

Bradford Metropolitan District Council
Harrogate Road - New Line Aimsun Model

Harrogate Road Model Validation Report

5 October 2017
Version 0.3
Draft





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1 Introduction

1.1 Commission

Fore Consulting Limited (Fore) has been commissioned by Bradford Metropolitan Council to develop an Aimsun microsimulation model for Harrogate Road / New Line junction.

The model has subsequently been used to test a highway improvement scheme being promoted by the City of Bradford Metropolitan District Council (Bradford Council) for the A658 Harrogate Road / A657 New Line junction aimed at reducing congestion and facilitating development in the Greengates area.

This report sets out the development, calibration, and validation of the model, as well as findings from the modelling of the proposed highway scheme.

1.2 Report Structure

This report is structured as follows:

- Chapter 2 describes the development of the model, including the coding of the network, traffic signals and public transport and the estimation of traffic demand matrices;
- Chapter 3 sets out the model verification process that was undertaken;
- Chapter 4 discusses the model calibration;
- Chapter 5 presents the validation of the model against observed traffic count and queue length data;
- Chapter 6 describes the modelling of the future year Do Minimum scenarios;
- Chapter 7 sets out the approach to modelling the future year Do Something scenarios;
- Chapter 8 presents and discusses the results of the modelling;
- Chapter 9 provides a summary and conclusions to the report.

2 Model Development

2.1 Purpose of the Model

The model is intended for use in appraising a highway improvement scheme proposed by Bradford Council for the A658 Harrogate Road / A657 New Line junction.

2.2 Aimsun Version

The model has been developed in Aimsun version number 8.1.4 (R45822).

2.3 Extent of the Model

The scope and extent of the Aimsun model has been agreed with Bradford Metropolitan District Council as the Local Planning and Highway Authority.

The model covers Harrogate Road / New Line junction as well as accessed to local retail developments. Harrogate Road and New Line are extended in each direction in order to capture the full extent of any queueing from the junction but do not necessarily reflect the full level of network detail along their lengths.

Screenshot 1: Extent of the Model



2.4 Modelled Year and Time Periods

The model has been developed to be representative of typical conditions in the year 2017 during the following time periods:

- Weekday AM peak period: 07:00 to 10:00
- Weekday PM peak period: 15:00 to 19:00
- Saturday peak period: 10:00 to 14:00

These peak periods were chosen as these capture the peak traffic flows on the highway network.

These extended modelled periods include the shoulders of the peak hour, enabling the build-up and decay of queues to be better represented. In addition, a fifteen minute warm-up period has been used to generate the initial starting point for the model.

2.5 Vehicle Types

The model considers the following vehicle types:

- Cars - comprising private cars and taxis;
- Light goods vehicles (LGVs) - with a gross vehicle weight of less than 3.5t;
- Heavy goods vehicles (HGVs) - with a gross vehicle weight greater than 3.5t;
- Buses - comprising all public service buses.

2.6 Network Development

The network was automatically generated by Aimsun using the Open Street Map importer and then refined using geo-referenced Ordnance Survey (OS) Mastermap data to provide a spatially accurate representation of the highway network. This data was supplemented by aerial photography to enable the accurate positioning of stop-lines and lane markings.

2.7 Traffic Signal Coding

The Harrogate Road / New Line junction currently operates using the MOVA control method. This has been replicated in the model by modelling the junction as “actuated”, with the maximum greens being varied over time to reflect the maximum greens that were observed during traffic surveys of the junction.

The traffic signal-controlled pedestrian crossings that have been modelled are detailed in Table 1.

Table 1: Traffic Signal Controlled Pedestrian Crossings

Model ID	Junction or Crossing	Description of Control
300510478	A657 New Line east Pelican Crossing west of Elder Street	Pelican Crossing 120s Cycle Time
300510541	A658 Harrogate Road south Pelican Crossing outside Sainsbury's	Pelican Crossing 120s Cycle Time

For pedestrian crossings, the traffic signal controls have been coded to accurately reflect the on-street situation with regards to stages, green times, intergreens, and crossing width.

2.8 Public Transport

All bus stops within the modelled area have been coded into the model using various sources including the Traveline¹ website, as well as aerial photography. The bus routes have been coded into the model based on published timetable and routing information, also provided by Traveline and respective bus operators. The routes and operators are listed in Table 2.

Table 2: Modelled Bus Services

Service	Between	Operator
645	Buttershaw - Greengates	First
670	Bradford - Leeds	First
760	Keighley - Leeds	Keighley Bus Company
948	Eccleshill Park Road - Apperley Bridge Rail Station	Keighley Bus Company
Flying Tiger 747	Bradford - Harrogate	Yorkshire Tiger

Dwell times for buses at each bus stop have been coded with a mean of 20 seconds and standard deviation of 10 seconds. This results in a variation in bus stop dwell times, with some buses stopping for short periods (for example for passengers to alight) and some buses stopping for longer periods (for example for passengers to board and purchase tickets).

¹ <http://www.traveline.info/>

2.9 Traffic Demand

2.9.1 Observed Traffic Data

Turning count traffic surveys covering key junctions in the study area were undertaken, as set out in Table 3. Turning counts were collected at a total of eight junctions. The turning counts were collected in fifteen minute intervals and were classified by vehicle type. The count data covers the time periods 07:00 to 10:00 and 15:00 to 19:00 during the weekday and 10:00 to 14:00 for Saturday. Results for these counts are included as Appendix A.

In addition to turning counts, a queue length survey was also undertaken at Harrogate Road / New Line junction on Thursday 23 March 2017.

The full survey specification and results for the above surveys are included as Appendix A.

Table 3: Traffic Survey Locations

Location	Type	Date
A658 Harrogate Road North / A657 New Line East / A658 Harrogate Road South / A657 New Line West	CTC	23/03/2017
A658 Harrogate Road North / A658 Harrogate Road South / Stockhill Road		
A658 Harrogate Road / Carr Bottom Road / A658 Harrogate Road South		
Elder Street North / A657 New Line East / Elder Street South / A657 New Line West		
Asda / A657 New Line East / A657 New Line West		
A658 Harrogate Road North / A658 Harrogate Road South / Farmfoods		
A658 Harrogate Road North / Sainsburys / A658 Harrogate Road South		
The Grove / A657 New Line East / A657 New Line West		

Location	Type	Date
A657 New Line west	ATC	23/03/2017 - 05/04/2017
A658 Harrogate Road south		
A657 New Line east		02/06/2017 - 15/06/2017

2.9.2 Matrix Development

Traffic demand matrices have been estimated from seed matrices using Aimsun’s built-in matrix estimation algorithm and the observed turn and link counts. In addition, to provide further constraints to the matrix estimation process, the trip generation and attractions for all centroids where demand has not been directly observed have been estimated from trip rates.

Demand matrices have been derived for each 15 minute time period for cars, LGVs and HGVs in the time periods 07:00 to 10:00 and 15:00 to 19:00 for the weekday and 10:00 to 14:00 for the Saturday. This process produced 132 matrices in total which were combined to create the AM, PM and Saturday peak period traffic demands.

The use of 15 minute time-sliced matrices allows a realistic traffic profile to be created within the model that reflects both changes in traffic levels and traffic patterns over the modelled periods. The resulting traffic demand profiles for the 2017 base year are shown in Figure 1 to Figure 3.

Figure 1: Weekday AM Peak Hour Base Year Demand Profile (vehicles)

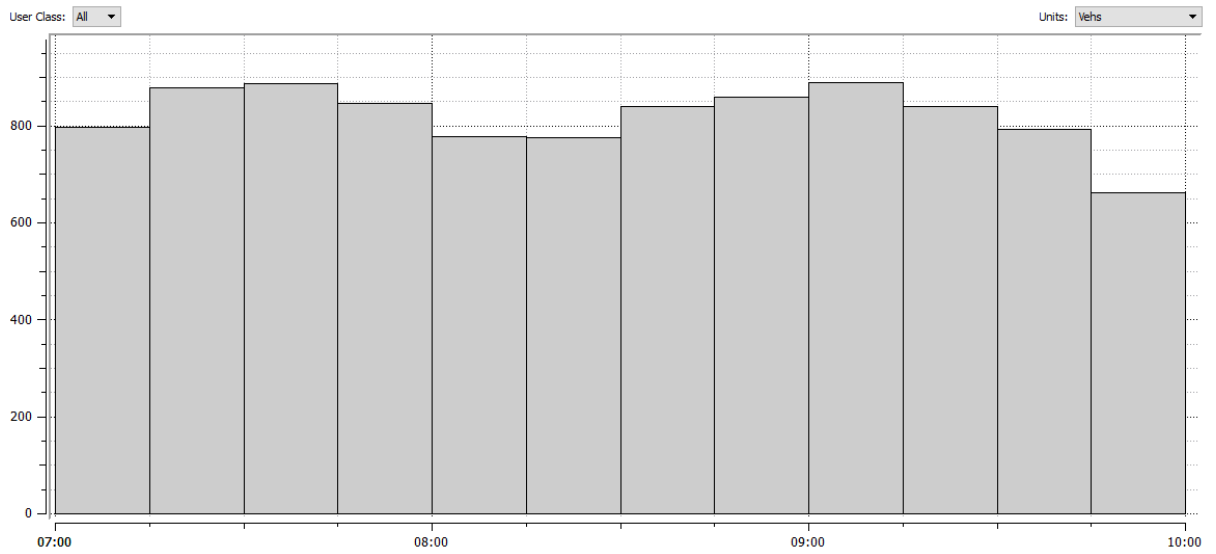


Figure 2: Weekday PM Peak Hour Base Year Demand Profile (vehicles)

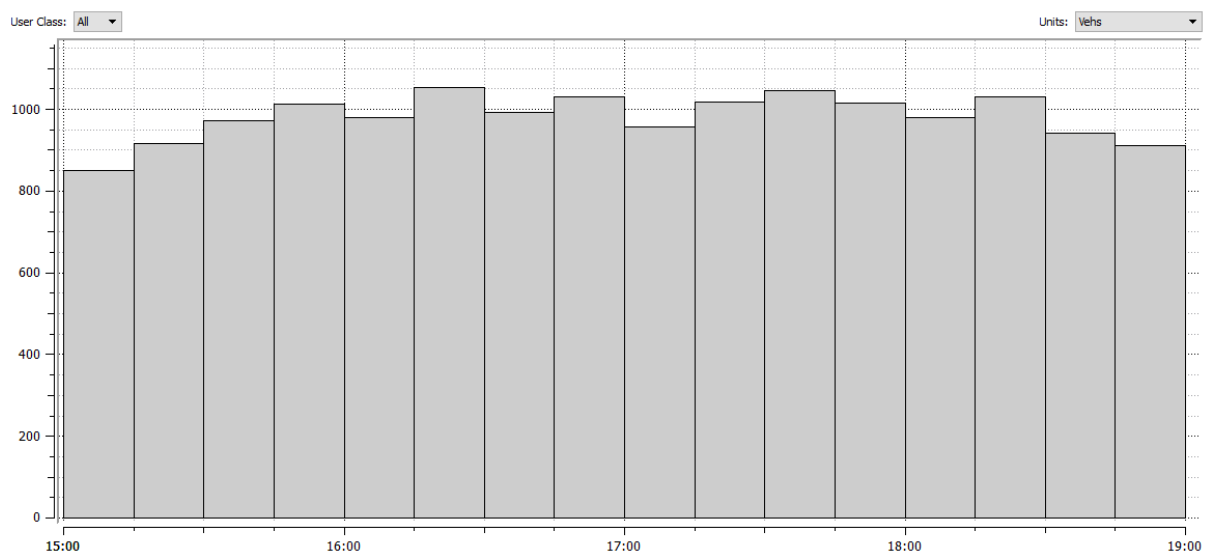
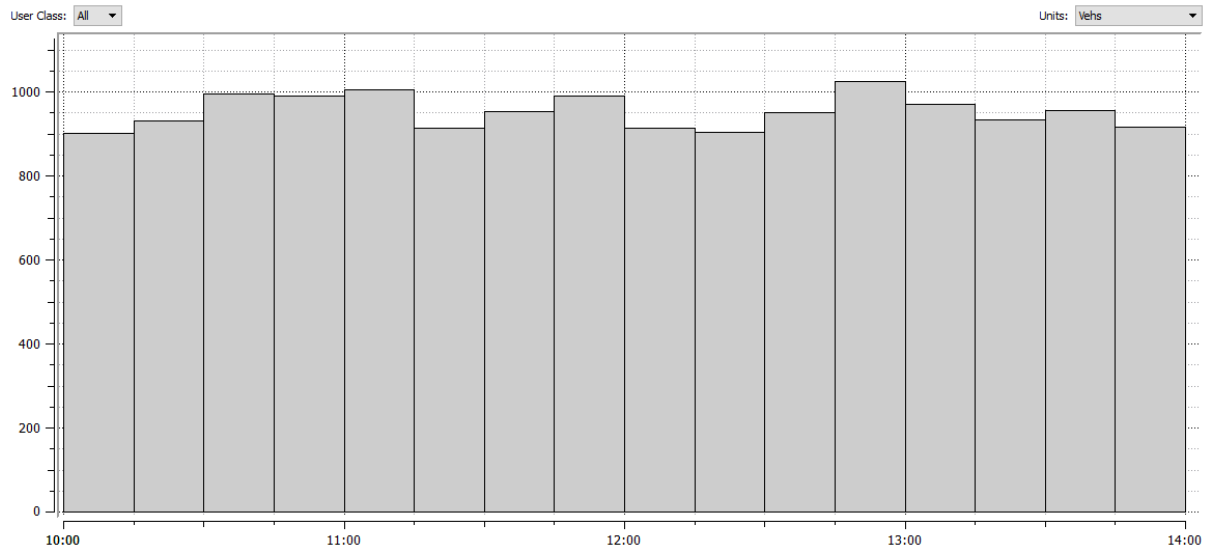




Figure 3: Saturday Peak Hour Base Year Demand Profile (vehicles)



3 Model Verification

Model verification is the process of ensuring the model is correctly specified and operates as expected. The inputs to the model have all been checked to ensure that geometry, stop-line location, number of lanes, bus stop locations, etc. have been coded as accurately as possible.

The “Check and Fix Experiment” feature in Aimsun has been used to identify any errors in the model coding and all warnings have been investigated and addressed, as necessary.

The models have been run as “animated simulations” and observed carefully to check that they are working correctly, with any errors being corrected. Traffic signal coding has been reviewed and the resulting operation has been compared to the operation on-site.

4 Model Calibration

4.1 Introduction

Model calibration is the process of adjusting the parameters of the model to ensure that simulated traffic flows, routes and travel behaviour correspond with observed behaviour. A number of features within the Aimsun models were calibrated to ensure the best representation of the network and driver behaviour.

The calibration parameters in the model include:

- Behavioural Models;
- Section characteristics;
- Give-way model parameters;
- Turn characteristics;
- Vehicle characteristics;
- Simulation step and reaction time;
- Route Choice Model;
- Traffic Flow Calibration.

The calibration of the model is discussed in detail in the following sections.

4.2 Behavioural Models

4.2.1 Car Following and Lane Change Models

Both car following and lane changing models have global parameters for which it is possible to alter the default settings. The 2-lane car following model with default parameters was used in the model.

The lane changing model is a decision process and the factors of the model include percentage overtake (percentage of the desired speed of a vehicle below which the vehicle may decide to overtake), percentage recover (percentage of the desired speed of a vehicle above which a vehicle may decide to get back into the slower lane) and distance zone variability (the percentage variability in the look ahead distances described in section 4.3).

In the model, none of the values were changed from these default settings, which are shown in Table 4.

Table 4: Car Following and Lane Changing Parameters

Parameter	Value
Percentage Overtake	90%
Percentage Recover	95%
Distance Zone Variability	40%

4.3 Section Characteristics

There are a number of section characteristics that can be calibrated in the Aimsun model as follows:

- **Section Maximum Speed:** This gives the maximum speed that vehicles travel on the section, although the maximum speed for each vehicle will vary (higher or lower) depending on speed limit acceptance characteristic of the drivers. The section maximum speed in the model has been set to be equal to the signed speed limit;
- **Yellow Box Speed:** The yellow box speed prohibits a vehicle from entering the junction area (which is designated as a yellow box) should the preceding vehicle be travelling at a speed lower than the specified value. This facility can be used to model yellow boxes that are marked on-street. However, it is also used to simulate the effect of slow moving traffic on the main road allowing traffic to emerge from minor side roads, to avoid gridlock which often occurs in many microsimulation models, and to adjust the relative capacity of approaches. The yellow box speed can also be set by turning movement. The yellow box speed has been set to zero for some turns to and from minor road arms at priority junctions, whilst the major road yellow box speeds have been maintained at the default values. This has the effect of major road traffic creating gaps and showing courtesy to minor road traffic in congested situations.
- **Lane Changing Cooperation:** This parameter considers the percentage of upstream vehicles that try to create a gap for a vehicle that tries to change lanes. The default value of 80% has been assumed for in the model.

4.4 Give-Way Model Parameters

- **Visibility to give way:** This is distance from the end of the link where vehicles begin to apply the gap acceptance model and is used to calibrate the capacity of priority junctions and has initially been based on default values and calibrated on a turn-by-turn basis.
- **Visibility along main stream:** This is the distance along the major road within which vehicles travelling on the main road are taken into account in the gap acceptance model. It has initially been based on default values and further calibrated on a turn-by-turn basis.
- **Initial and final safety margin and initial and final give-way time factor:** In the give-way model, minor road vehicles will emerge into the major road if there is a large enough gap to avoid a collision. The initial and final safety margins add an additional element of safety in the algorithm. This safety margin reduces over time from the initial to final safety margin to reflect the increased likelihood of a driver accepting a smaller gap the longer they have to wait. The length of time before the safety margin starts to reduce and length of time over which the safety margin is reduced depends on the give way time parameter, which varies for different vehicles. The initial and final give-way time factors can be adjusted to vary these lengths. These factors have been based on default values and further calibrated on a turn-by-turn basis.

4.5 Turning Characteristics

- **Turning Speed:** This is the maximum speed a vehicle will travel when making the turn, although the speed will vary (higher or lower) depending on the speed limit acceptance characteristic of the drivers. A vehicle driving through a section will start to decelerate while approaching the turn in order to reach its turning speed at the end of the section. The turning speed is maintained during the turn and, when entering the next section, the vehicle will start to accelerate again according to its desired speed for that section. The turning speeds in the model have been automatically calculated by Aimsun based on the geometry of the turn. The automatically calculated speeds have been reviewed to ensure they are appropriate.
- **Look Ahead Distance Zones 1 and 2:** The lane changing model considers three zones labelled Zone 1, 2 and 3. In Zone 1, lane-changing decisions are mainly governed by the traffic conditions of the lanes involved and the next desired turning movement is not taken into account. In Zone 2, it is the desired turning movement that affects the lane-changing decision. Vehicles not driving in the correct lane for the next turn tend to move towards the correct lane. Vehicles looking for a gap may try to adapt to it, but do not affect the behaviour of vehicles in the adjacent lanes. In Zone 3, vehicles

are forced to reach the correct lane, reducing speed if necessary, and even coming to a complete stop in order to make the lane change possible. Also, vehicles in the adjacent lane can modify their behaviour in order to provide a gap big enough for the vehicle to change lanes. The “Distance Zone 1” and “Distance Zone 2” parameters determine the locations of Zones 1, 2 and 3 and therefore affect how the lane changing model is applied in different parts of the network. These parameters were reviewed in order to obtain realistic lane-changing behaviour and lane usage in the model.

4.6 Vehicle Characteristics

There are several vehicle characteristics specified in the model. Almost all parameters are defined using a truncated normal distribution. The mean, standard deviation, maximum and minimum values are carefully defined. The characteristics can be broadly split into two categories: vehicle properties and driver characteristics. Vehicle properties include size, maximum speed and maximum acceleration and driver characteristics include speed acceptance, minimum distance between vehicles and maximum give way time.

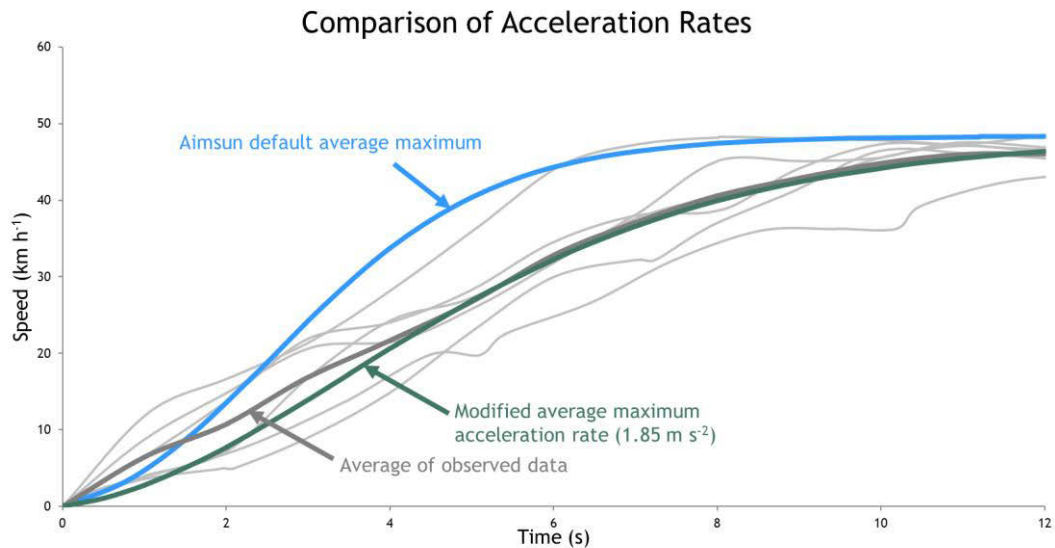
- Maximum Acceleration:** The default maximum acceleration rates in Aimsun are generally high for the UK, especially for cars. Revised maximum acceleration parameters based on research² have therefore been used and these are set out in Table 5 below. Graph 1 compares the Aimsun default, adjusted and observed mean maximum acceleration rates for cars accelerating from zero to 30mph and confirms that the revised acceleration rates result in realistic acceleration profiles.

Table 5: Maximum Acceleration Rates

Vehicle Type	Maximum Acceleration Rates (m s ⁻²)			
	Mean	Standard Deviation	Minimum	Maximum
Car	1.85	0.43	1.35	2.75
HGV	1.25	0.5	0.75	1.75
LGV	1.65	0.5	1.15	2.15
Bus	1.5	0.5	1.00	2.00

² Zallinger, M., Tate, J., and Hausberger, S. 2008. An instantaneous emission model for the passenger car fleet. Transport and Air Pollution conference, Graz 2008

Graph 1: Comparison of Acceleration Rates



- **Maximum Give Way Time:** When a vehicle is in a give-way situation, for example at a Yield or Stop sign in a junction or an on-ramp in a freeway, it applies either the normal gap-acceptance model or a lane-changing model in order to cross or merge with traffic, respectively. When a vehicle has been at a standstill for more than this Give-way Time (in seconds), it will become more aggressive and will reduce the acceptance margins. This period is also used in the Lane-Changing model as the time that a vehicle accepts being at a standstill while waiting for a gap to be created in the desired turning lane before giving up and continuing ahead. The default values have been used.

4.7 Simulation Step and Reaction Time

The reaction time is a global parameter which defines the time it takes a driver to react to changes in speed of the preceding vehicle, and this will influence the capacity at signal controlled junctions. The parameter can be either fixed (for all vehicle types) or variable (a discrete probability function is defined for each vehicle type).

The reaction time at stop (which determines how quickly a vehicle reacts from a complete stop) and reaction time at traffic light (which determines how quickly the vehicle at the head of the queue at a traffic signal reacts to the changing signals) are also global parameters which can be varied.

The reaction time parameters set for each time period in the model are shown in Table 6. The reaction time at stop and reaction time at traffic light have been set at default values. The reaction time has been set at 0.6s in order that the LEGION for Aimsun plug-in can be used, if necessary, in the future.

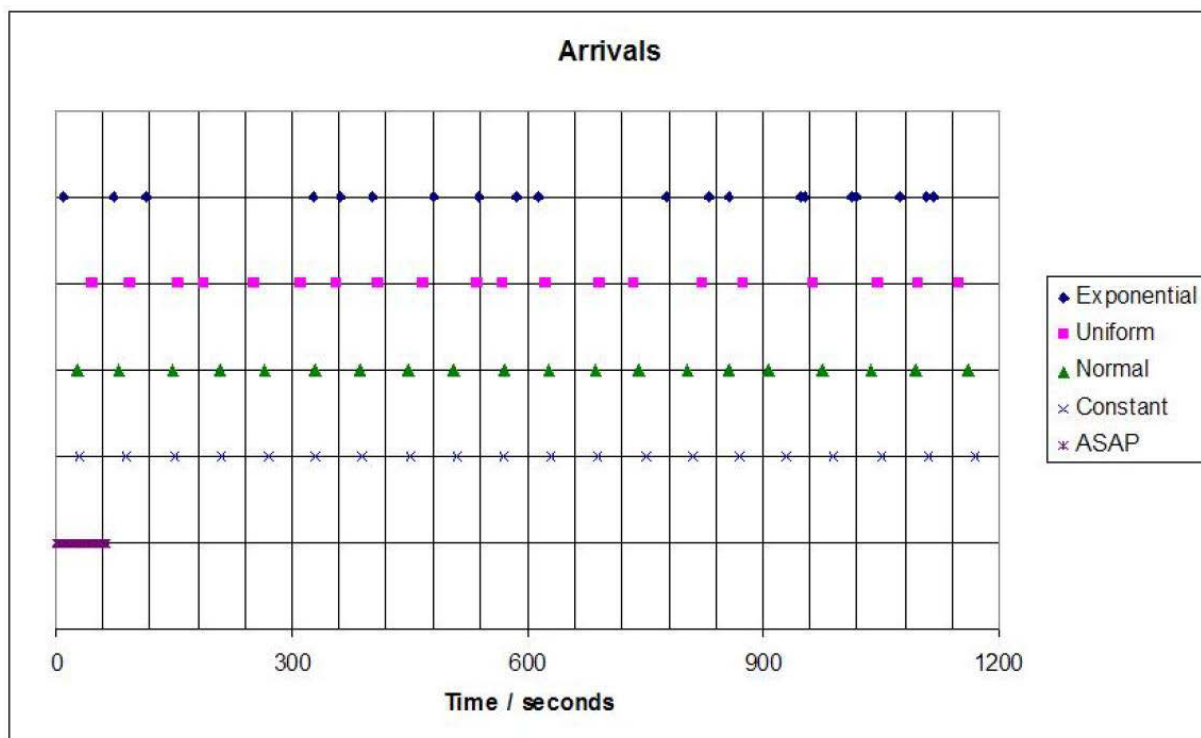
Table 6: Simulation Step and Reaction Time

Parameter	Value (s)
Simulation Step / Reaction Time	0.6
Reaction Time at Stop	1.2
Reaction Time at Traffic Light	1.6

4.8 Trip Generation

When loading a traffic demand into the simulation model a number of different models can be used to determine the headway between two consecutive vehicle arrivals. Five types of traffic generation are available in Aimsun: exponential, uniform, normal, constant, and ASAP. Figure 4 illustrates the trip generation profile for each type of distribution. Clearly, the ASAP distribution is not appropriate for this model and was therefore discounted. Sensitivity testing of the other distributions was undertaken to determine which best reflected reality. The uniform, normal and constant distributions did not result in sufficient variation in traffic flows. The exponential distribution was therefore used as it models some platooning on the approaches to the model.

Figure 4: Trip Generation



4.9 Traffic Flow Verification

4.9.1 Criteria

Modelled traffic flows have been compared to observed turn and section traffic flows to verify that the model is currently reproducing the inputted traffic flows.

WebTAG sets out acceptability guidelines³ for the calibration and validation of section flows and turning movements. These are summarised in Table 7 and have been used for the verification of traffic flows in the model.

Table 7: WebTAG Section Turning Flow Calibration / Validation Criteria and Acceptability Guidelines

Criteria	Acceptability Guideline
Individual flows within 15% for flows between 700 and 2,700 vph	>85% of cases
Individual flows within 100 vph for flows < 700 vph	
Individual flows within 400 vph for flows > 2,700 vph	
Individual flows with a GEH Statistic ⁴ < 5	

4.9.2 Verification Results

The results of the traffic flow verification for turn counts in the Weekday AM, PM and Saturday peak periods are summarised in Table 8 and Table 9 for section flows and turning movements, respectively. The analysis shows that the traffic flows within the model are represented to a high level of accuracy, all section and turning flows being replicated well within the acceptability guidelines set out in WebTAG.

Additionally, the results are shown spatially in Screenshots 2 to 7. Green represents a GEH statistic of less than 5, orange represents a GEH statistic between 5 and 10 and red represents a GEH statistic greater than 10. The analysis shows that traffic flows in the model are reproduced to a very high level of accuracy, with all links and turns having GEH statistics of less than 5 in all three scenario peak periods. The individual hours also show similar results with high levels of accuracy, these have not been presented in this report for conciseness.

³ TAG Unit M3.1, Table 2

⁴ The GEH statistic is a widely used goodness of fit test to compare two sets of traffic data.

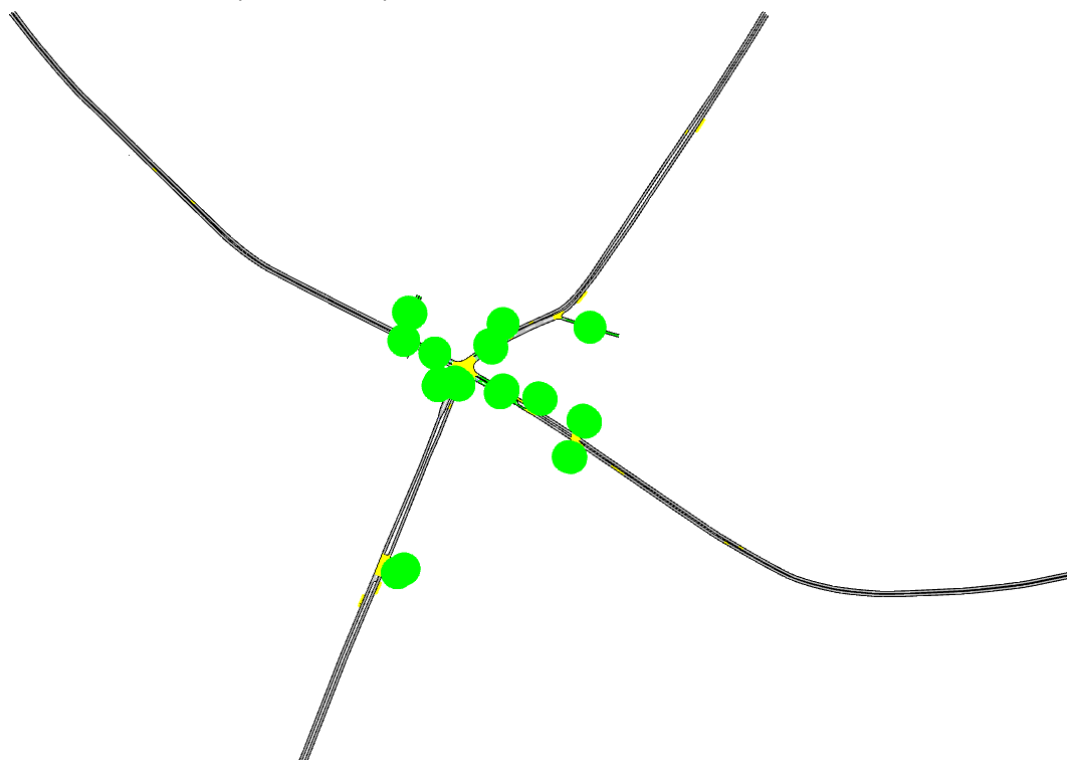
Table 8: Summary of Peak Traffic Flow Verification – Sections

Time Period	Percentage Sections with Flow < 700 vph modelled within 100 vph	Percentage Sections with Flow between 700 and 2,700 vph modelled within 15%	Percentage Sections with Flow >2,700 vph modelled within 400 vph	Percentage of Sections with GEH < 5
AM Peak (07:00 to 10:00)	100%	100%	N/A	100%
PM Peak (15:00 to 19:00)	100%	100%	N/A	100%
Saturday Peak (10:00 to 14:00)	100%	100%	N/A	100%

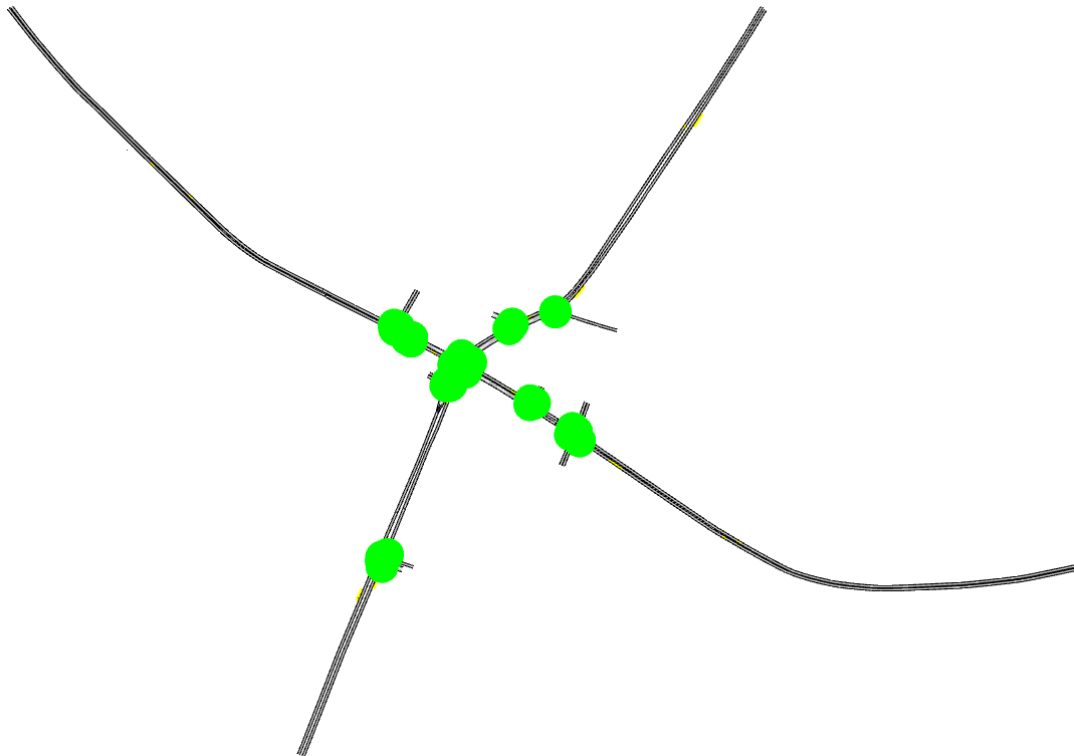
Table 9: Summary of Peak Traffic Flow Verification – Turns

Time Period	Percentage Turns with Flow < 700 vph modelled within 100 vph	Percentage Turns with Flow between 700 and 2,700 vph modelled within 15%	Percentage Turns with Flow >2,700 vph modelled within 400 vph	Percentage of Turns with GEH < 5
AM Peak (07:00 to 10:00)	100%	100%	N/A	100%
PM Peak (15:00 to 19:00)	100%	100%	N/A	100%
Saturday Peak (10:00 to 14:00)	100%	100%	N/A	100%

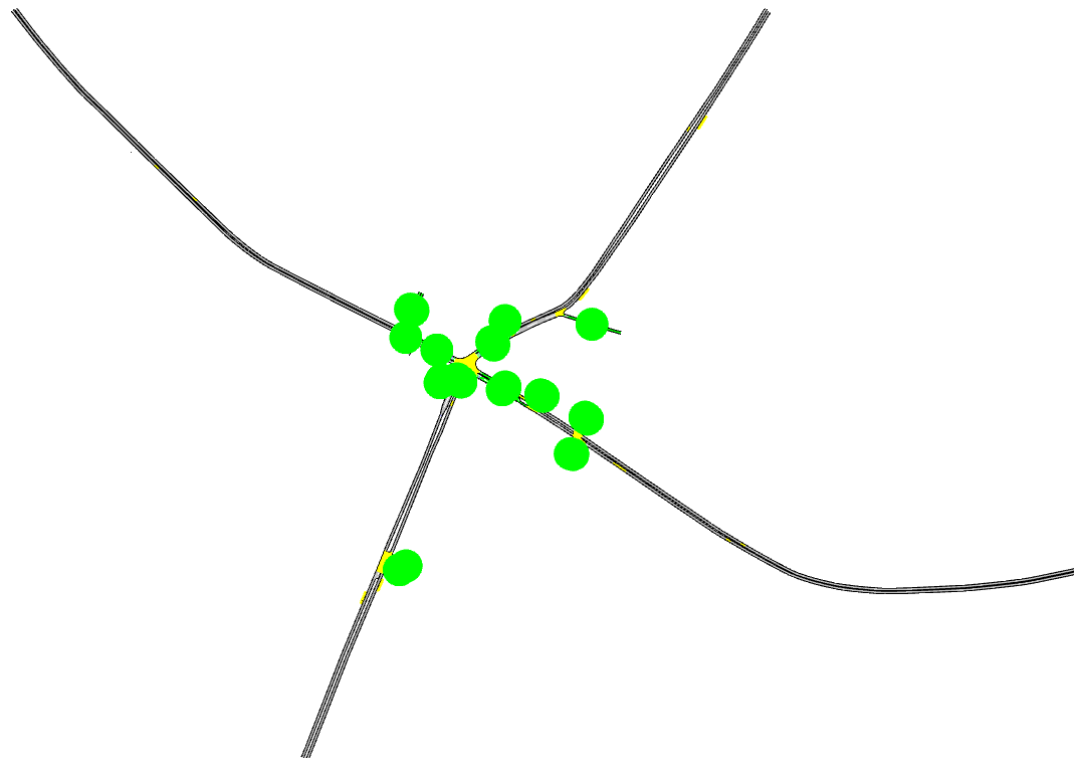
Screenshot 2: AM Peak (07:00 to 10:00) Section Flow Verification



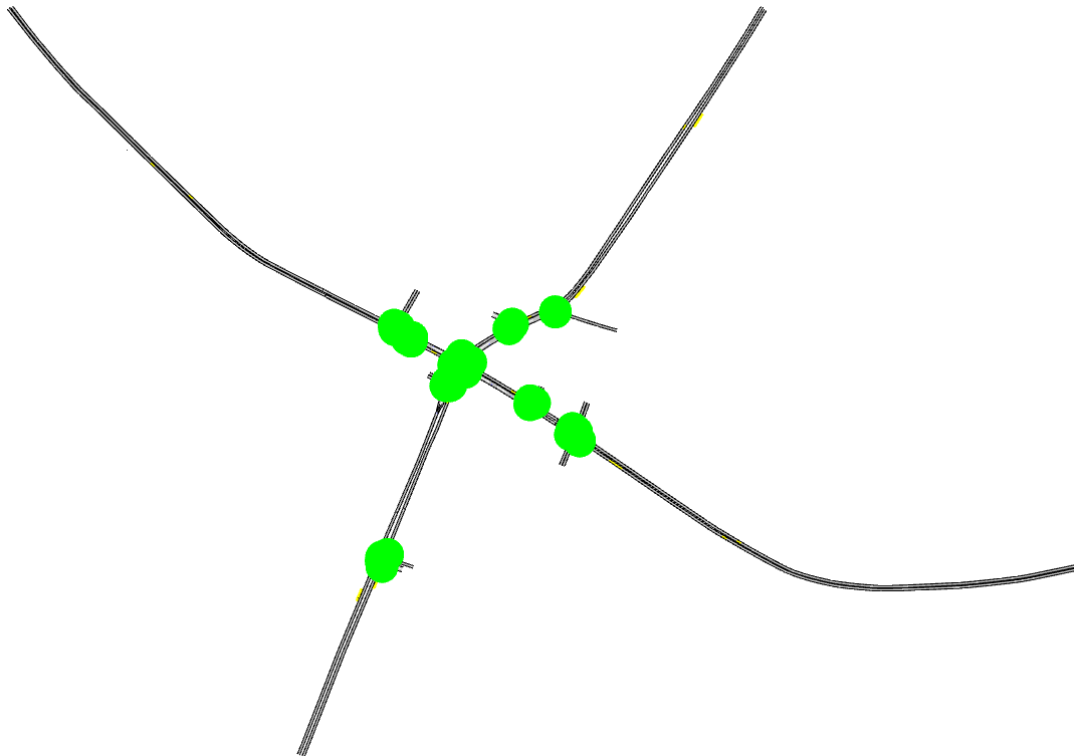
Screenshot 3: AM Peak (07:00 to 10:00) Turn Flow Verification



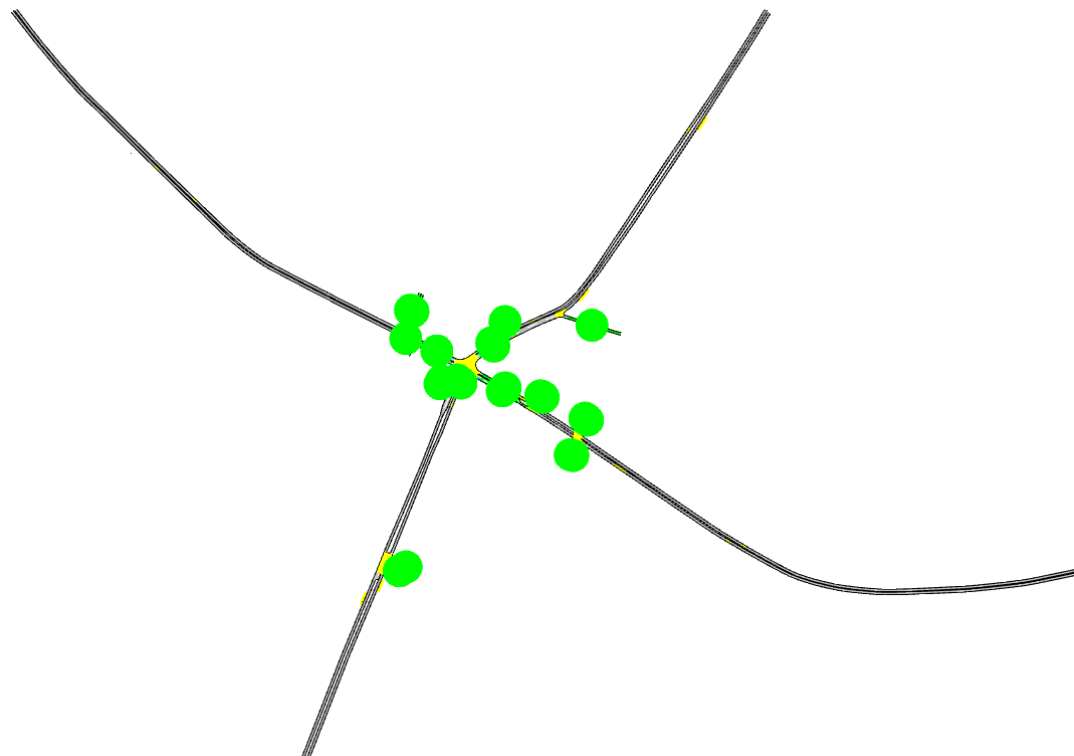
Screenshot 4: PM Peak (15:00 to 19:00) Section Flow Verification



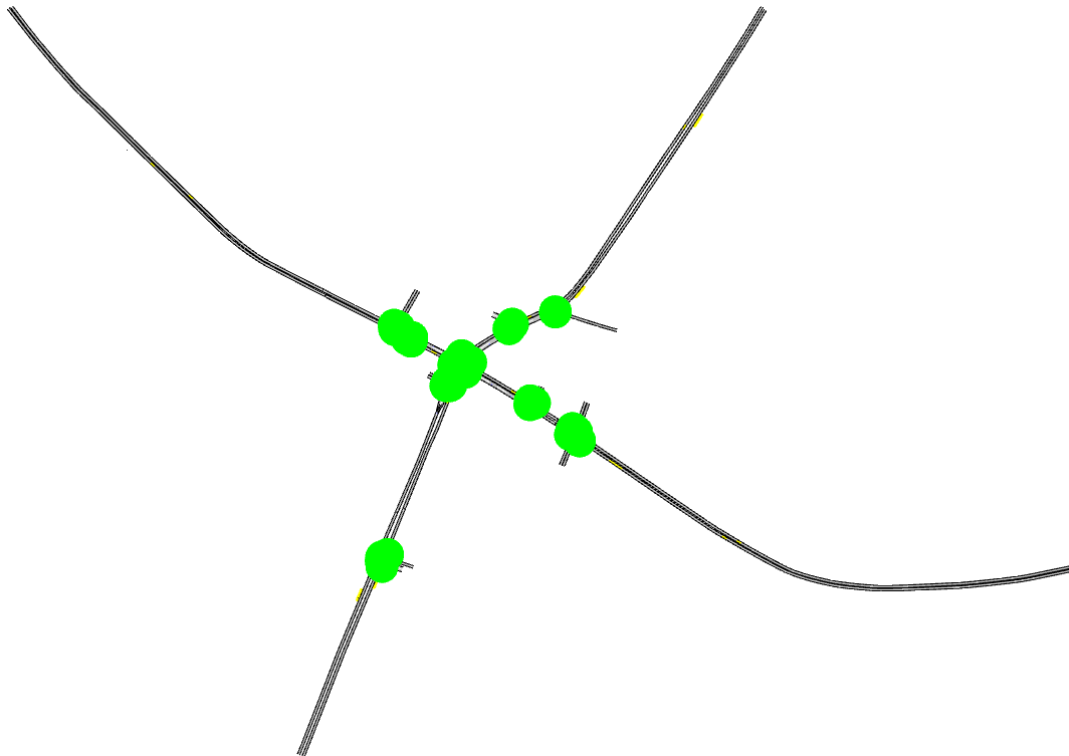
Screenshot 5: PM Peak (15:00 to 19:00) Turn Flow Verification



Screenshot 6: Saturday Peak (10:00 to 14:00) Section Flow Verification



Screenshot 7: Saturday Peak (10:00 to 19:00) Turn Flow Verification



4.10 Regression Analysis

As well as considering the GEH statistic, DMRB⁵ recommends the use of regression analysis to compare how well the observed and modelled data are correlated. The regression analysis calculates the correlation coefficient (R), which can be used to measure the goodness of model fit. A correlation coefficient of 1.0 would denote a perfect fit and DMRB advises that the correlation coefficient should be greater than 0.95.

Screenshot 8 to Screenshot 13 illustrates the regression lines in the AM, PM and Saturday periods and Table 10 summarises the values of the correlation coefficient, R. The table shows that the calibration sections and turns in all three periods have a correlation coefficient that exceeds the DMRB guidance.

