



norman rourke pryme
traffic and transportation

Former Nestlé Factory, Hayes

Scenario Tests

Produced for Barratt Homes

February 2017

57 Webber Street
London
SE1 0RF
Tel +44 (0)207 654 7280

13-14 Orchard Street
Bristol
BS1 5EH
Tel: +44 (0)117 387 8910

www.nrpsc.com

QA RECORD

Document Ref	TN02	Rev	1.0
Drafted by	Chris Davis	Date	February 17
Checked by	Chris Attwood	Date	February 17
Approved by	Chris Attwood	Date	February 17
Electronic location	B:\Projects\6587 Former Nestle Factory, Hayes\Deliverables\Reports\TN02 - Future Reporting\TN02 - Hayes Future_V1.0.Docx		

This document has been produced by Norman Rourke Pryme for Barratt Homes for the provision of the Former Nestle Factory, Hayes. This document is for the purpose of the intended recipient only. No liability will be accepted for unauthorised distribution to any third party without written agreement in advance.

Former Nestle Factory, Hayes - Scenario Tests

1	Introduction.....	3
1.1	Background.....	3
2	Purpose and Scope of the VISSIM Model.....	4
2.1	Purpose.....	4
2.2	Scope	4
3	MAP Stage 5 – Scenario Tests.....	8
3.1	Network changes (V503)	8
3.2	flow consistency check (V504)	12
3.3	Public Transport (V223)	13
3.4	Signal data (V224).....	13
3.5	Priority rules / conflict areas (V225)	14
3.6	Reduced speed areas (V226).....	15
3.7	Link-connector structure / Network operation (V227)	15
4	Scenario Data Analysis.....	16
4.1	Demand Dependency.....	16
4.2	Signal Green Times.....	18
4.3	Saturation flows (V303)	19
4.4	Model Convergence.....	23
4.5	Traffic Assignment Methodology.....	25
4.6	Traffic Flow Validation (V304)	29
4.7	Queue Length Analysis (V305)	29
4.8	Journey Time Comparison (V306)	29
4.9	Error Logs (V307)	33

1 INTRODUCTION

1.1 BACKGROUND

- 1.1.1 Norman Rourke Pryme (NRP) has been commissioned by Barratt Homes (in conjunction with Markides Associates) to undertake traffic modelling to assess the impact of the proposed development at the Former Nestle Factory, Hayes.
- 1.1.2 The purpose of this study is to produce a number of scenario based VISSIM models of the Hayes Town Centre to include Station Road to the south, Botwell Common to the North, the A312 The Parkway to the east, and Shepiston Lane to the west.
- 1.1.3 The scenarios tested and discussed within this document include:
- ▶ Baseline 2024
 - ▶ Baseline 2024 + Development
 - ▶ Baseline 2024 + Development + Sensitivity
 - ▶ 5 Years After Opening
 - ▶ 5 Years After Opening + Development
 - ▶ 5 Years After Opening + Development + Sensitivity
- 1.1.4 VISSIM version 5.40-08 was used in the development of these models.
- 1.1.5 The model filenames submitted with this note are constructed using the following references – note the **XXX** will be replaced by the initials shown in bold below.
- ▶ Main title: HayesTC_5408_XXX_AM.inp / HayesTC_5408_XXX_PM.inp
 - ▶ Baseline 2024 – **BL**
 - ▶ Baseline 2024 + Development - **BLD**
 - ▶ Baseline 2024 + Development + Sensitivity - **BLDS**
 - ▶ Baseline 2029 - 5 Years After Opening – **5BL**
 - ▶ Baseline 2029 - 5 Years After Opening + Development – **5BLD**
 - ▶ Baseline 2029 - 5 Years After Opening + Development + Sensitivity – **5BDS**
- 1.1.6 All maps / plots within this document contain *OS data © Crown copyright and database right (2016)* and © *OpenStreetMap contributors*.

2 PURPOSE AND SCOPE OF THE VISSIM MODEL

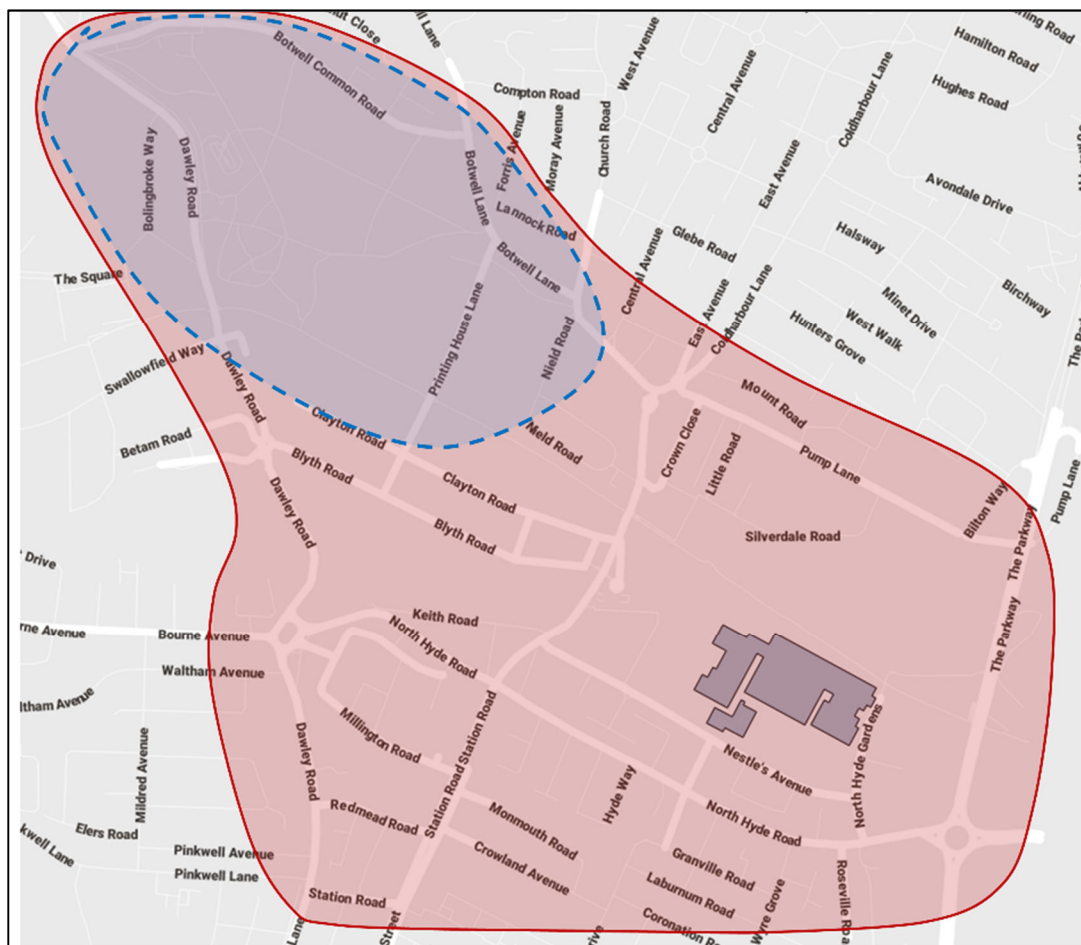
2.1 PURPOSE

2.1.1 The purpose of this study is to produce a number of scenario tests that accurately represent future traffic conditions to compare to the initial base model so that a reliable comparison of the impact can be made to the proposed scheme.

2.2 SCOPE

2.2.1 The scope of the model is shown in Figure 2.1 on the following page.

Figure 2.1: Study area



2.2.2 The area bounded by the dashed line, indicates a 'buffer zone' where the validation criteria required is turning counts only in the base model, however for consistency, this area is included in the scenario models.

2.2.3 The signalised junction and pedestrian crossings included within the scenario models are listed below:

VA Junction

- ▶ J26/010 - STATION / NORTH HYDE ROAD – CLF Control / V/A.
- ▶ J26/261 - MILLINGTON ROAD / STATION ROAD – CLF Control
- ▶ J26/075 - HIGH STREET / STATION ROAD – Local Control VA

UTC SCOOT

- ▶ J25/126 - HAYES ROAD - A312 THE PARKWAY - A437 NORTH HYDE ROAD - BULLS BRIDGE ROUNDABOUT

Former Nestle Factory, Hayes - Scenario Tests

- ▶ J25/127 - HAYES ROAD - A312 THE PARKWAY - A437 NORTH HYDE ROAD - BULLS BRIDGE ROUNDABOUT
- ▶ J25/128 - HAYES ROAD - A312 THE PARKWAY - A437 NORTH HYDE ROAD - BULLS BRIDGE ROUNDABOUT
- ▶ J25/129 - HAYES ROAD - A312 THE PARKWAY - A437 NORTH HYDE ROAD - BULLS BRIDGE ROUNDABOUT
- ▶ J26/130 - HAYES ROAD - A312 THE PARKWAY - A437 NORTH HYDE ROAD - BULLS BRIDGE ROUNDABOUT
- ▶ J25/131 - HAYES ROAD - A312 THE PARKWAY - A437 NORTH HYDE ROAD - BULLS BRIDGE ROUNDABOUT
- ▶ J25/132 - HAYES ROAD - A312 THE PARKWAY - A437 NORTH HYDE ROAD - BULLS BRIDGE ROUNDABOUT
- ▶ J26/146 - NORTH HYDE ROAD - NORTH HYDE GARDENS - WATERSPLASH LANE

Pelican

- ▶ J26/134 - BOTWELL LANE @ CENTRAL [PEL]J00/263 - B518 AGINCOURT ROAD BY CRESSY ROAD

Puffin

- ▶ J26/024 - NORTH HYDE ROAD BY ROSEVILLE ROAD [PUFFIN]
- ▶ J26/031 - STATION ROAD BY REDMEAD ROAD [PUFFIN]
- ▶ J26/056 - DAWLEY ROAD BY BLYTH ROAD [PUFFIN]
- ▶ J26/059 - NORTH HYDE ROAD BY CRANFORD PARK [PUFFIN]

PED X CROSSING – **NEW**

- ▶ J26/098 - PUMP LANE @ STATION [PED X CROSSING]
- ▶ J26/107 - BOTWELL @ STATION [PED X CROSSING]
- ▶ J26/108 - COLDHARBOUR LANE @ PUMP LANE [PED X CROSSING]
- ▶ J26/109 – STATION ROAD [PED X CROSSING]

2.2.4 The Puffin crossings **J26/098**, **J26/107** and **J26/108** have been recoded as **Ped X Crossings**. The stoplines for **J26/107** have been moved to the west to accommodate the new link connecting Station Road to the Botwell Lane roundabout.

2.2.5 These changes are part of the Hayes Town Centre redevelopment scheme and have been coded using the provided VISSIM proposed model from SDG. The SDG associated VISSIM Proposed Model Validation Technical report is dated October 2014. The timings coded have been based on the timing data shown below (also found in the SDG report).

Figure 2.2 - Pedestrian Crossing Timings

Timings			
Pedestrians	Traffic		
Red Man	Green (UTC/Local)	A	7 / 20
Red Man	Amber	A to B	3
Red Man	Red	I/G	2
Green Man	Red	B	6
Blackout	Red		5
Red Man	Red	B to A	3
Red Man	Starting Amber	I/G	2
PRE-Timed Max		Road Width	9.2 m
26/98 Pump Lane			

Timings			
Pedestrians	Traffic		
Red Man	Green (UTC/Local)	A	7 / 20
Red Man	Amber	A to B	3
Red Man	Red	I/G	2
Green Man	Red	B	6
Blackout	Red		8
Red Man	Red	B to A	3
Red Man	Starting Amber	I/G	2
PRE-Timed Max		Road Width	12 m
26/109 Station Road			

Timings			
Pedestrians	Traffic		
Red Man	Green (UTC/Local)	A	7 / 20
Red Man	Amber	A to B	3
Red Man	Red	I/G	2
Green Man	Red	B	6
Blackout	Red		4
Red Man	Red	B to A	3
Red Man	Starting Amber	I/G	2
PRE-Timed Max		Road Width	m
26/107 Botwell Lane			

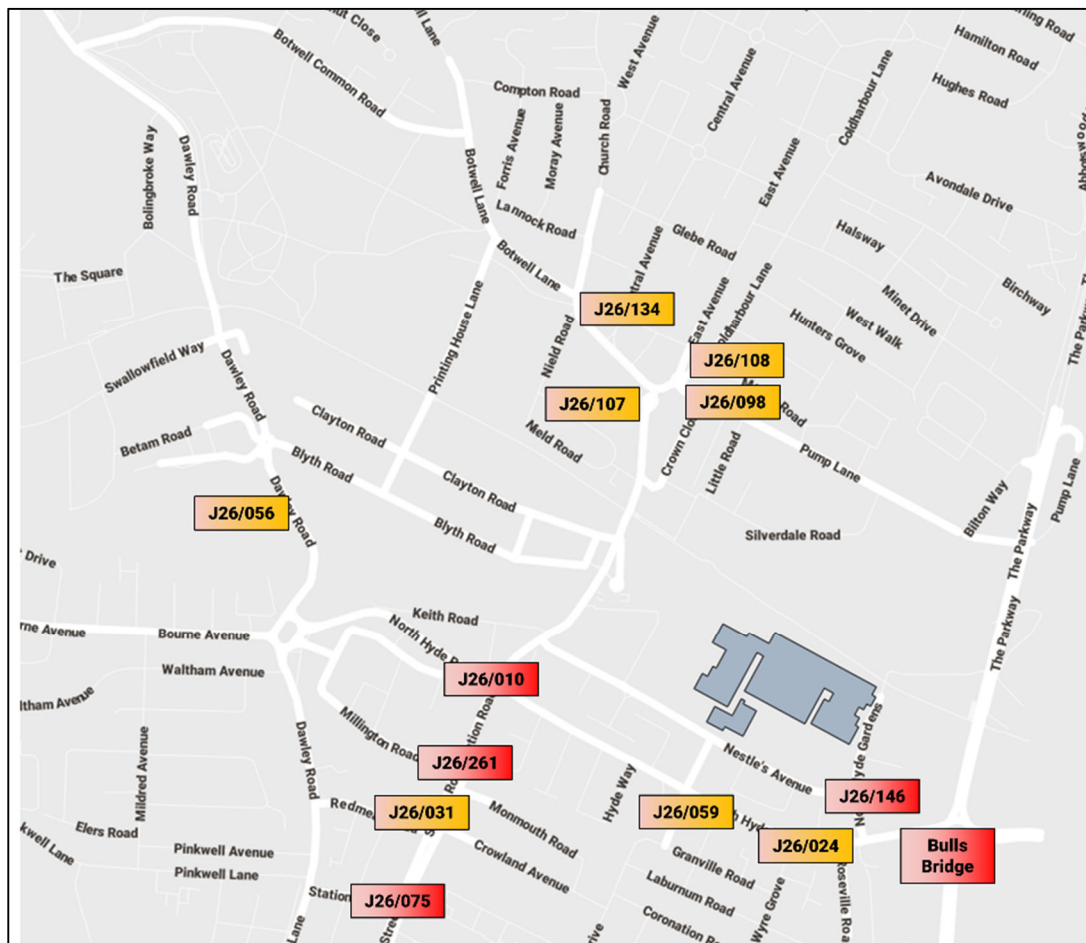
Timings			
Pedestrians	Traffic		
Red Man	Green (UTC/Local)	A	7 / 20
Red Man	Amber	A to B	3
Red Man	Red	I/G	2
Green Man	Red	B	6
Blackout	Red		7
Red Man	Red	B to A	3
Red Man	Starting Amber	I/G	2
PRE-Timed Max		Road Width	11.2 m
26/108 Coldharbour Lane			

Model Calibration Signal Operation (replicated from the base model)

- ▶ J25/115 Parkway SB OffSlip & Circulatory – replicates Southbound congestion seen A312 towards the M4.
- ▶ J25/114 M4 OffSlip & Circulatory – replicates M4 Offslip platooning traffic
- ▶ HGV Unstick - Pump Lane – replicates width restriction operation on Pump Lane
- ▶ J25/135 - HAYES LANE / TESCO ACCESS [FT] – replicates Hayes Lane / Tesco Access platooning traffic

2.2.6 The operation of the three VA junctions have been coded using a combination of CLF plan data and site observations. It should be noted that none of the traffic signals are part of the TfL UTC network.

Figure 2.3: Signalised junction locations



2.2.7 The Zebra crossings at the following locations are also included in the model:

- ▶ Botwell Common Road o/s no 112 Botwell Common Road.
- ▶ Station Road at the Station Road / Shepiston Lane / Dawley Road mini-roundabout
- ▶ Dawley Road at the Station Road / Shepiston Lane / Dawley Road mini-roundabout
- ▶ Dawley Road north of Redmead Road junction
- ▶ Botwell Common Road at the Botwell Common Road / Botwell Lane mini-roundabout
- ▶ Botwell Lane at the Botwell Common Road / Botwell Lane mini-roundabout
- ▶ Crown Lane at the Crown Lane / Pump Lane junction
- ▶ Clayton Road at the Station Approach / Clayton Road / Station Road mini-roundabout
- ▶ Station Road o/s Hayes & Harlington Railway Station

2.2.8 The Scenario models have been developed in accordance with TfL VMAP under 'Stage 5 – Proposed' for the AM and PM peak periods.

3 MAP STAGE 5 – SCENARIO TESTS

3.1 NETWORK CHANGES (V503)

- 3.1.1 As part of committed development in and around Hayes Town Centre, the following figures show the coding changes between the Base and the Scenario models. All the network changes are consistent with the changes provided as part of the SDG proposed model.

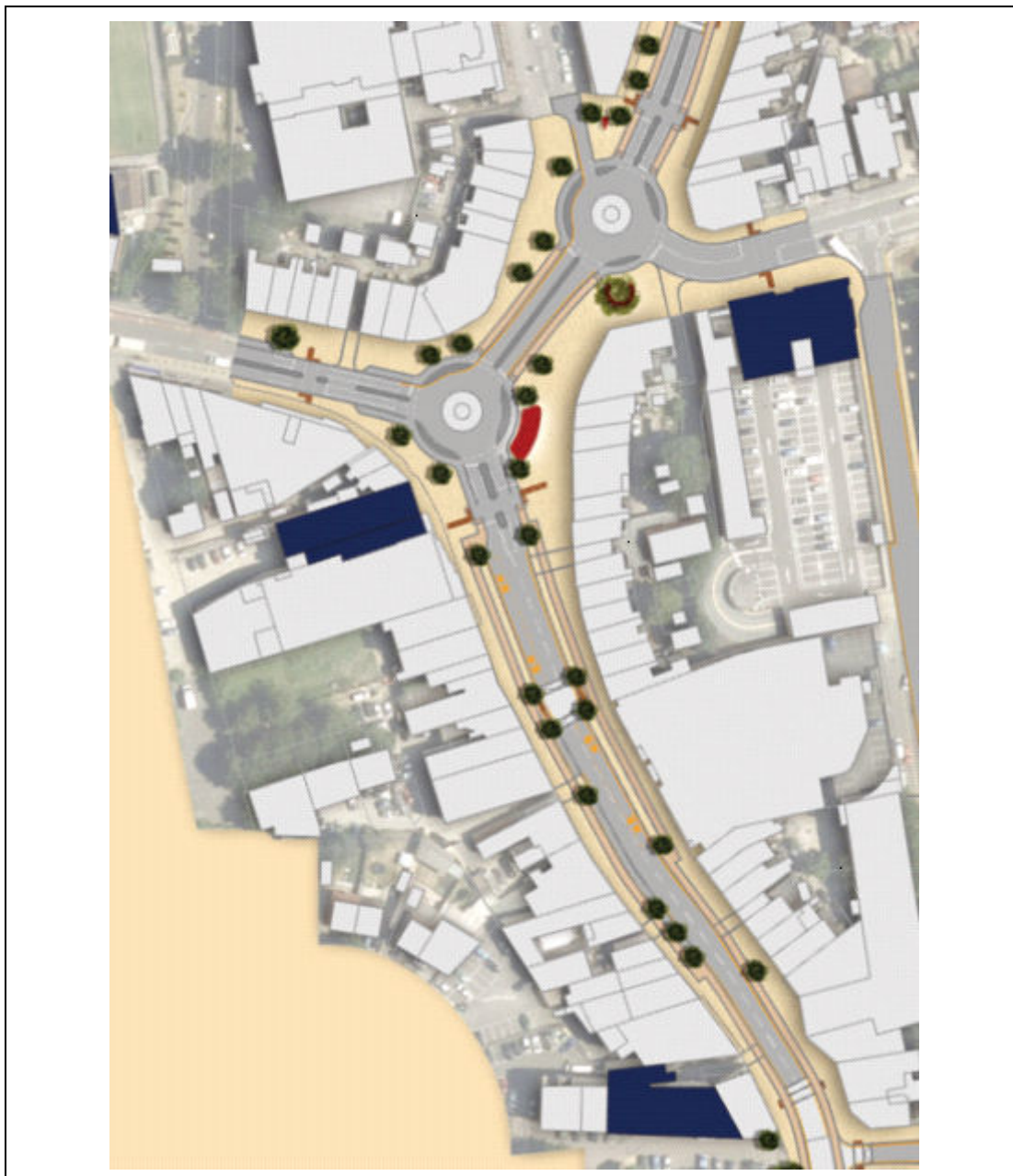
NOTE – the SDG model contained off-road cycle lanes. These have not been coded into the scenario models as cyclist have not explicitly been modelled. As such, there would be no comparison available between the base and the scenario models.

- 3.1.2 The **Hayes town centre improvements** introduce a new link between Station Road and Botwell Lane. An additional roundabout is located here with one additional pedestrian crossing.
- 3.1.3 Two bus stops are introduced in both directions.
- 3.1.4 Traffic can no longer travel northbound via Crown Lane whereas all traffic can now travel southbound rather than only public transport through the Crown Lane bus gate.

