.243	328	0.3	3.488	A
3 - Capesthorpe Road (E)	398	0	267	1841	0.216	396	0.3	2.492	A
4 - Poplars Avenue (S)	201	0	232	1294	0.155	200	0.2	3.291	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	324	0	277	1293	0.250	323	0.3	3.713	A
2 - Poplars Avenue (N)	394	0	420	1317	0.299	393	0.4	3.894	A
3 - Capesthorpe Road (E)	475	0	320	1803	0.263	474	0.4	2.709	A
4 - Poplars Avenue (S)	240	0	278	1267	0.189	240	0.2	3.504	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	396	0	339	1257	0.315	396	0.5	4.178	A
2 - Poplars Avenue (N)	482	0	515	1261	0.383	481	0.6	4.615	A
3 - Capesthorpe Road (E)	581	0	391	1752	0.332	581	0.5	3.071	A
4 - Poplars Avenue (S)	294	0	340	1231	0.239	294	0.3	3.841	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	396	0	339	1257	0.315	396	0.5	4.184	A
2 - Poplars Avenue (N)	482	0	515	1260	0.383	482	0.6	4.626	A
3 - Capesthorpe Road (E)	581	0	392	1752	0.332	581	0.5	3.074	A
4 - Poplars Avenue (S)	294	0	340	1230	0.239	294	0.3	3.843	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	324	0	277	1292	0.250	324	0.3	3.721	A
2 - Poplars Avenue (N)	394	0	421	1317	0.299	395	0.4	3.907	A
3 - Capesthorpe Road (E)	475	0	321	1803	0.263	475	0.4	2.712	A
4 - Poplars Avenue (S)	240	0	278	1267	0.190	240	0.2	3.507	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	271	0	232	1319	0.206	271	0.3	3.438	A
2 - Poplars Avenue (N)	330	0	353	1358	0.243	330	0.3	3.502	A
3 - Capesthorpe Road (E)	398	0	268	1840	0.216	398	0.3	2.498	A
4 - Poplars Avenue (S)	201	0	233	1293	0.155	201	0.2	3.299	A

(Default Analysis Set) - 2030 Do Minimum, PM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Capesthorne Road/Poplars Avenue RBT	Standard Roundabout	1, 2, 3, 4	4.64	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2030 Do Minimum	PM	ONE HOUR	17:00	18:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Capesthorne Road (W)		✓	362	100.000
2 - Poplars Avenue (N)		✓	294	100.000
3 - Capesthorne Road (E)		✓	776	100.000
4 - Poplars Avenue (S)		✓	378	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Capesthorne Road (W)	2 - Poplars Avenue (N)	3 - Capesthorne Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorne Road (W)	0	59	231	72
	2 - Poplars Avenue (N)	77	0	122	95
	3 - Capesthorne Road (E)	369	282	0	125
	4 - Poplars Avenue (S)	54	166	158	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Capesthorne Road (W)	2 - Poplars Avenue (N)	3 - Capesthorne Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorne Road (W)	0	0	0	0
	2 - Poplars Avenue (N)	0	0	0	0
	3 - Capesthorne Road (E)	0	0	0	0
	4 - Poplars Avenue (S)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - Capesthorne Road (W)	0.37	5.38	0.6	A
2 - Poplars Avenue (N)	0.26	3.82	0.3	A
3 - Capesthorne Road (E)	0.46	3.65	0.9	A
4 - Poplars Avenue (S)	0.43	6.60	0.8	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	273	0	454	1190	0.229	271	0.3	3.914	A
2 - Poplars Avenue (N)	221	0	346	1362	0.162	221	0.2	3.151	A
3 - Capesthorne Road (E)	584	0	183	1900	0.307	582	0.4	2.728	A
4 - Poplars Avenue (S)	285	0	546	1110	0.256	283	0.3	4.345	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	325	0	544	1138	0.286	325	0.4	4.425	A
2 - Poplars Avenue (N)	264	0	414	1321	0.200	264	0.2	3.405	A
3 - Capesthorne Road (E)	698	0	219	1875	0.372	697	0.6	3.055	A
4 - Poplars Avenue (S)	340	0	654	1048	0.324	339	0.5	5.079	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	399	0	666	1068	0.373	398	0.6	5.367	A
2 - Poplars Avenue (N)	324	0	506	1266	0.256	323	0.3	3.818	A
3 - Capesthorne Road (E)	854	0	268	1840	0.464	853	0.9	3.646	A
4 - Poplars Avenue (S)	416	0	801	962	0.433	415	0.8	6.566	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	399	0	667	1067	0.373	399	0.6	5.383	A
2 - Poplars Avenue (N)	324	0	508	1265	0.256	324	0.3	3.823	A
3 - Capesthorpe Road (E)	854	0	269	1840	0.464	854	0.9	3.653	A
4 - Poplars Avenue (S)	416	0	802	962	0.433	416	0.8	6.599	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	325	0	546	1137	0.286	326	0.4	4.443	A
2 - Poplars Avenue (N)	264	0	416	1320	0.200	265	0.3	3.413	A
3 - Capesthorpe Road (E)	698	0	220	1874	0.372	699	0.6	3.064	A
4 - Poplars Avenue (S)	340	0	655	1047	0.325	341	0.5	5.107	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	273	0	457	1189	0.229	273	0.3	3.934	A
2 - Poplars Avenue (N)	221	0	348	1361	0.163	222	0.2	3.158	A
3 - Capesthorpe Road (E)	584	0	184	1900	0.308	585	0.4	2.740	A
4 - Poplars Avenue (S)	285	0	549	1109	0.257	285	0.3	4.372	A

(Default Analysis Set) - 2030 Do Something, AM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Capesthorpe Road/Poplars Avenue RBT	Standard Roundabout	1, 2, 3, 4	5.00	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2030 Do Something	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Capesthorpe Road (W)		✓	366	100.000
2 - Poplars Avenue (N)		✓	605	100.000
3 - Capesthorpe Road (E)		✓	723	100.000
4 - Poplars Avenue (S)		✓	345	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Capesthorpe Road (W)	2 - Poplars Avenue (N)	3 - Capesthorpe Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorpe Road (W)	0	17	227	122
	2 - Poplars Avenue (N)	43	0	338	224
	3 - Capesthorpe Road (E)	226	224	0	273
	4 - Poplars Avenue (S)	7	186	152	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Capesthorpe Road (W)	2 - Poplars Avenue (N)	3 - Capesthorpe Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorpe Road (W)	0	0	0	0
	2 - Poplars Avenue (N)	0	0	0	0
	3 - Capesthorpe Road (E)	0	0	0	0
	4 - Poplars Avenue (S)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - Capesthorpe Road (W)	0.37	5.20	0.6	A
2 - Poplars Avenue (N)	0.54	6.29	1.2	A
3 - Capesthorpe Road (E)	0.46	3.87	0.9	A
4 - Poplars Avenue (S)	0.34	4.91	0.5	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	276	0	422	1209	0.228	274	0.3	3.847	A
2 - Poplars Avenue (N)	455	0	376	1344	0.339	453	0.5	4.032	A
3 - Capesthorpe Road (E)	544	0	292	1823	0.299	543	0.4	2.807	A
4 - Poplars Avenue (S)	260	0	370	1213	0.214	259	0.3	3.769	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	329	0	505	1161	0.283	329	0.4	4.323	A
2 - Poplars Avenue (N)	544	0	450	1300	0.418	543	0.7	4.753	A
3 - Capesthorpe Road (E)	650	0	349	1782	0.365	649	0.6	3.175	A
4 - Poplars Avenue (S)	310	0	443	1171	0.265	310	0.4	4.179	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	403	0	618	1096	0.368	402	0.6	5.186	A
2 - Poplars Avenue (N)	666	0	551	1239	0.538	664	1.1	6.246	A
3 - Capesthorpe Road (E)	796	0	427	1727	0.461	795	0.8	3.858	A
4 - Poplars Avenue (S)	380	0	542	1113	0.341	379	0.5	4.903	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	403	0	619	1095	0.368	403	0.6	5.200	A
2 - Poplars Avenue (N)	666	0	552	1238	0.538	666	1.2	6.289	A
3 - Capesthorpe Road (E)	796	0	428	1726	0.461	796	0.9	3.870	A
4 - Poplars Avenue (S)	380	0	543	1112	0.341	380	0.5	4.913	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	329	0	506	1160	0.284	330	0.4	4.340	A
2 - Poplars Avenue (N)	544	0	451	1299	0.419	546	0.7	4.792	A
3 - Capesthorpe Road (E)	650	0	351	1781	0.365	651	0.6	3.187	A
4 - Poplars Avenue (S)	310	0	444	1170	0.265	311	0.4	4.192	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	276	0	424	1208	0.228	276	0.3	3.864	A
2 - Poplars Avenue (N)	455	0	378	1343	0.339	456	0.5	4.065	A
3 - Capesthorpe Road (E)	544	0	293	1822	0.299	545	0.4	2.821	A
4 - Poplars Avenue (S)	260	0	372	1212	0.214	260	0.3	3.781	A

(Default Analysis Set) - 2030 Do Something, PM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Capesthorne Road/Poplars Avenue RBT	Standard Roundabout	1, 2, 3, 4	6.28	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2030 Do Something	PM	ONE HOUR	17:00	18:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Capesthorne Road (W)		✓	370	100.000
2 - Poplars Avenue (N)		✓	490	100.000
3 - Capesthorne Road (E)		✓	919	100.000
4 - Poplars Avenue (S)		✓	449	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Capesthorne Road (W)	2 - Poplars Avenue (N)	3 - Capesthorne Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorne Road (W)	0	61	238	71
	2 - Poplars Avenue (N)	80	0	258	152
	3 - Capesthorne Road (E)	370	463	0	86
	4 - Poplars Avenue (S)	53	233	163	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Capesthorne Road (W)	2 - Poplars Avenue (N)	3 - Capesthorne Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorne Road (W)	0	0	0	0
	2 - Poplars Avenue (N)	0	0	0	0
	3 - Capesthorne Road (E)	0	0	0	0
	4 - Poplars Avenue (S)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - Capesthorne Road (W)	0.45	7.21	0.8	A
2 - Poplars Avenue (N)	0.43	5.01	0.7	A
3 - Capesthorne Road (E)	0.56	4.61	1.3	A
4 - Poplars Avenue (S)	0.59	10.32	1.4	B

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	279	0	644	1081	0.258	277	0.3	4.473	A
2 - Poplars Avenue (N)	369	0	353	1358	0.272	367	0.4	3.631	A
3 - Capesthorne Road (E)	692	0	227	1869	0.370	690	0.6	3.045	A
4 - Poplars Avenue (S)	338	0	685	1030	0.328	336	0.5	5.176	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	333	0	771	1007	0.330	332	0.5	5.327	A
2 - Poplars Avenue (N)	440	0	423	1316	0.335	440	0.5	4.109	A
3 - Capesthorne Road (E)	826	0	272	1837	0.450	825	0.8	3.554	A
4 - Poplars Avenue (S)	404	0	820	951	0.424	403	0.7	6.553	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	407	0	943	908	0.449	406	0.8	7.154	A
2 - Poplars Avenue (N)	540	0	518	1259	0.429	539	0.7	4.992	A
3 - Capesthorne Road (E)	1012	0	333	1794	0.564	1010	1.3	4.581	A
4 - Poplars Avenue (S)	494	0	1003	844	0.586	492	1.4	10.144	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	407	0	946	906	0.450	407	0.8	7.214	A
2 - Poplars Avenue (N)	540	0	520	1258	0.429	539	0.7	5.012	A
3 - Capesthorpe Road (E)	1012	0	334	1793	0.564	1012	1.3	4.605	A
4 - Poplars Avenue (S)	494	0	1005	843	0.586	494	1.4	10.318	B

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	333	0	775	1005	0.331	334	0.5	5.378	A
2 - Poplars Avenue (N)	440	0	426	1314	0.335	441	0.5	4.130	A
3 - Capesthorpe Road (E)	826	0	273	1836	0.450	828	0.8	3.578	A
4 - Poplars Avenue (S)	404	0	823	949	0.425	406	0.7	6.658	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	279	0	648	1078	0.258	279	0.4	4.508	A
2 - Poplars Avenue (N)	369	0	356	1356	0.272	369	0.4	3.652	A
3 - Capesthorpe Road (E)	692	0	228	1868	0.370	693	0.6	3.067	A
4 - Poplars Avenue (S)	338	0	688	1028	0.329	339	0.5	5.237	A

(Default Analysis Set) - 2030 Through-Route, AM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Capesthorpe Road/Poplars Avenue RBT	Standard Roundabout	1, 2, 3, 4	4.48	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2030 Through-Route	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Capesthorne Road (W)		✓	367	100.000
2 - Poplars Avenue (N)		✓	466	100.000
3 - Capesthorne Road (E)		✓	717	100.000
4 - Poplars Avenue (S)		✓	342	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Capesthorne Road (W)	2 - Poplars Avenue (N)	3 - Capesthorne Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorne Road (W)	0	16	229	122
	2 - Poplars Avenue (N)	42	0	238	186
	3 - Capesthorne Road (E)	225	179	0	313
	4 - Poplars Avenue (S)	7	161	174	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Capesthorne Road (W)	2 - Poplars Avenue (N)	3 - Capesthorne Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorne Road (W)	0	0	0	0
	2 - Poplars Avenue (N)	0	0	0	0
	3 - Capesthorne Road (E)	0	0	0	0
	4 - Poplars Avenue (S)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - Capesthorne Road (W)	0.36	4.99	0.6	A
2 - Poplars Avenue (N)	0.42	5.07	0.7	A
3 - Capesthorne Road (E)	0.45	3.72	0.8	A
4 - Poplars Avenue (S)	0.33	4.70	0.5	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	276	0	386	1230	0.225	275	0.3	3.765	A
2 - Poplars Avenue (N)	351	0	394	1333	0.263	349	0.4	3.654	A
3 - Capesthorpe Road (E)	540	0	262	1844	0.293	538	0.4	2.753	A
4 - Poplars Avenue (S)	257	0	335	1234	0.209	256	0.3	3.681	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	330	0	462	1186	0.278	330	0.4	4.202	A
2 - Poplars Avenue (N)	419	0	471	1287	0.326	418	0.5	4.145	A
3 - Capesthorpe Road (E)	645	0	314	1807	0.357	644	0.6	3.093	A
4 - Poplars Avenue (S)	307	0	401	1195	0.257	307	0.3	4.052	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	404	0	565	1126	0.359	403	0.6	4.977	A
2 - Poplars Avenue (N)	513	0	577	1223	0.420	512	0.7	5.058	A
3 - Capesthorpe Road (E)	789	0	385	1757	0.449	788	0.8	3.713	A
4 - Poplars Avenue (S)	377	0	490	1143	0.329	376	0.5	4.691	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	404	0	566	1126	0.359	404	0.6	4.988	A
2 - Poplars Avenue (N)	513	0	578	1223	0.420	513	0.7	5.073	A
3 - Capesthorpe Road (E)	789	0	385	1757	0.449	789	0.8	3.720	A
4 - Poplars Avenue (S)	377	0	491	1143	0.330	377	0.5	4.699	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	330	0	463	1185	0.278	331	0.4	4.215	A
2 - Poplars Avenue (N)	419	0	473	1286	0.326	420	0.5	4.163	A
3 - Capesthorpe Road (E)	645	0	315	1806	0.357	646	0.6	3.105	A
4 - Poplars Avenue (S)	307	0	402	1195	0.257	308	0.3	4.064	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	276	0	387	1229	0.225	277	0.3	3.781	A
2 - Poplars Avenue (N)	351	0	396	1332	0.263	351	0.4	3.671	A
3 - Capesthorpe Road (E)	540	0	264	1843	0.293	540	0.4	2.766	A
4 - Poplars Avenue (S)	257	0	336	1233	0.209	258	0.3	3.695	A

(Default Analysis Set) - 2030 Through-Route, PM

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Capesthorne Road/Poplars Avenue RBT	Standard Roundabout	1, 2, 3, 4	5.33	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D10	2030 Through-Route	PM	ONE HOUR	17:00	18:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Capesthorne Road (W)		✓	370	100.000
2 - Poplars Avenue (N)		✓	252	100.000
3 - Capesthorne Road (E)		✓	773	100.000
4 - Poplars Avenue (S)		✓	520	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Capesthorne Road (W)	2 - Poplars Avenue (N)	3 - Capesthorne Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorne Road (W)	0	60	238	72
	2 - Poplars Avenue (N)	79	0	57	116
	3 - Capesthorne Road (E)	373	192	0	208
	4 - Poplars Avenue (S)	54	200	266	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Capesthorne Road (W)	2 - Poplars Avenue (N)	3 - Capesthorne Road (E)	4 - Poplars Avenue (S)
From	1 - Capesthorne Road (W)	0	0	0	0
	2 - Poplars Avenue (N)	0	0	0	0
	3 - Capesthorne Road (E)	0	0	0	0
	4 - Poplars Avenue (S)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1 - Capesthorne Road (W)	0.39	5.74	0.6	A
2 - Poplars Avenue (N)	0.23	3.95	0.3	A
3 - Capesthorne Road (E)	0.47	3.71	0.9	A
4 - Poplars Avenue (S)	0.56	8.12	1.3	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	279	0	493	1168	0.239	277	0.3	4.037	A
2 - Poplars Avenue (N)	190	0	432	1311	0.145	189	0.2	3.208	A
3 - Capesthorne Road (E)	582	0	200	1888	0.308	580	0.4	2.749	A
4 - Poplars Avenue (S)	391	0	483	1147	0.341	389	0.5	4.739	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	333	0	591	1111	0.299	332	0.4	4.618	A
2 - Poplars Avenue (N)	227	0	517	1259	0.180	226	0.2	3.485	A
3 - Capesthorne Road (E)	695	0	240	1860	0.374	694	0.6	3.086	A
4 - Poplars Avenue (S)	467	0	578	1092	0.428	467	0.7	5.751	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorne Road (W)	407	0	722	1035	0.393	407	0.6	5.716	A
2 - Poplars Avenue (N)	277	0	632	1190	0.233	277	0.3	3.944	A
3 - Capesthorne Road (E)	851	0	294	1822	0.467	850	0.9	3.701	A
4 - Poplars Avenue (S)	573	0	708	1016	0.563	570	1.3	8.040	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	407	0	724	1034	0.394	407	0.6	5.743	A
2 - Poplars Avenue (N)	277	0	634	1189	0.233	277	0.3	3.950	A
3 - Capesthorpe Road (E)	851	0	294	1822	0.467	851	0.9	3.708	A
4 - Poplars Avenue (S)	573	0	709	1016	0.564	572	1.3	8.122	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	333	0	594	1110	0.300	333	0.4	4.644	A
2 - Poplars Avenue (N)	227	0	520	1258	0.180	227	0.2	3.492	A
3 - Capesthorpe Road (E)	695	0	240	1860	0.374	696	0.6	3.096	A
4 - Poplars Avenue (S)	467	0	580	1091	0.429	470	0.8	5.815	A

18:15 - 18:30

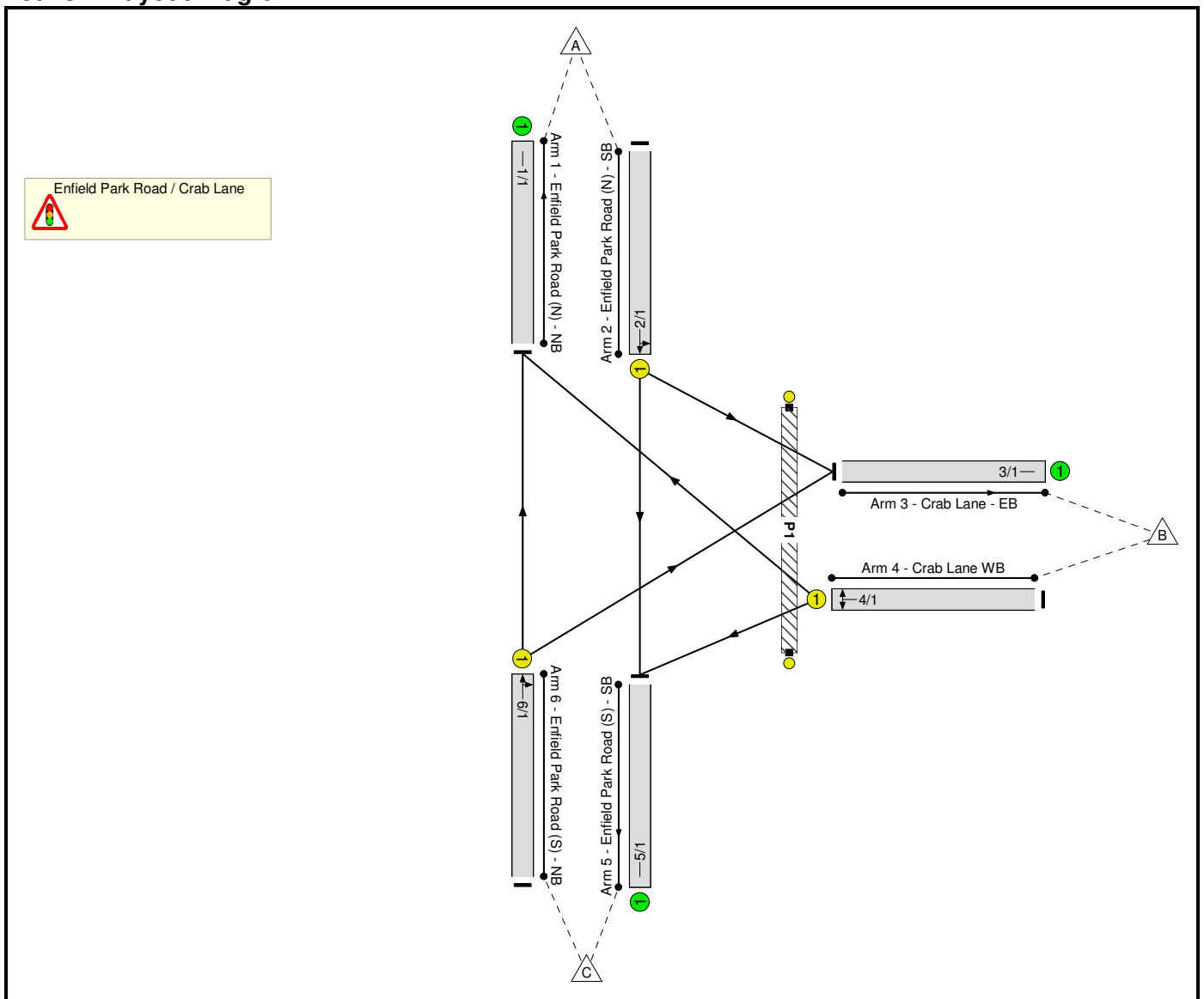
Arm	Total Demand (PCU/hr)	Bypass demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1 - Capesthorpe Road (W)	279	0	496	1166	0.239	279	0.3	4.061	A
2 - Poplars Avenue (N)	190	0	435	1309	0.145	190	0.2	3.219	A
3 - Capesthorpe Road (E)	582	0	201	1887	0.308	583	0.4	2.761	A
4 - Poplars Avenue (S)	391	0	485	1146	0.342	392	0.5	4.785	A

