

**PROPOSED CAR PARK EXTENSION
COMMERCIAL ROAD, GOLDTHORPE**

Aldi Stores Ltd
Transport Assessment

April 2016

**Aldi Stores Limited
Proposed Car Park Extension
Commercial Road, Goldthorpe**

Contents

1.0	INTRODUCTION	1
2.0	EXISTING SITE OPERATION	4
3.0	PROPOSED DEVELOPMENT	8
4.0	TRAFFIC ASSESSMENT	11
5.0	JUNCTION CAPACITY TESTS	15
6.0	SUMMARY & CONCLUSIONS	22

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List of Tables

Table 1 – Existing Staff	4
Table 2 – Shift Patterns	4
Table 3 – Existing RDC Trip Attraction	12
Table 4 – Growth Factors	12
Table 5 – Potential Trip Attraction of Development	13
Table 6 – Traffic Distribution	13
Table 7 – Net Development Effect	14
Table 8 – Queue Comparison – A6195 Rotheram Road / A635 Doncaster Road	16
Table 9 – Queue Comparison Model 2 – A6195 Rotherham Road / A635 Doncaster Road	17
Table 10 – ARCADY – A6195 Rotheram Road / A635 Doncaster Road	17
Table 11 – Queue Comparison – A6195 / Highgate / A633 Manvers Way	18
Table 12 – ARCADY – A6195 / Highgate / A633 Manvers Way	19
Table 13 – Queue Comparison – A6195 Dearne Valley Parkway / Wath Road	20
Table 14 – ARCADY – A6195 Dearne Valley Parkway / Wath Road	21

List of Appendices

Appendix 1	Site Masterplan
Appendix 2	Aldi Access Survey Results
Appendix 3	Parking Assessment
Appendix 4	Surveyed Flows and Raw Survey Data
Appendix 5	Existing Site Flows
Appendix 6	TEMPRO Assessment
Appendix 7	2021 Base Flows
Appendix 8	Development Flows
Appendix 9	2021 Base Flows plus Development
Appendix 10	Capacity Modelling Output Files

1.0 INTRODUCTION

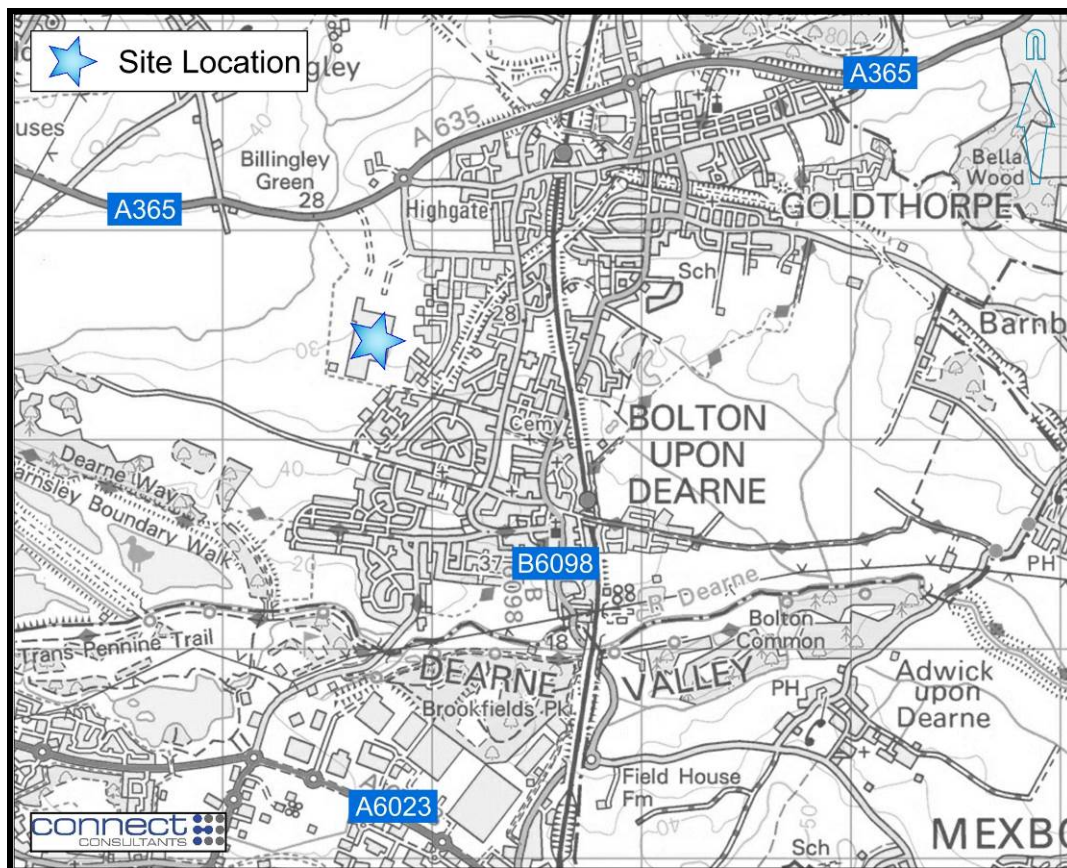
1.1 Appointment of Connect Consultants

1.1.1 Connect Consultants Limited has been commissioned by Aldi Stores Limited in relation to their proposals to extend the car parking provision at their regional distribution centre (RDC) at Commercial Road, Goldthorpe.

1.2 Site Location

1.2.1 The site is located at Goldthorpe Industrial Estate, Commercial Road, Goldthorpe. The location of the site and its local context is identified at **Inset 1.1** below.

Inset 1.1 – Site Location



1.2.2 The existing Aldi RDC includes a warehouse with a gross internal area (GIA) of 46,506sq.m and offices with a GIA of 3,330sq.m. There are currently a total of 253 parking spaces on-site.

1.2.3 Local to the site, Commercial Road and Dudley Drive form the spine roads to an industrial estate serving a number of commercial properties, which includes the existing Aldi RDC.

1.3 Development Proposals

1.3.1 **Appendix 1** contains the proposed site masterplan, the main components of which are summarised as follows:-

- 158 additional parking spaces will be provided for the RDC.
- No new floor space for the RDC is proposed.

1.3.2 In terms of the site access arrangements, these are also shown on the proposed site masterplan at **Appendix 1**. Access to the proposed parking area will be provided from a simple priority T-junction access with the internal access road serving the Aldi RDC.

1.4 National Planning Policy Framework Context

1.4.1 The National Planning Policy Framework (NPPF) published on the 27th March 2012 provides the Government's aims and objectives for transport and development throughout the country and sets out a framework for local authorities to produce their own local plans.