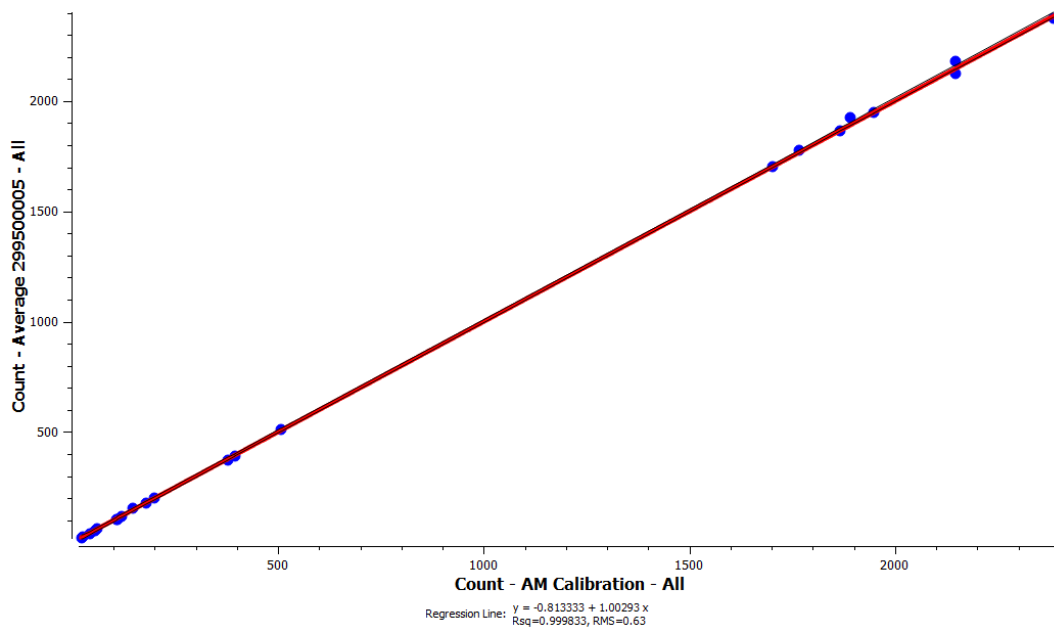
⁵ Design Manual for Roads and Bridges, Volume 12, Section 2, Part 1, Paragraph 4.4.42

Table 10: Aimsun Model Traffic Flow Calibration Correlation Coefficients

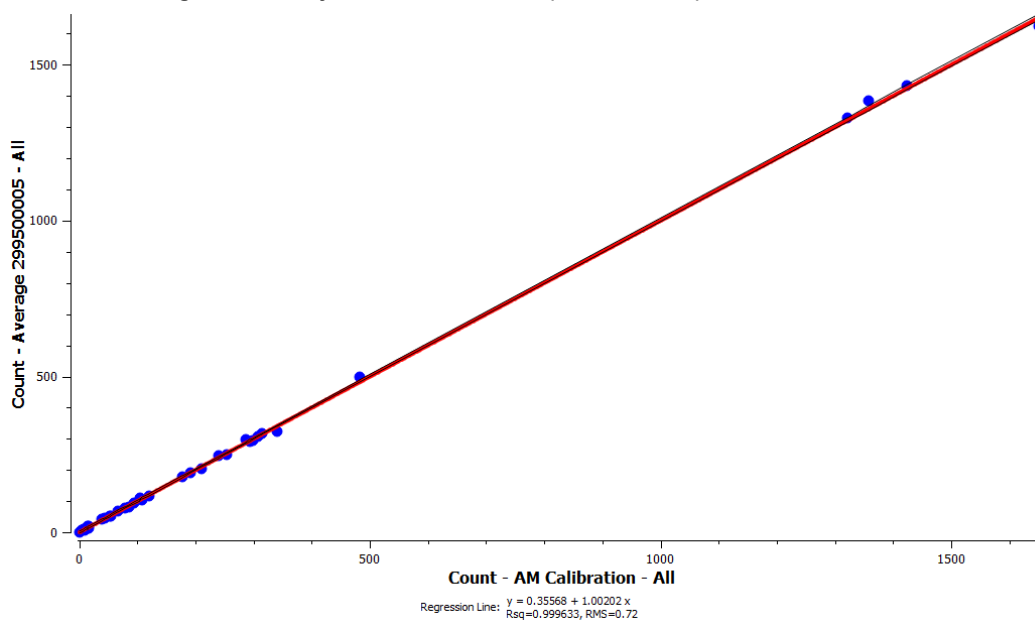
Type	Correlation Coefficient, R		
	AM Peak Period (07:00 to 10:00)	PM Peak Period (15:00 to 19:00)	Saturday Peak Period (10:00 to 14:00)
Sections	0.999	0.999	0.999
Turns	0.999	0.998	0.999

Note: All values rounded to 3 decimal places

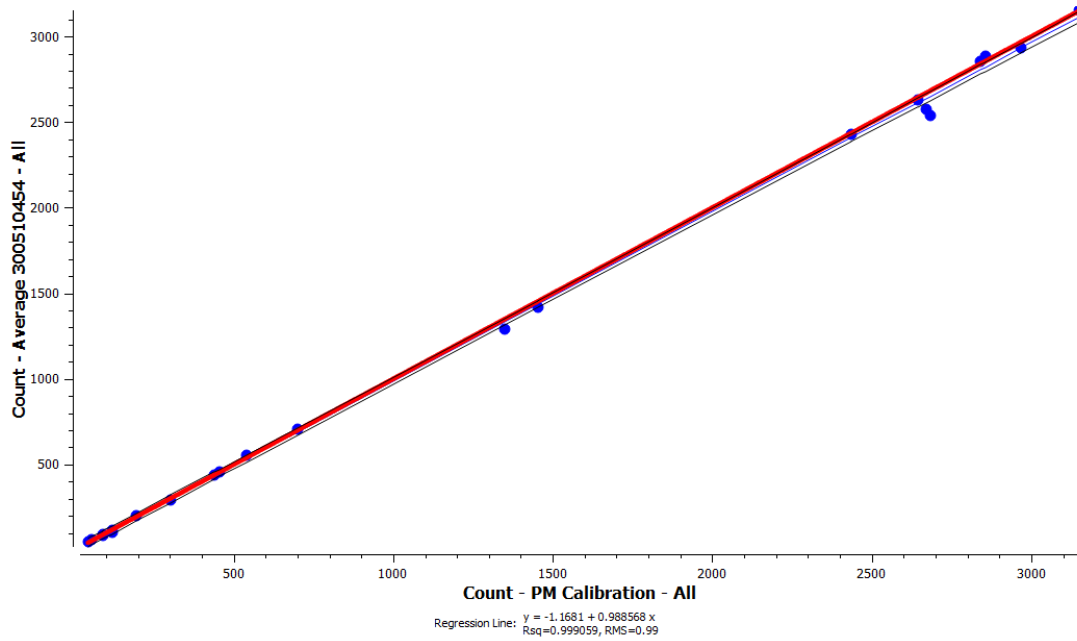
Screenshot 8: Regression Analysis - AM Peak Period (07:00 to 10:00) - Sections



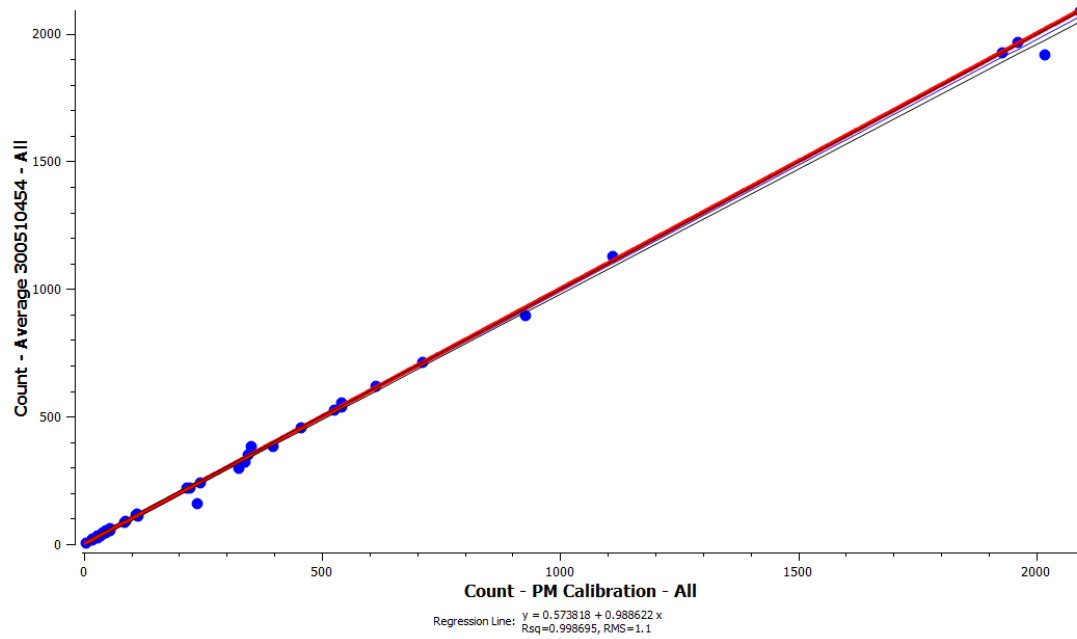
Screenshot 9: Regression Analysis - AM Peak Period (07:00 to 10:00) - Turns



Screenshot 10: Regression Analysis - PM Peak Period (15:00 to 19:00) - Sections

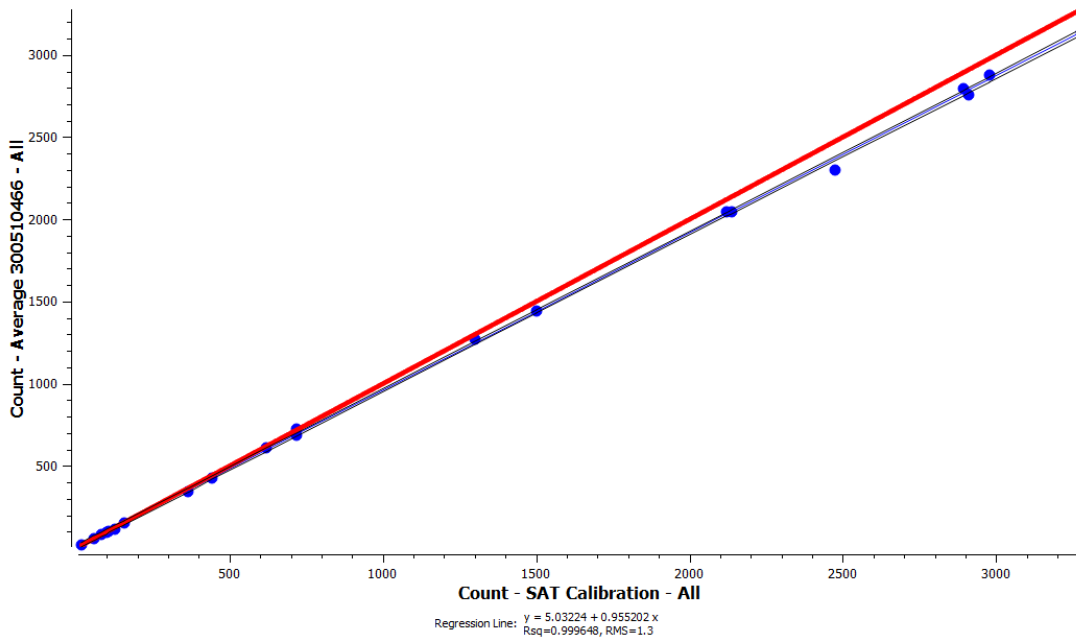


Screenshot 11: Regression Analysis - PM Peak Period (15:00 to 19:00) - Turns

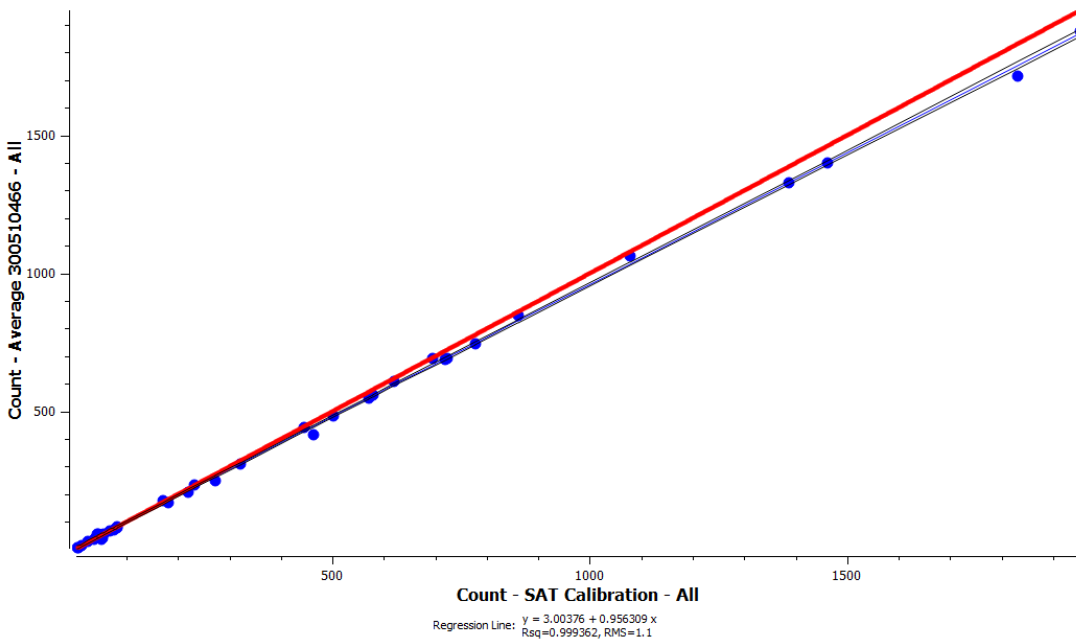




Screenshot 12: Regression Analysis - Saturday Peak Period (10:00 to 14:00) - Sections



Screenshot 13: Regression Analysis - Saturday Peak Period (10:00 to 14:00) - Turns





5 Model Validation

5.1 Introduction

The validation process determines whether the simulated model is an accurate representation of the observed situation by comparing modelled output data with observed data. The validation results are an average of ten model runs (known as replications) for each modelled period, each of the ten model replications being unique and effectively reflecting the variation in traffic conditions on different days.

The following was used to validate the New Line Aimsun Model:

- Traffic flow data from ATCs
- Queue length data collected at the same time as the traffic survey described in section 2.9 was used to validate the Harrogate Road / New Line Aimsun model.

5.2 Traffic Flow Validation

Modelled traffic flows have been compared to observed traffic flows from ATC data at locations set out in Table 3 to validate the model. This data is independent of the data used to calibrate the model and spans the full three hour modelled AM and PM peak periods. The validation is summarised in Table 11 with the validation presented in detail in Table 12 to Table 14.

Table 11: Summary of Traffic Flow Validation

Time Period	Percentage Sections with Flow < 700 vph modelled within 100 vph	Percentage Sections with Flow between 700 and 2,700 vph modelled within 15%	Percentage Sections with Flow >2,700 vph modelled within 400 vph	Percentage of Sections with GEH < 5
AM Peak (07:00 to 10:00)	100%	N/A	N/A	100%
PM Peak (16:00 to 19:00)	100%	67%	N/A	100%
SAT Peak (10:00 to 14:00)	50%	50%	N/A	67%

The tables demonstrate that the WebTAG criteria are met for the AM and PM peak periods. In the Saturday peak the GEH falls short at 71%. It should be noted that, as shown in Table 14, the only sections to not validate were New Line East. Due to damage to the survey equipment and subsequent roadworks in the area, the ATC data for this approach was collected two months after the rest of the data used in the validation of the model. The modelled data is higher than the observed data and it is possible that the observed data

atypically low due to seasonal factors. Notwithstanding this, it is clear that the modelled traffic flows on a Saturday represent a robust scenario for the purposes of scheme testing.

Table 12: AM Peak Period (07:00 - 10:00) Section Flow Validation

Location	Direction	Observed Flow (veh / hour)	Modelled Flow (veh / hour)	Difference (s)	Percentage Difference	GEH	Validates?
A657 New Line West	Eastbound	513	551	38	7%	1.66	Yes
	Westbound	526	593	67	13%	2.85	Yes
A657 New Line East	Eastbound	662	740	77	12%	2.92	Yes
	Westbound	594	677	83	14%	3.28	Yes
A658 Harrogate Road South	Northbound	633	716	83	13%	3.19	Yes
	Southbound	690	747	57	8%	2.12	Yes

Table 13: PM Peak Period (16:00 - 19:00) Section Flow Validation

Location	Direction	Observed Flow (veh / hour)	Modelled Flow (veh / hour)	Difference (s)	Percentage Difference	GEH	Validates?
A657 New Line West	Eastbound	567	613	46	8%	1.89	Yes
	Westbound	647	636	-11	-2%	0.45	Yes
A657 New Line East	Eastbound	677	765	88	13%	3.28	Yes
	Westbound	732	760	28	4%	1.02	Yes
A658 Harrogate Road South	Northbound	740	826	86	12%	3.08	Yes
	Southbound	752	884	132	18%	4.60	Yes

Table 14: SAT Peak Period (10:00 - 14:00) Section Flow Validation

Location	Direction	Observed Flow (veh / hour)	Modelled Flow (veh / hour)	Difference (s)	Percentage Difference	GEH	Validates?
A657 New Line West	Eastbound	523	581	58	11%	2.47	Yes
	Westbound	523	501	-22	-4%	0.96	Yes
A657 New Line East	Eastbound	574	729	155	27%	6.07	No
	Westbound	585	732	147	25%	5.73	No
A658 Harrogate Road South	Northbound	717	647	-70	-10%	2.67	Yes
	Southbound	746	874	128	17%	4.49	Yes

5.3 Queue Length Validation

Queue lengths on each approach to the Harrogate Road / New Line junction have been collected during the weekday AM, PM and Saturday peak periods. For signalised approaches, queues have been recorded at the end of each red phase during each cycle of the traffic signals. The observed minimum, mean and maximum queues are presented in Table 15 for each peak hour.

Mean and maximum queue lengths for each approach have also been outputted from the Aimsun model for each modelled two minute interval. These are presented in Table 15, and graphs of queue length plotted against time have been included as Appendix B. These represent an average of the mean and maximum queues observed over ten model runs and therefore represent an average mean maximum queue.

Table 15: Comparison of Observed and Modelled Queue Lengths

Approach	Observed Queue (Veh)			Modelled Average Max Queue (veh)
	Min	Mean	Max	
AM Peak Period (0700 to 1000)				
A658 Harrogate Road Southbound				
Lane 1	0.0	24.2	39.0	19.8
Lane 2	0.0	1.8	7.0	2.0
A655 New Line Westbound				
Lane 1	1.0	14.2	35.0	22.5
Lane 2	0.0	4.6	14.0	2.8
A658 Harrogate Road Northbound				
Lane 1	0.0	13.1	60.0	18.6
Lane 2	0.0	2.5	12.0	3.2
A655 New Line Eastbound				
Lane 1	1.0	16.1	35.0	12.0
Lane 2	0.0	1.8	9.0	2.0
PM Peak Period (1600 to 1900)				
A658 Harrogate Road Southbound				
Lane 1	7.0	36.2	55.0	31.9
Lane 2	0.0	2.2	7.0	4.0
A655 New Line Westbound				
Lane 1	0.0	20.0	36.0	27.4
Lane 2	0.0	6.2	16.0	3.4
A658 Harrogate Road Northbound				
Lane 1	2.0	40.2	65.0	53.1
Lane 2	0.0	3.3	13.0	4.5
A655 New Line Eastbound				
Lane 1	2.0	15.1	30.0	14.6
Lane 2	0.0	3.2	10.0	3.3
Saturday Peak Period (1000 to 1400)				
A658 Harrogate Road Southbound				

Approach	Observed Queue (Veh)			Modelled Average Max Queue (veh)
Lane 1	1.0	16.7	33.0	14.2
Lane 2	0.0	2.2	9.0	3.0
A655 New Line Westbound				
Lane 1	1.0	19.9	40.0	32.8
Lane 2	0.0	4.4	12.0	4.2
A658 Harrogate Road Northbound				
Lane 1	0.0	8.8	25.0	14.9
Lane 2	0.0	3.8	8.0	4.6
A655 New Line Eastbound				
Lane 1	0.0	11.9	30.0	29.7
Lane 2	0.0	5.3	14.0	4.7

Given the above and Appendix B, it can be seen that the modelled queues fall within the observed minimum and maximum queues and are generally similar to the observed mean queues, with the majority of queues modelled within two vehicles.

However, given that greater discrepancies exist, it should be considered that the queues outputted from Aimsun are not always directly comparable with the queues observed on-street for the following reasons:

- In Aimsun, vehicles are defined as entering a queue when their speed drops below 1 m/s and leave the queue when their speed rises above 4 m/s whereas the on-street observations of whether a vehicle is in a queue are more subjective.
- Regarding signalised approaches, the mean observed queue is an average of the queue observed each cycle, whereas the average mean modelled queue is an average over ten model runs of the mean queue observed in each two minute interval.

Having regard to the above, it is not often possible to make a direct numerical comparison between the modelled and observed queue values. However, by comparing the modelled mean and maximum queues with the minimum, maximum and mean observed queues, it is possible to conclude that the modelled queueing behaviour is representative of the observed queueing.

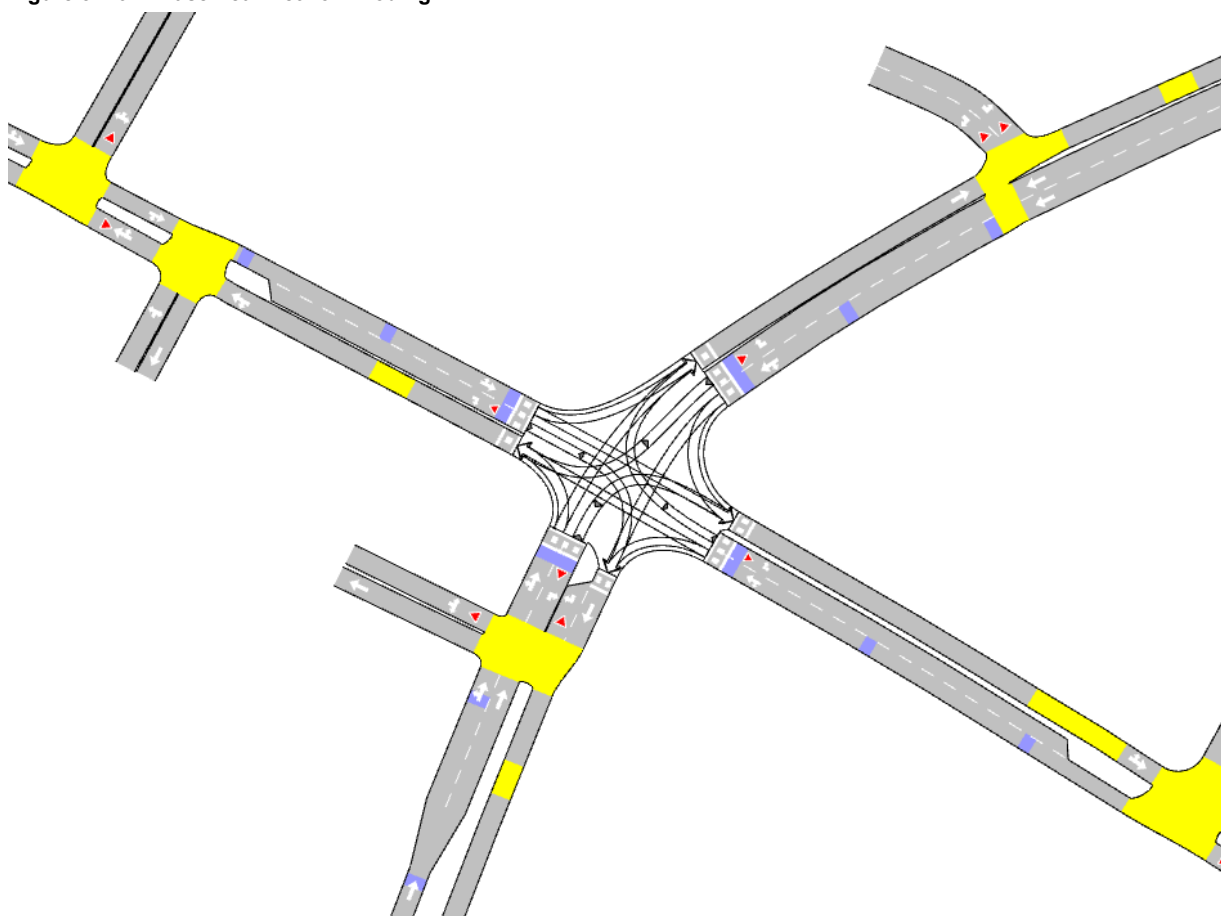
6 Future Year Do Minimum Scenario

6.1 2021 Opening Year Do Minimum

6.1.1 Network Coding Changes

The 2021 Future Year Do Minimum network layout remains consistent with the 2017 Base Year layout, which is shown in Figure 5.

Figure 5: 2017 Base Year Network Coding



6.1.2 Signal Timing Amendments

The traffic signals timings are consistent with those currently on-street.

6.1.3 Traffic Demand

The 2021 Future Year Do Minimum matrices reflect the base year traffic demand factored up to the 2021 opening year using National Transport Model (NTM) locally-adjusted growth factors derived using TEMPro. The factors used are summarised in Table 16.

Table 16: NTM / TEMPro Growth Factors (2017 to 2021)

Base Year	Future Year	NTM Local Growth Factor Bradford 09 and 027		
		AM Peak	PM Peak	SAT Peak
2017	2021	1.063	1.061	1.060

Committed development flows for four new housing developments in the vicinity of the junction have been provided by City of Bradford Council (Appendix C). These have been included in the 2021 Future Year traffic demand.

6.2 2029 Future Year Do Minimum

6.2.1 Network Coding Changes

The 2029 Future Year Do Minimum network layout remains consistent with the 2017 Base Year layout, which is shown in Figure 5.

6.2.2 Signal Timing Amendments

The traffic signals timings are consistent with those currently on-street.

6.2.3 Traffic Demand

The 2029 Future Year Do Minimum matrices reflect the base year traffic demand factored up to the future year using National Transport Model (NTM) locally-adjusted growth factors derived using TEMPro. These factors are summarised in Table 17.

Table 17: NTM / TEMPro Growth Factors (2017 to 2029)

Base Year	Future Year	NTM Local Growth Factor for Bradford 09 and 027		
		AM Peak	PM Peak	SAT Peak
2017	2029	1.182	1.181	1.185

Committed development flows are consistent with the 2021 Future Year model.

6.3 2036 Future Year Do Minimum

For a noise assessment a 2036 future year scenario was run using the model.

6.3.1 Network Coding Changes

The 2036 Future Year Do Minimum network layout remains consistent with the 2017 Base Year layout, which is shown in Figure 5.

6.3.2 Signal Timing Amendments

The traffic signals timings are consistent with those currently on-street.

6.3.3 Traffic Demand

The 2036 Future Year Do Minimum matrices reflect the base year traffic demand factored up to the future year using National Transport Model (NTM) locally-adjusted growth factors derived using TEMPro. These factors are summarised in Table 17.

Table 18: NTM / TEMPro Growth Factors (2017 to 2029)

Base Year	Future Year	NTM Local Growth Factor for Bradford 09 and 027		
		AM Peak	PM Peak	SAT Peak
2017	2036	1.270	1.268	1.275

Committed development flows are consistent with the 2021 Future Year model.

7 Future Year Scenario - Do Something

7.1 2021 Opening Year Do Something

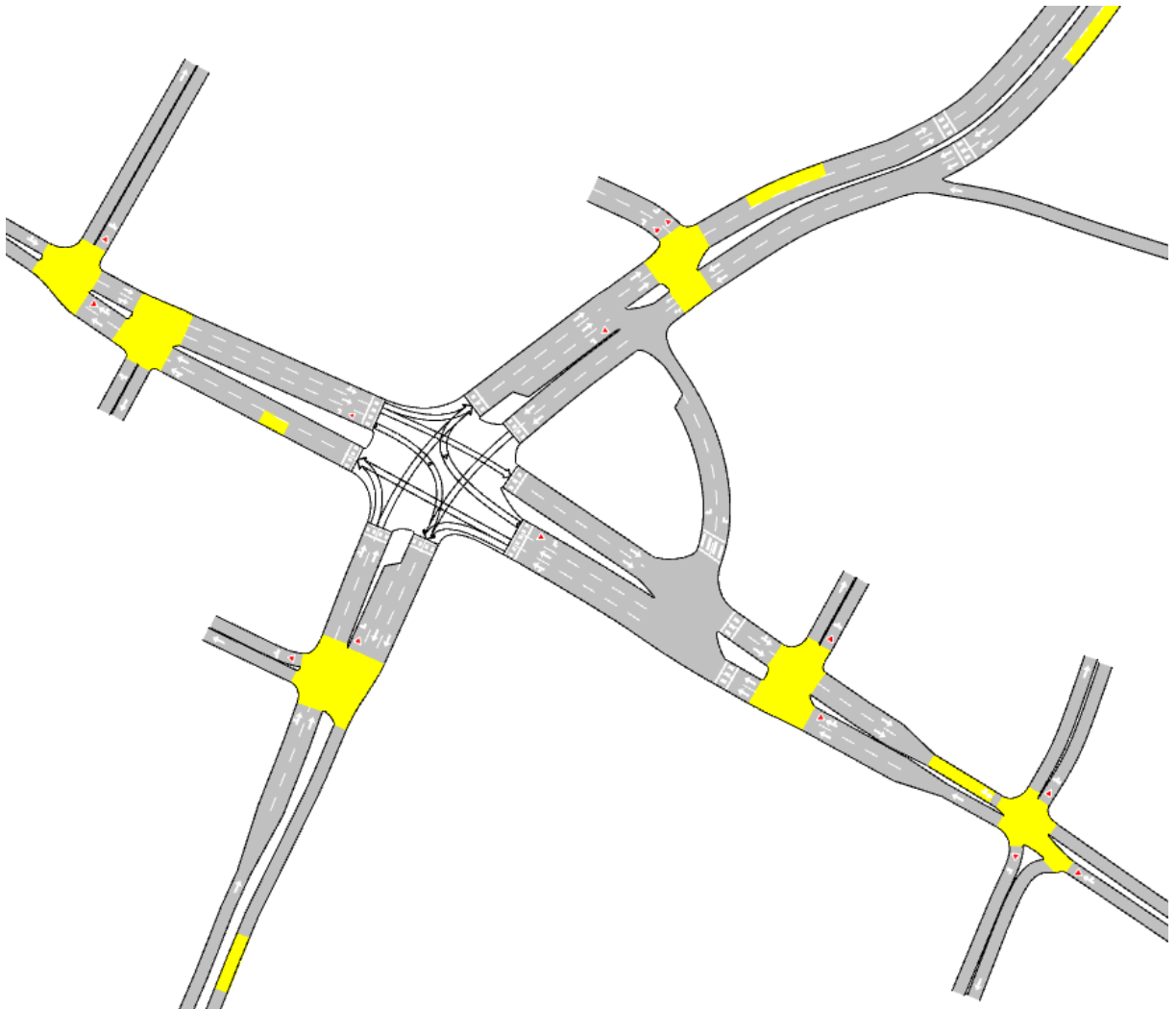
7.1.1 Highway Improvements

The highway improvement scheme is shown on Bradford Council's drawing numbered R/PTH/MH/103196/DL-2E, which is presented in Appendix D. The scheme includes the following key features:

- Formation of a one-way "P-loop" removing some right turning conflicts from the junction.
- Approach from Harrogate Road (north), only ahead movements are possible through the crossroads, with left and right turning movements being facilitated by the use of the P-loop.
- Approach from Harrogate Road (south) can only travel ahead and left through the crossroads, with right turning traffic using the P-loop.
- Approach from New Line (east) has a lane gain to now form three lanes approaching the crossroads.
- Approach from New Line (west) has a lane gain to now form three lanes approaching the crossroads.
- All exits from the junction have gone from one lane exits to two lanes.
- A new signal controlled junction is formed on New Line (east) with the P-loop, including pedestrian crossing facilities.

The Aimsun coding is shown on Figure 6.

Figure 6: 2021 Future Year Do Something Network Coding



7.1.2 Traffic Signal Coding

Signal timings have been amended to include the additional stages and ensure the efficient operation of the two junctions in co-ordination.

7.2 2029 Future Year Do Something Scenario

7.2.1 Highway Improvements

The 2029 Future Year Do Something network layout remains consistent with the 2021 Opening Year layout, which is shown in Figure 6.

7.2.2 Traffic Signal Coding

The traffic signals have been coded in accordance with the 2021 Opening Year layout.

7.3 2036 Future Year Do Something Scenario

7.3.1 Highway Improvements

The 2036 Future Year Do Something network layout remains consistent with the 2021 Opening Year layout, which is shown in Figure 6.

7.3.2 Traffic Signal Coding

The traffic signals have been coded in accordance with the 2021 Opening Year layout.

8 Aimsun Model Results

8.1 Introduction

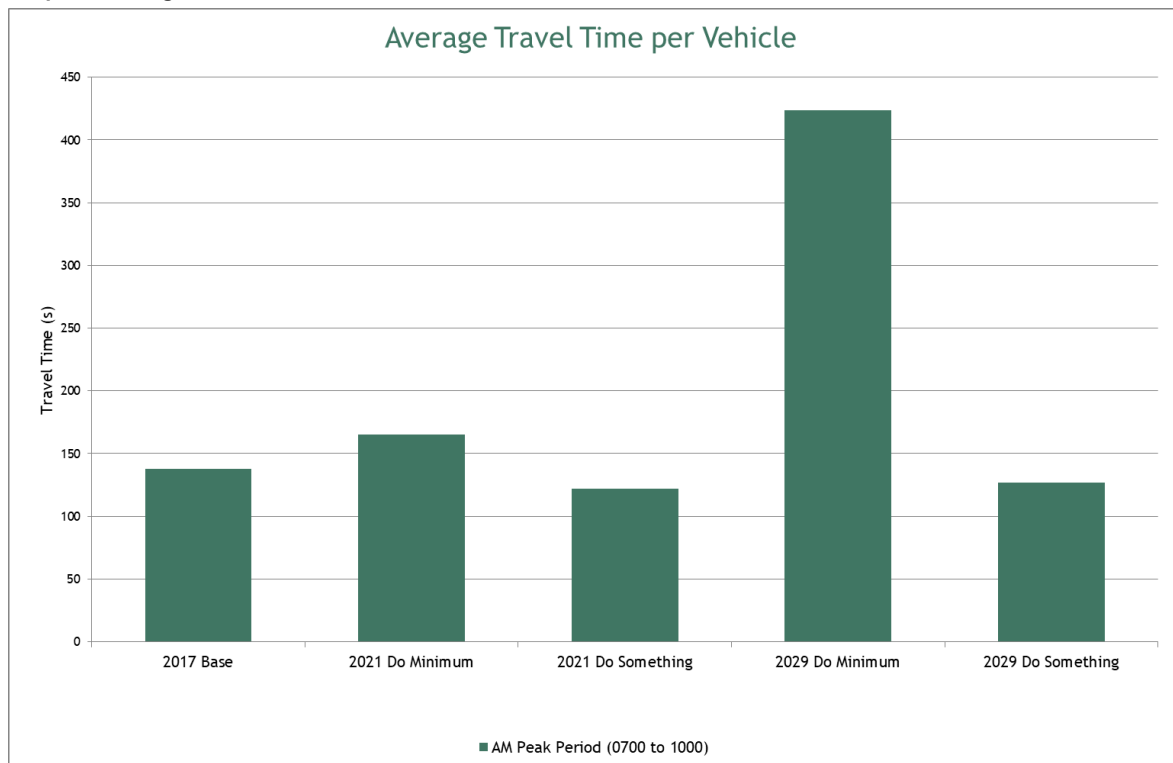
In order to understand the effects of the proposed highway improvements, a range of statistics have been extracted from the model for the 2021 Opening Year and 2029 Future Year scenarios and are presented in this section.

8.2 Network Statistics

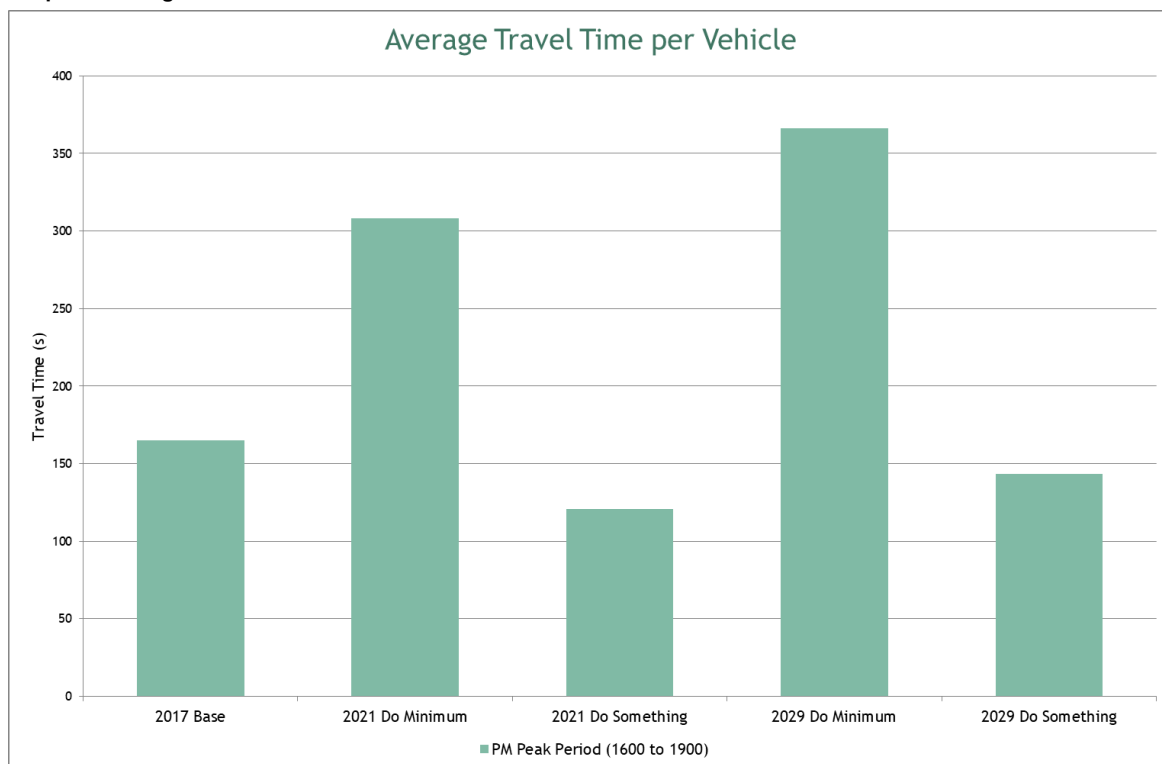
Network statistics provide a strategic overview of the performance of the whole network. These statistics have been extracted for the modelled network to understand the overall impacts of each option. These are presented in Graph 2 to Graph 7 and the following statistics are reported:

- **Travel time** - mean time it takes for vehicles to travel through the network in the modelled time period (unit: s/km)
- **Delay time** - mean delay incurred by vehicles travelling through the network in the modelled time period and is calculated as the difference between actual travel time and free flow travel (unit: s/km);

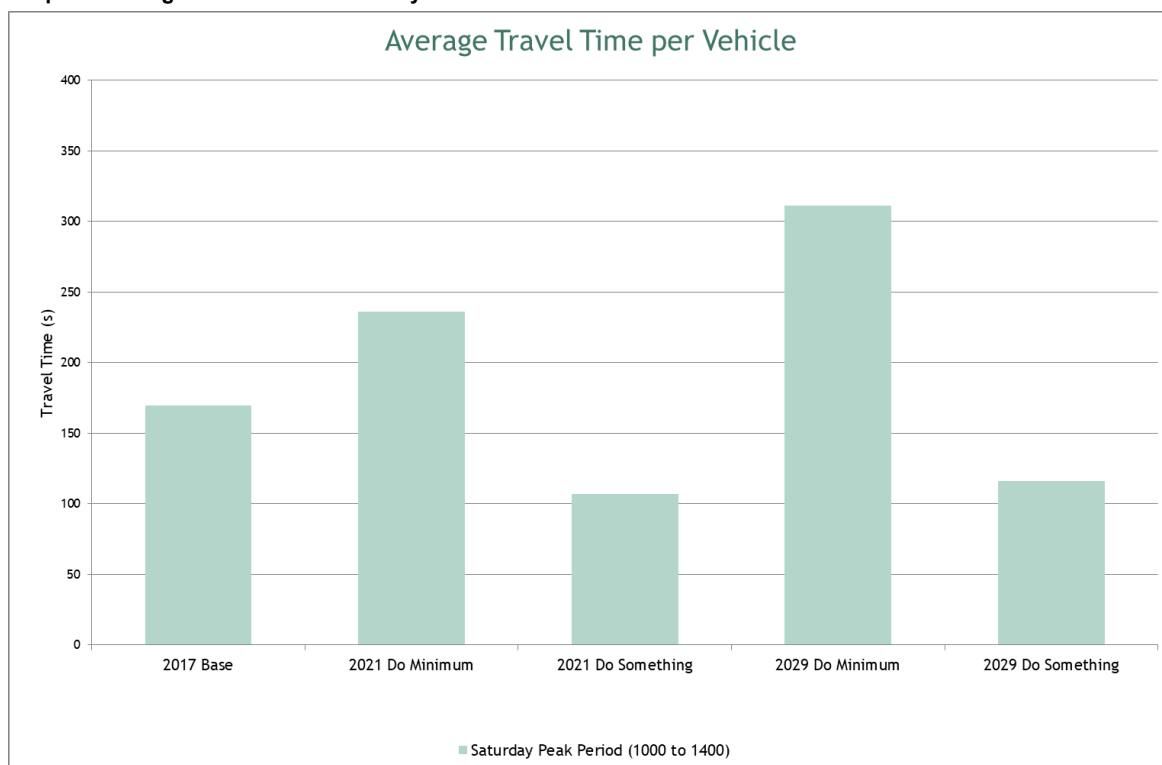
Graph 2: Average Travel Time - AM



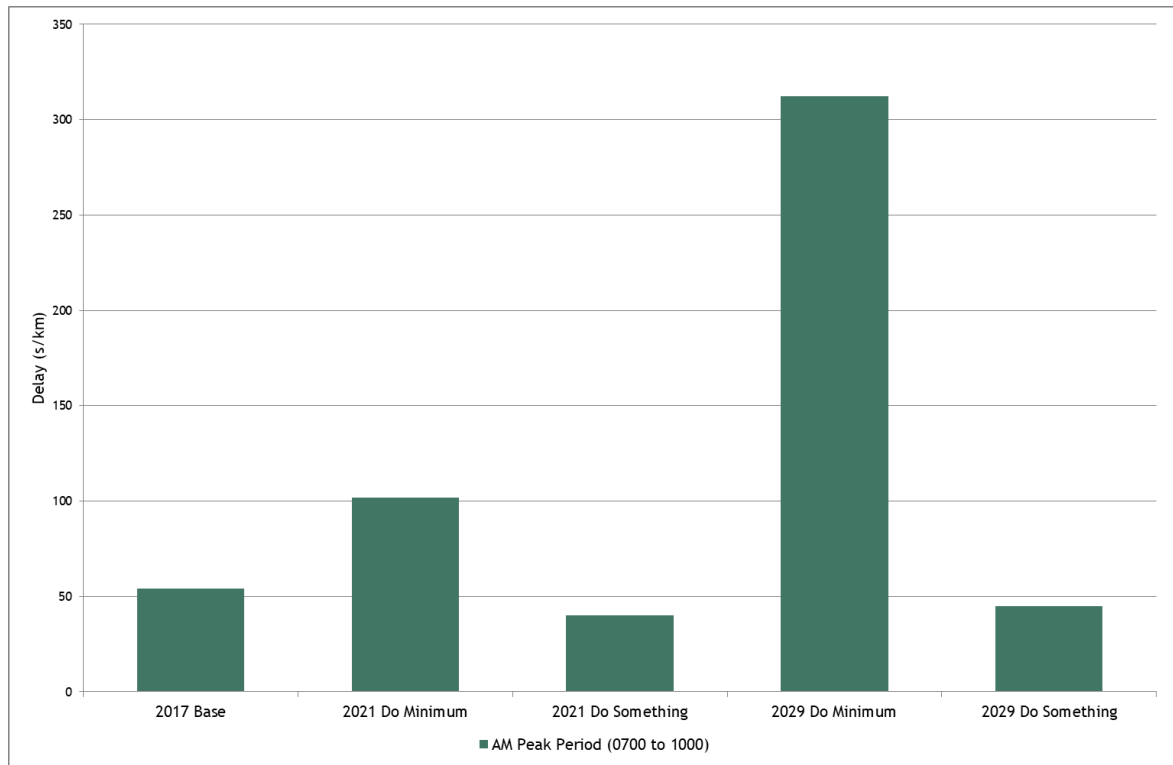
Graph 3: Average Travel Time - PM



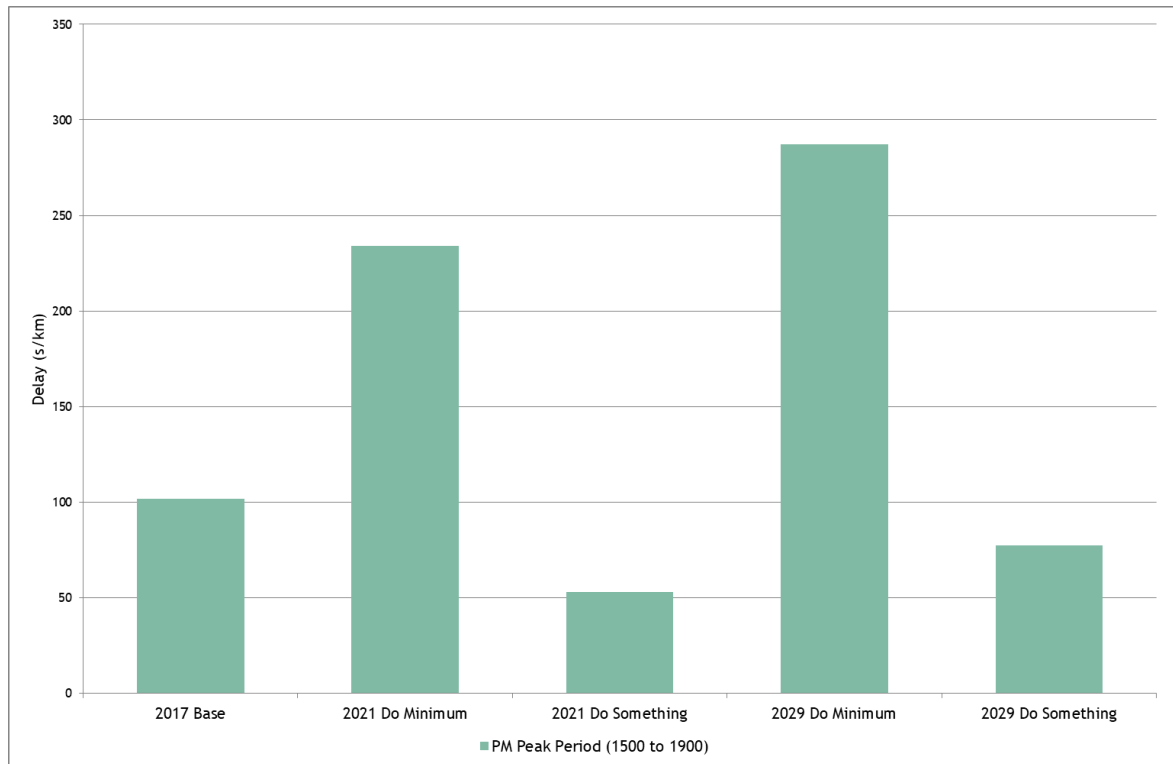
Graph 4: Average Travel Time - Saturday



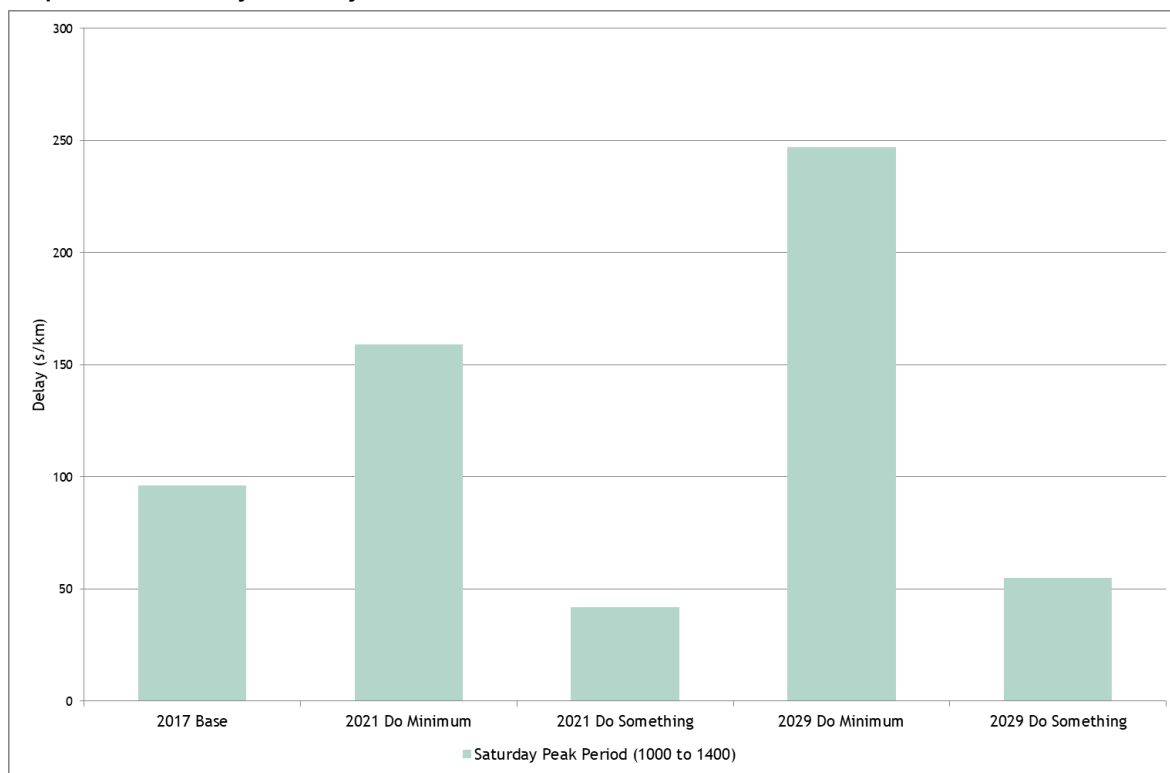
Graph 5: Network Delay - AM



Graph 6: Network Delay - PM



Graph 7: Network Delay - Saturday



The graphs indicate that travel time and delay is likely to increase a small amount by 2021 and significantly by 2029 as a result of background traffic growth in all three peak periods.

During each peak period, the junction improvements in the Do Something scenario result in significant reductions in both travel time and network delay. Furthermore, the results show that the scheme also results in a betterment compared with the 2017 Base Year scenario.

8.3 Travel Time Statistics

To analyse the impact of the junction improvement scheme on the travel time associated with each movement through the junction, the travel time OD statistics for each arm of the Harrogate Road / New Line junction have been extracted from the model.

8.3.1 2021 Opening Year Do Something Scenario

The difference in travel times between 2021 Opening Year Do Minimum scenario and the 2021 Opening Year Do Something scenario are presented for the AM, PM and Saturday peak periods in Table 19 to Table 21. Similar results for the 2029 future year are presented in Table 22 to Table 24.

Table 19: 2021 AM Travel Time Differences

Travel Time (s)	Harrogate Road North	New Line East	Harrogate Road South	New Line West
Harrogate Road North	N/A	-76	-79	-150
New Line East	-237	N/A	-166	-170
Harrogate Road South	-256	-412	N/A	-256
New Line West	-481	-351	-618	N/A

Table 20: 2021 PM Travel Time Differences

Travel Time (s)	Harrogate Road North	New Line East	Harrogate Road South	New Line West
Harrogate Road North	N/A	-211	-221	-349
New Line East	-178	N/A	-122	-139
Harrogate Road South	-255	-447	N/A	-241
New Line West	-286	-271	-400	N/A

Table 21: 2021 SAT Travel Time Differences

Travel Time (s)	Harrogate Road North	New Line East	Harrogate Road South	New Line West
Harrogate Road North	N/A	0	-12	-3
New Line East	-121	N/A	-93	-81
Harrogate Road South	-117	-183	N/A	-111
New Line West	-530	-532	-683	N/A

Table 22: 2029 AM Travel Time Differences

Travel Time (s)	Harrogate Road North	New Line East	Harrogate Road South	New Line West
Harrogate Road North	N/A	-208	-210	-269
New Line East	-387	N/A	-306	-308
Harrogate Road South	-318	-517	N/A	-307
New Line West	-563	-432	-693	N/A

Table 23: 2029 PM Travel Time Differences

Travel Time (s)	Harrogate Road North	New Line East	Harrogate Road South	New Line West
Harrogate Road North	N/A	-232	-225	-298
New Line East	-241	N/A	-172	-186
Harrogate Road South	-295	-532	N/A	-276
New Line West	-397	-385	-500	N/A

Table 24: SAT Travel Time Differences

Travel Time (s)	Harrogate Road North	New Line East	Harrogate Road South	New Line West
Harrogate Road North	N/A	-17	-31	-17
New Line East	-177	N/A	-172	-151
Harrogate Road South	-351	-492	N/A	-332
New Line West	-648	-669	-891	N/A

The travel time analysis indicates that the junction improvement scheme would provide significant journey time benefits for all movements through the junction. In the 2021 Opening Year, improvements in travel time are achieved for all movements through the junction, with the largest improvements being on the New Line (West) approach with benefits of up to 683 seconds in the SAT peak. In the 2029 Future Year 2029, travel time

benefits are increased along each route with the New Line (West) approach again receiving the largest improvements across the three peak periods.

8.4 Minor Roads and Accesses

Due to the significant layout changes being proposed as part of the Harrogate Road / New Line junction improvements it is important to assess and consider the impacts upon minor roads and car park accesses. Table 25 sets out the statistics that are used to consider the level of congestion experienced at these minor junctions and the impact of the scheme.

Table 25: Individual Arm Statistics Description

Statistic	Units	Analytical Use
Flow	veh/h	This shows the actual traffic flow on each arm of the junction
Delay	s	This shows the delay experienced by each vehicle on each arm of the junction and is calculated as the difference between the actual travel time and free-flow travel time
Mean Queue	veh	This shows the time-averaged queue.
Max Queue	veh	This shows the maximum length of queue observed on each arm

Statistics for Stockhill Road, the Farmfoods car park, the New Line Retail Park and the Asda car park are presented in Table 26 to 32 as these junctions are closest to Harrogate Road / New Line junction and therefore will be most affected. The statistics are presented as average totals over each peak period respectively.

Table 26: Stockhill Road AM Peak Statistics

Statistic	2017 Base	2021 Do Min	2021 Do Something	2029 Do Min	2029 Do Something
Flow	108	137	132	146	149
Delay	11	129	5	225	7
Mean Queue	0	4	0	10	0
Max Queue	5	25	1	35	5

Table 27: Stockhill Road PM Peak Statistics

Statistic	2017 Base	2021 Do Min	2021 Do Something	2029 Do Min	2029 Do Something
Flow	177	185	185	209	210
Delay	22	60	6	114	8
Mean Queue	1	2	0	6	0
Max Queue	14	15	5	21	6

Table 28: Stockhill Road SAT Peak Statistics

Statistic	2017 Base	2021 Do Min	2021 Do Something	2029 Do Min	2029 Do Something
Flow	170	185	188	210	218
Delay	6	7	4	8	5
Mean Queue	0	0	0	0	0
Max Queue	5	4	4	5	5

Table 29: Farmfoods Car Park AM Peak Statistics

Statistic	2017 Base	2021 Do Min	2021 Do Something	2029 Do Min	2029 Do Something
Flow	6	10	9	9	9
Delay	5	32	14	33	18
Mean Queue	0	0	0	0	0
Max Queue	1	3	2	3	2

Table 30: Farmfoods Car Park PM Peak Statistics

Statistic	2017 Base	2021 Do Min	2021 Do Something	2029 Do Min	2029 Do Something
Flow	23	25	25	28	26
Delay	40	28	13	31	19
Mean Queue	0	0	0	0	0
Max Queue	6	5	3	5	4

Table 31: Farmfoods Car Park SAT Peak Statistics

Statistic	2017 Base	2021 Do Min	2021 Do Something	2029 Do Min	2029 Do Something
Flow	21	26	28	32	31
Delay	19	28	11	21	16
Mean Queue	0	0	0	0	0
Max Queue	4	4	4	5	5

Table 32: Asda Car Park AM Peak Statistics

Statistic	2017 Base	2021 Do Min	2021 Do Something	2029 Do Min	2029 Do Something
Flow	38	38	39	43	43
Delay	48	117	10	175	13
Mean Queue	0	1	0	2	0
Max Queue	10	9	4	13	5

Table 33: Asda Car Park PM Peak Statistics

Statistic	2017 Base	2021 Do Min	2021 Do Something	2029 Do Min	2029 Do Something
Flow	45	52	51	53	60
Delay	76	62	12	85	18
Mean Queue	1	1	0	1	0
Max Queue	16	9	5	13	6

Table 34: Asda Car Park SAT Peak Statistics

Statistic	2017 Base	2021 Do Min	2021 Do Something	2029 Do Min	2029 Do Something
Flow	38	44	44	49	47
Delay	40	56	11	58	14
Mean Queue	0	1	0	1	0
Max Queue	7	10	4	7	5

Table 35: New Line Retail Park AM Peak Statistics

Statistic	2017 Base	2021 Do Min	2021 Do Something	2029 Do Min	2029 Do Something
Flow	5	4	5	6	5
Delay	1	3	1	4	1
Mean Queue	0	0	0	0	0
Max Queue	1	1	1	1	0

Table 36: New Line Retail Park PM Peak Statistics

Statistic	2017 Base	2021 Do Min	2021 Do Something	2029 Do Min	2029 Do Something
Flow	15	17	15	18	18
Delay	0	6	1	3	1
Mean Queue	0	0	0	0	0
Max Queue	2	2	2	2	1

Table 37: New Line Retail Park SAT Peak Statistics

Statistic	2017 Base	2021 Do Min	2021 Do Something	2029 Do Min	2029 Do Something
Flow	28	27	29	31	33
Delay	1	4	1	7	1
Mean Queue	0	0	0	0	0
Max Queue	2	4	2	3	2

The individual access and road statistics indicate that with the improvement scheme in place there are, in general, benefits to existing access junctions. For each peak period there is either a reduction or no impact in queueing and delay time with the improvement scheme in place compared with the Do minimum scenario in both 2021 and 2029.