Former Nestle Factory, Hayes - Scenario Tests

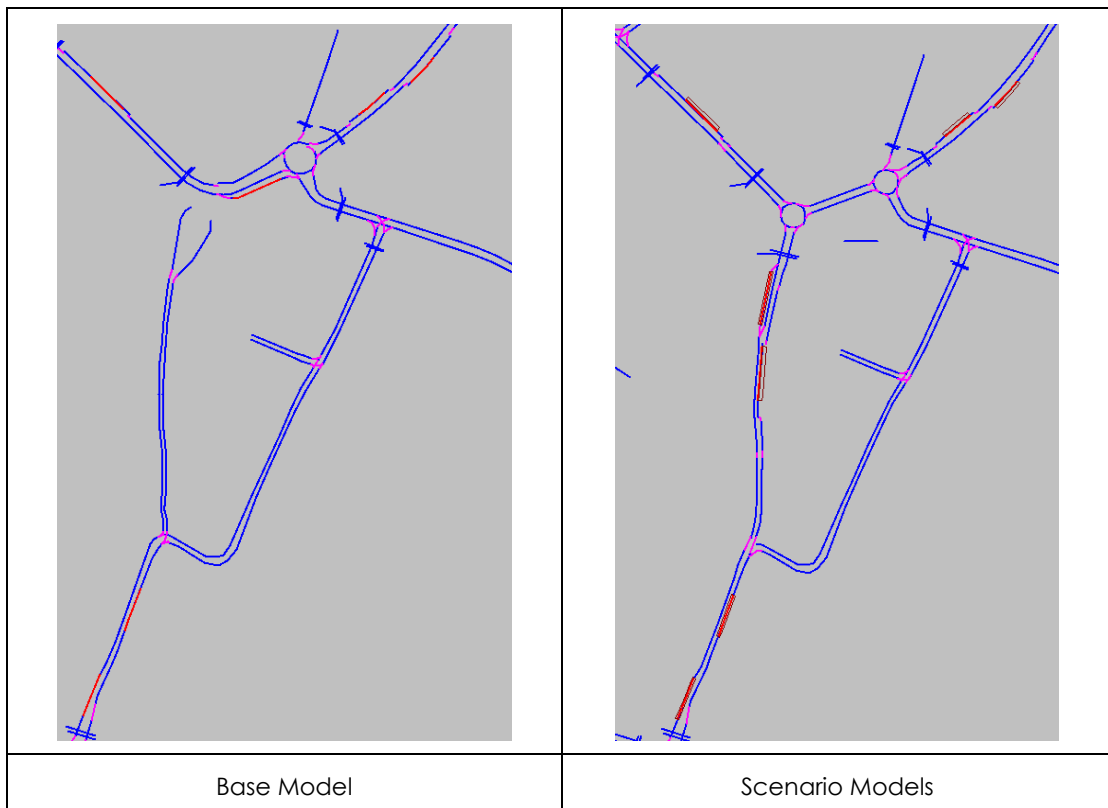
3.1.5 Figure 3.1.1 below, shows the Hayes Town Centre improvement scheme as prepared by the London Borough of Hillingdon in December 2014. The provided VISSIM model from SDG contains coding for this improvement scheme and has been replicated as part of this work. The coding at the two roundabouts is fairly rudimentary in the way traffic operates. In order to replicate previous work – the coding has been retained with a few refinements such as priority rule tweaks.

Figure 3.1: Hayes Town Centre Improvement Scheme

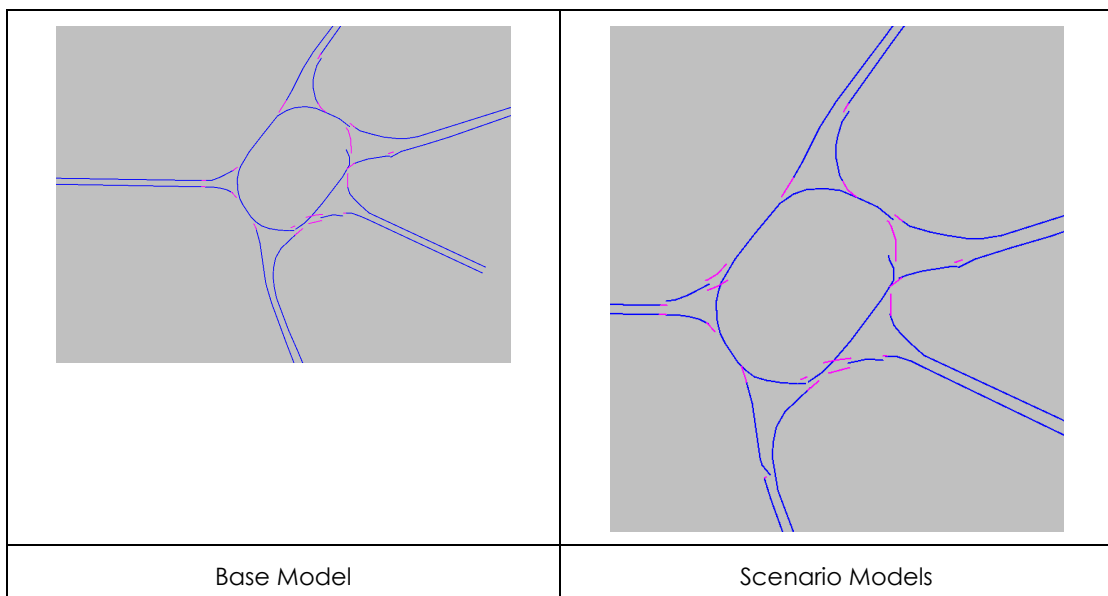


3.1.6 The following images show the network changes coded between the base and the scenario models. These include the Hayes town centre improvement works but also a number of minor amendments to the modelled road network as part of committed development mitigation measures within the study area such as those for the Old Vinyl Factory redevelopment on Blyth Road.

Former Nestle Factory, Hayes - Scenario Tests

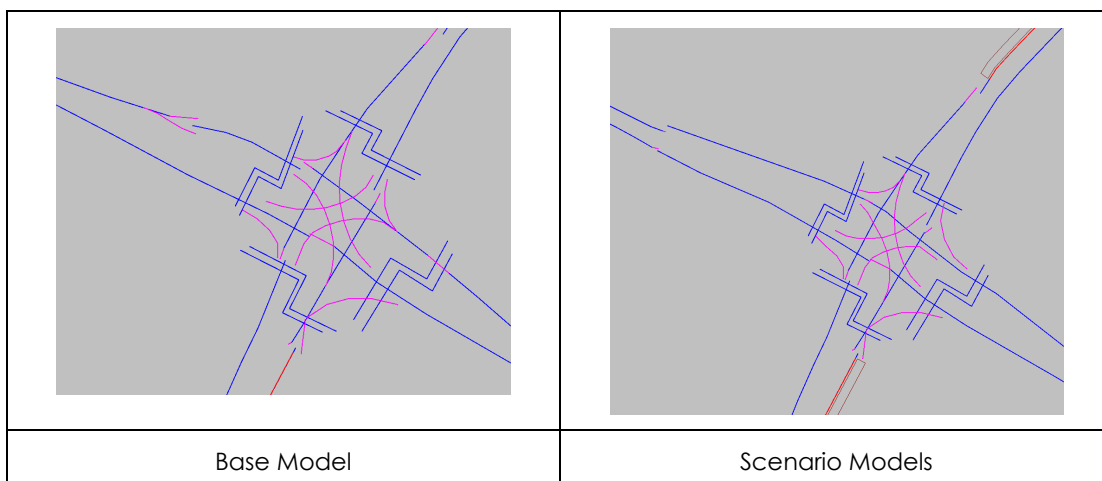


3.1.7 As part of the Old Vinyl Factory redevelopment, the Bourne Avenue / North Hyde Road roundabout will have some minor amendments made to it. From Bourne Avenue, an additional lane entering the roundabout will be introduced. Priority rules have been amended as appropriate. As does the northbound Shepiston Lane approach.

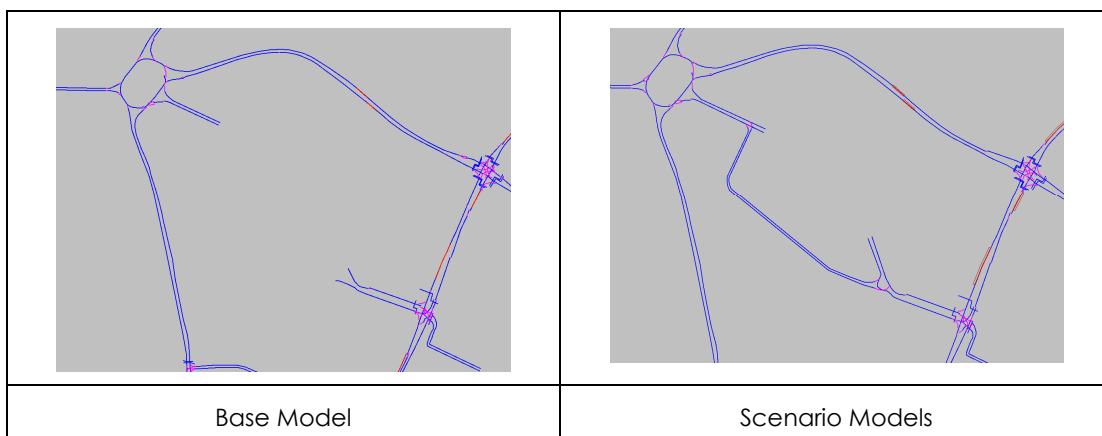


Former Nestle Factory, Hayes - Scenario Tests

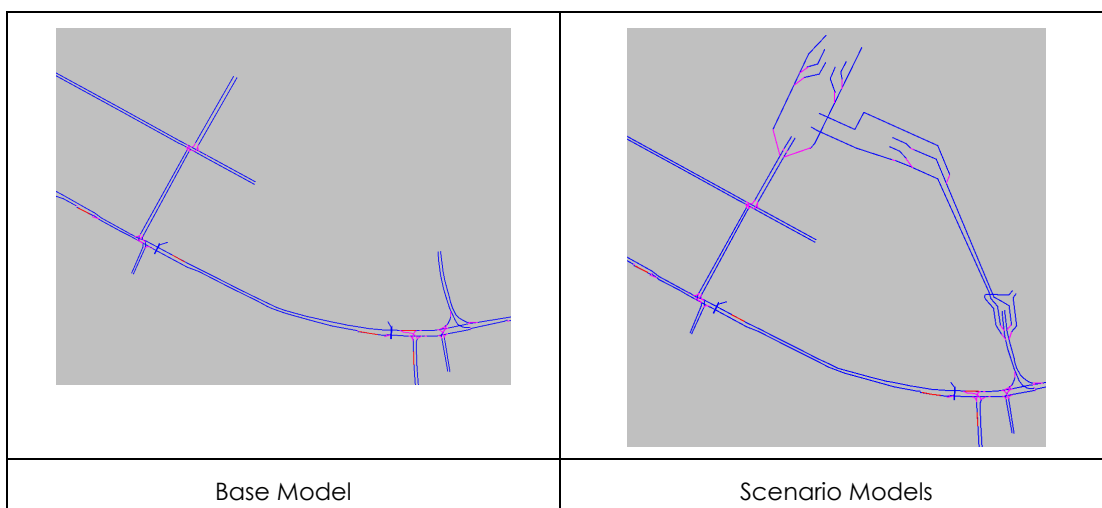
3.1.8 The Station Road / North Hyde Road junction has also been amended. The eastbound North Hyde Road approach has an extended left-turn flare lane.



3.1.9 The provided TfL Future Base WelHAM model introduces an additional link between the Millington Road junction with Station Road and the Millington Road junction and Shepiston Lane. In the base models Millington Road was separated, whereas now access to the Millington Road zone can be accessed via Shepiston Lane or Station Road. The network has been coded as appropriate. Note that traffic cannot use Millington Road as a through route.



3.1.10 In addition to the Millington Road changes found in the Future Base WelHAM Model, an additional connector was added for traffic entering the industrial estate via North Hyde Gardens, which did not exist in the base model. The VISSIM models now contain the additional link representing this traffic movement.



Former Nestle Factory, Hayes - Scenario Tests

3.1.11 No other network changes have been made to the modelled network. Bulls Bridge Roundabout retains its existing layout. Timings have been coded based upon the standalone WelHAM scenario tests – under separate submission.

3.2 FLOW CONSISTENCY CHECK (V504)

3.2.1 Two peak periods have been modelled. The AM peak (**0800-0900**), and the PM peak (**1700-1800**).

3.2.2 The simulation start time is **900** seconds before the start of the peak hour for each peak hour periods.

3.2.3 The simulation period is **3600** seconds for each peak hour period. There is a **900** second warmup period and a **900** second cool down period.

3.2.4 The following traffic compositions have been used with separate peak compositions calculated as per the survey proportions.

- ▶ Peak Lights (vehicle type – Car); Note this includes the PCU equivalent of motorcycles;
- ▶ Peak Taxis (vehicle type – Taxi); and
- ▶ Peak Heavies (vehicle type – MGW, HGV).

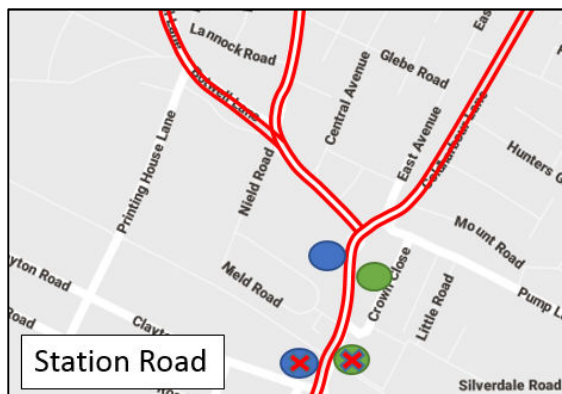
3.2.5 Pedestrians have also been used when necessary for demand dependent signal stages at all pedestrian crossings including Puffins. The traffic flow for motorcyclists have been converted into PCUs and added to the Lights traffic flow. This methodology has been adopted in previous models and approved by TfL.

3.2.6 The number of pedestrians remain identical to those found in base model. With the exception of the new pedestrian crossing on the approach to Botwell Lane via the new Station Road link.

Former Nestle Factory, Hayes - Scenario Tests

3.3 PUBLIC TRANSPORT (V223)

- 3.3.1 Bus routes and frequencies have been obtained from online TfL timetables. The bus start times have been offset from each other using a randomising algorithm so that buses do not all enter the modelled network at the same time.
- 3.3.2 The frequency of bus services remains identical to those coded within the base model. To recap, they have been derived from the first bus stop that the bus stops at.
- 3.3.3 Due to the changes of the network at Station Road and the new link with Botwell Lane, buses are coded to operate via Station Road in both directions rather via the bus gate located on Crown Close. Two bus stops have been created with one northbound, and one southbound within the new link section. All routes that previously ran via Crown Close now stop and use these two bus stops. The two bus stops located to the south of Crown Road (M Clayton Road and D Clayton Road), have been removed as per the improvement works – as shown in the diagram below.

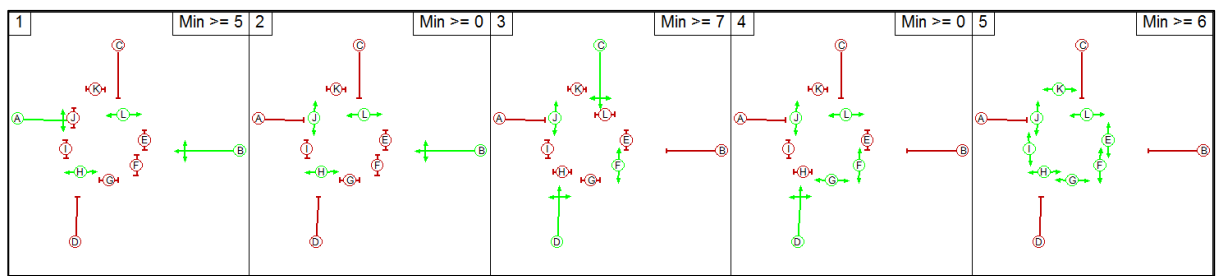


- 3.3.4 Dwell time information has been provided by TfL. The dwell times have been calculated from iBUS data for each bus route and each bus stop is provided with a dwell time per bus route. Where dwell time information was not provided, the VISSIM default dwell time (Mean Value: 20.0 and Standard Deviation 2.0) has been used. The dwell times used for the two new bus stops are identical to those already located on Station Road. Northbound buses use the same dwell times as those of the removed bus stop M Clayton Road. Southbound buses use the same dwell times as the removed bus stop D Clayton Road.

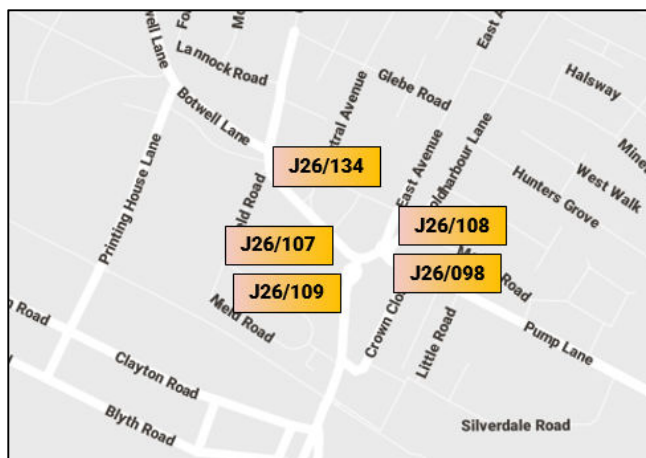
3.4 SIGNAL DATA (V224)

- 3.4.1 The Bulls Bridge Roundabout has been coded using updated timings based on the separate TfL LinSigs coded using the WelHAM Saturn scenario flows. Under separate submission.
- 3.4.2 The **J26/010** Station Road / High Street junction has been coded to operate using the method of control suggested by Alan Baxter as part of the Old Vinyl Factory Committed Development.
- 3.4.3 The Stages coded are shown in Figure 3.2. The east/westbound traffic now operate concurrently with an early cut-off of the eastbound movement, allowing additional time for the westbound traffic to make an unopposed right-turn towards Hayes Town Centre. Similarly, the north/southbound traffic operate concurrently, as before, but the southbound operates with an early cut-off allowing additional time for the northbound traffic making an unopposed right-turn towards Bulls Bridge and the A312. The timings here have been prepared using individual LinSigs with the calculated proposed flows.
- 3.4.4 As in the base, the junction operates under VA control and each stage is provided with a maximum and a minimum stage length called using 'Demand Detectors' on the approach to the junction.

Figure 3.2 - Old Vinyl Factory Signal Stages



- 3.4.5 Puffin crossings extend the green time for pedestrians if they are detected on the crossing. As such, there is no fixed cycle time for these crossings. Pedestrians have been coded into the models to arrive and demand the crossing at the same time as those observed on site. This ensures that the signals are demanded correctly. No change has been made to the pedestrian demand from the base model.
- 3.4.6 The stage intergreens and phase delays remain identical to the base model (with exception of the updated Station Road junction.)
- 3.4.7 The signals have been coded using VAP control. All relevant PUA files and VAP files are attached with this submission.
- 3.4.8 The Hayes town centre redevelopment scheme introduces an additional roundabout between Pump Lane and Printinghouse Lane with a new link joining Station Road with Botwell Lane. The roundabout, has been coded as per the SDG model and has introduced an additional pedestrian crossing – J26/109, and converted the remaining crossings in the vicinity to Ped X Crossings.



- 3.4.9 The VAP and PUA files have been taken directly from the SDG model (and amended as necessary). The pedestrian demand remains the same as the base model for all of the pedestrian facilities with the exception of **J26/109**. The demand for this crossing has been calculated to be based on the average demand for all of the other pedestrian crossings. This methodology replicates those of the SDG reporting.

3.5 PRIORITY RULES / CONFLICT AREAS (V225)

- 3.5.1 As mentioned in TN01, Priority rules have been used throughout the model to replicate give-way junctions, yellow boxes and other important observed behavioural characteristics. These have been carefully calibrated so that the behaviour in the model matches those observed on site.
- 3.5.2 Priority rules at the Pump Lane / Coldharbour Lane / Botwell Lane / Station Road roundabouts have been coded as per the SDG model however they have been amended slightly to better represent driver behaviour.

Former Nestle Factory, Hayes - Scenario Tests

3.6 REDUCED SPEED AREAS (V226)

- 3.6.1 Reduced speeds areas (RSAs) have been used to reduce vehicle speeds at bends and to calibrate saturation flows.
- 3.6.2 Additional reduced speed areas have been coded along Station Road, as per the SDG model.
- 3.6.3 As with the priority rules, the reduced speed areas coded in the SDG model have been replicated here at the Botweel Lane / Station Road roundabouts. They are set to reduce the speed of buses significantly when entering these roundabouts. They may be deemed too severe however for consistency - they have been retained.

3.7 LINK-CONNECTOR STRUCTURE / NETWORK OPERATION (V227)

- 3.7.1 The network structure has been coded so that it matches the network layout (and the base model) and has been calibrated to match on-site behaviour.
- 3.7.2 Any changes have been due to proposed network changes previously listed.

4 SCENARIO DATA ANALYSIS

4.1 DEMAND DEPENDENCY

4.1.1 Detailed observations have been carried out at each of the junctions and pedestrian crossing locations. Demand data has been analysed and the models coded to replicate the crossing detection accurately. A comparison between modelled and observed demand dependency is shown in Tables 1-3.