Full Input Data And Results
Full Input Data And Results

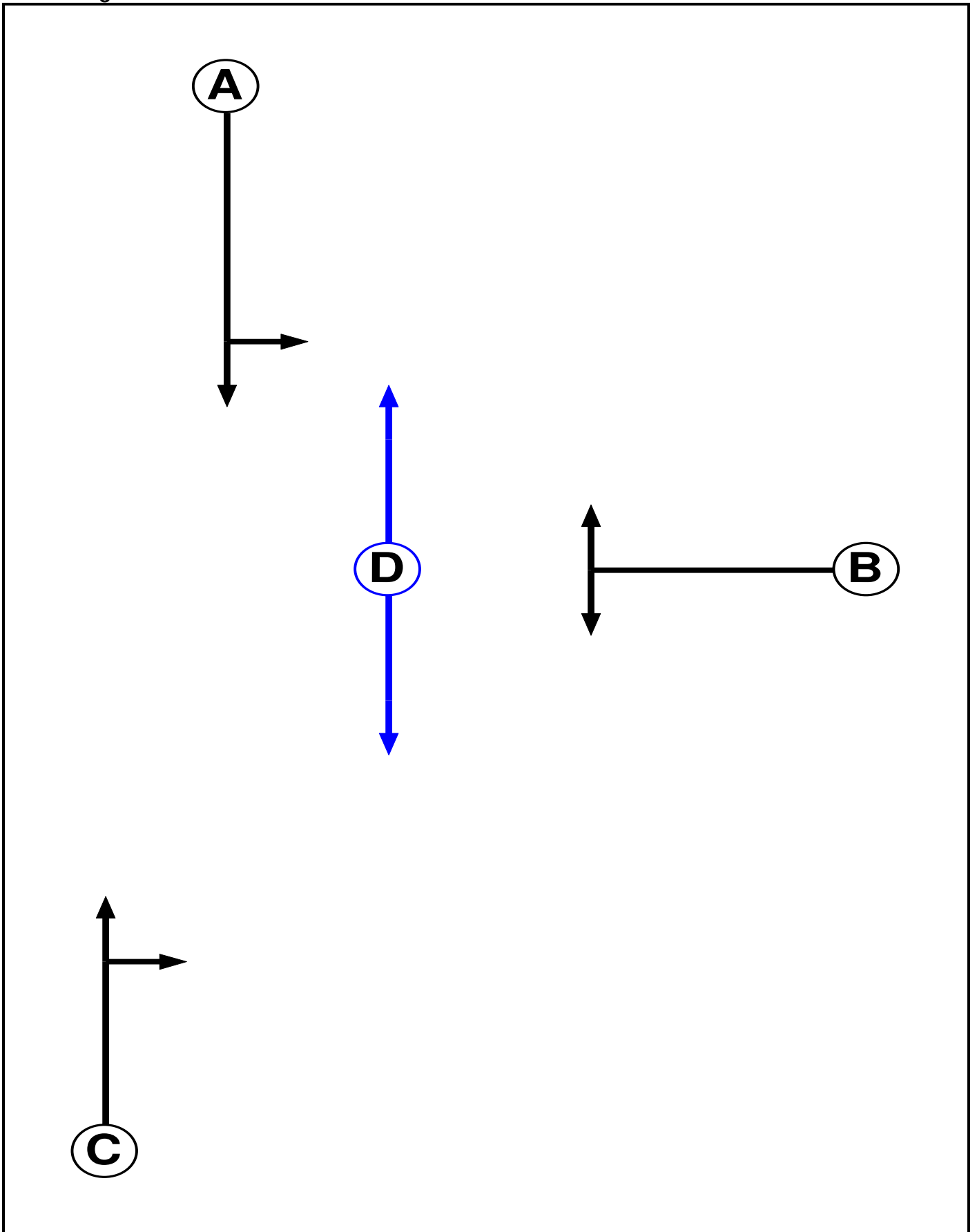
User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	Enfield Park Road . Crab Lane.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Pedestrian		7	7

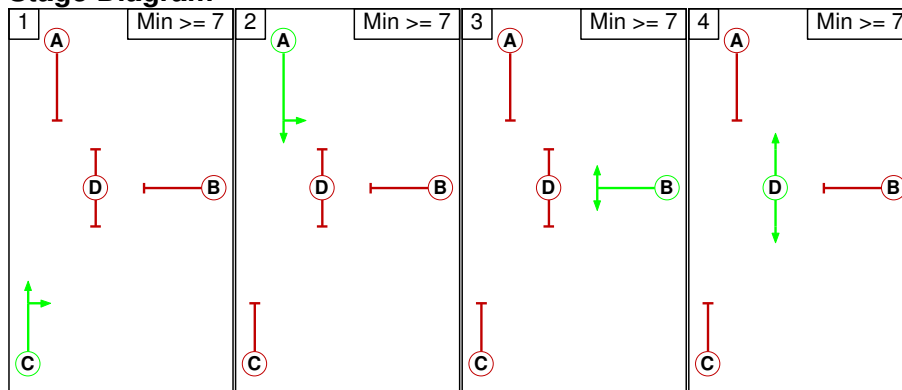
Phase Intergreens Matrix

		Starting Phase			
		A	B	C	D
Terminating Phase	A		6	6	6
	B	6		6	6
	C	6	6		6
	D	6	6	6	

Phases in Stage

Stage No.	Phases in Stage
1	C
2	A
3	B
4	D

Stage Diagram



Phase Delays

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

Prohibited Stage Change

		To Stage			
		1	2	3	4
From Stage	1		6	6	6
	2	6		6	6
	3	6	6		6
	4	6	6	6	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Enfield Park Road / Crab Lane

There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: Enfield Park Road / Crab Lane												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Enfield Park Road (N) - NB)	U		2	3	60.0	Inf	-	-	-	-	-	-
2/1 (Enfield Park Road (N) - SB)	U	A	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 3 Left	20.00
											Arm 5 Ahead	Inf
3/1 (Crab Lane - EB)	U		2	3	60.0	Inf	-	-	-	-	-	-
4/1 (Crab Lane WB)	U	B	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 1 Right	12.00
											Arm 5 Left	8.00
5/1 (Enfield Park Road (S) - SB)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Enfield Park Road (S) - NB)	U	C	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 1 Ahead	Inf
											Arm 3 Right	25.00

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'MCC Base Traffic Flows AM'	08:00	09:00	01:00	
2: 'MCC Base Traffic Flows PM'	17:00	18:00	01:00	
3: '2025 Do Something AM'	08:00	09:00	01:00	
4: '2025 Do Something PM'	17:00	18:00	01:00	
5: '2030 Do Something AM'	08:00	09:00	01:00	
6: '2030 Do Something PM'	17:00	18:00	01:00	
7: '2030 Do Something Through Route AM'	08:00	09:00	01:00	
8: '2030 Do Something Through Route PM'	17:00	18:00	01:00	

Full Input Data And Results

Scenario 1: 'Base Scenario AM' (FG1: 'MCC Base Traffic Flows AM', Plan 1: 'Ped every cycle')

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	286	13	299
	B	58	0	202	260
	C	48	437	0	485
	Tot.	106	723	215	1044

Traffic Lane Flows

Lane	Scenario 1: Base Scenario AM
Junction: Enfield Park Road / Crab Lane	
1/1	106
2/1	299
3/1	723
4/1	260
5/1	215
6/1	485

Lane Saturation Flows

Junction: Enfield Park Road / Crab Lane								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Enfield Park Road (N) - NB Lane 1)	Infinite Saturation Flow						Inf	Inf
2/1 (Enfield Park Road (N) - SB)	3.25	0.00	Y	Arm 3 Left	20.00	95.7 %	1810	1810
				Arm 5 Ahead	Inf	4.3 %		
3/1 (Crab Lane - EB Lane 1)	Infinite Saturation Flow						Inf	Inf
4/1 (Crab Lane WB)	3.25	0.00	Y	Arm 1 Right	12.00	22.3 %	1653	1653
				Arm 5 Left	8.00	77.7 %		
5/1 (Enfield Park Road (S) - SB Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Enfield Park Road (S) - NB)	3.25	0.00	Y	Arm 1 Ahead	Inf	9.9 %	1840	1840
				Arm 3 Right	25.00	90.1 %		

Full Input Data And Results

Scenario 2: 'Base Scenario PM' (FG2: 'MCC Base Traffic Flows PM', Plan 1: 'Ped every cycle')

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	84	28	112
	B	186	0	361	547
	C	33	179	0	212
	Tot.	219	263	389	871

Traffic Lane Flows

Lane	Scenario 2: Base Scenario PM
Junction: Enfield Park Road / Crab Lane	
1/1	219
2/1	112
3/1	263
4/1	547
5/1	389
6/1	212

Lane Saturation Flows

Junction: Enfield Park Road / Crab Lane								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Enfield Park Road (N) - NB Lane 1)	Infinite Saturation Flow						Inf	Inf
2/1 (Enfield Park Road (N) - SB)	3.25	0.00	Y	Arm 3 Left	20.00	75.0 %	1837	1837
				Arm 5 Ahead	Inf	25.0 %		
3/1 (Crab Lane - EB Lane 1)	Infinite Saturation Flow						Inf	Inf
4/1 (Crab Lane WB)	3.25	0.00	Y	Arm 1 Right	12.00	34.0 %	1663	1663
				Arm 5 Left	8.00	66.0 %		
5/1 (Enfield Park Road (S) - SB Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Enfield Park Road (S) - NB)	3.25	0.00	Y	Arm 1 Ahead	Inf	15.6 %	1846	1846
				Arm 3 Right	25.00	84.4 %		

Full Input Data And Results

Scenario 3: '2025 Do Something AM' (FG3: '2025 Do Something AM', Plan 1: 'Ped every cycle')

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	286	14	300
	B	54	0	200	254
	C	47	531	0	578
	Tot.	101	817	214	1132

Traffic Lane Flows

Lane	Scenario 3: 2025 Do Something AM
Junction: Enfield Park Road / Crab Lane	
1/1	101
2/1	300
3/1	817
4/1	254
5/1	214
6/1	578

Lane Saturation Flows

Junction: Enfield Park Road / Crab Lane								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Enfield Park Road (N) - NB Lane 1)	Infinite Saturation Flow						Inf	Inf
2/1 (Enfield Park Road (N) - SB)	3.25	0.00	Y	Arm 3 Left	20.00	95.3 %	1811	1811
				Arm 5 Ahead	Inf	4.7 %		
3/1 (Crab Lane - EB Lane 1)	Infinite Saturation Flow						Inf	Inf
4/1 (Crab Lane WB)	3.25	0.00	Y	Arm 1 Right	12.00	21.3 %	1652	1652
				Arm 5 Left	8.00	78.7 %		
5/1 (Enfield Park Road (S) - SB Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Enfield Park Road (S) - NB)	3.25	0.00	Y	Arm 1 Ahead	Inf	8.1 %	1839	1839
				Arm 3 Right	25.00	91.9 %		

Full Input Data And Results

Scenario 4: '2025 Do Something PM' (FG4: '2025 Do Something PM', Plan 1: 'Ped every cycle')

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	84	28	112
	B	155	0	379	534
	C	33	233	0	266
	Tot.	188	317	407	912

Traffic Lane Flows

Lane	Scenario 4: 2025 Do Something PM
Junction: Enfield Park Road / Crab Lane	
1/1	188
2/1	112
3/1	317
4/1	534
5/1	407
6/1	266

Lane Saturation Flows

Junction: Enfield Park Road / Crab Lane								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Enfield Park Road (N) - NB Lane 1)	Infinite Saturation Flow						Inf	Inf
2/1 (Enfield Park Road (N) - SB)	3.25	0.00	Y	Arm 3 Left	20.00	75.0 %	1837	1837
				Arm 5 Ahead	Inf	25.0 %		
3/1 (Crab Lane - EB Lane 1)	Infinite Saturation Flow						Inf	Inf
4/1 (Crab Lane WB)	3.25	0.00	Y	Arm 1 Right	12.00	29.0 %	1659	1659
				Arm 5 Left	8.00	71.0 %		
5/1 (Enfield Park Road (S) - SB Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Enfield Park Road (S) - NB)	3.25	0.00	Y	Arm 1 Ahead	Inf	12.4 %	1843	1843
				Arm 3 Right	25.00	87.6 %		

Full Input Data And Results

Scenario 5: '2030 Do Something AM' (FG5: '2030 Do Something AM', Plan 1: 'Ped every cycle')

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	286	15	301
	B	51	0	158	209
	C	47	597	0	644
	Tot.	98	883	173	1154

Traffic Lane Flows

Lane	Scenario 5: 2030 Do Something AM
Junction: Enfield Park Road / Crab Lane	
1/1	98
2/1	301
3/1	883
4/1	209
5/1	173
6/1	644

Lane Saturation Flows

Junction: Enfield Park Road / Crab Lane								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Enfield Park Road (N) - NB Lane 1)	Infinite Saturation Flow						Inf	Inf
2/1 (Enfield Park Road (N) - SB)	3.25	0.00	Y	Arm 3 Left	20.00	95.0 %	1811	1811
				Arm 5 Ahead	Inf	5.0 %		
3/1 (Crab Lane - EB Lane 1)	Infinite Saturation Flow						Inf	Inf
4/1 (Crab Lane WB)	3.25	0.00	Y	Arm 1 Right	12.00	24.4 %	1655	1655
				Arm 5 Left	8.00	75.6 %		
5/1 (Enfield Park Road (S) - SB Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Enfield Park Road (S) - NB)	3.25	0.00	Y	Arm 1 Ahead	Inf	7.3 %	1838	1838
				Arm 3 Right	25.00	92.7 %		

Full Input Data And Results

Scenario 6: '2030 Do Something PM' (FG6: '2030 Do Something PM', Plan 1: 'Ped every cycle')

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	84	28	112
	B	153	0	374	527
	C	33	242	0	275
	Tot.	186	326	402	914

Traffic Lane Flows

Lane	Scenario 6: 2030 Do Something PM
Junction: Enfield Park Road / Crab Lane	
1/1	186
2/1	112
3/1	326
4/1	527
5/1	402
6/1	275

Lane Saturation Flows

Junction: Enfield Park Road / Crab Lane								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Enfield Park Road (N) - NB Lane 1)	Infinite Saturation Flow						Inf	Inf
2/1 (Enfield Park Road (N) - SB)	3.25	0.00	Y	Arm 3 Left	20.00	75.0 %	1837	1837
				Arm 5 Ahead	Inf	25.0 %		
3/1 (Crab Lane - EB Lane 1)	Infinite Saturation Flow						Inf	Inf
4/1 (Crab Lane WB)	3.25	0.00	Y	Arm 1 Right	12.00	29.0 %	1659	1659
				Arm 5 Left	8.00	71.0 %		
5/1 (Enfield Park Road (S) - SB Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Enfield Park Road (S) - NB)	3.25	0.00	Y	Arm 1 Ahead	Inf	12.0 %	1843	1843
				Arm 3 Right	25.00	88.0 %		

Full Input Data And Results

Scenario 7: '2030 Do Something Through Route AM' (FG7: '2030 Do Something Through Route AM', Plan 1: 'Ped every cycle')

Desired Flow :

	Destination				
	A	B	C	Tot.	
Origin	A	0	286	14	300
	B	51	0	170	221
	C	46	612	0	658
	Tot.	97	898	184	1179

Traffic Lane Flows

Lane	Scenario 7: 2030 Do Something Through Route AM
Junction: Enfield Park Road / Crab Lane	
1/1	97
2/1	300
3/1	898
4/1	221
5/1	184
6/1	658

Lane Saturation Flows

Junction: Enfield Park Road / Crab Lane								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Enfield Park Road (N) - NB Lane 1)	Infinite Saturation Flow						Inf	Inf
2/1 (Enfield Park Road (N) - SB)	3.25	0.00	Y	Arm 3 Left	20.00	95.3 %	1811	1811
				Arm 5 Ahead	Inf	4.7 %		
3/1 (Crab Lane - EB Lane 1)	Infinite Saturation Flow						Inf	Inf
4/1 (Crab Lane WB)	3.25	0.00	Y	Arm 1 Right	12.00	23.1 %	1654	1654
				Arm 5 Left	8.00	76.9 %		
5/1 (Enfield Park Road (S) - SB Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Enfield Park Road (S) - NB)	3.25	0.00	Y	Arm 1 Ahead	Inf	7.0 %	1837	1837
				Arm 3 Right	25.00	93.0 %		

Full Input Data And Results

Scenario 8: '2030 Do Something Through Route PM' (FG8: '2030 Do Something Through Route PM', Plan 1: 'Ped every cycle')

Desired Flow :

	Destination				
	A	B	C	Tot.	
Origin	A	0	84	28	112
	B	155	0	361	516
	C	33	265	0	298
	Tot.	188	349	389	926

Traffic Lane Flows

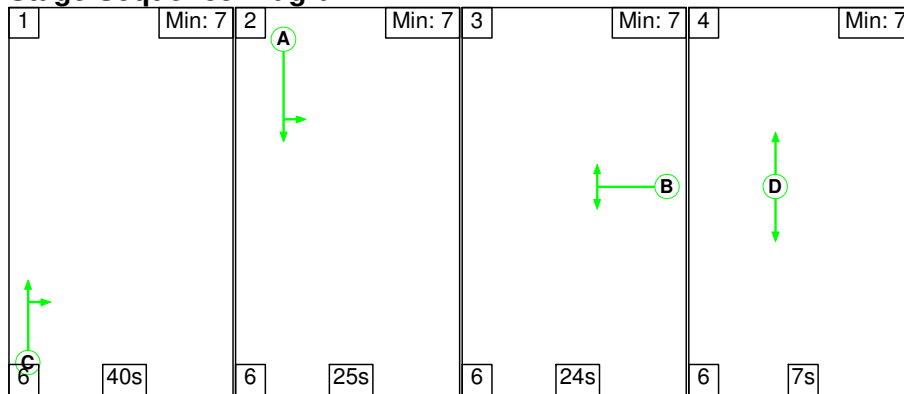
Lane	Scenario 8: 2030 Do Something Through Route PM
Junction: Enfield Park Road / Crab Lane	
1/1	188
2/1	112
3/1	349
4/1	516
5/1	389
6/1	298

Lane Saturation Flows

Junction: Enfield Park Road / Crab Lane								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Enfield Park Road (N) - NB Lane 1)	Infinite Saturation Flow						Inf	Inf
2/1 (Enfield Park Road (N) - SB)	3.25	0.00	Y	Arm 3 Left	20.00	75.0 %	1837	1837
				Arm 5 Ahead	Inf	25.0 %		
3/1 (Crab Lane - EB Lane 1)	Infinite Saturation Flow						Inf	Inf
4/1 (Crab Lane WB)	3.25	0.00	Y	Arm 1 Right	12.00	30.0 %	1660	1660
				Arm 5 Left	8.00	70.0 %		
5/1 (Enfield Park Road (S) - SB Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Enfield Park Road (S) - NB)	3.25	0.00	Y	Arm 1 Ahead	Inf	11.1 %	1842	1842
				Arm 3 Right	25.00	88.9 %		

Scenario 1: 'Base Scenario AM' (FG1: 'MCC Base Traffic Flows AM', Plan 1: 'Ped every cycle')

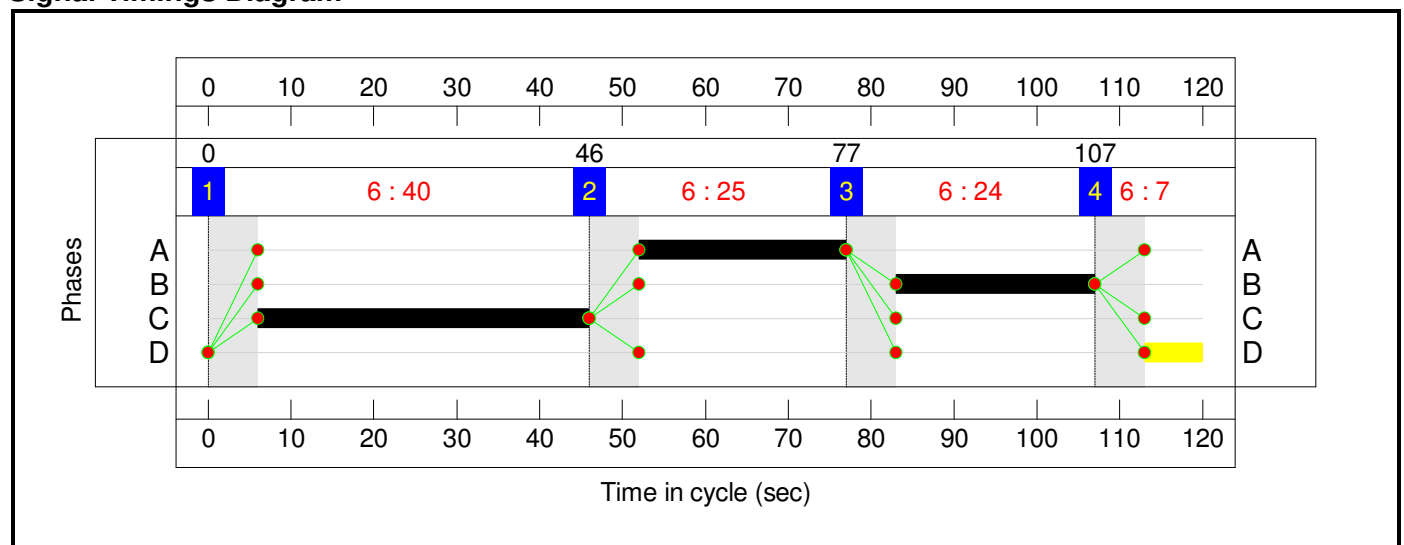
Stage Sequence Diagram



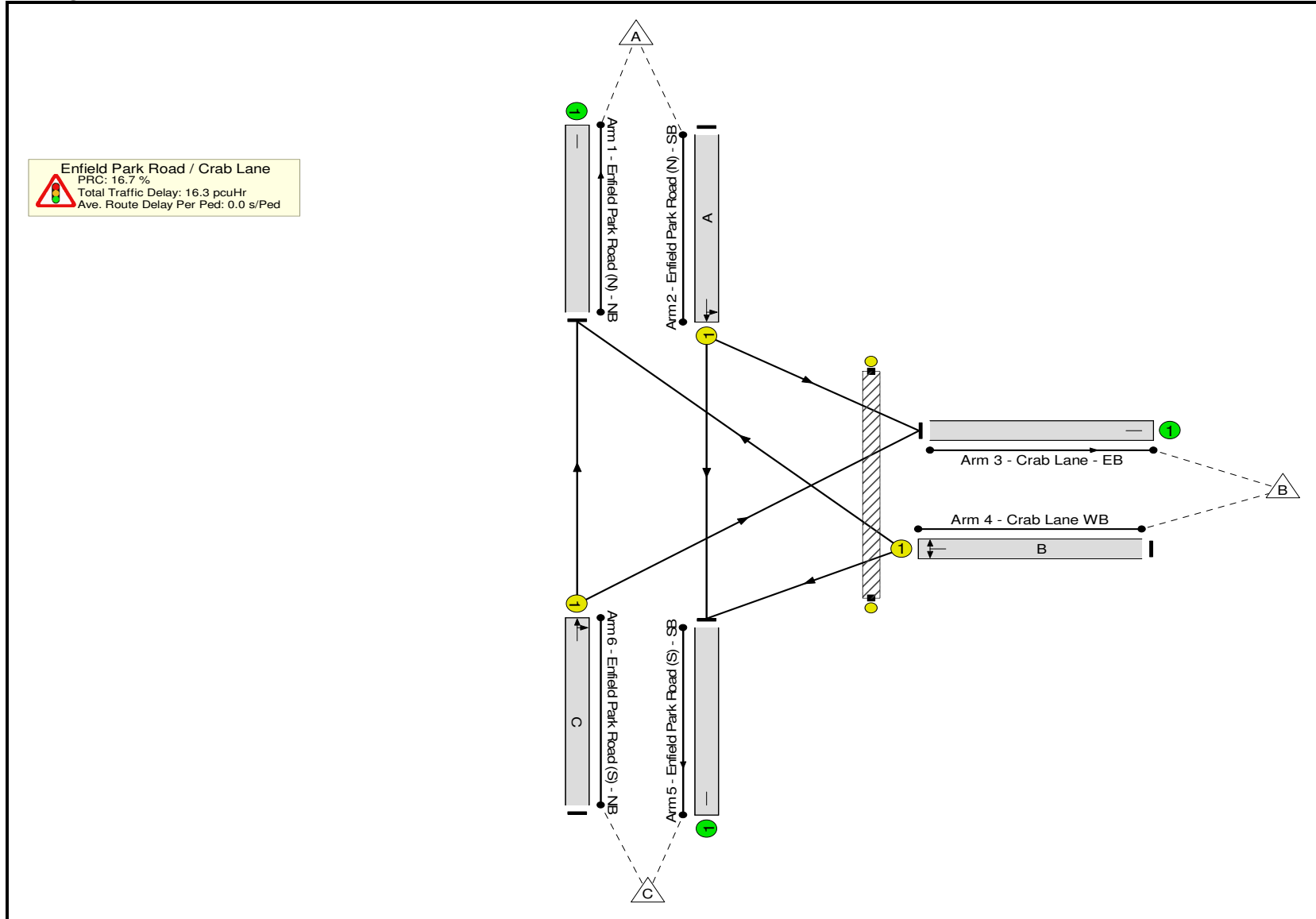
Stage Timings

Stage	1	2	3	4
Duration	40	25	24	7
Change Point	0	46	77	107

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	77.1%
Enfield Park Road / Crab Lane	-	-	N/A	-	-		-	-	-	-	-	-	77.1%
1/1	Enfield Park Road (N) - NB	U	N/A	N/A	-		-	-	-	106	Inf	Inf	0.0%
2/1	Enfield Park Road (N) - SB Left Ahead	U	N/A	N/A	A		1	25	-	299	1810	392	76.2%
3/1	Crab Lane - EB	U	N/A	N/A	-		-	-	-	723	Inf	Inf	0.0%
4/1	Crab Lane WB Right Left	U	N/A	N/A	B		1	24	-	260	1653	344	75.5%
5/1	Enfield Park Road (S) - SB	U	N/A	N/A	-		-	-	-	215	Inf	Inf	0.0%
6/1	Enfield Park Road (S) - NB Ahead Right	U	N/A	N/A	C		1	40	-	485	1840	629	77.1%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	D		1	7	-	0	-	0	0.0%