9 Summary and Conclusions

9.1 Introduction

Fore Consulting Limited (Fore) has been appointed by Bradford Council to develop an Aimsun microsimulation model of the Harrogate Road / New Line junction located at Crossgates. The model has been calibrated, validated, and used to assess the impact of implementing a proposed improvement scheme that is required to alleviate an already congested network and accommodate future year traffic growth.

9.2 Base Model Description

The Aimsun base model is representative of the Harrogate Road / New Line junction. The model has been developed to be representative of the year 2017 during the following time periods:

- Weekday AM Peak Period: 0700 to 1000;
- Weekday PM Peak Period: 1500 to 1900;
- Saturday Peak Period: 1000 to 1400.

The model considers the following vehicle types:

- Cars;
- Light Goods Vehicles (LGVs) - comprising commercial vehicles with a gross vehicle weight of less than 3.5t;
- Heavy Goods Vehicles - comprising commercial vehicles (except buses) with a gross vehicle weight greater than 3.5t;
- Buses - comprising all public service buses.

9.3 Calibration and Validation

The model has been fully calibrated and validated and accurately reflects observed traffic flows and queue length data.

9.4 Future Year Scenarios

The following Future Year scenarios were used to assess the Harrogate Road / New Line junction:

- 2021 Opening Year Do Minimum - this reflects current highway layout and background traffic growth to 2021.
- 2021 Opening Year Do Something - this reflects the proposed Highway layout and background traffic growth to 2021;
- 2029 Future Year Do Minimum - this reflects current highway layout and background traffic growth to 2029;
- 2029 Future Year Do Something - this reflects the proposed Highway layout and background traffic growth to 2029.

9.5 Future Year Modelling

Statistics have been extracted from the future year scenarios for individual arms and also for the junction as a whole. The statistics show that the scheme provides a significant improvement on compared to the 2021 and 2029 Do Minimum scenarios, whilst not having any detrimental impact upon the operation of the car park access in the vicinity of the junction.

Additionally, travel time analysis was also undertaken and indicated that the scheme would provide significant travel time benefits along all routes through the junction.

Appendix A

Traffic Survey Data



Bradford - Manual Traffic Survey: Thursday, 23 March 2017

Produced by Streetwise Services Ltd.

Junction: **A - A658 Harrogate Road North / B - A657 New Line East / C - A658 Harrogate Road South / D - A657 New Line West**

Approach: **A - A658 Harrogate Road North**

TIME	A to B							A to C								
	PICYCLE	MICYCLE	CAR	LGV	OSV1	OSV2	BUS	TOTAL	PICYCLE	MICYCLE	CAR	LGV	OSV1	OSV2	BUS	TOTAL
07:00 - 07:15	0	0	26	3	3	0	0	32	1	0	151	13	3	0	0	168
07:15 - 07:30	0	0	37	1	1	0	0	39	2	1	133	10	1	1	0	148
07:30 - 07:45	0	1	35	5	0	0	0	41	1	0	150	5	2	2	1	161
07:45 - 08:00	0	0	40	7	0	0	0	47	1	0	129	6	3	2	0	141
Hourly Total	0	1	138	16	4	0	0	159	5	1	563	34	9	6	1	618
08:00 - 08:15	0	0	27	2	1	1	0	31	2	0	106	3	5	2	1	119
08:15 - 08:30	0	0	52	2	0	1	0	55	1	1	130	8	2	0	1	143
08:30 - 08:45	0	0	58	1	1	0	0	60	1	0	114	10	4	2	0	131
08:45 - 09:00	0	0	29	1	0	0	0	30	0	0	130	13	6	4	0	153
Hourly Total	0	0	166	6	2	2	0	176	4	1	486	34	17	8	2	546
09:00 - 09:15	0	0	35	7	2	0	1	45	0	1	121	10	5	3	1	141
09:15 - 09:30	0	0	38	2	0	0	0	40	0	0	120	7	6	1	0	134
09:30 - 09:45	0	0	24	3	2	0	0	29	0	0	93	14	4	1	2	114
09:45 - 10:00	0	0	27	3	2	3	0	35	0	1	89	14	2	3	1	110
Hourly Total	0	0	124	15	6	3	1	149	0	2	423	45	17	8	4	489
Session Total	0	1	428	37	12	5	1	484	9	4	1466	113	43	21	7	1663
15:00 - 15:15	0	0	30	10	1	0	2	43	0	1	75	20	3	4	4	107
15:15 - 15:30	0	0	38	5	0	0	0	43	0	0	103	19	5	0	2	128
15:30 - 15:45	0	0	42	3	0	0	1	46	1	0	117	17	4	0	0	138
15:45 - 16:00	0	0	47	4	1	0	0	52	0	0	124	17	3	1	0	145
Hourly Total	0	0	157	22	2	0	3	184	1	1	419	73	15	8	6	529
16:00 - 16:15	0	0	47	5	3	0	0	55	2	2	104	7	3	0	2	120
16:15 - 16:30	0	0	44	3	0	0	1	48	0	2	112	18	4	0	1	137
16:30 - 16:45	0	1	43	6	0	0	0	50	0	3	103	13	2	0	1	122
16:45 - 17:00	0	0	40	6	0	0	1	47	1	3	104	12	2	0	0	122
Hourly Total	0	1	174	20	3	0	2	200	3	10	423	50	11	0	4	501
17:00 - 17:15	0	0	40	4	1	0	0	45	0	1	70	8	1	0	0	80
17:15 - 17:30	0	1	48	8	0	0	0	57	1	2	110	14	0	0	1	128
17:30 - 17:45	0	0	35	2	0	0	0	37	0	1	147	8	3	0	0	159
17:45 - 18:00	0	0	35	4	0	0	0	39	0	0	134	7	1	0	0	142
Hourly Total	0	1	168	18	1	0	0	176	1	4	461	37	5	0	1	509
18:00 - 18:15	0	0	25	4	1	0	0	30	1	1	163	7	4	1	0	177
18:15 - 18:30	0	0	35	1	1	0	0	37	0	0	129	8	2	0	1	140
18:30 - 18:45	0	0	35	2	0	0	0	37	0	0	127	4	1	0	0	132
18:45 - 19:00	0	0	45	3	0	0	0	48	0	2	122	10	2	1	0	137
Hourly Total	0	0	140	10	2	0	0	152	1	3	541	29	9	2	1	586
Session Total	0	2	629	70	8	0	5	714	6	18	1844	189	40	7	12	2116

TIME	From A								To A							
	PICYCLE	MICYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PICYCLE	MICYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
07:00 - 07:15	1	0	193	19	7	0	0	220	2	1	119	22	4	5	1	164
07:15 - 07:30	2	1	181	12	2	2	0	200	2	2	123	44	6	0	2	179
07:30 - 07:45	1	2	201	11	2	2	1	220	1	2	157	19	2	2	2	185
07:45 - 08:00	1	0	182	14	3	2	0	202	0	1	131	14	11	3	4	164
Hourly Total	5	3	757	56	14	6	1	842	5	6	530	99	23	10	9	662
08:00 - 08:15	2	0	147	8	6	3	1	167	0	2	101	16	3	4	4	130
08:15 - 08:30	1	2	204	10	2	2	1	222	1	1	91	21	6	1	1	122
08:30 - 08:45	1	0	194	12	7	2	0	216	0	0	91	21	9	2	0	123
08:45 - 09:00	0	0	183	16	6	5	0	210	0	1	114	22	9	2	1	149
Hourly Total	4	2	728	46	21	12	2	815	1	4	397	60	27	9	6	504
09:00 - 09:15	0	1	177	19	10	4	2	213	0	0	119	24	4	1	0	148
09:15 - 09:30	0	0	181	11	6	1	0	199	0	1	108	23	3	4	0	139
09:30 - 09:45	0	0	139	20	6	2	2	169	2	3	108	20	10	5	2	160
09:45 - 10:00	0	1	131	21	4	6	1	164	1	2	111	23	6	2	1	148
Hourly Total	0	2	628	71	26	13	5	745	3	6	446	90	28	12	3	585
Session Total	9	7	2113	173	61	31	8	2402	9	16	1373	269	75	31	18	1791
15:00 - 15:15	0	1	123	30	6	4	6	170	0	1	88	10	2	0	1	192
15:15 - 15:30	0	0	161	24	7	0	3	195	0	2	129	8	5	1	0	145
15:30 - 15:45	1	0	184	22	4	0	1	212	0	0	163	11	3	2	0	179
15:45 - 16:00	0	0	193	22	5	1	0	221	1	2	157	12	4	2	1	178
Hourly Total	1	1	661	98	22	5	10	798	1	5	537	41	14	5	2	605
16:00 - 16:15	2	2	173	16	6	0	2	201	0	1	144	15	1	0	1	162
16:15 - 16:30	0	2	167	23	4	0	2	198	0	1	162	23	3	0	0	189
16:30 - 16:45	0	4	157	19	2	0	1	183	1	0	130	8	2	1	0	142
16:45 - 17:00	1	3	160	19	3	0	1	187	0	2	158	11	3	0	0	174
Hourly Total	3	11	667	77	15	0	6	769	1	4	594	57	9	1	1	667
17:00 - 17:15	0	1	123	12	2	1	0	139	2	2	160	11	0	1	0	176
17:15 - 17:30	1	3	174	25	0	0	1	204	0	2	174	9	2	2	1	190
17:30 - 17:45	1	1	208	11	4	0	0	225	0	0	189	9	4	0	0	202
17:45 - 18:00	0	0	185	13	2	1	0	201	2	4	179	11	2	3	0	201
Hourly Total	2	5	690	61	8	2	1	769	4	8	702	40	8	6	1	769
18:00 - 18:15	1	1	214	14	5	1	0	236	2	1	157	7	1	0	1	169
18:15 - 18:30	0	0	184	12	3	0	1	200	0	0	175	10	0	0	0	185
18:30 - 18:45	0	0	184	8	1	0	0	193	0	1	144	6	2	1	0	154
18:45 - 19:00	0	2	192	15	2	1	0	212	0	0	137	10	0	1	0	148
Hourly Total	1	3	774	49	11	2	1	841	2	2	613	33	3	2	1	656
Session Total	7	20	2782	285	86	9	18	3177	8	19	2446	171	34	14	5	2697



Bradford - Manual Traffic Survey: Thursday, 23 March 2017

Produced by Streetwise Services Ltd.

Junction: A - A658 Harrogate Road North / B - A657 New Line East / C - A658 Harrogate Road South / D - A657 New Line West

Approach: B - A657 New Line East

TIME	B to C								B to D							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
07:00 - 07:15	0	0	15	1	1	0	1	18	0	0	93	12	3	1	2	111
07:15 - 07:30	0	0	20	0	1	0	0	21	0	0	118	17	3	3	0	141
07:30 - 07:45	0	0	17	4	0	1	0	22	2	1	96	13	3	2	2	119
07:45 - 08:00	0	0	10	1	0	0	1	12	0	0	114	11	2	0	1	128
Hourly Total	0	0	62	6	2	1	2	73	2	1	421	53	11	6	5	499
08:00 - 08:15	0	0	14	2	1	1	0	18	0	0	104	19	3	2	2	130
08:15 - 08:30	0	0	19	2	1	0	2	24	0	0	105	7	4	0	1	117
08:30 - 08:45	0	0	25	1	0	0	0	26	1	1	88	9	6	0	0	105
08:45 - 09:00	0	0	18	3	0	0	1	22	1	1	92	16	2	0	1	113
Hourly Total	0	0	76	8	2	1	3	90	2	2	389	51	15	2	4	465
09:00 - 09:15	0	0	21	2	0	0	0	23	0	0	95	14	5	1	0	115
09:15 - 09:30	0	0	29	5	2	0	0	36	0	1	74	6	7	1	1	90
09:30 - 09:45	0	0	26	2	2	0	0	30	0	0	65	11	3	3	1	83
09:45 - 10:00	0	0	25	4	5	0	0	34	0	0	67	7	2	0	1	77
Hourly Total	0	0	101	13	9	0	0	123	0	1	301	38	17	5	3	365
Session Total	0	0	239	27	13	2	5	286	4	4	1111	142	43	13	12	1329
15:00 - 15:15	0	0	13	4	2	1	0	20	0	1	94	12	1	2	1	111
15:15 - 15:30	0	0	22	6	1	1	1	31	0	0	70	12	2	1	0	85
15:30 - 15:45	0	0	23	3	0	0	0	26	0	0	94	16	5	1	1	117
15:45 - 16:00	0	1	17	2	0	0	0	20	0	0	105	10	3	0	0	118
Hourly Total	0	1	75	15	3	2	1	97	0	1	383	50	11	4	2	431
16:00 - 16:15	0	0	21	1	0	0	1	23	0	1	105	15	0	1	0	122
16:15 - 16:30	0	0	14	6	0	0	0	20	0	1	112	11	3	0	1	128
16:30 - 16:45	0	0	20	2	0	0	0	22	0	0	118	15	4	2	0	139
16:45 - 17:00	0	0	20	2	0	0	0	22	0	1	125	9	2	3	1	141
Hourly Total	0	0	78	11	0	0	1	87	0	3	460	50	9	6	2	530
17:00 - 17:15	1	0	14	1	0	0	0	16	0	3	137	15	3	0	0	158
17:15 - 17:30	0	0	24	1	0	0	1	26	0	2	125	17	1	0	2	147
17:30 - 17:45	0	0	11	3	0	0	0	14	0	1	115	7	1	1	0	128
17:45 - 18:00	0	0	19	3	0	0	1	23	1	2	124	5	1	0	1	134
Hourly Total	1	0	68	8	0	0	2	79	1	8	501	44	6	1	3	564
18:00 - 18:15	0	0	15	1	0	1	0	17	0	0	77	5	0	0	1	83
18:15 - 18:30	0	0	21	2	1	0	0	24	0	0	114	9	0	0	2	126
18:30 - 18:45	0	0	22	3	0	0	1	26	0	0	129	7	0	0	1	137
18:45 - 19:00	0	0	22	1	0	0	1	24	1	0	90	12	1	0	1	105
Hourly Total	0	0	80	7	1	1	2	91	1	0	410	33	1	0	5	450
Session Total	1	1	298	41	4	3	6	354	2	12	1734	177	27	11	12	1975

TIME	From B								To B							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
07:00 - 07:15	0	0	120	15	4	2	3	144	3	1	150	28	5	1	3	191
07:15 - 07:30	1	0	154	25	4	3	0	187	4	3	201	18	3	0	2	231
07:30 - 07:45	2	1	134	22	3	4	2	168	0	2	171	24	3	0	0	200
07:45 - 08:00	0	0	146	12	4	0	4	166	1	2	175	26	2	0	1	207
Hourly Total	3	1	554	74	15	9	9	665	8	8	697	96	13	1	6	829
08:00 - 08:15	0	0	145	26	4	4	4	183	1	0	164	21	4	3	0	193
08:15 - 08:30	0	0	148	14	7	0	3	172	1	2	159	20	2	1	1	186
08:30 - 08:45	1	1	127	14	8	1	0	152	0	1	178	13	5	1	1	199
08:45 - 09:00	1	1	133	24	4	0	2	165	0	0	128	11	4	0	3	146
Hourly Total	2	2	583	78	23	5	9	672	2	3	629	65	15	5	5	724
09:00 - 09:15	0	0	150	20	6	1	0	177	0	0	135	14	6	1	1	157
09:15 - 09:30	0	2	126	19	10	2	1	160	0	0	153	13	6	3	2	177
09:30 - 09:45	0	0	114	16	6	5	2	143	0	0	109	14	8	1	0	132
09:45 - 10:00	0	0	115	17	8	0	1	141	0	0	116	19	11	3	0	148
Hourly Total	0	2	505	72	30	8	4	621	0	0	513	60	31	8	3	615
Session Total	5	5	1612	224	68	22	22	1958	10	11	1839	221	59	14	14	2168
15:00 - 15:15	0	1	121	20	3	3	1	149	0	0	131	26	8	2	3	179
15:15 - 15:30	0	0	121	21	5	2	1	150	1	0	172	16	6	1	1	197
15:30 - 15:45	0	0	182	20	6	1	1	190	0	1	136	24	2	1	3	167
15:45 - 16:00	0	1	145	14	3	0	0	163	0	2	147	27	3	1	2	182
Hourly Total	0	2	549	75	17	6	3	652	1	3	586	93	19	5	9	716
16:00 - 16:15	0	1	153	17	0	1	1	173	0	2	165	28	9	0	2	206
16:15 - 16:30	0	1	156	23	3	0	1	184	1	2	174	18	2	0	3	200
16:30 - 16:45	0	0	169	18	4	2	0	193	1	2	187	25	5	0	1	221
16:45 - 17:00	0	1	175	13	3	3	1	196	0	1	188	29	3	0	1	222
Hourly Total	0	3	653	71	16	6	3	746	2	7	714	100	19	0	7	848
17:00 - 17:15	1	3	190	18	3	0	0	215	0	0	179	19	5	0	1	204
17:15 - 17:30	0	2	179	18	2	0	3	204	1	1	153	23	3	1	1	183
17:30 - 17:45	0	1	157	10	2	1	0	171	1	0	171	6	2	0	1	181
17:45 - 18:00	1	6	183	11	1	0	2	204	0	2	158	9	2	0	1	172
Hourly Total	2	12	709	57	8	1	5	794	2	3	661	57	12	1	4	740
18:00 - 18:15	0	0	115	9	0	1	1	126	0	0	158	12	2	1	1	174
18:15 - 18:30	0	0	165	15	1	0	2	183	1	0	181	9	2	0	1	194
18:30 - 18:45	0	0	194	11	0	0	2	207	0	0	133	7	0	1	1	142
18:45 - 19:00	1	0	147	16	1	0	2	167	0	1	157	11	0	1	2	172
Hourly Total	1	0	621	51	2	1	7	683	1	1	629	39	4	3	5	682
Session Total	3	17	2532	254	37	14	18	2875	6	14	2590	289	54	9	25	2987



Eastford - Manual Traffic Survey Thursday, 23 March 2017
 Produced by Neithson Services Ltd

Junction: A - A628 Harrogate Road North / B - A627 New Line East / C - A628 Harrogate Road South / D - A627 New Line West

Approach: C - A628 Harrogate Road South

TIME	E-W						W-E					
	PEDS	BICYC	CAR	LOR	OVN	OVN	PEDS	BICYC	CAR	LOR	OVN	OVN
07:00-07:15	1	0	11	2	1	0	1	0	10	2	1	0
07:15-07:30	0	0	10	1	0	0	1	0	10	0	0	0
07:30-07:45	0	0	11	1	0	0	1	0	10	0	0	0
07:45-08:00	0	0	10	0	0	0	1	0	10	0	0	0
08:00-08:15	0	0	10	0	0	0	1	0	10	0	0	0
08:15-08:30	0	0	10	0	0	0	1	0	10	0	0	0
08:30-08:45	0	0	10	0	0	0	1	0	10	0	0	0
08:45-09:00	0	0	10	0	0	0	1	0	10	0	0	0
09:00-09:15	0	0	10	0	0	0	1	0	10	0	0	0
09:15-09:30	0	0	10	0	0	0	1	0	10	0	0	0
09:30-09:45	0	0	10	0	0	0	1	0	10	0	0	0
09:45-10:00	0	0	10	0	0	0	1	0	10	0	0	0
10:00-10:15	0	0	10	0	0	0	1	0	10	0	0	0
10:15-10:30	0	0	10	0	0	0	1	0	10	0	0	0
10:30-10:45	0	0	10	0	0	0	1	0	10	0	0	0
10:45-11:00	0	0	10	0	0	0	1	0	10	0	0	0
11:00-11:15	0	0	10	0	0	0	1	0	10	0	0	0
11:15-11:30	0	0	10	0	0	0	1	0	10	0	0	0
11:30-11:45	0	0	10	0	0	0	1	0	10	0	0	0
11:45-12:00	0	0	10	0	0	0	1	0	10	0	0	0
12:00-12:15	0	0	10	0	0	0	1	0	10	0	0	0
12:15-12:30	0	0	10	0	0	0	1	0	10	0	0	0
12:30-12:45	0	0	10	0	0	0	1	0	10	0	0	0
12:45-13:00	0	0	10	0	0	0	1	0	10	0	0	0
13:00-13:15	0	0	10	0	0	0	1	0	10	0	0	0
13:15-13:30	0	0	10	0	0	0	1	0	10	0	0	0
13:30-13:45	0	0	10	0	0	0	1	0	10	0	0	0
13:45-14:00	0	0	10	0	0	0	1	0	10	0	0	0
14:00-14:15	0	0	10	0	0	0	1	0	10	0	0	0
14:15-14:30	0	0	10	0	0	0	1	0	10	0	0	0
14:30-14:45	0	0	10	0	0	0	1	0	10	0	0	0
14:45-15:00	0	0	10	0	0	0	1	0	10	0	0	0
15:00-15:15	0	0	10	0	0	0	1	0	10	0	0	0
15:15-15:30	0	0	10	0	0	0	1	0	10	0	0	0
15:30-15:45	0	0	10	0	0	0	1	0	10	0	0	0
15:45-16:00	0	0	10	0	0	0	1	0	10	0	0	0
16:00-16:15	0	0	10	0	0	0	1	0	10	0	0	0
16:15-16:30	0	0	10	0	0	0	1	0	10	0	0	0
16:30-16:45	0	0	10	0	0	0	1	0	10	0	0	0
16:45-17:00	0	0	10	0	0	0	1	0	10	0	0	0
17:00-17:15	0	0	10	0	0	0	1	0	10	0	0	0
17:15-17:30	0	0	10	0	0	0	1	0	10	0	0	0
17:30-17:45	0	0	10	0	0	0	1	0	10	0	0	0
17:45-18:00	0	0	10	0	0	0	1	0	10	0	0	0
18:00-18:15	0	0	10	0	0	0	1	0	10	0	0	0
18:15-18:30	0	0	10	0	0	0	1	0	10	0	0	0
18:30-18:45	0	0	10	0	0	0	1	0	10	0	0	0
18:45-19:00	0	0	10	0	0	0	1	0	10	0	0	0
19:00-19:15	0	0	10	0	0	0	1	0	10	0	0	0
19:15-19:30	0	0	10	0	0	0	1	0	10	0	0	0
19:30-19:45	0	0	10	0	0	0	1	0	10	0	0	0
19:45-20:00	0	0	10	0	0	0	1	0	10	0	0	0
20:00-20:15	0	0	10	0	0	0	1	0	10	0	0	0
20:15-20:30	0	0	10	0	0	0	1	0	10	0	0	0
20:30-20:45	0	0	10	0	0	0	1	0	10	0	0	0
20:45-21:00	0	0	10	0	0	0	1	0	10	0	0	0
21:00-21:15	0	0	10	0	0	0	1	0	10	0	0	0
21:15-21:30	0	0	10	0	0	0	1	0	10	0	0	0
21:30-21:45	0	0	10	0	0	0	1	0	10	0	0	0
21:45-22:00	0	0	10	0	0	0	1	0	10	0	0	0
22:00-22:15	0	0	10	0	0	0	1	0	10	0	0	0
22:15-22:30	0	0	10	0	0	0	1	0	10	0	0	0
22:30-22:45	0	0	10	0	0	0	1	0	10	0	0	0
22:45-23:00	0	0	10	0	0	0	1	0	10	0	0	0
23:00-23:15	0	0	10	0	0	0	1	0	10	0	0	0
23:15-23:30	0	0	10	0	0	0	1	0	10	0	0	0
23:30-23:45	0	0	10	0	0	0	1	0	10	0	0	0
23:45-00:00	0	0	10	0	0	0	1	0	10	0	0	0



Bradford - Manual Traffic Survey: Thursday, 23 March 2017

Produced by Streetwise Services Ltd.

Junction: A - A658 Harrogate Road North / B - A657 New Line East / C - A658 Harrogate Road South / D - A657 New Line West

Approach: D - A657 New Line West

TIME	D to A								D to B							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
07:00 - 07:15	0	0	0	0	1	1	1	3	2	1	110	18	2	0	2	133
07:15 - 07:30	0	0	2	0	0	0	0	2	4	3	145	16	2	0	1	171
07:30 - 07:45	0	0	2	0	0	0	1	3	0	1	117	16	3	0	0	137
07:45 - 08:00	0	0	2	0	0	0	1	3	1	2	123	19	1	0	1	147
Hourly Total	0	0	6	0	1	1	3	11	7	7	495	69	8	0	4	590
08:00 - 08:15	0	0	1	0	1	1	1	4	1	0	124	17	3	2	0	147
08:15 - 08:30	0	0	2	0	1	0	1	4	1	2	95	13	2	0	0	113
08:30 - 08:45	0	0	4	0	1	0	0	5	0	1	103	12	3	1	1	121
08:45 - 09:00	0	0	8	3	2	0	0	13	0	0	85	7	4	0	3	99
Hourly Total	0	0	15	3	5	1	2	26	2	3	407	49	12	3	4	480
09:00 - 09:15	0	0	2	0	0	1	0	3	0	0	79	6	4	1	0	90
09:15 - 09:30	0	0	4	1	0	1	0	6	0	0	92	9	5	3	1	110
09:30 - 09:45	0	0	5	2	1	1	0	9	0	0	67	11	6	1	0	85
09:45 - 10:00	0	0	10	2	0	0	0	12	0	0	66	13	9	0	0	88
Hourly Total	0	0	21	5	1	3	0	30	0	0	304	39	24	5	1	373
Session Total	0	0	42	8	7	5	5	67	9	10	1206	157	44	8	9	1443
15:00 - 15:15	0	0	9	1	0	0	0	10	0	0	82	15	6	2	1	106
15:15 - 15:30	0	0	4	0	0	0	0	4	1	0	109	9	6	1	1	127
15:30 - 15:45	0	0	6	1	0	0	0	7	0	1	75	17	2	1	2	98
15:45 - 16:00	0	0	6	0	0	0	0	6	0	1	82	21	2	1	2	109
Hourly Total	0	0	25	2	0	0	0	27	1	2	348	62	16	5	6	440
16:00 - 16:15	0	0	5	0	0	0	0	5	0	2	101	19	5	0	2	129
16:15 - 16:30	0	1	4	2	1	0	0	8	1	1	109	13	2	0	1	127
16:30 - 16:45	0	0	5	1	0	0	0	6	1	1	126	17	4	0	1	150
16:45 - 17:00	0	1	5	2	0	0	0	8	0	1	134	20	3	0	0	155
Hourly Total	0	2	19	5	1	0	0	27	2	5	470	69	14	0	4	564
17:00 - 17:15	0	0	5	0	0	0	0	5	0	0	129	15	3	0	1	145
17:15 - 17:30	0	0	10	1	0	0	0	11	1	0	94	12	3	1	0	111
17:30 - 17:45	0	0	7	1	0	0	0	8	0	0	123	4	2	0	1	130
17:45 - 18:00	0	0	6	1	1	1	1	9	0	2	109	3	2	0	0	116
Hourly Total	0	0	28	3	1	1	0	33	1	2	455	34	10	1	2	505
18:00 - 18:15	0	0	6	0	0	0	0	6	0	0	115	7	1	1	1	125
18:15 - 18:30	0	0	3	1	0	0	0	4	1	0	121	6	1	0	0	129
18:30 - 18:45	0	0	4	2	1	0	0	7	0	0	76	5	0	1	0	82
18:45 - 19:00	0	0	9	0	0	0	0	9	0	1	91	5	0	0	2	99
Hourly Total	0	0	22	3	1	0	0	26	1	1	403	23	2	2	3	435
Session Total	0	2	94	13	3	1	0	113	5	10	1676	188	42	8	15	1944

TIME	From D								To D							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
07:00 - 07:15	2	1	118	18	4	1	4	148	1	0	120	17	5	1	2	146
07:15 - 07:30	4	3	166	16	2	0	1	182	0	0	142	19	3	4	0	168
07:30 - 07:45	0	1	127	17	3	0	1	149	2	2	133	18	3	2	2	162
07:45 - 08:00	1	3	135	20	1	0	2	162	0	0	153	15	2	0	2	172
Hourly Total	7	8	536	71	10	1	8	641	3	2	548	69	13	7	6	648
08:00 - 08:15	1	0	137	18	5	3	2	166	0	0	133	22	3	4	2	164
08:15 - 08:30	1	2	118	14	3	1	1	140	0	1	147	9	4	2	1	164
08:30 - 08:45	0	1	125	13	4	1	1	145	1	1	134	11	9	1	0	157
08:45 - 09:00	1	0	111	12	6	0	3	133	1	1	146	22	2	2	1	175
Hourly Total	3	3	491	57	18	5	7	584	2	3	560	64	18	9	4	660
09:00 - 09:15	0	0	101	6	4	3	0	114	0	0	136	23	9	2	0	170
09:15 - 09:30	0	0	112	11	7	4	1	135	0	1	112	10	7	1	1	132
09:30 - 09:45	0	0	89	15	7	4	0	115	0	0	113	19	5	5	2	144
09:45 - 10:00	0	0	104	18	12	0	0	134	0	0	103	15	5	0	1	124
Hourly Total	0	0	406	50	30	11	1	498	0	1	464	67	26	8	4	570
Session Total	10	11	1433	178	68	17	16	1723	5	6	1572	200	57	24	14	1878
15:00 - 15:15	0	0	112	18	10	2	1	143	0	1	138	16	3	2	1	161
15:15 - 15:30	1	0	136	12	7	1	1	158	0	0	117	15	5	1	1	139
15:30 - 15:45	0	1	105	19	2	1	2	130	0	0	144	18	8	1	1	172
15:45 - 16:00	0	1	105	23	3	1	2	135	0	0	155	12	4	0	1	172
Hourly Total	1	2	458	72	22	5	6	566	0	1	554	61	20	4	4	644
16:00 - 16:15	0	2	130	21	7	0	2	162	0	1	146	20	1	1	0	169
16:15 - 16:30	1	2	137	16	4	0	1	161	0	1	136	13	3	0	1	154
16:30 - 16:45	1	1	154	19	4	0	1	180	0	0	141	16	4	2	0	163
16:45 - 17:00	0	2	163	24	5	0	0	194	0	1	158	14	4	3	1	191
Hourly Total	2	7	584	80	28	0	4	697	0	3	551	63	12	6	2	657
17:00 - 17:15	0	0	158	16	4	0	1	179	0	3	162	16	4	1	0	196
17:15 - 17:30	1	0	130	13	3	1	0	148	0	2	156	22	1	0	2	183
17:30 - 17:45	0	0	150	5	2	0	1	158	1	1	155	9	3	1	0	170
17:45 - 18:00	0	2	134	7	3	1	0	147	1	2	158	8	2	1	1	173
Hourly Total	1	2	572	41	12	2	2	632	2	6	631	55	10	3	3	712
18:00 - 18:15	0	0	145	8	1	1	1	156	0	0	124	9	0	0	1	134
18:15 - 18:30	1	0	146	8	1	0	0	156	0	0	149	14	1	0	2	166
18:30 - 18:45	0	0	101	9	1	1	0	112	0	0	170	10	0	0	1	181
18:45 - 19:00	0	1	126	6	0	0	2	135	1	0	139	15	1	0	1	157
Hourly Total	1	1	518	31	3	2	3	559	1	0	582	48	2	0	5	638
Session Total	5	12	2132	224	67	9	16	2454	3	12	2348	227	44	13	14	2661



Bradford - Manual Traffic Survey: Saturday, 25 March 2017

Produced by Streetwise Services Ltd.

Junction: A - A658 Harrogate Road North / B - A657 New Line East / C - A658 Harrogate Road South / D - A657 New Line West

Approach: A - A658 Harrogate Road North

TIME	A to B								A to C							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
10:00 - 10:15	0	0	43	0	0	0	0	43	0	0	90	8	2	1	1	102
10:15 - 10:30	0	0	35	6	0	0	0	41	1	0	92	4	1	2	0	100
10:30 - 10:45	1	0	32	1	1	0	1	36	0	2	116	6	2	0	0	126
10:45 - 11:00	0	0	30	3	2	0	0	35	1	0	121	7	1	1	1	132
Hourly Total	1	0	140	10	3	0	1	155	2	2	419	25	6	4	2	460
11:00 - 11:15	0	0	31	2	0	0	0	33	0	1	77	7	2	0	0	87
11:15 - 11:30	0	0	45	2	0	0	0	47	1	0	111	9	2	0	0	123
11:30 - 11:45	0	0	33	9	0	0	0	42	0	0	111	8	1	0	0	120
11:45 - 12:00	0	0	34	0	0	0	0	34	0	1	108	8	4	0	1	122
Hourly Total	0	0	143	13	0	0	0	156	1	2	407	32	9	0	1	452
12:00 - 12:15	0	0	29	4	2	0	0	35	0	3	112	11	4	2	1	133
12:15 - 12:30	1	0	27	0	0	0	0	28	0	3	127	6	3	0	0	139
12:30 - 12:45	0	0	34	3	0	0	0	37	1	3	117	9	3	0	0	133
12:45 - 13:00	1	1	35	2	1	0	0	40	0	1	107	9	2	0	0	119
Hourly Total	2	1	128	9	3	0	0	140	1	10	463	35	12	2	1	524
13:00 - 13:15	0	2	32	1	0	0	0	35	1	0	111	3	1	2	1	119
13:15 - 13:30	0	1	34	1	2	0	0	38	0	1	132	14	2	0	0	149
13:30 - 13:45	0	0	32	1	0	0	0	33	0	4	138	13	3	1	0	159
13:45 - 14:00	0	3	28	1	0	0	0	32	0	2	102	11	0	1	0	116
Hourly Total	0	6	126	4	2	0	0	138	1	7	483	41	6	4	1	543
Session Total	3	7	534	36	8	0	1	589	5	21	1772	133	33	10	5	1979

TIME	From A								To A							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
10:00 - 10:15	0	0	151	12	2	1	1	167	2	3	156	16	4	0	1	182
10:15 - 10:30	1	1	145	13	2	2	0	164	0	0	146	13	3	0	0	162
10:30 - 10:45	1	2	177	10	3	0	1	194	1	1	137	12	3	1	0	155
10:45 - 11:00	1	1	176	12	4	2	1	197	1	5	127	8	0	0	1	142
Hourly Total	3	4	649	47	11	5	3	722	4	9	566	49	10	1	2	641
11:00 - 11:15	0	2	130	10	3	0	0	145	1	4	144	7	1	2	0	159
11:15 - 11:30	1	0	176	17	2	0	0	196	0	2	108	5	1	1	0	117
11:30 - 11:45	0	0	170	18	2	0	0	190	7	4	106	4	1	0	0	122
11:45 - 12:00	0	1	167	8	4	0	1	181	1	4	127	7	1	0	0	140
Hourly Total	1	3	643	53	11	0	1	712	9	14	485	23	4	3	0	538
12:00 - 12:15	0	3	173	15	7	2	1	201	2	5	97	2	1	1	0	108
12:15 - 12:30	2	3	189	6	3	0	0	203	0	1	96	5	0	1	1	104
12:30 - 12:45	1	3	169	17	3	0	0	193	1	2	109	6	1	0	0	119
12:45 - 13:00	1	2	161	12	3	0	0	179	0	3	131	3	0	1	0	138
Hourly Total	4	11	692	50	16	2	1	776	3	11	433	16	2	3	1	469
13:00 - 13:15	4	2	173	7	1	3	1	191	0	4	118	2	1	0	0	125
13:15 - 13:30	0	3	196	18	4	0	0	221	1	12	133	3	3	1	1	154
13:30 - 13:45	0	4	201	15	3	1	0	224	1	10	140	7	2	0	0	160
13:45 - 14:00	0	5	156	14	0	1	0	176	0	3	122	6	1	0	0	132
Hourly Total	4	14	726	54	8	5	1	812	2	29	513	18	7	1	1	571
Session Total	12	32	2710	204	46	12	6	3022	18	63	1997	106	23	8	4	2219



Bradford - Manual Traffic Survey: Saturday, 25 March 2017

Produced by Streetwise Services Ltd.

Junction: **A - A658 Harrogate Road North / B - A657 New Line East / C - A658 Harrogate Road South / D - A657 New Line West**

Approach: **B - A657 New Line East**

TIME	B to C								B to D							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
10:00 - 10:15	0	0	17	1	3	0	1	22	0	0	86	6	1	0	0	93
10:15 - 10:30	0	0	28	1	0	0	0	29	0	2	111	10	2	0	2	127
10:30 - 10:45	0	0	28	2	0	0	0	30	0	1	89	12	0	0	0	102
10:45 - 11:00	0	1	40	7	1	0	0	49	0	0	100	7	0	0	1	108
Hourly Total	0	1	113	11	4	0	1	130	0	3	386	35	3	0	3	430
11:00 - 11:15	0	0	50	4	1	0	2	57	1	0	94	7	0	0	0	102
11:15 - 11:30	0	0	58	5	5	0	1	69	0	0	64	7	1	0	1	73
11:30 - 11:45	0	1	59	4	5	0	2	71	1	3	75	3	1	0	0	83
11:45 - 12:00	0	0	56	3	3	0	3	65	1	0	85	5	2	0	0	93
Hourly Total	0	1	223	16	14	0	8	262	3	3	318	22	4	0	1	351
12:00 - 12:15	0	1	40	8	1	1	0	51	0	3	76	6	1	0	1	87
12:15 - 12:30	0	2	48	5	0	0	3	58	0	0	85	9	2	0	0	96
12:30 - 12:45	0	0	64	4	2	0	2	72	1	2	69	5	1	0	0	78
12:45 - 13:00	0	0	55	8	1	0	1	65	0	1	95	4	1	0	0	101
Hourly Total	0	3	207	25	4	1	6	246	1	6	325	24	5	0	1	362
13:00 - 13:15	0	3	50	4	0	0	1	58	0	2	78	6	1	0	1	88
13:15 - 13:30	0	0	46	7	2	0	1	56	1	1	63	3	1	0	1	70
13:30 - 13:45	0	1	48	5	2	0	0	56	1	3	78	4	0	0	0	86
13:45 - 14:00	0	1	58	4	0	0	1	64	0	2	96	2	0	0	0	100
Hourly Total	0	5	202	20	4	0	3	234	2	8	315	15	2	0	2	344
Session Total	0	10	745	72	26	1	18	872	6	20	1344	96	14	0	7	1487

TIME	From B								To B							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
10:00 - 10:15	0	0	140	10	4	0	1	155	1	0	158	5	1	0	1	166
10:15 - 10:30	0	2	180	15	2	0	2	201	0	1	165	12	2	1	0	181
10:30 - 10:45	0	1	146	17	1	0	0	165	1	0	151	12	1	0	2	167
10:45 - 11:00	0	2	188	16	1	0	1	208	0	0	157	15	5	0	0	177
Hourly Total	0	5	654	58	8	0	4	729	2	1	631	44	9	1	3	691
11:00 - 11:15	1	0	179	12	1	0	2	195	0	0	193	7	2	0	2	204
11:15 - 11:30	0	0	154	12	6	0	2	174	2	4	159	9	1	1	2	178
11:30 - 11:45	1	4	165	7	6	0	2	185	2	2	176	24	2	0	0	206
11:45 - 12:00	2	0	170	12	6	0	3	193	3	0	190	6	3	0	1	203
Hourly Total	4	4	688	43	19	0	9	747	7	6	718	46	8	1	5	791
12:00 - 12:15	0	4	153	15	2	1	1	176	1	6	150	11	5	0	3	176
12:15 - 12:30	0	2	170	15	2	0	3	192	2	0	156	12	0	0	1	171
12:30 - 12:45	1	2	160	9	3	0	2	177	0	2	174	10	2	0	3	191
12:45 - 13:00	0	2	177	13	2	0	1	195	1	8	199	9	1	0	0	218
Hourly Total	1	10	660	52	9	1	7	740	4	16	679	42	8	0	7	756
13:00 - 13:15	0	6	163	10	1	0	2	182	1	2	174	17	4	0	3	201
13:15 - 13:30	1	2	142	10	4	0	2	161	0	7	148	7	6	0	4	172
13:30 - 13:45	1	4	155	11	3	0	0	174	0	4	159	11	0	0	2	176
13:45 - 14:00	0	3	190	7	0	0	1	201	0	7	159	14	1	0	1	182
Hourly Total	2	15	650	38	8	0	5	718	1	20	640	49	11	0	10	731
Session Total	7	34	2632	191	44	1	25	2934	14	43	2668	181	36	2	25	2969



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Produced by Streetwise Services Ltd.

Junction: A - A658 Harrogate Road North / B - A657 New Line East / C - A658 Harrogate Road South / D - A657 New Line West

Approach: C - A658 Harrogate Road South

TIME	C to D								C to A							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
10:00 - 10:15	0	0	25	3	1	0	0	29	2	3	109	12	3	0	1	130
10:15 - 10:30	0	0	22	3	0	0	0	25	0	0	103	8	2	0	0	113
10:30 - 10:45	0	1	23	1	0	0	0	25	1	1	103	9	2	1	0	117
10:45 - 11:00	0	0	20	1	1	0	0	22	1	4	71	6	0	0	1	83
Hourly Total	0	1	90	8	2	0	0	101	4	8	386	35	7	1	2	443
11:00 - 11:15	0	0	10	0	1	0	0	11	1	4	92	6	1	2	0	106
11:15 - 11:30	0	0	12	1	0	0	0	13	0	2	72	5	0	1	0	80
11:30 - 11:45	0	2	18	0	0	0	0	20	7	4	58	4	1	0	0	74
11:45 - 12:00	0	1	4	0	0	0	0	5	0	4	91	2	0	0	0	97
Hourly Total	0	3	44	1	1	0	0	49	8	14	313	17	2	3	0	357
12:00 - 12:15	0	0	6	1	0	0	0	7	2	5	47	1	0	1	0	56
12:15 - 12:30	1	0	8	0	0	0	0	9	0	1	45	3	0	1	1	51
12:30 - 12:45	0	0	10	1	0	0	0	11	1	2	71	5	1	0	0	80
12:45 - 13:00	0	2	16	2	1	0	0	21	0	2	92	2	0	1	0	97
Hourly Total	1	2	40	4	1	0	0	48	3	10	255	11	1	3	1	284
13:00 - 13:15	1	0	6	0	0	0	0	7	0	3	68	2	1	0	0	74
13:15 - 13:30	0	0	10	0	1	0	0	11	1	11	88	3	2	1	1	107
13:30 - 13:45	0	0	12	0	0	0	0	12	1	10	99	4	1	0	0	115
13:45 - 14:00	0	0	12	0	0	0	0	12	0	3	73	5	1	0	0	82
Hourly Total	1	0	40	0	1	0	0	42	2	27	328	14	5	1	1	378
Session Total	2	6	214	13	5	0	0	240	17	69	1282	77	15	8	4	1462

TIME	From C								To C							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
10:00 - 10:15	2	3	163	16	4	0	2	190	0	1	141	11	5	3	2	163
10:15 - 10:30	0	0	156	13	2	1	0	172	1	0	148	7	2	2	0	160
10:30 - 10:45	1	2	156	12	2	1	0	174	0	2	174	11	4	0	0	191
10:45 - 11:00	1	4	121	8	1	0	1	136	1	1	182	17	3	1	1	206
Hourly Total	4	9	596	49	9	2	3	672	2	4	645	46	14	6	3	720
11:00 - 11:15	1	4	134	7	2	2	1	151	0	1	161	13	3	0	2	180
11:15 - 11:30	0	4	108	7	0	2	1	122	1	0	196	14	7	1	1	220
11:30 - 11:45	7	6	109	6	1	0	0	129	0	1	193	13	7	0	2	216
11:45 - 12:00	0	5	126	2	1	0	1	135	0	1	193	12	7	0	4	217
Hourly Total	8	19	477	22	4	4	3	537	1	3	743	52	24	1	9	833
12:00 - 12:15	2	8	79	2	0	1	2	94	0	4	176	20	6	3	1	210
12:15 - 12:30	1	1	75	7	0	1	2	87	0	5	197	13	4	0	3	222
12:30 - 12:45	1	3	109	6	1	0	2	122	1	4	204	15	6	0	2	232
12:45 - 13:00	0	7	135	5	1	1	0	149	0	1	183	19	3	0	1	207
Hourly Total	4	19	398	20	2	3	6	452	1	14	760	67	19	3	7	871
13:00 - 13:15	1	3	107	3	2	0	2	118	1	3	187	8	2	2	2	205
13:15 - 13:30	1	15	119	3	4	1	5	148	0	1	208	22	4	0	1	236
13:30 - 13:45	1	11	145	6	1	0	1	165	0	5	213	19	5	1	0	243
13:45 - 14:00	0	6	113	7	2	0	1	129	0	4	188	15	0	1	1	209
Hourly Total	3	35	484	19	9	1	9	560	1	13	796	64	11	4	4	893
Session Total	19	82	1955	110	24	10	21	2221	5	34	2944	229	68	14	23	3317



Bradford - Manual Traffic Survey: Saturday, 25 March 2017

Produced by Streetwise Services Ltd.

Junction: A - A658 Harrogate Road North / B - A657 New Line East / C - A658 Harrogate Road South / D - A657 New Line West

Approach: D - A657 New Line West

TIME	D to A								D to B							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
10:00 - 10:15	0	0	10	1	1	0	0	12	1	0	86	4	1	0	0	92
10:15 - 10:30	0	0	2	1	1	0	0	4	0	1	99	4	2	0	0	106
10:30 - 10:45	0	0	5	0	0	0	0	5	0	0	89	9	0	0	1	99
10:45 - 11:00	0	0	8	0	0	0	0	8	0	0	97	11	3	0	0	111
Hourly Total	0	0	25	2	2	0	0	29	1	1	371	28	6	0	1	408
11:00 - 11:15	0	0	17	0	0	0	0	17	0	0	130	4	2	0	1	137
11:15 - 11:30	0	0	4	0	1	0	0	5	2	2	90	6	1	0	1	102
11:30 - 11:45	0	0	17	0	0	0	0	17	2	2	110	13	2	0	0	129
11:45 - 12:00	0	0	7	1	0	0	0	8	3	0	125	6	2	0	0	136
Hourly Total	0	0	45	1	1	0	0	47	7	4	455	29	7	0	2	504
12:00 - 12:15	0	0	13	0	1	0	0	14	1	3	95	7	3	0	1	110
12:15 - 12:30	0	0	14	1	0	0	0	15	1	0	107	8	0	0	0	116
12:30 - 12:45	0	0	11	1	0	0	0	12	0	1	112	7	2	0	1	123
12:45 - 13:00	0	0	12	0	0	0	0	12	0	4	137	6	0	0	0	147
Hourly Total	0	0	50	2	1	0	0	53	2	8	451	28	5	0	2	496
13:00 - 13:15	0	0	15	0	0	0	0	15	1	0	109	15	3	0	1	129
13:15 - 13:30	0	0	12	0	0	0	0	12	0	2	93	6	3	0	0	104
13:30 - 13:45	0	0	12	1	0	0	0	13	0	3	93	8	0	0	1	105
13:45 - 14:00	0	0	13	0	0	0	0	13	0	1	103	11	0	0	0	115
Hourly Total	0	0	52	1	0	0	0	53	1	6	398	40	6	0	2	453
Session Total	0	0	172	6	4	0	0	182	11	19	1675	128	24	0	7	1881

TIME	From D								To D							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
10:00 - 10:15	1	1	130	7	2	2	0	143	0	0	129	13	2	0	0	144
10:15 - 10:30	0	1	129	7	4	0	0	141	0	3	151	16	3	0	2	175
10:30 - 10:45	0	0	124	12	2	0	1	139	0	2	141	16	0	0	0	159
10:45 - 11:00	0	0	126	14	4	0	0	144	0	1	145	10	2	1	1	160
Hourly Total	1	2	509	40	12	2	1	567	0	6	566	55	7	1	3	638
11:00 - 11:15	0	0	181	6	2	0	1	190	1	1	126	8	2	0	0	138
11:15 - 11:30	2	2	121	6	2	1	1	135	0	0	96	14	1	0	1	112
11:30 - 11:45	2	2	150	14	3	0	0	171	1	5	119	4	2	0	0	131
11:45 - 12:00	3	0	161	8	2	0	0	174	1	1	114	5	2	0	0	123
Hourly Total	7	4	613	34	9	1	2	670	3	7	455	31	7	0	1	504
12:00 - 12:15	1	3	132	8	5	0	1	150	0	3	114	7	2	0	1	127
12:15 - 12:30	1	0	143	11	1	0	0	156	2	0	128	9	2	0	0	141
12:30 - 12:45	0	2	146	10	3	0	1	162	1	2	97	11	1	0	0	112
12:45 - 13:00	0	4	170	8	0	0	0	182	0	3	130	7	2	0	0	142
Hourly Total	2	9	591	37	9	0	2	650	3	8	469	34	7	0	1	522
13:00 - 13:15	1	0	150	16	4	0	1	172	4	2	114	9	1	1	1	132
13:15 - 13:30	0	2	135	7	3	0	0	147	1	2	103	6	2	0	1	115
13:30 - 13:45	0	3	132	10	0	0	1	146	1	3	121	5	0	0	0	130
13:45 - 14:00	0	2	144	11	0	0	0	157	0	2	134	4	0	0	0	140
Hourly Total	1	7	561	44	7	0	2	622	6	9	472	24	3	1	2	517
Session Total	11	22	2274	155	37	3	7	2509	12	30	1962	144	24	2	7	2181



Bradford: Queue Length Survey - Saturday, 25 March 2017

Produced by Streetwise Services Ltd.