Table 1: Demand dependency comparison – AM peak

Junction	TfL ref	AM peak						
		Base	Baseline	Baseline + DEV	Baseline + DEV + SEN	5 Yr Baseline	5 Yr Baseline + DEV	5 Yr Baseline + DEV + SEN
NORTH HYDE ROAD - NORTH HYDE GARDENS - WATERSPLASH LANE	26/146	0%	0%	0%	0%	0%	0%	0%
BOTWELL LANE @ CENTRAL [PEL]	26/134	72%	68%	68%	69%	68%	69%	69%
NORTH HYDE ROAD BY ROSEVILLE ROAD [PUFFIN]	26/024	20%	20%	20%	20%	19%	20%	20%
STATION ROAD BY REDMEAD ROAD [PUFFIN]	26/031	33%	33%	33%	33%	33%	33%	33%
DAWLEY ROAD BY BLYTH ROAD [PUFFIN]	26/056	18%	18%	18%	18%	18%	18%	18%
NORTH HYDE ROAD BY CRANFORD PARK [PUFFIN]	26/059	19%	19%	19%	19%	19%	19%	19%
PUMP LANE @ STATION [PUFFIN]	26/098	97%	72%	72%	72%	72%	72%	72%
BOTWELL @ STATION [PUFFIN]	26/107	87%	68%	68%	68%	68%	68%	68%
COLDHARBOUR LANE @ PUMP LANE [PUFFIN]	26/108	67%	50%	50%	50%	50%	50%	50%
STATION / NORTH HYDE ROAD – Local Control VA	26/010	52%	46%	52%	52%	49%	49%	52%

Former Nestle Factory, Hayes - Scenario Tests

MILLINGTON ROAD / STATION ROAD – CLF Control	26/261	52%	52%	52%	52%	52%	52%	52%
HIGH STREET / STATION ROAD – Local Control VA	26/075	100%	100%	100%	100%	100%	100%	100%

Table 2: Demand dependency comparison – PM peak

Junction	TfL ref	PM peak						
		Base	Baseline	Baseline + DEV	Baseline + DEV + SEN	5 Yr Baseline	5 Yr Baseline + DEV	5 Yr Baseline + DEV + SEN
NORTH HYDE ROAD - NORTH HYDE GARDENS - WATERSPLASH LANE	26/146	16%	0%	0%	0%	0%	0%	0%
BOTWELL LANE @ CENTRAL [PEL]	26/134	58%	57%	57%	57%	57%	57%	57%
NORTH HYDE ROAD BY ROSEVILLE ROAD [PUFFIN]	26/024	25%	26%	26%	25%	26%	26%	26%
STATION ROAD BY REDMEAD ROAD [PUFFIN]	26/031	12%	12%	12%	12%	12%	12%	12%
DAWLEY ROAD BY BLYTH ROAD [PUFFIN]	26/056	9%	9%	9%	9%	9%	9%	9%
NORTH HYDE ROAD BY CRANFORD PARK [PUFFIN]	26/059	17%	17%	17%	17%	17%	17%	17%
PUMP LANE @ STATION [PUFFIN]	26/098	100%	81%	81%	81%	81%	81%	81%
BOTWELL @ STATION [PUFFIN]	26/107	99%	80%	80%	80%	80%	80%	80%
COLDHARBOUR LANE @ PUMP LANE [PUFFIN]	26/108	95%	72%	72%	72%	72%	72%	72%

Former Nestle Factory, Hayes - Scenario Tests

STATION / NORTH HYDE ROAD – Local Control VA	26/010	49%	52%	49%	49%	52%	35%	49%
MILLINGTON ROAD / STATION ROAD – CLF Control	26/261	49%	49%	49%	49%	49%	49%	49%
HIGH STREET / STATION ROAD – Local Control VA	26/075	100%	100%	100%	100%	100%	100%	100%

4.1.2 The Puffin crossings do not have cycle times and so the number of times called for modelled and observed has been presented with a percentage difference.

4.1.3 Where the pedestrian demand is calling stages, specifically at the Pelicans and Puffins, the time when the signal was called has been noted for each peak. Using Public Transport routes, pedestrians have been coded to arrive and demand the crossing at these times within the modelled hour. The pedestrians have been coded using vehicle class **501** [Demand Dependant PED] with the associated signal detectors configured only to activate when these vehicles arrive.

4.2 SIGNAL GREEN TIMES

4.2.1 Junction 26/075 HIGH STREET / STATION ROAD – operates under Local Control Vehicle Actuation and as such phases are called when there is vehicle demand rather than following a dedicated stage order. The average modelled green times are shown in the following tables.

Approach	AM PEAK							PM PEAK						
	Base	BL	BLD	BLDS	5BL	5BLD	5BLDS	Base	BL	BLD	BLDS	5BL	5BLD	5BLDS
Station Road SB SA	33	35	35	33	34	34	36	32	34	35	33	37	33	36
High Street NB SA LT	13	14	14	13	13	14	14	16	19	17	17	18	17	19
Station Road EB	17	17	21	19	17	19	19	19	19	19	19	19	19	19

Former Nestle Factory, Hayes - Scenario Tests

4.2.2 Junction 26/010 HIGH STREET / NORTH HYDE ROAD – operates under Local Control Vehicle Actuation and as such phases are called when there is vehicle demand rather than following a dedicated stage order. The average modelled green times are shown in the following tables.

Approach	AM PEAK							PM PEAK						
	Base	BL	BLD	BLDS	5BL	5BLD	5BLDS	Base	BL	BLD	BLDS	5BL	5BLD	5BLDS
North Hyde Road EB SA/RT/LT	19	25	25	24	22	27	24	19	27	29	29	27	26	29
North Hyde Road WB SA/RT/LT	22	29	29	27	26	31	27	22	42	44	20	42	42	20
Station Road SB	28	39	40	36	39	40	36	28	40	36	29	39	38	29
Station Road NB	28	46	43	36	46	47	36	28	44	39	29	43	46	29

4.3 SATURATION FLOWS (V303)

4.3.1 A comparison of the VISSIM and LinSig (observed) saturation flows is provided in Table 4. The saturation flows are an average of AM and PM peak hour periods with 10 seeds run for each peak.

Table 3: Saturation flow validation (PCUs/hr)

Junction	Approach	Base	Baseline	Baseline + DEV	Baseline + DEV + SEN	5 Yr Baseline	5 Yr Baseline + DEV	5 Yr Baseline + DEV + SEN
26/075	Station Road SB SA	1917	1908	1905	1903	1914	1911	1906
26/075	Station Road SB SA RT	1861	1873	1861	1872	1874	1867	1875
26/075	High Street NB SA LT	1897	1898	1912	1900	1910	1917	1906
26/075	High Street NB SA	2015	2024	2021	2014	2032	2019	2022
26/075	Station Road EB	1951	1925	1967	1947	1938	1962	1949
26/261	Station Road SB SA	1925	1911	1925	1915	1920	1913	1899
26/261	Station Road SB RT	1926	1909	1904	1896	1923	1911	1906
26/261	Bedwell Gardens	1824	1824	1827	1813	1825	1817	1822
26/261	Station Road NB SA RT	1879	1866	1865	1849	1847	1873	1854
26/261	Station Road NB SA LT	1926	1909	1904	1896	1923	1911	1906

Former Nestle Factory, Hayes - Scenario Tests

26/261	Station Road NB SA LT	1859	1827	1839	1839	1812	1827	1800
26/261	Millington Road EB LT	1851	1851	1844	1843	1830	1830	1838
26/010	Millington Road EB RT	2013	2028	2008	2037	2061	1991	2027
26/010	Station Road SB SA LT	Too Few Vehs	1809	-	1812	1808	-	1808
26/010	Station Road SB RT	1880	1909	1892	1898	1886	1898	1891
26/010	North Hyde Road WB SA LT	1869	1835	1846	1875	1826	1856	1884
26/010	North Hyde Road WB RT	1990	1991	1992	2003	1967	1998	2025
26/010	Station Road NB SA LT	1806	1809	1813	1814	1818	1802	1800
26/010	Station Road NB SA RT	1916	1854	1842	1856	1847	1847	1853
26/010	North Hyde Road EB SA LT	1892	1848	1850	1860	1839	1832	1856
26/146	North Hyde Road EB RT	1844	1843	1836	1879	1844	1826	1875
26/146	North Hyde Road EB	-	1823	1813	1818	Too Few Vehs	1800	1811
26/146	North Hyde Gardens	2012	1965	1878	1923	1857	1873	1926
26/146	North Hyde Road WB	-	-	-	-	-	-	-
25/126	Watersplash Road NB	1934	1902	1884	1875	1897	1887	1890
25/126	North Hyde Road EB Appr	1866	1855	1823	1847	1838	1830	1840
25/126	North Hyde Road EB Appr	1825	-	-	-	-	-	Too Few Vehs
25/127	North Hyde Road EB Appr FLARE	2006	2022	1968	1985	2029	2018	1977
25/127	Parkway [N] SB Lane 1 FLARE	1947	1967	1978	2001	1957	1946	1989
25/127	Parkway [N] SB Lane 2	2013	1997	2106	2124	1988	1981	2124
25/129	Parkway [N] SB Lane 3 Offside	1877	1951	1926	1967	1937	1935	1956

Former Nestle Factory, Hayes - Scenario Tests

25/129	Hayes Road WB Lane 1 Kerbside	1886	1892	1943	1941	1885	1876	1928
25/129	Hayes Road WB Lane 2	1831	1815	1823	1816	1813	1822	1820
25/129	Hayes Road WB Lane 3	1867	1847	1869	1869	1858	1848	1856
25/131	Hayes Road WB Lane 4 Offside	2033	1894	1985	1970	1882	1899	1982
25/131	Parkway [S] NB Lane 1 FLARE OFFSIDE	1975	1860	1941	1934	1868	1886	1942
25/131	Parkway [S] NB Lane 2	1985	1871	1948	1933	1863	1888	1940
25/131	Parkway [S] NB Lane 3	1845	1878	1852	1844	1897	1881	1855
25/127	Parkway [S] NB Lane 4 FLARE KERBSIDE	1969	1843	1945	1892	1840	1845	1862
25/127	Northern Circulatory LANE 1 KERBSIDE	1881	1820	1907	1847	1820	1808	1834
25/127	Northern Circulatory LANE 2	1854	1866	1843	1834	1852	1846	1848
25/127	Northern Circulatory LANE 3	-	-	-	-	-	-	-
25/129	Northern Circulatory LANE 4 OFFSIDE	1947	1895	1905	1991	1832	1836	1954
25/129	Western Circulatory LANE 1 KERBSIDE	1948	1917	1923	2026	1837	1831	2003
25/129	Western Circulatory LANE 2	1905	1991	2002	2119	1855	1850	2179
25/129	Western Circulatory LANE 3	1940	1883	1873	1897	1864	1851	1916
25/131	Western Circulatory LANE 4 OFFSIDE	1881	1890	1871	1887	1883	1884	1883
25/131	Southern Circulatory LANE 1 KERBSIDE	2120	1813	2120	1927	1818	1805	1983

Former Nestle Factory, Hayes - Scenario Tests

25/131	Southern Circulatory LANE 2	2060	1865	2023	1935	1930	1921	1977
25/126	Southern Circulatory LANE 3 OFFSIDE	1938	1948	2109	1946	2086	2136	1953
25/126	Eastern Circulatory LANE 1 KERBSIDE	1874	1922	2086	1896	2109	2126	1905
25/126	Eastern Circulatory LANE 2	1891	1906	2032	1872	2095	2080	1881
25/126	Eastern Circulatory LANE 3	2076	1836	2085	1862	1911	1961	1846
26/031	Eastern Circulatory LANE 4 OFFSIDE	1910	1875	1869	1872	1877	1882	1866
26/031	Station Road NB	1975	1913	1951	1924	1929	1935	1905
26/024	Station Road SB	1872	1887	1880	1925	1900	1884	1925
26/024	North Hyde Road EB	1975	1950	1973	1928	1984	1940	1933
26/059	North Hyde Road WB	1946	1894	1886	1887	1902	1855	1891
26/059	North Hyde Road EB	1979	1940	1970	1898	1974	2017	1894
26/098	North Hyde Road WB	1835	1822	1828	1843	1885	1825	1854
26/098	Pump Lane WB	1835	1822	1828	1843	1885	1825	1854
26/108	Pump Lane EB	1814	1800	1802	1804	1805	1801	1802
26/108	Coldharbour Lane NB	1802	1803	1804	1801	1802	1803	1804
26/107	Coldharbour Lane SB	1825	1802	1803	1804	1802	1805	1803
26/107	Botwell Lane WB	1841	1817	1822	1820	1823	1818	1820
26/134	Botwell Lane EB	1862	1842	1860	1841	1857	1857	1855
26/134	Botwell Lane WB	1810	1804	1805	1805	1811	1804	1805
26/109	Station Road Link NB	-	1817	1819	1814	1827	1844	1808
26/109	Station Road Link SB	-	1809	1809	1800	1809	1800	1800

4.3.2 The table found above can also be seen in **Appendix A**.

Former Nestle Factory, Hayes - Scenario Tests

4.4 MODEL CONVERGENCE

- 4.4.1 When a VISSIM model is coded to operate under Dynamic Assignment, a series of iterated model runs are used to determine the routes vehicles travel through the network from each OD pair, based on total travel cost. There is a need to assess the convergence of the model to test whether the travel times and volumes do not change significantly from one iteration to the next. This ensures that the model is stable enough for results to be used with confidence.
- 4.4.2 The Design Manual for Road and Bridges (DMRB) emphasises the importance of convergence within traffic models primarily for strategic models, however it is deemed good practice to ensure the microsimulation model converges also. There are two convergence criteria available for assessment with a VISSIM model.
- 4.4.3 These are :
- ▶ The percentage of links with a flow change (P) of less than 5% should be greater than 90% for four consecutive iterations; and
 - ▶ The percentage change in user costs or time spent within the network (V) of less than 1% for four consecutive iterations.
- 4.4.4 A *.CVA file output from VISSIM can be used to assess the P statistic and the *.NPE file output can be used to assess the V statistic.
- 4.4.5 The data provided in Table 4 and Table 5 indicate that both the AM and PM models are fully converged and provide a suitable platform for further validation.
- 4.4.6 Under heavily congested networks, there may iterations that do not converge or fully satisfy the convergence criteria. When this is the case, a judgment is made on the stability of the model and whether the convergence will be achieved by further model iterations. If it is deemed that the convergence will not get any better, then the model must be caveated as such.

Table 4: Model Convergence – AM – Baseline

AM	Run (Random seed 42)									
	1	2	3	4	5	6	7	8	9	10
Total Travel Time:	1381.99	1412.12	1382.71	1392.64	1366.66	1514.91	1363.32	1385.52	1388.76	1372.13
% Change in Travel Time:	0%	2%	-2%	1%	-2%	11%	-10%	2%	0%	-1%
% Edges with flow change of less than 5%:	88%	80%	80%	86%	88%	76%	74%	86%	82%	83%

Table 5: Model Convergence – PM – Baseline

PM	Run (Random seed 42)									
	1	2	3	4	5	6	7	8	9	10
Total Travel Time:	1677.67	1645.50	1620.09	1693.31	1672.52	1867.43	1745.30	1708.30	1772.99	1851.32
% Change in Travel Time:	-3%	-2%	-2%	5%	-1%	12%	-7%	-2%	4%	4%

Former Nestle Factory, Hayes - Scenario Tests

% Edges with flow change of less than 5%:	85%	80%	81%	84%	85%	79%	73%	85%	82%	80%
-------------------------------------------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Table 6: Model Convergence – AM – Baseline + DEV

AM	Run (Random seed 42)									
	1	2	3	4	5	6	7	8	9	10
Total Travel Time:	1413.74	1346.23	1397.57	1410.89	1412.37	1408.05	1414.17	1352.99	1379.88	1371.92
% Change in Travel Time:	1%	-5%	4%	1%	0%	0%	0%	-4%	2%	-1%
% Edges with flow change of less than 5%:	87%	86%	85%	86%	86%	90%	89%	90%	91%	93%

Table 7: Model Convergence – PM – Baseline + DEV

PM	Run (Random seed 42)									
	1	2	3	4	5	6	7	8	9	10
Total Travel Time:	1452.60	1475.46	1460.83	1448.35	1412.99	1444.21	1433.52	1431.23	1449.06	1446.17
% Change in Travel Time:	1%	2%	-1%	-1%	-2%	2%	-1%	0%	1%	0%
% Edges with flow change of less than 5%:	90%	88%	91%	92%	90%	91%	88%	90%	90%	89%

Table 8: Model Convergence – AM – Baseline + DEV + SEN

AM	Run (Random seed 42)									
	1	2	3	4	5	6	7	8	9	10
Total Travel Time:	1546.59	1566.23	1578.82	1562.42	1605.29	1615.88	1561.45	1554.06	1587.30	1562.40
% Change in Travel Time:	-5%	1%	1%	-1%	3%	1%	-3%	0%	2%	-2%
% Edges with flow change of less than 5%:	72%	82%	83%	80%	79%	82%	82%	83%	80%	78%

Table 9: Model Convergence – PM – Baseline + DEV + SEN

PM	Run (Random seed 42)									
	1	2	3	4	5	6	7	8	9	10
Total Travel Time:	1463. 32	1453. 07	1447. 16	1447. 67	1454. 37	1441. 46	1451. 72	1416. 55	1448. 86	1458. 91
% Change in Travel Time:	-1%	-1%	0%	0%	0%	-1%	1%	-2%	2%	1%
% Edges with flow change of less than 5%:	83%	87%	85%	85%	86%	87%	88%	86%	87%	86%

- 4.4.7 IT can seen that the Baseline, and the Baseline + DEV scenario convergence is fairly stable and converges nicely. The Baseline + DEV + SEN scenario, especially in the AM peak, shows the that the converge fluctuates over the course of a number of iterations.
- 4.4.8 The convergence assessment has only be conducted on the Baseline, Baseline + DEV, and the Baseline + DEV+ SEN models. There is no +5 Yr WelHAM model, as such, the WelHAM assignment for the +5Yr scenarios utilised the baseline dataset.

4.5 TRAFFIC ASSIGNMENT METHODOLOGY

- 4.5.1 The following text outlines the steps taken to code the VISSIM model with traffic inputs and routing information. It does not detail every calculation but it provides a summary of the methodology.
- 4.5.2 The base model traffic inputs have been factored using provided TEMPRO values to represent future year baseline traffic growth. It does not take into account any possible traffic reassignment away from the study area due to traffic growth or other unknown factors. The possible reassignment cannot fully be understood using TEMPRO uplifts whereas the use of a strategic model – such as WelHAM, to provide the baseline growth factor would reflect this assignment. It may be the case that certain model inputs would be reduced when using a strategic model because of reassignment of trips to other routes, whereas the TEMPRO factor can only uplift this traffic.
- 4.5.3 Therefore, the TEMPRO factor can be seen as the worst case and may increase baseline traffic growth to a greater value than would be seen in reality.
- 4.5.4 The Baseline 2024 TEMPRO factors used are:
 - ▶ AM Peak: 1.0843
 - ▶ PM Peak: 1.0853
- 4.5.5 The 2029 (+5Yr) TEMPRO factors used are:
 - ▶ AM Peak: 1.1103
 - ▶ PM Peak: 1.113
- 4.5.6 In addition, within the Baseline scenario, traffic has been introduced from/to the Nestle Site in the form of B2 land use traffic to represent re-occupation of the existing buildings on site, of which the following table indicates trip generation numbers. These values are in PCU's.