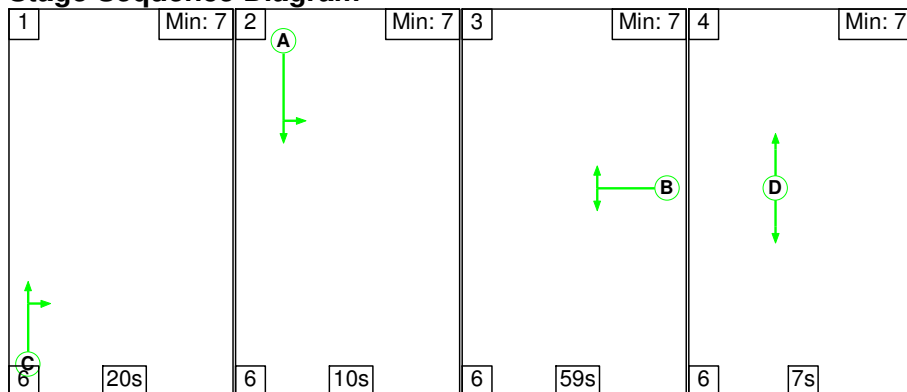
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	0	0	0	11.6	4.7	0.0	16.3	-	-	-	-
Enfield Park Road / Crab Lane	-	-	0	0	0	11.6	4.7	0.0	16.3	-	-	-	-
1/1	106	106	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	299	299	-	-	-	3.7	1.6	-	5.2	62.8	9.3	1.6	10.9
3/1	723	723	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	260	260	-	-	-	3.2	1.5	-	4.7	65.2	8.1	1.5	9.6
5/1	215	215	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	485	485	-	-	-	4.8	1.7	-	6.4	47.6	14.4	1.7	16.1
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
C1 PRC for Signalled Lanes (%): 16.7 Total Delay for Signalled Lanes (pcuHr): 16.34 Cycle Time (s): 120 PRC Over All Lanes (%): 16.7 Total Delay Over All Lanes(pcuHr): 16.34													

Full Input Data And Results

Scenario 2: 'Base Scenario PM' (FG2: 'MCC Base Traffic Flows PM', Plan 1: 'Ped every cycle')

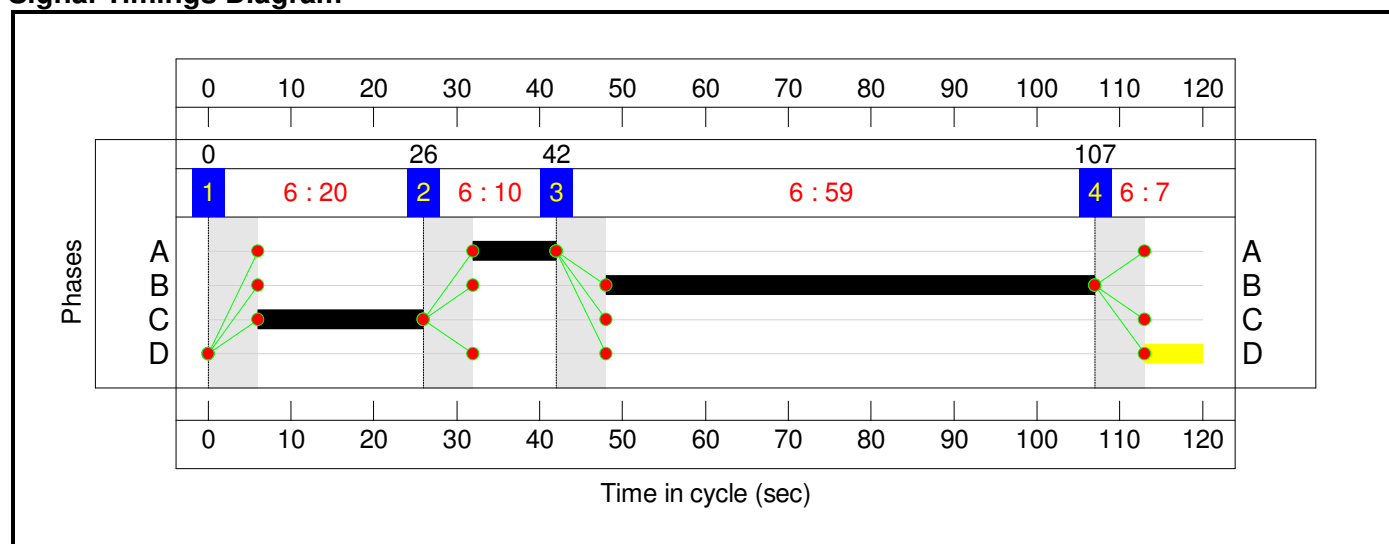
Stage Sequence Diagram



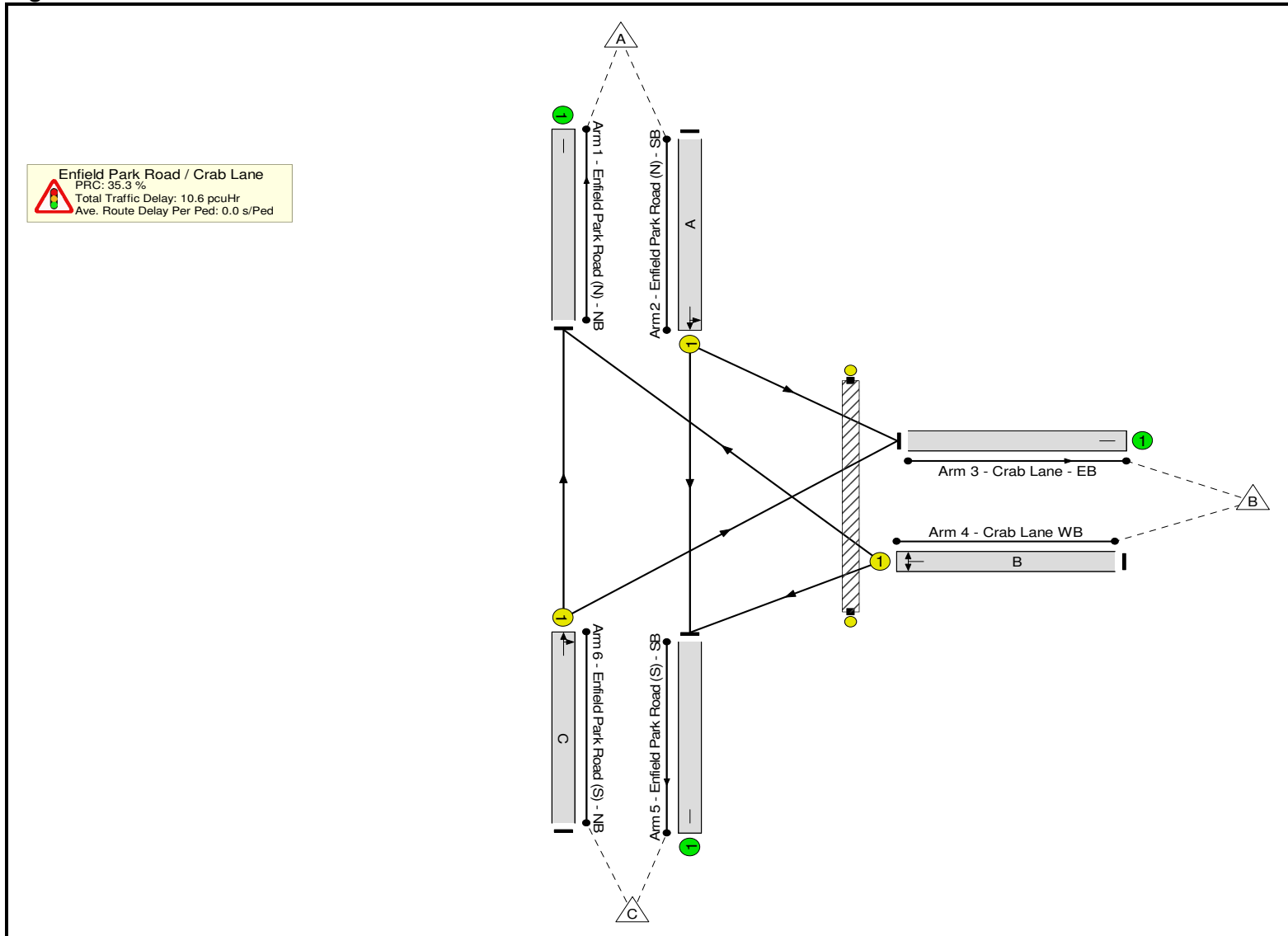
Stage Timings

Stage	1	2	3	4
Duration	20	10	59	7
Change Point	0	26	42	107

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

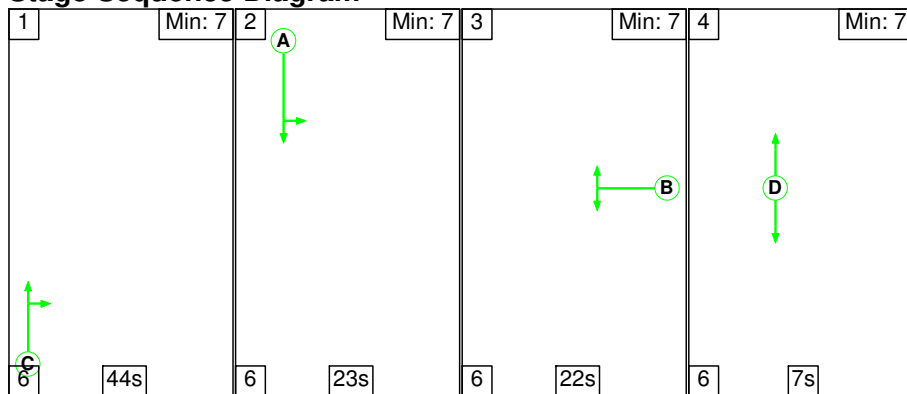
Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	66.5%
Enfield Park Road / Crab Lane	-	-	N/A	-	-		-	-	-	-	-	-	66.5%
1/1	Enfield Park Road (N) - NB	U	N/A	N/A	-		-	-	-	219	Inf	Inf	0.0%
2/1	Enfield Park Road (N) - SB Left Ahead	U	N/A	N/A	A		1	10	-	112	1837	168	66.5%
3/1	Crab Lane - EB	U	N/A	N/A	-		-	-	-	263	Inf	Inf	0.0%
4/1	Crab Lane WB Right Left	U	N/A	N/A	B		1	59	-	547	1663	831	65.8%
5/1	Enfield Park Road (S) - SB	U	N/A	N/A	-		-	-	-	389	Inf	Inf	0.0%
6/1	Enfield Park Road (S) - NB Ahead Right	U	N/A	N/A	C		1	20	-	212	1846	323	65.6%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	D		1	7	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	0	0	0	7.8	2.9	0.0	10.6	-	-	-	-
Enfield Park Road / Crab Lane	-	-	0	0	0	7.8	2.9	0.0	10.6	-	-	-	-
1/1	219	219	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	112	112	-	-	-	1.6	1.0	-	2.6	83.6	3.6	1.0	4.6
3/1	263	263	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	547	547	-	-	-	3.4	1.0	-	4.4	28.6	13.5	1.0	14.5
5/1	389	389	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	212	212	-	-	-	2.7	0.9	-	3.7	62.1	6.5	0.9	7.5
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%): 35.3		PRC Over All Lanes (%): 35.3		Total Delay for Signalled Lanes (pcuHr): 10.61		Total Delay Over All Lanes (pcuHr): 10.61		Cycle Time (s): 120		

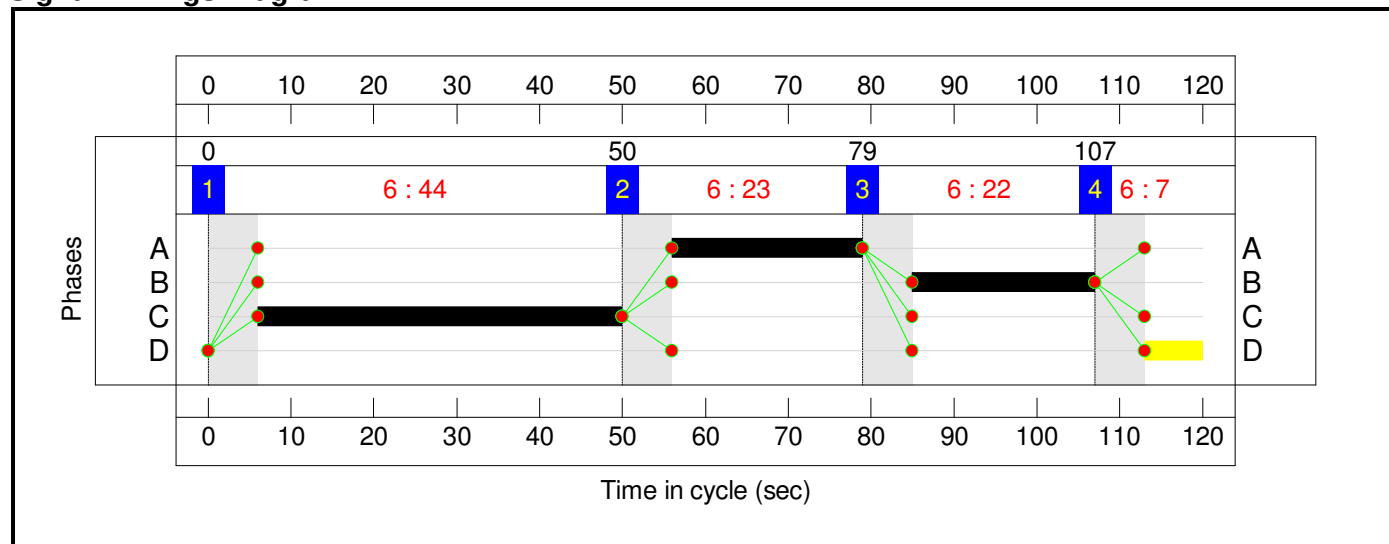
Stage Sequence Diagram



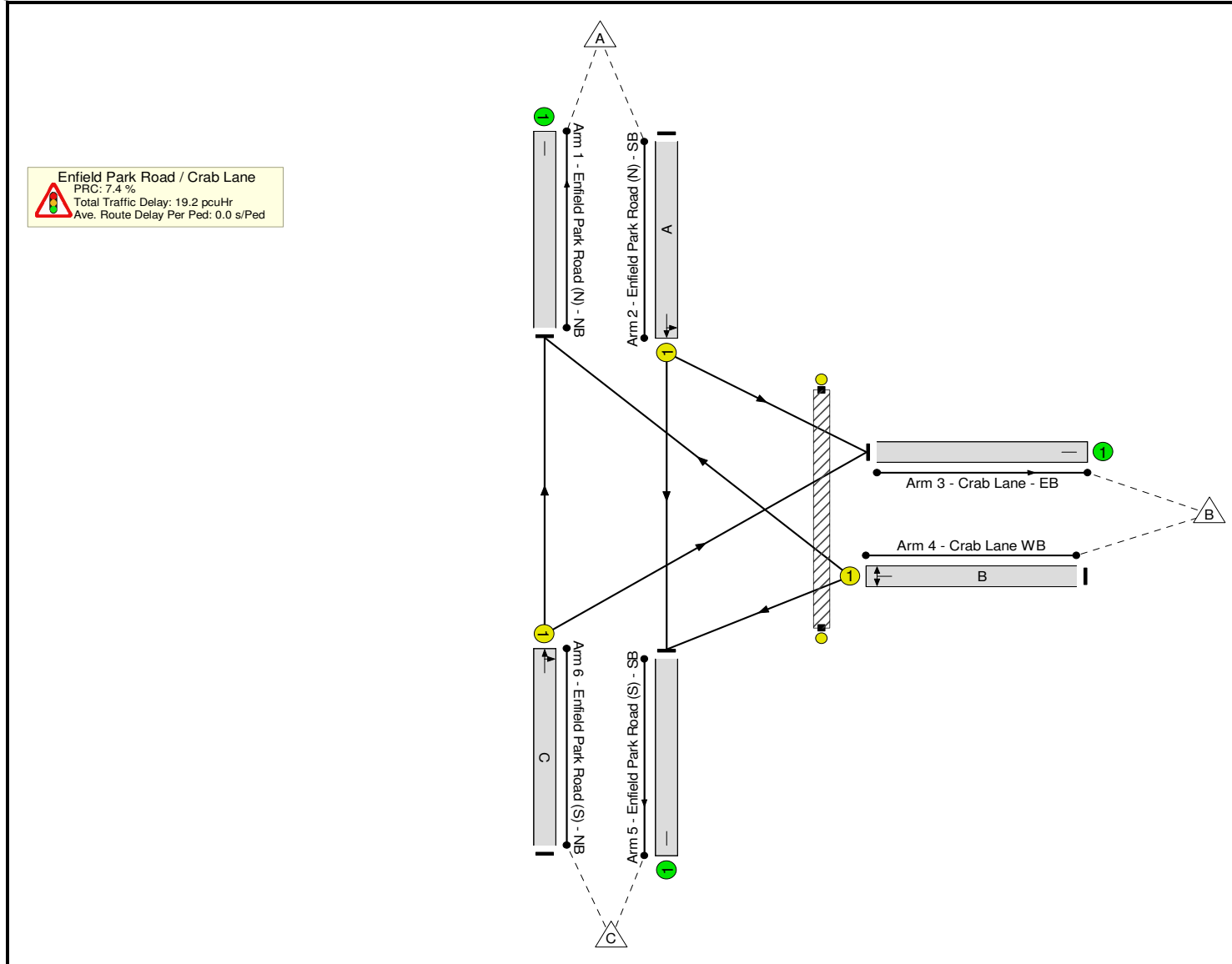
Stage Timings

Stage	1	2	3	4
Duration	44	23	22	7
Change Point	0	50	79	107

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

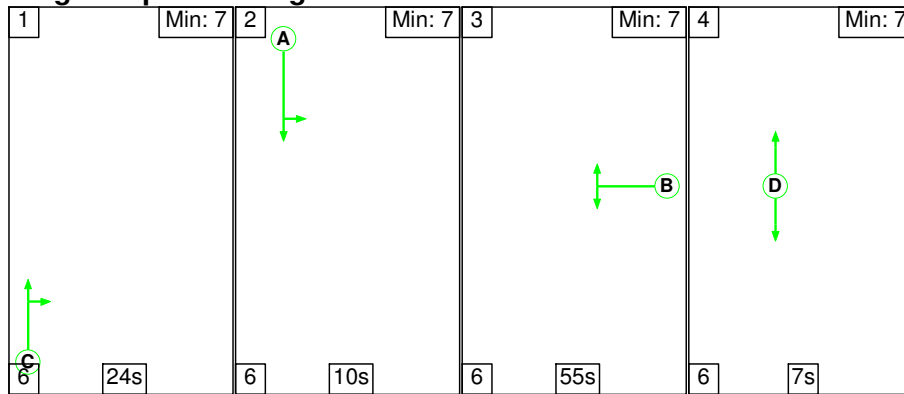
Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	83.8%
Enfield Park Road / Crab Lane	-	-	N/A	-	-		-	-	-	-	-	-	83.8%
1/1	Enfield Park Road (N) - NB	U	N/A	N/A	-		-	-	-	101	Inf	Inf	0.0%
2/1	Enfield Park Road (N) - SB Left Ahead	U	N/A	N/A	A		1	23	-	300	1811	362	82.8%
3/1	Crab Lane - EB	U	N/A	N/A	-		-	-	-	817	Inf	Inf	0.0%
4/1	Crab Lane WB Right Left	U	N/A	N/A	B		1	22	-	254	1652	317	80.2%
5/1	Enfield Park Road (S) - SB	U	N/A	N/A	-		-	-	-	214	Inf	Inf	0.0%
6/1	Enfield Park Road (S) - NB Ahead Right	U	N/A	N/A	C		1	44	-	578	1839	690	83.8%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	D		1	7	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	0	0	0	12.6	6.6	0.0	19.2	-	-	-	-
Enfield Park Road / Crab Lane	-	-	0	0	0	12.6	6.6	0.0	19.2	-	-	-	-
1/1	101	101	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	300	300	-	-	-	3.8	2.2	-	6.1	73.0	9.6	2.2	11.8
3/1	817	817	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	254	254	-	-	-	3.3	1.9	-	5.2	73.4	8.0	1.9	10.0
5/1	214	214	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	578	578	-	-	-	5.5	2.5	-	8.0	49.6	17.5	2.5	20.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%): 7.4		PRC Over All Lanes (%): 7.4		Total Delay for Signalled Lanes (pcuHr): 19.23		Total Delay Over All Lanes (pcuHr): 19.23		Cycle Time (s): 120		