Junction: A - A658 Harrogate Road North / B - A657 New Line East / C - A658 Harrogate Road South / D - A657 New Line West

Signal Change HH:MM:SS	A - A658 Harrogate Road North		B - A657 New Line East				C - A658 Harrogate Road South				D - A657 New Line West			
	Lane 1	Lane 2	Signal Change HH:MM:SS	Lane 1	Lane 2	Signal Change HH:MM:SS	Lane 1	Lane 2	Signal Change HH:MM:SS	Lane 1	Lane 2	Signal Change HH:MM:SS	Lane 1	Lane 2
10:00:40	8	1	10:00:42	6	2	10:00:25	12	4	10:01:07	7	5			
10:01:55	5	1	10:01:37	10	4	10:01:33	11	4	10:02:04	1	3			
10:03:02	1	0	10:03:04	3	2	10:02:45	17	3	10:03:31	8	5			
10:04:25	20	0	10:04:03	9	1	10:03:56	12	0	10:04:30	16	3			
10:06:00	15	2	10:05:36	13	10	10:05:17	17	1	10:06:02	11	1			
10:07:21	16	2	10:07:05	8	2	10:06:52	12	3	10:07:32	3	3			
10:08:40	5	0	10:08:33	4	1	10:08:11	15	3	10:08:01	0	4			
10:09:36	5	1	10:10:40	6	2	10:09:32	6	4	10:09:00	9	5			
10:10:52	6	2	10:11:55	5	0	10:10:28	15	6	10:10:01	5	3			
10:11:58	4	2	10:13:13	8	5	10:11:44	13	2	10:11:07	13	2			
10:13:14	7	1	10:14:13	8	5	10:12:50	9	1	10:12:23	1	2			
10:14:34	16	0	10:15:40	7	6	10:14:06	12	3	10:13:41	13	4			
10:16:06	11	0	10:17:30	11	2	10:15:24	9	3	10:16:04	4	5			
10:17:40	2	0	10:18:43	5	4	10:16:58	10	4	10:17:58	11	5			
10:19:08	16	3	10:20:27	10	4	10:18:31	13	1	10:19:09	7	5			
10:20:41	5	1	10:21:51	12	8	10:20:00	12	2	10:20:53	18	2			
10:22:08	17	3	10:23:26	10	12	10:21:32	13	5	10:22:18	20	5			
10:23:54	13	1	10:25:21	17	12	10:23:00	16	3	10:23:53	14	3			
10:25:50	15	5	10:27:02	24	6	10:24:46	22	2	10:25:47	6	2			
10:27:41	16	2	10:28:58	38	3	10:26:39	7	3	10:27:29	16	1			
10:29:32	17	7	10:30:55	10	4	10:28:30	15	4	10:29:17	8	0			
10:31:11	13	4	10:32:24	10	0	10:30:24	12	2	10:30:08	0	3			
10:32:28	4	3	10:33:27	6	0	10:32:01	13	3	10:31:21	8	7			
10:33:51	9	0	10:34:49	10	3	10:33:18	13	7	10:32:50	6	7			
10:35:09	10	3	10:36:27	9	1	10:34:43	12	3	10:33:53	5	9			
10:36:35	18	3	10:37:51	9	3	10:36:00	14	0	10:35:15	9	9			
10:38:09	8	6	10:39:04	4	4	10:37:27	15	1	10:36:55	19	12			
10:39:12	19	4	10:40:26	3	6	10:39:00	11	3	10:38:17	8	11			
10:40:43	12	8	10:41:48	12	9	10:40:04	18	3	10:39:32	1	14			
10:42:01	13	2	10:43:10	16	11	10:41:34	4	3	10:40:52	12	10			
10:43:23	11	2	10:44:24	34	12	10:42:51	3	5	10:42:16	8	11			
10:44:25	17	3	10:45:59	37	12	10:44:15	3	4	10:43:37	12	8			
10:46:36	30	8	10:48:06	16	4	10:45:17	9	3	10:44:51	5	5			
10:48:47	30	6	10:49:53	8	2	10:47:26	4	3	10:46:24	6	5			
10:50:11	19	2	10:51:27	9	5	10:49:36	6	4	10:48:33	9	5			
10:51:36	5	2	10:52:28	1	4	10:51:00	3	4	10:50:18	2	7			
10:52:39	15	1	10:53:52	12	3	10:52:27	0	5	10:51:54	8	5			
10:54:09	8	0	10:55:13	20	2	10:53:30	15	2	10:52:54	8	8			
10:55:35	18	2	10:57:01	34	9	10:55:00	11	4	10:54:16	14	8			
10:57:28	13	2	10:58:38	11	6	10:56:26	15	3	10:55:38	7	6			
10:59:07	15	2	11:00:18	15	5	10:58:20	18	4	10:57:27	9	10			
11:00:43	14	1	11:01:57	38	7	10:59:58	15	4	10:59:12	10	8			
11:02:12	10	1	11:03:07	22	5	11:01:33	1	5	11:00:43	10	10			
11:03:15	14	3	11:04:21	34	11	11:03:03	2	4	11:02:25	9	9			
11:04:52	11	2	11:06:17	39	11	11:04:06	5	3	11:03:32	13	9			
11:06:48	5	3	11:08:15	34	8	11:05:42	17	6	11:04:48	14	10			
11:08:31	8	1	11:09:32	35	8	11:07:38	23	3	11:06:42	14	9			
11:10:01	5	3	11:11:09	38	5	11:09:21	13	3	11:08:41	13	9			
11:11:45	12	4	11:12:56	6	4	11:10:52	15	8	11:09:58	7	11			
11:13:13	13	1	11:14:33	8	5	11:12:38	14	2	11:11:38	9	8			
11:15:15	25	0	11:16:47	36	3	11:14:04	14	4	11:13:22	8	6			
11:17:00	18	0	11:18:19	37	5	11:16:06	11	3	11:15:00	13	4			
11:18:59	13	6	11:20:08	11	0	11:17:53	3	4	11:17:15	11	3			
11:20:28	8	1	11:21:31	18	1	11:19:50	1	4	11:18:46	5	2			
11:21:37	12	0	11:22:42	15	0	11:21:18	3	4	11:20:36	11	1			
11:22:44	10	2	11:23:51	35	5	11:22:33	0	3	11:21:57	2	3			
11:24:16	16	5	11:25:35	36	2	11:23:35	14	5	11:23:09	8	4			
11:25:51	10	0	11:26:48	13	0	11:25:08	16	4	11:24:17	11	6			
11:27:38	22	1	11:28:50	12	3	11:26:42	11	3	11:25:57	13	5			
11:29:09	18	3	11:30:17	15	3	11:28:28	4	3	11:27:13	18	3			
11:30:49	14	1	11:31:52	13	6	11:30:00	6	4	11:29:13	19	2			
11:32:09	2	1	11:33:08	15	0	11:31:38	1	4	11:30:42	17	3			
11:33:23	10	2	11:34:26	4	1	11:33:01	0	5	11:32:20	8	2			
11:34:27	4	0	11:35:30	11	0	11:34:14	10	4	11:33:33	9	1			
11:35:36	4	2	11:36:36	10	2	11:35:16	8	5	11:34:53	2	3			
11:37:04	30	0	11:38:38	40	5	11:36:26	11	5	11:35:56	8	4			
11:39:30	28	7	11:41:05	15	3	11:37:57	25	3	11:37:04	16	2			
11:41:33	16	5	11:42:59	36	2	11:40:22	13	2	11:39:04	24	4			
11:43:12	8	2	11:44:14	37	3	11:42:23	1	3	11:41:32	25	6			
11:44:25	5	0	11:45:26	16	0	11:44:02	3	4	11:43:24	25	8			

11:45:31	5	0	11:46:40	34	4	11:45:17	0	5	11:44:41	25	7
11:47:22	18	3	11:48:54	38	7	11:46:24	12	6	11:44:54	24	6
11:49:01	6	2	11:49:59	39	6	11:48:14	13	4	11:47:06	24	5
11:50:43	24	5	11:51:55	17	6	11:49:50	9	3	11:49:21	18	6
11:52:36	27	5	11:54:07	19	3	11:51:34	16	3	11:50:26	15	5
11:54:29	17	4	11:56:00	39	3	11:53:27	19	4	11:52:23	19	5
11:56:36	25	3	11:57:39	6	2	11:55:20	5	4	11:54:32	23	10
11:57:48	22	1	11:58:55	20	2	11:57:28	4	3	11:56:27	21	9
11:58:59	20	0	11:59:58	22	3	11:58:38	6	4	11:58:06	3	8
12:00:13	15	3	12:01:34	34	3	11:59:48	0	4	11:59:22	2	9
12:01:55	9	3	12:02:51	8	3	12:01:04	13	5	12:00:24	17	7
12:02:51	14	0	12:03:58	19	3	12:02:46	2	3	12:01:57	16	7
12:04:22	21	3	12:05:36	12	6	12:03:43	0	5	12:03:26	19	5
12:05:56	26	6	12:07:17	36	9	12:05:14	10	3	12:04:23	19	2
12:07:45	23	2	12:09:01	12	12	12:06:46	2	4	12:06:02	18	1
12:09:15	24	2	12:10:21	39	9	12:08:35	4	3	12:07:43	18	1
12:10:39	22	0	12:11:53	38	9	12:10:05	2	4	12:09:26	14	3
12:12:16	20	0	12:13:40	37	9	12:11:31	1	4	12:10:52	16	0
12:14:19	24	2	12:15:21	11	5	12:13:08	0	3	12:12:19	11	3
12:15:32	28	1	12:16:33	10	3	12:15:12	4	3	12:14:05	4	3
12:16:37	28	0	12:17:32	39	3	12:16:24	4	4	12:15:47	5	4
12:17:56	28	4	12:19:00	35	1	12:17:29	3	3	12:17:00	8	0
12:19:15	31	2	12:20:13	37	1	12:18:47	7	3	12:17:57	2	3
12:20:53	33	4	12:22:22	10	5	12:20:09	1	3	12:19:27	12	4
12:22:45	31	4	12:23:57	13	5	12:21:44	5	5	12:20:39	6	4
12:24:29	30	1	12:26:07	40	8	12:23:35	4	6	12:22:47	16	5
12:26:46	33	5	12:28:18	20	7	12:25:19	16	4	12:24:23	17	5
12:28:21	33	3	12:29:36	40	6	12:27:39	2	4	12:26:32	17	3
12:29:53	33	0	12:31:01	12	0	12:29:13	1	3	12:28:44	14	8
12:31:03	29	0	12:32:21	38	4	12:30:42	1	4	12:30:02	4	8
12:32:44	29	1	12:33:51	15	3	12:31:55	0	3	12:31:30	25	6
12:34:36	25	2	12:36:00	12	4	12:33:34	10	4	12:32:48	23	6
12:36:49	27	2	12:38:17	13	5	12:35:27	4	4	12:34:21	25	3
12:38:32	13	3	12:39:40	13	5	12:37:40	8	6	12:36:29	12	2
12:40:06	16	3	12:41:20	14	3	12:39:24	7	4	12:38:44	7	3
12:41:53	11	3	12:43:09	36	2	12:40:57	1	3	12:40:07	8	1
12:43:16	11	3	12:44:31	17	1	12:42:45	16	4	12:41:47	7	5
12:44:54	19	1	12:46:17	6	9	12:44:08	6	6	12:43:36	10	6
12:46:45	12	1	12:47:51	40	4	12:45:46	13	3	12:46:44	13	8
12:48:02	11	1	12:49:17	34	3	12:47:39	11	3	12:48:17	12	5
12:49:32	9	2	12:50:35	14	1	12:48:53	16	3	12:49:43	15	5
12:50:38	3	2	12:51:30	13	3	12:50:23	9	4	12:51:03	14	3
12:51:56	17	0	12:53:10	10	4	12:51:29	7	5	12:51:58	17	4
12:53:32	18	2	12:54:41	10	4	12:52:48	9	4	12:53:36	17	4
12:55:05	11	0	12:56:13	9	5	12:54:25	9	3	12:55:06	20	5
12:56:41	16	0	12:57:56	20	4	12:55:56	7	3	12:56:40	20	4
12:58:18	16	2	12:59:29	37	1	12:57:32	8	4	12:58:24	5	3
13:00:16	27	4	13:01:40	21	2	12:59:08	2	4	12:59:56	25	4
13:01:44	20	0	13:02:58	36	5	13:01:08	6	5	13:02:06	21	6
13:03:20	16	0	13:04:28	16	3	13:02:33	10	4	13:03:24	17	5
13:04:49	15	2	13:05:49	9	5	13:04:09	2	5	13:04:54	20	5
13:05:11	14	2	13:07:43	11	8	13:05:40	8	7	13:06:17	23	6
13:06:06	25	3	13:09:15	10	8	13:06:57	10	3	13:08:12	18	9
13:08:04	12	5	13:11:15	11	6	13:08:55	3	4	13:09:43	30	8
13:10:02	16	9	13:12:56	15	5	13:10:52	12	7	13:11:40	21	10
13:11:46	24	3	13:14:35	14	2	13:12:36	8	5	13:13:22	10	6
13:13:20	26	1	13:16:13	36	3	13:14:10	0	3	13:15:01	4	8
13:14:57	25	3	13:17:59	40	7	13:15:49	1	8	13:16:39	2	9
13:16:36	25	3	13:19:57	37	6	13:17:28	18	3	13:18:24	11	11
13:18:22	25	5	13:21:47	35	8	13:19:14	21	3	13:20:27	25	12
13:20:30	28	7	13:23:16	16	11	13:21:20	5	3	13:22:13	13	10
13:22:00	28	4	13:24:33	7	9	13:22:53	10	4	13:23:40	8	11
13:23:37	30	3	13:25:53	14	8	13:24:28	4	4	13:24:57	7	8
13:24:47	28	0	13:27:32	34	7	13:25:38	14	7	13:26:19	13	0
13:26:09	28	2	13:29:23	34	1	13:27:00	14	3	13:28:00	5	2
13:27:47	25	1	13:31:20	37	1	13:28:38	14	5	13:29:51	17	1
13:29:38	26	3	13:32:28	18	2	13:30:29	10	5	13:31:49	10	3
13:31:32	20	3	13:34:32	14	4	13:32:25	6	4	13:32:55	8	1
13:33:00	29	3	13:36:16	12	2	13:33:52	8	4	13:34:58	2	6
13:34:52	29	3	13:37:59	38	3	13:35:42	19	4	13:36:43	11	5
13:36:38	14	5	13:40:11	14	4	13:37:29	20	8	13:38:27	26	7
13:38:38	30	2	13:42:19	16	7	13:39:31	12	3	13:40:38	5	7
13:40:39	22	2	13:43:44	34	7	13:41:30	1	4	13:42:44	7	6
13:42:27	4	2	13:44:51	35	4	13:43:18	4	6	13:44:09	10	5
13:43:21	10	0	13:45:49	40	6	13:44:43	13	4	13:45:16	3	4
13:44:54	8	0	13:46:52	11	4	13:45:46	8	3	13:46:17	8	1
13:46:00	5	3	13:48:13	40	5	13:46:51	3	6	13:47:19	5	0
13:47:10	8	1	13:49:53	13	0	13:48:02	11	4	13:48:39	5	4
13:48:43	19	2	13:51:17	11	2	13:49:35	12	5	13:50:17	17	3
13:50:16	25	3	13:53:04	10	4	13:51:08	9	2	13:51:42	10	1
13:51:35	28	3	13:54:56	23	4	13:52:27	12	2	13:53:31	7	4
13:53:32	18	2	13:55:59	14	0	13:54:25	3	3	13:55:20	7	8
13:55:02	10	1	13:57:05	15	2	13:55:52	9	3	13:56:25	11	6
13:56:07	10	1	13:58:42	5	4	13:56:57	0	4	13:57:31	22	8
13:57:45	9	1	13:59:50	18	1	13:58:36	4	5	13:59:10	9	5
13:58:49	2	2				13:59:40	8	5			

To A							
PICYCLE	MICYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0	0	11	1	0	0	0	12
0	0	25	6	0	0	0	31
1	0	36	3	1	0	0	41
0	0	40	4	0	0	0	44
1	0	112	14	1	0	0	128
0	0	17	5	0	0	0	22
0	0	11	3	0	0	0	14
0	0	19	4	1	1	0	25
0	0	20	3	0	0	0	23
0	0	67	16	1	1	0	84
0	0	31	5	0	0	0	36
0	0	16	5	1	1	0	23
0	0	24	5	0	0	0	29
0	0	17	2	2	0	0	21
0	0	88	17	3	1	0	109
1	0	267	46	5	2	0	321
1	0	34	1	0	0	0	36
0	0	22	4	0	0	0	26
1	0	26	4	0	0	0	31
0	0	36	5	0	0	0	41
2	0	118	14	0	0	0	134
0	0	35	2	0	0	0	37
0	0	38	5	0	0	0	43
0	0	45	6	0	0	0	51
0	0	36	4	0	0	0	40
0	0	154	17	0	0	0	171
0	0	49	2	0	0	0	51
1	0	36	0	0	0	0	37
0	0	42	1	0	0	0	43
1	0	55	2	0	0	0	58
2	0	182	5	0	0	0	189
0	0	32	1	0	0	0	33
0	0	40	3	0	0	0	43
0	0	26	1	0	0	0	27
0	0	20	0	0	0	0	20
0	0	118	5	0	0	0	123
4	0	572	41	0	0	0	617

To B							
PICYCLE	MICYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0	0	0	0	0	0	0	0
0	0	6	0	0	0	0	6
0	1	5	1	0	0	0	7
0	0	14	1	0	0	0	15
0	1	25	2	0	0	0	28
0	0	6	0	0	0	0	6
0	0	4	0	0	0	0	4
0	0	3	1	0	0	0	4
0	0	31	1	0	0	0	32
0	0	44	2	0	0	0	46
0	0	5	0	1	0	0	6
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	1	0	0	0	1
0	0	5	1	1	0	0	7
0	1	74	5	1	0	0	81
0	0	20	1	1	0	0	22
0	0	12	0	0	0	0	12
0	0	3	0	0	0	0	3
0	0	1	0	0	0	0	1
0	0	38	1	1	0	0	38
0	0	17	0	0	0	0	17
0	0	7	0	0	0	0	7
0	0	1	0	0	0	0	1
0	0	2	0	0	0	0	2
0	0	27	0	0	0	0	27
0	0	11	0	0	0	0	11
0	0	2	1	0	0	0	3
0	0	2	0	0	0	0	2
0	0	4	0	0	0	0	4
0	0	19	1	0	0	0	20
0	0	1	1	0	0	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	0	1	1	0	0	0	2
0	0	83	3	1	0	0	87



Bradford - Manual Traffic Survey: Thursday, 23 March 2017

Produced by Streetwise Services Ltd.

Junction: **A - A658 Harrogate Road North / B - A658 Harrogate Road South / C - Stockhill Road**

Approach: **C - Stockhill Road**

TIME	C to A								C to B							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
07:00 - 07:15	0	0	11	1	0	0	0	12	0	0	0	0	0	0	0	0
07:15 - 07:30	0	0	25	6	0	0	0	31	0	0	6	0	0	0	0	6
07:30 - 07:45	1	0	36	3	1	0	0	41	0	1	5	1	0	0	0	7
07:45 - 08:00	0	0	40	4	0	0	0	44	0	0	14	1	0	0	0	15
Hourly Total	1	0	112	14	1	0	0	128	0	1	25	2	0	0	0	28
08:00 - 08:15	0	0	17	5	0	0	0	22	0	0	6	0	0	0	0	6
08:15 - 08:30	0	0	11	3	0	0	0	14	0	0	4	0	0	0	0	4
08:30 - 08:45	0	0	19	4	1	1	0	25	0	0	3	1	0	0	0	4
08:45 - 09:00	0	0	20	3	0	0	0	23	0	0	31	1	0	0	0	32
Hourly Total	0	0	67	15	1	1	0	84	0	0	44	2	0	0	0	46
09:00 - 09:15	0	0	31	5	0	0	0	36	0	0	5	0	1	0	0	6
09:15 - 09:30	0	0	16	5	1	1	0	23	0	0	0	0	0	0	0	0
09:30 - 09:45	0	0	24	5	0	0	0	29	0	0	0	0	0	0	0	0
09:45 - 10:00	0	0	17	2	2	0	0	21	0	0	0	1	0	0	0	1
Hourly Total	0	0	88	17	3	1	0	109	0	0	5	1	1	0	0	7
Session Total	1	0	267	46	5	2	0	321	0	1	74	5	1	0	0	81
15:00 - 15:15	1	0	34	1	0	0	0	36	0	0	20	1	1	0	0	22
15:15 - 15:30	0	0	22	4	0	0	0	26	0	0	12	0	0	0	0	12
15:30 - 15:45	1	0	26	4	0	0	0	31	0	0	3	0	0	0	0	3
15:45 - 16:00	0	0	36	5	0	0	0	41	0	0	1	0	0	0	0	1
Hourly Total	2	0	118	14	0	0	0	134	0	0	36	1	1	0	0	38
16:00 - 16:15	0	0	35	2	0	0	0	37	0	0	17	0	0	0	0	17
16:15 - 16:30	0	0	38	5	0	0	0	43	0	0	7	0	0	0	0	7
16:30 - 16:45	0	0	45	6	0	0	0	51	0	0	1	0	0	0	0	1
16:45 - 17:00	0	0	36	4	0	0	0	40	0	0	2	0	0	0	0	2
Hourly Total	0	0	164	17	0	0	0	171	0	0	27	0	0	0	0	27
17:00 - 17:15	0	0	49	2	0	0	0	51	0	0	11	0	0	0	0	11
17:15 - 17:30	1	0	36	0	0	0	0	37	0	0	2	1	0	0	0	3
17:30 - 17:45	0	0	42	1	0	0	0	43	0	0	2	0	0	0	0	2
17:45 - 18:00	1	0	55	2	0	0	0	58	0	0	4	0	0	0	0	4
Hourly Total	2	0	182	5	0	0	0	189	0	0	19	1	0	0	0	20
18:00 - 18:15	0	0	32	1	0	0	0	33	0	0	1	1	0	0	0	2
18:15 - 18:30	0	0	40	3	0	0	0	43	0	0	0	0	0	0	0	0
18:30 - 18:45	0	0	26	1	0	0	0	27	0	0	0	0	0	0	0	0
18:45 - 19:00	0	0	20	0	0	0	0	20	0	0	0	0	0	0	0	0
Hourly Total	0	0	118	5	0	0	0	123	0	0	1	1	0	0	0	2
Session Total	4	0	572	41	0	0	0	617	0	0	83	3	1	0	0	87

TIME	From A								To A							
	PICYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS	TOTAL	PICYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS	TOTAL
10:00 - 10:15	0	0	0	0	0	0	0	0	0	0	25	1	0	0	0	26
10:15 - 10:30	0	0	0	0	0	0	0	0	0	0	32	0	0	0	0	32
10:30 - 10:45	0	0	0	0	0	0	0	0	0	0	31	1	0	0	0	32
10:45 - 11:00	0	0	0	0	0	0	0	0	0	0	35	1	0	0	0	36
Hourly Total	0	0	0	0	0	0	0	0	0	0	123	3	0	0	0	126
11:00 - 11:15	0	0	0	0	0	0	0	0	0	0	34	3	1	0	0	38
11:15 - 11:30	0	0	0	0	0	0	0	0	0	0	34	3	1	0	0	38
11:30 - 11:45	0	0	0	0	0	0	0	0	0	0	34	1	0	0	0	35
11:45 - 12:00	0	0	0	0	0	0	0	0	0	2	35	2	0	0	0	39
Hourly Total	0	0	0	0	0	0	0	0	2	0	140	9	2	0	0	153
12:00 - 12:15	0	0	0	0	0	0	0	0	0	0	42	2	0	0	0	44
12:15 - 12:30	0	0	0	0	0	0	0	0	0	3	45	3	0	0	0	51
12:30 - 12:45	0	0	0	0	0	0	0	0	0	0	47	3	0	0	0	50
12:45 - 13:00	0	0	0	0	0	0	0	0	0	0	51	1	0	0	0	52
Hourly Total	0	0	0	0	0	0	0	0	0	3	185	9	0	0	0	197
13:00 - 13:15	0	0	0	0	0	0	0	0	0	2	63	4	0	0	0	69
13:15 - 13:30	0	0	0	0	0	0	0	0	0	0	63	4	0	0	0	67
13:30 - 13:45	0	0	0	0	0	0	0	0	0	0	46	1	0	0	0	47
13:45 - 14:00	0	0	0	0	0	0	0	0	0	0	45	2	1	1	0	49
Hourly Total	0	0	0	0	0	0	0	0	0	2	206	11	1	0	0	220
Season Total	0	0	0	0	0	0	0	0	2	3	653	32	3	0	0	720

TIME	From B								To B							
	PICYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS	TOTAL	PICYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS	TOTAL
10:00 - 10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 - 10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 - 10:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
10:45 - 11:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Hourly Total	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3
11:00 - 11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 - 11:30	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	5
11:30 - 11:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
11:45 - 12:00	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4
Hourly Total	0	0	0	0	0	0	0	0	0	0	9	1	0	0	0	10
12:00 - 12:15	0	0	0	0	0	0	0	0	0	0	2	1	1	0	0	4
12:15 - 12:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
12:30 - 12:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
12:45 - 13:00	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2
Hourly Total	0	0	0	0	0	0	0	0	0	0	5	2	1	0	0	8
13:00 - 13:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
13:15 - 13:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
13:30 - 13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45 - 14:00	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
Hourly Total	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4
Season Total	0	0	0	0	0	0	0	0	0	0	20	4	1	0	0	25

To A							
PICYCLE	MICYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0	0	0	0	0	0	0	0
0	0	3	1	0	0	0	4
2	0	0	1	0	0	0	3
0	0	1	1	0	0	0	2
2	0	4	3	0	0	0	9
0	0	3	0	0	0	0	3
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	2	0	0	0	0	2
0	0	5	0	0	0	0	5
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	2
0	0	1	0	0	0	0	1
2	0	1	0	0	0	0	3
4	0	10	3	0	0	0	17
0	0	1	0	0	0	0	1
0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	1
0	0	1	0	0	0	0	1
0	0	3	0	0	0	0	3
0	0	1	1	0	0	0	2
0	0	0	0	0	0	0	0
0	0	1	1	0	0	0	2
0	0	1	0	0	0	0	1
0	0	3	2	0	0	0	5
0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	1
1	0	2	0	0	0	0	3
2	1	2	0	0	0	0	5
4	1	4	0	0	0	0	9
0	0	0	0	0	0	0	0
0	0	2	0	0	0	0	2
0	0	2	0	0	0	0	2
1	0	1	0	0	0	0	2
1	0	5	0	0	0	0	6
5	1	15	2	0	0	0	23



Bradford - Manual Traffic Survey: Thursday, 23 March 2017

Produced by Streetwise Services Ltd.

Junction: **A - A658 Harrogate Road / B - Carr Bottom Road / C - A658 Harrogate Road South**

Approach: **B - Carr Bottom Road**

TIME	B to C								B to A							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
07:00 - 07:15	0	0	7	1	0	0	0	7	0	0	0	0	0	0	0	0
07:15 - 07:30	0	0	7	1	0	0	0	8	0	0	3	1	0	0	0	4
07:30 - 07:45	0	1	5	1	0	0	0	7	2	0	0	1	0	0	0	3
07:45 - 08:00	0	0	9	2	0	0	0	11	0	0	1	1	0	0	0	2
Hourly Total	0	1	28	4	0	0	0	33	2	0	4	3	0	0	0	9
08:00 - 08:15	0	0	4	0	0	0	0	4	0	0	3	0	0	0	0	3
08:15 - 08:30	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0
08:30 - 08:45	1	0	2	0	0	0	0	3	0	0	0	0	0	0	0	0
08:45 - 09:00	0	0	4	0	0	0	0	4	0	0	2	0	0	0	0	2
Hourly Total	1	0	13	0	0	0	0	14	0	0	5	0	0	0	0	5
09:00 - 09:15	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0
09:15 - 09:30	0	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0
09:30 - 09:45	0	0	4	0	0	0	0	4	2	0	0	0	0	0	0	2
09:45 - 10:00	0	0	5	0	0	0	0	5	0	0	1	0	0	0	0	1
Hourly Total	0	0	15	0	0	0	0	18	2	0	1	0	0	0	0	3
Session Total	1	1	56	4	0	0	0	62	4	0	10	3	0	0	0	17
15:00 - 15:15	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	1
15:15 - 15:30	0	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0
15:30 - 15:45	1	0	3	0	0	0	0	4	0	0	1	0	0	0	0	1
15:45 - 16:00	0	0	6	0	0	0	0	6	0	0	1	0	0	0	0	1
Hourly Total	1	0	14	0	0	0	0	15	0	0	3	0	0	0	0	3
16:00 - 16:15	0	0	4	0	0	0	0	4	0	0	1	1	0	0	0	2
16:15 - 16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30 - 16:45	0	0	3	0	0	0	0	3	0	0	1	1	0	0	0	2
16:45 - 17:00	0	0	5	1	0	0	0	6	0	0	1	0	0	0	0	1
Hourly Total	0	0	12	1	0	0	0	13	0	0	3	2	0	0	0	5
17:00 - 17:15	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0
17:15 - 17:30	0	0	4	1	0	0	0	5	1	0	0	0	0	0	0	1
17:30 - 17:45	0	0	2	0	0	0	0	2	1	0	2	0	0	0	0	3
17:45 - 18:00	0	0	3	0	0	0	0	3	2	1	2	0	0	0	0	5
Hourly Total	0	0	11	1	0	0	0	12	4	1	4	0	0	0	0	9
18:00 - 18:15	1	0	4	0	0	0	0	5	0	0	0	0	0	0	0	0
18:15 - 18:30	0	0	4	1	0	0	0	5	0	0	2	0	0	0	0	2
18:30 - 18:45	0	0	4	0	0	0	0	4	0	0	2	0	0	0	0	2
18:45 - 19:00	0	0	3	1	0	0	0	4	1	0	1	0	0	0	0	2
Hourly Total	1	0	15	2	0	0	0	18	1	0	5	0	0	0	0	6
Session Total	2	0	62	4	0	0	0	68	5	1	15	2	0	0	0	23

To C							
PICYCLE	MICYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0	0	7	0	0	0	0	7
0	0	7	1	0	0	0	8
0	1	5	1	0	0	0	7
0	0	9	2	0	0	0	11
0	1	28	4	0	0	0	33
0	0	4	0	0	0	0	4
0	0	3	0	0	0	0	3
1	0	2	0	0	0	0	3
0	0	4	0	0	0	0	4
1	0	13	0	0	0	0	14
0	0	2	0	0	0	0	2
0	0	4	0	0	0	0	4
0	0	4	0	0	0	0	4
0	0	5	0	0	0	0	5
0	0	15	0	0	0	0	15
1	1	56	4	0	0	0	62
0	0	1	0	0	0	0	1
0	0	4	0	0	0	0	4
1	0	3	0	0	0	0	4
0	0	6	0	0	0	0	6
1	0	14	0	0	0	0	15
0	0	4	0	0	0	0	4
0	0	0	0	0	0	0	0
0	0	3	0	0	0	0	3
0	0	5	1	0	0	0	6
0	0	12	1	0	0	0	13
0	0	2	0	0	0	0	2
0	0	4	1	0	0	0	5
0	0	2	0	0	0	0	2
0	0	3	0	0	0	0	3
0	0	11	1	0	0	0	12
1	0	4	0	0	0	0	5
0	0	4	1	0	0	0	5
0	0	4	0	0	0	0	4
0	0	3	1	0	0	0	4
1	0	15	2	0	0	0	18
2	0	52	4	0	0	0	56

TIME	From A							To A							TOTAL		
	PICYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS	PICYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS			
10:00 - 10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 - 10:30	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
10:30 - 10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 - 11:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Hourly Total	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	3
11:00 - 11:15	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
11:15 - 11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 - 11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 - 12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
12:00 - 12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 - 12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 - 12:45	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3
12:45 - 13:00	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3
Hourly Total	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	6
13:00 - 13:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
13:15 - 13:30	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3
13:30 - 13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45 - 14:00	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
Hourly Total	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	6
Weekly Total	0	0	0	0	0	0	0	0	0	3	9	26	1	0	0	0	30

TIME	From B							To B							TOTAL
	BIKCYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS	BIKCYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS	
10:00-10:15	0	0	4	0	0	0	0	4	0	0	0	0	0	0	0
10:15-10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30-10:45	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0
10:45-11:00	0	0	6	1	0	0	0	7	0	0	0	0	0	0	0
Hourly Total	0	0	23	1	0	0	0	24	0	0	0	0	0	0	0
11:00-11:15	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0
11:15-11:30	0	0	3	2	0	0	0	5	0	0	0	0	0	0	0
11:30-11:45	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0
11:45-12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	2	0	17	2	0	0	0	21	0	0	0	0	0	0	0
12:00-12:15	0	0	4	1	0	0	0	5	0	0	0	0	0	0	0
12:15-12:30	1	0	11	0	0	0	0	12	0	0	0	0	0	0	0
12:30-12:45	0	0	4	0	0	0	0	4	0	0	0	0	0	0	0
12:45-13:00	0	0	11	0	0	0	0	11	0	0	0	0	0	0	0
Hourly Total	1	0	34	1	0	0	0	36	0	0	0	0	0	0	0
13:00-13:15	0	0	9	1	0	0	0	10	0	0	0	0	0	0	0
13:15-13:30	0	0	11	0	0	0	0	11	0	0	0	0	0	0	0
13:30-13:45	0	0	4	1	0	0	0	5	0	0	0	0	0	0	0
13:45-14:00	0	0	7	0	0	0	0	7	0	0	0	0	0	0	0
Hourly Total	0	0	31	2	0	0	0	33	0	0	0	0	0	0	0
Season Total	3	0	102	6	0	0	0	112	0	0	0	0	0	0	0



Bradford - Manual Traffic Survey: Thursday, 23 March 2017

Produced by Streetwise Services Ltd.

Junction: **A - Elder Street North / B - A657 New Line East / C - Elder Street South / D - A657 New Line West**

Approach: **A - Elder Street North**

TIME	A to B								A to C							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
07:00 - 07:15	0	0	7	0	0	0	0	7	0	0	0	0	0	0	0	0
07:15 - 07:30	0	0	5	0	0	0	0	5	0	0	0	0	0	0	0	0
07:30 - 07:45	0	0	12	0	0	0	0	12	0	0	0	0	0	0	0	0
07:45 - 08:00	0	0	10	0	0	0	0	10	0	0	0	0	0	0	0	0
Hourly Total	0	0	34	0	0	0	0	34	0	0	0	0	0	0	0	0
08:00 - 08:15	0	0	9	0	0	0	0	9	0	0	1	0	0	0	0	1
08:15 - 08:30	0	0	5	0	0	0	0	5	0	0	0	0	0	0	0	0
08:30 - 08:45	0	0	11	0	0	0	0	11	0	0	1	0	0	0	0	1
08:45 - 09:00	0	0	8	1	0	0	0	9	0	0	0	0	0	0	0	0
Hourly Total	0	0	33	1	0	0	0	34	0	0	2	0	0	0	0	2
09:00 - 09:15	0	0	6	1	0	0	0	7	0	0	0	0	0	0	0	0
09:15 - 09:30	0	0	5	1	0	0	0	6	0	0	0	0	0	0	0	0
09:30 - 09:45	0	0	12	2	1	0	0	15	0	0	0	0	0	0	0	0
09:45 - 10:00	0	0	9	0	0	0	0	9	0	0	0	0	0	0	0	0
Hourly Total	0	0	32	4	1	0	0	37	0	0	0	0	0	0	0	0
Session Total	0	0	99	5	1	0	0	105	0	0	2	0	0	0	0	2
15:00 - 15:15	0	0	20	0	0	0	0	20	0	0	1	1	0	0	0	2
15:15 - 15:30	0	0	10	0	0	0	0	10	0	0	0	0	0	0	0	0
15:30 - 15:45	0	0	12	0	0	0	0	12	0	0	1	0	0	0	0	1
15:45 - 16:00	0	0	16	0	0	0	0	16	0	0	0	0	0	0	0	0
Hourly Total	0	0	58	0	0	0	0	58	0	0	2	1	0	0	0	3
16:00 - 16:15	0	0	13	3	0	0	0	16	0	0	0	0	0	0	0	0
16:15 - 16:30	0	0	17	1	0	0	0	18	0	0	1	0	0	0	0	1
16:30 - 16:45	0	0	23	0	0	0	0	23	0	0	0	0	0	0	0	0
16:45 - 17:00	0	0	11	1	0	0	0	12	0	0	0	0	0	0	0	0
Hourly Total	0	0	64	5	0	0	0	69	0	0	1	0	0	0	0	1
17:00 - 17:15	1	0	21	0	0	0	0	22	0	0	0	0	0	0	0	0
17:15 - 17:30	0	0	15	3	0	0	0	18	0	0	0	0	0	0	0	0
17:30 - 17:45	0	0	14	0	0	0	0	14	0	0	0	0	0	0	0	0
17:45 - 18:00	0	0	12	1	0	0	0	13	0	0	0	0	0	0	0	0
Hourly Total	1	0	62	4	0	0	0	67	0	0	0	0	0	0	0	0
18:00 - 18:15	0	0	12	1	0	0	0	13	0	0	0	0	0	0	0	0
18:15 - 18:30	0	0	15	3	0	0	0	18	0	0	0	0	0	0	0	0
18:30 - 18:45	0	0	12	0	0	0	0	12	0	0	0	0	0	0	0	0
18:45 - 19:00	0	0	9	0	0	0	0	9	0	0	1	0	0	0	0	1
Hourly Total	0	0	48	4	0	0	0	52	0	0	1	0	0	0	0	1
Session Total	1	0	232	13	0	0	0	246	0	0	4	1	0	0	0	5

TIME	From A								To A							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
07:00 - 07:15	0	0	10	0	0	0	0	10	0	0	3	0	0	0	0	3
07:15 - 07:30	0	0	6	0	0	0	0	6	0	0	2	0	0	0	0	2
07:30 - 07:45	0	0	14	1	0	0	0	15	2	0	4	0	0	0	0	6
07:45 - 08:00	0	0	16	0	0	0	0	16	0	0	2	0	0	0	0	2
Hourly Total	0	0	46	1	0	0	0	47	2	0	11	0	0	0	0	13
08:00 - 08:15	0	0	15	0	0	0	0	15	0	0	0	0	0	0	0	0
08:15 - 08:30	0	0	6	0	0	0	0	6	0	0	5	1	0	0	0	6
08:30 - 08:45	0	0	14	0	0	0	0	14	0	0	2	0	0	0	0	2
08:45 - 09:00	0	0	8	1	0	0	0	9	0	0	5	1	0	0	0	6
Hourly Total	0	0	43	1	0	0	0	44	0	0	12	2	0	0	0	14
09:00 - 09:15	0	0	8	1	0	0	0	9	0	0	3	0	0	0	0	3
09:15 - 09:30	0	0	10	2	0	0	0	12	0	0	1	2	0	0	0	3
09:30 - 09:45	0	0	17	2	1	0	0	20	0	0	4	2	0	0	0	6
09:45 - 10:00	0	0	13	1	0	0	0	14	0	0	4	2	0	0	0	6
Hourly Total	0	0	48	6	1	0	0	55	0	0	12	6	0	0	0	18
Session Total	0	0	137	8	1	0	0	146	2	0	35	8	0	0	0	45
15:00 - 15:15	0	0	24	1	0	0	0	25	0	0	5	1	0	0	0	6
15:15 - 15:30	0	0	21	0	0	0	0	21	0	0	10	0	0	0	0	10
15:30 - 15:45	0	0	16	0	0	0	0	16	0	1	4	0	0	0	0	5
15:45 - 16:00	0	0	18	0	0	0	0	18	0	0	8	2	0	0	0	10
Hourly Total	0	0	79	1	0	0	0	80	0	1	27	3	0	0	0	31
16:00 - 16:15	0	0	17	3	0	0	0	20	0	0	8	0	0	0	0	8
16:15 - 16:30	0	0	22	1	0	0	0	23	0	0	6	0	0	0	0	6
16:30 - 16:45	0	0	26	0	0	0	0	26	0	1	11	0	0	0	0	12
16:45 - 17:00	0	0	17	1	0	0	0	18	0	0	5	1	0	0	0	6
Hourly Total	0	0	82	5	0	0	0	87	0	1	30	1	0	0	0	32
17:00 - 17:15	1	0	22	0	0	0	0	23	0	0	6	0	0	0	0	6
17:15 - 17:30	0	0	17	3	0	0	0	20	0	0	8	0	0	0	0	8
17:30 - 17:45	0	0	15	0	0	0	0	15	0	0	11	0	0	0	0	11
17:45 - 18:00	0	0	17	1	0	0	0	18	0	0	5	0	0	0	0	5
Hourly Total	1	0	71	4	0	0	0	76	0	0	30	0	0	0	0	30
18:00 - 18:15	0	0	17	1	0	0	0	18	0	0	8	1	0	0	0	9
18:15 - 18:30	0	0	15	3	0	0	0	18	1	0	8	1	0	0	0	10
18:30 - 18:45	0	0	14	1	0	0	0	15	0	0	6	0	0	0	0	6
18:45 - 19:00	0	0	11	0	0	0	0	11	0	0	2	2	0	0	0	4
Hourly Total	0	0	57	5	0	0	0	62	1	0	24	4	0	0	0	29
Session Total	1	0	289	15	0	0	0	305	1	2	111	8	0	0	0	122

TIME	From B								To B							
	PICYCLE	MICYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PICYCLE	MICYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
07:00 - 07:15	0	0	7	0	0	0	0	7	0	0	9	1	0	0	0	10
07:15 - 07:30	0	0	12	1	0	0	0	13	0	0	6	0	0	0	0	6
07:30 - 07:45	2	0	17	0	0	0	0	19	0	0	14	0	0	0	0	14
07:45 - 08:00	0	0	12	1	1	0	0	14	0	0	11	0	1	0	0	12
Hourly Total	2	0	48	2	1	0	0	53	0	0	46	1	1	0	0	42
08:00 - 08:15	0	0	13	1	0	0	0	14	0	0	10	0	0	0	0	10
08:15 - 08:30	0	0	9	0	0	0	0	9	0	0	6	0	0	0	0	6
08:30 - 08:45	0	1	14	2	0	0	0	17	0	0	14	0	0	0	0	14
08:45 - 09:00	0	0	20	2	0	0	0	22	0	0	10	1	0	0	0	11
Hourly Total	0	1	56	5	0	0	0	62	0	0	40	1	0	0	0	41
09:00 - 09:15	0	0	24	0	0	0	0	24	0	0	8	1	0	0	0	9
09:15 - 09:30	0	0	17	3	0	0	0	20	0	0	8	1	0	0	0	9
09:30 - 09:45	0	0	21	3	0	0	0	24	0	0	15	3	1	0	0	19
09:45 - 10:00	0	0	13	0	1	0	0	14	0	0	11	0	0	0	0	11
Hourly Total	0	0	75	6	1	0	0	82	0	0	42	5	1	0	0	48
Session Total	2	1	179	13	2	0	0	197	0	0	122	7	2	0	0	131
15:00 - 15:15	0	0	16	1	0	0	0	17	0	0	23	0	0	0	0	23
15:15 - 15:30	0	1	22	0	0	0	0	23	0	0	15	0	0	0	0	15
15:30 - 15:45	0	1	31	1	0	0	0	33	0	0	12	0	0	0	0	12
15:45 - 16:00	0	0	23	3	0	0	0	26	0	0	18	0	0	0	0	18
Hourly Total	0	2	92	5	0	0	0	99	0	0	68	0	0	0	0	68
16:00 - 16:15	0	0	32	1	0	0	0	33	0	0	13	3	0	0	0	16
16:15 - 16:30	0	1	28	3	0	0	0	32	0	0	21	1	0	0	0	22
16:30 - 16:45	0	1	34	2	1	0	0	38	0	0	26	0	0	0	0	26
16:45 - 17:00	0	0	42	2	0	0	0	44	0	0	16	1	0	0	0	17
Hourly Total	0	2	136	8	1	0	0	147	0	0	76	5	0	0	0	81
17:00 - 17:15	0	0	38	2	0	0	0	40	1	0	23	0	0	0	0	24
17:15 - 17:30	0	1	31	2	0	0	0	34	0	0	18	3	0	0	0	21
17:30 - 17:45	0	0	32	1	0	0	0	33	0	0	18	0	0	0	0	18
17:45 - 18:00	0	0	32	1	0	0	0	33	0	0	13	1	0	0	0	14
Hourly Total	0	1	133	6	0	0	0	140	1	0	72	4	0	0	0	77
18:00 - 18:15	0	0	28	3	0	0	0	31	0	0	18	1	0	0	0	19
18:15 - 18:30	1	0	32	3	0	0	0	36	0	0	18	3	0	0	0	21
18:30 - 18:45	0	0	28	6	0	0	0	34	0	0	13	1	0	0	0	14
18:45 - 19:00	0	0	20	2	0	0	0	22	0	0	11	1	0	0	0	12
Hourly Total	1	0	108	14	0	0	0	123	0	0	60	6	0	0	0	66
Session Total	1	5	469	33	1	0	0	509	1	0	276	15	0	0	0	292



Bradford - Manual Traffic Survey: Thursday, 23 March 2017

Produced by Streetwise Services Ltd.

Junction: A - Elder Street North / B - A657 New Line East / C - Elder Street South / D - A657 New Line West

Approach: C - Elder Street South

TIME	C to D								C to A							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
07:00 - 07:15	0	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0
07:15 - 07:30	0	0	5	2	0	0	0	7	0	0	0	0	0	0	0	0
07:30 - 07:45	0	0	4	0	0	0	0	4	0	0	2	0	0	0	0	2
07:45 - 08:00	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0
Hourly Total	0	0	14	2	0	0	0	16	0	0	2	0	0	0	0	2
08:00 - 08:15	0	0	6	0	0	0	0	6	0	0	0	0	0	0	0	0
08:15 - 08:30	0	0	5	0	0	0	0	5	0	0	1	0	0	0	0	1
08:30 - 08:45	0	1	9	0	0	0	0	10	0	0	0	0	0	0	0	0
08:45 - 09:00	0	0	7	3	0	0	0	10	0	0	1	0	0	0	0	1
Hourly Total	0	1	27	3	0	0	0	31	0	0	2	0	0	0	0	2
09:00 - 09:15	0	0	15	1	0	0	0	16	0	0	1	0	0	0	0	1
09:15 - 09:30	0	0	17	2	2	0	0	21	0	0	1	2	0	0	0	3
09:30 - 09:45	0	0	18	0	0	0	0	18	0	0	3	0	0	0	0	3
09:45 - 10:00	0	0	18	0	1	0	0	19	0	0	1	1	0	0	0	2
Hourly Total	0	0	68	3	3	0	0	74	0	0	6	3	0	0	0	9
Session Total	0	1	109	8	3	0	0	121	0	0	10	3	0	0	0	13
15:00 - 15:15	0	0	25	1	0	0	0	26	0	0	2	0	0	0	0	2
15:15 - 15:30	0	0	31	0	0	0	0	31	0	0	2	0	0	0	0	2
15:30 - 15:45	0	0	29	1	0	0	0	30	0	0	1	0	0	0	0	1
15:45 - 16:00	0	0	38	1	0	0	0	39	0	0	2	0	0	0	0	2
Hourly Total	0	0	123	3	0	0	0	126	0	0	7	0	0	0	0	7
16:00 - 16:15	0	0	29	0	0	0	0	29	0	0	3	0	0	0	0	3
16:15 - 16:30	0	0	34	1	0	0	0	35	0	0	2	0	0	0	0	2
16:30 - 16:45	0	0	40	1	0	0	0	41	0	0	3	0	0	0	0	3
16:45 - 17:00	0	0	26	2	0	0	0	28	0	0	2	0	0	0	0	2
Hourly Total	0	0	129	4	0	0	0	133	0	0	10	0	0	0	0	10
17:00 - 17:15	0	1	56	1	0	0	0	58	0	0	1	0	0	0	0	1
17:15 - 17:30	0	0	32	2	0	0	0	34	0	0	3	0	0	0	0	3
17:30 - 17:45	0	0	27	0	0	0	0	27	0	0	0	0	0	0	0	0
17:45 - 18:00	0	0	17	1	0	0	0	18	0	0	0	0	0	0	0	0
Hourly Total	0	1	132	4	0	0	0	137	0	0	4	0	0	0	0	4
18:00 - 18:15	0	0	35	2	0	0	0	37	0	0	1	0	0	0	0	1
18:15 - 18:30	0	0	36	0	0	0	0	36	0	0	2	0	0	0	0	2
18:30 - 18:45	0	0	40	3	0	0	0	43	0	0	1	0	0	0	0	1
18:45 - 19:00	0	0	29	1	0	0	0	30	0	0	1	1	0	0	0	2
Hourly Total	0	0	140	6	0	0	0	146	0	0	5	1	0	0	0	6
Session Total	0	1	524	17	0	0	0	542	0	0	26	1	0	0	0	27

TIME	From C								To C							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
07:00 - 07:15	0	0	6	1	0	0	0	7	0	0	6	0	0	0	0	6
07:15 - 07:30	0	0	6	2	0	0	0	8	0	0	10	1	0	0	0	11
07:30 - 07:45	0	0	8	0	0	0	0	8	0	0	16	0	0	0	0	16
07:45 - 08:00	0	0	2	0	1	0	0	3	0	0	11	1	1	0	0	13
Hourly Total	0	0	22	3	1	0	0	26	0	0	43	2	1	0	0	46
08:00 - 08:15	0	0	7	0	0	0	0	7	0	0	14	1	0	0	0	15
08:15 - 08:30	0	0	7	0	0	0	0	7	0	0	9	0	0	0	0	9
08:30 - 08:45	0	1	12	0	0	0	0	13	0	1	15	2	0	0	0	18
08:45 - 09:00	0	0	10	3	0	0	0	13	0	0	18	1	0	0	0	19
Hourly Total	0	1	36	3	0	0	0	40	0	1	56	4	0	0	0	61
09:00 - 09:15	0	0	18	1	0	0	0	19	0	0	23	0	0	0	0	23
09:15 - 09:30	0	0	21	4	2	0	0	27	0	0	19	3	0	0	0	22
09:30 - 09:45	0	0	24	1	0	0	0	25	0	0	24	1	0	0	0	25
09:45 - 10:00	0	0	21	1	1	0	0	23	0	0	13	0	1	0	0	14
Hourly Total	0	0	84	7	3	0	0	94	0	0	79	4	1	0	0	84
Session Total	0	1	142	13	4	0	0	160	0	1	178	10	2	0	0	191
15:00 - 15:15	0	0	30	1	0	0	0	31	0	0	17	1	0	0	0	18
15:15 - 15:30	0	0	38	0	0	0	0	38	0	1	18	0	0	0	0	19
15:30 - 15:45	0	0	30	1	0	0	0	31	0	0	31	1	0	0	0	32
15:45 - 16:00	0	0	42	1	0	0	0	43	0	0	24	2	0	0	0	26
Hourly Total	0	0	140	3	0	0	0	143	0	1	90	4	0	0	0	95
16:00 - 16:15	0	0	32	0	0	0	0	32	0	0	28	1	0	0	0	29
16:15 - 16:30	0	0	40	1	0	0	0	41	0	1	28	3	0	0	0	32
16:30 - 16:45	0	0	46	1	0	0	0	47	0	0	34	2	1	0	0	37
16:45 - 17:00	0	0	33	2	0	0	0	35	0	0	41	2	0	0	0	43
Hourly Total	0	0	151	4	0	0	0	155	0	1	131	8	1	0	0	141
17:00 - 17:15	0	1	59	1	0	0	0	61	0	0	36	2	0	0	0	38
17:15 - 17:30	0	0	38	2	0	0	0	40	0	1	31	2	0	0	0	34
17:30 - 17:45	0	0	31	0	0	0	0	31	0	0	27	1	0	0	0	28
17:45 - 18:00	0	0	18	1	0	0	0	19	0	0	29	1	0	0	0	30
Hourly Total	0	1	146	4	0	0	0	151	0	1	123	6	0	0	0	130
18:00 - 18:15	0	0	42	2	0	0	0	44	0	0	23	2	0	0	0	25
18:15 - 18:30	0	0	41	0	0	0	0	41	0	0	30	2	0	0	0	32
18:30 - 18:45	0	0	42	4	0	0	0	46	0	0	27	6	0	0	0	33
18:45 - 19:00	0	0	32	3	0	0	0	35	0	0	22	2	0	0	0	24
Hourly Total	0	0	157	9	0	0	0	166	0	0	102	12	0	0	0	114
Session Total	0	1	594	20	0	0	0	615	0	3	446	30	1	0	0	480

TIME	From D								To D							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
07:00 - 07:15	0	0	2	0	0	0	0	2	0	0	7	0	0	0	0	7
07:15 - 07:30	0	0	0	0	0	0	0	0	0	0	6	2	0	0	0	8
07:30 - 07:45	0	0	1	0	0	0	0	1	0	0	6	1	0	0	0	7
07:45 - 08:00	0	0	1	0	0	0	0	1	0	0	7	0	0	0	0	7
Hourly Total	0	0	4	0	0	0	0	4	0	0	26	3	0	0	0	29
08:00 - 08:15	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	11
08:15 - 08:30	0	0	4	1	0	0	0	5	0	0	6	0	0	0	0	6
08:30 - 08:45	0	0	2	0	0	0	0	2	0	1	11	0	0	0	0	12
08:45 - 09:00	0	0	2	0	0	0	0	2	0	0	7	3	0	0	0	10
Hourly Total	0	0	8	1	0	0	0	9	0	1	35	3	0	0	0	39
09:00 - 09:15	0	0	1	0	0	0	0	1	0	0	17	1	0	0	0	18
09:15 - 09:30	0	0	2	0	0	0	0	2	0	0	22	3	2	0	0	27
09:30 - 09:45	0	0	4	0	0	0	0	4	0	0	23	0	0	0	0	23
09:45 - 10:00	0	0	3	1	0	0	0	4	0	0	22	1	1	0	0	24
Hourly Total	0	0	10	1	0	0	0	11	0	0	84	5	3	0	0	92
Session Total	0	0	22	2	0	0	0	24	0	1	145	11	3	0	0	160
15:00 - 15:15	0	0	3	0	0	0	0	3	0	0	28	1	0	0	0	29
15:15 - 15:30	0	0	4	0	0	0	0	4	0	0	42	0	0	0	0	42
15:30 - 15:45	0	0	2	0	0	0	0	2	0	0	32	1	0	0	0	33
15:45 - 16:00	0	0	7	1	0	0	0	8	0	0	40	1	0	0	0	41
Hourly Total	0	0	16	1	0	0	0	17	0	0	142	3	0	0	0	145
16:00 - 16:15	0	0	1	0	0	0	0	1	0	0	33	0	0	0	0	33
16:15 - 16:30	0	0	3	0	0	0	0	3	0	0	38	1	0	0	0	39
16:30 - 16:45	0	0	8	0	0	0	0	8	0	0	43	1	0	0	0	44
16:45 - 17:00	0	0	2	1	0	0	0	3	0	0	32	2	0	0	0	34
Hourly Total	0	0	14	1	0	0	0	15	0	0	146	4	0	0	0	150
17:00 - 17:15	0	0	3	0	0	0	0	3	0	1	57	1	0	0	0	59
17:15 - 17:30	0	0	5	0	0	0	0	5	0	0	34	2	0	0	0	36
17:30 - 17:45	0	0	6	0	0	0	0	6	0	0	28	0	0	0	0	28
17:45 - 18:00	0	0	2	0	0	0	0	2	0	0	22	1	0	0	0	23
Hourly Total	0	0	16	0	0	0	0	16	0	1	141	4	0	0	0	146
18:00 - 18:15	0	0	2	0	0	0	0	2	0	0	40	2	0	0	0	42
18:15 - 18:30	0	0	4	0	0	0	0	4	0	0	36	0	0	0	0	36
18:30 - 18:45	0	0	4	0	0	0	0	4	0	0	42	4	0	0	0	46
18:45 - 19:00	0	0	2	1	0	0	0	3	0	0	30	1	0	0	0	31
Hourly Total	0	0	12	1	0	0	0	13	0	0	148	7	0	0	0	155
Session Total	0	0	58	3	0	0	0	61	0	1	577	18	0	0	0	596



Bradford - Manual Traffic Survey: Saturday, 25 March 2017

Produced by Streetwise Services Ltd.