Former Nestle Factory, Hayes - Scenario Tests

Table 10 - Baseline B2 Trip Generation

B2 Use	AM Peak			PM Peak		
	IN	OUT	Total	IN	OUT	Total
Car trip rate	223	36	259	27	201	228
Goods Vehicle trip rate	17	15	32	6	7	13
Total	241	51	292	33	208	241

4.5.7 Within the Development Scenario, the following trips have been assigned to the Nestle Site.

Table 11 - +DEV Development Trip Generation

Proposed Development	AM Peak			PM Peak		
	IN	OUT	Total	IN	OUT	Total
Nursery	20	21	41	16	27	43
Residential	54	215	269	224	130	354
Gym / Office	13	6	19	9	12	21
New Employment	58 (2)	27 (8)	55	13 (6)	61 (6)	86
Total	147	227	384	268	236	504

4.5.8 Note that the numbers in brackets are HGV traffic.

4.5.9 The following table shows the trips assigned to the remainder of the Nestle site by way of Sensitivity Traffic.

Table 12 - +SEN Sensitivity Trip Generation

Sensitivity Traffic	AM Peak			PM Peak		
	IN	OUT	Total	IN	OUT	Total
Beccleuch Site	16	63	79	66	38	104
Squirrel TW	15	61	76	64	37	101
Precis Resi	6	25	31	26	15	41
Precis Office	25	3	28	5	27	32
Total	62	152	214	161	117	278

4.5.10 When developing the traffic matrices for each of the scenarios, the following steps have been undertaken:

- 1 - OBTAIN WELHAM SCENARIO MATRIX
- 2 - OBTAIN WELHAM ROUTING FILE (SATPIG)
- 3 - CREATE WELHAM DIFFERENCE MATRIX BETWEEN BASE AND SCENARIO MATRIX
- 4 - UPLIFT TRAFFIC FLOW INPUTS BASED UPON TEMPRO AND COMMITTED DEVELOPMENTS PLUS PROPOSED / SENSITIVITY TRAFFIC
- 5 - USE WELHAM ASSIGNMENT PROPORTIONS PER SCENARIO

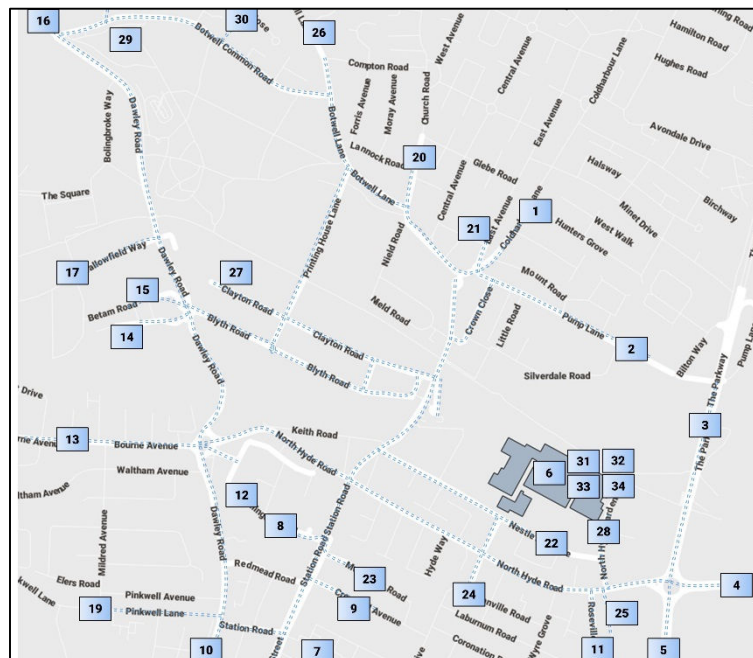
Former Nestle Factory, Hayes - Scenario Tests

6 - PREPARE SCENARIO TRAFFIC MATRICES

7 – DYNAMICALLY ASSIGN MATRICES WITHIN VISSIM

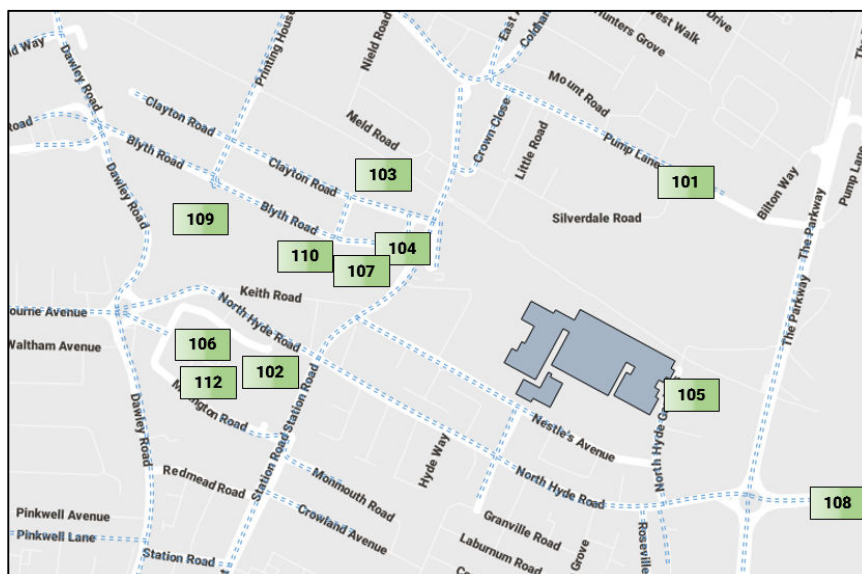
- 4.5.11 The routing assignment from the WELHAM model and the Dynamic Assignment run in VISSIM can often be different. The VISSIM assignment is compared with the WelHAM assignment and matched where possible.
- 4.5.12 The Origin and Destination Zones used within the Future Base Scenario is shown in Figure 4.1. Note the additional zones – 31 to 34. 31 is used to represent proposed Nursery traffic, 32 is used to represent the proposed Residential traffic, 33 is used to represent the Office/Gym proposed traffic and zone 34 is used to represent the proposed new employment traffic. Zone 34 access the site via North Hyde Gardens, whereas the 31, 32, and 33 all access the site via Nestle Avenue.
- 4.5.13 Note that Zone 6 represents the Former Nestle Site. In the Base model, this zone has 0 trips assigned to it. Within the Baseline Scenario, the site is to be assess with B2 Existing Employment trips. In the with Development scenarios, this is to be replaced with the New Employment traffic.

Figure 4.1: O-D Zone Locations – Baseline Scenario, Baseline + DEV, and Baseline + DEV + SEN



- 4.5.14 For each of the committed developments in and around Hayes Town Centre, a new zone has been created in order for this traffic to be assigned correctly within the model. If the flows associated with the committed developments were assigned using the WELHAM OD proportions for trips entering and leaving the model extent, these trips, although travelling through the model, would not be accurately routed to the correct zones. As such, each committed development has a specific trip value per Origin and Destination within the model.

Figure 4.2: O-D Zone Locations – Committed Developments



The committed developments include the following:

- ▶ 101 - Silverdale Road
- ▶ 102 - Rackspac City, Millington Road
- ▶ 103 - Union House, Clayton Road
- ▶ 104 - Trident House, Blyth Road
- ▶ 105 - Unit A, Bulls Bridge Centre, North Hyde Gardens
- ▶ 106 - Hyde Park Hayes, Millington Road
- ▶ 107 - 20 Blyth Road
- ▶ 108 - Southwall Gas Works, via Hayes Lane
- ▶ 109 – Old Vinyl Factory, Blyth Road
- ▶ 110 – Gatefold Building, Blyth Road
- ▶ 111 – UTC College (Combined with 109)
- ▶ 112 – Asda Industrial, Millington Road

Table 13 - Committed Development Flows - Both Peaks

Development	Road Access	AM Peak		PM Peak	
		IN	OUT	IN	OUT
Silverdale Road	Pump Lane	5	15	10	6
22632 App	Millington Rd	5	15	15	9
Union House	Clayton Rd	3	7	4	1
Trident House	Clayton Rd	1	14	9	5
Unit A Bulls Bridge	North Hyde Gardens	50	30	24	48
HPH	Millington	65	9	11	66

Former Nestle Factory, Hayes - Scenario Tests

20 Blyth Road	Blyth Road	4	15	12	10
Gas Works	Blyth Road	30	59	58	52
Old Vinyl Factory (incl UTC College)	Blyth Road	717	221	192	794
Gatefold Building	Blyth Road	8	37	14	13
Asda	Asda	71	13	11	54
Silverdale Road	PUMP LANE	5	15	10	6

4.6 TRAFFIC FLOW VALIDATION (V304)

- 4.6.1 The traffic flows measured from VISSIM are the average of **10** seed runs. The modelled flows are extracted from VISSIM using Data Collection points and are separated by vehicle type. The vehicle flow numbers are converted into PCU values and compared for each with the surveyed PCU flows.
- 4.6.2 As with the base model, U-Turning traffic is not explicitly modelled, with the exception of traffic leaving North Hyde Gardens with a destination to the west. These vehicles must turn left onto North Hyde Road and make a U-Turn via Bulls Bridge Roundabout to enter North Hyde Road in a westbound direction.
- 4.6.3 With Station Road linking directly with Botwell Lane the model cannot reflect vehicles in the base previously parking at Station Road. These trips have been removed. As mentioned in the LMVR document, (and shown below), public transport routes were used to reflect this traffic.

Similarly, the SATURN WelHAM model does not route traffic into the available parking at Station Road. Traffic has been assigned, using Public Transport routes to enter into this section of the network.

- 4.6.4 Warmup traffic introduced and retained as part of the scenario tests.
- ▶ Bourne Avenue – AM: 140 vehs, PM: 250 vehs.
 - ▶ A312 Parkway SB – AM: 500 vehs, PM: 150 vehs.
 - ▶ Hayes Road WB – AM: 150 vehs, PM: 85 vehs.
- 4.6.5 These additional vehicles do not affect the traffic flow validation as they create congestion and queueing conditions that occur at the beginning of the peak period. The warmup traffic is only loaded into the network during the warmup period.
- 4.6.6 The comparison of the VISSIM traffic flows is provided at **Appendix B**.

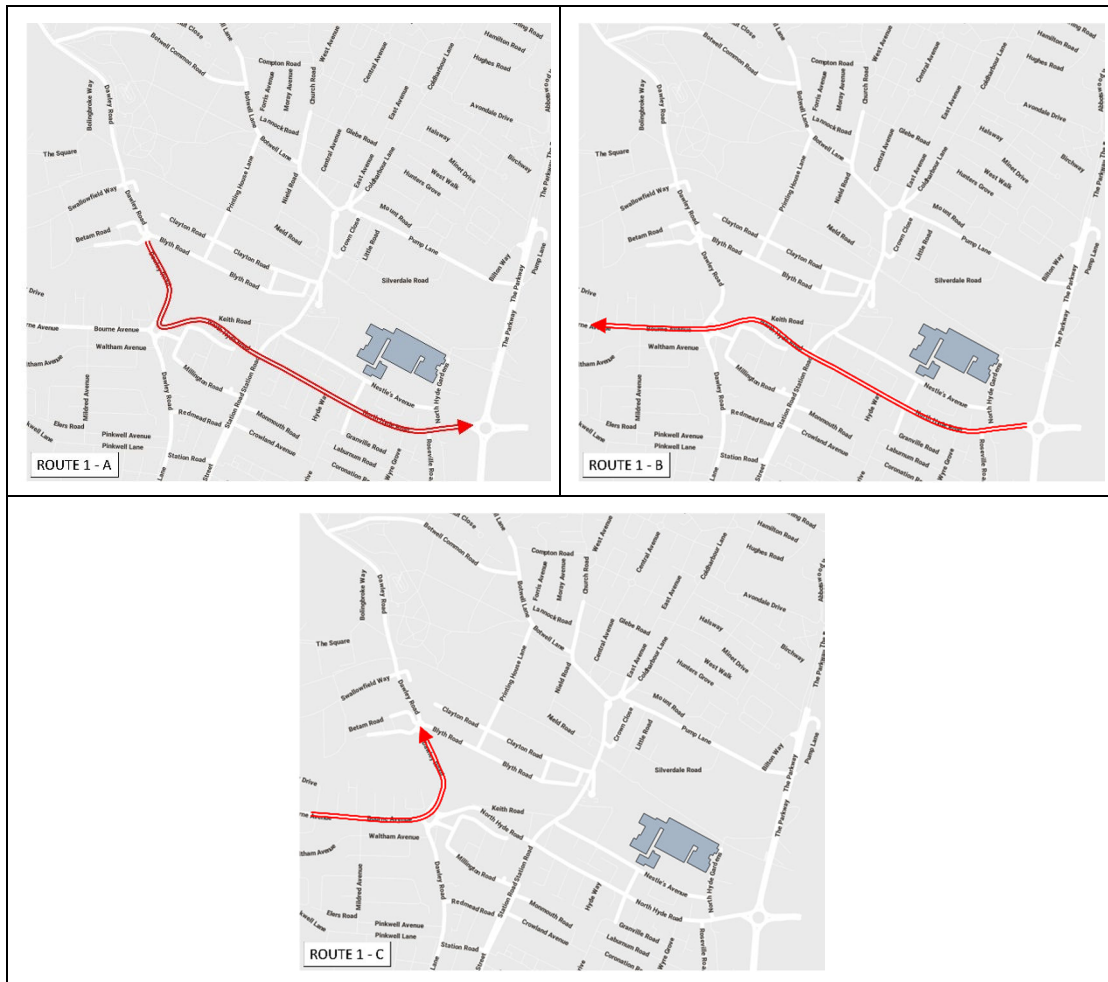
4.7 QUEUE LENGTH ANALYSIS (V305)

- 4.7.1 Queue lengths in the scenario models have been analysed and compared between the modelled scenarios.
- 4.7.2 The comparison between VISSIM modelled queue lengths and those observed on site can be found in **Appendix C**.

4.8 JOURNEY TIME COMPARISON (V306)

- 4.8.1 The journey time routes are shown in Figure 4.3, Figure 4.4 and Figure 4.5 remain active in the scenario tests, and comparison between these and the base model has been provided.

Figure 4.3: Route 1 Sections A, B & C



4.8.2 Route 1 Section A runs between:

- ▶ Blyth Road to the A312 via Dawley Road & North Hyde Road EASTBOUND.

4.8.3 Route 1 Section B runs between:

- ▶ A312 Bulls Bridge Roundabout to Bourne Avenue via North Hyde Road WESTBOUND.

4.8.4 Route 1 Section C runs between:

- ▶ Bourne Avenue to Betham Road via Dawley Road NORTHBOUND.

Figure 4.4: Route 2 Sections, A, B, C & D



- 4.8.5 Route 2 Section **A** runs between:
- ▶ High Street / Station Road to Blyth Road / Dawley Road via High Street & Blyth Road NORTHBOUND.
- 4.8.6 Route 2 Section **B** runs between:
- ▶ Blyth Road / Dawley Avenue to Station Approach via Clayton Road EASTBOUND.
- 4.8.7 Route 2 Section **C** runs between:
- ▶ Station Road Parking NORTHBOUND / SOUTHBOUND.
- 4.8.8 Route 2 Section **D** runs between:
- ▶ Station Road to High Street / Station Road SOUTHBOUND.

Figure 4.5: Route 3 Sections A, B, C & D



- 4.8.9 Route 3 Section A runs between:
- ▶ The Parkway / Hayes Road A312 westbound via North Hyde Road via Station Road, Nestle Avenue (eastbound), Harold Avenue and returns eastbound via North Hyde Road to the A312.
- 4.8.10 Route 3 Section B runs between:
- ▶ Pump Lane towards Church Road / Botwell Road WESTBOUND
- 4.8.11 Route 3 Section C runs between:
- ▶ Church Road / Botwell Road towards Pump Lane EASTBOUND
- 4.8.12 Route 3 Section D runs between:
- ▶ Pump Lane and the A312 Bulls Bridge junction along the A312 SOUTHBOUND.
- 4.8.13 A comparison of the VISSIM and observed journey times is provided in Figure 4.6. The journey time results are the average of 10 seed runs.

Former Nestle Factory, Hayes - Scenario Tests

Figure 4.6: Modelled Journey Times

		AM												
Route 1 - Combined		Base	Baseline	BL+DEV	BL+DEV+SEN	Baseline vs Base	BLD vs BL	BLDS vs BL	SYr Baseline	SYr BL+DEV	SYr BL+DEV+SEN	SYrBL vs BL	SYrBLD vs SYrBL	SYrBLDS vs SYrBL
A	Route 1 - Blyth Road to A312 EB	436	451	481	856	15 3%	30 7%	405 90%	478	522	824	28 6%	44 9%	346 79%
B	Route 1 - A312 to Bourne Avenue WB	254	463	309	602	209 82%	-154 -33%	139 30%	269	283	573	-193 -42%	14 5%	304 119%
C	Route 1 - Bourne Avenue to Betam Road NB	340	391	347	575	51 15%	-44 -13%	183 47%	486	371	634	95 24%	-116 -24%	148 144%
Route 2 - Combined		Base	Baseline	BL+DEV	BL+DEV+SEN	Baseline vs Base	BLD vs BL	BLDS vs BL	SYr Baseline	SYr BL+DEV	SYr BL+DEV+SEN	SYrBL vs BL	SYrBLD vs SYrBL	SYrBLDS vs SYrBL
A	Route 2 - High Street to Blyth Road / Dawley Road NB	316	313	542	982	-4 -1%	230 74%	669 214%	322	890	735	-9 3%	568 177%	433 133%
B	Route 2 - Blyth Road / Dawley Road to Station Approach RAB EB	133	130	137	184	-3 -2%	7 5%	53 41%	134	138	164	3 2%	4 3%	31 23%
C	Route 2 - Station Road Parking	62	50	142	135	-12 -20%	92 186%	86 172%	50	157	130	0 1%	107 214%	80 129%
D	Route 2 - Station Road to High Street SB	221	253	200	454	31 14%	-52 -21%	201 80%	279	206	386	27 10%	-73 -26%	107 148%
Route 3 - Individual		Base	Baseline	BL+DEV	BL+DEV+SEN	Baseline vs Base	BLD vs BL	BLDS vs BL	SYr Baseline	SYr BL+DEV	SYr BL+DEV+SEN	SYrBL vs BL	SYrBLD vs SYrBL	SYrBLDS vs SYrBL
A	A312 The Pkwy / North Hyde Road RAB to North Hyde Road / North Hyde Green Jct	15	18	20	28	3 17%	2 12%	10 55%	22	21	24	4 24%	-1 -7%	2 12%
A	North Hyde Road / North Hyde Green Jct to North Hyde Road / Roseville Ped X	18	20	21	34	2 11%	1 5%	14 71%	20	21	31	0 -2%	2 9%	1 62%
A	North Hyde Road / Roseville Ped X to North Hyde Road / Harold Road Ped X	34	67	35	135	33 97%	-32 -47%	68 102%	38	36	122	-30 -44%	-2 -4%	85 249%
A	North Hyde Road / Harold Road Ped X to A437 Station Road / A437 North Hyde Road Jct	119	287	149	314	168 141%	-137 -48%	27 9%	121	127	306	-166 -58%	6 5%	185 156%
A	A437 Station Road / A437 North Hyde Road Jct to Nestles Avenue / Station Road Jct	25	53	65	24	29 117%	11 21%	-29 -55%	49	70	24	-5 -9%	21 44%	-25 -100%
A	Nestles Avenue / Station Road Jct to Nestles Avenue / Harold Avenue Jct	60	61	59	59	0 0%	-2 -2%	-2 -3%	60	58	61	-1 -1%	-2 -3%	1 1%
A	Nestles Avenue / Harold Avenue Jct to Harold Avenue / North Hyde Road Jct	18	21	25	40	3 16%	4 18%	19 86%	21	24	45	-1 -3%	4 17%	24 132%
A	Harold Avenue / North Hyde Road Jct to North Hyde Road / Harold Road Ped X	6	8	10	7	2 32%	2 26%	-2 -20%	12	10	6	3 42%	-1 -10%	-5 -47%
A	North Hyde Road / Harold Road Ped X to North Hyde Road / Roseville Ped X	49	64	99	49	15 30%	35 55%	-15 -23%	90	108	53	26 41%	18 20%	-37 -76%
A	North Hyde Road / Roseville Ped X to North Hyde Road / Watersplash Lane / North Hyde Gardens Jct	20	19	25	17	0 -1%	6 29%	-3 -13%	22	26	18	3 15%	4 18%	4 23%
A	North Hyde Road / Watersplash Lane / North Hyde Gardens Jct to A312 The Pkwy / North Hyde Road RAB	70	45	59	42	-25 -35%	14 13%	3 4%	60	62	44	1 1%	1 2%	-16 -24%
Route 3 - Combined		Base	Baseline	BL+DEV	BL+DEV+SEN	Baseline vs Base	BLD vs BL	BLDS vs BL	SYr Baseline	SYr BL+DEV	SYr BL+DEV+SEN	SYrBL vs BL	SYrBLD vs SYrBL	SYrBLDS vs SYrBL
A	Route 3 - A312 Parkway Loop	424	664	368	748	240 57%	-95 -14%	85 13%	514	564	734	-140 -23%	50 10%	220 51%
B	Route 3 - Pump Lane to Church Road RAB WB	69	83	95	100	14 20%	12 15%	17 21%	87	96	90	5 6%	8 9%	2 8%
C	Route 3 - Pump Lane to Church Road RAB EB	47	74	86	73	27 58%	12 16%	-1 -2%	77	86	76	3 3%	5 12%	-1 -2%
D	Route 3 - SB A312 Approach to Bulls Bridge RAB	244	248	147	254	5 2%	-101 -41%	5 2%	158	167	250	-90 -36%	9 5%	51 37%
Bulls Bridge to Harold Avenue		Base	Baseline	BL+DEV	BL+DEV+SEN	Baseline vs Base	BLD vs BL	BLDS vs BL	SYr Baseline	SYr BL+DEV	SYr BL+DEV+SEN	SYrBL vs BL	SYrBLD vs SYrBL	SYrBLDS vs SYrBL
	Harold Road to Bulls Bridge Roundabout - Eastbound	138	128	183	108	-10 7%	55 43%	-20 -16%	173	196	115	45 35%	23 13%	-58 -42%
	Bulls Bridge Roundabout to Harold Road - Westbound	67	105	77	197	38 56%	-28 -27%	92 88%	79	78	177	-26 -24%	-1 -2%	98 145%
Botwell Common		Base	Baseline	BL+DEV	BL+DEV+SEN	Baseline vs Base	BLD vs BL	BLDS vs BL	SYr Baseline	SYr BL+DEV	SYr BL+DEV+SEN	SYrBL vs BL	SYrBLD vs SYrBL	SYrBLDS vs SYrBL
	Botwell Common Road - Eastbound	247	272	319	455	25 10%	47 17%	183 67%	468	385	378	195 72%	-83 -18%	-89 -36%
	Botwell Common Road - Westbound	230	246	254	446	17 7%	8 3%	200 81%	249	260	568	3 1%	11 4%	319 139%
		PM												
Route 1 - Combined		Base	Baseline	BL+DEV	BL+DEV+SEN	Baseline vs Base	BLD vs BL	BLDS vs BL	SYr Baseline	SYr BL+DEV	SYr BL+DEV+SEN	SYrBL vs BL	SYrBLD vs SYrBL	SYrBLDS vs SYrBL
A	Route 1 - Blyth Road to A312 EB	639	1187	629	642	549 86%	-559 -47%	-445 -60%	1023	1096	641	-165 -14%	79 7%	-391 -37%
B	Route 1 - A312 to Bourne Avenue WB	256	268	235	423	11 4%	-33 -12%	156 58%	231	242	404	-37 -14%	11 5%	173 75%
C	Route 1 - Bourne Avenue to Betam Road NB	324	357	331	388	33 10%	-27 -7%	31 8%	365	340	366	8 2%	-25 -7%	-1 0%
Route 2 - Combined		Base	Baseline	BL+DEV	BL+DEV+SEN	Baseline vs Base	BLD vs BL	BLDS vs BL	SYr Baseline	SYr BL+DEV	SYr BL+DEV+SEN	SYrBL vs BL	SYrBLD vs SYrBL	SYrBLDS vs SYrBL
A	Route 2 - High Street to Blyth Road / Dawley Road NB	378	609	406	525	231 61%	-203 -33%	-84 -14%	577	554	608	-32 -5%	-23 -4%	31 5%
B	Route 2 - Blyth Road / Dawley Road to Station Approach RAB EB	129	404	141	277	275 213%	-263 -65%	-127 -32%	319	291	364	-86 -21%	-28 -9%	45 14%
C	Route 2 - Station Road Parking	79	70	162	145	-9 -11%	93 133%	75 108%	78	129	126	8 12%	51 66%	48 61%
D	Route 2 - Station Road to High Street SB	264	419	208	453	155 59%	-211 -50%	34 8%	408	414	485	-12 -3%	6 2%	78 19%
Route 3 - Individual		Base	Baseline	BL+DEV	BL+DEV+SEN	Baseline vs Base	BLD vs BL	BLDS vs BL	SYr Baseline	SYr BL+DEV	SYr BL+DEV+SEN	SYrBL vs BL	SYrBLD vs SYrBL	SYrBLDS vs SYrBL
A	A312 The Pkwy / North Hyde Road RAB to North Hyde Road / North Hyde Green Jct	28	24	23	24	-4 -12%	-2 -7%	0 2%	23	26	21	-2 -7%	3 15%	-2 -7%
A	North Hyde Road / North Hyde Green Jct to North Hyde Road / Roseville Ped X	30	28	22	24	-2 7%	6 21%	-3 -12%	26	27	22	-2 -7%	1 3%	4 -15%
A	North Hyde Road / Roseville Ped X to North Hyde Road / Harold Road Ped X	36	35	38	51	0 -1%	3 8%	15 44%	36	37	43	3 2%	0 1%	7 20%
A	North Hyde Road / Harold Road Ped X to A437 Station Road / A437 North Hyde Road Jct	96	116	90	257	20 20%	-26 -23%	141 122%	89	91	252	-27 -23%	2 2%	163 184%
A	A437 Station Road / A437 North Hyde Road Jct to Nestles Avenue / Station Road Jct	23	92	54	43	69 300%	-38 -42%	-49 -53%	66	86	45	-27 -29%	20 30%	-21 -32%
A	Nestles Avenue / Station Road Jct to Nestles Avenue / Harold Avenue Jct	61	60	60	57	-1 -2%	0 1%	-2 -4%	60	60	58	0 0%	1 1%	-2 -4%
A	Nestles Avenue / Harold Avenue Jct to Harold Avenue / North Hyde Road Jct	19	20	21	28	1 4%	2 9%	9 45%	19	25	26	0 1%	6 25%	6 32%
A	Harold Avenue / North Hyde Road Jct to North Hyde Road / Harold Road Ped X	10	25	9	7	15 162%	-16 -64%	-18 -73%	22	23	7	-1 -5%	2 9%	-15 -68%
A	North Hyde Road / Harold Road Ped X to North Hyde Road / Roseville Ped X	122	229	113	70	107 88%	-116 -51%	-159 -69%	184	202	74	-45 -20%	18 10%	-110 -60%
A	North Hyde Road / Roseville Ped X to North Hyde Road / Watersplash Lane / North Hyde Gardens Jct	35	44	30	25	9 27%	-14 -31%	-19 -42%	35	38	26	-8 -9%	3 8%	-9 -27%
A	North Hyde Road / Watersplash Lane / North Hyde Gardens Jct to A312 The Pkwy / North Hyde Road RAB	86	85	61	46	-1 -1%	-24 -28%	-39 -46%	82	82	46	-2 -3%	-1 -1%	-17 -44%
Route 3 - Combined		Base	Baseline	BL+DEV	BL+DEV+SEN	Baseline vs Base	BLD vs BL	BLDS vs BL	SYr Baseline	SYr BL+DEV	SYr BL+DEV+SEN	SYrBL vs BL	SYrBLD vs SYrBL	SYrBLDS vs SYrBL
A	Route 3 - A312 Parkway Loop	544	758	523	633	214 39%	-237 -31%	-125 -17%	642	696	619	-116 -15%	54 8%	-22 3%
B	Route 3 - Pump Lane to Church Road RAB WB	70	107	86	79	37 53%	-21 -19%	-28 -26%	92	91	77	-15 -14%	-2 -2%	-15 -17%
C	Route 3 - Pump Lane to Church Road RAB EB	53	136	102	95	83 157%	-34 -25%	-41 -30%	116	108	101	-20 -15%	-8 -7%	-15 -13%
D	Route 3 - SB A312 Approach to Bulls Bridge RAB	167	571	236	252	403 241%	-334 -59%	-318 -56%	568	569	246	-3 0%	1 0%	-322 -57%
Bulls Bridge to Harold Avenue		Base	Baseline	BL+DEV	BL+DEV+SEN	Baseline vs Base	BLD vs BL	BLDS vs BL	SYr Baseline	SYr BL+DEV	SYr BL+DEV+SEN	SYrBL vs BL	SYrBLD vs SYrBL	SYrBLDS vs SYrBL
	Harold Road to Bulls Bridge Roundabout - Eastbound	243	358	204	141	220 159%	76 59%	3 2%	302	322	146	174 135%	149 86%	-27 -19%
	Bulls Bridge Roundabout to Harold Road - Westbound	93	87	83	99	-20 10%	-22 21%	31 47%	84	88	86	-21 -20%	9 11%	7 10%
Botwell Common		Base	Baseline	BL+DEV	BL+DEV+SEN	Baseline vs Base	BLD vs BL	BLDS vs BL	SYr Baseline	SYr BL+DEV	SYr BL+DEV+SEN	SYrBL vs BL	SYrBLD vs SYrBL	SYrBLDS vs SYrBL
	Botwell Common Road - Eastbound	236	395	277	265	148 60%	5 2%	18 7%	341	309	266	69 25%	-159 -34%	-201 -82%
	Botwell Common Road - Westbound	222	264	249	239	34 15%	3 1%	9 4%	263	253	238	17 7%	4 1%	-12 5%