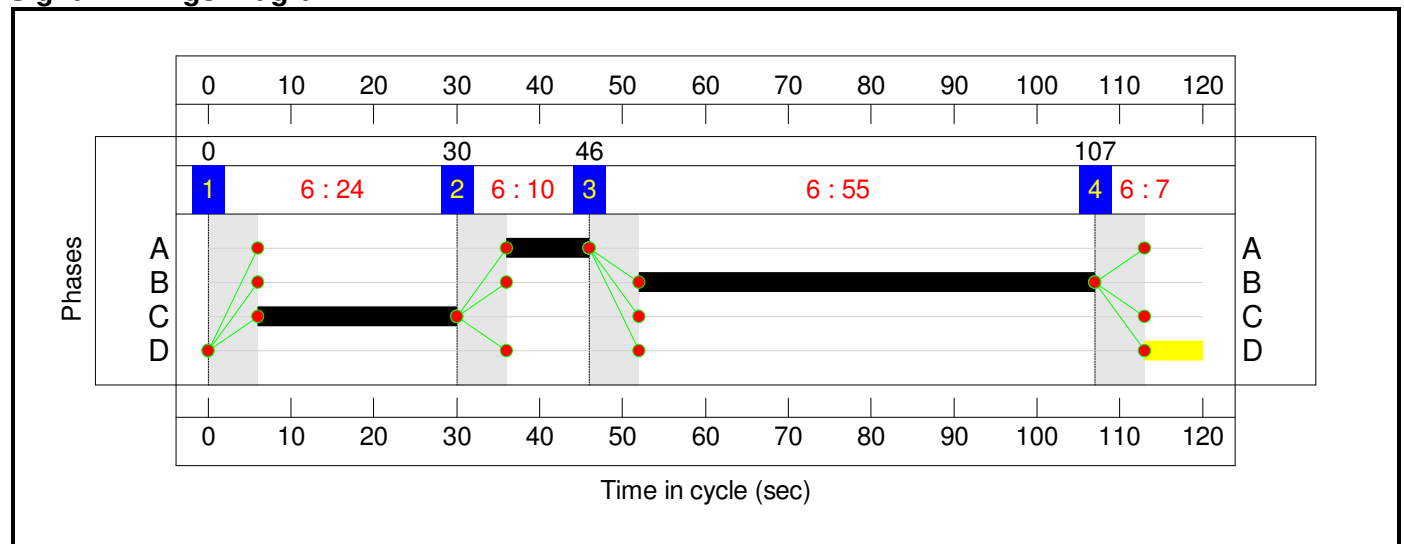
Stage Sequence Diagram



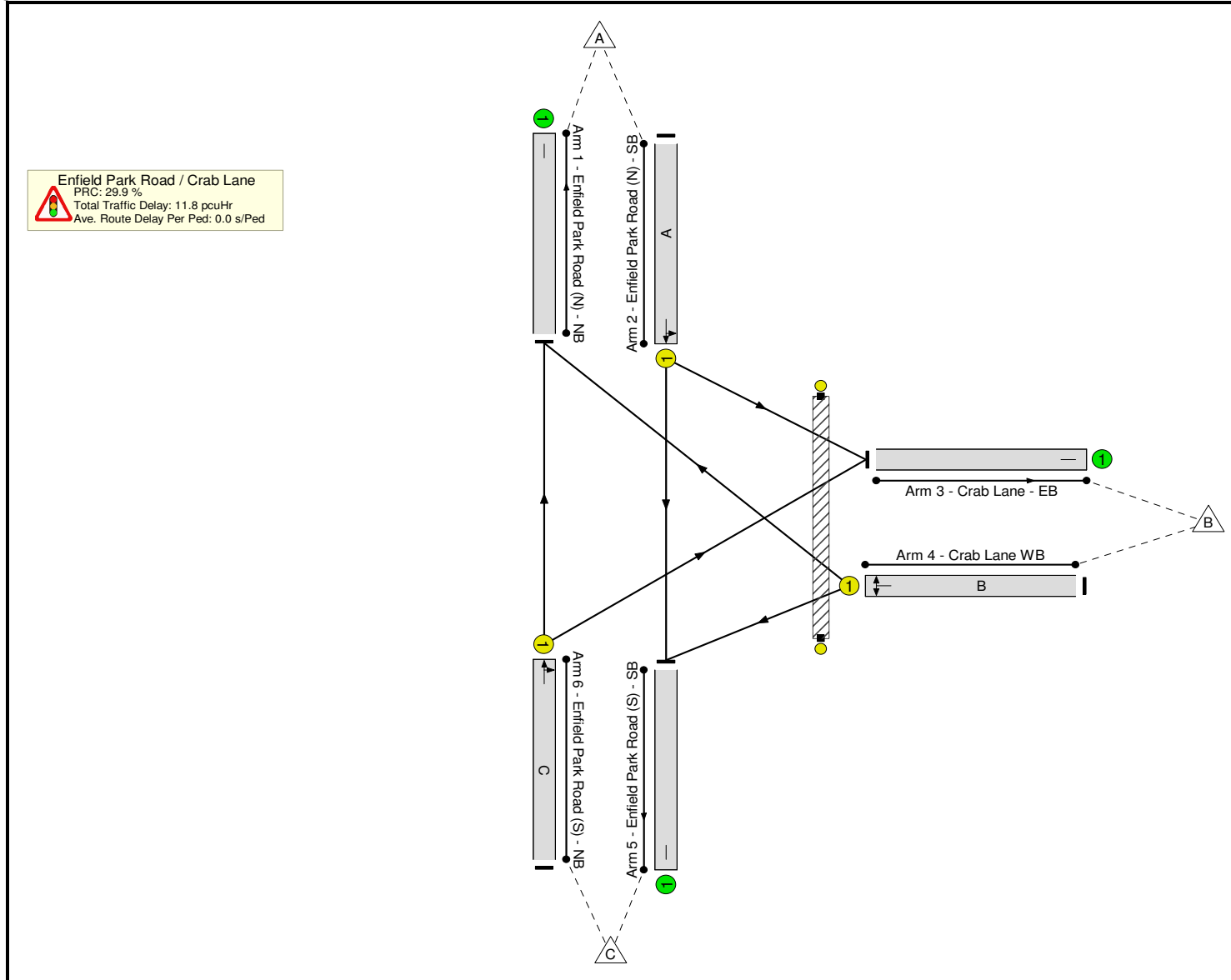
Stage Timings

Stage	1	2	3	4
Duration	24	10	55	7
Change Point	0	30	46	107

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

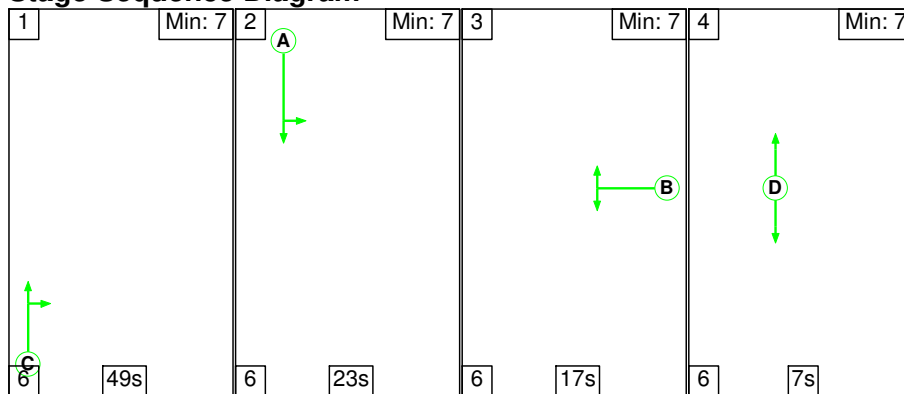
Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	69.3%
Enfield Park Road / Crab Lane	-	-	N/A	-	-		-	-	-	-	-	-	69.3%
1/1	Enfield Park Road (N) - NB	U	N/A	N/A	-		-	-	-	188	Inf	Inf	0.0%
2/1	Enfield Park Road (N) - SB Left Ahead	U	N/A	N/A	A		1	10	-	112	1837	168	66.5%
3/1	Crab Lane - EB	U	N/A	N/A	-		-	-	-	317	Inf	Inf	0.0%
4/1	Crab Lane WB Right Left	U	N/A	N/A	B		1	55	-	534	1659	774	69.0%
5/1	Enfield Park Road (S) - SB	U	N/A	N/A	-		-	-	-	407	Inf	Inf	0.0%
6/1	Enfield Park Road (S) - NB Ahead Right	U	N/A	N/A	C		1	24	-	266	1843	384	69.3%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	D		1	7	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	0	0	0	8.6	3.2	0.0	11.8	-	-	-	-
Enfield Park Road / Crab Lane	-	-	0	0	0	8.6	3.2	0.0	11.8	-	-	-	-
1/1	188	188	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	112	112	-	-	-	1.6	1.0	-	2.6	83.6	3.6	1.0	4.6
3/1	317	317	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	534	534	-	-	-	3.7	1.1	-	4.8	32.6	13.9	1.1	15.0
5/1	407	407	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	266	266	-	-	-	3.2	1.1	-	4.4	58.9	8.2	1.1	9.3
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%): 29.9		PRC Over All Lanes (%): 29.9		Total Delay for Signalled Lanes (pcuHr): 11.79		Total Delay Over All Lanes (pcuHr): 11.79		Cycle Time (s): 120		

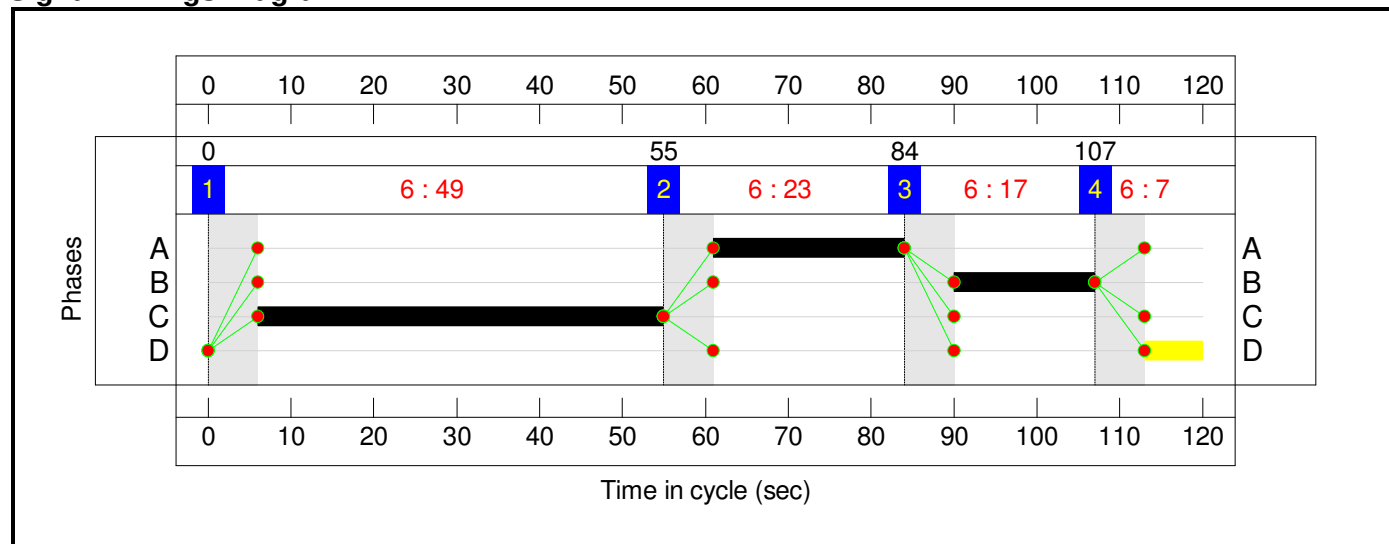
Stage Sequence Diagram



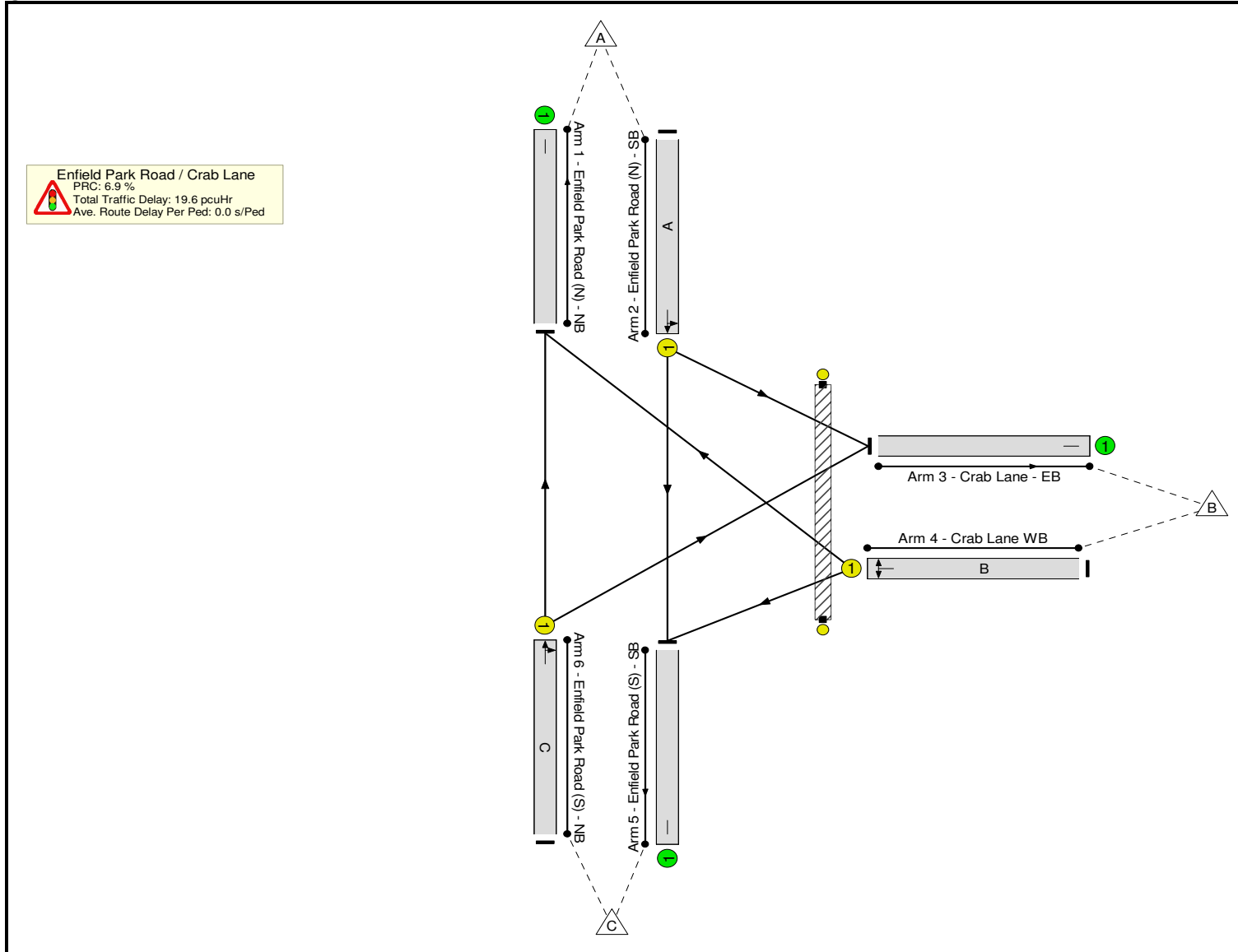
Stage Timings

Stage	1	2	3	4
Duration	49	23	17	7
Change Point	0	55	84	107

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

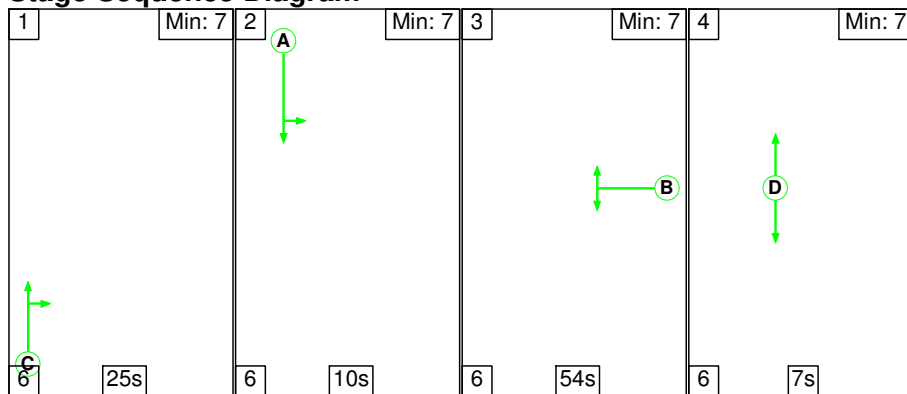
Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	84.2%
Enfield Park Road / Crab Lane	-	-	N/A	-	-		-	-	-	-	-	-	84.2%
1/1	Enfield Park Road (N) - NB	U	N/A	N/A	-		-	-	-	98	Inf	Inf	0.0%
2/1	Enfield Park Road (N) - SB Left Ahead	U	N/A	N/A	A		1	23	-	301	1811	362	83.1%
3/1	Crab Lane - EB	U	N/A	N/A	-		-	-	-	883	Inf	Inf	0.0%
4/1	Crab Lane WB Right Left	U	N/A	N/A	B		1	17	-	209	1655	248	84.2%
5/1	Enfield Park Road (S) - SB	U	N/A	N/A	-		-	-	-	173	Inf	Inf	0.0%
6/1	Enfield Park Road (S) - NB Ahead Right	U	N/A	N/A	C		1	49	-	644	1838	766	84.1%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	D		1	7	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	0	0	0	12.4	7.2	0.0	19.6	-	-	-	-
Enfield Park Road / Crab Lane	-	-	0	0	0	12.4	7.2	0.0	19.6	-	-	-	-
1/1	98	98	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	301	301	-	-	-	3.9	2.3	-	6.1	73.4	9.6	2.3	11.9
3/1	883	883	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	209	209	-	-	-	2.9	2.4	-	5.3	90.5	6.7	2.4	9.1
5/1	173	173	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	644	644	-	-	-	5.6	2.5	-	8.2	45.6	19.1	2.5	21.7
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
C1 PRC for Signalled Lanes (%): 6.9 Total Delay for Signalled Lanes (pcuHr): 19.55 Cycle Time (s): 120 PRC Over All Lanes (%): 6.9 Total Delay Over All Lanes(pcuHr): 19.55													

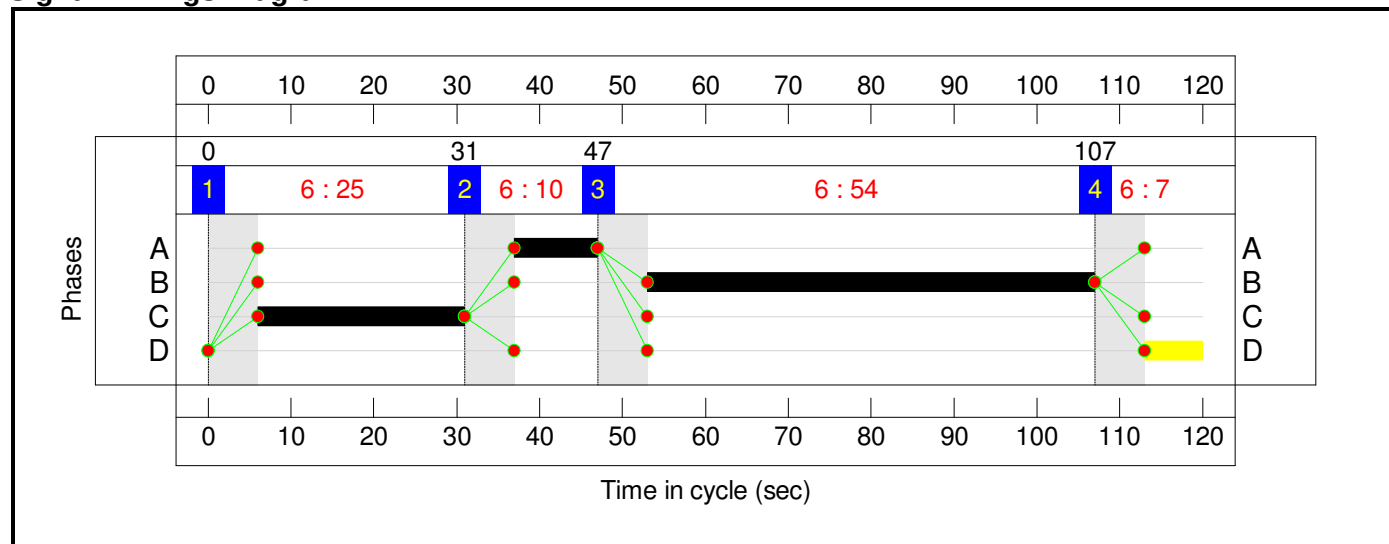
Stage Sequence Diagram



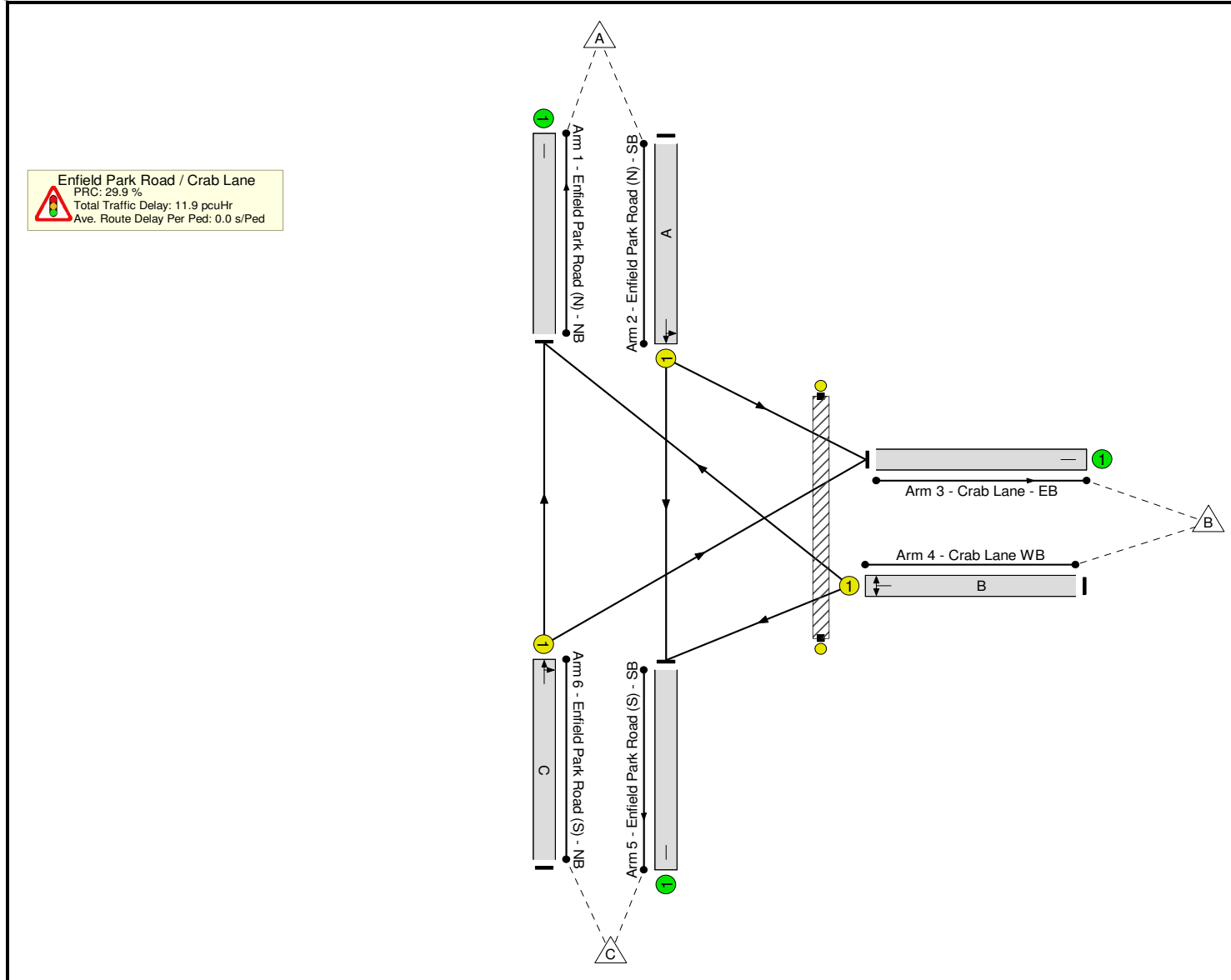
Stage Timings

Stage	1	2	3	4
Duration	25	10	54	7
Change Point	0	31	47	107

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

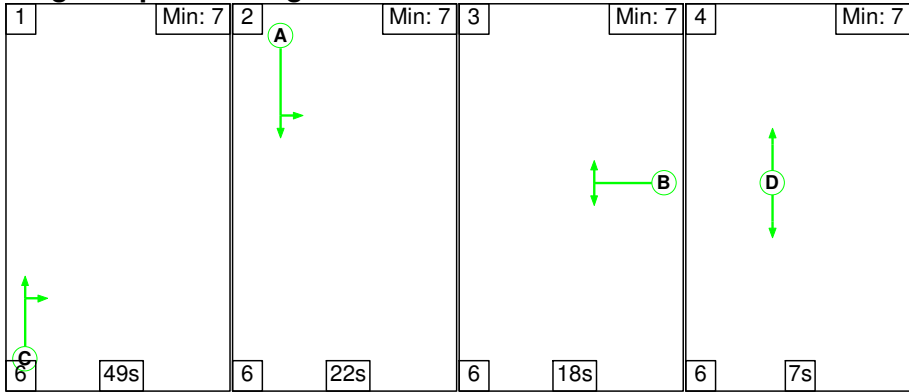
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	69.3%
Enfield Park Road / Crab Lane	-	-	N/A	-	-		-	-	-	-	-	-	69.3%
1/1	Enfield Park Road (N) - NB	U	N/A	N/A	-		-	-	-	186	Inf	Inf	0.0%
2/1	Enfield Park Road (N) - SB Left Ahead	U	N/A	N/A	A		1	10	-	112	1837	168	66.5%
3/1	Crab Lane - EB	U	N/A	N/A	-		-	-	-	326	Inf	Inf	0.0%
4/1	Crab Lane WB Right Left	U	N/A	N/A	B		1	54	-	527	1659	760	69.3%
5/1	Enfield Park Road (S) - SB	U	N/A	N/A	-		-	-	-	402	Inf	Inf	0.0%
6/1	Enfield Park Road (S) - NB Ahead Right	U	N/A	N/A	C		1	25	-	275	1843	399	68.9%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	D		1	7	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)																
Network	-	-	0	0	0	8.7	3.2	0.0	11.9	-	-	-	-																
Enfield Park Road / Crab Lane	-	-	0	0	0	8.7	3.2	0.0	11.9	-	-	-	-																
1/1	186	186	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0																
2/1	112	112	-	-	-	1.6	1.0	-	2.6	83.6	3.6	1.0	4.6																
3/1	326	326	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0																
4/1	527	527	-	-	-	3.8	1.1	-	4.9	33.4	13.9	1.1	15.0																
5/1	402	402	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0																
6/1	275	275	-	-	-	3.3	1.1	-	4.4	57.5	8.4	1.1	9.5																
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-																
<table style="width:100%; border:none;"> <tr> <td style="width:20%;"></td> <td style="width:10%;">C1</td> <td style="width:10%;">PRC for Signalled Lanes (%):</td> <td style="width:10%;">29.9</td> <td style="width:10%;">Total Delay for Signalled Lanes (pcuHr):</td> <td style="width:10%;">11.89</td> <td style="width:10%;">Cycle Time (s):</td> <td style="width:10%;">120</td> </tr> <tr> <td></td> <td></td> <td>PRC Over All Lanes (%):</td> <td>29.9</td> <td>Total Delay Over All Lanes(pcuHr):</td> <td>11.89</td> <td></td> <td></td> </tr> </table>															C1	PRC for Signalled Lanes (%):	29.9	Total Delay for Signalled Lanes (pcuHr):	11.89	Cycle Time (s):	120			PRC Over All Lanes (%):	29.9	Total Delay Over All Lanes(pcuHr):	11.89		
	C1	PRC for Signalled Lanes (%):	29.9	Total Delay for Signalled Lanes (pcuHr):	11.89	Cycle Time (s):	120																						
		PRC Over All Lanes (%):	29.9	Total Delay Over All Lanes(pcuHr):	11.89																								