Junction: **A - Elder Street North / B - A657 New Line East / C - Elder Street South / D - A657 New Line West**

Approach: **A - Elder Street North**

TIME	A to B								A to C							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
10:00 - 10:15	0	0	15	0	0	0	0	15	0	0	0	0	0	0	0	0
10:15 - 10:30	0	0	9	1	0	0	0	10	0	0	0	0	0	0	0	0
10:30 - 10:45	0	0	19	3	0	0	0	22	0	0	1	0	0	0	0	1
10:45 - 11:00	0	0	22	0	0	0	0	22	0	0	1	0	0	0	0	1
Hourly Total	0	0	65	4	0	0	0	69	0	0	2	0	0	0	0	2
11:00 - 11:15	0	0	24	0	0	0	0	24	0	0	0	0	0	0	0	0
11:15 - 11:30	0	0	23	0	0	0	0	23	0	0	0	0	0	0	0	0
11:30 - 11:45	0	0	21	0	0	0	0	21	0	0	0	1	0	0	0	1
11:45 - 12:00	0	0	25	0	0	0	0	25	0	0	0	0	0	0	0	0
Hourly Total	0	0	93	0	0	0	0	93	0	0	0	1	0	0	0	1
12:00 - 12:15	0	0	27	2	0	0	0	29	0	0	0	0	0	0	0	0
12:15 - 12:30	0	0	16	0	0	0	0	16	0	0	0	0	0	0	0	0
12:30 - 12:45	0	0	21	0	1	0	0	22	0	0	1	0	0	0	0	1
12:45 - 13:00	0	0	23	0	0	0	0	23	0	0	1	0	0	0	0	1
Hourly Total	0	0	87	2	1	0	0	90	0	0	2	0	0	0	0	2
13:00 - 13:15	0	0	21	0	0	0	0	21	0	0	0	0	0	0	0	0
13:15 - 13:30	0	0	16	0	0	0	0	16	0	0	0	0	0	0	0	0
13:30 - 13:45	0	1	13	0	0	0	0	14	0	0	0	0	0	0	0	0
13:45 - 14:00	0	0	19	1	0	0	0	20	0	0	0	0	0	0	0	0
Hourly Total	0	1	69	1	0	0	0	71	0	0	0	0	0	0	0	0
Session Total	0	1	314	7	1	0	0	323	0	0	4	1	0	0	0	5

TIME	From A								To A							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
10:00 - 10:15	0	0	19	0	0	0	0	19	0	0	6	0	0	0	0	6
10:15 - 10:30	0	0	9	3	0	0	0	12	0	0	9	2	0	0	0	11
10:30 - 10:45	0	0	24	3	0	0	0	27	0	0	9	0	0	0	0	9
10:45 - 11:00	0	0	28	1	0	0	0	29	0	0	5	2	0	0	0	7
Hourly Total	0	0	80	7	0	0	0	87	0	0	29	4	0	0	0	33
11:00 - 11:15	0	0	27	0	0	0	0	27	0	0	8	1	0	0	0	9
11:15 - 11:30	0	0	26	0	0	0	0	26	0	0	5	3	0	0	0	8
11:30 - 11:45	0	0	21	1	0	0	0	22	2	0	5	1	0	0	0	8
11:45 - 12:00	0	0	26	0	0	0	0	26	0	0	9	0	0	0	0	9
Hourly Total	0	0	100	1	0	0	0	101	2	0	27	5	0	0	0	34
12:00 - 12:15	0	0	28	2	0	0	0	30	0	0	5	1	0	0	0	6
12:15 - 12:30	0	0	17	0	0	0	0	17	0	0	7	0	1	0	0	8
12:30 - 12:45	0	0	23	0	1	0	0	24	0	0	9	2	0	0	0	11
12:45 - 13:00	0	0	26	0	0	0	0	26	0	0	8	1	0	0	0	9
Hourly Total	0	0	94	2	1	0	0	97	0	0	29	4	1	0	0	34
13:00 - 13:15	0	0	25	0	0	0	0	25	0	0	9	1	0	0	0	10
13:15 - 13:30	0	0	18	0	0	0	0	18	0	0	9	0	0	0	0	9
13:30 - 13:45	0	1	15	0	0	0	0	16	0	0	5	0	0	0	0	5
13:45 - 14:00	0	0	20	1	0	0	0	21	0	0	4	0	0	0	0	4
Hourly Total	0	1	78	1	0	0	0	80	0	0	27	1	0	0	0	28
Session Total	0	1	382	11	1	0	0	385	2	0	112	14	1	0	0	129

TIME	From B								To B							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
10:00 - 10:15	0	0	37	1	0	0	0	38	0	0	22	1	0	0	0	23
10:15 - 10:30	0	0	36	2	0	0	0	38	0	0	13	2	0	0	0	15
10:30 - 10:45	0	0	42	2	0	0	0	44	0	0	26	4	0	0	0	30
10:45 - 11:00	0	0	42	2	0	0	0	44	0	0	31	0	0	0	0	31
Hourly Total	0	0	167	7	0	0	0	164	0	0	92	7	0	0	0	99
11:00 - 11:15	0	1	44	2	0	0	0	47	0	0	24	0	0	0	0	24
11:15 - 11:30	0	0	40	2	0	0	0	42	0	0	31	1	0	0	0	32
11:30 - 11:45	2	0	47	0	1	0	0	50	0	0	26	1	0	0	0	27
11:45 - 12:00	0	0	44	0	0	0	0	44	0	0	27	1	0	0	0	28
Hourly Total	2	1	175	4	1	0	0	183	0	0	108	3	0	0	0	111
12:00 - 12:15	0	0	46	2	0	0	0	48	0	0	29	2	0	0	0	31
12:15 - 12:30	0	0	41	1	1	0	0	43	0	0	21	0	0	0	0	21
12:30 - 12:45	0	0	45	2	0	0	0	47	0	0	29	1	1	0	0	31
12:45 - 13:00	0	0	38	5	0	0	0	43	0	0	26	0	0	0	0	26
Hourly Total	0	0	170	10	1	0	0	181	0	0	105	3	1	0	0	109
13:00 - 13:15	1	0	37	0	0	0	0	38	0	0	29	0	0	0	0	29
13:15 - 13:30	0	0	34	1	0	0	0	35	0	0	18	0	0	0	0	18
13:30 - 13:45	0	0	39	0	0	0	1	40	1	1	21	0	0	0	0	23
13:45 - 14:00	0	0	26	1	0	0	0	27	0	0	22	2	0	0	0	24
Hourly Total	1	0	136	2	0	0	1	140	1	1	90	2	0	0	0	94
Session Total	3	1	638	23	2	0	1	668	1	1	395	15	1	0	0	413



Bradford - Manual Traffic Survey: Saturday, 25 March 2017

Produced by Streetwise Services Ltd.

Junction: **A - Elder Street North / B - A657 New Line East / C - Elder Street South / D - A657 New Line West**

Approach: **C - Elder Street South**

TIME	C to D								C to A							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
10:00 - 10:15	0	0	37	3	0	0	0	40	0	0	0	0	0	0	0	0
10:15 - 10:30	0	0	36	3	0	0	0	39	0	0	0	0	0	0	0	0
10:30 - 10:45	0	0	44	2	0	0	0	46	0	0	1	0	0	0	0	1
10:45 - 11:00	0	0	49	2	0	0	0	51	0	0	1	0	0	0	0	1
Hourly Total	0	0	166	10	0	0	0	176	0	0	2	0	0	0	0	2
11:00 - 11:15	0	0	54	0	0	0	0	54	0	0	3	0	0	0	0	3
11:15 - 11:30	0	0	40	1	0	0	0	41	0	0	2	0	0	0	0	2
11:30 - 11:45	0	0	41	0	0	0	0	41	0	0	2	0	0	0	0	2
11:45 - 12:00	0	0	59	3	0	0	0	62	0	0	4	0	0	0	0	4
Hourly Total	0	0	194	4	0	0	0	198	0	0	11	0	0	0	0	11
12:00 - 12:15	0	0	46	4	0	0	0	50	0	0	2	0	0	0	0	2
12:15 - 12:30	0	0	48	0	1	0	0	49	0	0	1	0	0	0	0	1
12:30 - 12:45	0	0	35	0	0	0	0	35	0	0	5	0	0	0	0	5
12:45 - 13:00	0	0	46	0	0	0	0	46	0	0	3	0	0	0	0	3
Hourly Total	0	0	175	4	1	0	0	180	0	0	11	0	0	0	0	11
13:00 - 13:15	0	0	33	0	0	0	0	33	0	0	5	1	0	0	0	6
13:15 - 13:30	0	0	52	1	1	0	0	54	0	0	3	0	0	0	0	3
13:30 - 13:45	0	0	29	0	1	0	0	30	0	0	3	0	0	0	0	3
13:45 - 14:00	0	0	48	0	0	0	0	48	0	0	2	0	0	0	0	2
Hourly Total	0	0	162	1	2	0	0	165	0	0	13	1	0	0	0	14
Session Total	0	0	697	19	3	0	0	719	0	0	37	1	0	0	0	38

TIME	From C								To C							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
10:00 - 10:15	0	0	44	4	0	0	0	48	0	0	35	1	0	0	0	36
10:15 - 10:30	0	0	40	4	0	0	0	44	0	0	35	1	0	0	0	36
10:30 - 10:45	0	0	52	3	0	0	0	55	0	0	39	2	0	0	0	41
10:45 - 11:00	0	0	59	2	0	0	0	61	0	0	42	0	0	0	0	42
Hourly Total	0	0	195	13	0	0	0	208	0	0	151	4	0	0	0	155
11:00 - 11:15	0	0	57	0	0	0	0	57	0	1	45	2	0	0	0	48
11:15 - 11:30	0	0	50	2	0	0	0	52	0	0	39	1	0	0	0	40
11:30 - 11:45	0	0	48	1	0	0	0	49	0	0	44	2	1	0	0	47
11:45 - 12:00	0	0	65	4	0	0	0	69	0	0	42	0	0	0	0	42
Hourly Total	0	0	220	7	0	0	0	227	0	1	170	5	1	0	0	177
12:00 - 12:15	0	0	50	4	0	0	0	54	0	0	45	1	0	0	0	46
12:15 - 12:30	0	0	54	0	1	0	0	55	0	0	38	1	0	0	0	39
12:30 - 12:45	0	0	48	1	0	0	0	49	0	0	45	1	0	0	0	46
12:45 - 13:00	0	0	52	0	0	0	0	52	0	0	41	4	0	0	0	45
Hourly Total	0	0	204	5	1	0	0	210	0	0	169	7	0	0	0	176
13:00 - 13:15	0	0	46	1	0	0	0	47	1	0	36	0	0	0	0	37
13:15 - 13:30	0	0	57	1	1	0	0	59	0	0	34	1	0	0	0	35
13:30 - 13:45	1	0	40	0	1	0	0	42	0	0	39	0	0	0	1	40
13:45 - 14:00	0	0	53	1	0	0	0	54	0	0	26	1	0	0	0	27
Hourly Total	1	0	196	3	2	0	0	202	1	0	135	2	0	0	1	139
Session Total	1	0	815	28	3	0	0	847	1	1	625	18	1	0	1	647

TIME	From D								To D							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
10:00 - 10:15	0	0	4	0	0	0	0	4	0	0	41	3	0	0	0	44
10:15 - 10:30	0	0	8	1	0	0	0	9	0	0	36	5	0	0	0	41
10:30 - 10:45	0	0	4	0	0	0	0	4	0	0	48	2	0	0	0	50
10:45 - 11:00	0	0	3	0	0	0	0	3	0	0	54	3	0	0	0	57
Hourly Total	0	0	19	1	0	0	0	20	0	0	179	13	0	0	0	192
11:00 - 11:15	0	0	6	1	0	0	0	7	0	0	57	0	0	0	0	57
11:15 - 11:30	0	0	2	2	0	0	0	4	0	0	43	1	0	0	0	44
11:30 - 11:45	0	0	0	2	0	0	0	2	0	0	41	0	0	0	0	41
11:45 - 12:00	0	0	3	0	0	0	0	3	0	0	60	3	0	0	0	63
Hourly Total	0	0	11	5	0	0	0	16	0	0	201	4	0	0	0	205
12:00 - 12:15	0	0	2	0	0	0	0	2	0	0	47	4	0	0	0	51
12:15 - 12:30	0	0	3	0	0	0	0	3	0	0	49	0	1	0	0	50
12:30 - 12:45	0	0	3	1	0	0	0	4	0	0	36	0	0	0	0	36
12:45 - 13:00	0	0	7	0	0	0	0	7	0	0	48	0	0	0	0	48
Hourly Total	0	0	15	1	0	0	0	16	0	0	180	4	1	0	0	185
13:00 - 13:15	0	0	3	0	0	0	0	3	0	0	37	0	0	0	0	37
13:15 - 13:30	0	0	6	0	0	0	0	6	0	0	54	1	1	0	0	56
13:30 - 13:45	0	0	2	0	0	0	0	2	0	0	31	0	1	0	0	32
13:45 - 14:00	0	0	2	0	0	0	0	2	0	0	49	0	0	0	0	49
Hourly Total	0	0	13	0	0	0	0	13	0	0	171	1	2	0	0	174
Session Total	0	0	58	7	0	0	0	65	0	0	731	22	3	0	0	756



Bradford - Manual Traffic Survey: Thursday, 23 March 2017
 Produced by Streetwise Services Ltd.

Junction: **A - Asda / B - A657 New Line East / C - A657 New Line West**

Approach: **A - Asda**

TIME	A to B								A to C							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
07:00 - 07:15	0	0	3	0	0	0	0	3	0	0	4	0	0	0	0	4
07:15 - 07:30	0	0	3	0	0	0	0	3	0	0	4	1	0	0	0	5
07:30 - 07:45	0	0	4	0	0	0	0	4	0	0	5	0	0	0	0	5
07:45 - 08:00	0	0	1	0	0	0	0	1	0	0	4	0	1	0	0	5
Hourly Total	0	0	11	0	0	0	0	11	0	0	17	1	1	0	0	19
08:00 - 08:15	0	0	2	1	0	0	0	3	0	0	2	0	0	0	0	2
08:15 - 08:30	0	0	4	1	0	0	0	5	0	0	5	0	0	0	0	5
08:30 - 08:45	0	0	7	1	0	0	0	8	0	0	4	0	0	0	0	4
08:45 - 09:00	0	0	5	0	0	0	0	5	0	0	1	2	0	0	0	3
Hourly Total	0	0	18	3	0	0	0	21	0	0	12	2	0	0	0	14
09:00 - 09:15	0	0	7	1	0	0	0	8	0	0	5	0	0	1	0	6
09:15 - 09:30	0	0	7	0	0	0	0	7	0	0	6	1	0	0	0	7
09:30 - 09:45	0	0	5	0	0	0	0	5	0	0	7	1	0	0	0	8
09:45 - 10:00	0	0	5	0	0	0	0	5	0	0	4	1	2	0	0	7
Hourly Total	0	0	24	1	0	0	0	25	0	0	22	3	2	1	0	28
Session Total	0	0	53	4	0	0	0	57	0	0	51	6	3	1	0	61
15:00 - 15:15	0	0	9	1	0	0	0	10	0	0	5	0	0	0	0	5
15:15 - 15:30	0	0	9	1	0	0	0	10	0	0	2	1	0	0	0	3
15:30 - 15:45	0	0	7	2	0	0	0	9	0	0	6	1	0	0	0	7
15:45 - 16:00	0	0	4	1	0	0	0	5	0	0	3	2	0	0	0	5
Hourly Total	0	0	29	5	0	0	0	34	0	0	16	4	0	0	0	20
16:00 - 16:15	0	0	5	1	0	0	0	6	0	0	4	1	0	0	0	5
16:15 - 16:30	0	0	7	0	0	0	0	7	0	0	5	0	0	0	0	5
16:30 - 16:45	0	0	3	1	0	0	0	4	0	0	1	0	0	0	0	1
16:45 - 17:00	0	0	11	0	0	0	0	11	0	0	4	0	0	0	0	4
Hourly Total	0	0	26	2	0	0	0	28	0	0	14	1	0	0	0	15
17:00 - 17:15	0	0	7	0	0	0	0	7	0	0	8	0	0	0	0	8
17:15 - 17:30	0	0	8	1	0	0	0	9	0	0	3	0	0	0	0	3
17:30 - 17:45	0	0	5	1	0	0	0	6	0	0	2	0	0	0	0	2
17:45 - 18:00	0	0	1	0	0	0	0	1	0	0	4	0	0	0	0	4
Hourly Total	0	0	21	2	0	0	0	23	0	0	17	0	0	0	0	17
18:00 - 18:15	0	0	7	0	0	0	0	7	0	0	8	1	0	0	0	9
18:15 - 18:30	0	0	6	1	0	0	0	7	0	0	7	2	0	0	0	9
18:30 - 18:45	0	0	7	0	0	0	0	7	0	0	7	0	0	0	0	7
18:45 - 19:00	0	0	3	1	0	0	0	4	0	0	7	2	0	0	0	9
Hourly Total	0	0	23	2	0	0	0	25	0	0	29	5	0	0	0	34
Session Total	0	0	99	11	0	0	0	110	0	0	76	10	0	0	0	86

To A							
PICYCLE	MICYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0	0	13	0	0	0	0	13
0	0	13	1	0	0	0	14
0	0	19	1	1	0	0	21
0	0	6	1	0	0	0	7
0	0	51	3	1	0	0	55
0	0	17	1	0	0	0	18
0	0	12	1	0	0	0	13
0	0	23	1	0	0	0	24
0	0	14	2	0	0	0	16
0	0	66	5	0	0	0	71
0	0	24	2	0	0	0	26
0	0	29	2	1	0	0	32
0	0	14	0	0	0	0	14
0	0	26	3	1	1	0	31
0	0	93	7	2	1	0	103
0	0	210	16	3	1	0	229
0	0	30	2	0	0	0	32
0	0	25	3	0	0	0	28
0	0	18	5	0	0	0	23
0	0	23	3	0	0	0	26
0	0	96	13	0	0	0	109
0	0	25	0	0	0	0	25
0	0	32	0	0	0	0	32
0	0	29	1	0	0	0	30
0	0	27	2	0	0	0	29
0	0	113	3	0	0	0	116
0	0	29	1	0	0	0	30
0	1	25	3	0	0	0	29
0	0	18	1	0	0	0	19
0	0	25	2	0	0	0	27
0	1	97	7	0	0	0	105
0	0	31	1	0	0	0	32
0	0	25	1	0	0	0	26
0	0	23	2	0	0	0	25
0	0	26	2	0	0	0	28
0	0	105	6	0	0	0	111
0	1	411	29	0	0	0	441



Bradford - Manual Traffic Survey: Thursday, 23 March 2017
 Produced by Streetwise Services Ltd.

Junction: **A - Asda / B - A657 New Line East / C - A657 New Line West**

Approach: **B - A657 New Line East**

TIME	B to C								B to A							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
07:00 - 07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 - 07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 - 07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 - 08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 - 08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 - 08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 - 08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 - 09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 - 09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 - 09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 - 09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 - 10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Session Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00 - 15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15 - 15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30 - 15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45 - 16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00 - 16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15 - 16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30 - 16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45 - 17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00 - 17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15 - 17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30 - 17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45 - 18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00 - 18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15 - 18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30 - 18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45 - 19:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Session Total	0	0	0	0	0	0	0	0	0	1	213	10	0	0	0	224

To B							
PICYCLE	MICYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0	0	3	0	0	0	0	3
0	0	3	0	0	0	0	3
0	0	4	0	0	0	0	4
0	0	1	0	0	0	0	1
0	0	11	0	0	0	0	11
0	0	2	1	0	0	0	3
0	0	4	1	0	0	0	5
0	0	7	1	0	0	0	8
0	0	5	0	0	0	0	5
0	0	18	3	0	0	0	21
0	0	7	1	0	0	0	8
0	0	7	0	0	0	0	7
0	0	5	0	0	0	0	5
0	0	5	0	0	0	0	5
0	0	24	1	0	0	0	25
0	0	53	4	0	0	0	57
0	0	9	1	0	0	0	10
0	0	9	1	0	0	0	10
0	0	7	2	0	0	0	9
0	0	4	1	0	0	0	5
0	0	29	5	0	0	0	34
0	0	5	1	0	0	0	6
0	0	7	0	0	0	0	7
0	0	3	1	0	0	0	4
0	0	11	0	0	0	0	11
0	0	26	2	0	0	0	28
0	0	7	0	0	0	0	7
0	0	8	1	0	0	0	9
0	0	5	1	0	0	0	6
0	0	1	0	0	0	0	1
0	0	21	2	0	0	0	23
0	0	7	0	0	0	0	7
0	0	6	1	0	0	0	7
0	0	7	0	0	0	0	7
0	0	3	1	0	0	0	4
0	0	23	2	0	0	0	25
0	0	99	11	0	0	0	110

To C							
PICYCLE	MICYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0	0	4	0	0	0	0	4
0	0	4	1	0	0	0	5
0	0	5	0	0	0	0	5
0	0	4	0	1	0	0	5
0	0	17	1	1	0	0	19
0	0	2	0	0	0	0	2
0	0	5	0	0	0	0	5
0	0	4	0	0	0	0	4
0	0	1	2	0	0	0	3
0	0	12	2	0	0	0	14
0	0	5	0	0	1	0	6
0	0	6	1	0	0	0	7
0	0	7	1	0	0	0	8
0	0	4	1	2	0	0	7
0	0	22	3	2	1	0	28
0	0	51	6	3	1	0	61
0	0	5	0	0	0	0	5
0	0	2	1	0	0	0	3
0	0	6	1	0	0	0	7
0	0	3	2	0	0	0	5
0	0	16	4	0	0	0	20
0	0	4	1	0	0	0	5
0	0	5	0	0	0	0	5
0	0	1	0	0	0	0	1
0	0	4	0	0	0	0	4
0	0	14	1	0	0	0	15
0	0	8	0	0	0	0	8
0	0	3	0	0	0	0	3
0	0	2	0	0	0	0	2
0	0	4	0	0	0	0	4
0	0	17	0	0	0	0	17
0	0	8	1	0	0	0	9
0	0	7	2	0	0	0	9
0	0	7	0	0	0	0	7
0	0	7	2	0	0	0	9
0	0	29	5	0	0	0	34
0	0	76	10	0	0	0	86

TIME	From A							To A							TOTAL
	PICTYLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS	PICTYLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS	
10:00-10:15	0	0	8	0	1	0	0	0	0	24	0	0	0	0	24
10:15-10:30	0	0	14	1	0	0	0	15	0	0	24	2	0	0	26
10:30-10:45	0	0	11	1	0	0	0	12	0	0	28	3	0	0	31
10:45-11:00	0	0	11	0	0	0	0	11	0	0	31	1	0	0	32
Hourly Total	0	0	44	2	1	0	0	47	0	0	107	6	0	0	113
11:00-11:15	0	0	12	0	0	0	0	12	0	0	34	0	0	0	34
11:15-11:30	0	0	8	0	0	0	0	8	0	0	30	0	0	0	38
11:30-11:45	0	0	5	0	0	0	0	5	0	0	24	2	0	0	29
11:45-12:00	0	0	13	0	0	0	0	13	0	0	35	1	0	0	39
Hourly Total	0	0	38	0	0	0	0	38	0	0	122	3	0	0	125
12:00-12:15	0	0	9	1	0	0	0	10	0	0	36	3	0	0	49
12:15-12:30	0	0	8	1	0	0	0	9	0	1	27	1	0	0	29
12:30-12:45	0	1	9	1	0	0	0	11	0	0	21	0	0	0	21
12:45-13:00	0	0	7	1	0	0	0	8	0	0	34	0	0	0	34
Hourly Total	0	1	33	4	0	0	0	38	0	1	112	4	0	0	117
13:00-13:15	0	0	14	0	0	0	0	14	0	0	28	0	0	0	28
13:15-13:30	0	0	9	1	0	0	0	10	0	1	18	1	0	0	20
13:30-13:45	0	1	4	0	0	0	0	5	0	1	14	1	0	0	16
13:45-14:00	0	0	5	1	0	0	0	6	0	0	25	2	0	0	28
Hourly Total	0	1	32	2	0	0	0	35	0	2	85	4	0	0	92
Session Total	0	2	147	6	1	0	0	156	0	3	427	17	0	0	447

TIME	From B							To B							TOTAL	
	PICYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS	PICYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS		
10:00-10:15	0	0	14	0	0	0	0	14	0	0	4	0	0	0	0	4
10:15-10:30	0	0	9	1	0	0	0	10	0	0	0	0	0	0	0	6
10:30-10:45	0	0	17	2	0	0	0	19	0	0	4	1	0	0	0	6
10:45-11:00	0	0	22	0	0	0	0	22	0	0	7	0	0	0	0	7
Hourly Total	0	0	62	3	0	0	0	65	0	0	25	1	0	0	0	31
11:00-11:15	0	0	21	0	0	0	0	21	0	0	0	0	0	0	0	6
11:15-11:30	0	0	15	0	0	0	0	15	0	0	5	0	0	0	0	5
11:30-11:45	0	0	16	0	0	0	0	16	0	0	0	0	0	0	0	3
11:45-12:00	0	0	24	0	0	0	0	24	0	0	0	0	0	0	0	8
Hourly Total	0	0	77	0	0	0	0	77	0	0	22	0	0	0	0	22
12:00-12:15	0	0	23	1	0	0	0	24	0	0	4	1	0	0	0	5
12:15-12:30	0	1	16	0	0	0	0	17	0	0	0	1	0	0	0	7
12:30-12:45	0	0	10	0	0	0	0	10	0	0	1	1	0	0	0	2
12:45-13:00	0	0	22	0	0	0	0	22	0	0	4	0	0	0	0	4
Hourly Total	0	1	71	1	0	0	0	73	0	0	16	2	0	0	0	18
13:00-13:15	0	0	17	0	0	0	0	17	0	0	10	0	0	0	0	10
13:15-13:30	0	1	13	0	0	0	0	14	0	0	4	1	0	0	0	5
13:30-13:45	0	0	7	1	0	0	0	8	0	0	2	0	0	0	0	2
13:45-14:00	0	0	20	1	0	0	0	21	0	0	2	0	0	0	0	2
Hourly Total	0	1	57	2	0	0	0	60	0	0	16	1	0	0	0	19
Season Total	0	2	267	6	0	0	0	273	0	0	76	3	0	0	0	31

TIME	From C							To C							TOTAL	
	PICYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS	PICYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS		
10:00-10:15	0	0	16	0	0	0	0	16	0	0	4	0	0	0	0	4
10:15-10:30	0	0	15	1	0	0	0	16	0	0	2	1	0	0	0	3
10:30-10:45	0	0	11	1	0	0	0	12	0	0	7	0	0	0	0	7
10:45-11:00	0	0	9	1	0	0	0	10	0	0	4	0	0	0	0	4
Hourly Total	0	0	45	3	0	0	0	48	0	0	23	1	0	0	0	24
11:00-11:15	0	0	13	0	0	0	0	13	0	0	5	0	0	0	0	5
11:15-11:30	0	0	14	0	0	0	0	14	0	0	3	0	0	0	0	3
11:30-11:45	0	0	7	2	0	0	0	9	0	0	2	0	0	0	0	2
11:45-12:00	0	0	11	1	0	0	0	12	0	0	5	0	0	0	0	5
Hourly Total	0	0	45	3	0	0	0	48	0	0	16	0	0	0	0	16
12:00-12:15	0	0	7	2	0	0	0	9	0	0	5	0	0	0	0	5
12:15-12:30	0	0	11	1	0	0	0	12	0	0	2	0	0	0	0	2
12:30-12:45	0	0	11	0	0	0	0	11	0	1	8	0	0	0	0	9
12:45-13:00	0	0	12	0	0	0	0	12	0	0	3	1	0	0	0	4
Hourly Total	0	0	41	3	0	0	0	44	0	1	16	1	0	0	0	18
13:00-13:15	0	0	11	0	0	0	0	11	0	0	4	0	0	0	0	4
13:15-13:30	0	0	5	1	0	0	0	6	0	0	5	0	0	0	0	5
13:30-13:45	0	0	7	0	0	0	0	7	0	1	2	0	0	0	0	3
13:45-14:00	0	0	6	1	0	0	0	7	0	0	3	1	0	0	0	4
Hourly Total	0	0	29	2	0	0	0	31	0	1	14	1	0	0	0	16
Season Total	0	0	160	11	0	0	0	171	0	2	71	3	0	0	0	77

TIME	From A								To A							
	BIKCYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS	TOTAL	BIKCYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS	TOTAL
07:00-07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15-07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30-07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45-08:00	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0
Hourly Total	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0
08:00-08:15	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1
08:15-08:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
08:30-08:45	0	0	1	0	0	0	0	1	0	0	2	0	0	0	0	2
08:45-09:00	0	0	3	0	0	0	0	3	0	0	3	0	0	0	0	3
Hourly Total	0	0	4	0	1	0	0	5	0	0	6	0	0	1	0	7
09:00-09:15	0	0	3	0	0	0	0	3	0	0	0	1	0	0	0	4
09:15-09:30	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	2
09:30-09:45	0	0	1	0	0	0	0	1	0	0	4	0	0	0	0	4
09:45-10:00	0	0	1	0	0	0	0	1	0	0	1	1	0	0	0	2
Hourly Total	0	0	6	0	0	0	0	7	0	0	6	2	0	0	0	9
Session Total	0	0	11	0	1	0	0	12	0	0	12	2	0	1	0	15
10:00-10:15	0	0	5	0	0	0	0	5	0	0	3	0	0	0	0	8
10:15-10:30	0	0	2	1	0	0	0	3	0	0	5	0	0	0	0	8
10:30-10:45	0	0	3	0	0	0	0	3	0	0	7	0	0	0	0	10
10:45-10:00	0	0	4	0	0	0	0	4	0	0	3	0	0	0	0	7
Hourly Total	0	0	14	1	0	0	0	15	0	0	18	0	0	0	0	33
10:00-10:15	0	0	2	0	0	0	0	2	0	0	3	1	0	0	0	6
10:15-10:30	0	0	2	0	0	0	0	2	0	0	5	0	0	0	0	7
10:30-10:45	0	0	2	0	0	0	0	2	0	0	4	0	0	0	0	6
10:45-11:00	0	0	3	0	1	0	0	4	0	0	3	0	0	0	0	7
Hourly Total	0	0	9	0	1	0	0	10	0	0	15	1	0	0	0	16
11:00-11:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
11:15-11:30	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	2
11:30-11:45	0	0	1	0	0	0	0	1	0	0	2	0	0	0	0	3
11:45-12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	2	0	0	0	0	2	0	0	4	0	0	0	0	6
12:00-12:15	0	0	2	0	0	0	0	2	0	0	3	0	0	0	0	5
12:15-12:30	0	0	3	0	0	0	0	3	0	0	2	0	0	0	0	5
12:30-12:45	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	2
12:45-13:00	0	0	3	0	0	0	0	3	0	0	1	0	0	0	0	4
Hourly Total	0	0	9	0	0	0	0	9	0	0	7	0	0	0	0	16
Session Total	0	0	34	1	1	0	0	36	0	0	44	1	0	0	0	48

TIME	From B								To B							
	BIKYLE	MICYCLE	CAR	LDV	DDV1	DDV2	BUS	TOTAL	BIKYLE	MICYCLE	CAR	LDV	DDV1	DDV2	BUS	TOTAL
07:00 - 07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 - 07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
07:30 - 07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 - 08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
08:00 - 08:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
08:15 - 08:30	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	2
08:30 - 08:45	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	2
08:45 - 09:00	0	0	2	1	0	0	0	3	0	0	1	0	1	0	0	5
Hourly Total	0	0	4	1	0	0	0	5	0	0	2	0	1	0	0	8
09:00 - 09:15	0	0	4	0	0	0	0	4	0	0	1	0	0	0	0	5
09:15 - 09:30	0	0	3	1	0	0	0	4	0	0	2	0	0	0	0	6
09:30 - 09:45	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1
09:45 - 10:00	0	0	3	0	0	0	0	3	0	0	2	0	0	0	0	5
Hourly Total	0	0	8	1	0	0	0	9	0	0	3	0	0	0	0	12
Session Total	0	0	12	2	0	0	0	14	0	0	5	0	1	0	0	16
10:00 - 10:15	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4
10:15 - 10:30	0	0	7	0	0	0	0	7	0	0	0	0	0	0	0	7
10:30 - 10:45	0	0	2	0	0	0	0	2	0	0	1	1	0	0	0	4
10:45 - 11:00	0	0	3	1	0	0	0	4	0	0	3	0	0	0	0	7
Hourly Total	0	0	12	1	0	0	0	13	0	0	8	1	0	0	0	22
11:00 - 11:15	0	0	2	0	0	0	0	2	0	0	4	0	0	0	0	6
11:15 - 11:30	0	0	4	0	0	0	0	4	0	0	1	0	0	0	0	5
11:30 - 11:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
11:45 - 12:00	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	2
Hourly Total	0	0	8	0	0	0	0	8	0	0	6	1	0	0	0	15
12:00 - 12:15	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1
12:15 - 12:30	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	2
12:30 - 12:45	0	0	4	0	0	0	0	4	0	0	4	0	0	0	0	8
12:45 - 13:00	0	0	1	0	0	0	0	1	0	0	3	0	0	0	0	4
Hourly Total	0	0	8	0	0	0	0	8	0	0	7	0	0	0	0	15
13:00 - 13:15	0	0	2	0	0	0	0	2	0	0	1	0	0	0	0	3
13:15 - 13:30	0	0	5	0	0	0	0	5	0	0	2	0	0	0	0	7
13:30 - 13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45 - 14:00	0	0	6	1	0	0	0	7	0	0	0	0	0	0	0	7
Hourly Total	0	0	13	1	0	0	0	14	0	0	3	0	0	0	0	18
Session Total	0	0	33	5	0	0	0	38	0	0	16	1	1	0	0	46

TIME	From C							TOTAL	To C							TOTAL				
	BIKCYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS		BIKCYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS					
07:00 - 07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 - 07:30	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
07:30 - 07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 - 08:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	1	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0
08:00 - 08:15	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0
08:15 - 08:30	0	0	1	0	0	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0
08:30 - 08:45	0	0	3	0	0	0	0	0	3	0	0	1	0	0	0	0	0	0	0	0
08:45 - 09:00	0	0	4	0	1	1	0	0	6	0	0	2	1	1	0	0	0	0	0	0
Hourly Total	0	0	8	0	1	1	0	0	10	0	0	6	1	1	1	0	0	0	0	0
09:00 - 09:15	0	0	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
09:15 - 09:30	0	0	6	0	0	0	0	0	6	0	0	4	1	0	0	0	0	0	0	0
09:30 - 09:45	0	0	4	0	0	0	0	0	4	0	0	2	0	0	0	0	0	0	0	0
09:45 - 10:00	0	0	3	1	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0
Hourly Total	0	0	14	2	0	0	0	0	16	0	0	10	1	0	0	0	0	0	0	0
Session Total	0	0	22	2	2	1	0	0	27	0	0	24	2	2	1	0	0	0	0	0
10:00 - 10:15	0	0	7	0	0	0	0	0	7	0	0	14	0	0	0	0	0	0	0	0
10:15 - 10:30	0	0	11	0	0	0	0	0	11	0	0	9	1	0	0	0	0	0	0	0
10:30 - 10:45	0	0	8	1	0	0	0	0	9	0	0	5	0	0	0	0	0	0	0	0
10:45 - 11:00	0	0	6	0	0	0	0	0	6	0	0	7	1	0	0	0	0	0	0	0
Hourly Total	0	0	22	1	0	0	0	0	27	0	0	26	2	0	0	0	0	0	0	0
11:00 - 11:15	1	0	7	1	0	0	0	0	9	0	0	4	0	0	0	0	0	0	0	0
11:15 - 11:30	0	0	6	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0
11:30 - 11:45	0	0	7	0	0	0	0	0	7	0	0	4	0	0	0	0	0	0	0	0
11:45 - 12:00	0	0	4	4	0	1	0	0	9	0	0	4	0	1	0	0	0	0	0	0
Hourly Total	1	0	24	5	1	0	0	0	27	0	0	18	0	1	0	0	0	0	0	0
12:00 - 12:15	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
12:15 - 12:30	0	0	1	0	0	0	0	0	1	0	0	3	0	0	0	0	0	0	0	0
12:30 - 12:45	0	0	6	0	0	0	0	0	6	0	0	5	0	0	0	0	0	0	0	0
12:45 - 13:00	0	0	3	0	0	0	0	0	3	0	0	1	0	0	0	0	0	0	0	0
Hourly Total	0	0	11	0	0	0	0	0	11	0	0	10	0	0	0	0	0	0	0	0
13:00 - 13:15	0	0	4	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0
13:15 - 13:30	0	0	4	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0
13:30 - 13:45	0	0	4	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0
13:45 - 14:00	0	0	5	0	0	0	0	0	5	0	0	3	0	0	0	0	0	0	0	0
Hourly Total	0	0	9	0	0	0	0	0	9	0	0	9	1	0	0	0	0	0	0	0
14:00 - 14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15 - 14:30	0	0	4	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0
14:30 - 14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45 - 15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	22	0	0	0	0	0	22	0	0	24	1	0	0	0	0	0	0	0
Session Total	1	0	66	7	3	1	0	0	83	0	0	67	3	1	0	0	0	0	0	0

TIME	From A							TOTAL	To A							TOTAL	
	PICYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS		PICYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS		
10:00-10:15	0	0	4	0	0	0	0	4	0	0	2	0	0	0	0	0	2
10:15-10:30	0	0	3	0	0	0	0	3	0	0	4	0	0	0	0	0	4
10:30-10:45	0	0	1	0	1	0	0	2	0	0	2	0	0	0	0	0	2
10:45-11:00	0	0	3	0	0	0	0	3	0	0	0	1	0	0	0	0	6
Hourly Total	0	0	11	0	1	0	0	12	0	0	13	1	0	0	0	0	14
11:00-11:15	0	0	4	0	0	0	0	4	0	0	2	0	0	0	0	0	2
11:15-11:30	0	0	5	0	0	0	0	5	0	0	1	0	0	0	0	0	1
11:30-11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45-12:00	0	0	5	1	0	0	0	6	0	0	0	0	0	0	0	0	6
Hourly Total	0	0	14	1	0	0	0	15	0	0	2	0	0	0	0	0	6
12:00-12:15	0	0	3	2	0	0	0	5	0	0	4	1	0	0	0	0	5
12:15-12:30	0	0	3	0	0	0	0	3	0	0	2	0	0	0	0	0	5
12:30-12:45	0	0	2	0	0	0	0	2	0	0	4	0	0	0	0	0	4
12:45-13:00	0	0	2	0	0	0	0	2	0	0	3	2	0	0	0	0	5
Hourly Total	0	0	10	2	0	0	0	12	0	0	14	3	0	0	0	0	19
13:00-13:15	0	0	4	0	0	0	0	4	0	0	5	0	0	0	0	0	5
13:15-13:30	0	0	5	0	0	0	0	5	0	0	1	0	0	0	0	0	1
13:30-13:45	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	3
13:45-14:00	0	0	2	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Hourly Total	0	0	14	0	0	0	0	14	0	0	14	0	0	0	0	0	14
Session Total	0	0	49	3	1	0	0	53	0	0	51	4	0	0	0	0	58

TIME	From B							To B							TOTAL	
	PICYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS	PICYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS		
10:00 - 10:15	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
10:15 - 10:30	0	0	5	0	0	0	0	0	0	3	0	0	0	0	0	3
10:30 - 10:45	0	0	4	0	0	0	0	0	4	0	1	0	0	0	0	1
10:45 - 11:00	0	0	3	0	0	0	0	0	3	0	0	0	1	0	0	6
Hourly Total	0	0	17	0	0	0	0	0	17	0	10	0	1	0	0	17
11:00 - 11:15	0	0	1	0	0	0	0	0	1	0	2	0	0	0	0	2
11:15 - 11:30	0	0	4	0	0	0	0	0	4	0	0	0	0	0	0	6
11:30 - 11:45	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	1
11:45 - 12:00	0	0	4	0	0	0	0	0	4	0	1	0	0	0	0	1
Hourly Total	0	0	10	0	0	0	0	0	10	0	10	0	0	0	0	10
12:00 - 12:15	0	1	2	0	0	0	0	0	2	0	1	0	0	0	0	1
12:15 - 12:30	0	0	2	1	0	0	0	0	2	0	2	1	0	0	0	3
12:30 - 12:45	0	0	5	1	0	0	0	0	6	0	3	0	0	0	0	3
12:45 - 13:00	0	0	5	1	0	0	0	0	6	0	3	0	0	0	0	3
Hourly Total	0	1	14	3	0	0	0	0	13	0	9	1	0	0	0	10
13:00 - 13:15	0	0	3	0	0	0	0	0	3	0	5	0	0	0	0	5
13:15 - 13:30	0	0	3	0	0	0	0	0	3	0	4	0	0	0	0	4
13:30 - 13:45	0	0	2	0	0	0	0	0	2	0	1	0	0	0	0	1
13:45 - 14:00	0	0	2	0	0	0	0	0	2	0	1	0	0	0	0	1
Hourly Total	0	0	10	0	0	0	0	0	10	0	11	0	0	0	0	11
Session Total	0	1	51	3	0	0	0	0	55	0	42	1	1	0	0	44

TIME	From C							To C							TOTAL	
	PICYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS	PICYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS		
10:00-10:15	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
10:15-10:30	0	0	7	0	0	0	0	7	0	0	0	0	0	0	0	7
10:30-10:45	0	0	3	0	0	0	0	3	0	0	0	0	1	0	0	6
10:45-11:00	0	0	10	1	1	0	0	12	0	0	0	0	0	0	0	13
Hourly Total	0	0	25	1	1	0	0	27	0	0	0	1	0	0	0	29
11:00-11:15	0	0	4	0	0	0	0	4	0	0	0	0	0	0	0	4
11:15-11:30	0	0	7	0	0	0	0	7	0	0	0	0	0	0	0	7
11:30-11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45-12:00	0	0	11	0	0	0	0	11	0	0	0	1	0	0	0	12
Hourly Total	0	0	18	0	0	0	0	18	0	0	0	1	0	0	0	19
12:00-12:15	0	0	5	1	0	0	0	6	0	1	0	2	0	0	0	9
12:15-12:30	0	0	7	1	0	0	0	8	0	0	0	1	0	0	0	9
12:30-12:45	0	0	7	0	0	0	0	7	0	0	0	1	0	0	0	8
12:45-13:00	0	0	6	2	0	0	0	8	0	0	0	1	0	0	0	9
Hourly Total	0	0	25	4	0	0	0	29	0	1	0	4	0	0	0	34
13:00-13:15	0	0	10	0	0	0	0	10	0	0	0	0	0	0	0	10
13:15-13:30	0	0	5	0	0	0	0	5	0	0	0	0	0	0	0	5
13:30-13:45	0	0	7	0	0	0	0	7	0	0	0	0	0	0	0	7
13:45-14:00	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	3
Hourly Total	0	0	25	0	0	0	0	25	0	0	0	0	0	0	0	25
Session Total	0	0	93	5	1	0	0	99	0	1	0	5	0	0	0	105

TIME	From A							To A							TOTAL	
	BIKCYCLE	MCYCLE	CAR	LDV	ODV1	ODV2	BUS	TOTAL	BIKCYCLE	MCYCLE	CAR	LDV	ODV1	ODV2		BUS
07:00-07:15	0	0	5	2	0	0	0	7	0	0	0	0	0	0	0	7
07:15-07:30	0	0	5	1	0	0	0	6	0	0	0	0	1	0	0	7
07:30-07:45	0	0	10	0	0	0	0	10	0	0	3	0	1	0	0	14
07:45-08:00	0	0	9	0	0	0	0	9	0	0	4	0	0	0	0	13
Hourly Total	0	0	29	3	0	0	0	32	0	0	16	0	1	0	0	49
08:00-08:15	0	0	11	0	0	0	0	11	0	0	5	0	1	1	0	17
08:15-08:30	0	0	15	0	1	0	0	16	0	0	5	1	1	0	0	23
08:30-08:45	0	0	19	2	1	0	0	22	0	0	6	0	0	0	0	28
08:45-09:00	0	0	27	2	0	0	0	29	0	0	9	1	0	0	0	39
Hourly Total	0	0	73	4	2	0	0	79	0	0	26	2	2	1	0	109
09:00-09:15	0	1	23	1	0	0	0	25	0	0	12	1	0	0	0	38
09:15-09:30	0	0	20	3	0	0	0	23	0	0	10	0	1	0	0	34
09:30-09:45	0	0	31	3	0	0	0	34	0	0	9	3	1	0	0	47
09:45-10:00	0	0	34	2	1	0	0	37	0	0	14	2	1	0	0	54
Hourly Total	0	1	108	9	1	0	0	119	0	0	45	6	2	0	0	167
Session Total	0	1	230	12	3	0	0	246	0	0	87	3	3	1	0	337
10:00-10:15	0	0	28	1	0	0	0	29	0	0	13	0	1	0	0	44
10:15-10:30	0	0	36	1	1	0	0	38	0	1	21	0	1	0	0	61
10:30-10:45	0	0	32	1	1	0	0	34	0	0	19	0	0	0	0	53
10:45-11:00	0	0	27	2	0	0	0	29	0	0	16	2	0	0	0	47
Hourly Total	0	0	103	6	2	0	0	111	0	1	69	2	2	0	0	185
11:00-11:15	0	0	27	1	0	0	0	28	0	0	12	0	0	0	0	40
11:15-11:30	0	0	35	3	0	0	0	38	0	0	12	0	0	0	0	50
11:30-11:45	0	0	37	1	0	0	0	38	0	0	10	1	0	0	0	49
11:45-12:00	0	1	39	2	0	0	0	42	0	0	11	0	0	0	0	53
Hourly Total	0	1	138	7	0	0	0	146	0	0	45	1	0	0	0	192
12:00-12:15	0	0	19	1	0	0	0	20	0	1	6	1	0	0	0	28
12:15-12:30	0	0	24	0	0	0	0	24	0	0	12	0	0	1	0	37
12:30-12:45	0	0	28	2	1	0	0	31	0	0	0	0	0	0	0	31
12:45-13:00	0	0	32	1	0	0	0	33	0	0	11	1	0	0	0	45
Hourly Total	0	0	103	4	1	0	0	108	0	1	40	2	0	0	0	152
13:00-13:15	0	0	30	1	0	0	0	31	0	0	21	0	0	0	0	52
13:15-13:30	0	0	34	2	0	0	0	36	0	0	15	0	0	0	0	51
13:30-13:45	0	0	38	0	0	0	0	38	0	0	17	2	0	1	0	58
Hourly Total	0	0	136	4	0	0	0	140	0	0	53	2	1	1	0	191
Session Total	0	1	362	20	3	0	0	376	0	2	205	7	3	2	0	587

TIME	From B							To B							TOTAL	
	BIKYLE	MICYLE	CAR	LDV	DDV1	DDV2	BUS	TOTAL	BIKYLE	MICYLE	CAR	LDV	DDV1	DDV2		BUS
07:00-07:15	0	0	20	1	1	0	0	22	0	0	22	0	0	0	0	24
07:15-07:30	0	0	21	1	0	0	0	22	0	0	21	2	0	0	0	23
07:30-07:45	0	0	24	1	1	1	0	27	0	0	17	1	0	0	0	18
07:45-08:00	0	0	18	1	2	0	0	21	0	0	22	0	1	1	0	24
Hourly Total	0	0	83	5	4	1	0	93	0	0	82	3	2	1	0	88
08:00-08:15	0	0	23	0	1	1	0	25	0	0	23	0	1	0	0	24
08:15-08:30	0	0	22	1	3	0	0	26	0	0	35	1	2	0	0	39
08:30-08:45	0	0	43	1	0	0	0	44	0	1	26	0	1	0	0	51
08:45-09:00	0	0	24	0	0	0	0	24	0	0	74	0	0	0	0	74
Hourly Total	0	0	128	3	4	1	0	136	0	1	161	11	4	0	0	187
09:00-09:15	0	0	59	1	1	0	0	61	0	1	45	4	1	0	0	61
09:15-09:30	0	1	34	4	1	0	0	40	0	0	55	0	2	0	0	56
09:30-09:45	0	0	37	4	2	0	0	43	0	0	77	0	1	0	0	83
09:45-10:00	0	0	55	4	1	0	0	60	0	0	83	0	1	0	0	85
Hourly Total	0	1	285	13	5	0	0	299	0	1	252	51	5	0	0	356
Session Total	0	1	442	17	10	1	0	459	0	2	347	66	10	1	0	427
10:00-10:15	0	1	55	0	2	0	0	57	0	0	80	2	1	0	0	83
10:15-10:30	0	1	50	2	1	0	0	53	0	0	90	3	1	0	0	94
10:30-10:45	0	0	75	3	3	0	0	81	0	0	93	1	1	0	0	96
10:45-10:00	0	0	94	4	0	0	0	98	0	0	88	4	0	0	0	102
Hourly Total	0	2	284	19	6	0	0	292	0	0	351	10	3	0	0	364
10:00-10:15	0	0	69	0	1	0	0	70	0	0	87	2	1	0	0	89
10:15-10:30	0	0	103	0	0	0	0	103	0	0	102	4	0	1	0	107
10:30-10:45	0	0	77	0	1	0	0	78	0	0	95	1	0	0	0	87
10:45-11:00	0	1	77	3	0	0	0	81	0	3	95	2	0	0	0	91
Hourly Total	0	1	326	13	2	0	0	340	0	3	381	9	1	1	0	375
11:00-11:15	0	1	73	1	0	0	0	75	0	0	49	2	0	0	0	81
11:15-11:30	0	1	75	0	0	1	0	76	0	0	93	2	0	0	0	86
11:30-11:45	0	0	90	2	0	0	0	92	0	0	85	3	1	0	0	99
11:45-12:00	0	0	75	3	1	0	0	79	0	0	91	1	1	0	0	83
Hourly Total	0	2	316	6	1	0	0	324	0	0	318	8	2	0	0	334
12:00-12:15	0	0	69	0	1	0	0	70	0	0	101	2	0	1	0	104
12:15-12:30	0	0	89	3	0	0	0	92	0	0	89	2	0	0	0	91
12:30-12:45	0	0	86	0	0	0	0	86	0	0	94	4	1	0	0	95
12:45-13:00	0	0	75	4	0	1	0	80	0	0	95	0	1	0	0	86
Hourly Total	0	0	340	10	1	1	0	352	0	0	378	8	2	1	0	363
Session Total	0	5	1383	64	10	2	0	1464	0	3	1459	36	5	2	0	1487

TIME	From C							To C							TOTAL	
	BIICYCLE	MCYCLE	CAR	LDV	ODV1	ODV2	BUS	BIICYCLE	MCYCLE	CAR	LDV	ODV1	ODV2	BUS		
07:00-07:15	0	0	17	3	1	0	0	21	0	0	77	1	1	0	0	16
07:15-07:30	0	0	16	1	0	0	0	17	0	0	15	3	0	0	0	16
07:30-07:45	0	0	7	1	0	0	0	8	0	0	21	1	0	1	0	23
07:45-08:00	0	0	13	0	1	1	0	15	0	0	14	1	2	0	0	17
Hourly Total	0	0	53	5	2	1	0	61	0	0	82	6	3	1	0	71
08:00-08:15	0	0	16	0	1	0	0	17	0	0	24	0	0	0	0	24
08:15-08:30	0	0	20	1	1	0	0	22	0	0	16	0	2	0	0	16
08:30-08:45	0	1	33	3	0	0	0	37	0	0	37	1	0	0	0	38
08:45-09:00	0	0	47	3	0	0	0	50	0	0	25	4	0	0	0	29
Hourly Total	0	1	116	7	2	0	0	126	0	0	102	5	2	0	0	109
09:00-09:15	0	0	38	2	1	0	0	41	0	1	43	0	1	0	0	44
09:15-09:30	0	0	30	2	2	0	0	34	0	1	44	4	0	0	0	49
09:30-09:45	0	0	46	2	1	0	0	49	0	0	28	1	1	0	0	30
09:45-10:00	0	0	49	4	0	0	0	53	0	0	41	2	0	0	0	45
Hourly Total	0	0	164	11	4	0	0	181	0	1	156	7	2	0	0	164
Weekend Total	0	1	336	24	6	1	0	368	0	1	320	16	7	1	0	352
10:00-10:15	0	0	52	1	1	0	0	54	0	1	42	5	1	0	0	49
10:15-10:30	0	0	51	2	0	0	0	53	0	0	16	2	0	0	0	55
10:30-10:45	0	0	61	0	0	0	0	61	0	0	35	3	3	0	0	62
10:45-10:00	0	0	61	2	0	0	0	63	0	0	79	2	0	0	0	80
Hourly Total	0	0	225	5	1	0	0	231	0	1	224	12	4	0	0	231
10:00-10:15	0	0	60	1	1	0	0	62	0	0	27	3	1	0	0	67
10:15-10:30	0	0	67	1	0	1	0	69	0	0	61	6	0	0	0	67
10:30-10:45	0	0	49	0	0	0	0	49	0	0	67	4	1	0	0	72
10:45-11:00	0	0	47	0	0	0	0	47	0	1	65	3	0	0	0	70
Hourly Total	0	0	222	2	1	1	0	226	0	1	261	16	2	0	0	260
11:00-11:15	0	0	30	1	0	0	0	31	0	0	65	0	0	0	0	66
11:15-11:30	0	0	69	2	0	0	0	71	0	1	63	2	0	0	0	66
11:30-11:45	0	0	57	1	0	0	0	58	0	0	61	2	0	0	0	63
11:45-12:00	0	0	59	0	1	0	0	60	0	0	64	2	1	0	0	67
Hourly Total	0	0	215	4	1	0	0	220	0	1	252	6	1	0	0	221
12:00-12:15	0	0	60	1	0	0	0	61	0	0	71	5	0	0	0	76
12:15-12:30	0	0	57	0	1	0	0	58	0	0	65	2	0	0	0	61
Hourly Total	0	0	242	2	2	0	0	246	0	0	260	12	0	0	0	251
Weekend Total	0	0	365	15	6	1	0	388	0	3	355	47	7	0	0	393

TIME	From A							To A							TOTAL	
	PICTYLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS	PICTYLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS		
10:00-10:15	0	0	46	2	0	0	0	42	0	0	22	1	0	0	0	24
10:15-10:30	0	0	27	1	0	0	0	28	0	0	10	0	0	0	0	18
10:30-10:45	0	0	52	1	1	0	0	54	0	0	13	2	0	0	0	15
10:45-11:00	0	1	46	0	0	0	0	52	0	0	11	0	1	0	0	12
Hourly Total	0	1	165	0	1	0	0	176	0	0	56	3	1	0	0	21
11:00-11:15	0	1	37	0	0	0	0	38	0	0	18	1	0	0	0	19
11:15-11:30	0	0	43	1	0	0	0	44	0	0	10	0	0	0	0	16
11:30-11:45	0	0	24	0	0	0	0	24	0	0	7	1	0	0	0	8
11:45-12:00	0	0	40	0	1	0	0	42	0	0	12	0	0	0	0	12
Hourly Total	0	1	147	2	1	0	0	151	0	0	47	2	0	0	0	20
12:00-12:15	0	0	24	0	0	0	0	24	0	0	11	0	0	0	0	11
12:15-12:30	0	1	30	2	1	0	0	34	0	0	7	0	0	0	0	7
12:30-12:45	0	1	52	1	1	0	0	55	0	0	14	0	0	0	0	14
12:45-13:00	0	0	38	3	0	0	0	41	0	1	11	0	0	0	0	12
Hourly Total	0	2	172	6	2	0	0	180	0	1	43	0	0	0	0	24
13:00-13:15	0	0	38	1	1	0	0	40	0	0	12	0	0	0	0	12
13:15-13:30	0	0	44	1	0	0	0	45	0	1	10	2	0	0	0	15
13:30-13:45	0	0	46	0	0	0	0	46	0	0	23	0	0	0	0	23
13:45-14:00	0	1	37	0	0	0	0	38	0	0	11	1	0	0	0	12
Hourly Total	0	1	165	2	1	0	0	176	0	1	56	3	0	0	0	22
Season Total	0	5	520	27	5	1	0	539	0	2	211	6	1	0	0	222



Bradford - Manual Traffic Survey: Saturday, 25 March 2017

Produced by Streetwise Services Ltd.