1.4.2 A key objective at paragraph 18 of the NPPF is the commitment to securing economic growth. Paragraph 19 further emphasizes the importance of supporting economic growth through the planning system.

1.4.3 The objectives are reiterated in paragraph 32 which is provided below:-

"All developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment. Plans and decisions should take account of whether:

- *The opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure;*
- *Safe and suitable access to the site can be achieved for all people; and*
- *Improvements can be undertaken within the transport network that cost effectively limits the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe."*

1.5 Report Overview

1.5.1 This Transport Assessment (TA) has been prepared in accordance with the Government's National Planning Practice Guidance note 'Travel Plans, Transport Assessments, and Statements in Decision-Taking' set out at planningguidance.communities.gov.uk.

1.5.2 The scope of the Transport Assessment was discussed with representatives of Barnsley Metropolitan Borough Council, and the remainder of this report is divided into five further sections, details of which are set out below.

Section 2.0 Existing Site Operation

This provides details of the existing Aldi RDC operation.

Section 3.0 Proposed Development

This provides details for the proposed development including the site access arrangements and parking arrangements for vehicles relative to parking standards.

Section 4.0 Traffic Assessment

This provides details of existing traffic flows within the study area along with an assessment of the worst case trip attraction of the proposed development.

Section 5.0 Junction Capacity Tests

This provides junction capacity tests for the site access junction and junctions local to the site within an identified study area.

Section 6.0 Summary and Conclusions

A summary of the report and the Transport Assessment conclusions are provided in this final section of the report.

2.0 EXISTING SITE OPERATION

2.1 Introduction

2.1.1 This section of the report provides a summary of the existing staff attraction and vehicular operation of the Aldi RDC and regional offices.

2.2 Staff Numbers

2.2.1 The existing Aldi RDC consists of two main functions, these being the warehouse / distribution operation and the regional offices.

2.2.2 The existing employee numbers (on-site each day, as confirmed by Aldi) for each of these sectors is set out at **Table 1** below.

Table 1 – Existing Staff

Sector	Staff Figures
RDC Warehouse	160
RDC Drivers	98
Regional Offices	50
Total	308

2.3 Shift Patterns

2.3.1 Due to the nature and hours of operation, staff members have a variety of shift patterns. Office employees generally operate through a typical working day, while warehouse employees (which are inclusive of those operating within the warehouse and those driving goods vehicles) are split into shifts across a 24 hour operating period.

2.3.2 The indicative staff shift patterns are set out at **Table 2** below.

Table 2 – Shift Patterns

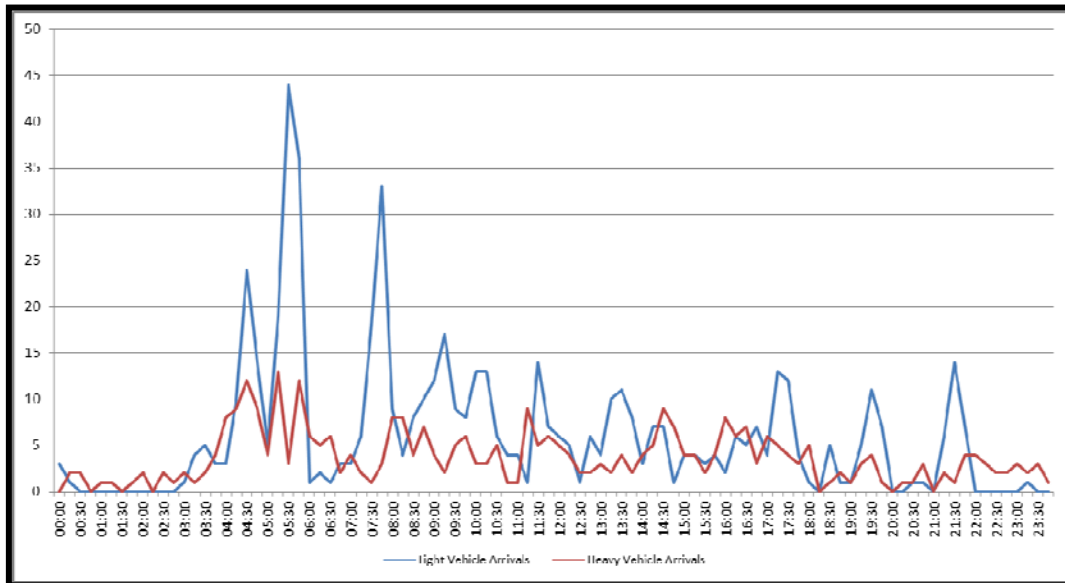
Type	Shift Periods	Comments
Warehouse	04:00 – 15:00	
Warehouse	14:00 – 02:00	
Driver	00:00 – 23:59	Staggered shift start times every c2 hours across a 24 hour period.
Office	08:00 – 17:00	

2.4 Existing Attraction

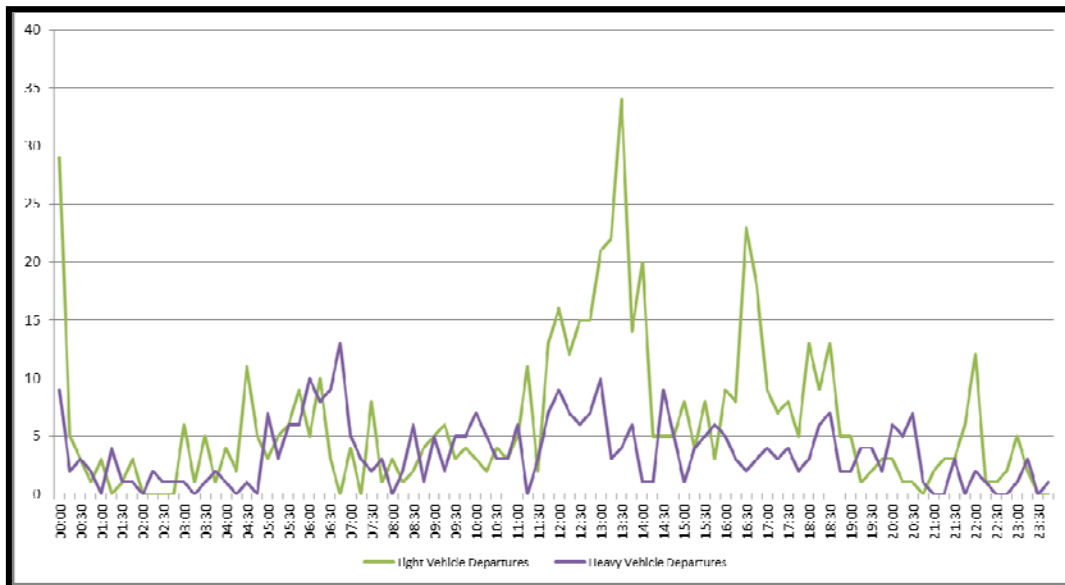
2.4.1 Traffic surveys were undertaken at the site access (Commercial Road) on Tuesday 13th October 2015. The surveys identified the total two-way attraction of the site access for a 24 hour period between 00:00 and 23:59. The surveys classified light and heavy vehicles and summarised the counts into 15 minute periods throughout the survey.