Scenario 7: '2030 Do Something Through Route AM' (FG7: '2030 Do Something Through Route AM', Plan 1: 'Ped every cycle')

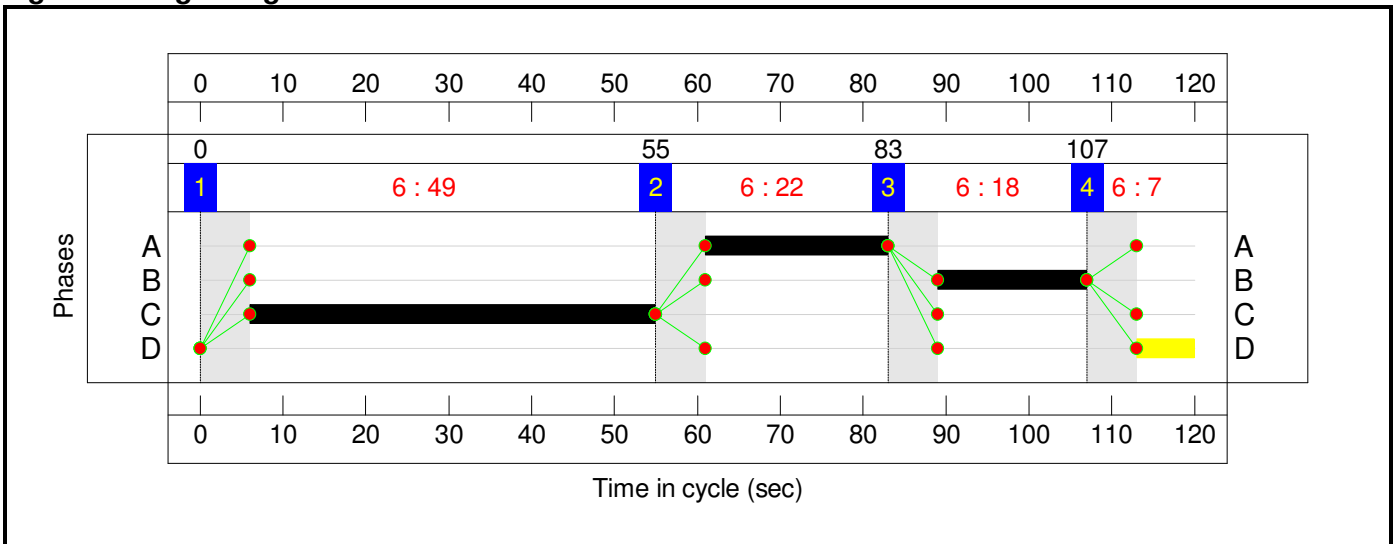
Stage Sequence Diagram



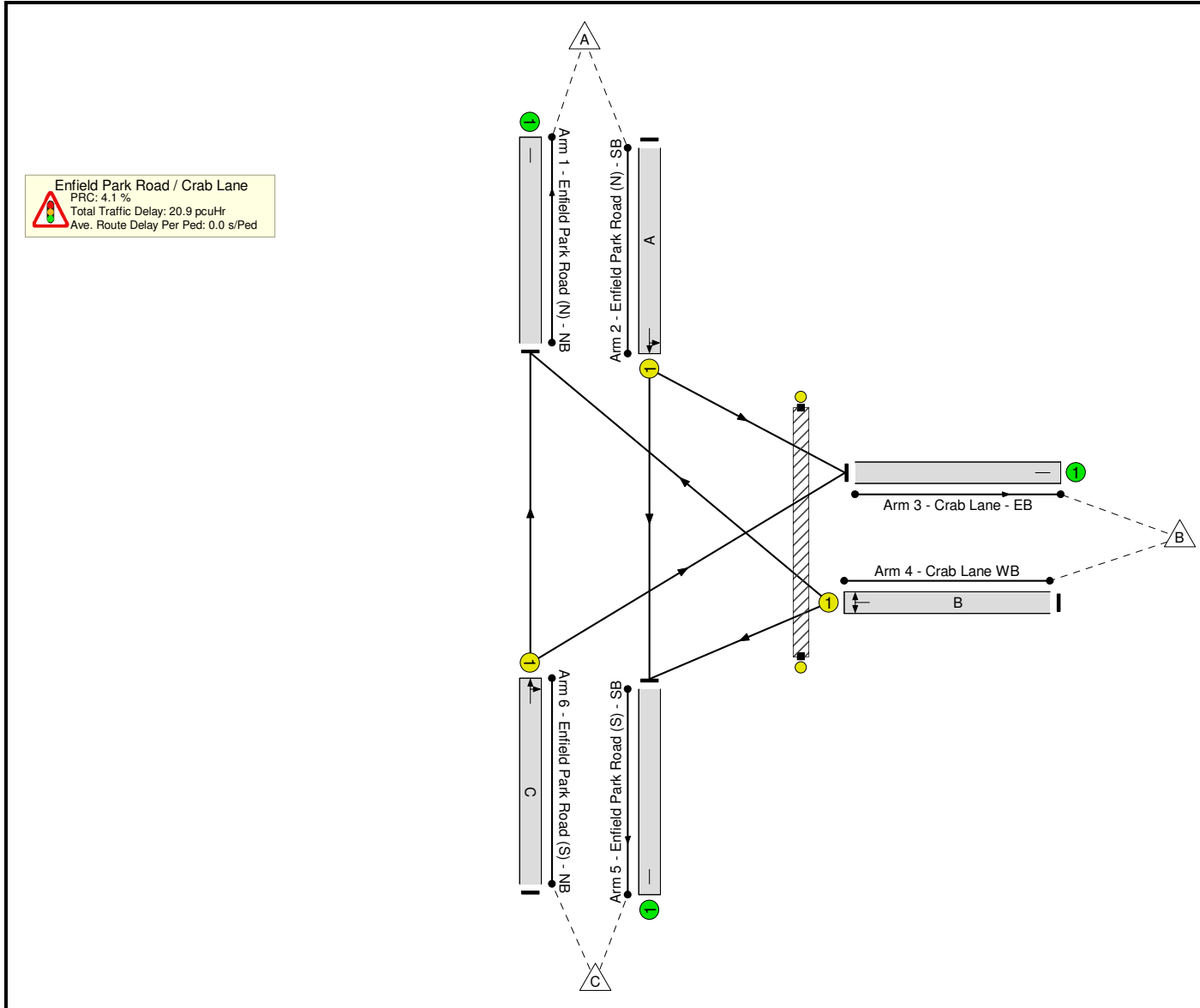
Stage Timings

Stage	1	2	3	4
Duration	49	22	18	7
Change Point	0	55	83	107

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

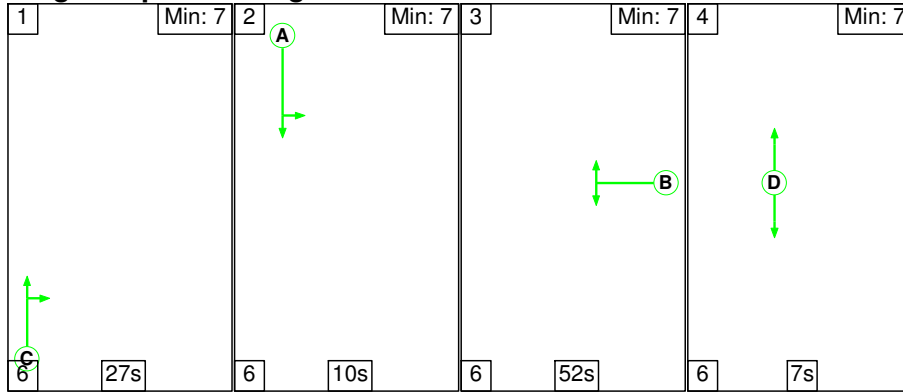
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	86.4%
Enfield Park Road / Crab Lane	-	-	N/A	-	-		-	-	-	-	-	-	86.4%
1/1	Enfield Park Road (N) - NB	U	N/A	N/A	-		-	-	-	97	Inf	Inf	0.0%
2/1	Enfield Park Road (N) - SB Left Ahead	U	N/A	N/A	A		1	22	-	300	1811	347	86.4%
3/1	Crab Lane - EB	U	N/A	N/A	-		-	-	-	898	Inf	Inf	0.0%
4/1	Crab Lane WB Right Left	U	N/A	N/A	B		1	18	-	221	1654	262	84.4%
5/1	Enfield Park Road (S) - SB	U	N/A	N/A	-		-	-	-	184	Inf	Inf	0.0%
6/1	Enfield Park Road (S) - NB Ahead Right	U	N/A	N/A	C		1	49	-	658	1837	765	86.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	D		1	7	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	0	0	0	12.7	8.2	0.0	20.9	-	-	-	-
Enfield Park Road / Crab Lane	-	-	0	0	0	12.7	8.2	0.0	20.9	-	-	-	-
1/1	97	97	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	300	300	-	-	-	3.9	2.8	-	6.8	81.1	9.7	2.8	12.5
3/1	898	898	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	221	221	-	-	-	3.0	2.4	-	5.4	88.4	7.1	2.4	9.5
5/1	184	184	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	658	658	-	-	-	5.8	2.9	-	8.7	47.7	19.9	2.9	22.8
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%):		4.1	Total Delay for Signalled Lanes (pcuHr):		20.91	Cycle Time (s): 120				
			PRC Over All Lanes (%):		4.1	Total Delay Over All Lanes (pcuHr):		20.91					

Scenario 8: '2030 Do Something Through Route PM' (FG8: '2030 Do Something Through Route PM', Plan 1: 'Ped every cycle')

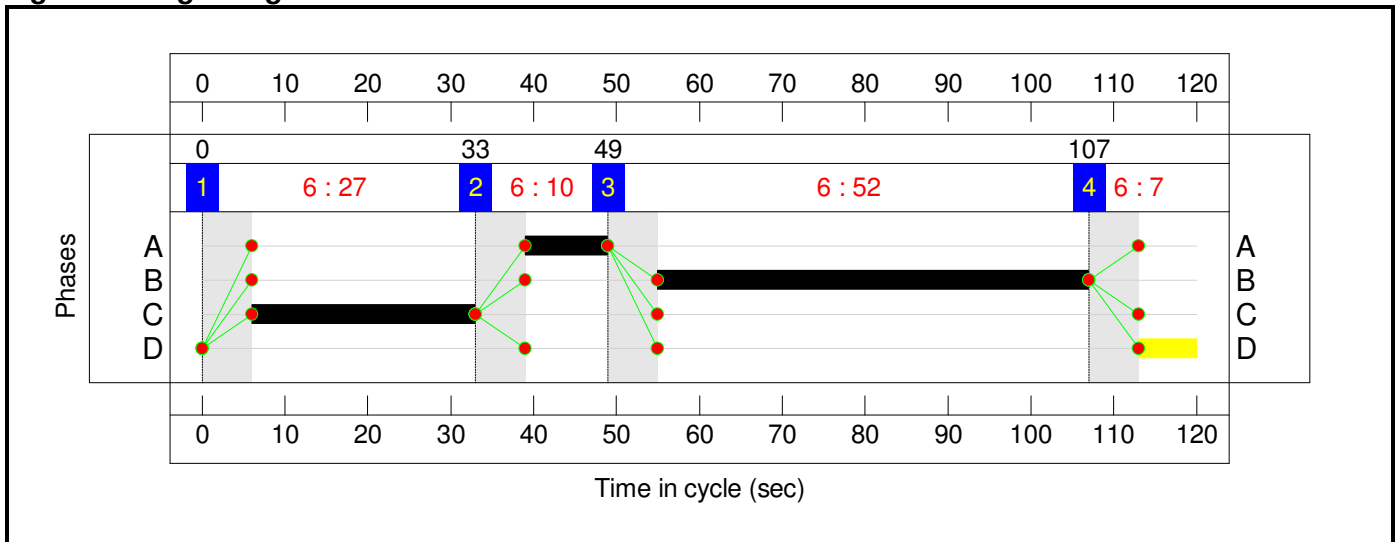
Stage Sequence Diagram



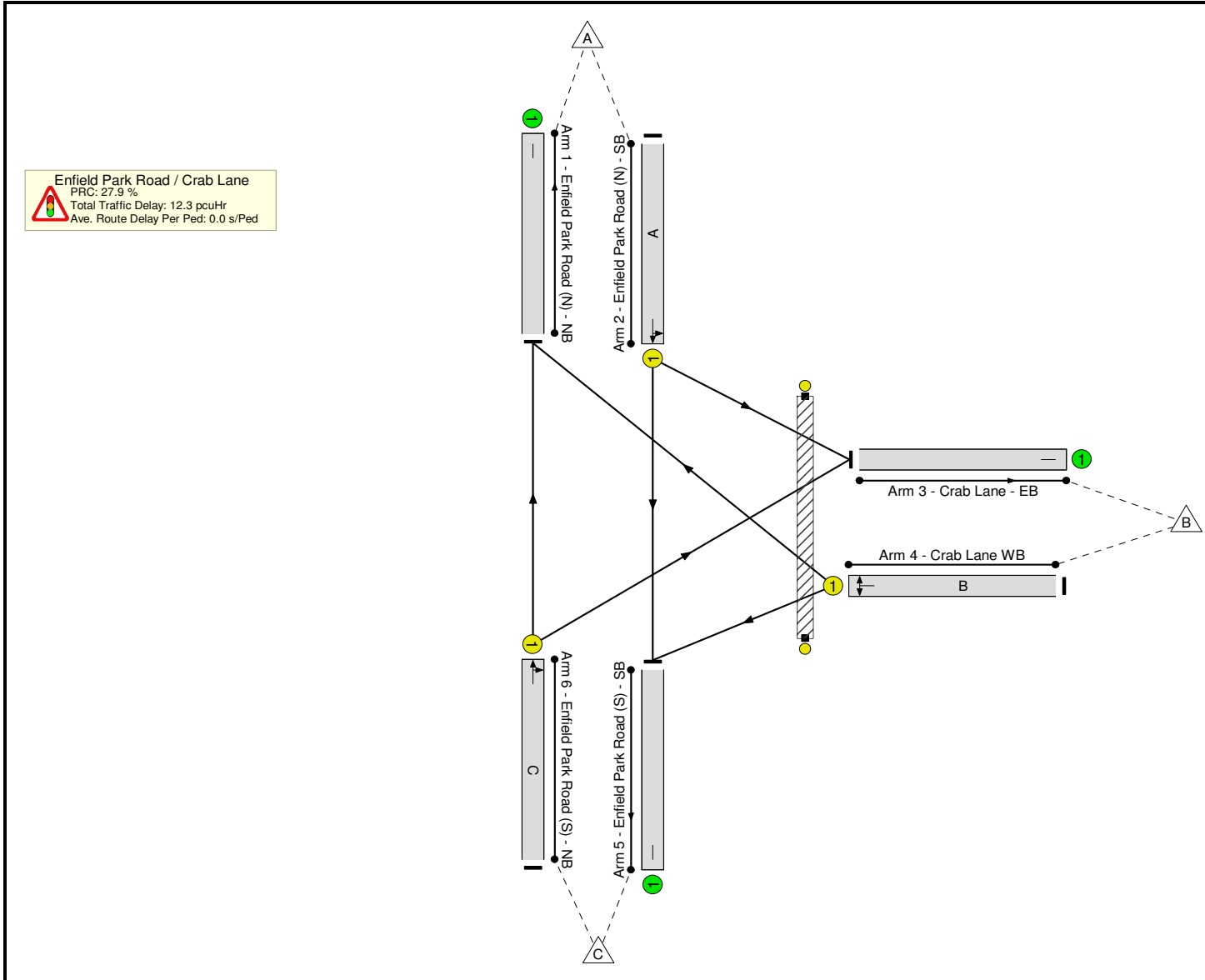
Stage Timings

Stage	1	2	3	4
Duration	27	10	52	7
Change Point	0	33	49	107

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	70.4%
Enfield Park Road / Crab Lane	-	-	N/A	-	-		-	-	-	-	-	-	70.4%
1/1	Enfield Park Road (N) - NB	U	N/A	N/A	-		-	-	-	188	Inf	Inf	0.0%
2/1	Enfield Park Road (N) - SB Left Ahead	U	N/A	N/A	A		1	10	-	112	1837	168	66.5%
3/1	Crab Lane - EB	U	N/A	N/A	-		-	-	-	349	Inf	Inf	0.0%
4/1	Crab Lane WB Right Left	U	N/A	N/A	B		1	52	-	516	1660	733	70.4%
5/1	Enfield Park Road (S) - SB	U	N/A	N/A	-		-	-	-	389	Inf	Inf	0.0%
6/1	Enfield Park Road (S) - NB Ahead Right	U	N/A	N/A	C		1	27	-	298	1842	430	69.3%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	D		1	7	-	0	-	0	0.0%

Full Input Data And Results

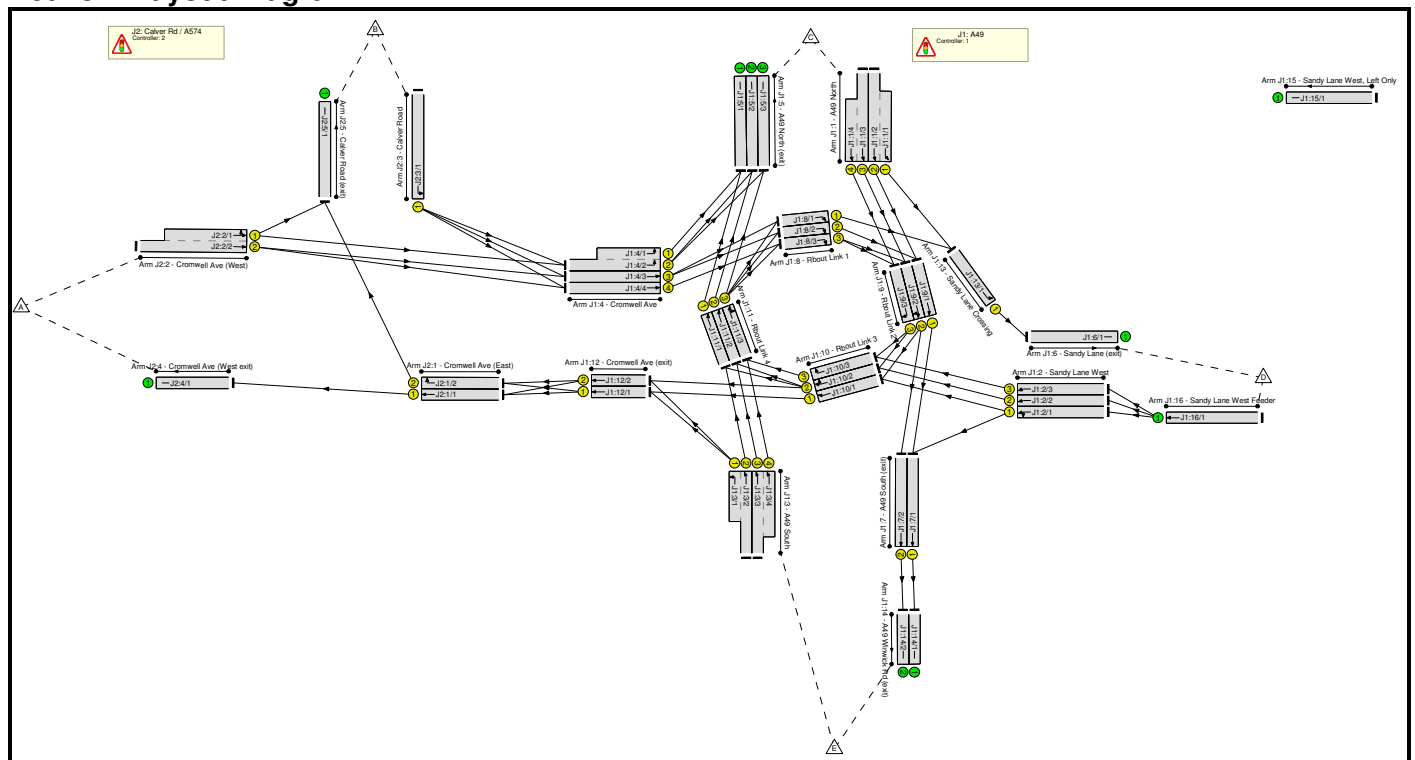
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	0	0	0	9.0	3.2	0.0	12.3	-	-	-	-
Enfield Park Road / Crab Lane	-	-	0	0	0	9.0	3.2	0.0	12.3	-	-	-	-
1/1	188	188	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	112	112	-	-	-	1.6	1.0	-	2.6	83.6	3.6	1.0	4.6
3/1	349	349	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	516	516	-	-	-	3.9	1.2	-	5.1	35.3	13.9	1.2	15.1
5/1	389	389	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	298	298	-	-	-	3.5	1.1	-	4.6	55.5	9.0	1.1	10.1
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%): 27.9		PRC Over All Lanes (%): 27.9		Total Delay for Signalled Lanes (pcuHr): 12.26		Total Delay Over All Lanes (pcuHr): 12.26		Cycle Time (s): 120		