Junction: A - A658 Harrogate Road North / B - Sainsburys / C - A658 Harrogate Road South

Approach: B - Sainsburys

TIME	B to C							B to A							B to B									
	PICTYLE	MICYCLE	CAR	LGV	DDV1	DDV2	BUS	TOTAL	PICTYLE	MICYCLE	CAR	LGV	DDV1	DDV2	BUS	TOTAL	PICTYLE	MICYCLE	CAR	LGV	DDV1	DDV2	BUS	TOTAL
10:00 - 10:05	0	0	46	0	0	0	0	46	0	0	22	1	0	0	0	23	0	0	0	0	0	0	0	0
10:05 - 10:10	0	0	47	1	0	0	0	48	0	0	19	0	0	0	0	19	0	0	0	0	0	0	0	0
10:10 - 10:15	0	0	69	1	0	0	0	72	0	0	13	2	0	0	0	16	0	0	0	0	0	0	0	0
10:15 - 10:20	0	1	76	4	1	0	0	82	0	0	11	0	1	0	0	12	0	0	1	0	0	0	0	1
Hourly Total	0	1	232	51	1	0	0	285	0	0	65	3	1	0	0	69	0	0	1	0	0	0	0	1
11:00 - 11:05	0	0	73	0	0	0	0	73	0	0	18	1	0	0	0	19	0	0	0	0	0	0	0	0
11:05 - 11:10	0	0	67	0	0	0	0	67	0	0	10	0	0	0	0	10	0	0	0	0	0	0	0	0
11:10 - 11:15	0	0	69	0	1	0	0	70	0	0	7	1	0	0	0	8	0	0	0	0	0	0	0	0
11:15 - 11:20	0	0	77	0	1	0	0	80	0	0	12	0	0	0	0	12	0	0	0	0	0	0	0	0
Hourly Total	0	0	282	10	2	0	0	294	0	0	47	2	0	0	0	49	0	0	0	0	0	0	0	0
12:00 - 12:05	0	1	66	1	0	0	0	68	0	0	11	0	0	0	0	11	0	0	2	0	0	0	0	2
12:05 - 12:10	0	0	85	2	0	0	0	87	0	0	7	0	0	0	0	7	0	0	0	0	0	0	0	0
12:10 - 12:15	0	1	71	1	0	0	0	73	0	0	14	0	0	0	0	14	0	0	0	0	0	0	0	0
12:15 - 12:20	0	0	69	0	1	0	0	70	0	1	11	0	0	0	0	12	0	0	0	0	0	0	0	0
Hourly Total	0	2	271	4	1	0	0	278	0	1	43	0	0	0	0	44	0	0	2	0	0	0	0	2
13:00 - 13:05	0	0	69	4	0	0	0	73	0	0	12	0	0	0	0	12	0	0	0	0	0	0	0	0
13:05 - 13:10	0	0	48	3	0	0	0	51	0	1	10	2	0	0	0	13	0	0	0	0	0	0	0	0
13:10 - 13:15	0	0	68	0	0	0	0	68	0	0	23	0	0	0	0	23	0	0	0	0	0	0	0	0
13:15 - 13:20	0	0	62	0	0	0	0	64	0	0	11	1	0	0	0	12	0	0	0	0	0	0	0	0
Hourly Total	0	0	242	11	0	0	0	253	0	1	56	3	0	0	0	60	0	0	0	0	0	0	0	0
Session Total	0	0	1023	41	4	0	0	1068	0	2	211	5	1	0	0	222	0	0	3	0	0	0	0	3

TIME	From B							To B							TOTAL
	BIKCYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS	BIKCYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS	
10:00-10:15	0	0	87	4	0	0	0	71	0	0	0	0	0	0	86
10:15-10:30	0	0	85	1	0	0	0	87	0	0	0	0	0	0	86
10:30-10:45	0	0	82	0	0	0	0	87	0	0	120	5	1	0	134
10:45-11:00	0	1	85	4	2	0	0	95	0	2	89	5	1	0	97
Hourly Total	0	1	339	14	2	0	0	339	0	2	300	10	2	0	417
11:00-11:15	0	3	91	0	0	0	0	95	0	1	100	2	0	0	108
11:15-11:30	0	0	77	0	0	0	0	82	0	0	80	4	0	0	86
11:30-11:45	0	0	73	4	1	0	0	78	0	0	160	3	0	0	189
11:45-12:00	0	0	80	0	1	0	0	81	0	0	95	3	1	0	99
Hourly Total	0	3	330	12	2	0	0	347	0	1	360	12	1	0	364
12:00-12:15	0	1	83	1	0	0	0	86	0	1	81	0	0	1	89
12:15-12:30	0	0	82	0	0	0	0	84	0	1	85	3	1	0	94
12:30-12:45	0	1	85	1	0	0	0	87	0	1	97	2	1	0	101
12:45-13:00	0	1	76	0	1	0	0	83	0	1	80	0	1	0	89
Hourly Total	0	3	316	3	1	0	0	339	0	4	320	10	3	1	357
13:00-13:15	0	0	81	4	0	0	0	85	0	0	74	3	2	0	79
13:15-13:30	0	1	85	0	0	0	0	86	0	1	76	0	0	0	82
13:30-13:45	0	0	86	2	0	0	0	88	0	0	80	7	1	0	101
13:45-14:00	0	0	73	3	0	0	0	76	1	1	75	6	0	0	85
Hourly Total	0	1	288	14	0	0	0	313	1	2	316	21	3	0	345
Season Total	0	6	1247	43	6	0	0	1300	1	9	1430	63	9	1	1513

TIME	From C							To C							TOTAL	
	PICTYLE	MICYCLE	CAR	LDV	DDV1	DDV2	BUS	PICTYLE	MICYCLE	CAR	LDV	DDV1	DDV2	BUS		
10:00-10:15	0	0	50	4	0	0	0	54	0	0	45	3	0	0	0	46
10:15-10:30	0	0	50	3	0	0	0	53	0	0	47	1	0	0	0	48
10:30-10:45	0	0	76	4	0	0	0	80	0	0	69	3	0	0	0	72
10:45-11:00	0	1	42	0	1	0	0	44	0	1	76	4	1	0	0	82
Hourly Total	0	1	227	11	1	0	0	249	0	1	325	11	1	0	0	339
11:00-11:15	0	0	68	2	0	0	0	70	0	3	73	0	0	0	0	76
11:15-11:30	0	0	37	3	0	0	0	40	0	0	57	5	0	0	0	72
11:30-11:45	0	0	46	3	0	0	0	49	0	0	66	3	1	0	0	79
11:45-12:00	0	0	40	1	0	0	0	41	0	0	77	2	1	0	0	80
Hourly Total	0	0	197	9	0	0	0	206	0	3	263	10	2	0	0	238
12:00-12:15	0	1	58	0	0	0	0	59	0	1	60	1	0	0	0	61
12:15-12:30	0	0	31	1	0	0	0	32	0	0	55	2	0	0	0	57
12:30-12:45	0	0	45	1	0	0	0	46	0	1	71	1	0	0	0	73
12:45-13:00	0	1	54	2	1	0	0	58	0	0	65	5	1	0	0	71
Hourly Total	0	2	188	4	1	0	0	197	0	2	253	9	1	0	0	263
13:00-13:15	0	0	36	2	1	0	0	39	0	0	69	4	0	0	0	73
13:15-13:30	0	1	32	4	0	0	0	37	0	0	48	3	0	0	0	81
13:30-13:45	0	0	47	2	1	0	0	50	0	0	63	2	0	0	0	85
13:45-14:00	1	1	38	4	0	0	0	43	0	0	62	2	0	0	0	84
Hourly Total	1	1	153	12	2	0	0	169	0	0	242	11	0	0	0	233
Season Total	1	4	727	38	4	0	0	782	0	6	1033	41	4	0	0	1084

TIME	From A							To A							TOTAL	
	PICTYLE	MCYCLE	CAR	LDV	ODV1	ODV2	BUS	PICTYLE	MCYCLE	CAR	LDV	ODV1	ODV2	BUS		
07:00 - 07:15	0	0	1	1	0	0	0	2	0	0	2	0	0	0	0	4
07:15 - 07:30	0	0	9	1	0	0	0	10	0	0	7	1	0	0	0	8
07:30 - 07:45	0	0	16	0	0	0	0	16	1	0	16	0	0	0	0	17
07:45 - 08:00	0	0	10	0	0	0	0	10	0	0	10	0	0	0	0	10
Hourly Total	0	0	36	2	0	0	0	42	1	0	44	1	0	0	0	44
08:00 - 08:15	0	0	4	0	0	0	0	4	0	0	5	0	0	0	0	9
08:15 - 08:30	0	0	1	0	0	0	1	2	0	0	9	0	0	0	0	9
08:30 - 08:45	0	0	2	0	0	0	0	2	0	0	8	1	0	0	0	9
08:45 - 09:00	0	0	9	1	0	0	0	10	0	0	26	1	0	0	0	27
Hourly Total	0	0	16	1	0	0	1	18	0	0	52	2	0	0	0	54
09:00 - 09:15	0	0	3	0	0	0	0	3	0	0	1	1	0	0	0	4
09:15 - 09:30	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	3
09:30 - 09:45	0	0	0	0	1	0	0	1	0	0	2	0	0	0	0	2
09:45 - 10:00	0	0	3	0	0	0	0	3	0	0	2	0	0	0	0	2
Hourly Total	0	0	6	0	1	0	0	7	0	0	16	1	1	0	0	12
Session Total	0	0	52	2	1	0	1	62	1	0	100	4	1	0	0	102
10:00 - 10:15	0	0	19	0	0	0	0	19	0	0	3	1	0	0	0	4
10:15 - 10:30	0	0	1	0	0	0	0	1	0	0	5	1	0	0	0	6
10:30 - 10:45	0	0	2	0	0	0	0	2	0	0	6	1	0	0	0	7
10:45 - 11:00	0	0	1	0	0	0	0	1	0	0	14	1	0	0	0	16
Hourly Total	0	0	14	0	0	0	0	14	0	0	28	4	0	0	0	22
11:00 - 11:15	0	0	1	1	0	0	0	2	0	0	5	0	0	0	0	6
11:15 - 11:30	0	0	2	0	0	0	0	2	0	0	8	0	0	0	0	8
11:30 - 11:45	0	0	2	0	0	0	0	2	0	0	11	0	0	0	0	11
11:45 - 12:00	0	0	1	0	0	0	0	1	0	0	11	1	0	0	0	12
Hourly Total	0	0	6	1	0	0	0	7	0	0	35	2	0	0	0	22
12:00 - 12:15	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5
12:15 - 12:30	0	0	4	0	0	0	0	4	0	0	7	1	0	0	0	8
12:30 - 12:45	0	0	3	0	0	0	0	3	0	0	2	1	0	0	0	6
12:45 - 13:00	0	0	1	0	0	0	0	1	0	0	2	0	0	0	0	2
Hourly Total	0	0	8	0	0	0	0	8	0	0	16	2	0	0	0	10
Session Total	0	0	41	4	0	0	0	45	0	0	100	11	0	0	0	116

TIME	From B							To B							TOTAL	
	BIKYLE	MICYCLE	CAR	LDV	DDV1	DDV2	BUS	BIKYLE	MICYCLE	CAR	LDV	DDV1	DDV2	BUS		
07:00 - 07:15	0	0	2	0	0	0	0	2	0	0	1	0	0	0	0	1
07:15 - 07:30	0	0	7	1	0	0	0	8	0	0	3	1	0	0	0	10
07:30 - 07:45	1	0	16	0	0	0	0	17	0	0	10	0	0	0	0	16
07:45 - 08:00	0	0	19	0	0	0	0	19	0	0	9	0	0	0	0	9
Hourly Total	1	0	44	1	0	0	0	45	0	0	24	1	0	0	0	50
08:00 - 08:15	0	0	9	0	0	0	0	9	0	0	1	0	0	0	0	1
08:15 - 08:30	0	0	9	0	0	0	0	9	0	0	1	0	0	0	0	1
08:30 - 08:45	0	0	8	1	0	0	0	9	0	0	0	0	0	0	0	9
08:45 - 09:00	0	0	20	1	0	0	0	21	0	0	0	1	0	0	0	7
Hourly Total	0	0	52	2	0	0	0	54	0	0	2	1	0	0	0	9
09:00 - 09:15	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0
09:15 - 09:30	0	0	2	0	1	0	0	3	0	0	0	0	0	0	0	0
09:30 - 09:45	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0
09:45 - 10:00	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0
Hourly Total	0	0	10	1	1	0	0	12	0	0	0	0	0	0	0	0
Session Total	1	0	106	4	1	0	0	112	0	0	42	2	0	0	0	42
10:00 - 10:15	0	0	3	1	0	0	0	4	0	0	7	0	0	0	0	7
10:15 - 10:30	0	0	5	1	0	0	0	6	0	0	9	0	0	0	0	9
10:30 - 10:45	0	0	6	0	0	0	0	6	0	0	1	0	0	0	0	1
10:45 - 11:00	0	0	12	1	0	0	0	13	0	0	1	0	0	0	0	1
Hourly Total	0	0	26	3	0	0	0	29	0	0	8	0	0	0	0	9
11:00 - 11:15	0	0	5	0	0	0	0	5	0	0	0	0	0	0	0	0
11:15 - 11:30	0	0	8	0	0	0	0	8	0	0	0	0	0	0	0	0
11:30 - 11:45	0	0	12	1	0	0	0	13	0	0	1	0	0	0	0	1
11:45 - 12:00	0	0	8	2	0	0	0	10	0	0	4	0	0	0	0	4
Hourly Total	0	0	33	3	0	0	0	36	0	0	6	0	0	0	0	6
12:00 - 12:15	0	0	7	1	0	0	0	8	0	0	2	1	0	0	0	3
12:15 - 12:30	0	0	2	0	0	0	0	2	0	0	1	0	0	0	0	1
12:30 - 12:45	0	0	11	0	0	0	0	11	0	0	3	0	0	0	0	3
12:45 - 13:00	0	0	10	1	0	0	0	11	0	0	0	0	0	0	0	0
Hourly Total	0	0	30	2	0	0	0	32	0	0	6	1	0	0	0	7
13:00 - 13:15	0	0	5	0	0	0	0	5	0	0	0	0	0	0	0	0
13:15 - 13:30	0	0	7	1	0	0	0	8	0	0	3	0	0	0	0	3
13:30 - 13:45	0	0	2	1	0	0	0	3	0	0	3	0	0	0	0	3
13:45 - 13:59	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0
Hourly Total	0	0	16	2	0	0	0	18	0	0	6	0	0	0	0	6
Session Total	0	0	185	10	0	0	0	195	0	0	26	1	0	0	0	27

TIME	From C								To C							
	BIKCYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS	TOTAL	BIKCYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS	TOTAL
07:00-07:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
07:15-07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30-07:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
07:45-08:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Hourly Total	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3
08:00-08:15	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3
08:15-08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
08:30-08:45	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
08:45-09:00	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3
Hourly Total	0	0	0	0	0	0	0	0	0	0	6	0	0	0	1	7
09:00-09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15-09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30-09:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
09:45-10:00	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3
Hourly Total	0	0	0	0	0	0	0	0	0	0	6	0	1	0	0	7
Session Total	0	0	0	0	0	0	0	0	0	0	16	1	1	0	1	19
10:00-10:15	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3
10:15-10:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
10:30-10:45	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
10:45-10:59	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	2
Hourly Total	0	0	2	1	0	0	0	0	2	0	0	0	0	0	0	3
10:00-10:15	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2
10:15-10:30	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
10:30-10:45	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3
10:45-11:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Hourly Total	0	0	0	0	0	0	0	0	0	0	6	2	0	0	0	8
11:00-11:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
11:15-11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30-11:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
11:45-12:00	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Hourly Total	0	0	1	0	0	0	0	0	1	0	2	0	0	0	0	3
12:00-12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15-12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30-12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45-13:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Hourly Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Session Total	0	0	3	1	0	0	0	0	4	0	0	16	3	0	0	19

TIME	From A							To A							TOTAL	
	PICYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS	PICYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS		
10:00 - 10:15	0	0	2	0	0	0	0	2	0	0	1	0	0	0	0	1
10:15 - 10:30	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
10:30 - 10:45	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
10:45 - 11:00	0	0	1	0	0	0	0	1	0	3	2	0	0	0	0	6
Hourly Total	0	0	3	0	0	0	0	3	0	6	3	0	0	0	0	12
11:00 - 11:15	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1
11:15 - 11:30	0	0	3	0	0	0	0	3	4	0	2	0	0	0	0	9
11:30 - 11:45	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3
11:45 - 12:00	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3
Hourly Total	0	0	4	0	0	0	0	4	4	6	2	0	0	0	0	20
12:00 - 12:15	0	0	4	0	0	0	0	4	0	7	0	0	0	0	0	11
12:15 - 12:30	0	0	1	0	0	0	0	1	0	2	1	0	0	0	0	4
12:30 - 12:45	0	0	0	1	0	0	0	1	0	2	0	0	0	0	0	3
12:45 - 13:00	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	3
Hourly Total	0	0	8	1	0	0	0	9	4	9	1	0	0	0	0	24
13:00 - 13:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
13:15 - 13:30	0	0	1	0	0	0	0	1	0	4	0	0	0	0	0	5
13:30 - 13:45	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	2
13:45 - 14:00	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2
Hourly Total	0	0	3	0	0	0	0	3	0	5	1	0	0	0	0	9
Session Total	0	0	16	1	0	0	0	17	4	31	4	0	0	0	0	32

TIME	From B							To B							TOTAL	
	PICYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS	PICYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS		
10:00 - 10:15	0	0	1	0	0	0	0	1	0	0	2	0	0	0	0	2
10:15 - 10:30	0	0	5	0	0	0	0	5	0	0	0	0	0	0	0	5
10:30 - 10:45	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1
10:45 - 11:00	0	0	3	2	0	0	0	5	0	1	0	0	0	0	0	6
Hourly Total	0	0	10	2	0	0	0	12	0	1	2	0	0	0	15	
11:00 - 11:15	0	0	2	0	0	0	0	2	0	1	0	0	0	0	0	3
11:15 - 11:30	0	0	2	0	0	0	0	2	0	3	0	0	0	0	0	5
11:30 - 11:45	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	2
11:45 - 12:00	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	2
Hourly Total	0	0	14	0	0	0	0	14	0	4	0	0	0	0	18	
12:00 - 12:15	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
12:15 - 12:30	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	2
12:30 - 12:45	0	0	2	0	0	0	0	2	0	0	1	0	0	0	0	3
12:45 - 13:00	0	0	5	0	0	0	0	5	0	1	0	0	0	0	0	6
Hourly Total	0	0	19	0	0	0	0	19	0	3	1	0	0	0	23	
13:00 - 13:15	0	0	5	1	0	0	0	6	0	0	0	0	0	0	0	6
13:15 - 13:30	0	0	4	0	0	0	0	4	0	0	0	0	0	0	0	4
13:30 - 13:45	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
13:45 - 14:00	0	0	1	1	0	0	0	2	0	0	0	0	0	0	0	2
Hourly Total	0	0	10	1	0	0	0	11	0	1	0	0	0	0	12	
Session Total	0	0	49	3	0	0	0	52	0	5	1	0	0	0	57	

TIME	From C								To C							
	PICYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS	TOTAL	PICYCLE	MICYCLE	CAR	LDV	ODV1	ODV2	BUS	TOTAL
10:00 - 10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 - 10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 - 10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 - 11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 - 11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 - 11:30	4	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4
11:30 - 11:45	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1
11:45 - 12:00	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1
Hourly Total	4	0	2	0	0	0	0	6	0	0	0	0	0	0	0	6
12:00 - 12:15	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1
12:15 - 12:30	0	0	1	1	0	0	0	2	0	0	1	0	0	0	0	3
12:30 - 12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 - 13:00	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
Hourly Total	0	0	2	1	0	0	0	3	0	2	0	0	0	0	0	5
13:00 - 13:15	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1
13:15 - 13:30	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
13:30 - 13:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
13:45 - 14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	1	0	0	0	0	1	0	2	0	0	0	0	0	3
Season Total	4	0	5	1	0	0	0	10	0	2	5	0	0	0	0	17

Bradford ATC 10, New Lane

Produced by Streetwise Services Ltd.



Bradford ATC 10, New Lane

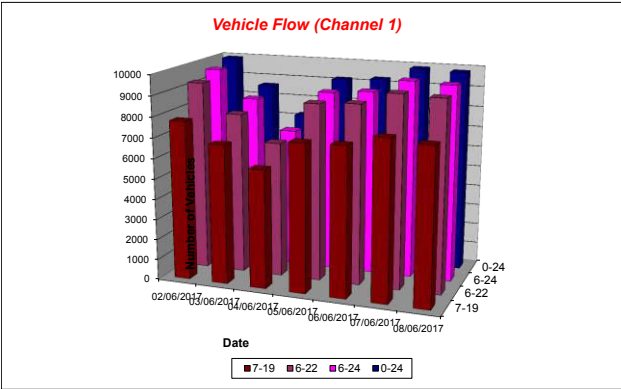
Produced by Streetwise Services Ltd.



Channel 1 - Eastbound								Vehicle Flow		Week 1	
Hr Ending	02/06/2017 Friday	03/06/2017 Saturday	04/06/2017 Sunday	05/06/2017 Monday	06/06/2017 Tuesday	07/06/2017 Wednesday	08/06/2017 Thursday	5 Day Ave	7 Day Ave		
1	58	105	141	52	42	40	55	49	70		
2	31	65	77	27	19	29	25	26	39		
3	20	33	54	13	21	20	16	18	25		
4	16	42	37	34	20	18	16	21	26		
5	32	30	34	54	41	31	38	39	37		
6	148	73	59	138	134	133	140	139	118		
7	498	144	95	504	553	555	585	539	419		
8	810	241	139	818	852	845	832	831	648		
9	757	404	185	779	785	742	764	765	631		
10	634	591	358	512	565	617	606	587	555		
11	572	679	582	535	516	559	565	549	573		
12	590	707	620	517	522	555	537	544	578		
13	640	635	616	590	539	597	571	573	588		
14	652	702	618	519	523	586	497	555	585		
15	615	575	599	500	182	574	539	482	512		
16	632	573	600	536	613	599	611	588	595		
17	678	581	592	646	777	731	777	722	683		
18	623	621	471	688	813	738	732	719	669		
19	575	490	400	598	559	634	542	582	543		
20	429	427	325	437	457	448	519	458	435		
21	311	288	245	289	308	345	332	317	303		
22	287	210	161	205	195	272	267	239	224		
23	191	213	124	128	162	182	159	164	166		
24	162	194	75	66	68	84	101	96	107		
7-19	7778	6799	5780	7207	7246	7737	7573	7508	7160		
6-22	9273	7668	6006	8642	8759	9337	9276	9061	8540		
6-24	9276	8276	6903	8642	8759	9337	9276	9322	8813		
0-24	9931	8623	7207	9154	9266	9894	9826	9614	9129		

Channel 1 - Eastbound								Average Speed		Week 1	
Hr Ending	02/06/2017 Friday	03/06/2017 Saturday	04/06/2017 Sunday	05/06/2017 Monday	06/06/2017 Tuesday	07/06/2017 Wednesday	08/06/2017 Thursday	5 Day Ave	7 Day Ave		
1	29.7	30.0	29.8	30.6	32.7	33.3	29.5	30.2	29.5		
2	33.2	31.6	31.1	32.5	32.7	33.3	32.7	32.8	32.7		
3	29.0	31.8	32.2	32.6	34.0	32.8	30.9	32.8	30.2		
4	30.8	32.6	33.9	32.3	34.0	33.3	30.3	33.3	30.5		
5	30.2	28.2	32.3	32.3	32.0	33.6	33.6	33.6	30.6		
6	30.1	31.5	33.2	30.3	30.2	31.8	30.2	31.8	30.2		
7	27.1	31.1	31.2	27.4	27.6	28.4	27.6	27.6	27.6		
8	22.8	29.9	30.4	23.4	23.4	23.7	21.6	23.7	21.6		
9	22.6	27.7	30.1	23.6	24.5	23.1	23.0	24.5	23.0		
10	23.7	26.0	27.6	25.7	25.6	24.5	24.6	24.5	24.6		
11	22.7	25.3	26.5	25.3	25.5	24.9	24.9	24.9	24.9		
12	23.7	24.2	25.4	26.2	24.7	25.1	23.5	24.7	23.5		
13	23.5	22.9	24.6	24.7	24.6	25.7	23.4	24.6	23.4		
14	23.2	22.1	25.5	24.7	24.5	26.5	23.6	24.5	23.6		
15	23.9	25.0	25.0	24.6	24.8	24.0	22.3	24.0	22.3		
16	23.3	25.3	25.4	24.0	23.2	22.5	21.2	22.5	21.2		
17	22.5	25.4	25.9	22.3	21.7	22.4	20.6	22.4	20.6		
18	23.0	25.5	26.7	23.4	21.9	21.3	20.5	23.4	20.5		
19	24.5	27.0	27.5	24.2	23.8	22.6	22.1	23.8	22.1		
20	26.3	27.2	28.6	27.2	26.7	26.2	25.7	26.7	25.7		
21	28.0	28.2	29.1	27.6	27.5	27.7	27.3	27.7	27.3		
22	27.4	29.1	29.0	28.1	27.7	27.0	25.9	27.7	25.9		
23	27.9	28.5	28.9	28.3	28.9	27.4	27.7	28.9	27.7		
24	28.1	29.2	30.0	30.4	30.3	29.3	29.9	30.3	29.9		
10-12	23.2	24.7	25.9	25.3	25.1	25.0	24.2	25.1	24.2		
14-18	24.6	26.1	26.8	26.3	26.6	26.6	25.1	26.6	25.1		
0-24	24.2	25.9	26.8	25.0	24.7	24.6	23.6	25.0	23.6		

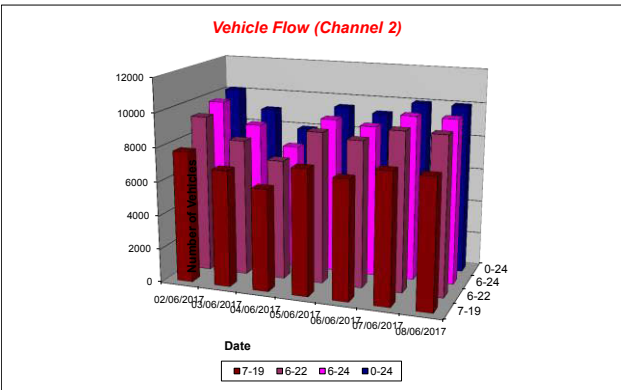
7 Day Ave 25.0



Channel 2 - Westbound								Vehicle Flow		Week 1	
Hr Ending	02/06/2017 Friday	03/06/2017 Saturday	04/06/2017 Sunday	05/06/2017 Monday	06/06/2017 Tuesday	07/06/2017 Wednesday	08/06/2017 Thursday	5 Day Ave	7 Day Ave		
1	109	158	211	75	80	72	76	82	112		
2	44	94	110	44	23	38	25	35	54		
3	31	63	76	22	19	24	19	23	36		
4	13	45	56	20	14	14	27	18	27		
5	44	51	57	23	30	23	44	33	39		
6	124	92	75	102	123	111	102	112	104		
7	287	119	95	297	290	316	339	308	250		
8	708	198	111	720	686	710	757	716	556		
9	585	376	155	574	639	665	663	625	522		
10	623	532	352	542	599	581	598	583	542		
11	546	498	439	483	519	536	526	522	533		
12	561	673	604	528	495	495	532	525	555		
13	675	684	693	540	568	540	556	576	608		
14	634	675	656	591	540	596	597	592	613		
15	662	697	689	696	596	581	571	521	570		
16	624	610	696	696	676	695	691	674	664		
17	725	669	606	732	730	705	721	723	698		
18	717	601	540	682	713	765	685	712	672		
19	693	559	421	730	687	809	698	723	657		
20	553	499	430	561	546	576	611	569	539		
21	426	346	350	428	473	468	449	449	420		
22	284	233	188	248	301	314	321	294	270		
23	269	251	181	171	189	226	217	214	215		
24	198	216	128	99	127	142	172	148	155		
7-19	7753	6872	6012	7394	7025	7680	7595	7489	7190		
6-22	9313	8069	7075	8928	8635	9354	9315	9109	8670		
6-24	9759	8536	7534	9188	8981	9725	9704	9471	9039		
0-24	10145	9039	7969	9484	9240	10004	9997	9774	9411		

Channel 2 - Westbound								Average Speed		Week 1	
Hr Ending	02/06/2017 Friday	03/06/2017 Saturday	04/06/2017 Sunday	05/06/2017 Monday	06/06/2017 Tuesday	07/06/2017 Wednesday	08/06/2017 Thursday	5 Day Ave	7 Day Ave		
1	30.7	30.7	29.9	31.4	30.6	32.4	31.4	30.6	31.4		
2	33.4	32.1	32.0	32.7	31.7	32.7	31.8	32.7	31.8		
3	30.3	32.9	32.9	33.5	32.5	31.3	32.5	31.3	32.5		
4	33.0	31.5	32.1	32.5	30.5	32.3	30.2	32.3	30.2		
5	30.4	31.3	32.2	34.0	30.2	34.3	31.8	34.0	31.8		
6	31.3	31.7	32.4	31.0	31.4	31.9	31.5	31.9	31.5		
7	27.0	30.8	30.2	27.6	28.6	28.3	26.8	28.6	26.8		
8	18.3	29.4	31.5	20.2	20.2	21.7	16.3	21.7	16.3		
9	21.1	27.0	28.9	20.1	23.0	17.3	19.4	23.0	17.3		
10	23.3	25.0	27.9	24.0	23.8	21.4	22.2	23.8	21.4		
11	23.4	24.0	26.7	23.7	24.2	23.6	23.4	24.2	23.6		
12	23.7	23.1	23.3	23.5	23.5	24.1	22.2	23.5	22.2		
13	20.7	24.0	22.0	21.0	23.2	25.0	21.0	23.2	25.0		
14	21.2	15.5	23.4	21.7	23.5	23.5	20.9	23.5	20.9		
15	21.8	20.6	21.0	22.3	21.8	21.0	19.8	21.8	19.8		
16	20.2	23.9	21.8	17.9	18.1	15.5	13.8	18.1	15.5		
17	15.1	22.5	24.9	14.8	16.3	13.5	14.8	16.3	13.5		
18	14.0	24.6	26.2	19.5	16.6	14.6	14.4	16.6	14.4		
19	19.7	26.7	27.6	19.6	19.5	18.0	17.3	19.6	17.3		
20	24.6	25.3	27.5	24.9	26.3	24.8	23.8	24.9	23.8		
21	26.8	27.1	27.3	27.2	27.0	26.8	26.0	27.0	26.8		
22	26.9	27.9	29.4	28.1	26.9	26.9	25.4	26.9	25.4		
23	27.6	28.7	29.7	28.8	28.8	28.4	27.3	28.8	27.3		
24	29.0	29.1	30.3	30.1	31.5	29.1	28.6	30.1	28.6		
10-12	23.0	23.5	24.9	23.6	23.8	23.9	22.8	23.8	22.8		
14-18	21.0	22.1	21.4	19.9	18.9	18.0	16.5	18.9	16.5		
0-24	21.7	23.9	25.5	22.2	22.4	21.3	20.4	23.9	20.4		

7 Day Ave 22.5



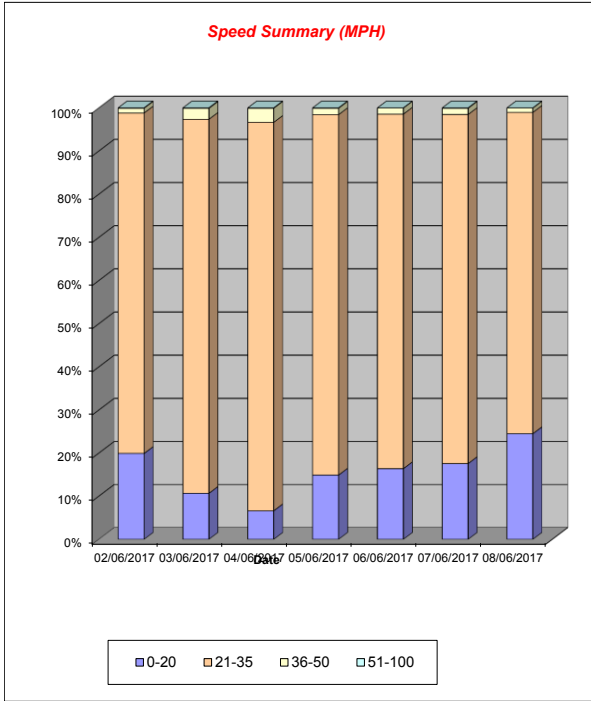
Channel 2 - Westbound								85th Percentile		Week 1	
Hr Ending	02/06/2017 Friday	03/06/2017 Saturday	04/06/2017 Sunday	05/06/2017 Monday	06/06/2017 Tuesday	07/06/2017 Wednesday	08/06/2017 Thursday	5 Day Ave	7 Day Ave		
1	38.3	33.3	33.7	38.6	38.2	38.6	38.6	38.6	38.6		
2	38.5	38.3	38.5	43.3	38.2	38.8	38.3	38.5	38.7		
3	38.9	38.2	38.6	43.1	38.3	38.5	38.3	38.5	38.3		
4	38.5	38.5	38.2	38.2	33.8	33.2	38.4	33.8	38.4		
5	38.4	38.2	38.5	38.1	33.1	38.9	38.8	38.5	38.8		
6	33.8	38.6	38.7	38.4	33.5	38.4	38.7	38.6	38.7		
7	33.8	38.4	33.8	34.0	33.8	33.3	33.4	33.8	33.4		
8	28.7	33.9	38.4	23.5							

Bradford ATC 10, New Lane

Produced by Streetwise Services Ltd.



Channel 1 - Eastbound		Speed Summary							Week 1
Speed (MPH)	02/06/2017 Friday	03/06/2017 Saturday	04/06/2017 Sunday	05/06/2017 Monday	06/06/2017 Tuesday	07/06/2017 Wednesday	08/06/2017 Thursday		
0-20	1979	920	477	1365	1520	1740	2409		
21-35	7836	7477	6490	7647	7614	8005	7317		
36-50	111	219	236	137	130	143	98		
51-100	5	7	4	5	2	6	2		
TOTAL	9931	8623	7207	9154	9266	9894	9826		

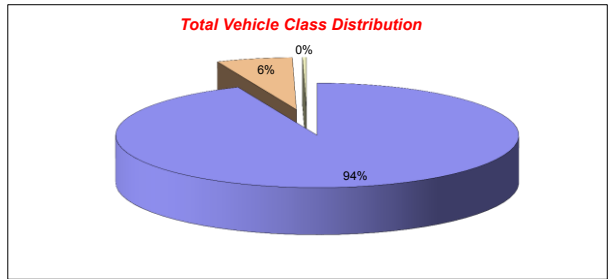


Bradford ATC 10, New Lane

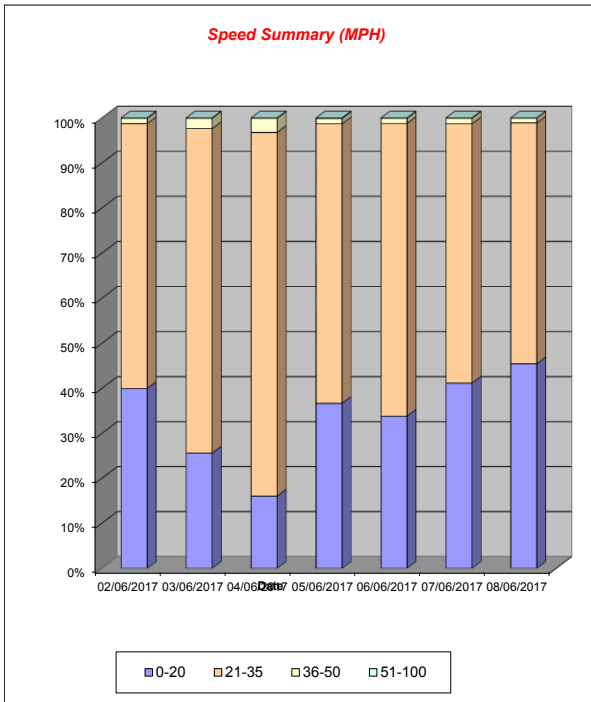
Produced by Streetwise Services Ltd.



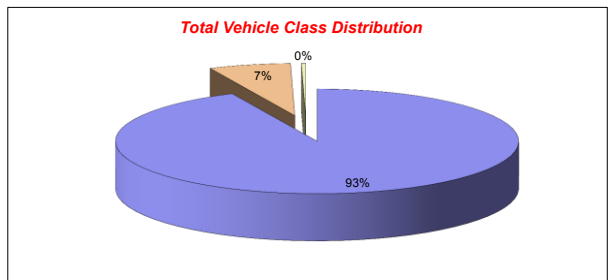
Channel 1 - Eastbound		Vehicle Class				Week 1
Day / Time	Classes	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL - 1,13	
02/06/2017	7-19	7237	514	27	7778	
	6-22	8649	594	30	9273	
	6-24	8991	606	30	9626	
	0-24	9252	643	36	9931	
03/06/2017	7-19	6472	309	18	6799	
	6-22	7502	348	18	7868	
	6-24	7994	373	19	8375	
	0-24	8205	397	21	8623	
04/06/2017	7-19	5582	182	16	5780	
	6-22	6372	217	17	6606	
	6-24	6862	236	18	7105	
	0-24	6932	256	19	7207	
05/06/2017	7-19	6686	506	15	7207	
	6-22	8011	584	17	8612	
	6-24	8215	601	20	8836	
	0-24	8482	639	23	9144	
06/06/2017	7-19	6733	489	24	7246	
	6-22	8145	585	29	8759	
	6-24	8307	603	29	8939	
	0-24	8619	617	30	9266	
07/06/2017	7-19	7195	518	24	7737	
	6-22	8707	622	28	9357	
	6-24	9088	625	30	9743	
	0-24	9203	658	33	9894	
08/06/2017	7-19	6999	535	39	7573	
	6-22	8589	649	41	9279	
	6-24	8935	660	41	9636	
	0-24	9086	693	47	9826	
Average						
	7-19	6701	436	23	7160	
	6-22	7999	516	26	8541	
	6-24	8348	538	27	8913	
	0-24	8541	558	30	9129	



Channel 2 - Westbound		Speed Summary							Week 1
Speed (MPH)	02/06/2017 Friday	03/06/2017 Saturday	04/06/2017 Sunday	05/06/2017 Monday	06/06/2017 Tuesday	07/06/2017 Wednesday	08/06/2017 Thursday		
0-20	4058	2317	1279	3480	3127	4118	4545		
21-35	5959	8509	6435	5882	8001	5755	5343		
36-50	120	206	248	112	106	126	106		
51-100	8	7	7	10	6	5	3		
TOTAL	10145	9039	7969	9484	9240	10004	9997		



Channel 2 - Westbound		Vehicle Class				Week 1
Day / Time	Classes	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL - 1,13	
02/06/2017	7-19	7133	585	30	7748	
	6-22	8616	680	37	9333	
	6-24	9085	678	37	9780	
	0-24	9399	703	43	10145	
03/06/2017	7-19	6487	370	15	6872	
	6-22	7639	418	15	8069	
	6-24	8077	443	16	8536	
	0-24	8567	465	17	9039	
04/06/2017	7-19	5756	242	14	6012	
	6-22	6776	281	18	7075	
	6-24	7598	299	19	7916	
	0-24	7813	337	19	8169	
05/06/2017	7-19	6783	605	26	7394	
	6-22	8211	685	32	8928	
	6-24	8469	736	33	9198	
	0-24	8725	724	35	9484	
06/06/2017	7-19	6436	570	19	7025	
	6-22	7967	655	23	8645	
	6-24	8354	688	28	9070	
	0-24	8531	683	28	9242	
07/06/2017	7-19	7049	596	35	7680	
	6-22	8628	687	39	9354	
	6-24	8968	716	40	9724	
	0-24	9252	711	41	10004	
08/06/2017	7-19	6982	578	35	7595	
	6-22	8603	672	40	9315	
	6-24	8929	685	44	9658	
	0-24	9239	709	49	9997	
Average						
	7-19	6656	507	26	7190	
	6-22	8051	580	29	8670	
	6-24	8413	606	30	9039	
	0-24	8759	619	33	9411	



Bradford ATC 10, New Lane

Produced by Streetwise Services Ltd.



Channel 1 - Eastbound										Vehicle Flow		Week 2	
Hr Ending	09/06/2017 Friday	10/06/2017 Saturday	11/06/2017 Sunday	12/06/2017 Monday	13/06/2017 Tuesday	14/06/2017 Wednesday	15/06/2017 Thursday	5 Day Ave	7 Day Ave				
1	48	111	149	32	56	36	54	45	69				
2	37	62	77	19	24	18	25	25	37				
3	18	59	52	19	20	14	14	17	28				
4	17	31	38	31	26	29	15	24	27				
5	37	33	29	40	41	32	40	38	36				
6	143	79	57	134	143	152	126	140	119				
7	490	122	96	523	561	541	567	536	414				
8	786	218	136	785	815	831	850	813	632				
9	764	385	192	780	755	707	749	747	615				
10	624	587	320	590	521	644	592	586	548				
11	565	626	530	528	523	589	546	550	558				
12	594	656	619	533	568	590	525	562	584				
13	582	652	638	616	550	543	568	572	593				
14	637	700	635	616	574	590	517	567	596				
15	601	626	541	553	591	575	534	571	574				
16	634	596	636	601	631	614	599	616	616				
17	661	599	555	706	751	739	800	731	687				
18	679	635	471	745	714	728	767	727	663				
19	645	490	400	544	580	609	549	585	547				
20	514	413	314	417	489	454	508	476	444				
21	334	257	256	327	326	348	319	331	310				
22	241	222	195	213	256	281	269	252	240				
23	206	200	117	132	154	173	149	165	163				
24	146	165	79	81	82	87	114	102	108				
7-19	7772	6670	5672	7437	7573	7759	7996	7627	7211				
6-22	9361	7654	6333	8917	9205	9385	9223	8619					
5-24	8703	8098	6733	8130	8451	8643	8450	7850					
0-24	10003	8424	7131	9405	9761	9924	9796	9778	9206				

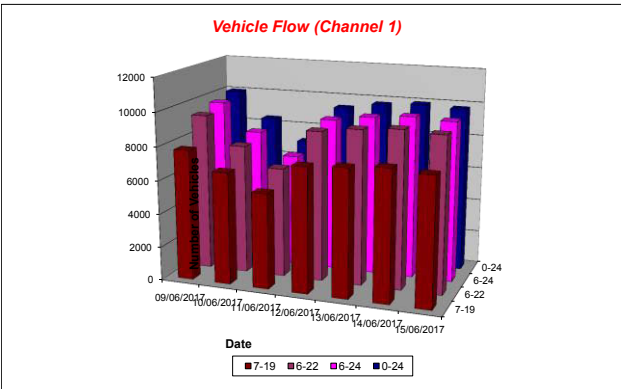
Bradford ATC 10, New Lane

Produced by Streetwise Services Ltd.



Channel 1 - Eastbound										Average Speed		Week 2	
Hr Ending	09/06/2017 Friday	10/06/2017 Saturday	11/06/2017 Sunday	12/06/2017 Monday	13/06/2017 Tuesday	14/06/2017 Wednesday	15/06/2017 Thursday	5 Day Ave	7 Day Ave				
1	30.5	28.8	29.3	28.5	31.3	31.1	30.3						
2	32.5	31.3	31.1	32.9	30.7	33.6	32.3						
3	28.6	31.5	30.0	31.7	31.0	29.8	29.1						
4	31.2	30.7	29.8	32.5	31.3	31.4	30.0						
5	30.0	30.3	30.2	31.4	31.4	31.4	31.0						
6	29.9	31.9	32.0	29.8	30.5	31.3	30.2						
7	27.0	30.3	31.6	27.5	28.2	27.9	27.5						
8	22.7	29.2	29.9	21.2	22.4	21.7	21.5						
9	22.5	27.4	28.8	21.6	23.0	22.1	23.2						
10	23.6	25.0	27.9	24.8	24.8	23.0	24.6						
11	22.6	24.6	26.0	24.4	25.0	25.1	24.9						
12	23.7	23.2	25.2	24.2	24.9	25.3	23.6						
13	24.3	22.1	22.7	24.0	24.5	25.8	23.3						
14	23.9	21.2	22.6	24.7	23.9	25.5	23.6						
15	22.9	23.2	23.3	23.1	23.0	24.1	22.4						
16	21.1	24.5	24.9	22.8	23.1	22.7	21.3						
17	21.2	23.9	26.6	21.3	21.6	22.2	20.4						
18	21.0	24.9	27.2	21.1	21.0	21.3	20.6						
19	23.9	26.0	28.4	23.5	22.2	22.7	22.3						
20	25.6	25.6	28.1	27.0	25.9	26.0	25.7						
21	26.6	27.9	28.0	27.4	27.1	27.9	27.3						
22	27.0	27.3	27.5	27.6	27.3	27.0	25.9						
23	26.8	27.2	27.5	28.0	27.8	28.2	27.6						
24	28.1	28.7	30.0	29.6	29.3	29.6	29.7						
10-12	23.2	23.9	25.6	24.3	24.9	25.2	24.3						
14-16	23.6	23.8	25.6	24.3	24.1	24.6	23.8						
0-24	23.7	25.0	26.1	23.9	24.2	24.3	23.6						

7 Day Ave 24.4



Channel 1 - Eastbound										85th Percentile		Week 2	
Hr Ending	09/06/2017 Friday	10/06/2017 Saturday	11/06/2017 Sunday	12/06/2017 Monday	13/06/2017 Tuesday	14/06/2017 Wednesday	15/06/2017 Thursday	5 Day Ave	7 Day Ave				
1	38.4	33.1	33.9	33.7	33.9	38.5	38.8						
2	38.8	33.2	38.8	38.0	33.3	43.6	39.0						
3	33.2	38.7	38.3	38.3	33.7	33.1	38.3						
4	33.4	38.5	38.5	38.7	33.9	33.2	33.7						
5	33.4	38.2	38.6	38.1	33.3	38.3	33.8						
6	33.5	38.0	38.8	38.3	38.4	33.0	33.8						
7	33.3	38.5	38.6	38.3	33.0	33.2	33.8						
8	28.6	33.0	33.2	28.4	28.3	28.4	28.5						
9	28.2	33.4	33.2	28.6	29.0	28.5	28.2						
10	28.1	28.3	28.4	28.3	28.8	28.8	28.6						
11	28.9	28.8	28.6	28.3	28.6	28.8	28.9						
12	28.1	28.9	28.3	28.8	28.6	28.0	28.9						
13	28.7	28.8	28.5	28.3	28.3	28.4	28.7						
14	28.9	28.2	28.4	28.4	28.5	28.1	28.0						
15	28.2	28.1	28.6	28.4	28.8	28.8	28.7						
16	23.9	28.0	28.1	28.8	28.9	28.6	24.0						
17	23.8	28.2	28.6	28.4	28.1	28.6	23.0						
18	28.4	28.4	33.2	23.7	23.5	28.6	24.0						
19	28.5	28.2	34.0	28.7	28.4	28.3	28.6						
20	28.8	29.0	33.9	28.4	28.1	28.9	28.3						
21	33.8	33.9	34.0	34.0	33.5	33.8	33.6						
22	33.4	33.6	33.8	33.6	33.7	33.6	28.8						
23	33.2	33.7	33.4	33.5	33.5	33.4	33.0						
24	33.3	33.1	33.8	33.2	38.4	38.7	33.1						
10-12	28.4	28.3	29.0	28.6	28.9	28.2	28.6						
14-16	26.9	26.9	28.3	28.7	26.9	28.1	28.2						
0-24	28.6	28.8	28.2	28.5	28.6	28.2	28.4						

7 Day Ave 28.5

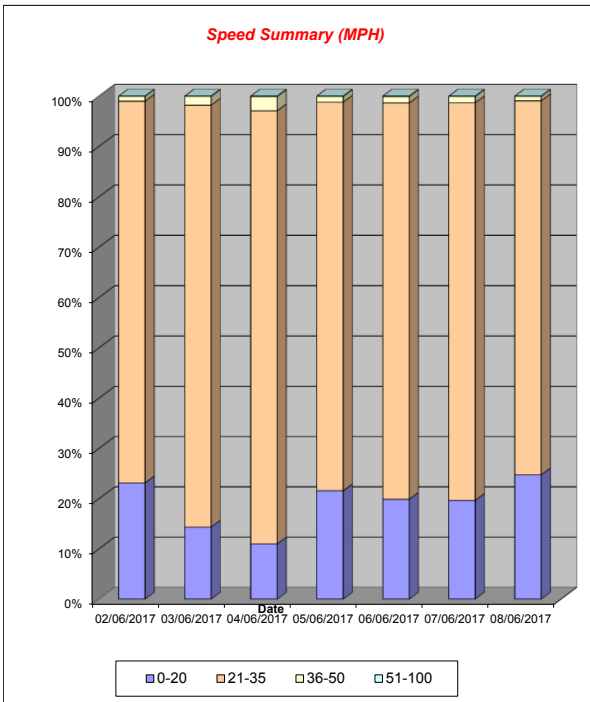
Channel 2 - Westbound										Vehicle Flow		Week 2	
Hr Ending	09/06/2017 Friday	10/06/2017 Saturday	11/06/2017 Sunday	12/06/2017 Monday	13/06/2017 Tuesday	14/06/2017 Wednesday	15/06/2017 Thursday	5 Day Ave	7 Day Ave				
1	101	153	186	61	67	81	74	77	103				
2	43	103	130	46	28	31	27	35	58				
3	28	67	73	21	15	18	19	20	34				
4	16	41	43	29	25	18	23	22	28				
5	37	52	55	26	28	31	44	33	39				
6	122	93	68	93	101	97	113	105	98				
7	315	105	69	303	291	319	317	309	246				
8	719	204	122	699	718	748	723	721	562				
9	585	361	163	634	645	666	644	635	528				
10	609	528	333	562	574	595	621	592	546				
11	553	583	474	486	494	553	522	522	524				
12	582	680	598	514	531	489	540	531	562				
13	618	689	762	575	571	537	571	574	618				
14	659	656	728	604	592	592	585	606	631				
15	634	661	774	602	641	579	557	603	635				
16	676	691	599	655	712	683	665	678	669				
17	699	687	550	728	751	706	685	714	687				
18	712	581	538	745	703	762	671	719	673				
19	694	537	462	724	743	812	712	737	669				
20	585	437	403	519	606	692	596	582	536				
21	455	305	336	434	446	477	435	449	413				
22	301	265	236	265	329	305	311	302	287				
23	262	226	182	176	211	237	215	220	216				
24	196	219	115	114	137	145	169	152	156				
7-19	7740	6858	6104	7528	7675	7722	7496	7632	7303				
6-22	9396	7970	7148	9049	9347	9426	9157	9276	8785				
5-24	9854	8418											

Bradford ATC 10, New Lane

Produced by Streetwise Services Ltd.