2.4.2 The existing hourly vehicular attraction of the Aldi site is summarised at **Graphs 2.1** and **2.2** below, while full survey results are provided at **Appendix 2**.

Graph 2.1 – Existing Vehicular Attraction – Arrivals



Graph 2.2 – Existing Vehicular Attraction – Departures



2.4.3 The data indicates a total of 576 car arrivals and 592 car departures during the 24 hour survey period and a total of 351/337 goods vehicles arriving and departing from site. Aldi have advised that on the day of the survey, a total of 30 visitors came to the site.

2.4.4 The graph also identifies that the highest number of hourly car arrivals occurs between 05:00 and 06:00 (104) and the highest number of hourly car departures occurs between 12:45 and 13:45 (92), which is consistent with the driver employees on site and the shifted working hours. It is noteworthy that the peak attractions of the RDC are outside of the typical network peak hours.

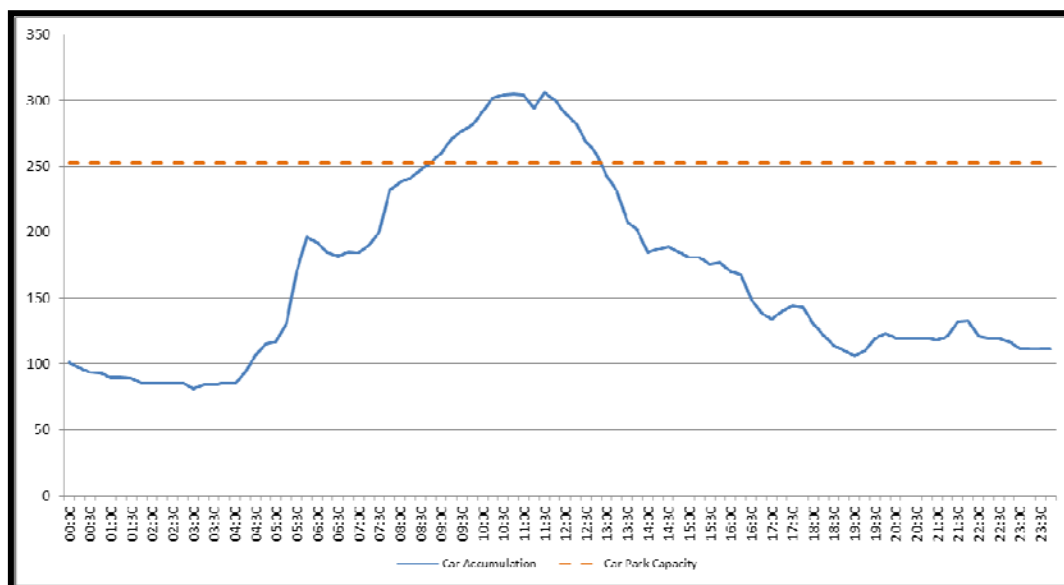
2.4.5 **Graph 2.1** identifies that there were a greater number of light vehicle arrivals (576) across the survey day than there are staff working on site (308). This is explained by a number of reasons, including but not limited to:-

- A number of light vehicles arrive directly to the depot area as part of the warehouse goods deliveries.
- Some staff are dropped-off / picked-up for their shifts (as part of multi-occupancy shared car journeys) and so rather than a single arrival to the site and a single departure from the site, these staff members have 4 traffic movements associated with their work journey at the site access.
- Some of the office staff leave the site during their lunch break, and so again these staff members have 4 traffic movements associated with their daily work journey.
- The figures include day visitors to the Aldi RDC.

2.5 Car Park Accumulation Data

2.5.1 The Tuesday 13th October 2015 traffic surveys identified the initial occupancy of the existing site car park prior to the access count, which has been used to determine the overall car park occupancy throughout the survey day. The existing site car park has a total of 253 spaces and the profile of cars parked is shown at **Graph 2.3** below.

Graph 2.3 – Existing Aldi Site Car Park



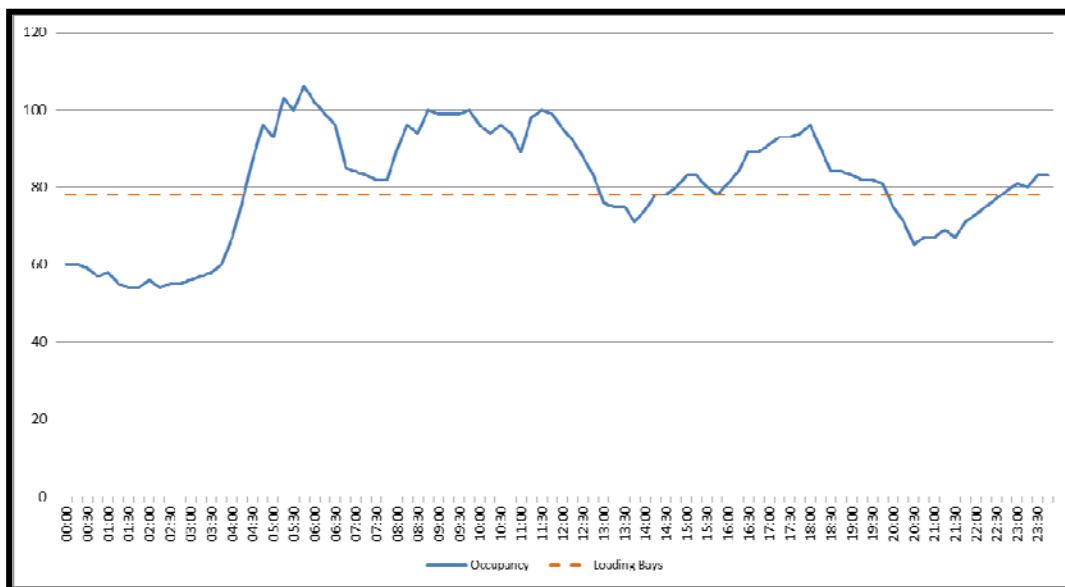
2.5.2 The peak accumulation across the survey period occurred at 11:30, with a total of 306 vehicles parked on site, while the minimum accumulation occurred at 03:00 with 81 vehicles parked. It should be noted that the accumulation of cars on site includes a number of Aldi operational vehicles, which are stored until such time that they are required for business use. This proportion of the occupancy, which is likely to be low, has an effect on the maximum operational parking accumulation.