Full Input Data And Results
Full Input Data And Results

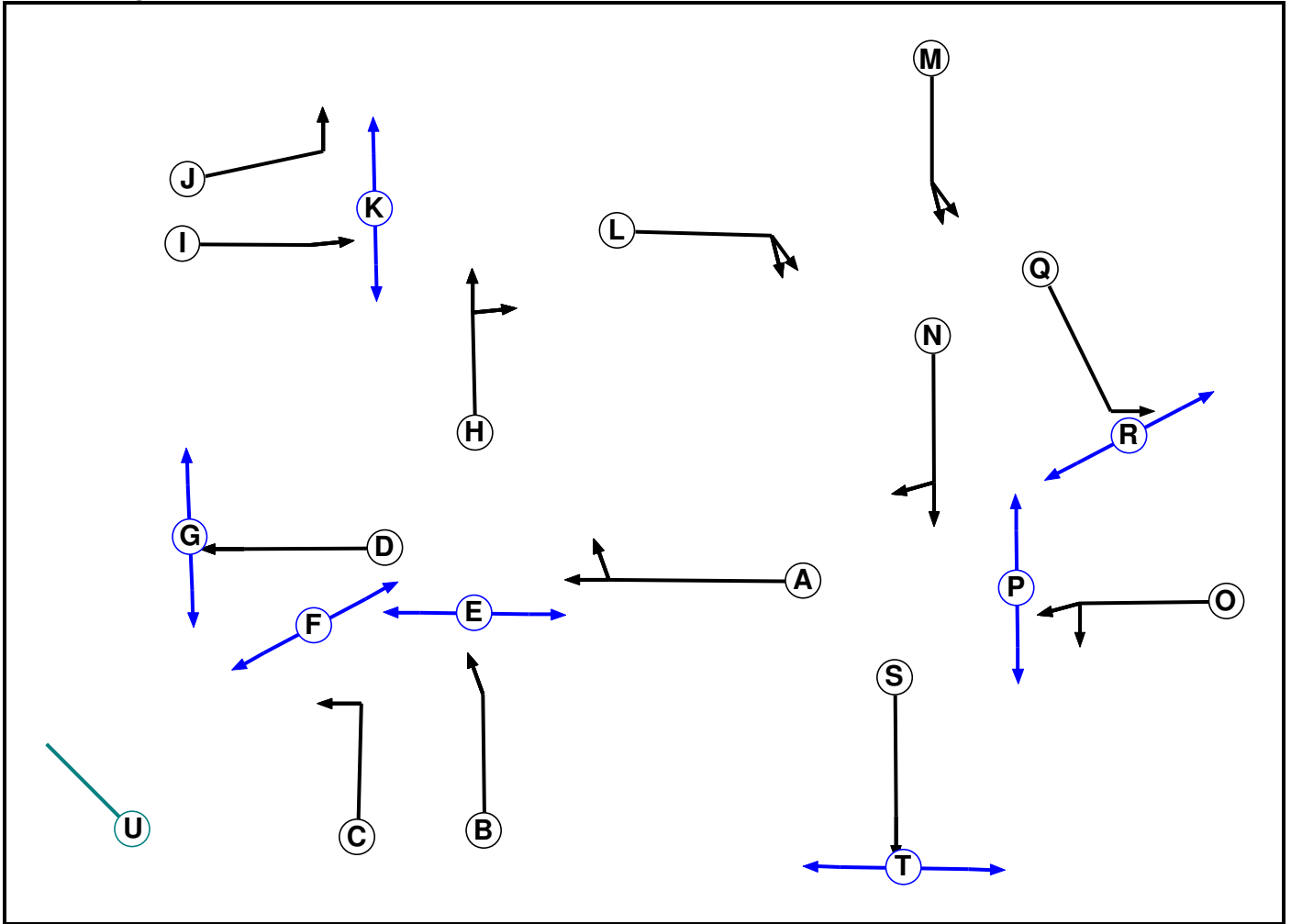
User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	LINSIG A49_Sandy Lane_v2 - Mitigation.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



C1
Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Traffic	1		7	7
D	Traffic	7		7	7
E	Pedestrian	1		6	6
F	Pedestrian	1		6	6
G	Pedestrian	7		7	7
H	Traffic	2		7	7
I	Traffic	2		7	7
J	Traffic	2		7	7
K	Pedestrian	2		9	9
L	Traffic	3		7	7
M	Traffic	3		7	7
N	Traffic	4		7	7
O	Traffic	4		7	7
P	Pedestrian	4		7	7
Q	Traffic	5		7	7
R	Pedestrian	5		6	6
S	Traffic	6		7	7
T	Pedestrian	6		6	6
U	Dummy	1		0	0

Phase Intergreens Matrix

		Starting Phase																				
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
Terminating Phase	A		5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	B	7		-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
	C	6	-		-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
	D	-	-	-		-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	E	-	9	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	F	-	-	7	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	G	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	H	-	-	-	-	-	-	-		6	6	-	-	-	-	-	-	-	-	-	-	-
	I	-	-	-	-	-	-	-	6		-	5	-	-	-	-	-	-	-	-	-	-
	J	-	-	-	-	-	-	-	6	-		5	-	-	-	-	-	-	-	-	-	-
	K	-	-	-	-	-	-	-	-	12	12		-	-	-	-	-	-	-	-	-	-
	L	-	-	-	-	-	-	-	-	-	-	-		5	-	-	-	-	-	-	-	-
	M	-	-	-	-	-	-	-	-	-	-	-	7		-	-	-	-	-	-	-	-
	N	-	-	-	-	-	-	-	-	-	-	-	-	-		5	-	-	-	-	-	-
	O	-	-	-	-	-	-	-	-	-	-	-	-	-	5		5	-	-	-	-	-
	P	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7		-	-	-	-	-
	Q	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		5	-	-	-
	R	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7		-	-	-
	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		0	-
	T	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		-
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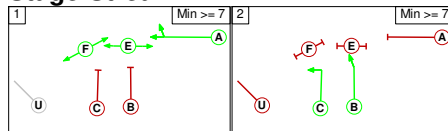
Full Input Data And Results

Phases in Stage

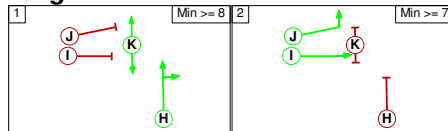
Stream	Stage No.	Phases in Stage
1	1	A E F
1	2	B C
2	1	H K
2	2	I J
3	1	L
3	2	M
4	1	N P
4	2	O
5	1	Q
5	2	R
6	1	S
6	2	T
7	1	D
7	2	G

Stage Diagram

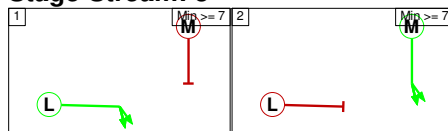
Stage Stream: 1



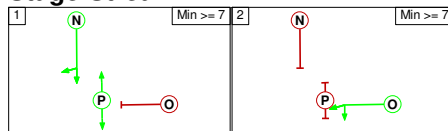
Stage Stream: 2



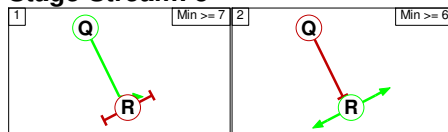
Stage Stream: 3



Stage Stream: 4

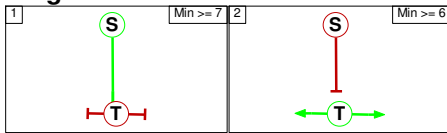


Stage Stream: 5

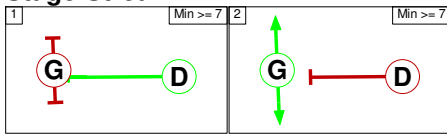


Full Input Data And Results

Stage Stream: 6

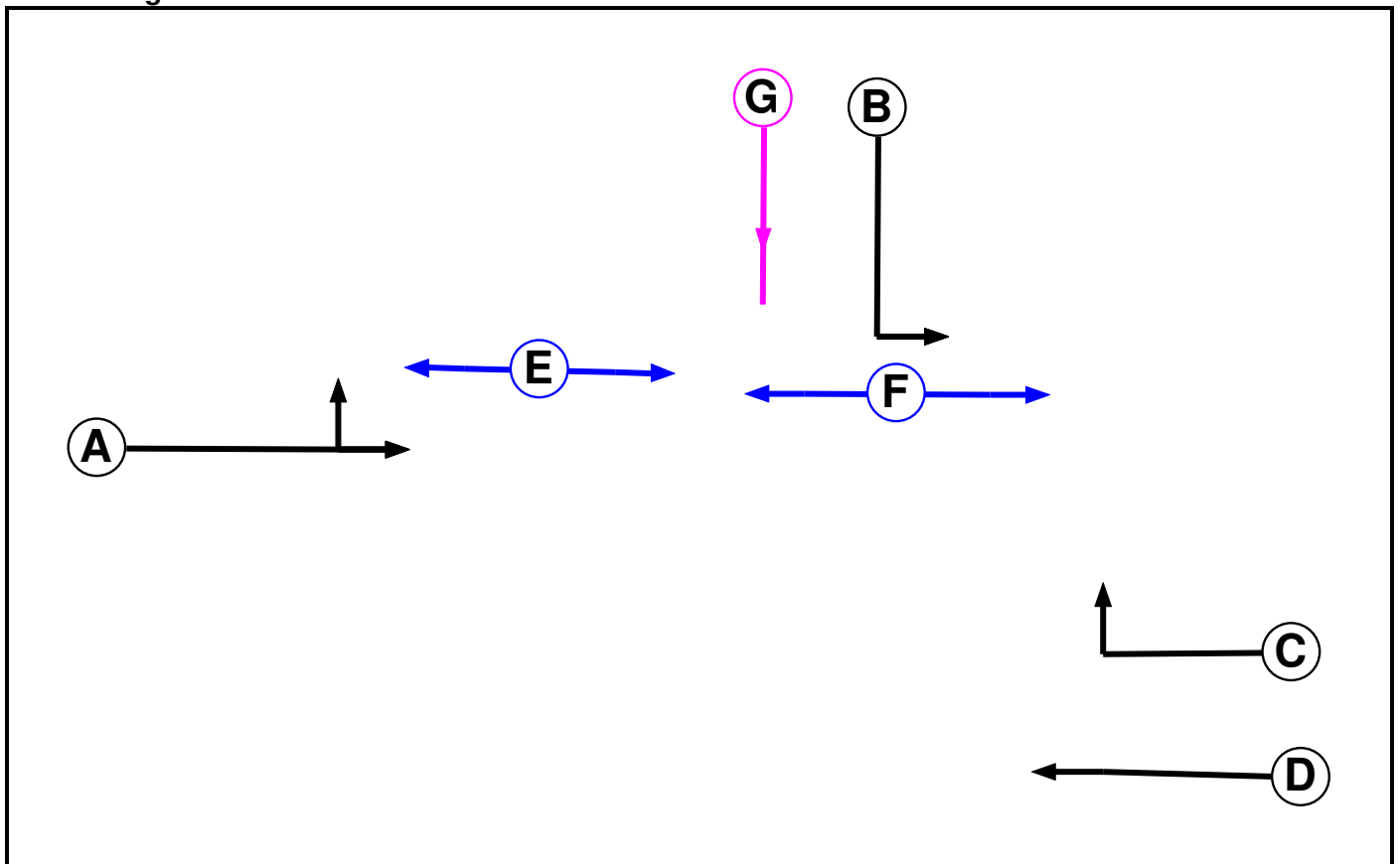


Stage Stream: 7



C2

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Pedestrian		5	5
F	Pedestrian		5	5
G	Cycle		7	7

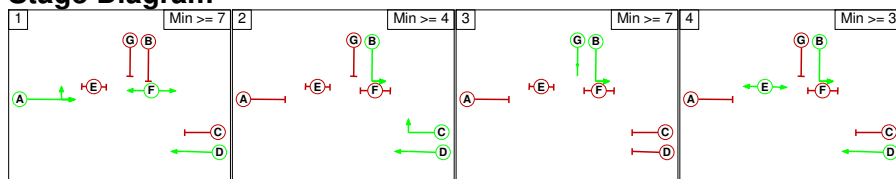
Phase Intergrens Matrix

		Starting Phase						
		A	B	C	D	E	F	G
Terminating Phase	A		8	5	-	8	-	8
	B	5		-	-	-	5	-
	C	7	-		-	8	-	7
	D	-	-	-		-	-	7
	E	0	-	0	-		-	0
	F	-	0	-	-	-		-
	G	7	-	7	7	5	-	

Phases in Stage

Stage No.	Phases in Stage
1	A D F
2	B C D
3	B G
4	B D E

Stage Diagram



Full Input Data And Results

Give-Way Lane Input Data

Junction: J1: A49

There are no Opposed Lanes in this Junction

Junction: J2: Calver Rd / A574

There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: J1: A49												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
J1:1/1 (A49 North)	U	M	2	3	11.0	Geom	-	3.30	0.00	Y	Arm J1:13 Ahead	Inf
J1:1/2 (A49 North)	U	M	2	3	60.0	Geom	-	3.65	0.00	N	Arm J1:9 Ahead	Inf
J1:1/3 (A49 North)	U	M	2	3	60.0	Geom	-	3.30	0.00	N	Arm J1:9 Ahead	Inf
J1:1/4 (A49 North)	U	M	2	3	8.2	Geom	-	3.90	0.00	N	Arm J1:9 Ahead	Inf
J1:2/1 (Sandy Lane West)	U	O	2	3	4.3	Geom	-	3.25	4.40	Y	Arm J1:7 Left Arm J1:10 Ahead	35.00 Inf
J1:2/2 (Sandy Lane West)	U	O	2	3	4.0	Geom	-	3.77	0.00	Y	Arm J1:10 Ahead	Inf
J1:2/3 (Sandy Lane West)	U	O	2	3	4.0	Geom	-	3.89	0.00	N	Arm J1:10 Ahead	Inf
J1:3/1 (A49 South)	U	C	2	3	6.6	Geom	-	5.00	0.00	Y	Arm J1:12 Left	60.00
J1:3/2 (A49 South)	U	B	2	3	60.0	Geom	-	3.30	0.00	N	Arm J1:11 Ahead	215.00
J1:3/3 (A49 South)	U	B	2	3	60.0	Geom	-	3.40	0.00	N	Arm J1:11 Ahead	215.00
J1:3/4 (A49 South)	U	B	2	3	13.0	Geom	-	3.30	0.00	N	Arm J1:11 Ahead	215.00
J1:4/1 (Cromwell Ave)	U	J	2	3	8.3	Geom	-	4.00	0.00	Y	Arm J1:5 Left	22.00
J1:4/2 (Cromwell Ave)	U	J	2	3	13.0	Geom	-	4.00	0.00	N	Arm J1:5 Left	75.00
J1:4/3 (Cromwell Ave)	U	I	2	3	21.7	Geom	-	3.70	0.00	N	Arm J1:8 Ahead	75.00
J1:4/4 (Cromwell Ave)	U	I	2	3	21.7	Geom	-	3.70	0.00	N	Arm J1:8 Ahead	80.00

Full Input Data And Results

J1:5/1 (A49 North exit))	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:5/2 (A49 North exit))	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:5/3 (A49 North exit))	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:6/1 (Sandy Lane exit))	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:7/1 (A49 South exit))	U	S	2	3	11.0	Geom	-	3.75	0.00	Y	Arm J1:14 Ahead	Inf
J1:7/2 (A49 South exit))	U	S	2	3	11.0	Geom	-	3.75	0.00	N	Arm J1:14 Ahead	Inf
J1:8/1 (Rbout Link 1)	U	L	2	3	8.9	Geom	-	4.00	0.00	Y	Arm J1:13 Right	Inf
J1:8/2 (Rbout Link 1)	U	L	2	3	8.0	Geom	-	3.80	0.00	N	Arm J1:9 Right	34.00
J1:8/3 (Rbout Link 1)	U	L	2	3	7.1	Geom	-	4.10	0.00	N	Arm J1:9 Right	30.00
J1:9/1 (Rbout Link 2)	U	N	2	3	11.3	Geom	-	3.70	0.00	Y	Arm J1:7 Ahead	Inf
J1:9/2 (Rbout Link 2)	U	N	2	3	10.1	Geom	-	3.70	0.00	N	Arm J1:7 Ahead	Inf
											Arm J1:10 Right	35.00
J1:9/3 (Rbout Link 2)	U	N	2	3	4.9	Geom	-	3.70	0.00	N	Arm J1:10 Right	25.00
J1:10/1 (Rbout Link 3)	U	A	2	3	8.3	Geom	-	3.50	0.00	Y	Arm J1:12 Ahead	Inf
J1:10/2 (Rbout Link 3)	U	A	2	3	7.7	Geom	-	3.40	0.00	N	Arm J1:11 Right	30.00
											Arm J1:12 Ahead	Inf
J1:10/3 (Rbout Link 3)	U	A	2	3	3.7	Geom	-	3.40	0.00	N	Arm J1:11 Right	27.00
J1:11/1 (Rbout Link 4)	U	H	2	3	7.8	Geom	-	3.75	0.00	Y	Arm J1:5 Ahead	Inf

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J1:11/2 (Rbout Link 4)	U	H	2	3	7.0	Geom	-	3.75	0.00	N	Arm J1:5 Ahead	Inf
J1:11/3 (Rbout Link 4)	U	H	2	3	6.1	Geom	-	3.75	0.00	Y	Arm J1:5 Ahead	Inf
											Arm J1:8 Right	24.00
J1:12/1 (Cromwell Ave (exit))	U	D	2	3	4.5	Geom	-	4.90	0.00	Y	Arm J2:1 Ahead	Inf
J1:12/2 (Cromwell Ave (exit))	U	D	2	3	4.5	Geom	-	3.55	0.00	N	Arm J2:1 Ahead	Inf
J1:13/1 (Sandy Lane Crossing)	U	Q	2	3	9.6	Geom	-	4.90	0.00	Y	Arm J1:6 Left	10.00
J1:14/1 (A49 Winwick Rd (exit))	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:14/2 (A49 Winwick Rd (exit))	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:15/1 (Sandy Lane West, Left Only)	U		2	3	4.3	Inf	-	-	-	-	-	-
J1:16/1 (Sandy Lane West Feeder)	U		2	3	60.0	Geom	-	3.25	0.00	Y	Arm J1:2 Ahead	Inf

Full Input Data And Results

Junction: J2: Calver Rd / A574												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
J2:1/1 (Cromwell Ave (East))	U	D	2	3	16.0	Geom	-	3.50	0.00	Y	Arm J2:4 Ahead	Inf
J2:1/2 (Cromwell Ave (East))	U	C	2	3	16.0	Geom	-	3.50	0.00	N	Arm J2:5 Right	10.00
J2:2/1 (Cromwell Ave (West))	U	A	2	3	10.8	Geom	-	3.00	0.00	Y	Arm J1:4 Ahead	Inf
											Arm J2:5 Left	20.00
J2:2/2 (Cromwell Ave (West))	U	A	2	3	60.0	Geom	-	3.00	0.00	N	Arm J1:4 Ahead	Inf
J2:3/1 (Calver Road)	U	B	2	3	60.0	Geom	-	5.00	0.00	Y	Arm J1:4 Left	25.00
J2:4/1 (Cromwell Ave (West exit))	U		2	3	60.0	Inf	-	-	-	-	-	-
J2:5/1 (Calver Road (exit))	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2025 Do Min AM'	08:00	09:00	01:00	
2: '2025 Do Min PM'	17:00	18:00	01:00	
3: '2025 Do Something AM'	08:00	09:00	01:00	
4: '2025 Do Something PM'	17:00	18:00	01:00	
5: '2030 Do Min AM'	08:00	09:00	01:00	
6: '2030 Do Min PM'	17:00	18:00	01:00	
7: '2030 Do Something AM'	08:00	09:00	01:00	
8: '2030 Do Something PM'	17:00	18:00	01:00	

Scenario 1: '2025 Do Min AM' (FG1: '2025 Do Min AM', Plan 1: 'Network Control Plan 1')

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	55	110	301	206	391	1063
	B	29	0	160	110	208	507
	C	248	102	21	225	1478	2074
	D	185	76	168	0	51	480
	E	259	107	1055	93	0	1514
	Tot.	776	395	1705	634	2128	5638

Scenario 2: '2025 Do Min PM' (FG2: '2025 Do Min PM', Plan 1: 'Network Control Plan 1')

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	56	130	222	63	255	726
	B	61	0	243	69	279	652
	C	312	124	0	303	810	1549
	D	267	106	328	0	59	760
	E	480	190	1343	64	2	2079
	Tot.	1176	550	2136	499	1405	5766

Full Input Data And Results

Scenario 3: '2025 Do Something AM' (FG3: '2025 Do Something AM', Plan 1: 'Network Control Plan 1')

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	57	110	301	239	404	1111
	B	29	0	152	121	204	506
	C	249	100	22	263	1475	2109
	D	211	85	201	0	82	579
	E	260	105	1057	139	0	1561
	Tot.	806	400	1733	762	2165	5866

Scenario 4: '2025 Do something PM' (FG4: '2025 Do Something PM', Plan 1: 'Network Control Plan 1')

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	57	130	223	71	257	738
	B	61	0	241	76	278	656
	C	311	121	1	334	807	1574
	D	290	112	404	0	113	919
	E	478	186	1375	67	1	2107
	Tot.	1197	549	2244	548	1456	5994

Scenario 5: '2030 Do Min AM' (FG5: '2030 Do Min AM', Plan 1: 'Network Control Plan 1')

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	57	114	307	214	410	1102
	B	30	0	163	113	217	523
	C	253	105	22	265	1489	2134
	D	192	80	175	0	53	500
	E	267	111	1089	104	0	1571
	Tot.	799	410	1756	696	2169	5830

Full Input Data And Results

Scenario 6: '2030 Do Min PM' (FG6: '2030 Do Min PM', Plan 1: 'Network Control Plan 1')

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	58	134	231	64	266	753
	B	64	0	253	70	290	677
	C	320	126	0	316	820	1582
	D	277	110	362	0	64	813
	E	488	193	1353	63	0	2097
	Tot.	1207	563	2199	513	1440	5922

Scenario 7: '2030 Do Something AM' (FG7: '2030 Do Something AM', Plan 1: 'Network Control Plan 1')

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	58	114	313	243	427	1155
	B	29	0	157	122	215	523
	C	253	100	22	317	1483	2175
	D	238	94	222	0	84	638
	E	272	107	1093	144	0	1616
	Tot.	850	415	1807	826	2209	6107

Scenario 8: '2030 Do something PM' (FG8: '2030 Do Something PM', Plan 1: 'Network Control Plan 1')

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	58	134	235	77	266	770
	B	63	0	254	83	286	686
	C	318	122	1	358	824	1623
	D	312	120	411	0	96	939
	E	487	187	1384	63	1	2122
	Tot.	1238	563	2285	581	1473	6140

Full Input Data And Results

Scenario 1: '2025 Do Min AM' (FG1: '2025 Do Min AM', Plan 1: 'Network Control Plan 1')