Channel 1 - Eastbound		Speed Summary							Week 2
Speed (MPH)	09/06/2017 Friday	10/06/2017 Saturday	11/06/2017 Sunday	12/06/2017 Monday	13/06/2017 Tuesday	14/06/2017 Wednesday	15/06/2017 Thursday		
0-20	2317	1210	784	2032	1943	1953	2426		
21-35	7586	7063	6140	7262	7686	7839	7279		
36-50	99	148	203	107	127	128	89		
51-100	1	3	4	4	5	4	2		
TOTAL	10003	8424	7131	9405	9761	9924	9796		

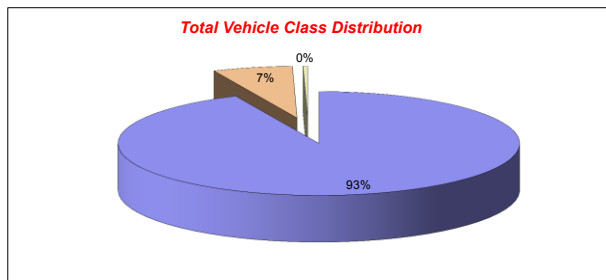


Bradford ATC 10, New Lane

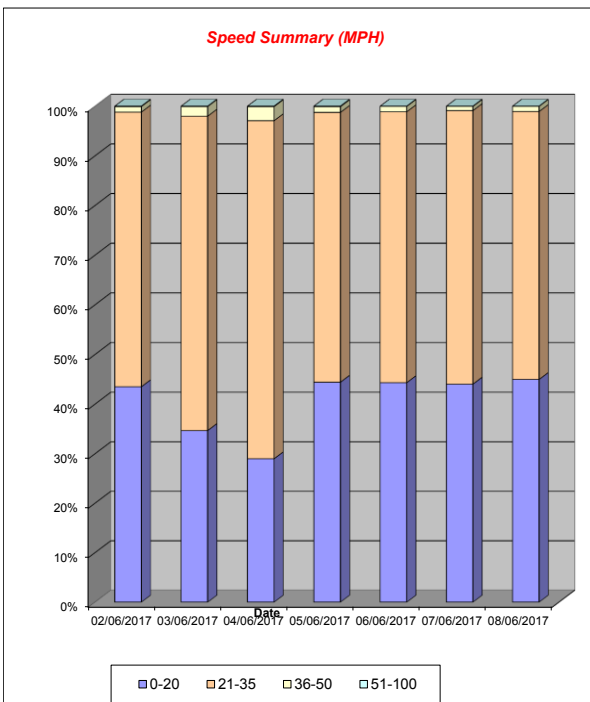
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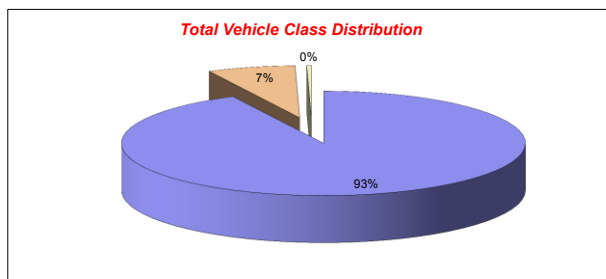
Channel 1 - Eastbound		Vehicle Class				Week 2
Day / Time	Classes	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL - 1,13	
09/06/2017	7-19	7222	523	27	7772	
	6-22	8706	615	30	9351	
	6-24	8945	938	31	9763	
	0-24	9301	664	38	10003	
10/06/2017	7-19	6346	319	5	6670	
	6-22	7309	370	5	7684	
	6-24	781	133	6	920	
	0-24	8007	411	6	8424	
11/06/2017	7-19	5449	215	8	5672	
	6-22	6275	248	9	6533	
	6-24	682	238	9	929	
	0-24	6827	294	10	7131	
12/06/2017	7-19	6864	538	35	7437	
	6-22	8238	840	38	9117	
	6-24	8435	855	49	9339	
	0-24	8670	694	41	9405	
13/06/2017	7-19	6926	610	37	7573	
	6-22	8449	714	42	9205	
	6-24	8587	725	44	9357	
	0-24	8951	759	51	9761	
14/06/2017	7-19	7207	520	32	7759	
	6-22	8734	908	41	9683	
	6-24	9080	810	43	9933	
	0-24	9223	654	47	9924	
15/06/2017	7-19	7036	522	38	7596	
	6-22	8590	629	40	9259	
	6-24	8943	838	41	9822	
	0-24	9082	667	47	9796	
Average						
	7-19	6721	464	26	7211	
	6-22	8043	545	29	8617	
	6-24	8138	711	31	8880	
	0-24	8580	592	34	9206	



Channel 2 - Westbound		Speed Summary							Week 2
Speed (MPH)	09/06/2017 Friday	10/06/2017 Saturday	11/06/2017 Sunday	12/06/2017 Monday	13/06/2017 Tuesday	14/06/2017 Wednesday	15/06/2017 Thursday		
0-20	4439	3097	2320	4272	4416	4441	4427		
21-35	5642	3649	5447	5224	5432	5554	5309		
36-50	114	174	227	111	108	85	103		
51-100	6	4	6	8	3	3	2		
TOTAL	10201	8924	8000	9615	9959	10083	9841		

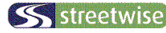


Channel 2 - Westbound		Vehicle Class				Week 2
Day / Time	Classes	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL - 1,13	
09/06/2017	7-19	7060	617	33	7710	
	6-22	8650	711	35	9396	
	6-24	9081	735	38	9854	
	0-24	9401	758	42	10201	
10/06/2017	7-19	6470	371	17	6858	
	6-22	7525	428	17	7970	
	6-24	7963	455	17	8435	
	0-24	8417	489	18	8924	
11/06/2017	7-19	5803	288	13	6104	
	6-22	6792	340	16	7148	
	6-24	7573	395	17	7985	
	0-24	7594	389	17	8000	
12/06/2017	7-19	6825	670	33	7528	
	6-22	8232	780	37	9049	
	6-24	8951	836	38	9825	
	0-24	8753	823	39	9615	
13/06/2017	7-19	6991	656	28	7675	
	6-22	8558	758	31	9347	
	6-24	8951	774	32	9757	
	0-24	9124	799	36	9959	
14/06/2017	7-19	7061	620	41	7722	
	6-22	8667	713	45	9425	
	6-24	9081	735	46	9862	
	0-24	9284	752	47	10083	
15/06/2017	7-19	6909	554	33	7496	
	6-22	8475	643	39	9157	
	6-24	8847	811	41	9699	
	0-24	9111	683	47	9841	
Average						
	7-19	6736	539	26	7303	
	6-22	8159	625	31	8785	
	6-24	8481	643	33	9157	
	0-24	8812	670	35	9518	



Bradford ATC 11, A658

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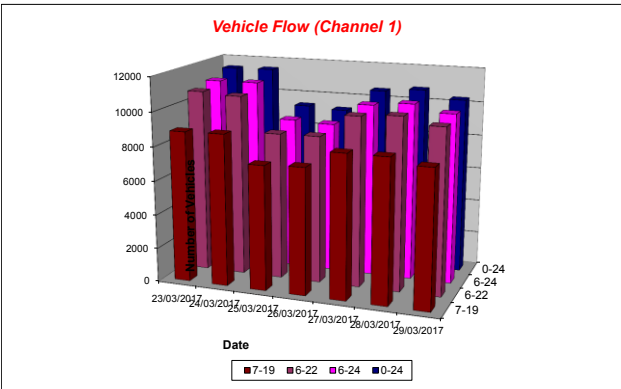
Channel 1 - Northbound										Vehicle Flow		Week 1	
Hr Ending	23/03/2017 Thursday	24/03/2017 Friday	25/03/2017 Saturday	26/03/2017 Sunday	27/03/2017 Monday	28/03/2017 Tuesday	29/03/2017 Wednesday	5 Day Ave	7 Day Ave	Week 1	Week 1		
1	43	48	90	90	39	30	37	39	54				
2	16	24	52	61	19	19	19	19	30				
3	16	16	37	0	21	19	8	16	17				
4	57	62	90	42	50	41	36	49	48				
5	75	87	68	61	87	82	77	82	80				
6	217	214	125	127	209	220	192	210	186				
7	509	494	201	215	492	482	470	489	409				
8	747	785	333	305	742	716	717	741	621				
9	634	669	524	354	610	474	444	666	530				
10	739	693	728	515	594	686	600	662	651				
11	672	707	801	753	668	652	617	663	606				
12	664	718	597	900	638	670	660	670	692				
13	732	761	471	692	685	703	668	710	673				
14	727	731	526	661	666	660	633	685	659				
15	776	784	491	781	721	738	659	736	707				
16	810	785	760	762	715	735	757	760	761				
17	751	739	755	604	827	790	760	773	747				
18	798	771	716	581	779	840	790	796	754				
19	810	758	615	502	727	733	723	750	695				
20	670	583	484	420	498	597	554	580	544				
21	396	348	353	350	334	381	363	364	361				
22	317	290	240	235	230	264	279	276	265				
23	166	256	227	130	127	163	171	177	177				
24	97	156	136	101	73	86	87	100	105				
7-19	8860	8901	7317	7410	8392	8387	8028	8514	8185				
6-22	10732	10616	8593	8530	9946	10111	9584	10224	9763				
6-24	11022	11022	8993	8933	10146	10130	9654	10500	10046				
0-24	11441	11479	9380	9262	10571	10771	10321	10917	10461				

Bradford ATC 11, A658

Produced by Streetwise Services Ltd.

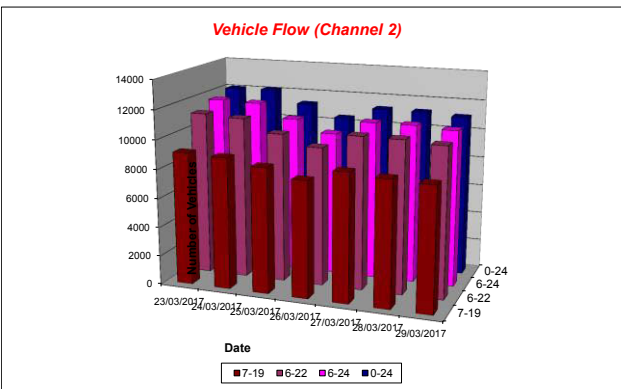


Channel 1 - Northbound										Average Speed		Week 1	
Hr Ending	23/03/2017 Thursday	24/03/2017 Friday	25/03/2017 Saturday	26/03/2017 Sunday	27/03/2017 Monday	28/03/2017 Tuesday	29/03/2017 Wednesday	5 Day Ave	7 Day Ave	Week 1	Week 1		
1	35.6	35.0	35.0	34.9	38.3	37.0	36.3						
2	42.1	35.3	36.8	36.1	37.3	38.8	39.8						
3	37.6	32.7	33.6	-	34.9	34.6	37.7						
4	35.6	33.3	34.5	36.1	35.3	35.0	35.4						
5	35.0	36.2	35.7	35.7	33.8	35.0	37.1						
6	33.6	32.9	34.7	34.7	33.7	33.4	33.6						
7	31.1	32.1	34.4	32.6	30.3	31.2	31.3						
8	26.4	24.6	33.1	32.5	26.4	23.0	19.5						
9	29.9	30.2	31.6	33.0	28.1	21.1	18.6						
10	29.1	29.0	28.8	32.1	29.5	29.6	29.2						
11	29.6	29.3	25.7	30.3	28.5	29.9	29.4						
12	29.1	16.1	14.1	25.5	29.0	29.6	29.6						
13	28.5	25.7	13.6	15.8	28.5	29.6	28.7						
14	28.0	22.2	13.3	14.2	29.7	29.7	29.7						
15	28.3	20.7	14.3	19.9	27.2	28.3	29.5						
16	26.6	24.3	24.1	26.5	27.2	25.5	25.5						
17	17.5	14.8	30.4	31.3	25.1	16.8	20.0						
18	15.6	15.8	27.3	32.5	16.7	21.2	14.6						
19	23.8	28.1	29.7	31.9	28.4	19.5	28.8						
20	28.7	29.8	30.9	31.5	30.7	29.9	29.6						
21	30.8	31.7	32.0	32.2	31.6	31.6	31.2						
22	31.7	32.6	33.7	33.2	33.1	32.2	32.2						
23	34.0	32.4	33.5	34.2	34.2	33.3	32.5						
24	34.9	34.4	35.9	34.5	36.5	33.1	34.3						
10-12	29.4	22.6	20.7	27.7	28.7	29.8	29.5						
14-16	27.8	25.8	25.3	27.2	27.8	28.9	27.4						
0-24	27.2	25.3	26.2	27.5	27.9	28.7	28.6						



Channel 1 - Northbound										85th Percentile		Week 1	
Hr Ending	23/03/2017 Thursday	24/03/2017 Friday	25/03/2017 Saturday	26/03/2017 Sunday	27/03/2017 Monday	28/03/2017 Tuesday	29/03/2017 Wednesday	5 Day Ave	7 Day Ave	Week 1	Week 1		
1	43.7	43.6	43.0	43.7	43.1	43.1	43.3						
2	56.0	43.3	43.4	43.9	43.9	48.7	48.2						
3	43.6	38.3	38.3	-	43.7	38.9	48.5						
4	43.3	38.8	38.2	43.8	38.5	38.5	38.3						
5	38.3	43.8	43.2	43.0	38.4	43.1	43.3						
6	38.8	38.6	38.6	38.6	38.1	38.8	38.8						
7	33.0	39.0	38.4	38.4	33.8	33.4	33.5						
8	33.8	33.9	38.4	38.4	33.5	33.5	28.2						
9	33.8	33.2	33.7	38.7	33.8	33.5	28.9						
10	33.7	33.7	33.7	33.5	33.6	33.6	33.6						
11	33.0	34.0	33.6	33.5	33.8	33.3	33.8						
12	33.4	23.2	18.2	33.5	33.0	33.1	33.9						
13	33.9	33.5	23.2	23.4	33.2	33.6	33.3						
14	33.8	33.1	16.6	18.4	33.1	33.2	33.5						
15	33.4	34.0	23.1	28.3	33.1	33.1	33.1						
16	34.0	33.7	33.5	33.1	33.3	33.1	33.6						
17	23.9	23.0	33.9	33.2	33.1	28.4	28.4						
18	23.1	23.6	33.3	33.0	28.0	28.3	19.0						
19	28.9	33.1	33.8	36.1	33.5	28.9	33.5						
20	33.4	33.1	33.4	33.4	33.7	33.8	33.9						
21	33.5	38.8	38.3	38.4	38.5	38.3	33.6						
22	33.8	38.3	38.9	38.5	38.6	38.7	38.3						
23	38.1	38.0	38.6	38.2	38.1	38.3	38.1						
24	38.6	38.3	43.6	38.5	43.2	38.1	38.5						
10-12	33.5	33.4	33.4	33.3	33.7	33.0	33.2						
14-16	33.9	33.3	33.1	33.6	33.5	33.3	33.6						
0-24	33.6	33.9	33.6	33.5	33.4	33.8	33.1						

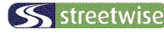
Channel 2 - Southbound										Vehicle Flow		Week 1	
Hr Ending	23/03/2017 Thursday	24/03/2017 Friday	25/03/2017 Saturday	26/03/2017 Sunday	27/03/2017 Monday	28/03/2017 Tuesday	29/03/2017 Wednesday	5 Day Ave	7 Day Ave	Week 1	Week 1		
1	86	107	169	160	119	98	103	103	120				
2	41	48	93	113	37	39	37	40	58				
3	19	29	54	0	23	21	9	20	22				
4	23	46	68	85	39	26	20	31	44				
5	61	77	69	88	43	36	54	54	61				
6	130	177	113	110	141	150	124	144	135				
7	436	436	204	135	399	410	393	415	345				
8	755	791	264	206	826	713	705	758	609				
9	730	795	455	283	672	630	626	691	599				
10	739	697	611	473	719	762	766	737	681				
11	656	720	712	697	630	617	604	645	662				
12	679	689	614	758	677	640	641	665	700				
13	726	794	776	758	699	742	688	728	739				
14	783	746	805	755	681	664	674	710	730				
15	811	736	698	786	790	769	707	763	757				
16	810	757	800	916	759	822	790	790	809				
17	738	705	899	870	825	725	737	746	786				
18	762	732	899	770	730	771	712	741	768				
19	918	843	858	701	757	724	823	813	803				
20	760	722	610	609	567	636	630	663	648				
21	534	523	481	475	469	482	482	496	493				
22	390	397	337	321	292	368	323	354	347				
23	291	323	265	227	210	237	227	258	254				
24	190	239	220	147	145	147	179	180	181				
7-19	9107	9005	8691	7973	8765	8579	8473	8786	8642				
6-22	11227	11083	10233	9517	10492	10475	10301	10716	10474				
6-24	11708	11546	10798	9891	10947	10859	10767	11153	10909				
0-24	12068	12129	11274	10447	11249	11229	11054	11546	11350				



Channel 2 - Southbound										Average Speed		Week 1	
Hr Ending	23/03/2017 Thursday	24/03/2017 Friday	25/03/2017 Saturday	26/03/2017 Sunday	27/03/2017 Monday	28/03/2017 Tuesday	29/03/2017 Wednesday	5 Day Ave	7 Day Ave	Week 1	Week 1		
1	33.7	36.2	34.3	34.7	34.3	34.9	35.1						
2	34.2	34.1	33.9	34.3	34.9	36.1	37.8						
3	36.6	33.3	35.2	-	35.2	33.1	33.6						
4	33.0	34.2	34.2	36.6	36.3	33.2							

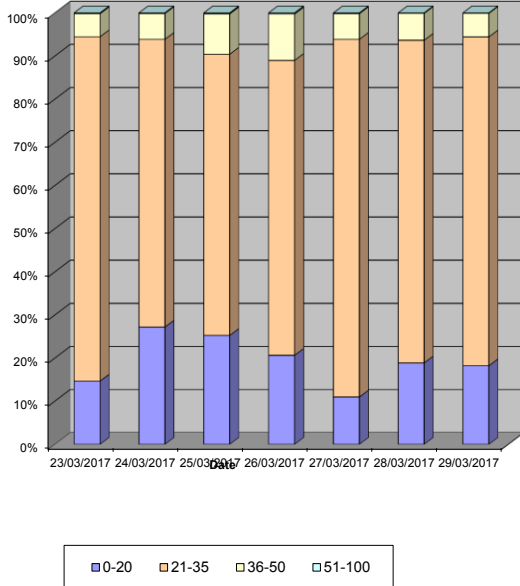
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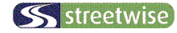
Channel 1 - Northbound		Speed Summary							Week 1
Speed (MPH)	23/03/2017 Thursday	24/03/2017 Friday	25/03/2017 Saturday	26/03/2017 Sunday	27/03/2017 Monday	28/03/2017 Tuesday	29/03/2017 Wednesday		
0-20	1680	3125	2371	1914	1161	2035	1882		
21-35	9131	7652	6112	6330	8765	8055	7866		
36-50	610	687	875	994	628	670	564		
51-100	20	15	22	24	17	11	9		
TOTAL	11441	11479	9380	9262	10571	10771	10321		

Speed Summary (MPH)



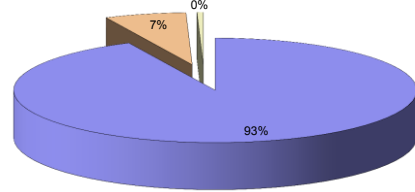
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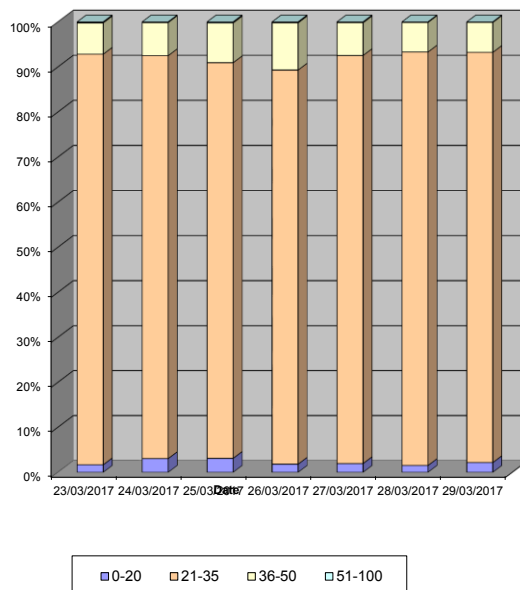
Channel 1 - Northbound		Vehicle Class				Week 1
Day / Time	Classes	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL - 1,13	
23/03/2017	7-19	8147	668	45	8860	
	6-22	9953	747	52	10752	
	6-24	10582	981	35	11644	
	0-24	10582	798	61	11441	
24/03/2017	7-19	8245	603	53	8901	
	6-22	8668	687	61	10016	
	6-24	10650	760	69	11479	
	0-24	10650	760	69	11479	
25/03/2017	7-19	6948	334	35	7317	
	6-22	8155	400	40	8595	
	6-24	8863	476	41	9380	
	0-24	8863	476	41	9380	
26/03/2017	7-19	7045	332	33	7410	
	6-22	8188	395	37	8620	
	6-24	8415	499	37	8951	
	0-24	8788	437	37	9262	
27/03/2017	7-19	7741	606	45	8392	
	6-22	9188	710	48	9946	
	6-24	9580	517	49	10146	
	0-24	9789	758	54	10571	
28/03/2017	7-19	7711	633	43	8387	
	6-22	9312	743	56	10111	
	6-24	9543	769	59	10360	
	0-24	9915	793	63	10771	
29/03/2017	7-19	7376	622	30	8028	
	6-22	8539	721	34	9294	
	6-24	8176	739	37	8952	
	0-24	8506	773	42	10321	
Average	7-19	7602	543	41	8185	
	6-22	9088	629	47	9763	
	6-24	9444	685	49	10178	
	0-24	9723	685	52	10461	

Total Vehicle Class Distribution



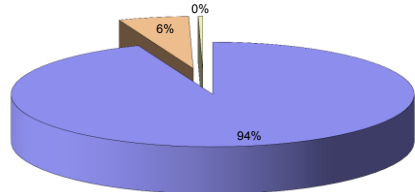
Channel 2 - Southbound		Speed Summary							Week 1
Speed (MPH)	23/03/2017 Thursday	24/03/2017 Friday	25/03/2017 Saturday	26/03/2017 Sunday	27/03/2017 Monday	28/03/2017 Tuesday	29/03/2017 Wednesday		
0-20	201	369	350	189	219	169	239		
21-35	11004	10853	9905	9144	10184	10311	10070		
36-50	839	892	995	1094	817	737	734		
51-100	24	15	24	20	19	12	11		
TOTAL	12068	12129	11274	10447	11249	11229	11054		

Speed Summary (MPH)



Channel 2 - Southbound		Vehicle Class				Week 1
Day / Time	Classes	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL - 1,13	
23/03/2017	7-19	8436	643	29	9107	
	6-22	10482	711	34	11227	
	6-24	10939	732	37	11708	
	0-24	11266	760	42	12068	
24/03/2017	7-19	8411	553	41	9005	
	6-22	10408	631	44	11083	
	6-24	10967	642	46	11645	
	0-24	11399	680	50	12129	
25/03/2017	7-19	8214	358	19	8591	
	6-22	9775	421	27	10223	
	6-24	10542	439	27	10708	
	0-24	10769	476	29	11274	
26/03/2017	7-19	7703	250	20	7973	
	6-22	9183	309	26	9517	
	6-24	9539	326	27	9891	
	0-24	10072	346	29	10447	
27/03/2017	7-19	8151	579	35	8765	
	6-22	9780	662	50	10492	
	6-24	9881	626	39	10546	
	0-24	10474	718	57	11249	
28/03/2017	7-19	7929	616	34	8579	
	6-22	9714	721	40	10475	
	6-24	9778	633	43	10454	
	0-24	10420	765	44	11229	
29/03/2017	7-19	7845	603	25	8473	
	6-22	9578	696	27	10301	
	6-24	9868	718	30	10707	
	0-24	10275	745	34	11054	
Average	7-19	8086	515	29	8642	
	6-22	9546	623	35	10174	
	6-24	10262	610	38	10909	
	0-24	10668	641	41	11350	

Total Vehicle Class Distribution



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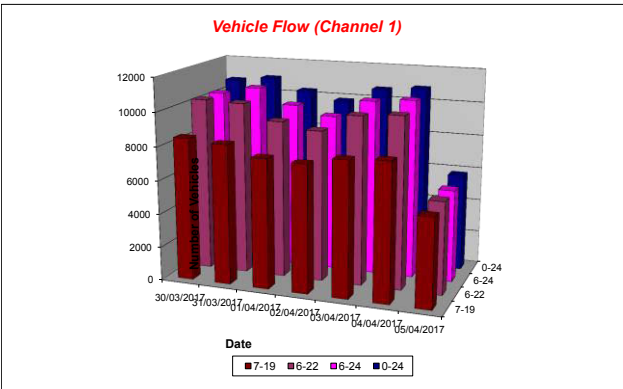
Channel 1 - Northbound										Vehicle Flow			Week 2	
Hr Ending	30/03/2017 Thursday	31/03/2017 Friday	01/04/2017 Saturday	02/04/2017 Sunday	03/04/2017 Monday	04/04/2017 Tuesday	05/04/2017 Wednesday	5 Day Ave	7 Day Ave					
1	43	9	146	179	62	71	99	65	86					
2	24	47	84	91	42	30	48	38	52					
3	14	23	66	58	23	22	23	21	33					
4	53	27	45	40	27	14	17	28	32					
5	95	50	43	52	46	40	45	45	59					
6	228	102	79	85	86	112	72	120	109					
7	501	236	131	149	232	235	206	282	241					
8	670	502	226	318	500	515	507	539	463					
9	555	723	302	421	681	657	729	669	581					
10	686	562	457	386	585	631	645	622	565					
11	635	587	678	557	640	684	624	634	629					
12	712	680	784	737	645	633	680	670	696					
13	710	737	846	877	670	717	694	706	750					
14	705	754	781	823	660	668	703	688	725					
15	728	721	747	850	711	668	323	630	678					
16	741	744	760	831	660	682	74	580	642					
17	793	772	686	682	710	729	93	619	638					
18	802	750	722	603	793	753	113	642	648					
19	744	774	720	492	758	816	109	640	630					
20	545	716	608	503	792	752	2	561	560					
21	449	574	504	403	559	597	6	437	442					
22	318	389	388	316	385	420	0	302	317					
23	0	306	281	231	272	247	0	165	192					
24	0	215	252	162	144	179	0	108	136					
7-19	8481	8306	7889	7577	8013	8153	5294	7649	7645					
6-22	10294	10221	9320	8948	9981	10157	6506	9232	9204					
6-24	10732	10744	8963	8344	10177	10083	6295	9505	9533					
0-24	10751	10991	10326	9846	10683	10872	5812	9822	9897					

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Channel 1 - Northbound										Average Speed			Week 2	
Hr Ending	30/03/2017 Thursday	31/03/2017 Friday	01/04/2017 Saturday	02/04/2017 Sunday	03/04/2017 Monday	04/04/2017 Tuesday	05/04/2017 Wednesday	5 Day Ave	7 Day Ave					
1	38.1	-	33.9	33.4	34.2	34.9	32.3							
2	37.0	35.7	35.0	36.7	34.7	37.3	35.1							
3	35.1	34.5	37.6	38.6	35.8	34.8	36.4							
4	34.4	35.6	36.6	36.1	35.9	37.3	37.9							
5	35.2	35.7	37.2	37.4	36.3	33.8	32.2							
6	33.8	35.3	34.4	35.3	36.9	35.2	36.2							
7	30.9	33.7	35.5	34.1	33.4	33.6	33.3							
8	19.7	31.1	33.5	31.5	32.2	32.0	31.7							
9	24.9	24.1	32.5	31.3	30.3	29.0	27.8							
10	25.5	27.9	31.9	31.4	30.4	29.4	30.7							
11	29.3	30.5	30.7	30.6	30.6	29.4	26.9							
12	27.5	30.6	29.0	29.3	29.0	30.1	29.7							
13	28.1	23.6	24.4	27.7	30.3	28.8	29.9							
14	29.0	29.0	22.1	21.0	30.4	29.0	28.7							
15	25.3	26.9	22.5	24.1	30.2	30.2	31.1							
16	26.2	27.7	25.6	28.1	29.7	29.8	35.7							
17	21.1	23.2	29.3	30.0	29.0	29.4	32.6							
18	21.1	15.6	30.1	30.5	24.3	16.7	38.2							
19	25.2	21.5	17.6	32.7	18.5	14.3	40.8							
20	31.2	26.9	30.8	32.8	28.5	18.0	43.0							
21	30.7	30.4	31.3	32.5	30.6	30.2	43.0							
22	32.5	31.3	31.8	32.8	31.1	30.5	-							
23	-	32.3	32.2	32.5	32.4	-	-							
24	-	32.3	33.0	33.3	33.9	31.4	-							
10-12	28.3	30.6	29.8	29.9	29.8	29.7	28.4							
14-16	29.8	29.3	28.2	28.9	28.9	28.9	28.8							
0-24	26.6	26.9	28.0	29.5	29.2	27.1	30.3							

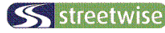


Channel 1 - Northbound										85th Percentile			Week 2	
Hr Ending	30/03/2017 Thursday	31/03/2017 Friday	01/04/2017 Saturday	02/04/2017 Sunday	03/04/2017 Monday	04/04/2017 Tuesday	05/04/2017 Wednesday	5 Day Ave	7 Day Ave					
1	43.9	38.7	38.4	43.5	38.5	38.4	38.4							
2	43.1	43.3	38.1	43.8	43.2	43.4	43.7							
3	43.4	38.4	43.3	44.0	38.6	38.9	43.2							
4	43.8	43.2	43.0	43.3	43.7	49.0	43.1							
5	43.2	43.6	48.8	48.2	43.5	43.6	38.2							
6	38.4	43.1	43.7	43.9	38.9	38.3	38.8							
7	38.4	38.2	38.8	38.8	38.8	38.6	39.0							
8	33.5	33.7	38.3	38.3	38.7	38.1	33.3							
9	33.3	33.5	38.5	33.7	33.9	33.2	33.7							
10	33.6	33.2	38.6	38.1	33.3	33.8	33.8							
11	33.2	34.0	33.8	33.1	33.4	33.0	33.0							
12	33.1	33.5	33.6	33.3	33.0	33.2	33.8							
13	33.9	33.0	33.2	33.4	33.3	33.4	33.5							
14	33.1	33.4	28.2	28.2	34.0	33.5	33.2							
15	33.7	33.3	28.4	28.3	33.8	33.6	33.6							
16	33.9	33.8	33.6	33.3	33.6	33.8	43.9							
17	28.2	28.9	33.3	33.8	33.6	33.0	43.9							
18	33.9	23.8	33.5	33.3	33.3	23.4	43.7							
19	33.8	28.2	34.4	38.4	28.5	18.1	43.0							
20	33.4	33.1	33.6	38.4	33.8	28.3	43.7							
21	33.5	33.0	33.1	38.8	33.9	33.6	44.0							
22	38.8	33.2	38.5	38.4	33.1	33.5	-							
23	-	38.4	38.2	38.7	38.5	38.6	-							
24	-	38.2	39.0	38.7	38.4	33.3	-							
10-12	33.8	34.0	33.9	33.4	33.1	33.9	33.0							
14-16	33.4	33.8	33.6	34.6	33.5	33.8	44.0							
0-24	33.2	33.6	33.8	33.6	33.7	33.6	33.1							

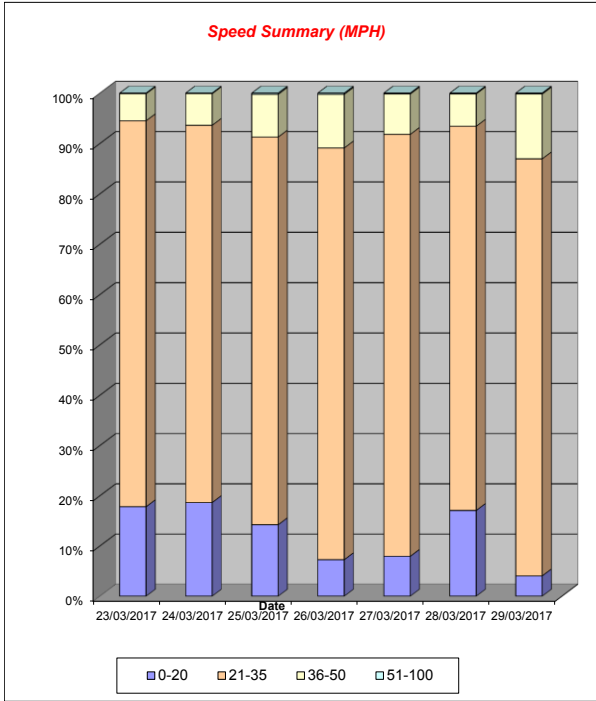
Channel 2 - Southbound										Vehicle Flow			Week 2	
Hr Ending	30/03/2017 Thursday	31/03/2017 Friday	01/04/2017 Saturday	02/04/2017 Sunday	03/04/2017 Monday	04/04/2017 Tuesday	05/04/2017 Wednesday	5 Day Ave	7 Day Ave					
1	102	0	277	259	145	159	179	117	160					
2	50	89	185	188	114	91	114	92	119					
3	19	50	105	124	46	52	48	43	63					
4	22	23	59	62	37	25	29	27	37					
5	60	36	48	51	31	22	31	36	40					
6	149	65	73	64	55	47	39	71	70					
7	419	148	120	132	156	165	112	200	179					
8	718	387	167	135	425	432	413	475	382					
9	669	744	263	183	847	831	900	798	634					
10	723	715	399	373	639	663	662	680	596					
11	649	699	541	455	618	680	616	652	623					
12	659	642	751	671	627	643	602	635	656					
13	722	680	814	797	699	643	703	689	723					
14	750	739	864	875	701	713	697	720	763					
15	754	695	873	881	696	682	429	651	716					
16	810	735	917	926	772	745	234	659	734					
17	749	674	850	899	739	805	281	668	727					
18	754	671	825	910	816	747	311	660	719					
19	802	785	685	707	758	710	321	675	661					
20	677	779	640	640	762	750	7	596	617					
21	517	705	598	515	646	734	7	522	532					
22	360	530	466	458	460	529	0	376	400					
23	0	410	357	292	306	361	1	216	247					
24	0	285	307	204	213	255	0	151	181					
7-19	8759	8256	7949	7912	8337	8294	6169	7963	7954					
6-22	10732	10418	9641	9657	10361	10472	6295	9656	9682					
6-24	10732	11113	10505	10183	10985	11088	6295	10022	10110					
0-24	11134	11376	11252	10901	11308	114								

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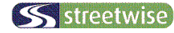


Channel 1 - Northbound		Speed Summary							Week 2
Speed (MPH)	30/03/2017 Thursday	31/03/2017 Friday	01/04/2017 Saturday	02/04/2017 Sunday	03/04/2017 Monday	04/04/2017 Tuesday	05/04/2017 Wednesday		
0-20	1916	2050	1470	716	849	1857	235		
21-35	8246	8240	7957	8059	8961	8301	4819		
36-50	577	690	875	1048	856	699	748		
51-100	12	11	24	23	17	15	10		
TOTAL	10751	10991	10326	9846	10683	10872	5812		

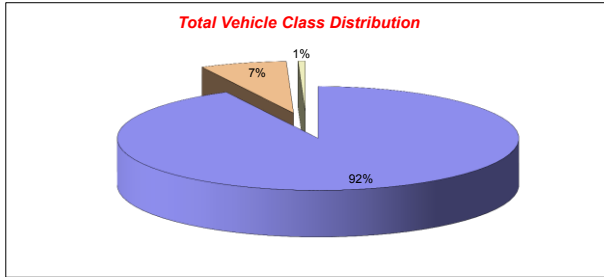


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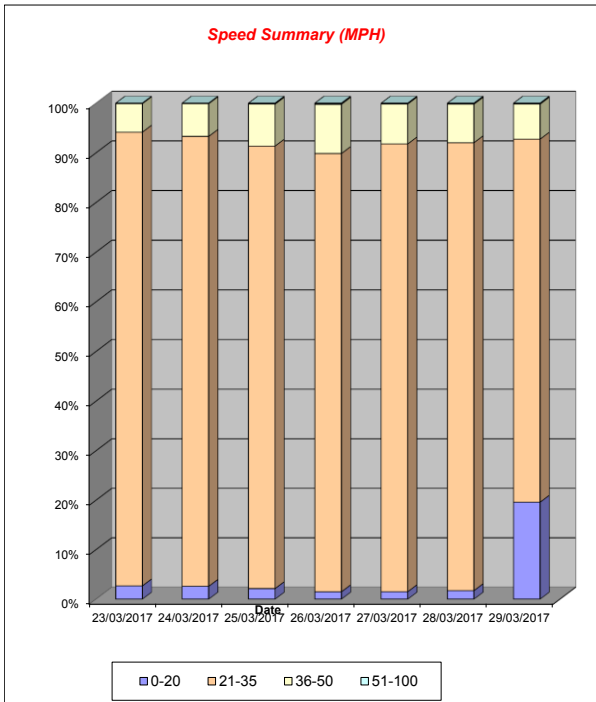
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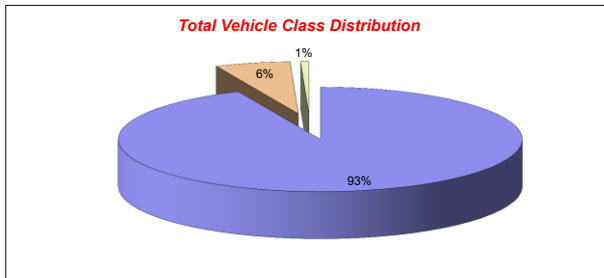
Channel 1 - Northbound		Vehicle Class				Week 2
Day / Time	Classes	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL - 1,13	
30/03/2017	7-19	7762	661	58	8481	
	6-22	9456	770	68	10294	
	6-24	849	978	99	10294	
	0-24	9848	826	77	10751	
31/03/2017	7-19	7551	700	55	8306	
	6-22	8355	800	66	10221	
	6-24	839	833	89	10742	
	0-24	10050	863	78	10991	
01/04/2017	7-19	7309	349	31	7689	
	6-22	8852	429	39	9320	
	6-24	839	833	89	9863	
	0-24	9797	488	41	10326	
02/04/2017	7-19	7184	347	36	7577	
	6-22	8496	410	42	8948	
	6-24	8573	423	45	9341	
	0-24	9348	454	44	9846	
03/04/2017	7-19	7277	688	48	8013	
	6-22	8145	781	58	8981	
	6-24	8531	807	59	10397	
	0-24	9787	834	62	10683	
04/04/2017	7-19	7383	720	40	8153	
	6-22	9280	825	52	10157	
	6-24	9685	846	52	10583	
	0-24	9945	869	58	10872	
05/04/2017	7-19	4797	458	39	5294	
	6-22	4994	473	41	5508	
	6-24	4984	473	41	5508	
	0-24	5266	502	44	5812	
Average	7-19	7040	560	44	7645	
	6-22	8511	641	52	9204	
	6-24	849	833	89	9333	
	0-24	9148	691	58	9897	



Channel 2 - Southbound		Speed Summary							Week 2
Speed (MPH)	30/03/2017 Thursday	31/03/2017 Friday	01/04/2017 Saturday	02/04/2017 Sunday	03/04/2017 Monday	04/04/2017 Tuesday	05/04/2017 Wednesday		
0-20	299	296	241	162	171	198	1321		
21-35	10187	10321	10041	9635	10211	10379	4928		
36-50	639	749	950	1082	909	892	476		
51-100	9	10	20	22	17	21	12		
TOTAL	11134	11376	11252	10901	11308	11484	6736		

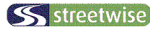


Channel 2 - Southbound		Vehicle Class				Week 2
Day / Time	Classes	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL - 1,13	
30/03/2017	7-19	8099	614	46	8759	
	6-22	9971	705	56	10732	
	6-24	9871	705	56	10732	
	0-24	10328	744	62	11134	
31/03/2017	7-19	7680	558	37	8275	
	6-22	9709	661	48	10418	
	6-24	10373	690	50	11113	
	0-24	10595	724	57	11376	
01/04/2017	7-19	7584	338	27	7949	
	6-22	9391	416	34	9841	
	6-24	10030	445	35	10505	
	0-24	10735	477	40	11252	
02/04/2017	7-19	7599	290	23	7912	
	6-22	9262	363	32	9657	
	6-24	9735	396	34	10153	
	0-24	10434	428	39	10901	
03/04/2017	7-19	7648	652	37	8337	
	6-22	9564	750	47	10361	
	6-24	9898	378	28	10299	
	0-24	10448	804	56	11308	
04/04/2017	7-19	7592	654	48	8294	
	6-22	9647	767	58	10472	
	6-24	9839	328	61	11068	
	0-24	10593	820	71	11484	
05/04/2017	7-19	5589	418	162	6169	
	6-22	3699	430	166	4295	
	6-24	433	428	198	6295	
	0-24	6104	462	170	6736	
Average	7-19	7396	504	54	7954	
	6-22	9035	685	63	9782	
	6-24	9441	603	65	10110	
	0-24	9891	637	71	10599	



Bradford ATC 12, New Line

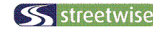
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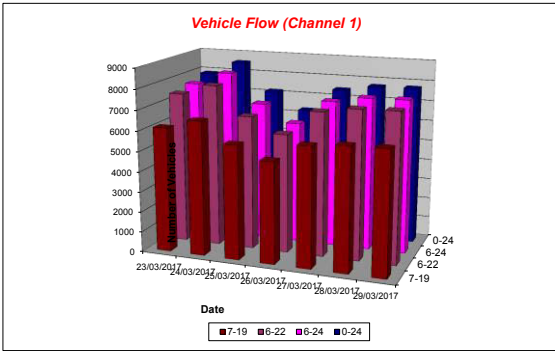
Channel 1 - Eastbound										Vehicle Flow			Week 1	
Hr Ending	23/03/2017	24/03/2017	25/03/2017	26/03/2017	27/03/2017	28/03/2017	29/03/2017	23/03/2017	24/03/2017	25/03/2017	7 Day Ave	7 Day Ave		
	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday							
1	33	48	113	31	26	28	28	30	31	32	31	31		
2	12	22	44	66	12	14	12	14	14	26	14	26		
3	13	16	27	0	12	13	8	12	13	25	13	25		
4	23	22	35	30	19	24	19	21	21	26	21	26		
5	49	40	38	48	36	40	37	38	40	40	38	40		
6	124	138	77	44	134	130	127	131	131	111	131	111		
7	432	415	121	72	409	409	430	419	327	327	419	327		
8	524	584	185	99	502	573	486	534	422	422	573	422		
9	553	567	394	169	518	479	526	528	468	468	528	468		
10	515	552	522	320	434	476	492	494	473	473	494	473		
11	487	491	563	508	462	451	450	474	402	402	474	402		
12	471	516	638	525	471	475	442	475	505	505	475	505		
13	467	549	646	619	460	459	469	481	524	524	481	524		
14	442	555	347	512	453	425	493	474	461	461	493	461		
15	280	534	504	528	499	487	552	470	483	483	552	470		
16	530	519	512	328	462	490	412	483	465	465	490	412		
17	673	612	494	494	527	575	575	592	564	564	592	564		
18	638	638	394	488	576	696	588	598	539	539	696	588		
19	539	538	493	391	489	514	526	521	499	499	526	499		
20	425	446	411	368	375	405	391	408	403	403	408	403		
21	286	295	297	246	243	256	270	270	264	264	270	264		
22	178	206	168	178	175	232	221	202	194	194	232	202		
23	132	176	150	91	100	124	126	132	128	128	132	128		
24	69	141	135	81	66	59	52	75	62	62	75	62		
7-19	6119	6594	5602	4981	5855	6007	6036	6122	5885	5885	6122	5885		
6-22	7440	7656	6569	5845	7057	7309	7346	7422	7075	7075	7422	7075		
5-24	8841	9278	8028	7013	8413	8668	8689	8765	8288	8288	8765	8288		
0-24	7895	8553	7160	6298	7457	7729	7757	7878	7550	7550	7878	7550		

Bradford ATC 12, New Line

Produced by Streetwise Services Ltd.