4.8.14 Bus travel time data has been compared between scenarios. Also found in Appendix D.

4.9 ERROR LOGS (V307)

4.9.1 The error logs have been interrogated and there are not significant issues. It should be noted that minimum green time violation errors occur – these can be ignored as the signals operate under VAP control which provides to correct operation of the signals.

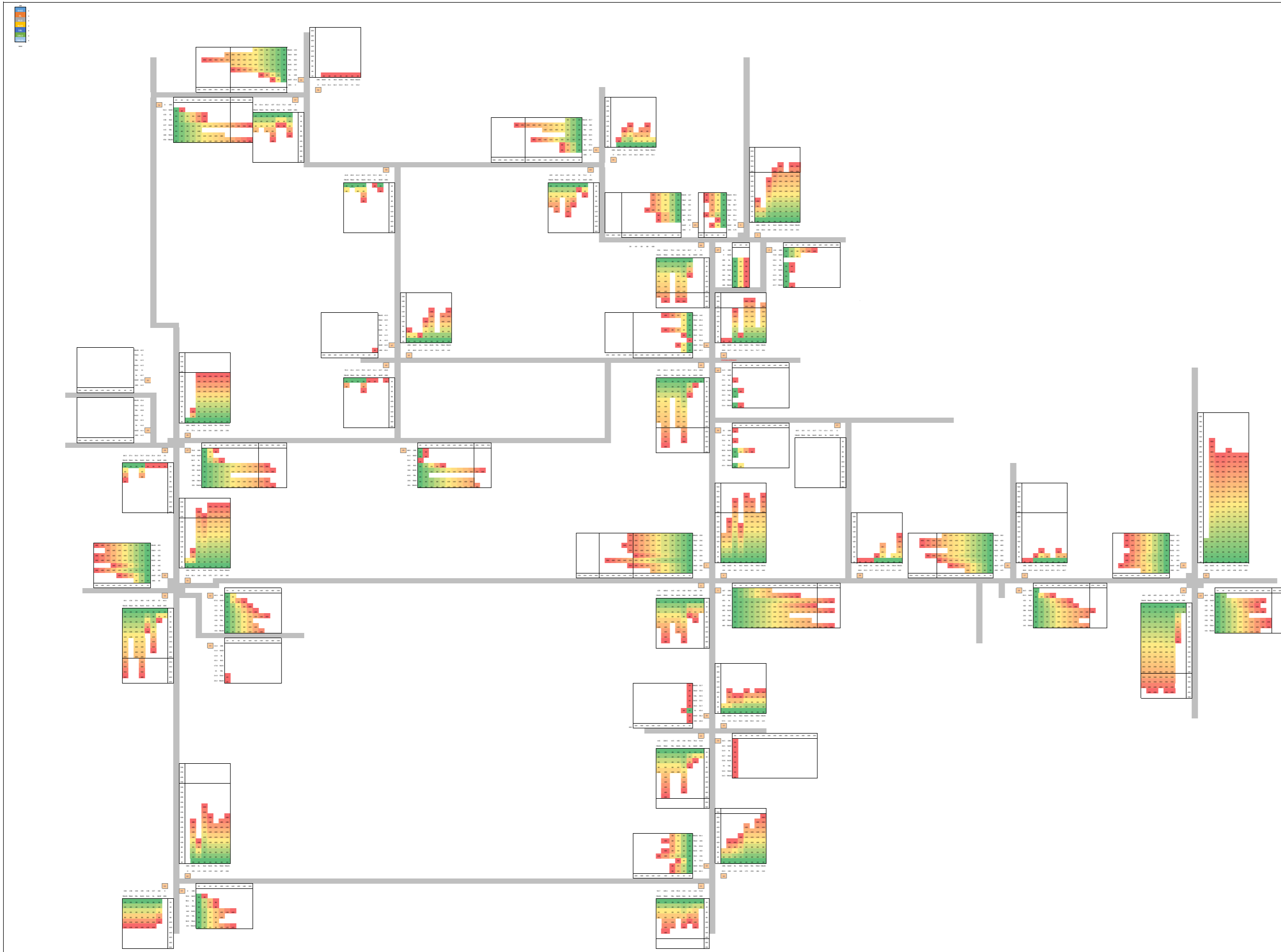
APPENDIX A - SATURATION FLOWS

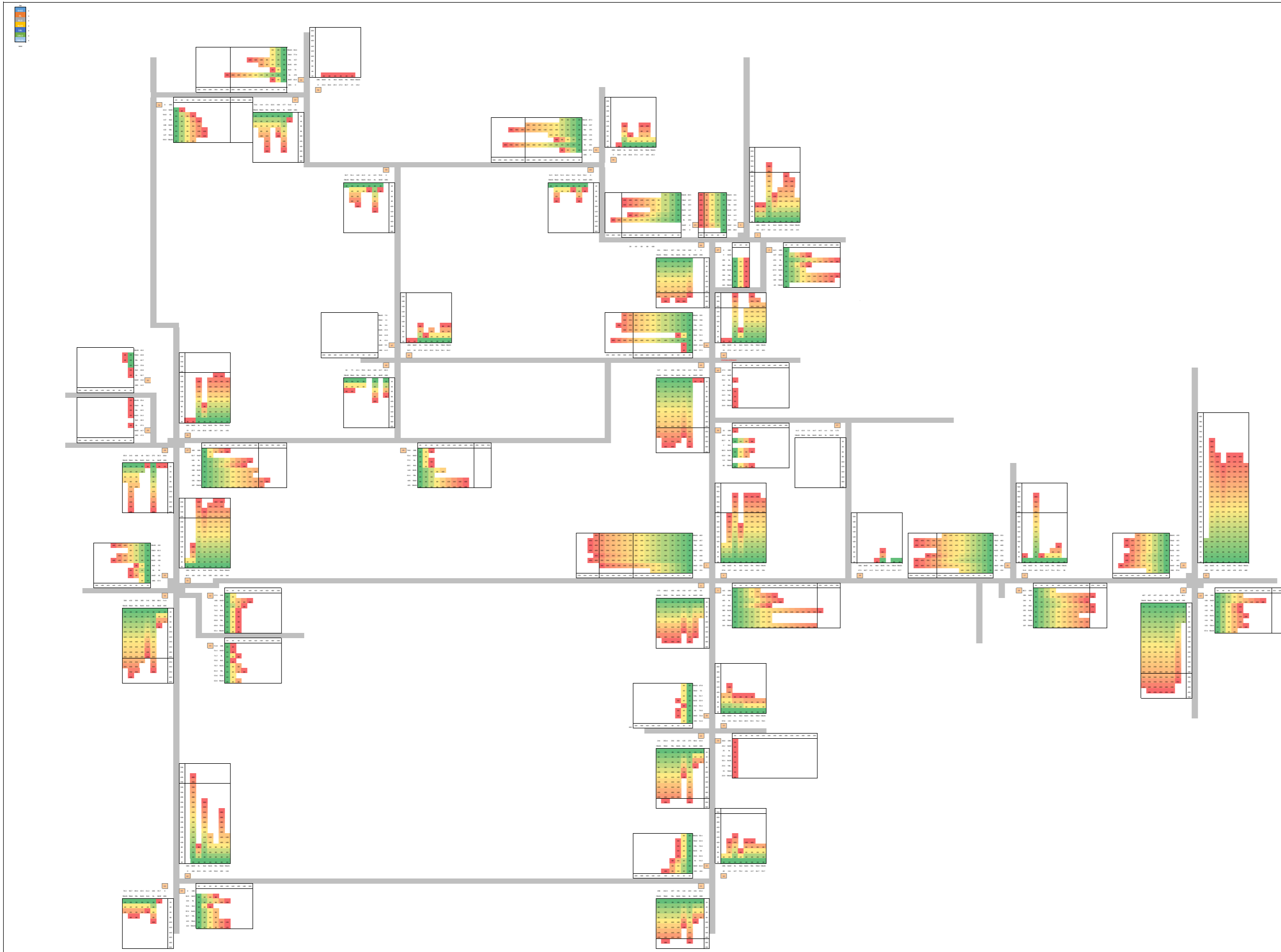
JCT	REF	Approach	v_Ref	AM	PM	LinSig saturation	Flow	Base	BASELINE	BASELINE + DEV	BASELINE + DEV + SEN	SYR BASELINE	SYR BASELINE + DEV	SYR BASELINE + DEV + SEN
26/075	A1	Station Road SB SA	750402	1985	2012	1999	1917	1908	1905	1903	1914	1911	1906	1906
26/075	A2	Station Road SB SA RT	750301	1945	2250	2097	1861	1873	1861	1872	1874	1867	1875	1875
26/075	B1	High Street NB SA LT	750102	2056	2026	2041	1897	1898	1912	1900	1910	1917	1906	1906
26/075	B2	High Street NB SA	750101	2109	2081	2095	2015	2024	2021	2014	2032	2019	2022	2022
26/075	C	Station Road WB	750201	1940	1958	1949	1955	1925	1967	1947	1938	1962	1949	1949
26/261	A1	Station Road SB SA	2610202	2064	2026	2045	1925	1911	1925	1915	1920	1913	1899	1899
26/261	A2	Station Road SB RT	2610201	2064	2026	2045	1926	1909	1904	1896	1923	1911	1906	1906
26/261	B	Bedwell Gardens	2610401	1995	1993	1994	1824	1824	1827	1813	1825	1817	1822	1822
26/261	C1	Station Road NB SA RT	2610101	2021	2032	2027	1879	1866	1865	1849	1847	1873	1854	1854
26/261	C2	Station Road NB SA LT	2610201	2156	2023	2089	1926	1909	1904	1896	1923	1911	1906	1906
26/261	D1	Millington Road EB LT	2610302	2386	2386	2386	1859	1827	1839	1839	1812	1827	1800	1800
26/261	D2	Millington Road EB RT	2610301	1982	1925	1953	1851	1851	1844	1843	1830	1830	1838	1838
26/010	A1	Station Road SB SA LT	100302	2149	2062	2106	2013	2028	2008	2037	2061	1991	2027	2027
26/010	A2	Station Road SB RT	100301	2040	2010	2025	Too Few Vehs	1809	-	1812	1808	-	1808	1808
26/010	B1	North Hyde Road WB SA LT	100202	1966	1932	1949	1880	1909	1892	1898	1886	1898	1891	1891
26/010	B2	North Hyde Road WB RT	100201	2094	1988	2041	1869	1835	1846	1875	1826	1856	1884	1884
26/010	C1	Station Road NB SA LT	100402	2287	2113	2200	1990	1991	1992	2003	1967	1998	2025	2025
26/010	C2	Station Road NB SA RT	100401	#DIV/0!	1872	#DIV/0!	1806	1809	1813	1814	1818	1802	1800	1800
26/010	D1	North Hyde Road EB SA LT	100102	1958	2078	2018	1916	1854	1842	1856	1847	1847	1853	1853
26/010	D2	North Hyde Road EB RT	100101	2160	1800	1980	1892	1848	1850	1860	1839	1832	1856	1856
26/146	J4-X	North Hyde Road EB	1460101	1800	1800	1800	1844	1843	1836	1879	1844	1826	1875	1875
26/146	J4-X	North Hyde Gardens	1460301	1800	1800	1800	-	1823	1813	1818	Too Few Vehs	1800	1811	1811
26/146	J4/1/1	North Hyde Road WB	1460202	1780	1780	1780	2012	1965	1878	1923	1857	1873	1926	1926
26/146	J4-X	Watersplash Road NB	1460401	1800	1800	1800	-	-	-	-	-	-	-	-
25/126	J1:2/1	North Hyde Road EB Appr	1260103	2094	2029	2062	1934	1902	1884	1875	1897	1887	1890	1890
25/126	J1:2/2	North Hyde Road EB Appr	1260102	2123	2025	2074	1866	1855	1823	1847	1838	1830	1840	1840
25/126	0	North Hyde Road EB Appr FLARE	1260101	2520	2268	2394	1825	-	-	-	-	-	Too Few Vehs	Too Few Vehs
25/127	J1:5/1	Parkway [N] SB Lane 1 FLARE	1270503	2117	1963	2040	2006	2022	1968	1985	2029	2018	1977	1977
25/127	J1:5/2	Parkway [N] SB Lane 2	1270502	2059	2034	2046	1947	1967	1978	2001	1957	1946	1989	1989
25/127	J1:5/3	Parkway [N] SB Lane 3 Offside	1270501	2282	2071	2177	2013	1997	2106	2124	1988	1981	2124	2124
25/129	J2:2/1	Hayes Road WB Lane 1 Kerbside	1290104	1951	2030	1991	1877	1951	1926	1967	1937	1935	1956	1956
25/129	J2:2/2	Hayes Road WB Lane 2	1290103	2053	2084	2069	1886	1892	1943	1941	1885	1876	1928	1928
25/129	J2:2/3	Hayes Road WB Lane 3	1290102	2062	2089	2075	1831	1815	1823	1816	1813	1822	1820	1820
25/129	J2:2/4	Hayes Road WB Lane 4 Offside	1290101	1980	1933	1956	1867	1847	1869	1869	1858	1848	1856	1856
25/131	J2:6/4	Parkway [S] NB Lane 1 FLARE OFFSIDE	1310601	2087	2156	2121	2033	1894	1985	1970	1882	1899	1982	1982
25/131	J2:6/3	Parkway [S] NB Lane 2	1310602	2058	2060	2059	1975	1860	1941	1934	1868	1886	1942	1942
25/131	J2:6/2	Parkway [S] NB Lane 3	1310603	2075	2005	2040	1985	1871	1948	1933	1863	1888	1940	1940
25/131	J2:6/1	Parkway [S] NB Lane 4 FLARE KERBSIDE	1310699	2152	2040	2096	1845	1878	1852	1844	1897	1881	1855	1855
25/127	J1:4/1	Northern Circulatory LANE 1 KERBSIDE	1270604	1965	1965	1965	1969	1843	1945	1892	1840	1845	1862	1862
25/127	J1:4/2	Northern Circulatory LANE 2	1270603	1675	1675	1675	1881	1820	1907	1847	1820	1808	1834	1834
25/127	J1:4/3	Northern Circulatory LANE 3	1270602	1975	1975	1975	1854	1866	1843	1834	1852	1846	1848	1848
25/127	J1:4/4	Northern Circulatory LANE 4 OFFSIDE	1270601	1965	1965	1965	-	-	-	-	-	-	-	-
25/129	J2:1/1	Western Circulatory LANE 1 KERBSIDE	1290204	1995	1995	1995	1947	1895	1905	1991	1832	1836	1954	1954
25/129	J2:1/2	Western Circulatory LANE 2	1290203	1995	1995	1995	1948	1917	1923	2026	1837	1831	2003	2003
25/129	J2:1/3	Western Circulatory LANE 3	1290202	1995	1995	1995	1905	1991	2002	2119	1855	1850	2179	2179
25/129	J2:1/4	Western Circulatory LANE 4 OFFSIDE	1290201	1995	1995	1995	1940	1883	1873	1897	1864	1851	1916	1916
25/131	J2:3/1	Southern Circulatory LANE 1 KERBSIDE	1310703	1995	1995	1995	1881	1890	1871	1887	1883	1884	1883	1883
25/131	J2:3/2	Southern Circulatory LANE 2	1310702	1995	1995	1995	2120	1813	2120	1927	1818	1805	1983	1983
25/131	J2:3/3	Southern Circulatory LANE 3 OFFSIDE	1310701	1975	1975	1975	2060	1865	2023	1935	1930	1921	1977	1977
25/126	J1:1/1	Eastern Circulatory LANE 1 KERBSIDE	1260204	1975	1975	1975	1938	1948	2109	1946	2086	2136	1953	1953
25/126	J1:1/2	Eastern Circulatory LANE 2	1260203	1975	1975	1975	1874	1922	2086	1896	2109	2126	1905	1905
25/126	J1:1/3	Eastern Circulatory LANE 3	1260202	1965	1965	1965	1891	1906	2032	1872	2095	2080	1881	1881
25/126	J1:1/4	Eastern Circulatory LANE 4 OFFSIDE	1260201	1965	1965	1965	2076	1836	2085	1862	1911	1961	1846	1846
26/031	0	Station Road NB	310101	1800	1800	1800	1910	1875	1869	1872	1877	1882	1866	1866
26/031	0	Station Road SB	310401	1800	1800	1800	1975	1913	1951	1924	1929	1935	1905	1905
26/024	0	North Hyde Road EB	240101	1800	1800	1800	1872	1887	1880	1925	1900	1884	1925	1925
26/024	0	North Hyde Road WB	240401	1800	1800	1800	1975	1950	1973	1928	1984	1940	1933	1933
26/059	0	North Hyde Road EB	590101	1800	1800	1800	1946	1894	1886	1887	1902	1855	1891	1891
26/059	0	North Hyde Road WB	590401	1800	1800	1800	1979	1940	1970	1898	1974	2017	1894	1894
26/098	0	Pump Lane WB	980401	1800	1800	1800	1835	1822	1828	1843	1885	1825	1854	1854
26/098	0	Pump Lane EB	980401	1800	1800	1800	1835	1822	1828	1843	1885	1825	1854	1854
26/108	0	Coldharbour Lane NB	1080101	1800	1800	1800	1814	1800	1802	1804	1805	1801	1802	1802
26/108	0	Coldharbour Lane SB	1080401	1800	1800	1800	1802	1803	1804	1801	1802	1803	1804	1804
26/107	0	Botwell Lane WB	1070101	1800	1800	1800	1825	1802	1803	1804	1802	1805	1803	1803
26/107	0	Botwell Lane EB	1070401	1800	1800	1800	1841	1817	1822	1820	1823	1818	1820	1820
26/134	0	Botwell Lane WB	1340401	1800	1800	1800	1862	1842	1860	1841	1857	1857	1855	1855
26/134	0	Botwell Lane EB	1340401	1800	1800	1800	1810	1804	1805	1805	1811	1804	1805	1805
26/109	0	Station Road NB	1090401	1800	1800	1800	-	1817	1819	1814	1827	1844	1808	1808
26/109	0	Station Road SB	1090101	1800	1800	1800	-	1809	1809	1800	1809	1800	1800	1800