2.5.3 It should also be noted that while there are 308 staff on-site per day, that there are periods of overlapping shifts across a 24-hour period, such that for parts of the day there are parked cars associated with shifts attributable to two working days.

2.5.4 Overall, the existing car park operates over its available capacity. The extent of any off-site car parking has not been established.

2.5.5 The Tuesday 13th October 2015 traffic surveys also identified the initial occupancy of HGVs on site prior to the access count, and the profile of HGV occupation on site throughout the survey day is shown at **Graph 2.4** below.

Graph 2.4 – Existing Aldi Site HGV Occupancy Profile



3.0 PROPOSED DEVELOPMENT

3.1 Introduction

3.1.1 This section of the report provides details of the proposed development for 158 parking spaces.

3.2 Vehicular Access Arrangements

3.2.1 The proposed site access arrangements are shown on the masterplan drawing at **Appendix 1**. Access to the proposed parking area will be provided from a simple priority T-junction access with the internal access road serving the Aldi RDC.

3.2.2 Delivery and service access to the Aldi RDC will continue from the existing Commercial Road access junction, and via the controlled gate house.

3.3 Car Parking Provision

3.3.1 A ministerial statement delivered on 25th March 2015 has amended national planning policy and states that the following needs to be read in conjunction with paragraph 39 of the National Planning Policy Framework (NPPF). *“Local planning authorities should only impose local parking standards for residential and non-residential development where there is clear and compelling justification that it is necessary to manage their local road network.”*

3.3.2 Paragraph 39 of the National Planning Policy Framework NPPF states:-

“If setting local parking standards for residential and non-residential development, local planning authorities should take into account:

- *The accessibility of the development;*
- *The type, mix and use of the development;*
- *The availability of and opportunities for public transport;*
- *Local car ownership levels; and*
- *An overall need to reduce the use of high-emission vehicles.”*

3.3.3 Barnsley Metropolitan Borough Council's Parking SPD sets out the car parking standards within the local authority, which are based on use class and location. The standards are maxima.

3.3.4 For B8 Storage and Distribution, the standards indicate one space per three staff or one space per 60sq.m gross floor area up to 300sq.m, then 1 space per 100sq.m gross floor area up to 1,000sq.m, and one space per 150sq.m gross floor area thereafter.

3.3.5 For B1 over 2,500sq.m the standards indicate one space per 30sq.m gross floor area.

3.3.6 By applying the standards above to the regional distribution centre, it equates to a maximum on-site car parking provision as follows:

- B8 Use: Based on floor area = 316 spaces (300 / 60) + (1,000 / 100) + (45,206 / 150) = 5 + 10 + 301 = 316 spaces).
- B1 Use: 3,330 / 30 = 111.
- B8 use + B1 use = 316 + 111 = 427 spaces.

3.3.7 The proposed total on-site car parking provision of 411 spaces therefore brings the site broadly in line with the maximum standard, without exceeding it. Therefore the proposed additional parking accords with local planning policy.

3.4 Car Parking Operation Assessment

3.4.1 Based on the traffic attraction assessment provided at **Section 4.0** of this report, the operation of the proposed car park has been assessed using the surveyed car park accumulations (as detailed above and summarised at **Graph 2.3**).

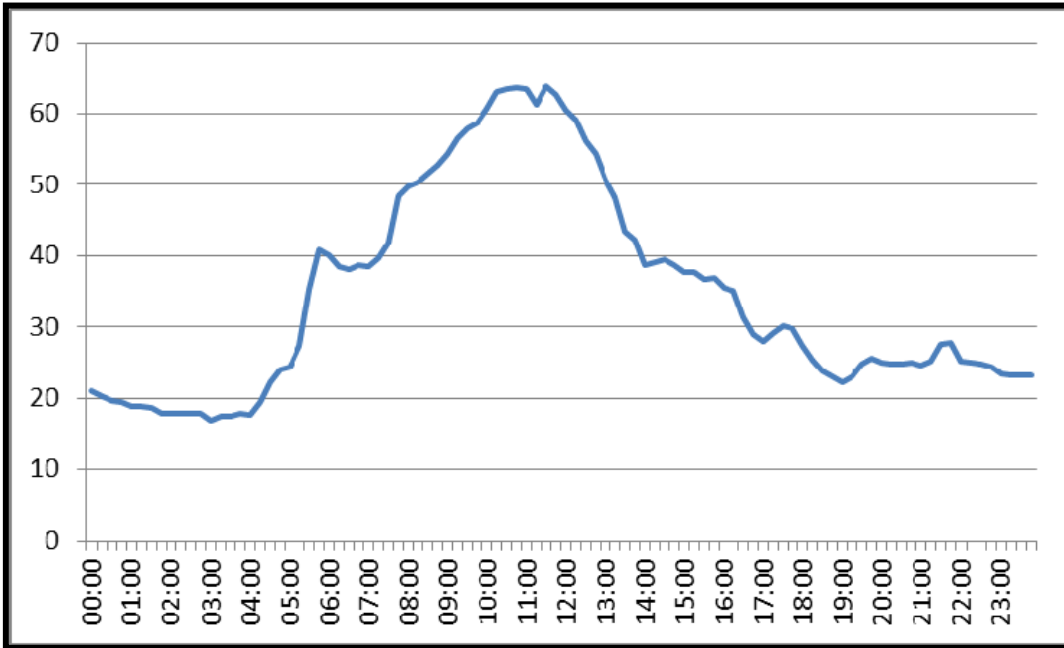
3.4.2 Based on the maximum observed accumulation of 306, the proposed parking provision will result in occupancy of 74%. Whilst leaving 26% spare capacity some of the on-site parking, which will be required by Aldi for the following reasons:-

1. Aldi occasionally hold conferences, seminars and training on site, which results in increased demand on the affected days.
2. Overlapping warehouse shifts result in some sharp spikes in demand for short periods.
3. Aldi purchase managers' cars in bulk and store them on site when space permits.