Channel 1 - Eastbound										Average Speed			Week 1	
Hr Ending	23/03/2017	24/03/2017	25/03/2017	26/03/2017	27/03/2017	28/03/2017	29/03/2017	23/03/2017	24/03/2017	25/03/2017	7 Day Ave	7 Day Ave		
	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday							
1	32.5	32.5	31.2	31.2	31.8	30.9	31.3	31.3	31.3	31.3	31.3	31.3		
2	33.4	31.8	31.7	31.7	32.6	29.7	31.8	31.8	31.8	31.8	31.8	31.8		
3	31.6	31.6	31.1	31.2	32.2	30.5	31.5	31.5	31.5	31.5	31.5	31.5		
4	32.0	33.1	33.1	30.6	31.3	30.7	31.5	31.5	31.5	31.5	31.5	31.5		
5	30.7	30.9	31.6	30.4	31.7	31.0	31.6	31.6	31.6	31.6	31.6	31.6		
6	27.9	29.2	31.4	31.8	28.4	28.4	28.7	28.7	28.7	28.7	28.7	28.7		
7	15.0	22.0	29.8	30.0	14.4	17.5	18.4	18.4	18.4	18.4	18.4	18.4		
8	21.8	23.6	27.4	28.7	17.6	18.3	21.0	21.0	21.0	21.0	21.0	21.0		
9	23.8	25.0	25.4	28.3	25.6	24.4	24.3	24.3	24.3	24.3	24.3	24.3		
10	24.5	21.6	24.2	26.0	28.9	28.5	28.8	28.8	28.8	28.8	28.8	28.8		
11	24.1	22.8	21.1	23.6	26.4	25.2	25.4	25.4	25.4	25.4	25.4	25.4		
12	24.7	22.0	23.3	21.0	25.4	24.7	24.5	24.5	24.5	24.5	24.5	24.5		
13	20.3	22.4	24.7	24.0	28.1	24.8	25.1	25.1	25.1	25.1	25.1	25.1		
14	21.0	20.4	22.4	26.0	25.9	24.3	22.5	22.5	22.5	22.5	22.5	22.5		
15	20.4	18.0	25.5	27.1	21.5	19.3	19.9	19.9	19.9	19.9	19.9	19.9		
16	21.9	23.0	29.2	26.6	16.2	23.0	15.5	15.5	15.5	15.5	15.5	15.5		
17	21.1	16.9	22.7	26.4	17.1	18.8	16.9	16.9	16.9	16.9	16.9	16.9		
18	23.2	22.8	24.3	26.2	26.8	25.1	23.6	23.6	23.6	23.6	23.6	23.6		
19	25.5	24.9	24.7	26.6	26.0	26.5	25.1	25.1	25.1	25.1	25.1	25.1		
20	27.0	26.9	27.0	27.8	27.6	28.6	26.6	26.6	26.6	26.6	26.6	26.6		
21	28.5	28.5	27.4	28.3	28.4	27.8	27.8	27.8	27.8	27.8	27.8	27.8		
22	28.2	28.3	27.7	31.8	29.7	29.5	29.3	29.3	29.3	29.3	29.3	29.3		
23	28.6	29.2	28.9	30.3	30.4	30.3	29.1	29.1	29.1	29.1	29.1	29.1		
10-12	24.3	22.3	22.6	24.8	26.8	25.8	24.6	24.6	24.6	24.6	24.6	24.6		
14-16	23.1	23.2	25.1	26.1	23.6	23.7	22.9	22.9	22.9	22.9	22.9	22.9		
0-24	23.1	23.2	25.1	26.1	23.6	23.7	22.9	22.9	22.9	22.9	22.9	22.9		

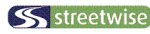


Channel 2 - Westbound										85th Percentile			Week 1	
Hr Ending	23/03/2017	24/03/2017	25/03/2017	26/03/2017	27/03/2017	28/03/2017	29/03/2017	23/03/2017	24/03/2017	25/03/2017	7 Day Ave	7 Day Ave		
	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday							
1	33.7	33.6	39.0	38.2	38.1	38.1	38.3	38.3	38.3	38.3	38.3	38.3		
2	48.5	33.3	38.4	38.9	38.9	38.7	38.2	38.2	38.2	38.2	38.2	38.2		
3	38.6	33.3	38.3	38.3	43.7	43.9	38.6	38.6	38.6	38.6	38.6	38.6		
4	33.3	38.8	38.2	38.8	38.5	33.3	33.3	33.3	33.3	33.3	33.3	33.3		
5	38.3	38.8	38.2	38.0	38.4	33.1	33.3	33.3	33.3	33.3	33.3	33.3		
6	33.8	38.6	38.6	33.5	38.1	33.8	33.8	33.8	33.8	33.8	33.8	33.8		
7	33.0	34.0	38.4	38.9	33.8	33.4	33.5	33.5	33.5	33.5	33.5	33.5		
8	28.8	28.9	33.4	33.4	23.5	28.5	28.2	28.2	28.2	28.2	28.2	28.2		
9	28.8	28.7	33.7	33.7	28.8	28.6	28.6	28.6	28.6	28.6	28.6	28.6		
10	28.7	28.7	28.3	28.3	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6		
11	28.0	29.0	28.6	28.5	28.8	28.3	28.8	28.8	28.8	28.8	28.8	28.8		
12	28.4	28.2	28.2	28.5	28.0	28.2	28.5	28.5	28.5	28.5	28.5	28.5		
13	28.9	28.2	28.2	28.6	28.4	28.6	28.6	28.6	28.6	28.6	28.6	28.6		
14	28.8	28.1	28.6	28.4	28.1	28.2	28.5	28.5	28.5	28.5	28.5	28.5		
15	28.4	29.0	28.1	28.3	28.1	28.9	28.1	28.1	28.1	28.1	28.1	28.1		
16	30.0	28.3	28.5	33.1	28.3	28.3	28.6	28.6	28.6	28.6	28.6	28.6		
17	28.9	28.0	28.9	33.2	23.1	28.4	28.4	28.4	28.4	28.4	28.4	28.4		
18	28.1	23.6	28.3	28.3	29.0	28.3	29.0	29.0	29.0	29.0	29.0	29.0		
19	28.9	28.1	28.6	28.1	28.5	28.6	28.6	28.6	28.6	28.6	28.6	28.6		
20	28.4	28.1	28.4	28.4	28.7	28.8	28.9	28.9	28.9	28.9	28.9	28.9		
21	33.5	33.8	28.3	33.4	33.5	28.3	33.6	33.6	33.6	33.6	33.6	33.6		
22	33.8	33.3	33.9	33.5	33.9	33.7	33.3	33.3	33.3	33.3	33.3	33.3		
23	33.1	33.0	33.6	38.2	33.1	33.3	33.3	33.3	33.3	33.3	33.3	33.3		
24	33.6	33.3	33.6	33.5	33.2	33.1	33.5	33.5	33.5	33.5	33.5	33.5		
10-12	28.5	28.4	28.4	28.3	28.7	28.0	28.2	28.2	28.2	28.2	28.2	28.2		
14-16	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1		
0-24	28.6	28.9	28.6	28.5	28.4	28.8	28.1	28.1	28.1	28.1	28.1	28.1		

Channel 2 - Westbound										Vehicle Flow			Week 1	
Hr Ending	23/03/2017	24/03/2017	25/03/2017	26/03/2017	27/03/2017	28/03/2017	29/03/2017	23/03/2017	24/03/2017	25/03/2017	7 Day Ave	7 Day Ave		
	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday							
1	60	73	152	125	87	83	82	81	83	83	83	83		
2	26	30	52	103	24	21	26	25	40	40	26	40		
3	25	17	45	0	27	15	18	20	21	21	20	21		
4	21	21	48	58	18	14	12	16	28	28	16	28		
5	21	24	31	57	30	19	28	24	30	30	28	30		
6	105	105	82	85	117	116	110	111	89	89	116	89		
7	301	289	110	75	290	314	314	302	232	232	314	232		
8	523	597	179	100	501	549	547	543	428	428	549	428		
9	583	566	344	162	586	611	541	577	485	485	611	485		
10	665	561	539	300	494	577	534	546	510	510	577	510		
11	576	572	613	472	536	566	490	565	545	545				

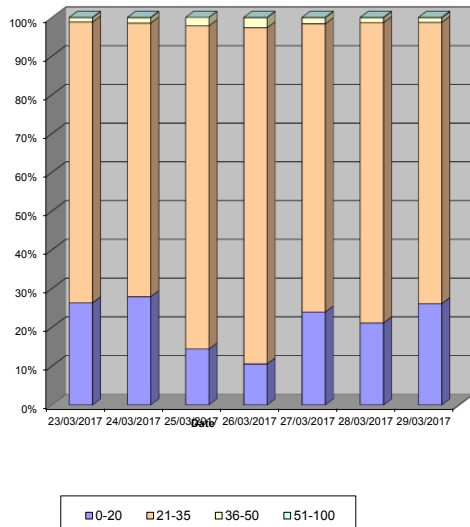
Bradford ATC 12, New Line

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Channel 1 - Eastbound		Speed Summary						Week 1
Speed (MPH)	23/03/2017 Thursday	24/03/2017 Friday	25/03/2017 Saturday	26/03/2017 Sunday	27/03/2017 Monday	28/03/2017 Tuesday	29/03/2017 Wednesday	
0-20	2078	2387	1032	666	1788	1633	2026	
21-35	5721	6039	5972	5464	5546	5993	5631	
36-50	93	123	156	165	119	98	94	
51-100	3	4	9	3	4	5	7	
TOTAL	7895	8553	7160	6298	7457	7729	7757	

Speed Summary (MPH)



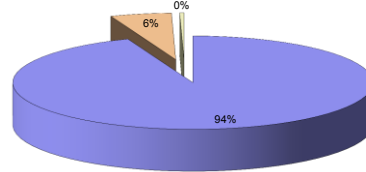
Bradford ATC 12, New Line

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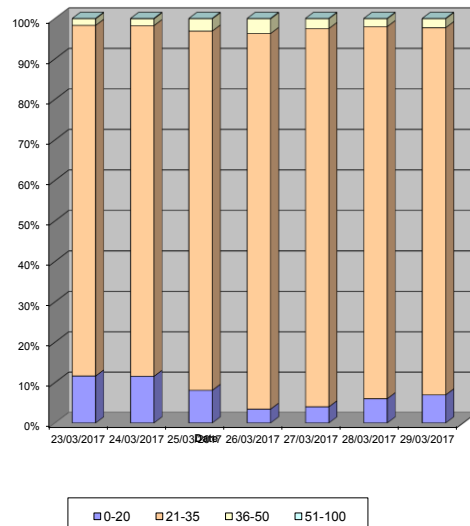
Channel 1 - Eastbound		Vehicle Class				Week 1
Day / Time	Classes	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL	
23/03/2017						
7-19		5632	453	34	6119	
6-22		6873	527	40	7440	
6-24		824	204	19	1047	
0-24		7283	568	44	7895	
24/03/2017						
7-19		6126	438	26	6590	
6-22		7465	515	35	7995	
6-24		1763	438	35	2236	
0-24		7949	567	37	8553	
25/03/2017						
7-19		5390	201	11	5602	
6-22		6324	234	11	6569	
6-24		824	204	11	1039	
0-24		6986	281	13	7160	
26/03/2017						
7-19		4829	145	7	4981	
6-22		5951	174	10	6135	
6-24		1060	160	11	1231	
0-24		6081	205	12	6298	
27/03/2017						
7-19		5481	343	31	5855	
6-22		6621	402	34	7057	
6-24		824	204	14	1042	
0-24		6990	431	36	7457	
28/03/2017						
7-19		5645	330	32	6007	
6-22		6884	388	36	7308	
6-24		1060	160	17	1237	
0-24		7274	417	38	7729	
29/03/2017						
7-19		5654	362	20	6036	
6-22		6918	407	23	7348	
6-24		824	204	14	1042	
0-24		7295	437	25	7757	
Average						
7-19		5537	325	23	5885	
6-22		6670	378	27	7075	
6-24		1060	160	16	1236	
0-24		7105	415	29	7549	

Total Vehicle Class Distribution



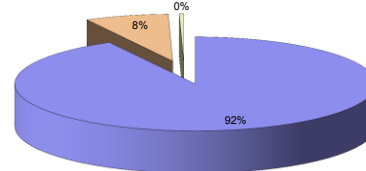
Channel 2 - Westbound		Speed Summary						Week 1
Speed (MPH)	23/03/2017 Thursday	24/03/2017 Friday	25/03/2017 Saturday	26/03/2017 Sunday	27/03/2017 Monday	28/03/2017 Tuesday	29/03/2017 Wednesday	
0-20	1062	1123	841	263	397	534	628	
21-35	7906	8412	7041	6862	8346	8460	8194	
36-50	149	163	241	269	218	180	201	
51-100	7	9	6	6	5	5	6	
TOTAL	9124	9707	7929	7390	8826	9199	9028	

Speed Summary (MPH)



Channel 2 - Westbound		Vehicle Class				Week 1
Day / Time	Classes	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL	
23/03/2017						
7-19		6176	599	33	6808	
6-22		7758	706	38	8502	
6-24		8335	749	40	9124	
24/03/2017						
7-19		6622	624	39	7285	
6-22		8255	719	32	8984	
6-24		8951	735	33	9719	
0-24		8808	774	35	9617	
25/03/2017						
7-19		5460	292	11	5763	
6-22		6705	364	13	7082	
6-24		143	204	13	360	
0-24		7492	423	14	7929	
26/03/2017						
7-19		5240	274	3	5517	
6-22		6400	318	5	6723	
6-24		892	135	8	1035	
0-24		7016	368	6	7390	
27/03/2017						
7-19		6179	657	44	6880	
6-22		7585	753	46	8384	
6-24		824	204	17	1045	
0-24		8084	794	48	8926	
28/03/2017						
7-19		6316	608	27	6951	
6-22		7540	719	60	8319	
6-24		1149	125	20	1294	
0-24		8381	756	52	9189	
29/03/2017						
7-19		6282	602	32	6916	
6-22		7775	692	34	8501	
6-24		824	204	14	1042	
0-24		8262	730	37	9029	
Average						
7-19		6039	622	30	6691	
6-22		7467	610	33	8110	
6-24		1067	166	16	1249	
0-24		8067	656	35	8758	

Total Vehicle Class Distribution



Bradford ATC 12, New Line

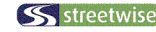
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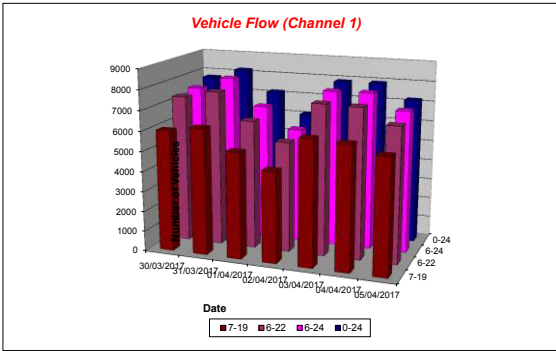
Channel 1 - Eastbound										Vehicle Flow		Week 2	
Hr Ending	30/03/2017	31/03/2017	01/04/2017	02/04/2017	03/04/2017	04/04/2017	05/04/2017	5 Day Ave	7 Day Ave				
	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday						
1	42	148	148	54	24	10	40	24	24				
2	43	83	88	25	24	31	27	45	45				
3	13	22	65	63	12	15	10	14	29				
4	16	16	28	45	17	13	13	15	21				
5	41	23	34	31	15	19	19	23	26				
6	145	42	40	30	44	33	42	61	54				
7	437	130	77	53	137	137	119	192	156				
8	699	398	120	81	410	430	401	450	350				
9	457	610	195	124	582	588	527	563	440				
10	507	485	322	195	527	551	532	520	446				
11	498	496	513	271	503	544	510	538	435				
12	475	475	516	510	499	478	497	485	493				
13	483	502	531	522	506	436	459	477	491				
14	487	476	571	576	507	503	372	469	500				
15	520	524	497	463	501	470	480	499	494				
16	519	574	490	487	493	507	493	517	509				
17	581	524	470	454	487	511	327	466	479				
18	540	597	458	441	565	544	522	514	495				
19	531	606	572	382	621	537	586	575	547				
20	383	566	426	378	494	517	265	445	433				
21	292	436	352	284	375	405	353	372	357				
22	204	286	256	245	251	267	244	250	250				
23	138	203	226	151	172	198	193	181	183				
24	0	175	187	80	104	144	133	111	113				
7-19	6007	6259	5255	4510	6201	6099	5700	6053	5719				
6-22	7323	7677	6366	5470	7438	7425	6981	7313	6914				
0-24	7730	8201	7158	6106	7901	7928	7192	7790	7459				

Bradford ATC 12, New Line

Produced by Streetwise Services Ltd.



Channel 1 - Eastbound										Average Speed		Week 2	
Hr Ending	30/03/2017	31/03/2017	01/04/2017	02/04/2017	03/04/2017	04/04/2017	05/04/2017	5 Day Ave	7 Day Ave				
	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday						
1	2	32.2	29.9	29.7	34.5	29.6	31.4	29.6	31.5	29.6	31.4	32.0	32.0
2	3	30.3	31.4	31.2	30.1	35.3	30.7	31.3	33.5	31.4	31.7	33.5	33.5
3	4	31.4	29.9	30.9	31.2	33.8	30.9	31.2	33.9	31.2	31.2	33.9	33.9
4	5	31.4	30.4	30.5	30.6	30.6	30.7	31.2	29.8	30.7	31.2	29.8	29.8
5	6	30.9	30.3	33.2	32.3	31.1	31.0	31.0	32.6	31.1	31.0	32.6	32.6
6	7	27.0	31.4	32.3	30.4	31.6	30.2	31.9	31.9	31.6	30.2	31.9	31.9
7	8	22.1	28.5	30.9	31.5	29.2	29.2	28.9	28.9	29.2	29.2	28.9	28.9
8	9	17.1	21.4	29.4	30.2	25.0	19.7	20.0	20.0	21.4	19.7	20.0	20.0
9	10	23.7	18.3	28.0	29.3	24.7	22.8	20.7	20.7	18.3	24.7	22.8	20.7
10	11	23.3	24.4	25.2	27.6	25.0	23.2	25.1	25.1	24.4	25.2	23.2	25.1
11	12	23.9	20.7	23.1	25.7	25.2	25.7	23.3	23.3	20.7	23.1	25.7	23.3
12	13	23.8	23.9	20.6	25.5	24.1	22.7	26.4	26.4	23.9	20.6	25.5	24.1
13	14	24.0	22.1	22.5	23.2	23.5	24.7	25.0	25.0	22.1	22.5	23.2	23.5
14	15	23.1	21.5	22.4	18.9	24.7	23.4	25.0	25.0	21.5	21.5	22.4	18.9
15	16	15.2	23.1	22.1	23.4	26.3	25.0	20.8	20.8	15.2	23.1	22.1	23.4
16	17	19.8	16.7	24.0	25.8	20.2	23.9	19.2	19.2	19.8	16.7	24.0	25.8
17	18	17.2	19.0	24.6	26.6	19.0	20.1	16.2	16.2	17.2	19.0	24.6	26.6
18	19	24.8	19.5	24.5	27.7	21.2	18.0	15.2	15.2	24.8	19.5	24.5	27.7
19	20	26.0	23.1	26.0	27.9	26.4	24.4	25.1	25.1	26.0	23.1	26.0	27.9
20	21	27.0	33.2	25.9	27.4	29.9	25.7	28.9	28.9	27.0	33.2	25.9	27.4
21	22	27.3	25.9	27.9	27.5	27.7	27.3	27.2	27.2	27.3	25.9	27.9	27.5
22	23	28.3	27.7	27.9	28.2	28.3	28.4	27.5	27.5	28.3	27.7	27.9	28.2
23	24	-	27.9	28.6	28.7	29.2	28.3	28.0	28.0	-	27.9	28.6	28.7
10-12	23.5	22.6	24.1	26.4	25.6	23.4	24.2	24.2	24.2	23.5	22.6	24.1	26.4
14-16	22.9	22.4	24.9	25.0	24.7	23.7	23.1	23.0	23.0	22.9	22.4	24.9	25.0
0-24	22.9	22.4	24.9	25.0	24.7	23.7	23.1	23.0	23.0	22.9	22.4	24.9	25.0

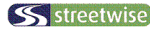


Channel 1 - Eastbound										85th Percentile		Week 2	
Hr Ending	30/03/2017	31/03/2017	01/04/2017	02/04/2017	03/04/2017	04/04/2017	05/04/2017	5 Day Ave	7 Day Ave				
	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday						
1	33.9	-	33.1	33.8	33.2	38.4	33.7	33.7	33.7	33.9	-	33.1	33.8
2	38.1	33.4	33.0	34.0	38.6	33.9	38.2	38.2	38.2	38.1	33.4	33.0	34.0
3	38.4	38.2	38.0	38.3	38.7	38.0	38.2	38.2	38.2	38.4	38.2	38.0	38.3
4	38.8	33.6	38.8	38.8	38.5	38.6	38.2	38.2	38.2	38.8	33.6	38.8	38.8
5	38.2	38.1	33.8	33.7	33.9	38.5	33.6	33.6	33.6	38.2	38.1	33.8	33.7
6	33.4	33.2	38.8	38.0	33.3	33.6	38.0	38.0	38.0	33.4	33.2	38.8	38.0
7	33.4	38.7	38.3	38.3	38.7	33.1	33.3	33.3	33.3	33.4	38.7	38.3	38.3
8	28.5	33.5	33.5	38.7	33.9	33.2	33.7	33.7	33.7	28.5	33.5	33.5	38.7
9	28.5	29.0	33.6	33.1	28.3	28.3	28.3	28.3	28.3	28.5	29.0	33.6	33.1
10	28.5	29.0	33.8	38.7	28.4	28.0	28.0	28.0	28.0	28.5	29.0	33.8	38.7
11	28.2	28.5	28.6	33.3	28.0	28.2	28.8	28.8	28.8	28.2	28.5	28.6	33.3
12	28.1	28.0	28.2	28.4	28.0	28.4	28.5	28.5	28.5	28.1	28.0	28.2	28.4
13	28.9	28.4	28.2	28.6	28.6	28.6	28.6	28.6	28.6	28.9	28.4	28.2	28.6
14	28.1	28.3	28.4	28.4	28.3	28.8	28.6	28.6	28.6	28.1	28.3	28.4	28.4
15	28.7	28.8	28.6	28.6	28.3	28.6	28.8	28.8	28.8	28.7	28.8	28.6	28.6
16	23.9	28.9	28.3	28.3	28.6	28.8	28.8	28.8	28.8	23.9	28.9	28.3	28.3
17	28.2	23.8	28.5	28.3	28.3	28.4	28.4	28.4	28.4	28.2	23.8	28.5	28.3
18	23.9	28.2	28.4	28.4	28.6	28.5	28.1	23.0	23.0	23.9	28.2	28.4	28.4
19	28.8	23.1	28.6	33.1	28.8	28.8	28.8	28.8	28.8	28.8	23.1	28.6	33.1
20	28.4	28.0	28.1	33.8	28.9	28.5	28.5	28.5	28.5	28.4	28.0	28.1	33.8
21	28.5	28.2	28.5	33.4	28.1	28.5	28.0	28.0	28.0	28.5	28.2	28.5	33.4
22	33.8	28.4	33.2	33.7	33.5	33.6	33.6	33.6	33.6	33.8	28.4	33.2	33.7
23	33.8	33.2	34.0	33.7	33.4	33.3	33.3	33.3	33.3	33.8	33.2	34.0	33.7
24	-	34.0	33.9	33.4	33.1	33.9	33.3	33.3	33.3	-	34.0	33.9	33.4
10-12	28.4	28.9	29.0	29.0	29.5	28.8	28.8	28.8	28.8	28.4	28.9	29.0	29.0
14-16	28.1	28.6	28.6	28.6	28.7	28.8	28.8	28.8	28.8	28.1	28.6	28.6	28.6
0-24	28.3	28.7	28.4	28.4	28.5	28.8	28.4	28.0	28.0	28.3	28.7	28.4	28.4

Channel 2 - Westbound										Vehicle Flow		Week 2	
Hr Ending	30/03/2017	31/03/2017	01/04/2017	02/04/2017	03/04/2017	04/04/2017	05/04/2017	5 Day Ave	7 Day Ave				
	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday						
1	83	0	242	209	110	109	109	72	115				
2	30	72	163	138	72	54	54	56	83				
3	19	49	91	98	25	21	23	27	47				
4	17	18	58	69	25	21	18	20	32				
5	27	10	45	48	13	15	15	18	26				
6	112	38	37	83	37	27	34	50	48				
7	274	115	88	67	114	124	130	151	130				
8	538	255	112	77	312	296	310	342	271				
9	584	542	173	100	671	581	546	585	457				
10	496	581	315	203	622	532	587	560	474				
11	529	493	514	338	489	494	566	514	460				
12	562	505	554	472	520	565	540	538	531				
13	574	603	588	553	540	553	587	571	571				
14	524	642	586	565	596	558	671	576	580				
15	635	610	546	575	590	580	618	605	593				
16	557	704	617	599	676	678	641	651	639				
17	588	604	559	600	600	622	399	592	587				
18	602	602	589	563	581	653	597	562	596				
19	691	628	594	505	688	656	629	658	627				
20	579	651	586										

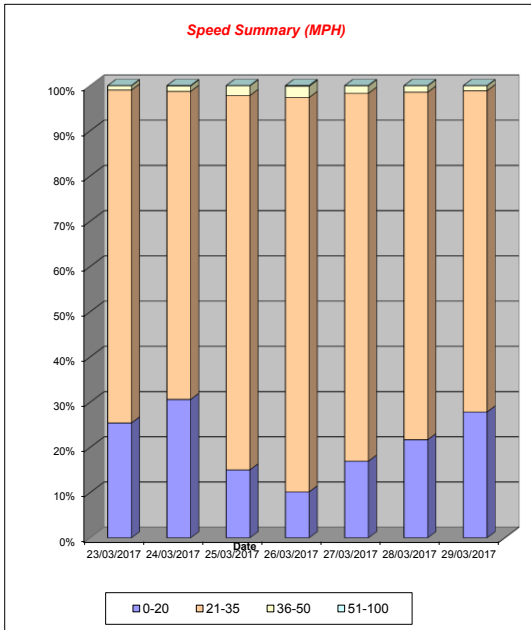
Bradford ATC 12, New Line

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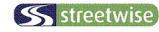
Channel 1 - Eastbound		Speed Summary						Week 2
Speed (MPH)	30/03/2017 Thursday	31/03/2017 Friday	01/04/2017 Saturday	02/04/2017 Sunday	03/04/2017 Monday	04/04/2017 Tuesday	05/04/2017 Wednesday	
0-20	1965	2512	1077	621	1340	1722	2003	
21-35	5689	5585	5925	5325	6427	6092	5108	
36-50	75	100	154	153	131	112	80	
51-100	1	4	2	7	3	2	1	
TOTAL	7730	8201	7158	6106	7901	7828	7192	

Speed Summary (MPH)



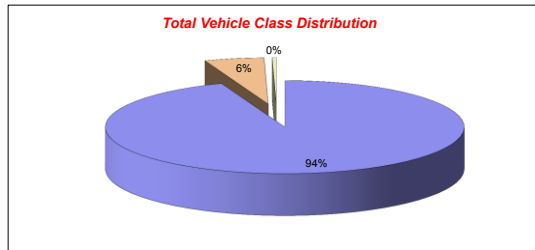
Bradford ATC 12, New Line

Produced by Streetwise Services Ltd.



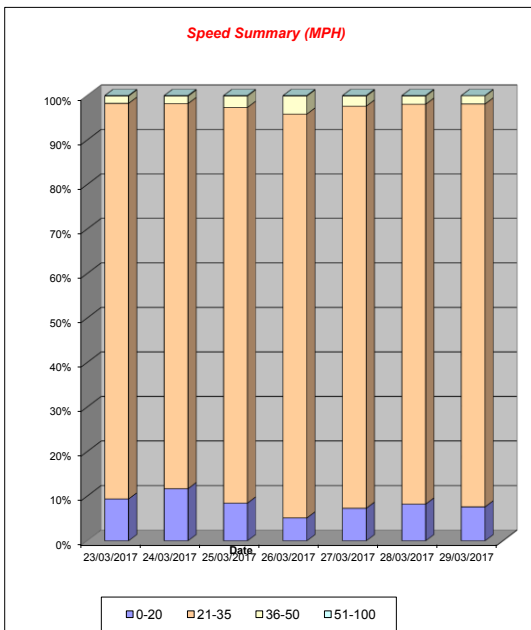
Channel 1 - Eastbound		Vehicle Class				Week 2
Day / Time	Classes	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL	
30/03/2017						
7-19		5585	391	31	6007	
6-22		6538	451	34	7323	
6-24		1938	10	38	2461	
0-24		7223	472	35	7730	
31/03/2017						
7-19		5650	389	21	6259	
6-22		7235	450	22	7677	
6-24		1563	119	23	8055	
0-24		7692	485	24	8201	
01/04/2017						
7-19		5049	202	4	5255	
6-22		6128	232	6	6366	
6-24		1489	128	7	6140	
0-24		6889	261	8	7158	
02/04/2017						
7-19		4379	125	6	4510	
6-22		5253	158	9	5470	
6-24		1514	177	10	5701	
0-24		5901	195	10	6106	
03/04/2017						
7-19		5780	407	34	6291	
6-22		6951	489	38	7458	
6-24		1583	128	14	7145	
0-24		7367	495	39	7901	
04/04/2017						
7-19		5673	396	30	6099	
6-22		6954	438	33	7425	
6-24		1590	149	35	7767	
0-24		7443	450	35	7928	
05/04/2017						
7-19		5287	403	40	5790	
6-22		6207	432	42	6681	
6-24		1536	144	14	7007	
0-24		6690	449	44	7192	
Average						
7-19		5365	330	24	5719	
6-22		6511	377	27	6914	
6-24		1526	128	14	7111	
0-24		7031	401	28	7459	

Total Vehicle Class Distribution



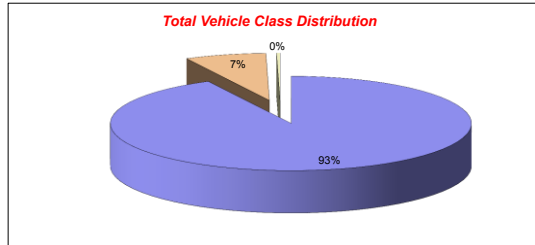
Channel 2 - Westbound		Speed Summary						Week 2
Speed (MPH)	30/03/2017 Thursday	31/03/2017 Friday	01/04/2017 Saturday	02/04/2017 Sunday	03/04/2017 Monday	04/04/2017 Tuesday	05/04/2017 Wednesday	
0-20	834	1097	716	379	678	737	659	
21-35	7891	8110	7453	6697	8381	8252	7829	
36-50	147	158	217	300	209	171	160	
51-100	7	9	5	5	9	6	2	
TOTAL	8879	9374	8385	7381	9277	9186	8650	

Speed Summary (MPH)



Channel 2 - Westbound		Vehicle Class				Week 2
Day / Time	Classes	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL	
30/03/2017						
7-19		6132	581	37	6750	
6-22		7636	697	40	8373	
6-24		761	10	16	961	
0-24		8102	734	43	8879	
31/03/2017						
7-19		6188	550	22	6760	
6-22		7951	655	23	8539	
6-24		8377	88	24	9187	
0-24		8648	704	24	9374	
01/04/2017						
7-19		5433	316	8	5757	
6-22		6822	389	8	7219	
6-24		1539	128	14	7145	
0-24		7916	461	8	8385	
02/04/2017						
7-19		4944	217	10	5171	
6-22		6117	274	10	6401	
6-24		1513	125	10	6777	
0-24		7022	349	10	7381	
03/04/2017						
7-19		6217	633	25	6875	
6-22		7751	738	27	8556	
6-24		1561	128	17	6955	
0-24		8461	788	28	9277	
04/04/2017						
7-19		6155	554	29	6738	
6-22		7522	658	34	8512	
6-24		1528	128	14	6799	
0-24		8456	694	26	9156	
05/04/2017						
7-19		5830	597	38	6465	
6-22		7151	678	41	7870	
6-24		1581	128	11	6307	
0-24		7889	720	41	8650	
Average						
7-19		5843	498	24	6365	
6-22		7314	584	26	7924	
6-24		1527	128	16	6337	
0-24		8070	636	27	8733	

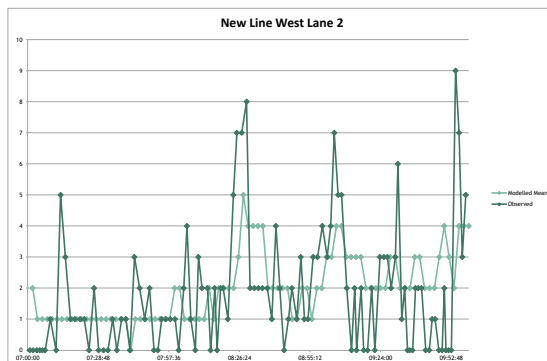
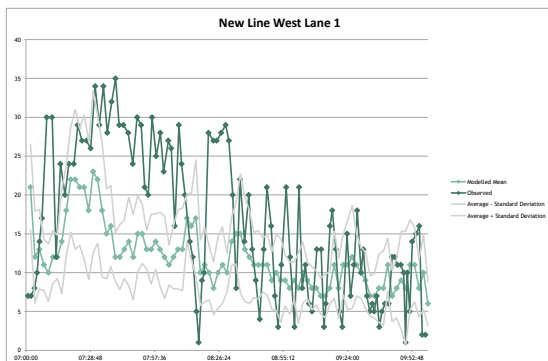
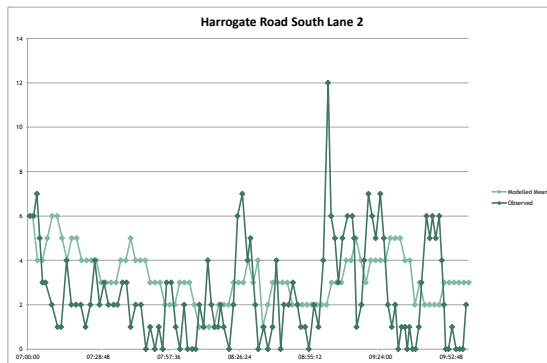
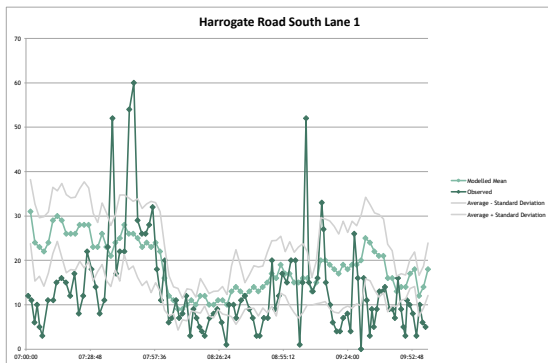
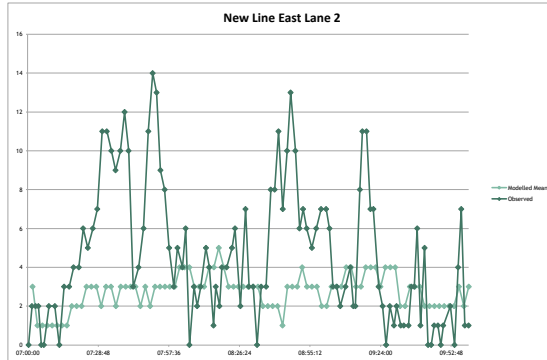
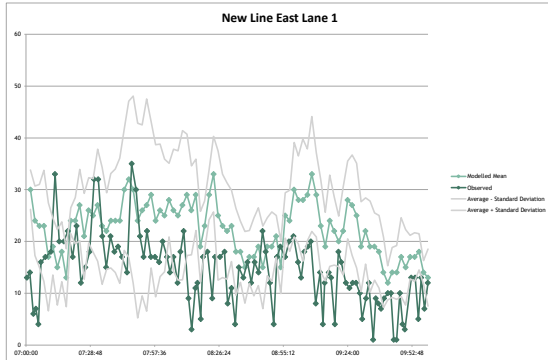
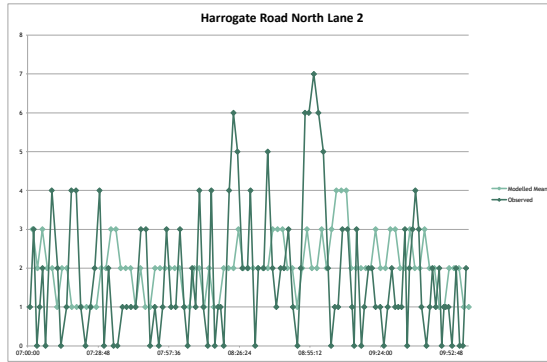
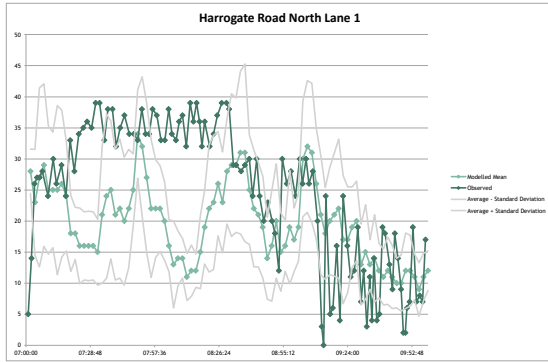
Total Vehicle Class Distribution



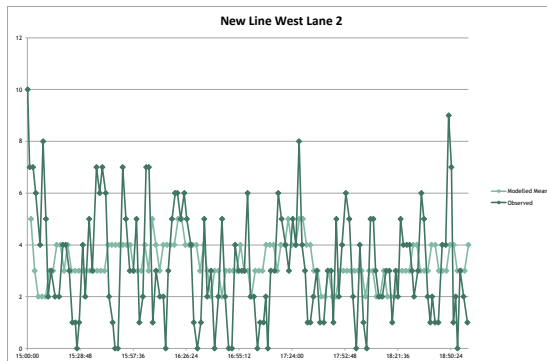
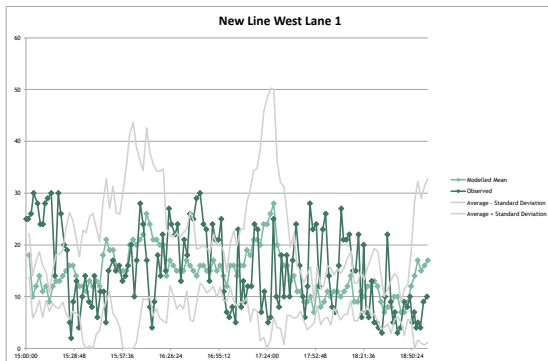
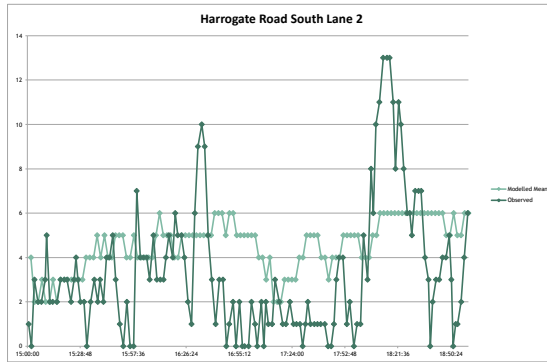
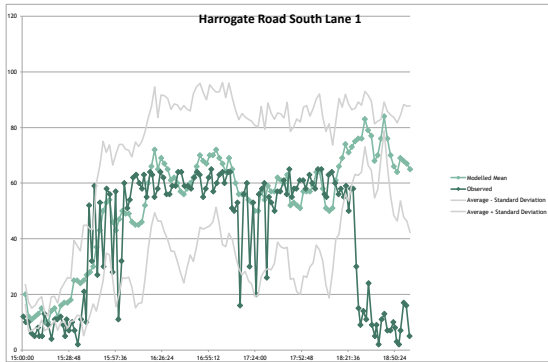
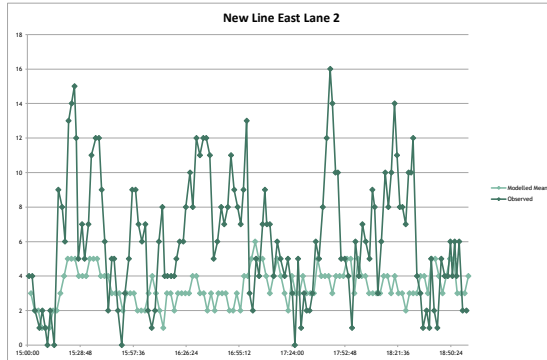
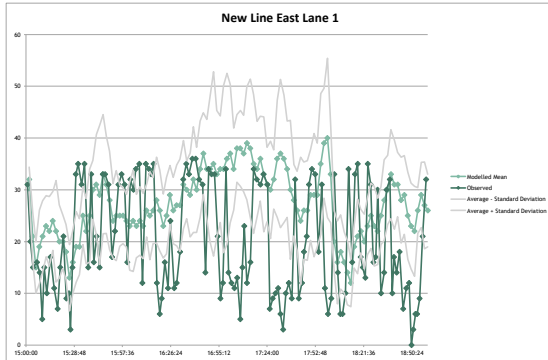
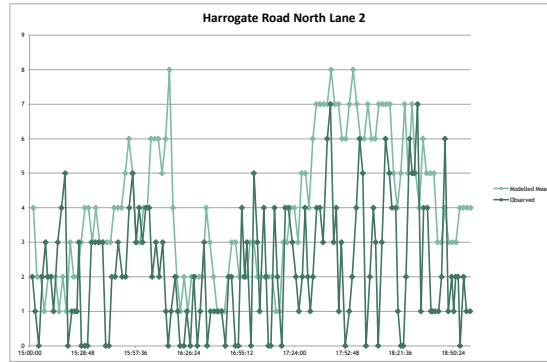
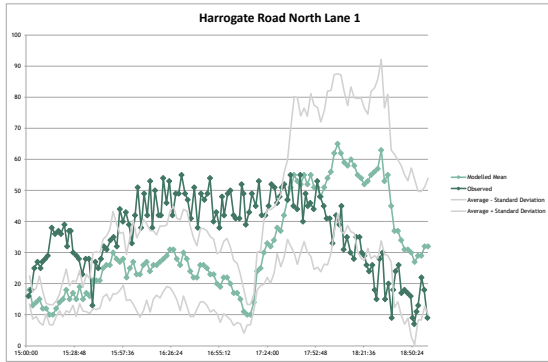
Appendix B

Queue Length Validation

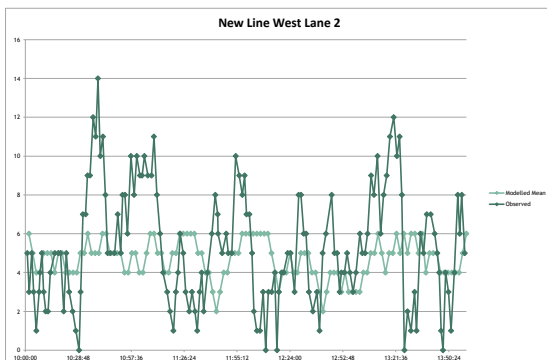
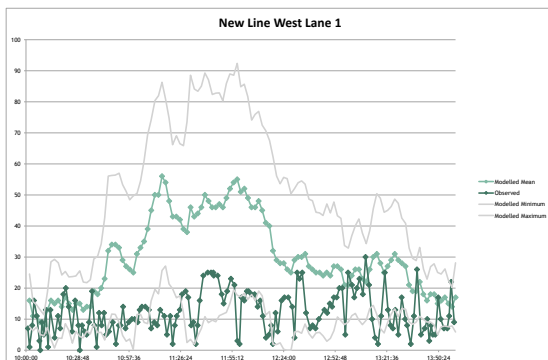
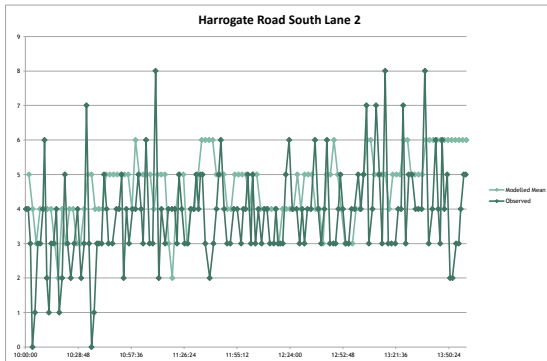
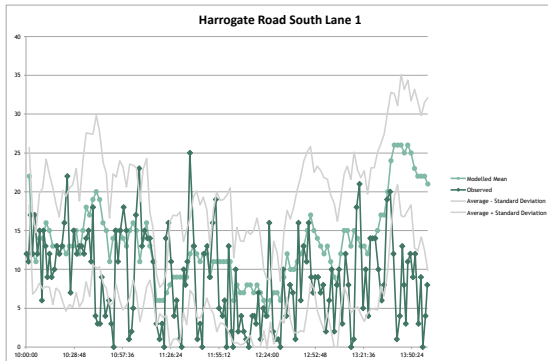
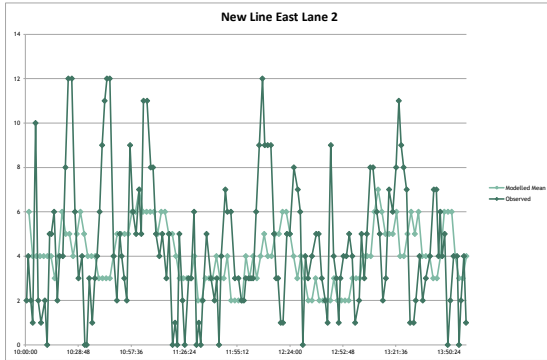
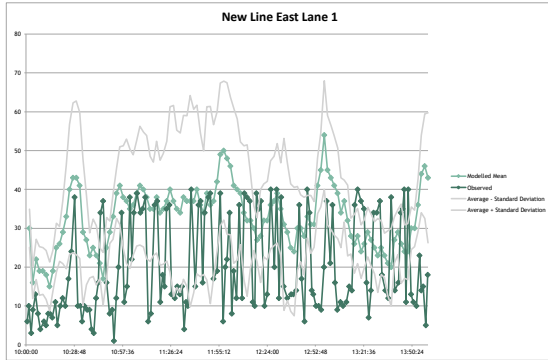
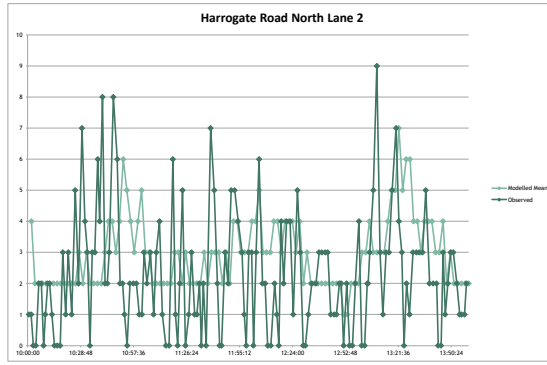
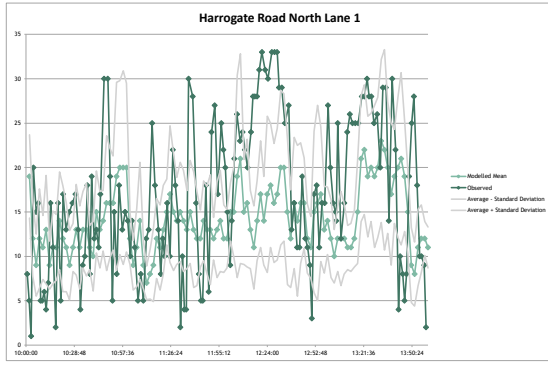
2017 Base Queue Length Validation AM Peak



2017 Base Queue Length Validation PM Peak

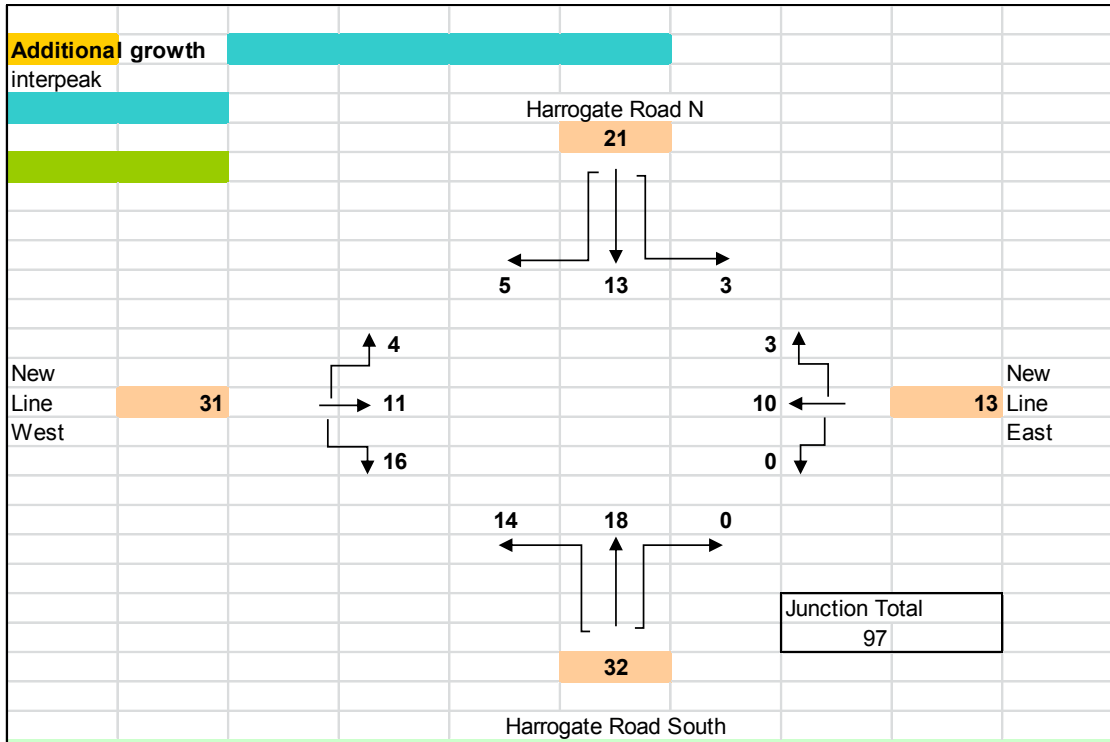


2017 Base Queue Length Validation SAT Peak



Appendix C

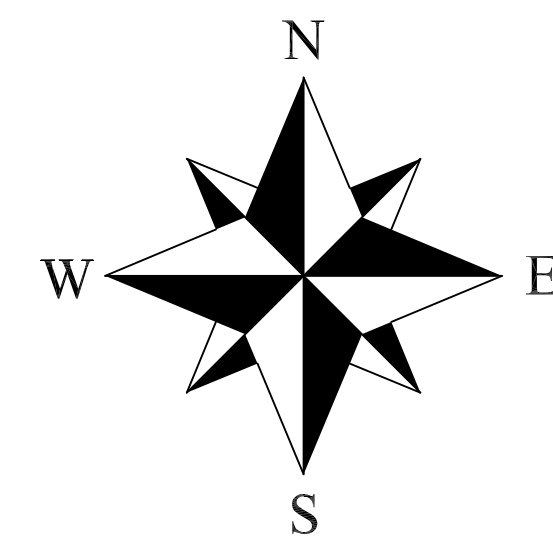
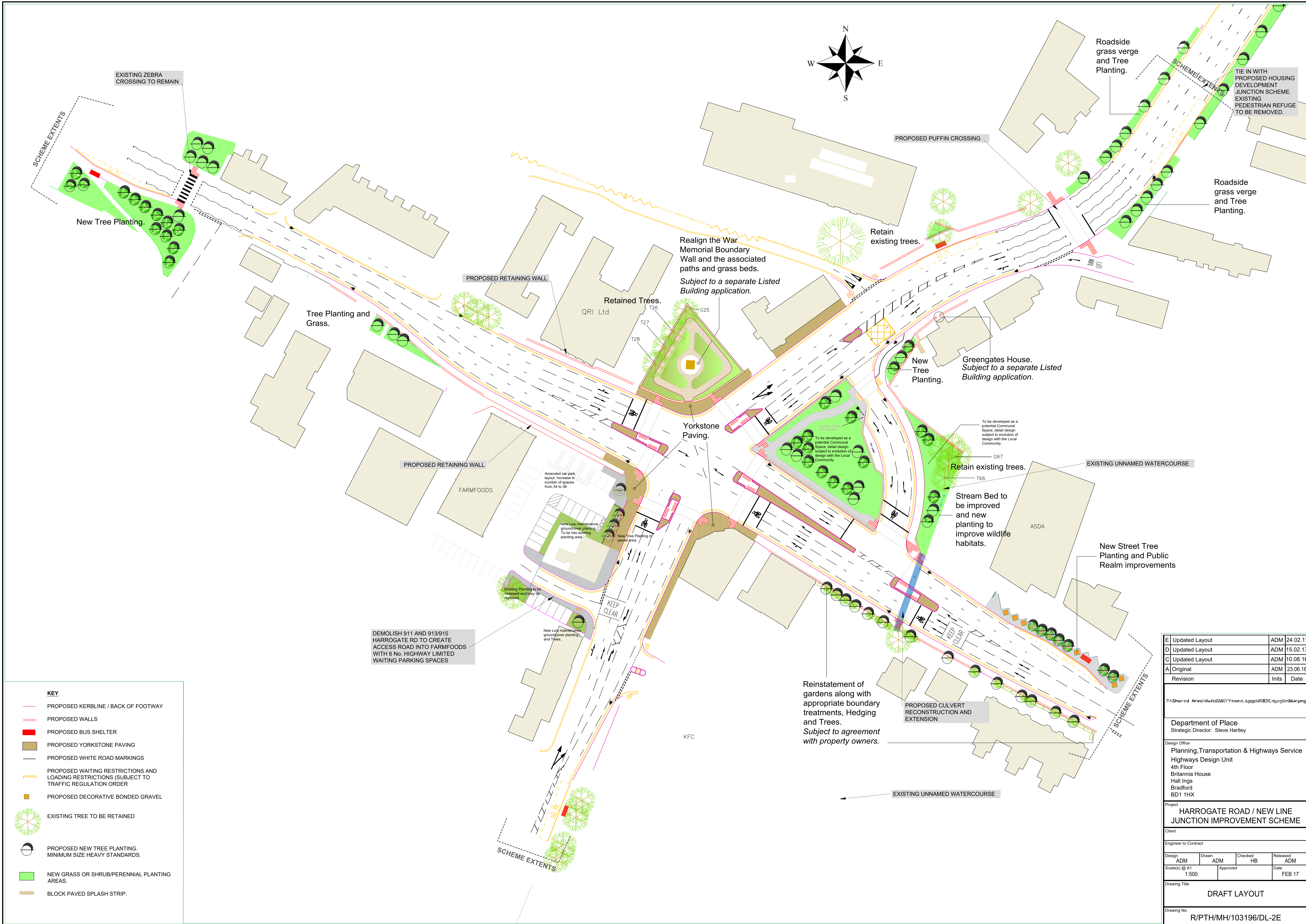
Committed Development Flows



Interpeak by hour

Appendix D

Drawing Number R/PTH/MH/103196/DL-2E



- KEY**
- PROPOSED KERBLINE / BACK OF FOOTWAY
 - PROPOSED WALLS
 - PROPOSED BUS SHELTER
 - PROPOSED YORKSTONE PAVING
 - PROPOSED WHITE ROAD MARKINGS
 - PROPOSED WAITING RESTRICTIONS AND LOADING RESTRICTIONS (SUBJECT TO TRAFFIC REGULATION ORDER)
 - PROPOSED DECORATIVE BONDED GRAVEL
 - EXISTING TREE TO BE RETAINED
 - PROPOSED NEW TREE PLANTING. MINIMUM SIZE HEAVY STANDARDS.
 - NEW GRASS OR SHRUB/PERENNIAL PLANTING AREAS.
 - BLOCK PAVED SPLASH STRIP.

E	Updated Layout	ADM	24.02.17
D	Updated Layout	ADM	15.02.17
C	Updated Layout	ADM	10.08.16
A	Original	ADM	23.06.16
Revision		Initis	Date
<p>Department of Place Strategic Director: Steve Hartley</p> <p>Design Office Planning, Transportation & Highways Service Highways Design Unit 4th Floor Britannia House Hall Ings Bradford BD1 1HX</p> <p>Project HARROGATE ROAD / NEW LINE JUNCTION IMPROVEMENT SCHEME</p> <p>Client</p> <p>Engineer to Contract</p> <p>Design ADM Drawn ADM Checked HB Released ADM Scale(s) @ A1 1:500 Approved Date FEB 17</p> <p>Drawing Title DRAFT LAYOUT</p> <p>Drawing No. R/PTH/MH/103196/DL-2E</p>			

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