AM	MOVEMENT	BASE			BASELINE			BASELINE + DEV			BASELINE + DEV + SENS			5Yr BASELINE			5Yr BASELINE + DEV			5Yr BASELINE + DEV + SENS			
		BASE	Diff	GEH	FB	Diff	GEH	FBS	Diff	GEH	PROP	Diff	GEH	PROP	Diff	GEH	PROP	Diff	GEH	PROP	Diff	GEH	
1_A-B	1_A-B Dawley Road [N] to Blyth Road	128.59	4.7	186	58	4.6	181	-5	4.2	178	-9	4.0	168	-18	3.3	167	-1	3.2	169	2	3.3		
1_A-C	1_A-C Dawley Road [N] to Dawley Road [S]	778.96	0.6	824	45	1.6	793	-31	0.5	746	-78	1.2	755	-69	0.9	722	-33	2.1	729	7	1.8		
1_A-D	1_A-D Dawley Road [N] to Kestrel Way	32.7	2.6	46	14	2.2	46	0	2.1	35	-11	0.4	41	-5	1.4	41	0	1.4	33	-8	0.0		
1_A-E	1_A-E Dawley Road [N] to Betam Road	25.5	0.3	4	-22	5.6	4	0	5.6	3	-1	6.0	3	-1	5.9	3	0	5.8	3	-1	6.1		
1_B-A	1_B-A Blyth Road to Dawley Road [N]	83.7	2.6	123	39	3.8	105	-18	2.2	45	-78	4.8	123	0	3.8	82	-41	0.2	47	-34	4.5		
1_B-C	1_B-C Blyth Road to Dawley Road [S]	285.89	1.9	292	6	0.3	435	143	7.8	473	181	9.6	353	62	3.8	403	50	6.3	468	64	9.4		
1_B-D	1_B-D Blyth Road to Kestrel Way	3.8	0.4	13	9	3.1	5	-8	0.6	6	-7	0.8	19	6	4.5	6	-13	0.9	7	1	1.3		
1_B-E	1_B-E Blyth Road to Betam Road	11	1.2	0	-11	4.7	0	0	4.7	0	0	4.7	1	1	4.3	0	-1	4.7	0	0	4.7		
1_C-A	1_C-A Dawley Road [S] to Dawley Road [N]	631.56	0.2	579	-52	2.1	580	1	2.1	615	36	0.7	576	-4	2.3	606	31	1.0	627	21	0.2		
1_C-B	1_C-B Dawley Road [S] to Blyth Road	310.96	2.0	477	166	8.4	487	10	8.8	607	129	13.8	532	55	10.8	527	-5	10.6	595	68	13.4		
1_C-D	1_C-D Dawley Road [S] to Kestrel Way	70.78	1.6	36	-35	4.8	40	4	4.1	39	3	4.3	31	-4	5.5	40	9	4.1	41	1	4.0		
1_C-E	1_C-E Dawley Road [S] to Betam Road	42.2	1.4	0	-42	9.2	0	0	9.2	0	0	9.2	0	0	9.2	0	0	9.2	0	0	9.2		
1_D-A	1_D-A Kestrel Way to Dawley Road [N]	4	1.1	5	1	0.4	5	0	0.4	5	0	0.3	6	1	0.9	5	-1	0.4	5	0	0.3		
1_D-B	1_D-B Kestrel Way to Blyth Road	5.9	0.4	7	1	0.4	7	0	0.4	6	-1	0.1	7	0	0.4	7	0	0.4	6	-1	0.1		
1_D-C	1_D-C Kestrel Way to Dawley Road [S]	23.7	0.6	23	0	0.1	24	1	0.1	24	1	0.2	27	4	0.6	27	0	0.7	28	1	0.8		
1_D-E	1_D-E Kestrel Way to Betam Road	0	2.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0		
1_E-A	1_E-A Betam Road to Dawley Road [N]	10.9	2.0	14	3	0.7	14	0	0.8	14	1	1.0	14	1	0.9	13	-1	0.7	14	1	1.0		
1_E-B	1_E-B Betam Road to Blyth Road	14	1.8	18	4	1.1	18	0	1.0	17	-1	0.9	18	-1	1.0	18	1	1.1	17	-2	0.7		
1_E-C	1_E-C Betam Road to Dawley Road [S]	20.7	0.9	21	0	0.1	22	1	0.3	22	1	0.2	21	-1	0.0	22	1	0.3	22	0	0.2		
1_E-D	1_E-D Betam Road to Kestrel Way	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0		
1_A-A	1_A-A Dawley Road [N] to Dawley Road [N]	0	3.3	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0		
1_B-B	1_B-B Blyth Road to Blyth Road	0	1.4	0	0	0.0	0	0	0.0	1	1	1.5	0	0	0.0	0	0	0.0	1	1	1.3		
1_C-C	1_C-C Dawley Road [S] to Dawley Road [S]	0	1.4	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0		
1_D-D	1_D-D Kestrel Way to Kestrel Way	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0		
1_E-E	1_E-E Betam Road to Betam 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	0	0.0		
2_A-B	2_A-B Dawley Road [N] to A437	253.77	0.9	290	36	2.2	354	64	5.7	315	25	3.6	285	-5	1.9	322	37	4.0	300	-22	2.8		
2_A-C	2_A-C Dawley Road [N] to Millington Road	149.1	1.7	61	-88	8.5	71	10	7.4	58	-4	9.0	67	5	7.9	64	-2	8.2	54	-10	9.4		
2_A-D	2_A-D Dawley Road [N] to Dawley Road [S]	599.93	0.4	647	47	1.9	682	35	3.2	661	14	2.4	650	3	2.0	632	-19	1.3	669	37	2.7		
2_A-E	2_A-E Dawley Road [N] to Bourne Avenue	108.48	0.3	128	19	1.8	158	30	4.3	116	-12	0.7	128	1	1.8	149	21	3.6	112	-38	0.3		
2_B-A	2_B-A A437 to Dawley Road [N]	239.64	3.0	302	63	3.8	300	-3	3.7	328	25	5.2	278	-24	2.4	317	39	4.6	342	25	6.0		
2_B-C	2_B-C A437 to Millington Road	13.3	2.6	78	65	9.6	73	-5	9.1	66	-13	8.3	74	-5	9.2	76	-2	9.4	67	-9	8.5		
2_B-D	2_B-D A437 to Dawley Road [S]	106	2.4	43	-63	7.3	26	-17	9.9	22	-21	10.5	41	-2	7.6	29	-12	9.3	26	-3	9.8		
2_B-E	2_B-E A437 to Bourne Avenue	46.3	1.5	56	9	1.3	36	-19	1.6	50	-6	0.5	62	6	2.1	38	-24	1.3	54	16	1.1		
2_C-A	2_C-A Millington Road to Dawley Road [N]	52.3	0.8	57	5	0.7	58	1	0.8	66	8	1.7	60	3	1.0	60	0	1.0	64	4	1.6		
2_C-B	2_C-B Millington Road to A437	0	1.4	10	10	4.5	20	10	6.2	21	11	6.5	10	0	4.4	21	12	6.5	25	4	7.1		
2_C-D	2_C-D Millington Road to Dawley Road [S]	33.09	2.5	26	-7	1.3	55	29	3.3	66	40	4.7	27	1	1.1	59	32	3.8	61	2	4.0		
2_C-E	2_C-E Millington Road to Bourne Avenue	6	0.4	15	9	2.8	13	-2	2.2	12	-3	2.0	17	2	3.2	13	-3	2.3	12	-1	2.1		
2_D-A	2_D-A Dawley Road [S] to Dawley Road [N]	598.94	2.3	620	21	0.9	605	-16	0.2	736	116	5.3	696	76	3.8	649	-47	2.0	731	82	5.1		
2_D-B	2_D-B Dawley Road [S] to A437	71.1	1.6	200	129	11.1	93	-107	2.4	83	-117	1.4	180	-20	9.7	105	-74	3.7	85	-20	1.6		
2_D-C	2_D-C Dawley Road [S] to Millington Road	59.15	0.9	156	97	9.4	147	-10	8.6	145	-11	8.5	153	-3	9.1	148	-5	8.7	142	-6	8.3		
2_D-E	2_D-E Dawley Road [S] to Bourne Avenue	20.5	2.3	19	-1	0.2	20	0	0.2	24	4	0.6	19	0	0.3	21	2	0.2	26	4	1.1		
2_E-A	2_E-A Bourne Avenue to Dawley Road [N]	166.1	0.9	117	-49	4.1	151	34	1.2	115	-2	4.3	112	-6	4.6	154	42	1.0	113	-41	4.5		
2_E-B	2_E-B Bourne Avenue to A437	103.5	1.0	165	62	5.3	139	-26	3.2	103	-36	2.4	157	-8	4.7	140	-17	3.3	129	-11	2.4		
2_E-C	2_E-C Bourne Avenue to Millington Road	8.8	2.0	20	12	3.0	24	3	3.7	20	0	3.0	21	0	3.1	24	3	3.8	19	-5	2.8		
2_E-D	2_E-D Bourne Avenue to Dawley Road [S]	56.9	0.5	56	-1	0.2	58	2	0.1	55	0	0.2	54	-2	0.4	61	7	0.5	52	-9	0.7		
2_A-A	2_A-A Dawley Road [N] to Dawley Road [N]	0	5.1	0	0	0.0	0	0	0.0	26	26	7.3	0	0	0.0	0	0	0.0	30	29	7.7		
2_B-B	2_B-B A437 to A437	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0		
2_C-C	2_C-C Millington Road to Millington Road	0	1.4	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0		
2_D-D	2_D-D Dawley Road [S] to Dawley Road [S]	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0		
2_E-E	2_E-E Bourne Avenue to Bourne Avenue	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0		
3_A-A	3_A-A Station Road [N] to Station Road [N]	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0		
3_A-B	3_A-B Station Road [N] to High Street [S]	516.63	1.5	479	-38	1.7	537	58	0.9	470	-8	2.1	499	21	0.8	560	61	1.9	472	-88	2.0		
3_A-C	3_A-C Station Road [N] to Station Road [W]	223.5	2.0	366	142	8.3	315	-50	5.6	411	-46	10.5	369	3	8.4	340	-29	6.9	370	30	8.5		
3_B-A	3_B-A High Street [S] to Station Road [N]	427.4	0.9	364	-64	3.2	374	10	2.7	347	-17	4.1	374	10	2.7	379	5	2.4	341	-38	4.4		
3_B-B	3_B-B High Street [S] to High Street [S]	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0		
3_B-C	3_B-C High Street [S] to Station Road [W]	224.4	0.9	265	40	2.6	248	-16	1.6	284	20	3.8	267	3	2.7	257	-10	2.1	254	-3	1.9		
3_C-A	3_C-A Station Road [W] to Station Road [N]	161.9	3.8	116	-46	3.9	332	216	10.8	232	116	5.0	157	42	0.4	328	171	10.6	200	-128	2.8		
3_C-B	3_C-B Station Road [W] to High Street [S]	266.88	0.3	282	15	0.9	258	-24	0														

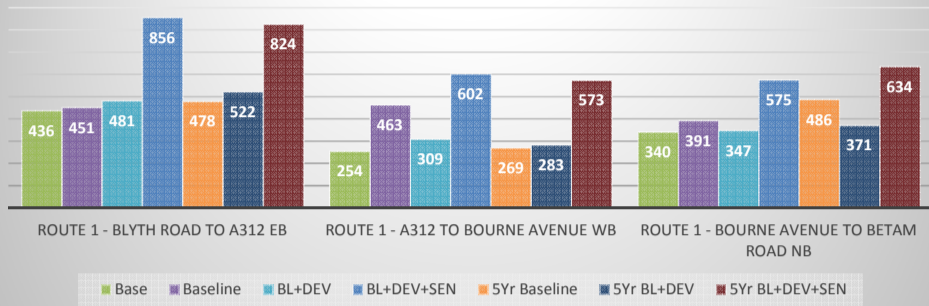
PM	MOVEMENT	BASE			BASELINE			BASELINE + DEV			BASELINE + DEV + SENS			5Yr BASELINE			5Yr BASELINE + DEV			5Yr BASELINE + DEV + SENS				
		BASE	Diff	GEH	FB	Diff	GEH	FBS	Diff	GEH	BASELINE + DEV + SENS	PROP	Diff	GEH	5Yr BASELINE	Diff	GEH	5Yr BASELINE + DEV	Diff	GEH	5Yr BASELINE + DEV + SENS	Diff	GEH	
1_A-B	1_A-B Dawley Road [N] to Blyth Road	83.45		2.9	79	-4	0.4	75	-4	0.9	97	18	1.5	86	6	0.3	59	53	2.9	107	54	2.4		
1_A-C	1_A-C Dawley Road [N] to Dawley Road [S]	593.11		0.9	372	-221	10.1	481	109	4.8	478	106	5.0	403	30	8.5	401	370	8.6	453	83	6.1		
1_A-D	1_A-D Dawley Road [N] to Kestrel Way	3.8		1.9	3	0	0.2	5	2	0.7	6	2	0.8	4	0	0.1	5	5	0.7	5	0	0.7		
1_A-E	1_A-E Dawley Road [N] to Betam Road	11		0.6	0	-11	4.7	0	0	4.7	0	0	4.7	0	0	4.7	0	0	4.7	0	0	4.7		
1_B-A	1_B-A Blyth Road to Dawley Road [N]	101.9		3.2	148	46	4.1	182	34	6.7	158	10	4.9	151	3	4.3	134	131	3.0	133	2	2.9		
1_B-C	1_B-C Blyth Road to Dawley Road [S]	400		0.4	237	-163	9.1	460	223	2.9	447	210	2.3	256	19	7.9	387	368	0.7	401	34	0.1		
1_B-D	1_B-D Blyth Road to Kestrel Way	0		2.0	2	2	2.1	4	2	2.9	3	1	2.5	3	1	2.4	3	2	2.4	3	0	2.2		
1_B-E	1_B-E Blyth Road to Betam Road	0		4.4	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0		
1_C-A	1_C-A Dawley Road [S] to Dawley Road [N]	706.68		1.7	772	66	2.4	689	-83	0.7	765	-7	2.2	791	18	3.1	687	668	0.8	764	96	2.1		
1_C-B	1_C-B Dawley Road [S] to Blyth Road	238.9		0.7	270	31	1.9	331	61	5.5	365	96	7.3	273	3	2.1	323	320	5.0	368	48	7.4		
1_C-D	1_C-D Dawley Road [S] to Kestrel Way	40.61		1.3	10	-30	6.0	16	6	4.5	16	6	4.6	13	3	5.3	14	12	5.0	15	4	4.8		
1_C-E	1_C-E Dawley Road [S] to Betam Road	20.3		0.6	0	-20	6.4	0	0	6.4	0	0	6.4	0	0	6.4	0	0	6.4	0	0	6.4		
1_D-A	1_D-A Kestrel Way to Dawley Road [N]	5.1		2.1	16	11	3.4	21	5	4.4	20	4	4.2	16	0	3.3	20	21	4.2	20	-1	4.2		
1_D-B	1_D-B Kestrel Way to Blyth Road	12.15		1.6	16	4	1.0	29	14	3.8	15	-1	0.8	17	1	1.2	27	26	3.4	17	-9	1.3		
1_D-C	1_D-C Kestrel Way to Dawley Road [S]	58.68		0.6	46	-12	1.7	29	-18	4.5	42	-5	2.4	47	0	1.6	31	31	4.1	43	12	2.2		
1_D-E	1_D-E Kestrel Way to Betam Road	0		1.4	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0		
1_E-A	1_E-A Betam Road to Dawley Road [N]	48.9		2.0	25	-24	3.9	31	6	2.9	30	5	3.0	26	1	3.7	31	30	2.9	30	0	3.1		
1_E-B	1_E-B Betam Road to Blyth Road	19.9		0.2	73	53	7.8	43	-31	4.1	29	-44	1.8	74	0	7.9	41	41	3.9	27	-14	1.5		
1_E-C	1_E-C Betam Road to Dawley Road [S]	33		3.0	15	-18	3.7	40	25	1.1	53	38	3.0	15	0	3.6	43	43	1.6	57	14	3.6		
1_E-D	1_E-D Betam Road to Kestrel Way	0		1.4	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0		
1_A-A	1_A-A Dawley Road [N] to Dawley Road [N]	0		0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0		
1_B-B	1_B-B Blyth Road to Blyth Road	0		2.4	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0		
1_C-C	1_C-C Dawley Road [S] to Dawley Road [S]	0		2.4	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0		
1_D-D	1_D-D Kestrel Way to Kestrel Way	0		0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0		
1_E-E	1_E-E Betam Road to Betam 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	0	0.0		
2_A-B	2_A-B Dawley Road [N] to A437	226.01		0.1	278	52	3.3	355	77	7.6	404	126	10.0	287	9	3.8	308	299	5.0	402	102	9.9		
2_A-C	2_A-C Dawley Road [N] to Millington Road	80.8		0.6	74	-7	0.8	96	23	1.6	99	26	2.0	80	7	0.1	84	77	0.3	95	18	1.5		
2_A-D	2_A-D Dawley Road [N] to Dawley Road [S]	677.43		1.5	456	-221	9.3	616	160	2.4	528	72	6.1	488	32	7.8	527	495	6.1	485	-10	8.0		
2_A-E	2_A-E Dawley Road [N] to Bourne Avenue	95.8		2.9	40	-56	6.8	65	25	3.5	55	15	4.8	46	6	6.0	54	48	4.9	50	2	5.4		
2_B-A	2_B-A A437 to Dawley Road [N]	286.2		0.4	193	-94	6.1	200	8	5.5	219	26	4.2	196	4	5.8	195	191	5.9	222	31	4.0		
2_B-C	2_B-C A437 to Millington Road	10		0.7	70	60	9.4	73	4	9.8	86	17	11.0	73	3	9.8	64	60	8.8	85	25	10.9		
2_B-D	2_B-D A437 to Dawley Road [S]	56.5		3.7	0	-57	10.6	37	37	2.8	30	30	4.1	0	0	10.6	38	38	2.7	32	-6	3.7		
2_B-E	2_B-E A437 to Bourne Avenue	74.5		0.3	60	-15	1.8	59	-1	1.9	66	7	1.0	66	6	1.1	54	48	2.6	63	15	1.4		
2_C-A	2_C-A Millington Road to Dawley Road [N]	129.7		0.2	204	74	5.7	161	-43	2.6	164	-40	2.8	210	6	6.1	163	157	2.7	167	11	3.1		
2_C-B	2_C-B Millington Road to A437	7.9		2.2	103	95	12.7	69	-33	9.9	72	-30	10.2	155	53	16.3	63	10	9.2	75	65	10.4		
2_C-D	2_C-D Millington Road to Dawley Road [S]	166.5		1.4	121	-45	3.8	219	97	3.7	204	83	2.7	122	1	3.7	224	223	4.1	208	-16	3.0		
2_C-E	2_C-E Millington Road to Bourne Avenue	14.4		0.2	43	29	5.3	30	-13	3.2	29	-14	3.2	44	1	5.5	31	30	3.4	29	0	3.2		
2_D-A	2_D-A Dawley Road [S] to Dawley Road [N]	501.79		0.8	512	10	0.4	561	49	2.6	551	39	2.1	523	12	1.0	551	539	2.1	541	2	1.7		
2_D-B	2_D-B Dawley Road [S] to A437	29.5		3.4	27	-3	0.5	124	97	10.8	118	91	10.3	28	1	0.3	63	62	5.0	120	58	10.5		
2_D-C	2_D-C Dawley Road [S] to Millington Road	25.28		1.4	97	72	9.2	98	0	9.2	99	2	9.4	98	1	9.3	97	97	9.2	94	-3	8.9		
2_D-E	2_D-E Dawley Road [S] to Bourne Avenue	58.9		0.3	29	-30	4.5	35	6	3.4	36	7	3.3	31	2	4.2	32	30	3.9	35	5	3.5		
2_E-A	2_E-A Bourne Avenue to Dawley Road [N]	91.3		1.9	78	-14	1.5	113	35	2.2	110	32	1.8	78	0	1.5	121	121	2.9	118	-3	2.6		
2_E-B	2_E-B Bourne Avenue to A437	95		2.4	125	30	2.8	97	-28	0.2	101	-24	0.6	127	3	3.1	95	93	0.0	102	9	0.7		
2_E-C	2_E-C Bourne Avenue to Millington Road	12.7		0.4	16	3	0.8	14	-2	0.2	14	-1	0.4	16	0	0.8	14	13	0.2	15	1	0.5		
2_E-D	2_E-D Bourne Avenue to Dawley Road [S]	43.2		0.8	42	-1	0.2	35	-7	1.3	38	-4	0.8	42	0	0.2	36	37	1.1	38	1	0.9		
2_A-A	2_A-A Dawley Road [N] to Dawley Road [N]	0		4.5	72	72	12.0	0	-72	0.0	104	32	14.4	75	3	12.3	0	-3	0.0	105	108	14.5		
2_B-B	2_B-B A437 to A437	0		0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0		
2_C-C	2_C-C Millington Road to Millington 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	0	0.0		
2_D-D	2_D-D Dawley Road [S] to Dawley Road [S]	0		0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0		
2_E-E	2_E-E Bourne Avenue to Bourne Avenue	0		0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0		
3_A-A	3_A-A Station Road [N] to Station Road [N]	0		1.4	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0		
3_A-B	3_A-B Station Road [N] to High Street [S]	540.05		2.6	368	-172	8.1	431	63	5.0	388	20	7.1	404	36	6.3	417	381	5.6	401	20	6.4		
3_A-C	3_A-C Station Road [N] to Station Road [W]	238.7		1.2	237	-1	0.1	183	-55	3.9	269	31	1.9	291	54	3.2	158	104	5.7	265	161	1.6		
3_B-A	3_B-A High Street [S] to Station Road [N]	444.05		0.8	447	3	0.2	429	-18	0.7	417	-31	1.3	480	32	1.7	454	422	0.5	431	9	0.6		
3_B-B	3_B-B High Street [S] to High Street [S]	0		0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0		
3_B-C	3_B-C High Street [S] to Station Road [W]	323.16		0.2	297	-26	1.5	388	91	3.5	370	73	2.5	326	29	0.2	368	339						