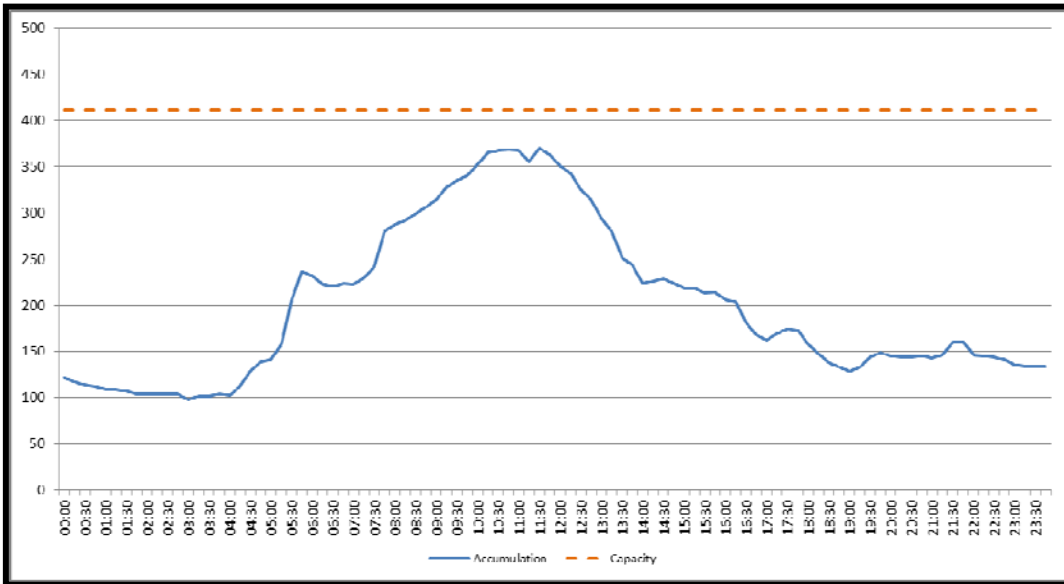
3.4.3 However, for a worst case assessment, this report is based on the assumption that the parking and access demand will increase to achieve 90% occupancy i.e. that the vehicular demand will increase (by 21%) to reflect the provision.

3.4.4 The additional accumulation is shown at **Graph 3.1** below, whilst the total on-site parking accumulation, with additional parking, is shown at **Graph 3.2** below.

Graph 3.1 – Additional Accumulation Assessment



Graph 3.2 – Total Site Accumulation



3.4.5 Full details of the assessment are provided at **Appendix 3**.

4.0 TRAFFIC ASSESSMENT

4.1 Introduction

4.1.1 This section of the report provides the traffic data which has been used for the assessment of the junctions within the TA study area. The assessment considers the impact of development traffic based on the study area indicated at **Inset 4.1** below.

Inset 4.1 – Transport Assessment Study Area



4.1.2 The study area above comprises the following junctions:-

- Dudley Drive / Commercial Road Site Access Junction.
- Commercial Road / Highgate Lane Junction.
- A635 / Dudley Drive Roundabout.
- A6195 / A635 Barnsley Road Roundabout.
- A6195 / Highgate / Manvers Way Roundabout.
- A6195 / Dearne Valley Parkway / Wath Road Roundabout.

4.2 Existing Traffic Flows

4.2.1 Details of the existing traffic flows for the study area junctions have been obtained from surveys undertaken on 15th March 2016. The surveys were undertaken between the hours of 07:00-10:00 and 16:00-19:00 to capture the weekday morning and evening peak periods.

4.2.2 The peak hours have been established using the summation of all recorded traffic movements and the traffic surveys indicate that the peak traffic demand periods for the weekday morning and weekday evening peak hours, are as listed below. The recorded peak hour flows for these periods are shown on the diagrams at **Appendix 4**.

- Weekday AM Peak Hour 07:30 – 08:30 hours
- Weekday PM Peak Hour 16:30 – 17:30 hours

4.2.3 The peak hour traffic flows shown at **Appendix 4** include the total traffic demand at the study area junctions during the surveyed period (i.e. accounting for surveyed flows and any junction queuing during the peak periods).

4.3 Existing RDC Traffic Flows

4.3.1 The surveyed trip attraction of the existing RDC has been determined by reference to the 15th March 2016 traffic surveys. The trip attraction of the RDC is set out at **Table 3** below for each of the peak hours considered in this assessment.

Table 3 – Existing RDC Trip Attraction

Peak	Existing Site Attraction - Lights		
	Arrivals	Departures	Total
AM Peak	62	8	70
PM Peak	30	58	88
Peak	Existing Site Attraction - HGVs		
	Arrivals	Departures	Total
AM Peak	24	22	46
PM Peak	13	10	23

4.3.2 The traffic flows to the existing RDC have been distributed based on the surveyed turning proportions at the study area junctions. **Appendix 5** contains diagrams indicating the existing RDC peak hour traffic flows.

4.4 Base Year Traffic Flows

4.4.1 Traffic growth on the urban road network tends to occur by peak spreading with very little growth during the busiest hour of the peak period which typically lasts for several hours.

4.4.2 This assessment considers the traffic flows at the future year of 2021 this being 5 years post application. The TEMPRO software has been used to provide local growth predictions based on the output for car drivers for the graphical area of Thurnscoe. The resultant growth factors are identified at **Table 4** below. Full details of the TEMPRO assessment along with the 2021 base traffic flows are provided at **Appendix 6** and **Appendix 7**.

Table 4 – Growth Factors

Peak Period	2016 to 2021
	Resultant Growth
Weekday AM Peak	1.0920
Weekday PM Peak	1.0948

4.4.3 Traffic growth has been applied to all traffic movements within the study area except for the traffic travelling to and from the existing Aldi RDC.

4.5 Proposed Site Trip Attraction

4.5.1 As set out above, based on the maximum observed accumulation of 306, the proposed parking provision will result in occupancy of 74%. This leaves 26% spare capacity some of the on-site parking will be required by Aldi for the following reasons:-

1. Aldi occasionally hold conferences, seminars and training on site, which results in increased demand on the affected days.
2. Overlapping warehouse shifts result in some sharp spikes in demand for short periods.
3. Aldi purchase managers' cars in bulk and store them on site when space permits.

4.5.2 However, for a worst case assessment, this report is based on the assumption that the parking and access demand will increase to achieve 90% occupancy i.e. that the vehicular demand will increase (by 21%) to reflect the provision.

4.5.3 The resultant trip attraction is set out at **Table 5** below.

Table 5 – Potential Trip Attraction of Development

Peak	Proposed Site Attraction		
	Arrivals	Departures	Total
AM Peak	13	2	15
PM Peak	6	12	18

4.6 Trip Distribution and Assignment

4.6.1 The distribution of proposed development trips is based on the simplifying assumption that additional vehicles travelling to/from the Aldi RDC will exhibit a similar pattern to those already arriving and departing from the site. The distribution is set out at **Table 6** below.