Network Results

Item	Lane Description	Lane Type	Total Green (s)	Demand Flow (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	82.2%	70.2	-	-
J1: A49	-	-	-	-	80.4%	50.8	-	-
1/2+1/1	A49 North Ahead Ahead2	U	62	993	76.2 : 76.2%	4.3	15.4	11.8
1/3+1/4	A49 North Ahead	U	62	1081	80.4 : 80.4%	4.9	16.3	13.5
2/1	Sandy Lane West Left Ahead	U	19	171	56.4%	1.7	36.3	3.4
2/2	Sandy Lane West Ahead	U	19	141	40.4%	1.2	30.8	2.6
2/3	Sandy Lane West Ahead	U	19	168	44.8%	1.4	31.0	3.1
3/2+3/1	A49 South Ahead Left	U	41:45	768	67.5 : 67.5%	4.4	20.7	8.3
3/3+3/4	A49 South Ahead	U	41	746	62.7 : 62.7%	4.3	20.7	9.1
4/2+4/1	Cromwell Ave Left	U	42	461	37.8 : 37.8%	1.6	12.3	3.5
4/3	Cromwell Ave Ahead	U	42	582	76.2%	3.4	21.1	10.6
4/4	Cromwell Ave Ahead	U	42	417	54.5%	1.8	15.2	6.1
5/1	A49 North (exit)	U	-	633	0.0%	0.0	0.0	0.0
5/2	A49 North (exit)	U	-	582	0.0%	0.0	0.0	0.0
5/3	A49 North (exit)	U	-	490	0.0%	0.0	0.0	0.0
6/1	Sandy Lane (exit)	U	-	634	0.0%	0.0	0.0	0.0
7/1	A49 South (exit) Ahead	U	112	1085	57.9%	0.7	2.3	0.8
7/2	A49 South (exit) Ahead	U	112	1043	52.0%	0.5	1.9	0.5
8/1	Rbout Link 1 Right	U	34	409	67.7%	2.3	20.5	8.6
8/2	Rbout Link 1 Right	U	34	266	43.4%	0.7	9.4	3.8
8/3	Rbout Link 1 Right	U	34	417	67.4%	1.7	14.8	8.7
9/1	Rbout Link 2 Ahead	U	77	1034	79.1%	2.8	9.8	9.2
9/2	Rbout Link 2 Ahead Right	U	77	1080	77.3%	2.7	9.1	10.0
9/3	Rbout Link 2 Right	U	77	418	31.7%	0.5	4.1	1.6

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10/1	Rbout Link 3 Ahead	U	47	157	19.6%	0.8	18.9	2.4
10/2	Rbout Link 3 Right Ahead	U	47	538	62.9%	2.7	18.0	9.1
10/3	Rbout Link 3 Right	U	47	189	23.3%	0.9	16.8	3.2
11/1	Rbout Link 4 Ahead	U	42	402	55.1%	1.0	9.3	5.9
11/2	Rbout Link 4 Ahead	U	42	467	59.8%	1.2	9.6	7.0
11/3	Rbout Link 4 Ahead Right	U	42	468	64.9%	2.0	15.2	8.2
12/1	Cromwell Ave (exit) Ahead	U	100	423	23.9%	0.3	2.4	1.3
12/2	Cromwell Ave (exit) Ahead	U	100	638	35.9%	0.3	1.8	0.7
13/1	Sandy Lane Crossing Left	U	102	634	40.4%	0.4	2.5	5.6
14/1	A49 Winwick Rd (exit)	U	-	1085	0.0%	0.0	0.0	0.0
14/2	A49 Winwick Rd (exit)	U	-	1043	0.0%	0.0	0.0	0.0
15/1	Sandy Lane West, Left Only	U	-	0	-	-	-	-
16/1	Sandy Lane West Feeder Ahead	U	-	480	24.7%	0.2	1.2	0.2
J2: Calver Rd / A574	-	-	-	-	82.2%	19.4	-	-
1/1	Cromwell Ave (East) Ahead	U	99	776	47.4%	0.8	3.6	4.3
1/2	Cromwell Ave (East) Right	U	22	285	81.3%	5.3	66.5	10.7
2/2+2/1	Cromwell Ave (West) Ahead Left	U	64	1063	82.2 : 82.2%	7.7	26.1	21.7
3/1	Calver Road Left	U	43	507	69.3%	5.7	40.2	15.3
4/1	Cromwell Ave (West exit)	U	-	776	0.0%	0.0	0.0	0.0
5/1	Calver Road (exit)	U	-	395	0.0%	0.0	0.0	0.0
			C1 Stream: 1 PRC for Signalled Lanes (%)	33.3	Total Delay for Signalled Lanes (pcuHr)	13.10	Cycle Time (s)	120
			C1 Stream: 2 PRC for Signalled Lanes (%)	18.1	Total Delay for Signalled Lanes (pcuHr)	10.99	Cycle Time (s)	120
			C1 Stream: 3 PRC for Signalled Lanes (%)	11.9	Total Delay for Signalled Lanes (pcuHr)	13.90	Cycle Time (s)	120
			C1 Stream: 4 PRC for Signalled Lanes (%)	13.7	Total Delay for Signalled Lanes (pcuHr)	10.41	Cycle Time (s)	120
			C1 Stream: 5 PRC for Signalled Lanes (%)	123.0	Total Delay for Signalled Lanes (pcuHr)	0.43	Cycle Time (s)	120
			C1 Stream: 6 PRC for Signalled Lanes (%)	55.4	Total Delay for Signalled Lanes (pcuHr)	1.23	Cycle Time (s)	120
			C1 Stream: 7 PRC for Signalled Lanes (%)	150.5	Total Delay for Signalled Lanes (pcuHr)	0.60	Cycle Time (s)	120
			C2 PRC for Signalled Lanes (%)	9.5	Total Delay for Signalled Lanes (pcuHr)	19.41	Cycle Time (s)	120
			PRC Over All Lanes (%)	9.5	Total Delay Over All Lanes (pcuHr)	70.25		

Full Input Data And Results

Scenario 2: '2025 Do Min PM' (FG2: '2025 Do Min PM', Plan 1: 'Network Control Plan 1')

Network Results

Item	Lane Description	Lane Type	Total Green (s)	Demand Flow (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	84.2%	69.1	-	-
J1: A49	-	-	-	-	84.2%	51.6	-	-
1/2+1/1	A49 North Ahead Ahead2	U	63	786	51.2 : 51.2%	2.3	10.4	5.6
1/3+1/4	A49 North Ahead	U	63	763	54.0 : 54.0%	2.3	10.7	5.9
2/1	Sandy Lane West Left Ahead	U	27	289	68.7%	2.8	34.4	5.8
2/2	Sandy Lane West Ahead	U	27	211	43.8%	1.5	26.1	3.6
2/3	Sandy Lane West Ahead	U	27	260	50.2%	1.9	26.8	4.5
3/2+3/1	A49 South Ahead Left	U	51:55	1021	83.5 : 83.5%	5.9	20.8	12.9
3/3+3/4	A49 South Ahead	U	51	1056	80.8 : 80.8%	5.9	20.2	11.9
4/2+4/1	Cromwell Ave Left	U	31	465	48.6 : 48.6%	1.8	14.0	3.2
4/3	Cromwell Ave Ahead	U	31	401	70.0%	2.5	22.6	6.5
4/4	Cromwell Ave Ahead	U	31	382	66.6%	2.3	21.5	6.0
5/1	A49 North (exit)	U	-	665	0.0%	0.0	0.0	0.0
5/2	A49 North (exit)	U	-	809	0.0%	0.0	0.0	0.0
5/3	A49 North (exit)	U	-	662	0.0%	0.0	0.0	0.0
6/1	Sandy Lane (exit)	U	-	499	0.0%	0.0	0.0	0.0
7/1	A49 South (exit) Ahead	U	112	811	43.3%	0.4	1.7	0.5
7/2	A49 South (exit) Ahead	U	112	592	29.5%	0.2	1.3	0.2
8/1	Rbout Link 1 Right	U	33	196	33.3%	0.8	13.9	2.0
8/2	Rbout Link 1 Right	U	33	269	45.1%	0.5	7.2	0.7
8/3	Rbout Link 1 Right	U	33	382	63.5%	1.0	9.8	2.0
9/1	Rbout Link 2 Ahead	U	69	752	64.0%	1.8	8.8	7.2
9/2	Rbout Link 2 Ahead Right	U	69	786	63.2%	1.8	8.5	8.0
9/3	Rbout Link 2 Right	U	69	359	30.3%	0.6	6.4	2.2

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10/1	Rbout Link 3 Ahead	U	37	424	66.4%	2.4	20.1	8.1
10/2	Rbout Link 3 Right Ahead	U	37	570	84.2%	4.9	31.0	11.9
10/3	Rbout Link 3 Right	U	37	260	40.3%	0.5	6.7	2.0
11/1	Rbout Link 4 Ahead	U	53	414	45.4%	0.8	6.9	4.4
11/2	Rbout Link 4 Ahead	U	53	702	71.9%	1.5	7.7	1.9
11/3	Rbout Link 4 Ahead Right	U	53	619	68.3%	3.2	18.7	10.6
12/1	Cromwell Ave (exit) Ahead	U	100	769	43.4%	0.6	2.7	2.2
12/2	Cromwell Ave (exit) Ahead	U	100	827	46.6%	0.6	2.6	2.1
13/1	Sandy Lane Crossing Left	U	102	499	31.8%	0.3	2.5	1.5
14/1	A49 Winwick Rd (exit)	U	-	811	0.0%	0.0	0.0	0.0
14/2	A49 Winwick Rd (exit)	U	-	592	0.0%	0.0	0.0	0.0
15/1	Sandy Lane West, Left Only	U	-	0	-	-	-	-
16/1	Sandy Lane West Feeder Ahead	U	-	760	39.2%	0.3	1.5	0.3
J2: Calver Rd / A574	-	-	-	-	74.3%	17.5	-	-
1/1	Cromwell Ave (East) Ahead	U	99	1176	71.8%	2.3	7.1	13.9
1/2	Cromwell Ave (East) Right	U	47	420	57.4%	3.6	30.9	11.8
2/2+2/1	Cromwell Ave (West) Ahead Left	U	39	726	74.3 : 74.3%	8.0	39.8	11.5
3/1	Calver Road Left	U	68	652	56.8%	3.6	19.7	14.2
4/1	Cromwell Ave (West exit)	U	-	1176	0.0%	0.0	0.0	0.0
5/1	Calver Road (exit)	U	-	550	0.0%	0.0	0.0	0.0
C1 Stream: 1 PRC for Signalled Lanes (%)			6.9	Total Delay for Signalled Lanes (pcuHr):		19.59	Cycle Time (s): 120	
C1 Stream: 2 PRC for Signalled Lanes (%)			25.2	Total Delay for Signalled Lanes (pcuHr):		12.11	Cycle Time (s): 120	
C1 Stream: 3 PRC for Signalled Lanes (%)			41.7	Total Delay for Signalled Lanes (pcuHr):		6.87	Cycle Time (s): 120	
C1 Stream: 4 PRC for Signalled Lanes (%)			31.0	Total Delay for Signalled Lanes (pcuHr):		10.55	Cycle Time (s): 120	
C1 Stream: 5 PRC for Signalled Lanes (%)			183.3	Total Delay for Signalled Lanes (pcuHr):		0.34	Cycle Time (s): 120	
C1 Stream: 6 PRC for Signalled Lanes (%)			108.0	Total Delay for Signalled Lanes (pcuHr):		0.59	Cycle Time (s): 120	
C1 Stream: 7 PRC for Signalled Lanes (%)			93.3	Total Delay for Signalled Lanes (pcuHr):		1.17	Cycle Time (s): 120	
C2 PRC for Signalled Lanes (%)			21.1	Total Delay for Signalled Lanes (pcuHr):		17.54	Cycle Time (s): 120	
PRC Over All Lanes (%)			6.9	Total Delay Over All Lanes (pcuHr):		69.09		

Full Input Data And Results

Scenario 3: '2025 Do Something AM' (FG3: '2025 Do Something AM', Plan 1: 'Network Control Plan 1')

Network Results

Item	Lane Description	Lane Type	Total Green (s)	Demand Flow (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	86.4%	77.9	-	-
J1: A49	-	-	-	-	83.2%	56.2	-	-
1/2+1/1	A49 North Ahead Ahead2	U	60	1063	82.3 : 82.3%	5.4	18.2	12.5
1/3+1/4	A49 North Ahead	U	60	1046	83.2 : 83.2%	5.5	18.8	13.2
2/1	Sandy Lane West Left Ahead	U	18	194	67.5%	2.3	43.0	4.5
2/2	Sandy Lane West Ahead	U	18	196	59.0%	2.0	36.8	4.2
2/3	Sandy Lane West Ahead	U	18	189	52.9%	1.8	34.1	3.9
3/2+3/1	A49 South Ahead Left	U	46:50	784	64.9 : 64.9%	3.7	17.2	6.9
3/3+3/4	A49 South Ahead	U	46	777	61.5 : 61.5%	3.8	17.5	7.9
4/2+4/1	Cromwell Ave Left	U	40	453	39.3 : 39.3%	1.8	13.9	3.8
4/3	Cromwell Ave Ahead	U	40	596	81.8%	4.5	27.1	13.0
4/4	Cromwell Ave Ahead	U	40	458	62.7%	2.4	18.9	8.2
5/1	A49 North (exit)	U	-	641	0.0%	0.0	0.0	0.0
5/2	A49 North (exit)	U	-	608	0.0%	0.0	0.0	0.0
5/3	A49 North (exit)	U	-	484	0.0%	0.0	0.0	0.0
6/1	Sandy Lane (exit)	U	-	762	0.0%	0.0	0.0	0.0
7/1	A49 South (exit) Ahead	U	112	1118	59.7%	0.7	2.4	1.4
7/2	A49 South (exit) Ahead	U	112	1047	52.2%	0.5	1.9	0.7
8/1	Rbout Link 1 Right	U	36	499	78.2%	3.1	22.7	7.5
8/2	Rbout Link 1 Right	U	36	236	36.4%	0.5	8.0	0.9
8/3	Rbout Link 1 Right	U	36	458	70.1%	1.5	11.8	2.9
9/1	Rbout Link 2 Ahead	U	78	1036	78.3%	2.6	9.1	9.1
9/2	Rbout Link 2 Ahead Right	U	78	1145	81.1%	3.2	10.0	11.0
9/3	Rbout Link 2 Right	U	78	359	26.9%	0.4	4.0	1.5

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10/1	Rbout Link 3 Ahead	U	42	210	29.1%	0.7	12.8	2.3
10/2	Rbout Link 3 Right Ahead	U	42	534	69.6%	3.1	20.6	7.0
10/3	Rbout Link 3 Right	U	42	210	28.9%	0.4	6.3	0.8
11/1	Rbout Link 4 Ahead	U	44	432	56.6%	1.2	9.9	2.9
11/2	Rbout Link 4 Ahead	U	44	486	59.5%	1.3	9.7	2.3
11/3	Rbout Link 4 Ahead Right	U	44	501	66.8%	2.4	17.3	8.7
12/1	Cromwell Ave (exit) Ahead	U	100	473	26.7%	0.3	2.3	1.3
12/2	Cromwell Ave (exit) Ahead	U	100	623	35.1%	0.3	1.8	0.7
13/1	Sandy Lane Crossing Left	U	102	762	48.5%	0.6	2.7	4.6
14/1	A49 Winwick Rd (exit)	U	-	1118	0.0%	0.0	0.0	0.0
14/2	A49 Winwick Rd (exit)	U	-	1047	0.0%	0.0	0.0	0.0
15/1	Sandy Lane West, Left Only	U	-	0	-	-	-	-
16/1	Sandy Lane West Feeder Ahead	U	-	579	29.8%	0.2	1.3	0.2
J2: Calver Rd / A574	-	-	-	-	86.4%	21.7	-	-
1/1	Cromwell Ave (East) Ahead	U	99	806	49.2%	0.8	3.5	9.4
1/2	Cromwell Ave (East) Right	U	21	290	86.4%	6.4	79.0	12.4
2/2+2/1	Cromwell Ave (West) Ahead Left	U	65	1111	85.7 : 85.7%	8.7	28.2	25.6
3/1	Calver Road Left	U	42	506	70.8%	5.9	41.6	15.7
4/1	Cromwell Ave (West exit)	U	-	806	0.0%	0.0	0.0	0.0
5/1	Calver Road (exit)	U	-	400	0.0%	0.0	0.0	0.0
			C1 Stream: 1 PRC for Signalled Lanes (%)	29.3	Total Delay for Signalled Lanes (pcuHr)	11.68	Cycle Time (s)	120
			C1 Stream: 2 PRC for Signalled Lanes (%)	10.1	Total Delay for Signalled Lanes (pcuHr)	13.55	Cycle Time (s)	120
			C1 Stream: 3 PRC for Signalled Lanes (%)	8.2	Total Delay for Signalled Lanes (pcuHr)	16.01	Cycle Time (s)	120
			C1 Stream: 4 PRC for Signalled Lanes (%)	10.9	Total Delay for Signalled Lanes (pcuHr)	12.30	Cycle Time (s)	120
			C1 Stream: 5 PRC for Signalled Lanes (%)	85.5	Total Delay for Signalled Lanes (pcuHr)	0.58	Cycle Time (s)	120
			C1 Stream: 6 PRC for Signalled Lanes (%)	50.9	Total Delay for Signalled Lanes (pcuHr)	1.30	Cycle Time (s)	120
			C1 Stream: 7 PRC for Signalled Lanes (%)	156.6	Total Delay for Signalled Lanes (pcuHr)	0.62	Cycle Time (s)	120
			C2 PRC for Signalled Lanes (%)	4.1	Total Delay for Signalled Lanes (pcuHr)	21.68	Cycle Time (s)	120
			PRC Over All Lanes (%)	4.1	Total Delay Over All Lanes (pcuHr)	77.91		

Full Input Data And Results

Scenario 4: '2025 Do something PM' (FG4: '2025 Do Something PM', Plan 1: 'Network Control Plan 1')

Network Results

Item	Lane Description	Lane Type	Total Green (s)	Demand Flow (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	86.2%	75.5	-	-
J1: A49	-	-	-	-	86.2%	57.5	-	-
1/2+1/1	A49 North Ahead Ahead2	U	63	845	54.4 : 54.4%	2.5	10.8	6.6
1/3+1/4	A49 North Ahead	U	63	729	55.8 : 55.8%	2.3	11.4	7.1
2/1	Sandy Lane West Left Ahead	U	28	288	66.7%	2.6	32.6	5.4
2/2	Sandy Lane West Ahead	U	28	332	66.7%	2.9	31.0	6.1
2/3	Sandy Lane West Ahead	U	28	299	55.8%	2.3	27.2	5.0
3/2+3/1	A49 South Ahead Left	U	48:52	1007	86.2 : 86.2%	6.7	24.0	13.6
3/3+3/4	A49 South Ahead	U	48	1099	85.6 : 85.6%	7.3	23.9	13.3
4/2+4/1	Cromwell Ave Left	U	32	464	49.0 : 49.0%	1.8	14.2	3.3
4/3	Cromwell Ave Ahead	U	32	416	70.5%	2.6	22.7	6.8
4/4	Cromwell Ave Ahead	U	32	384	65.0%	2.2	21.0	6.3
5/1	A49 North (exit)	U	-	699	0.0%	0.0	0.0	0.0
5/2	A49 North (exit)	U	-	818	0.0%	0.0	0.0	0.0
5/3	A49 North (exit)	U	-	727	0.0%	0.0	0.0	0.0
6/1	Sandy Lane (exit)	U	-	548	0.0%	0.0	0.0	0.0
7/1	A49 South (exit) Ahead	U	112	893	47.7%	0.5	1.9	1.1
7/2	A49 South (exit) Ahead	U	112	562	28.0%	0.2	1.2	0.2
8/1	Rbout Link 1 Right	U	33	214	36.4%	0.8	14.0	3.1
8/2	Rbout Link 1 Right	U	33	269	45.1%	0.5	7.2	3.4
8/3	Rbout Link 1 Right	U	33	384	63.8%	1.1	10.5	6.2
9/1	Rbout Link 2 Ahead	U	68	780	67.4%	2.0	9.3	7.3
9/2	Rbout Link 2 Ahead Right	U	68	830	67.9%	2.1	9.2	8.3
9/3	Rbout Link 2 Right	U	68	283	24.2%	0.4	5.7	1.6

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10/1	Rbout Link 3 Ahead	U	40	443	64.4%	2.6	21.2	6.3
10/2	Rbout Link 3 Right Ahead	U	40	614	84.5%	4.6	26.8	9.0
10/3	Rbout Link 3 Right	U	40	300	43.2%	0.6	6.8	2.1
11/1	Rbout Link 4 Ahead	U	52	441	49.2%	1.0	8.4	5.3
11/2	Rbout Link 4 Ahead	U	52	715	74.6%	1.6	8.1	1.8
11/3	Rbout Link 4 Ahead Right	U	52	691	77.6%	4.0	20.9	12.4
12/1	Cromwell Ave (exit) Ahead	U	100	781	44.1%	0.6	2.9	2.5
12/2	Cromwell Ave (exit) Ahead	U	100	835	47.0%	0.7	2.9	2.4
13/1	Sandy Lane Crossing Left	U	102	548	34.9%	0.4	2.6	1.7
14/1	A49 Winwick Rd (exit)	U	-	893	0.0%	0.0	0.0	0.0
14/2	A49 Winwick Rd (exit)	U	-	562	0.0%	0.0	0.0	0.0
15/1	Sandy Lane West, Left Only	U	-	0	-	-	-	-
16/1	Sandy Lane West Feeder Ahead	U	-	919	47.4%	0.4	1.8	0.4
J2: Calver Rd / A574	-	-	-	-	73.1%	17.9	-	-
1/1	Cromwell Ave (East) Ahead	U	99	1197	73.1%	2.5	7.5	13.7
1/2	Cromwell Ave (East) Right	U	44	419	61.1%	3.8	32.8	11.5
2/2+2/1	Cromwell Ave (West) Ahead Left	U	42	738	72.5 : 72.5%	7.5	36.8	11.4
3/1	Calver Road Left	U	65	656	59.8%	4.0	22.2	15.3
4/1	Cromwell Ave (West exit)	U	-	1197	0.0%	0.0	0.0	0.0
5/1	Calver Road (exit)	U	-	549	0.0%	0.0	0.0	0.0
			C1 Stream: 1 PRC for Signalled Lanes (%)	4.5	Total Delay for Signalled Lanes (pcuHr)	21.76	Cycle Time (s)	120
			C1 Stream: 2 PRC for Signalled Lanes (%)	15.9	Total Delay for Signalled Lanes (pcuHr)	13.34	Cycle Time (s)	120
			C1 Stream: 3 PRC for Signalled Lanes (%)	41.0	Total Delay for Signalled Lanes (pcuHr)	7.33	Cycle Time (s)	120
			C1 Stream: 4 PRC for Signalled Lanes (%)	32.6	Total Delay for Signalled Lanes (pcuHr)	12.29	Cycle Time (s)	120
			C1 Stream: 5 PRC for Signalled Lanes (%)	158.0	Total Delay for Signalled Lanes (pcuHr)	0.40	Cycle Time (s)	120
			C1 Stream: 6 PRC for Signalled Lanes (%)	88.9	Total Delay for Signalled Lanes (pcuHr)	0.67	Cycle Time (s)	120
			C1 Stream: 7 PRC for Signalled Lanes (%)	91.4	Total Delay for Signalled Lanes (pcuHr)	1.31	Cycle Time (s)	120
			C2 PRC for Signalled Lanes (%)	23.1	Total Delay for Signalled Lanes (pcuHr)	17.91	Cycle Time (s)	120
			PRC Over All Lanes (%)	4.5	Total Delay Over All Lanes (pcuHr)	75.46		

Full Input Data And Results

Scenario 5: '2030 Do Min AM' (FG5: '2030 Do Min AM', Plan 1: 'Network Control Plan 1')