PM	MOVEMENT	BASE			BASELINE			BASELINE + DEV			BASELINE + DEV + SENS			5Yr BASELINE			5Yr BASELINE + DEV			5Yr BASELINE + DEV + SENS		
		BASE	Diff	GEH	FB	Diff	GEH	FBS	Diff	GEH	PROP	Diff	GEH	PROP	Diff	GEH	PROP	Diff	GEH	PROP	Diff	GEH
12_A-C	12_A-C Trevor Road [N] to Trevor Road [S]	293.8		0.7	83	-211	15.3	249	166	2.7	216	133	4.9	95	12	14.3	221	209	4.6	205	-4	5.6
12_A-D	12_A-D Trevor Road [N] to Clayton Road [W]	0.8		1.0	5	4	2.5	12	7	4.4	12	7	4.4	7	2	3.1	11	9	4.1	9	0	3.7
12_C-A	12_C-A Trevor Road [S] to Trevor Road [N]	490		0.8	325	-165	8.2	368	42	5.9	357	32	6.5	334	8	7.7	350	342	6.8	361	19	6.3
12_C-B	12_C-B Trevor Road [S] to Clayton Road [E]	47.5		10.3	134	86	9.1	175	41	12.1	221	88	15.0	135	2	9.2	155	153	10.7	225	71	15.2
12_C-C	12_C-C Trevor Road [S] to Trevor Road [S]	0		0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
12_C-D	12_C-D Trevor Road [S] to Clayton Road [W]	8.3		1.7	21	13	3.4	26	5	4.3	18	-3	2.7	24	2	3.8	24	21	3.8	18	-3	2.7
12_D-A	12_D-A Clayton Road [W] to Trevor Road [N]	6.1		1.5	8	2	0.7	8	0	0.6	9	1	1.1	8	0	0.6	9	9	1.0	10	1	1.4
12_D-B	12_D-B Clayton Road [W] to Clayton Road [E]	5.7		1.8	23	18	4.6	11	-13	1.7	9	-14	1.2	23	-1	4.5	11	12	1.9	7	-5	0.6
12_D-C	12_D-C Clayton Road [W] to Trevor Road [S]	16.1		0.2	7	-9	2.5	23	15	1.5	22	15	1.4	8	1	2.3	21	20	1.0	24	4	1.8
12_D-D	12_D-D Clayton Road [W] to Clayton Road [W]	0		0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
13_A-C	13_A-C Trevor Road [N] to Blyth Road [W]	309.6		0.8	94	-216	15.2	268	174	2.4	211	117	6.1	107	13	14.0	236	223	4.4	217	-7	5.7
13_B-A	13_B-A Blyth Road [E] to Trevor Road [N]	192.3		3.9	16	-177	17.3	20	5	16.7	21	6	16.5	17	1	17.2	12	11	17.8	16	5	17.3
13_B-C	13_B-C Blyth Road [E] to Blyth Road [W]	194		4.3	230	36	2.5	227	-4	2.2	271	40	5.0	239	9	3.0	181	173	0.9	220	47	1.8
13_C-A	13_C-A Blyth Road [W] to Trevor Road [N]	353.6		1.1	448	94	4.7	553	105	9.4	539	91	8.8	477	29	6.0	530	501	8.4	569	68	10.0
14_A-A	14_A-A Dawley Road [N] to Dawley Road [N]	0		1.4	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
14_A-B	14_A-B Dawley Road [N] to Access	0		1.4	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
14_A-C	14_A-C Dawley Road [N] to Dawley Road [S]	603.06		1.4	392	-212	9.5	510	118	4.0	538	146	2.7	410	18	8.6	438	420	7.2	535	115	2.9
14_A-D	14_A-D Dawley Road [N] to Swallowfield Way	28.9		0.3	35	6	1.1	39	4	1.7	41	6	2.1	38	3	1.5	35	32	1.1	41	9	2.0
14_B-A	14_B-A Access to Dawley Road [N]	0		2.4	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
14_B-B	14_B-B Access to Access	0		0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
14_B-C	14_B-C Access to Dawley Road [S]	0		3.7	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
14_B-D	14_B-D Access to Swallowfield Way	0		0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
14_C-A	14_C-A Dawley Road [N] to Swallowfield Way	776.95		3.2	866	89	3.1	829	-38	1.8	888	21	3.8	891	25	3.9	797	773	0.7	880	107	3.6
14_C-B	14_C-B Dawley Road [S] to Access	0		1.4	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
14_C-C	14_C-C Dawley Road [S] to Dawley Road [S]	0		3.2	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
14_C-D	14_C-D Dawley Road [S] to Swallowfield Way	83.9		2.6	88	4	0.4	92	4	0.8	82	-5	0.2	91	3	0.7	73	70	1.2	69	-2	1.7
14_D-A	14_D-A Swallowfield Way to Dawley Road [N]	91.9		0.0	0	-92	13.6	129	129	3.5	134	134	3.9	91	91	0.1	129	38	3.5	133	95	3.8
14_D-B	14_D-B Swallowfield Way to Access	0		0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
14_D-C	14_D-C Swallowfield Way to Dawley Road [S]	90		3.5	92	2	0.3	63	-30	3.1	58	-35	3.7	100	7	1.0	59	52	3.6	60	8	3.5
14_D-D	14_D-D Swallowfield Way to Swallowfield Way	0		0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
17_B-A	17_B-A Coldharbour Lane to East Avenue	30.4		0.1	0	-30	7.8	0	0	7.8	0	0	7.8	0	0	7.8	0	0	7.8	0	0	7.8
17_B-B	17_B-B Coldharbour Lane to Coldharbour Lane	0		4.9	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
17_B-C	17_B-C Coldharbour Lane to Pump Lane	172.8		0.3	260	87	5.9	238	-22	4.6	273	13	6.7	273	13	6.7	251	238	5.4	277	39	7.0
17_B-D	17_B-D Coldharbour Lane to Botwell Lane	207.9		3.0	161	-47	3.4	209	48	0.1	176	15	2.3	167	6	3.0	208	208	0.0	185	-17	1.6
17_C-A	17_C-A Pump Lane to East Avenue	50.6		1.0	1	-50	9.9	1	0	9.9	1	0	9.9	1	0	9.9	1	1	9.9	1	0	9.9
17_C-B	17_C-B Pump Lane to Coldharbour Lane	180.9		1.3	72	-109	9.7	106	34	6.3	103	30	6.6	90	18	7.9	107	89	6.2	84	-5	8.4
17_C-C	17_C-C Pump Lane to Pump Lane	14.23		3.8	111	97	12.2	0	-111	5.3	0	-111	5.3	0	-111	5.3	0	111	5.3	0	-111	5.3
17_C-D	17_C-D Pump Lane to Botwell Lane	387.4		0.4	198	-189	11.0	355	157	1.7	252	53	7.6	255	56	7.4	361	305	1.3	204	-101	10.7
17_D-A	17_D-A Botwell Lane to East Avenue	51.1		4.0	6	-46	8.5	8	2	8.0	8	2	8.1	7	1	8.2	7	6	8.2	8	2	8.0
17_D-B	17_D-B Botwell Lane to Coldharbour Lane	206.5		2.4	333	127	7.7	416	83	11.9	417	84	11.9	370	37	9.6	406	369	11.4	434	65	12.7
17_D-C	17_D-C Botwell Lane to Pump Lane	326.5		0.3	305	-22	1.2	391	86	3.4	409	104	4.3	335	30	0.4	386	356	3.2	396	39	3.6
17_D-D	17_D-D Botwell Lane to Botwell Lane	0		3.2	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
20_A-B	20_A-B Dawley Road [N] to Botwell Common Road	93		2.5	313	220	15.4	260	-53	12.5	248	-65	11.9	310	-3	15.3	258	261	12.5	241	-19	11.5
20_A-C	20_A-C Dawley Road [N] to Dawley Road [S]	506.36		1.1	360	-146	7.0	416	56	4.2	409	48	4.6	367	7	6.6	421	414	4.0	422	8	3.9
20_B-A	20_B-A Botwell Common Road to Dawley Road [N]	85.2		2.2	239	153	12.1	303	64	15.6	221	-17	11.0	287	48	14.8	307	259	15.9	210	-50	10.2
20_B-C	20_B-C Botwell Common Road to Dawley Road [S]	121.9		1.5	100	-22	2.1	122	22	0.0	141	41	1.7	101	2	1.9	125	123	0.3	149	26	2.3
20_C-A	20_C-A Dawley Road [S] to Dawley Road [N]	761.3		2.3	675	-86	3.2	709	35	1.9	729	54	1.2	781	106	0.7	683	577	2.9	744	167	0.6
20_C-B	20_C-B Dawley Road [S] to Botwell Common Road	112.07		3.3	166	53	4.5	216	50	8.1	218	53	8.3	178	12	5.4	232	220	9.2	217	-4	8.2
21_A-A	21_A-A Botwell Lane [N] to Botwell Lane [S]	0		0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
21_A-B	21_A-B Botwell Lane [N] to Botwell Lane [S]	203.7		0.4	218	15	1.0	263	45	3.9	250	32	3.1	239	21	2.4	271	250	4.4	248	-2	2.9
21_A-C	21_A-C Botwell Lane [N] to Botwell Common Road [W]	23		3.4	0	-23	6.8	0	0	6.8	15	15	1.9	0	0	6.8	0	0	6.8	24	24	0.1
21_B-A	21_B-A Botwell Lane [S] to Botwell Lane [N]	210.2		0.2	146	-64	4.8	149	3	4.6	135	-12	5.7	169	23	3.0	144	121	5.0	129	8	6.2
21_B-B	21_B-B Botwell Lane [S] to Botwell Lane [S]	0		1.4	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
21_B-C	21_B-C Botwell Lane [S] to Botwell Common Road [W]	154.7		0.5	324	169	10.9	408	84	15.1	325	1	11.0	364	40	13.0	396	356	14.5	317	-39	10.6
21_C-A	21_C-A Botwell Common Road [W] to Botwell Lane [N]	99.7		0.1	0	-100	14.1	35	35	7.9	45	45	6.5	0	0	14.1	38	38	7.5	45	7	6.4
21_C-B	21_C-B Botwell Common Road [W] to Botwell Lane [S]	169.2		0.2	300	131	8.5	275	-25	7.1	271	-29	6.9	328	28	10.1	277	250	7.2	269	19	6.7
21_C-C	21_C-C Botwell Common Road [W] to Botwell Common Road [W]	0		0.0	0	0	0.0	0	0	0.0	7	7	3.6	0	0	0.0	0	0	0.0	6	6	3.4
22_A-B	22_A-B Botwell Lane [N] to Botwell Lane [S]	272.4		0.4	310	38	2.2	355	45	4.7	292	-18	1.2	347	36</							