Table 6 – Traffic Distribution

Origin / Destination	Weekday AM Peak		Weekday PM Peak	
	Arrivals	Departures	Arrivals	Departures
Highgate Lane N	2%	1%	3%	4%
Highgate Lane S	8%	11%	27%	10%
A635 E	32%	10%	21%	16%
Barnsley Road	1%	1%	4%	3%
Rotheram Road N	6%	9%	8%	8%
Doncaster Road	28%	39%	22%	31%
A633 Manvers Road E	9%	15%	7%	12%
Highgate W	0%	0%	0%	1%
Wath Road	0%	0%	0%	0%
Newlands Road	0%	0%	0%	0%
Dearn Valley Parkway	10%	9%	6%	11%
A633 W	3%	4%	2%	3%
Total	100%	100%	100%	100%

4.6.2 **Appendix 8** contains diagrams showing the trip attractions of the proposed development.

4.7 Base Flows with Development

- 4.7.1 The net effect of the proposed development has been combined with the base traffic flows at **Appendix 8** to provide the scenarios with the proposed development for the 2021 base year. These traffic flows are shown on the diagrams at **Appendix 9**.
- 4.7.2 The net effect of the proposed development at the study area junction is identified at **Table 7** below.

Table 7 – Net Development Effect

Junction / Link	AM Peak Net Effect		
	Base Year	Development	%age
Site Access Junction	570	+15	2.6%
Commercial Road / Highgate Lane	1,239	+1	0.1%
Dudley Road / A635 Roundabout	2,817	+13	0.5%
A635 / A6195 / Doncaster Road Roundabout	3,887	+9	0.2%
A6195 / A633 Manvers Lane Roundabout	3,409	+3	0.1%
A6195 / Dearne Valley Parkway Roundabout	3,550	+2	0.1%
Junction / Link	PM Peak Net Effect		
	Base Year	Development	%age
Site Access Junction	529	+18	3.5%
Commercial Road / Highgate Lane	1,372	+4	0.3%
Dudley Road / A635 Roundabout	2,725	+15	0.5%
A635 / A6195 / Doncaster Road Roundabout	4,022	+11	0.3%
A6195 / A633 Manvers Lane Roundabout	3,693	+4	0.1%
A6195 / Dearne Valley Parkway Roundabout	4,129	+2	0.1%

- 4.7.3 The resultant traffic effects, based on a worst case assumption, are negligible.

4.8 Road Safety

- 4.8.1 Based on the traffic effects associated with the proposed car park extension, no assessment of road safety has been undertaken.

5.0 JUNCTION CAPACITY TESTS

5.1 Introduction

5.1.1 The net development effect, shown on the diagrams at **Appendix 8** identifies that the impact of the development will be negligible; however, at the request of Barnsley Metropolitan Borough Council, this report section provides details of the junction capacity tests that have been undertaken for the following study area junctions.

- A6195 / A635 Barnsley Road Roundabout.
- A6195 / Highgate / Manvers Way Roundabout.
- A6195 / Dearne Valley Parkway / Wath Road Roundabout.

5.2 Computer Modelling

A6195 Rotheram Road / A635 Doncaster Road Roundabout

5.2.1 The A6195 Rotheram Road / A635 Doncaster Road roundabout junction has been assessed using the ARCADY9 computer program.

5.2.2 ARCADY9 is an industry standard tool for assessing roundabout junction layouts, and relates the geometry of the junction combined with traffic flow information to predict capacity. The software provides a number of results in its output, the most meaningful of which is the Ratio of Flow to Capacity (RFC), where an RFC of 1.00 reflects a demand equal to the theoretical capacity of the junction approach.

5.2.3 The assessment of the existing junction layout has been undertaken for the following scenarios for each of the peak periods considered in this assessment.

- 2016 Surveyed traffic flows - existing layout;
- 2021 Base traffic flows - existing layout;
- 2021 Base traffic flows with development - existing layout;

5.2.4 The 2016 model results have been compared against queue survey results for each of the junction approach lanes. Maximum and minimum queue lengths were surveyed on 15th March 2016 for each fifteen minute period during each peak hour (i.e. 8no. queue observations were provided for each hour period) and the results, along with the modelled queue lengths are summarised at **Table 8** below.

Table 8 – Queue Comparison – A6195 Rotheram Road / A635 Doncaster Road

Approach	AM Peak			
	Minimum Observed Queue Length	Maximum Observed Queue Length	Average Modelled Queue Length	95th Percentile Modelled Queue Length
A6195 (North)	15	22	1.9	4.4
A635 (East)	0	19	2	3.4
A6195 (South)	0	17	2.2	3.6
Doncaster Road (West)	0	22	3.8	18.8
Approach	PM Peak			
	Minimum Observed Queue Length	Maximum Observed Queue Length	Average Modelled Queue Length	95th Percentile Modelled Queue Length
A6195 (North)	0	22	2.9	11.5
A635 (East)	0	26	2.6	4.8
A6195 (South)	0	19	2	2.9
Doncaster Road (West)	0	15	1.2	2.2

- 5.2.5 For the majority of instances the minimum observed queue length was zero (for all 4no. 15 minute observations), indicating the all queueing vehicles cleared of the give-way line during each 15 minute observation period. On this basis, the approaches were observed to operate within capacity and therefore, given that the modelled queues falls within the range of observed queue results, there is no justification on which to adjust the 2016 base ARCADY model.
- 5.2.6 However, for the A6195 southbound approach during the AM peak hour, queuing was observed across the whole peak hour period. On this basis, the base ARCADY model has been adjusted to reflect the observations.
- 5.2.7 In this case, the queuing in the right turn lane was minimal, which suggests that this road area contributes little to the overall capacity of the junction approach. With this in mind, the model has been updated by removing the geometry and traffic flows associated with this area (i.e. retain a model of the 'ahead' and 'left' lane with the ahead and left traffic only).
- 5.2.8 The revised 2016 model results have been compared against queue survey results for each of the junction approach lanes, as summarised at **Table 9** below.

Table 9 – Queue Comparison Model 2 – A6195 Rotherham Road / A635 Doncaster Road

Approach	AM Peak			
	Minimum Observed Queue Length	Maximum Observed Queue Length	Average Modelled Queue Length	95th Percentile Modelled Queue Length
A6195 (North)	15	22	5.6	30.4
A635 (East)	0	19	1.9	3.2
A6195 (South)	0	17	2.1	3.4
Doncaster Road (West)	0	22	3.8	18.8
Approach	PM Peak			
	Minimum Observed Queue Length	Maximum Observed Queue Length	Average Modelled Queue Length	95th Percentile Modelled Queue Length
A6195 (North)	0	22	5.1	25.8
A635 (East)	0	26	2.2	3.9
A6195 (South)	0	19	1.7	2.3
Doncaster Road (West)	0	15	1.2	2.2

5.2.9 **Table 9** above identifies a much closer relationship between the observed queue lengths and the model results for the southbound A6195 approach. The results of the ARCADY tests, for all the scenarios above, are summarised at **Table 10** below while the full results of the analysis are provided at **Appendix 10**.