Network Results

Item	Lane Description	Lane Type	Total Green (s)	Demand Flow (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	85.5%	76.8	-	-
J1: A49	-	-	-	-	82.0%	55.3	-	-
1/2+1/1	A49 North Ahead Ahead2	U	62	1041	78.0 : 78.0%	4.5	15.7	11.9
1/3+1/4	A49 North Ahead	U	62	1093	82.0 : 82.0%	5.2	17.0	13.8
2/1	Sandy Lane West Left Ahead	U	17	182	66.3%	2.2	42.9	3.9
2/2	Sandy Lane West Ahead	U	17	158	50.1%	1.5	34.5	3.0
2/3	Sandy Lane West Ahead	U	17	160	47.1%	1.5	33.0	3.0
3/2+3/1	A49 South Ahead Left	U	43:47	799	68.5 : 68.5%	4.2	18.8	6.9
3/3+3/4	A49 South Ahead	U	43	772	60.7 : 60.7%	3.9	18.2	7.4
4/2+4/1	Cromwell Ave Left	U	43	470	39.0 : 39.0%	1.7	12.8	3.8
4/3	Cromwell Ave Ahead	U	43	608	77.8%	3.7	22.2	12.3
4/4	Cromwell Ave Ahead	U	43	433	55.4%	1.9	15.4	6.8
5/1	A49 North (exit)	U	-	647	0.0%	0.0	0.0	0.0
5/2	A49 North (exit)	U	-	602	0.0%	0.0	0.0	0.0
5/3	A49 North (exit)	U	-	507	0.0%	0.0	0.0	0.0
6/1	Sandy Lane (exit)	U	-	696	0.0%	0.0	0.0	0.0
7/1	A49 South (exit) Ahead	U	112	1110	59.2%	0.7	2.4	1.1
7/2	A49 South (exit) Ahead	U	112	1059	52.8%	0.6	1.9	0.7
8/1	Rbout Link 1 Right	U	34	431	71.3%	2.7	22.3	9.2
8/2	Rbout Link 1 Right	U	34	281	45.8%	0.7	8.6	4.0
8/3	Rbout Link 1 Right	U	34	433	70.0%	1.8	15.1	9.3
9/1	Rbout Link 2 Ahead	U	79	1057	78.9%	2.7	9.4	9.1
9/2	Rbout Link 2 Ahead Right	U	79	1108	77.4%	2.7	8.8	10.1
9/3	Rbout Link 2 Right	U	79	418	30.9%	0.4	3.6	1.7

Full Input Data And Results

10/1	Rbout Link 3 Ahead	U	45	178	23.1%	0.8	16.2	2.6
10/2	Rbout Link 3 Right Ahead	U	45	555	67.7%	2.9	19.1	8.8
10/3	Rbout Link 3 Right	U	45	181	23.3%	1.0	20.7	3.0
11/1	Rbout Link 4 Ahead	U	41	429	60.2%	2.1	17.8	8.0
11/2	Rbout Link 4 Ahead	U	41	476	62.4%	2.3	17.6	8.9
11/3	Rbout Link 4 Ahead Right	U	41	485	68.9%	2.2	16.5	6.3
12/1	Cromwell Ave (exit) Ahead	U	100	436	24.6%	0.3	2.3	1.2
12/2	Cromwell Ave (exit) Ahead	U	100	659	37.1%	0.3	1.9	0.8
13/1	Sandy Lane Crossing Left	U	102	696	44.3%	0.5	2.6	6.1
14/1	A49 Winwick Rd (exit)	U	-	1110	0.0%	0.0	0.0	0.0
14/2	A49 Winwick Rd (exit)	U	-	1059	0.0%	0.0	0.0	0.0
15/1	Sandy Lane West, Left Only	U	-	0	-	-	-	-
16/1	Sandy Lane West Feeder Ahead	U	-	500	25.8%	0.2	1.2	0.2
J2: Calver Rd / A574	-	-	-	-	85.5%	21.5	-	-
1/1	Cromwell Ave (East) Ahead	U	99	799	48.8%	0.9	4.1	6.1
1/2	Cromwell Ave (East) Right	U	22	296	84.4%	5.9	71.6	11.7
2/2+2/1	Cromwell Ave (West) Ahead Left	U	64	1102	85.5 : 85.5%	8.7	28.5	25.0
3/1	Calver Road Left	U	43	523	71.5%	6.0	41.1	16.2
4/1	Cromwell Ave (West exit)	U	-	799	0.0%	0.0	0.0	0.0
5/1	Calver Road (exit)	U	-	410	0.0%	0.0	0.0	0.0
C1 Stream: 1 PRC for Signalled Lanes (%)			31.5	Total Delay for Signalled Lanes (pcuHr):		12.86	Cycle Time (s): 120	
C1 Stream: 2 PRC for Signalled Lanes (%)			15.6	Total Delay for Signalled Lanes (pcuHr):		13.94	Cycle Time (s): 120	
C1 Stream: 3 PRC for Signalled Lanes (%)			9.8	Total Delay for Signalled Lanes (pcuHr):		14.89	Cycle Time (s): 120	
C1 Stream: 4 PRC for Signalled Lanes (%)			14.1	Total Delay for Signalled Lanes (pcuHr):		11.04	Cycle Time (s): 120	
C1 Stream: 5 PRC for Signalled Lanes (%)			103.1	Total Delay for Signalled Lanes (pcuHr):		0.51	Cycle Time (s): 120	
C1 Stream: 6 PRC for Signalled Lanes (%)			51.9	Total Delay for Signalled Lanes (pcuHr):		1.30	Cycle Time (s): 120	
C1 Stream: 7 PRC for Signalled Lanes (%)			142.5	Total Delay for Signalled Lanes (pcuHr):		0.62	Cycle Time (s): 120	
C2 PRC for Signalled Lanes (%)			5.3	Total Delay for Signalled Lanes (pcuHr):		21.49	Cycle Time (s): 120	
PRC Over All Lanes (%)			5.3	Total Delay Over All Lanes(pcuHr):		76.83		

Full Input Data And Results

Scenario 6: '2030 Do Min PM' (FG6: '2030 Do Min PM', Plan 1: 'Network Control Plan 1')

Network Results

Item	Lane Description	Lane Type	Total Green (s)	Demand Flow (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	84.1%	74.3	-	-
J1: A49	-	-	-	-	84.1%	55.5	-	-
1/2+1/1	A49 North Ahead Ahead2	U	63	835	54.8 : 54.8%	2.5	10.7	5.9
1/3+1/4	A49 North Ahead	U	63	747	56.2 : 56.2%	2.3	11.1	6.1
2/1	Sandy Lane West Left Ahead	U	27	279	66.4%	2.6	33.6	5.7
2/2	Sandy Lane West Ahead	U	27	254	52.8%	2.0	28.1	4.7
2/3	Sandy Lane West Ahead	U	27	280	54.0%	2.2	27.8	5.2
3/2+3/1	A49 South Ahead Left	U	51:55	1021	84.1 : 84.1%	6.1	21.3	13.2
3/3+3/4	A49 South Ahead	U	51	1076	83.0 : 83.0%	6.4	21.3	12.6
4/2+4/1	Cromwell Ave Left	U	31	484	51.0 : 51.0%	1.9	14.5	3.3
4/3	Cromwell Ave Ahead	U	31	416	72.6%	2.7	23.6	6.8
4/4	Cromwell Ave Ahead	U	31	396	69.0%	2.5	22.5	6.1
5/1	A49 North (exit)	U	-	672	0.0%	0.0	0.0	0.0
5/2	A49 North (exit)	U	-	839	0.0%	0.0	0.0	0.0
5/3	A49 North (exit)	U	-	688	0.0%	0.0	0.0	0.0
6/1	Sandy Lane (exit)	U	-	513	0.0%	0.0	0.0	0.0
7/1	A49 South (exit) Ahead	U	112	865	46.2%	0.4	1.8	0.6
7/2	A49 South (exit) Ahead	U	112	575	28.7%	0.2	1.3	0.2
8/1	Rbout Link 1 Right	U	33	197	33.5%	0.8	13.8	1.7
8/2	Rbout Link 1 Right	U	33	282	47.3%	0.6	7.7	0.7
8/3	Rbout Link 1 Right	U	33	396	65.8%	1.2	10.6	1.3
9/1	Rbout Link 2 Ahead	U	69	801	68.2%	2.1	9.3	7.2
9/2	Rbout Link 2 Ahead Right	U	69	835	67.3%	2.1	9.0	7.7
9/3	Rbout Link 2 Right	U	69	308	26.0%	0.5	5.7	1.7

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10/1	Rbout Link 3 Ahead	U	37	475	74.4%	3.4	25.4	9.4	
10/2	Rbout Link 3 Right Ahead	U	37	562	83.1%	4.6	29.4	11.1	
10/3	Rbout Link 3 Right	U	37	280	43.4%	0.6	7.7	4.4	
11/1	Rbout Link 4 Ahead	U	53	412	45.2%	0.9	7.8	2.2	
11/2	Rbout Link 4 Ahead	U	53	727	74.5%	2.0	9.8	2.7	
11/3	Rbout Link 4 Ahead Right	U	53	639	70.5%	3.2	18.3	10.8	
12/1	Cromwell Ave (exit) Ahead	U	100	815	46.0%	0.6	2.7	2.2	
12/2	Cromwell Ave (exit) Ahead	U	100	821	46.2%	0.6	2.7	2.2	
13/1	Sandy Lane Crossing Left	U	102	513	32.7%	0.4	2.5	1.5	
14/1	A49 Winwick Rd (exit)	U	-	865	0.0%	0.0	0.0	0.0	
14/2	A49 Winwick Rd (exit)	U	-	575	0.0%	0.0	0.0	0.0	
15/1	Sandy Lane West, Left Only	U	-	0	-	-	-	-	
16/1	Sandy Lane West Feeder Ahead	U	-	813	41.9%	0.4	1.6	0.4	
J2: Calver Rd / A574	-	-	-	-	77.1%	18.8	-	-	
1/1	Cromwell Ave (East) Ahead	U	99	1207	73.7%	2.7	7.9	14.2	
1/2	Cromwell Ave (East) Right	U	47	429	58.6%	3.8	31.8	12.2	
2/2+2/1	Cromwell Ave (West) Ahead Left	U	39	753	77.1 : 77.1%	8.6	40.9	12.2	
3/1	Calver Road Left	U	68	677	59.0%	3.8	20.2	15.2	
4/1	Cromwell Ave (West exit)	U	-	1207	0.0%	0.0	0.0	0.0	
5/1	Calver Road (exit)	U	-	563	0.0%	0.0	0.0	0.0	
C1 Stream: 1 PRC for Signalled Lanes (%)		7.0		Total Delay for Signalled Lanes (pcuHr):		20.97		Cycle Time (s): 120	
C1 Stream: 2 PRC for Signalled Lanes (%)		20.9		Total Delay for Signalled Lanes (pcuHr):		13.28		Cycle Time (s): 120	
C1 Stream: 3 PRC for Signalled Lanes (%)		36.7		Total Delay for Signalled Lanes (pcuHr):		7.30		Cycle Time (s): 120	
C1 Stream: 4 PRC for Signalled Lanes (%)		32.0		Total Delay for Signalled Lanes (pcuHr):		11.38		Cycle Time (s): 120	
C1 Stream: 5 PRC for Signalled Lanes (%)		175.6		Total Delay for Signalled Lanes (pcuHr):		0.36		Cycle Time (s): 120	
C1 Stream: 6 PRC for Signalled Lanes (%)		95.0		Total Delay for Signalled Lanes (pcuHr):		0.64		Cycle Time (s): 120	
C1 Stream: 7 PRC for Signalled Lanes (%)		94.7		Total Delay for Signalled Lanes (pcuHr):		1.23		Cycle Time (s): 120	
C2 PRC for Signalled Lanes (%)		16.8		Total Delay for Signalled Lanes (pcuHr):		18.81		Cycle Time (s): 120	
PRC Over All Lanes (%)		7.0		Total Delay Over All Lanes (pcuHr):		74.33			

Full Input Data And Results

Scenario 7: '2030 Do Something AM' (FG7: '2030 Do Something AM', Plan 1: 'Network Control Plan 1')

Network Results

Item	Lane Description	Lane Type	Total Green (s)	Demand Flow (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	89.7%	85.7	-	-
J1: A49	-	-	-	-	83.9%	61.6	-	-
1/2+1/1	A49 North Ahead Ahead2	U	60	1116	83.6 : 83.6%	5.7	18.5	12.7
1/3+1/4	A49 North Ahead	U	60	1059	83.9 : 83.9%	5.6	19.1	14.0
2/1	Sandy Lane West Left Ahead	U	19	212	70.2%	2.5	42.8	4.5
2/2	Sandy Lane West Ahead	U	19	224	64.3%	2.3	37.3	4.4
2/3	Sandy Lane West Ahead	U	19	202	53.8%	1.8	32.9	3.7
3/2+3/1	A49 South Ahead Left	U	45:49	817	68.7 : 68.7%	4.1	18.0	6.9
3/3+3/4	A49 South Ahead	U	45	799	61.9 : 61.9%	3.9	17.6	7.5
4/2+4/1	Cromwell Ave Left	U	43	470	38.7 : 38.7%	1.8	14.1	4.0
4/3	Cromwell Ave Ahead	U	43	625	80.0%	4.5	25.9	13.8
4/4	Cromwell Ave Ahead	U	43	469	60.0%	2.4	18.4	8.5
5/1	A49 North (exit)	U	-	670	0.0%	0.0	0.0	0.0
5/2	A49 North (exit)	U	-	628	0.0%	0.0	0.0	0.0
5/3	A49 North (exit)	U	-	509	0.0%	0.0	0.0	0.0
6/1	Sandy Lane (exit)	U	-	826	0.0%	0.0	0.0	0.0
7/1	A49 South (exit) Ahead	U	112	1143	61.0%	0.8	2.5	1.6
7/2	A49 South (exit) Ahead	U	112	1066	53.1%	0.6	1.9	0.7
8/1	Rbout Link 1 Right	U	36	509	79.8%	3.3	23.5	9.4
8/2	Rbout Link 1 Right	U	36	260	40.1%	0.6	8.1	1.2
8/3	Rbout Link 1 Right	U	36	469	71.8%	1.7	13.0	9.5
9/1	Rbout Link 2 Ahead	U	77	1059	81.0%	3.0	10.0	9.4
9/2	Rbout Link 2 Ahead Right	U	77	1158	83.0%	3.6	11.3	11.4
9/3	Rbout Link 2 Right	U	77	370	28.0%	0.4	3.9	1.7

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10/1	Rbout Link 3 Ahead	U	43	220	29.9%	0.8	12.8	2.1
10/2	Rbout Link 3 Right Ahead	U	43	576	73.5%	3.6	22.6	7.8
10/3	Rbout Link 3 Right	U	43	220	29.6%	0.4	5.7	0.8
11/1	Rbout Link 4 Ahead	U	41	450	63.1%	1.6	13.1	3.1
11/2	Rbout Link 4 Ahead	U	41	503	65.9%	1.9	13.4	2.8
11/3	Rbout Link 4 Ahead Right	U	41	528	75.3%	3.0	20.4	10.1
12/1	Cromwell Ave (exit) Ahead	U	100	418	23.6%	0.2	2.0	0.9
12/2	Cromwell Ave (exit) Ahead	U	100	733	41.3%	0.4	2.1	1.0
13/1	Sandy Lane Crossing Left	U	102	826	52.6%	0.7	3.0	6.8
14/1	A49 Winwick Rd (exit)	U	-	1143	0.0%	0.0	0.0	0.0
14/2	A49 Winwick Rd (exit)	U	-	1066	0.0%	0.0	0.0	0.0
15/1	Sandy Lane West, Left Only	U	-	0	-	-	-	-
16/1	Sandy Lane West Feeder Ahead	U	-	638	32.9%	0.2	1.4	0.2
J2: Calver Rd / A574	-	-	-	-	89.7%	24.1	-	-
1/1	Cromwell Ave (East) Ahead	U	99	850	51.9%	0.6	2.7	7.7
1/2	Cromwell Ave (East) Right	U	21	301	89.7%	7.1	85.2	13.5
2/2+2/1	Cromwell Ave (West) Ahead Left	U	65	1155	89.1 : 89.1%	10.1	31.6	29.3
3/1	Calver Road Left	U	42	523	73.2%	6.2	42.7	16.5
4/1	Cromwell Ave (West exit)	U	-	850	0.0%	0.0	0.0	0.0
5/1	Calver Road (exit)	U	-	415	0.0%	0.0	0.0	0.0
C1 Stream: 1 PRC for Signalled Lanes (%)			22.5	Total Delay for Signalled Lanes (pcuHr):		12.76	Cycle Time (s): 120	
C1 Stream: 2 PRC for Signalled Lanes (%)			12.5	Total Delay for Signalled Lanes (pcuHr):		15.24	Cycle Time (s): 120	
C1 Stream: 3 PRC for Signalled Lanes (%)			7.3	Total Delay for Signalled Lanes (pcuHr):		16.96	Cycle Time (s): 120	
C1 Stream: 4 PRC for Signalled Lanes (%)			8.4	Total Delay for Signalled Lanes (pcuHr):		13.65	Cycle Time (s): 120	
C1 Stream: 5 PRC for Signalled Lanes (%)			71.1	Total Delay for Signalled Lanes (pcuHr):		0.70	Cycle Time (s): 120	
C1 Stream: 6 PRC for Signalled Lanes (%)			47.6	Total Delay for Signalled Lanes (pcuHr):		1.37	Cycle Time (s): 120	
C1 Stream: 7 PRC for Signalled Lanes (%)			118.1	Total Delay for Signalled Lanes (pcuHr):		0.66	Cycle Time (s): 120	
C2 PRC for Signalled Lanes (%)			0.3	Total Delay for Signalled Lanes (pcuHr):		24.11	Cycle Time (s): 120	
PRC Over All Lanes (%)			0.3	Total Delay Over All Lanes (pcuHr):		85.69		

Full Input Data And Results

Scenario 8: '2030 Do something PM' (FG8: '2030 Do Something PM', Plan 1: 'Network Control Plan 1')

Network Results

Item	Lane Description	Lane Type	Total Green (s)	Demand Flow (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	87.3%	80.5	-	-
J1: A49	-	-	-	-	87.3%	61.1	-	-
1/2+1/1	A49 North Ahead Ahead2	U	62	886	57.1 : 57.1%	2.7	11.1	6.1
1/3+1/4	A49 North Ahead	U	62	737	56.9 : 56.9%	2.4	11.6	6.2
2/1	Sandy Lane West Left Ahead	U	29	305	68.2%	2.8	32.5	5.6
2/2	Sandy Lane West Ahead	U	29	353	68.6%	3.0	31.1	6.4
2/3	Sandy Lane West Ahead	U	29	281	50.7%	2.0	25.6	4.5
3/2+3/1	A49 South Ahead Left	U	47:51	988	87.3 : 87.3%	7.1	25.8	15.0
3/3+3/4	A49 South Ahead	U	47	1133	86.8 : 86.8%	7.9	25.0	14.2
4/2+4/1	Cromwell Ave Left	U	31	489	54.5 : 54.5%	2.1	15.2	3.3
4/3	Cromwell Ave Ahead	U	31	428	74.7%	2.9	24.8	6.9
4/4	Cromwell Ave Ahead	U	31	405	70.6%	2.6	23.3	6.5
5/1	A49 North (exit)	U	-	706	0.0%	0.0	0.0	0.0
5/2	A49 North (exit)	U	-	827	0.0%	0.0	0.0	0.0
5/3	A49 North (exit)	U	-	752	0.0%	0.0	0.0	0.0
6/1	Sandy Lane (exit)	U	-	581	0.0%	0.0	0.0	0.0
7/1	A49 South (exit) Ahead	U	112	892	47.6%	0.5	1.9	0.6
7/2	A49 South (exit) Ahead	U	112	580	28.9%	0.2	1.3	0.2
8/1	Rbout Link 1 Right	U	34	223	36.9%	0.8	12.5	2.0
8/2	Rbout Link 1 Right	U	34	268	43.7%	0.5	6.7	0.7
8/3	Rbout Link 1 Right	U	34	405	65.5%	1.1	9.8	1.6
9/1	Rbout Link 2 Ahead	U	67	796	69.7%	2.2	10.1	7.5
9/2	Rbout Link 2 Ahead Right	U	67	845	70.1%	2.3	10.0	8.5
9/3	Rbout Link 2 Right	U	67	297	25.8%	0.5	5.8	1.7

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10/1	Rbout Link 3 Ahead	U	41	474	67.3%	2.8	21.4	6.7
10/2	Rbout Link 3 Right Ahead	U	41	649	87.3%	5.4	29.8	9.1
10/3	Rbout Link 3 Right	U	41	282	39.6%	0.5	6.9	2.0
11/1	Rbout Link 4 Ahead	U	53	431	47.3%	1.1	8.8	5.5
11/2	Rbout Link 4 Ahead	U	53	720	73.8%	1.6	7.9	2.0
11/3	Rbout Link 4 Ahead Right	U	53	708	78.1%	3.8	19.3	13.5
12/1	Cromwell Ave (exit) Ahead	U	100	804	45.4%	0.7	3.0	2.6
12/2	Cromwell Ave (exit) Ahead	U	100	863	48.6%	0.7	3.1	2.7
13/1	Sandy Lane Crossing Left	U	102	581	37.0%	0.4	2.7	1.8
14/1	A49 Winwick Rd (exit)	U	-	892	0.0%	0.0	0.0	0.0
14/2	A49 Winwick Rd (exit)	U	-	580	0.0%	0.0	0.0	0.0
15/1	Sandy Lane West, Left Only	U	-	0	-	-	-	-
16/1	Sandy Lane West Feeder Ahead	U	-	939	48.4%	0.5	1.8	0.5
J2: Calver Rd / A574	-	-	-	-	78.0%	19.4	-	-
1/1	Cromwell Ave (East) Ahead	U	99	1238	75.6%	2.9	8.5	14.7
1/2	Cromwell Ave (East) Right	U	46	429	59.9%	3.8	32.0	11.8
2/2+2/1	Cromwell Ave (West) Ahead Left	U	40	770	78.0 : 78.0%	8.7	40.5	13.0
3/1	Calver Road Left	U	67	686	60.7%	4.0	21.2	15.8
4/1	Cromwell Ave (West exit)	U	-	1238	0.0%	0.0	0.0	0.0
5/1	Calver Road (exit)	U	-	563	0.0%	0.0	0.0	0.0
			C1 Stream: 1 PRC for Signalled Lanes (%)	3.0	Total Delay for Signalled Lanes (pcuHr)	23.69	Cycle Time (s)	120
			C1 Stream: 2 PRC for Signalled Lanes (%)	15.3	Total Delay for Signalled Lanes (pcuHr)	14.06	Cycle Time (s)	120
			C1 Stream: 3 PRC for Signalled Lanes (%)	37.5	Total Delay for Signalled Lanes (pcuHr)	7.49	Cycle Time (s)	120
			C1 Stream: 4 PRC for Signalled Lanes (%)	28.4	Total Delay for Signalled Lanes (pcuHr)	12.85	Cycle Time (s)	120
			C1 Stream: 5 PRC for Signalled Lanes (%)	143.3	Total Delay for Signalled Lanes (pcuHr)	0.43	Cycle Time (s)	120
			C1 Stream: 6 PRC for Signalled Lanes (%)	89.1	Total Delay for Signalled Lanes (pcuHr)	0.66	Cycle Time (s)	120
			C1 Stream: 7 PRC for Signalled Lanes (%)	85.2	Total Delay for Signalled Lanes (pcuHr)	1.41	Cycle Time (s)	120
			C2 PRC for Signalled Lanes (%)	15.3	Total Delay for Signalled Lanes (pcuHr)	19.45	Cycle Time (s)	120
			PRC Over All Lanes (%)	3.0	Total Delay Over All Lanes (pcuHr)	80.52		