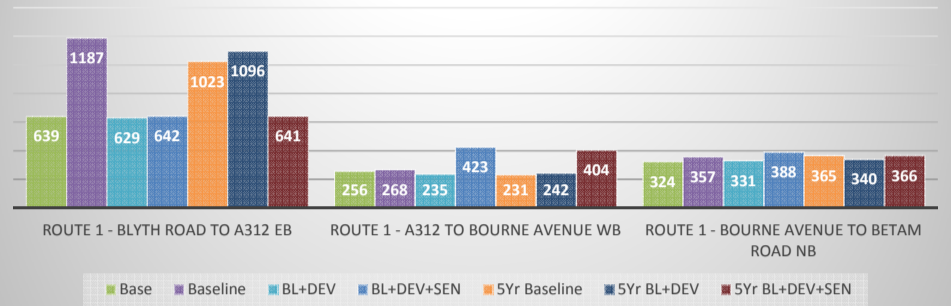




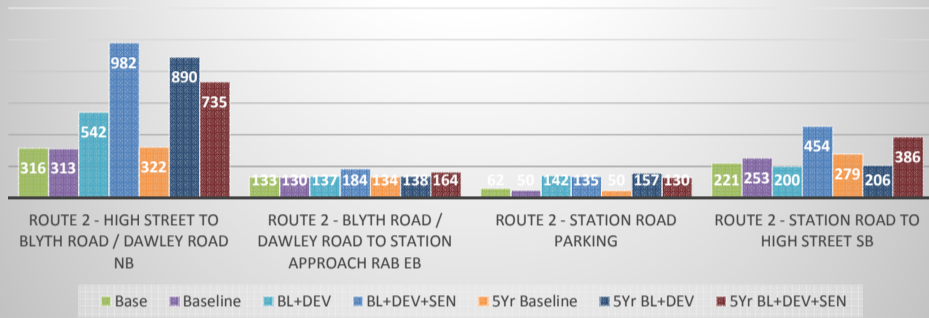
ROUTE 1: AM PEAK



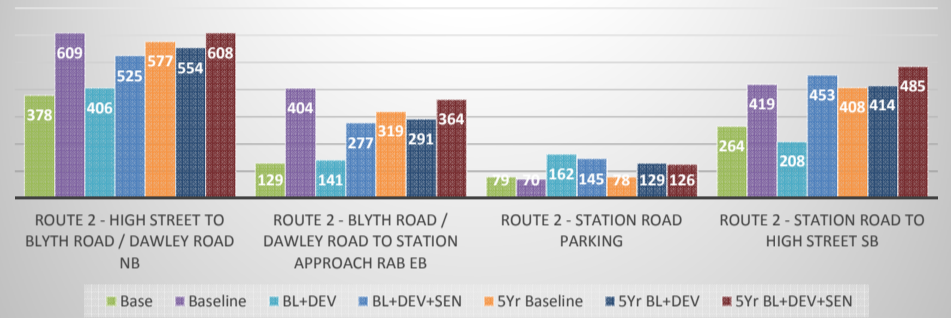
ROUTE 1: PM PEAK



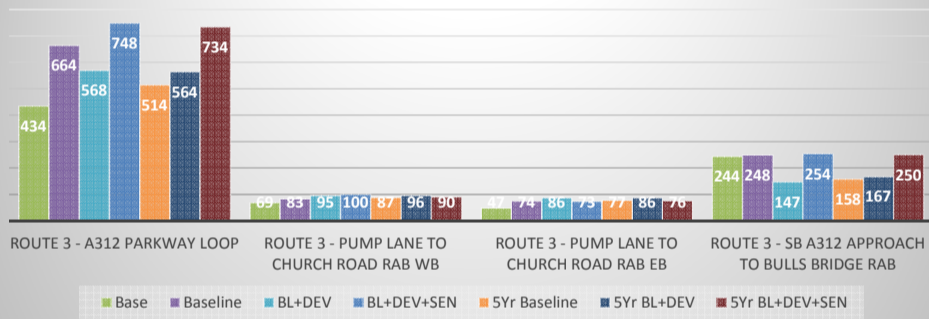
ROUTE 2: AM PEAK



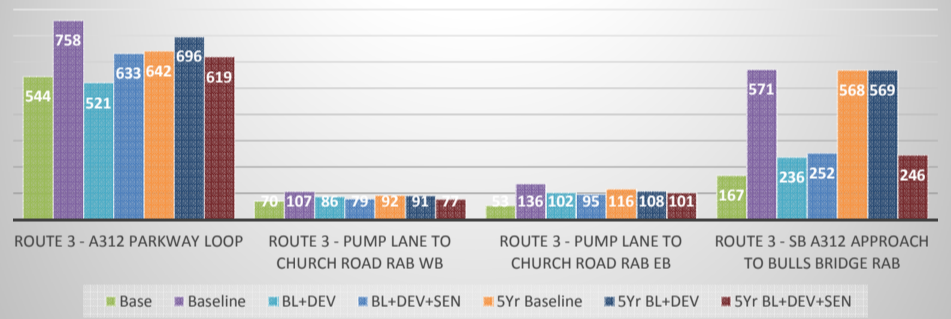
ROUTE 2: PM PEAK



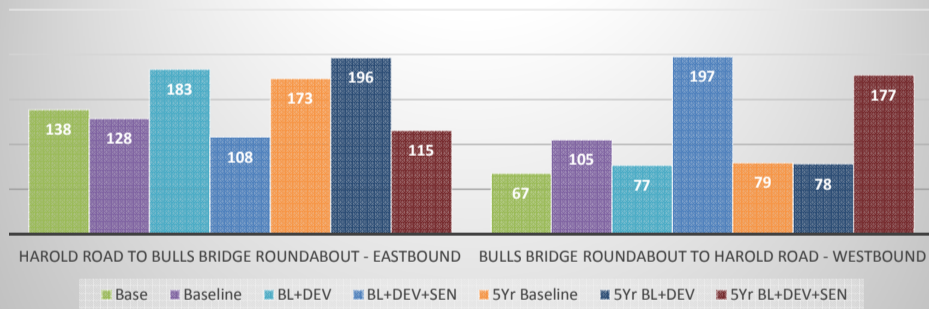
ROUTE 3: AM PEAK



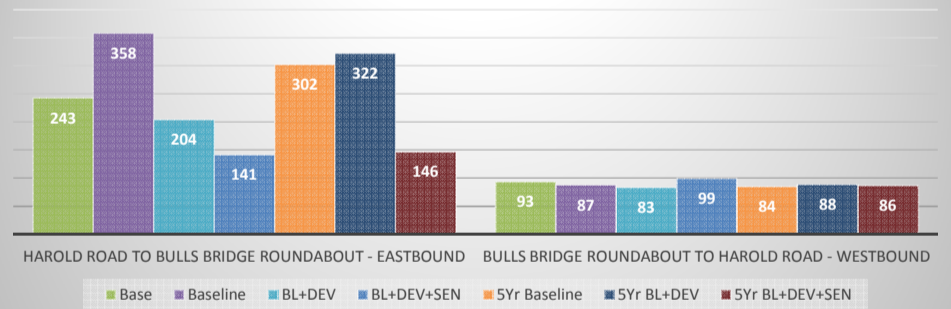
ROUTE 3: PM PEAK



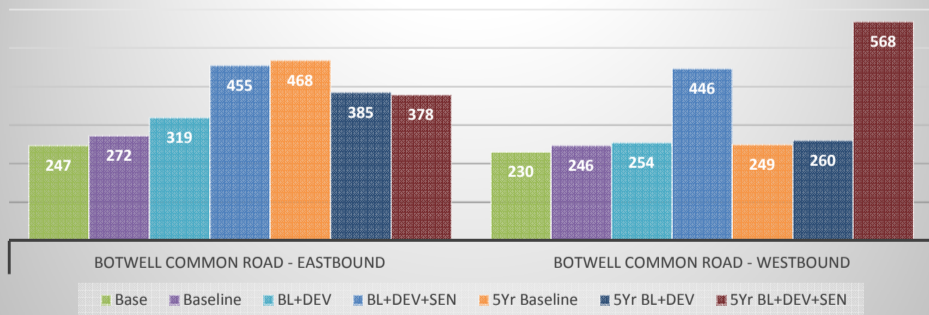
ROUTE 2: AM PEAK



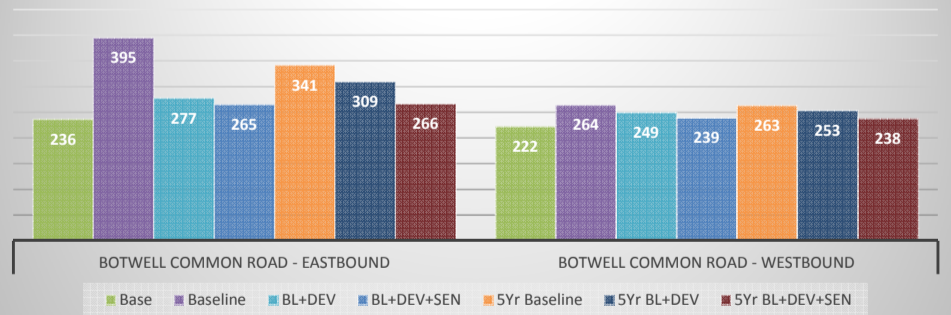
ROUTE 2: PM PEAK



Botwell Common: AM PEAK



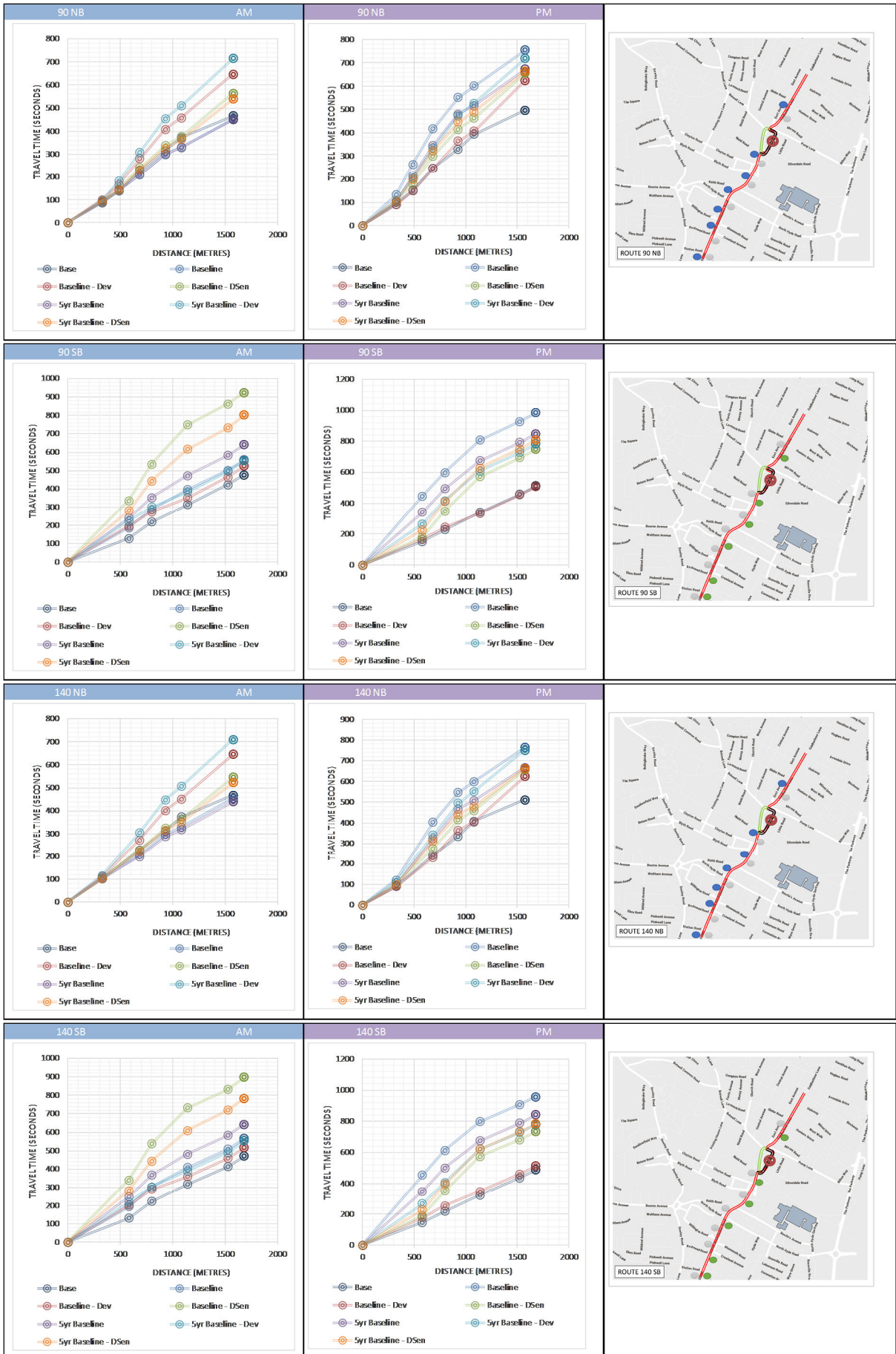
Botwell Common: PM PEAK



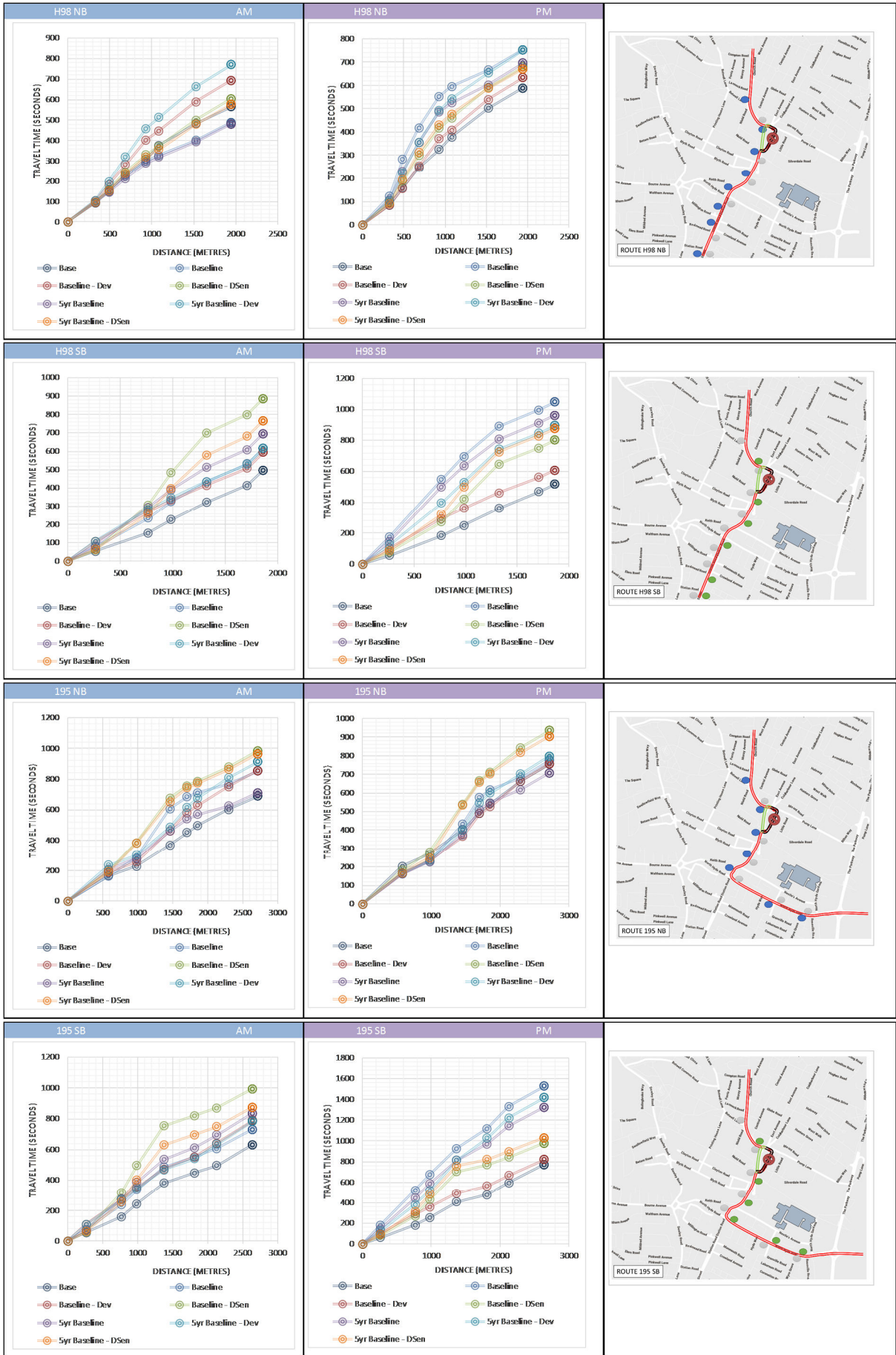
AM														
Route 1 - Combined		Base	Baseline	BL+DEV	BL+DEV+SEN	Baseline vs Base	BLD vs BL	BLDS vs BL	5Yr Baseline	5Yr BL+DEV	5Yr BL+DEV+SEN	5YrBL vs BL	5YrBLD vs 5YrBL	5YrBLDS vs 5YrBL
A	Route 1 - Blyth Road to A312 EB	436	451	481	856	15 3%	30 7%	405 90%	478	522	824	28 6%	44 9%	346 79%
B	Route 1 - A312 to Bourne Avenue WB	254	463	309	602	209 82%	-154 -33%	139 30%	269	283	573	-193 -42%	14 5%	304 119%
C	Route 1 - Bourne Avenue to Betam Road NB	340	391	347	575	51 15%	-44 -11%	183 47%	486	371	634	95 24%	-116 -24%	148 44%
Route 2 - Combined		Base	Baseline	BL+DEV	BL+DEV+SEN	Baseline vs Base	BLD vs BL	BLDS vs BL	5Yr Baseline	5Yr BL+DEV	5Yr BL+DEV+SEN	5YrBL vs BL	5YrBLD vs 5YrBL	5YrBLDS vs 5YrBL
A	Route 2 - High Street to Blyth Road / Dawley Road NB	316	313	542	982	-4 -1%	230 74%	669 214%	322	890	735	9 3%	568 177%	413 131%
B	Route 2 - Blyth Road / Dawley Road to Station Approach RAB EB	133	130	137	184	-3 -2%	7 5%	53 41%	134	138	164	3 2%	4 3%	31 23%
C	Route 2 - Station Road Parking	62	50	142	135	-12 -20%	92 186%	86 172%	50	157	130	0 1%	107 214%	80 129%
D	Route 2 - Station Road to High Street SB	221	253	200	454	31 14%	-52 -21%	201 80%	279	206	386	27 10%	-73 -26%	107 48%
Route 3 - Individual		Base	Baseline	BL+DEV	BL+DEV+SEN	Baseline vs Base	BLD vs BL	BLDS vs BL	5Yr Baseline	5Yr BL+DEV	5Yr BL+DEV+SEN	5YrBL vs BL	5YrBLD vs 5YrBL	5YrBLDS vs 5YrBL
A	A312 The Pkwy / North Hyde Road RAB to North Hyde Road / North Hyde Green Jct	15	18	20	28	3 17%	2 12%	10 55%	22	21	24	4 24%	-1 -7%	2 12%
A	North Hyde Road / North Hyde Green Jct to North Hyde Road / Roseville Ped X	18	20	21	34	2 11%	1 5%	14 71%	20	21	31	0 -2%	2 9%	11 62%
A	North Hyde Road / Roseville Ped X to North Hyde Road / Harold Road Ped X	34	67	35	135	33 97%	-32 -47%	68 102%	38	36	122	-30 -44%	-2 -4%	85 249%
A	North Hyde Road / Harold Road Ped X to A437 Station Road / A437 North Hyde Road Jct	119	287	149	314	168 141%	-137 -48%	27 9%	121	127	306	-166 -58%	6 5%	185 156%
A	A437 Station Road / A437 North Hyde Road Jct to Nestles Avenue / Station Road Jct	25	53	65	24	29 117%	11 21%	-29 -55%	49	70	24	-5 -9%	21 44%	-25 -100%
A	Nestles Avenue / Station Road Jct to Nestles Avenue / Harold Avenue Jct	60	61	59	59	0 0%	-2 -2%	-2 -3%	60	58	61	-1 -1%	-2 -3%	1 1%
A	Nestles Avenue / Harold Avenue Jct to Harold Avenue / North Hyde Road Jct	18	21	25	40	3 16%	4 18%	19 86%	21	24	45	-1 -3%	4 17%	24 132%
A	Harold Avenue / North Hyde Road Jct to North Hyde Road / Harold Road Ped X	6	8	10	7	2 32%	2 26%	-2 -20%	12	10	6	3 42%	-1 -10%	-5 -87%
A	North Hyde Road / Harold Road Ped X to North Hyde Road / Roseville Ped X	49	64	99	49	15 30%	35 55%	-15 -23%	90	108	53	26 41%	18 20%	-37 -76%
A	North Hyde Road / Roseville Road Ped X to North Hyde Road / Watersplash Lane / North Hyde Gardens Jct	20	19	25	17	0 -1%	6 29%	-3 -13%	22	26	18	3 15%	4 18%	-4 -23%
A	North Hyde Road / Watersplash Lane / North Hyde Gardens Jct to A312 The Pkwy / North Hyde Road RAB	70	45	59	42	-25 -35%	14 31%	-3 -6%	60	62	44	15 34%	1 2%	-16 -24%
Route 3 - Combined		Base	Baseline	BL+DEV	BL+DEV+SEN	Baseline vs Base	BLD vs BL	BLDS vs BL	5Yr Baseline	5Yr BL+DEV	5Yr BL+DEV+SEN	5YrBL vs BL	5YrBLD vs 5YrBL	5YrBLDS vs 5YrBL
A	Route 3 - A312 Parkway Loop	434	664	568	748	230 53%	-95 -14%	85 13%	514	564	734	-149 -23%	50 10%	220 51%
B	Route 3 - Pump Lane to Church Road RAB WB	69	83	95	100	14 20%	12 15%	17 21%	87	96	90	5 6%	8 9%	2 3%
C	Route 3 - Pump Lane to Church Road RAB EB	47	74	86	73	27 58%	12 16%	-1 -2%	77	86	76	2 3%	9 12%	-1 -2%
D	Route 3 - SB A312 Approach to Bulls Bridge RAB	244	248	147	254	5 2%	-101 -41%	5 2%	158	167	250	-90 -36%	9 5%	91 37%
Bulls Bridge to Harold Avenue		Base	Baseline	BL+DEV	BL+DEV+SEN	Baseline vs Base	BLD vs BL	BLDS vs BL	5Yr Baseline	5Yr BL+DEV	5Yr BL+DEV+SEN	5YrBL vs BL	5YrBLD vs 5YrBL	5YrBLDS vs 5YrBL
	Harold Road to Bulls Bridge Roundabout - Eastbound	138	128	183	108	-10 -7%	55 43%	-20 -16%	173	196	115	45 35%	23 13%	-58 -42%
	Bulls Bridge Roundabout to Harold Road - Westbound	67	105	77	197	38 56%	-28 -27%	92 88%	79	78	177	-26 -24%	-1 -2%	98 145%
Botwell Common		Base	Baseline	BL+DEV	BL+DEV+SEN	Baseline vs Base	BLD vs BL	BLDS vs BL	5Yr Baseline	5Yr BL+DEV	5Yr BL+DEV+SEN	5YrBL vs BL	5YrBLD vs 5YrBL	5YrBLDS vs 5YrBL
	Botwell Common Road - Eastbound	247	272	319	455	25 10%	47 17%	183 67%	468	385	378	195 72%	-83 -18%	-89 -36%
	Botwell Common Road - Westbound	230	246	254	446	17 7%	8 3%	200 81%	249	260	568	3 1%	11 4%	319 139%

PM																
Route 1 - Combined				Base	Baseline	BL+DEV	BL+DEV+SEN	Baseline vs Base	BLD vs BL	BLDS vs BL	5Yr Baseline	5Yr BL+DEV	5Yr BL+DEV+SEN	5YrBL vs BL	5YrBLD vs 5YrBL	5YrBLDS vs 5YrBL
A	Route 1 - Blyth Road to A312 EB			639	1187	629	642	549 86%	-559 -47%	-545 -46%	1023	1096	641	-165 -14%	73 7%	-381 -37%
B	Route 1 - A312 to Bourne Avenue WB			256	268	235	423	11 4%	-33 -12%	156 58%	231	242	404	-37 -14%	11 5%	173 75%
C	Route 1 - Bourne Avenue to Betam Road NB			324	357	331	388	33 10%	-27 -7%	31 9%	365	340	366	8 2%	-25 -7%	1 0%
Route 2 - Combined				Base	Baseline	BL+DEV	BL+DEV+SEN	Baseline vs Base	BLD vs BL	BLDS vs BL	5Yr Baseline	5Yr BL+DEV	5Yr BL+DEV+SEN	5YrBL vs BL	5YrBLD vs 5YrBL	5YrBLDS vs 5YrBL
A	Route 2 - High Street to Blyth Road / Dawley Road NB			378	609	406	525	231 61%	-203 -33%	-84 -14%	577	554	608	-32 -5%	-23 -4%	31 5%
B	Route 2 - Blyth Road / Dawley Road to Station Approach RAB EB			129	404	141	277	275 213%	-263 -65%	-127 -32%	319	291	364	-86 -21%	-28 -9%	45 14%
C	Route 2 - Station Road Parking			79	70	162	145	-9 -11%	93 133%	75 108%	78	129	126	8 12%	51 66%	48 61%
D	Route 2 - Station Road to High Street SB			264	419	208	453	155 59%	-211 -50%	34 8%	408	414	485	-12 -3%	6 2%	78 19%
Route 3 - Individual				Base	Baseline	BL+DEV	BL+DEV+SEN	Baseline vs Base	BLD vs BL	BLDS vs BL	5Yr Baseline	5Yr BL+DEV	5Yr BL+DEV+SEN	5YrBL vs BL	5YrBLD vs 5YrBL	5YrBLDS vs 5YrBL
A	A312 The Pkwy / North Hyde Road RAB to North Hyde Road / North Hyde Green Jct			28	24	23	24	-3 -12%	-2 -7%	0 -2%	23	26	21	-2 -7%	3 15%	-2 -7%
A	North Hyde Road / North Hyde Green Jct to North Hyde Road / Roseville Ped X			30	28	22	24	-2 -7%	-6 -21%	-3 -12%	26	27	22	-2 -7%	1 3%	-4 -15%
A	North Hyde Road / Roseville Ped X to North Hyde Road / Harold Road Ped X			36	35	38	51	0 -1%	3 8%	15 44%	36	36	43	1 2%	0 -1%	7 20%
A	North Hyde Road / Harold Road Ped X to A437 Station Road / A437 North Hyde Road Jct			96	116	90	257	20 20%	-26 -23%	141 122%	89	91	252	-27 -23%	2 2%	163 184%
A	A437 Station Road / A437 North Hyde Road Jct to Nestles Avenue / Station Road Jct			23	92	54	43	69 300%	-38 -42%	-49 -53%	86	86	45	-27 -29%	20 30%	-21 -32%
A	Nestles Avenue / Station Road Jct to Nestles Avenue / Harold Avenue Jct			61	60	60	57	-1 -2%	0 1%	-2 -4%	60	60	58	0 0%	1 1%	-2 -4%
A	Nestles Avenue / Harold Avenue Jct to Harold Avenue / North Hyde Road Jct			19	20	21	28	1 4%	2 9%	9 45%	19	25	26	0 -1%	6 29%	6 32%
A	Harold Avenue / North Hyde Road Jct to North Hyde Road / Harold Road Ped X			10	25	9	7	15 162%	-16 -64%	-18 -73%	22	23	7	-3 -14%	2 9%	-15 -68%
A	North Hyde Road / Harold Road Ped X to North Hyde Road / Roseville Ped X			122	229	113	70	107 88%	-116 -51%	-159 -69%	184	202	74	-45 -20%	18 10%	-110 -60%
A	North Hyde Road / Roseville Road Ped X to North Hyde Road / Watersplash Lane / North Hyde Gardens Jct			35	44	30	25	9 27%	-14 -31%	-19 -42%	35	38	26	-8 -19%	3 8%	-9 -27%
A	North Hyde Road / Watersplash Lane / North Hyde Gardens Jct to A312 The Pkwy / North Hyde Road RAB			86	85	61	46	-1 -1%	-24 -28%	-39 -46%	82	82	46	-2 -3%	-1 -1%	-37 -44%
Route 3 - Combined				Base	Baseline	BL+DEV	BL+DEV+SEN	Baseline vs Base	BLD vs BL	BLDS vs BL	5Yr Baseline	5Yr BL+DEV	5Yr BL+DEV+SEN	5YrBL vs BL	5YrBLD vs 5YrBL	5YrBLDS vs 5YrBL
A	Route 3 - A312 Parkway Loop			544	758	521	633	214 39%	-237 -31%	-125 -17%	642	696	619	-116 -15%	54 8%	-22 -3%
B	Route 3 - Pump Lane to Church Road RAB WB			70	107	86	79	37 53%	-21 -19%	-28 -26%	92	91	77	-15 -14%	-2 -2%	-15 -17%
C	Route 3 - Pump Lane to Church Road RAB EB			53	136	102	95	83 157%	-34 -25%	-41 -30%	116	108	101	-20 -15%	-8 -7%	-15 -13%
D	Route 3 - SB A312 Approach to Bulls Bridge RAB			167	571	236	252	403 241%	-334 -59%	-318 -56%	568	569	246	-3 0%	1 0%	-322 -57%
Bulls Bridge to Harold Avenue				Base	Baseline	BL+DEV	BL+DEV+SEN	Baseline vs Base	BLD vs BL	BLDS vs BL	5Yr Baseline	5Yr BL+DEV	5Yr BL+DEV+SEN	5YrBL vs BL	5YrBLD vs 5YrBL	5YrBLDS vs 5YrBL
	Harold Road to Bulls Bridge Roundabout - Eastbound			243	358	204	141	220 159%	76 59%	3 2%	302	322	146	174 135%	149 86%	-27 -19%
	Bulls Bridge Roundabout to Harold Road - Westbound			93	87	83	99	20 30%	-22 -21%	31 47%	84	88	86	-21 -20%	9 11%	7 10%
Botwell Common				Base	Baseline	BL+DEV	BL+DEV+SEN	Baseline vs Base	BLD vs BL	BLDS vs BL	5Yr Baseline	5Yr BL+DEV	5Yr BL+DEV+SEN	5YrBL vs BL	5YrBLD vs 5YrBL	5YrBLDS vs 5YrBL
	Botwell Common Road - Eastbound			236	395	277	265	148 60%	5 2%	18 7%	341	309	266	69 25%	-159 -34%	-201 -82%
	Botwell Common Road - Westbound			222	264	249	239	34 15%	3 1%	9 4%	263	253	238	17 7%	4 1%	-12 -5%

Former Nestlé Site, Hayes



Former Nestlé Site, Hayes



Former Nestlé Site, Hayes



Former Nestlé Site, Hayes