Table 10 – ARCADY – A6195 Rotheram Road / A635 Doncaster Road

Approach	AM		PM	
	Queue (Veh)	RFC	Queue (Veh)	RFC
Existing Junction Layout - 2016				
A6195 (North)	5.6	0.87	5.1	0.85
A635 (East)	1.9	0.66	2.2	0.69
A6195 (South)	2.1	0.68	1.7	0.63
Doncaster Road (West)	3.8	0.8	1.2	0.54
Existing Junction Layout - 2021				
A6195 (North)	22.7	1.04	16	0.98
A635 (East)	2.6	0.73	3.2	0.77
A6195 (South)	3.2	0.76	2.4	0.71
Doncaster Road (West)	9.9	0.93	1.6	0.62
Existing Junction Layout - 2021+Dev				
A6195 (North)	24.1	1.04	16.3	0.98
A635 (East)	2.7	0.73	3.3	0.77
A6195 (South)	3.2	0.77	2.4	0.71
Doncaster Road (West)	10.6	0.94	1.6	0.63

5.2.10 The assessment identifies that the impacts of the proposed development are negligible.

A6195 / Highgate / A633 Manvers Way Roundabout

5.2.11 The A6195 / Highgate / A633 Manvers Way roundabout junction has been assessed using the ARCADY9 computer program.

5.2.12 The assessment of the existing junction layout has been undertaken for the following scenarios for each of the peak periods considered in this assessment.

- 2016 Surveyed traffic flows - existing layout;
- 2021 Base traffic flows - existing layout;
- 2021 Base traffic flows with development - existing layout;

5.2.13 The 2016 model results have been compared against queue survey results for each of the junction approach lanes. Maximum and minimum queue lengths were surveyed on 15th March 2016 for each fifteen minute period during each peak hour (i.e. 8no. queue observations were provided for each hour period) and the results, along with the modelled queue lengths are summarised at **Table 11** below.

Table 11 – Queue Comparison – A6195 / Highgate / A633 Manvers Way

Approach	AM Peak			
	Minimum Observed Queue Length	Maximum Observed Queue Length	Average Modelled Queue Length	95th Percentile Queue Length
A6195 (North)	0	15	2.8	7.3
A633	0	15	1.4	1.7
A6195 (South)	0	14	2.6	6.3
Highgate	0	2	0.1	0.5
Approach	PM Peak			
	Minimum Observed Queue Length	Maximum Observed Queue Length	Average Modelled Queue Length	95th Percentile Queue Length
A6195 (North)	0	26	3.7	15.7
A633	0	32	1.7	2.6
A6195 (South)	0	15	4.2	19.2
Highgate	0	2	0	0.5

5.2.14 For all of the approaches the minimum observed queue length was zero (for all 4no. 15 minute observations), indicating the all queueing vehicles cleared of the give-way line during each 15 minute observation period. On this basis, the approaches were observed to operate within capacity and therefore, given that the modelled queues falls within the range of observed queue results, there is no justification on which to adjust the 2016 base ARCADY model.

5.2.15 The results of the ARCADY tests, for all the scenarios above, are summarised at **Table 12** below while the full results of the analysis are provided at **Appendix 10**.

Table 12 – ARCADY – A6195 / Highgate / A633 Manvers Way

Approach	AM		PM	
	Queue (Veh)	RFC	Queue (Veh)	RFC
Existing Junction Layout - 2016				
A6195 (North)	2.8	0.74	3.7	0.79
A633	1.4	0.58	1.7	0.64
A6195 (South)	2.6	0.73	4.2	0.81
Highgate	0.1	0.06	0	0.04
Existing Junction Layout - 2021				
A6195 (North)	4.4	0.82	7.4	0.89
A633	1.8	0.65	2.5	0.71
A6195 (South)	4.1	0.81	8.9	0.91
Highgate	0.1	0.07	0.1	0.06
Existing Junction Layout - 2021+Dev				
A6195 (North)	4.4	0.82	7.5	0.89
A633	1.8	0.65	2.5	0.71
A6195 (South)	4.1	0.81	8.9	0.91
Highgate	0.1	0.07	0.1	0.06

5.2.16 The assessment identifies that the development impact at the A6195 / Highgate / A633 Manvers Way roundabout is negligible.

A6195 Dearne Valley Parkway / Wath Road Roundabout

5.2.17 The A6195 Dearne Valley Parkway / Wath Road roundabout junction has been assessed using the ARCADY9 computer program.

5.2.18 The assessment of the existing junction layout has been undertaken for the following scenarios for each of the peak periods considered in this assessment.

- 2016 Surveyed traffic flows - existing layout;
- 2021 Base traffic flows - existing layout;
- 2021 Base traffic flows with development - existing layout;

5.2.19 The 2016 model results have been compared against queue survey results for each of the junction approach lanes. Maximum and minimum queue lengths were surveyed on 15th March 2016 for each fifteen minute period during each peak hour (i.e. 8no. queue observations were provided for each hour period) and the results, along with the modelled queue lengths are summarised at **Table 13** below.

Table 13 – Queue Comparison – A6195 Dearne Valley Parkway / Wath Road

Approach	AM Peak			
	Minimum Observed Queue Length	Maximum Observed Queue Length	Average Modelled Queue Length	95th Percentile Queue Length
Newlands Way	0	5	0.1	0.5
Dearne Valley Parkway (E)	0	19	3.9	18.5
Wath Rd (S)	0	15	0.6	2.6
Dearne Valley Parkway (S)	0	7	1.5	2.2
Wath Rd (N)	0	21	1.1	1.8
Approach	PM Peak			
	Minimum Observed Queue Length	Maximum Observed Queue Length	Average Modelled Queue Length	95th Percentile Queue Length
Newlands Way	0	12	0.2	0.7
Dearne Valley Parkway (E)	0	20	6.6	33.4
Wath Rd (S)	0	14	0.7	3
Dearne Valley Parkway (S)	0	10	2.9	5.8
Wath Rd (N)	0	25	1	2.1

5.2.20 For all of the approaches the minimum observed queue length was zero (for all 4no. 15 minute observations), indicating the all queueing vehicles cleared of the give-way line during each 15 minute observation period. On this basis, the approaches were observed to operate within capacity and therefore, given that the modelled queues falls within the range of observed queue results, there is no justification on which to adjust the 2016 base ARCADY model.

5.2.21 The results of the ARCADY tests, for all the scenarios above, are summarised at **Table 14** below while the full results of the analysis are provided at **Appendix 10**.

Table 14 – ARCADY – A6195 Dearne Valley Parkway / Wath Road

Approach	AM		PM	
	Queue (Veh)	RFC	Queue (Veh)	RFC
Existing Junction Layout - 2016				
Newlands Way	0.1	0.05	0.2	0.19
Dearne Valley Parkway (E)	3.9	0.8	6.6	0.88
Wath Rd (S)	0.6	0.36	0.7	0.4
Dearne Valley Parkway (S)	1.5	0.61	2.9	0.75
Wath Rd (N)	1.1	0.52	1	0.5
Existing Junction Layout - 2021				
Newlands Way	0.1	0.06	0.3	0.24
Dearne Valley Parkway (E)	7.7	0.9	21	0.99
Wath Rd (S)	0.7	0.41	0.8	0.46
Dearne Valley Parkway (S)	2	0.67	4.6	0.83
Wath Rd (N)	1.4	0.59	1.3	0.57
Existing Junction Layout - 2021+Dev				
Newlands Way	0.1	0.06	0.3	0.24
Dearne Valley Parkway (E)	7.7	0.9	21.4	0.99
Wath Rd (S)	0.7	0.41	0.8	0.46
Dearne Valley Parkway (S)	2	0.67	4.6	0.83
Wath Rd (N)	1.4	0.59	1.3	0.57

5.2.22 The assessment identifies that the development impacts at the A6195 Dearne Valley Parkway / Wath Road roundabout are negligible.

5.3 Section Conclusions

5.3.1 The assessment is based on a hypothetical increase in vehicular trips to the site, which identifies vehicular impacts of less than 1% at the assessed study area junctions, and only a negligible effect on the operation of these junctions.

5.3.2 Therefore, the proposed development will not cause any measurable detrimental traffic impacts.

6.0 SUMMARY & CONCLUSIONS

6.1 Summary

6.1.1 Connect Consultants have been instructed by Aldi Stores Limited in respect to their proposed car park extension to their RDC at Commercial Road, Goldthorpe.

6.1.2 A summary of this report is as follows:-

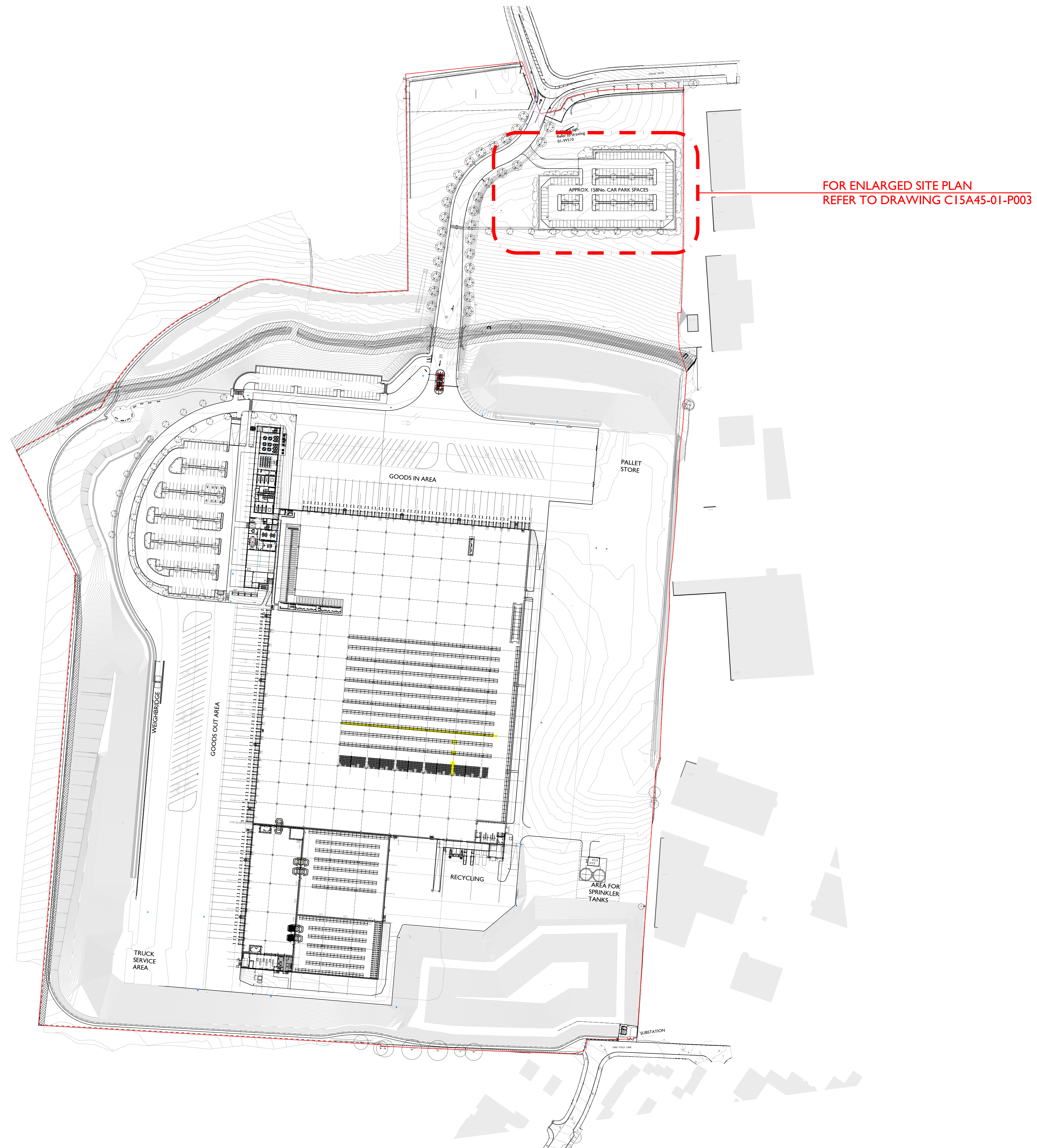
- 158 additional parking spaces will be provided at the RDC.
- In terms of the site access arrangements, these are also shown on the proposed site masterplan at **Appendix 1**. Access to the proposed parking area will be provided from a simple priority T-junction access with the internal access road serving the Aldi RDC.
- The traffic assessment included in this report provides a robust assessment of the development impacts, which identifies that the proposed traffic increases will be negligible.
- The impact of the proposed development on the operation of local junctions will be negligible.
- The proposed car parking provision accords with local parking standards.

6.2 Conclusions

6.2.1 Overall, on the basis of the above, it is concluded that this proposed development is acceptable from a transport perspective and will not result in any identifiable transport related difficulties.

Appendix 1

Site Masterplan



FOR ENLARGED SITE PLAN
REFER TO DRAWING C15A45-01-P003

STOAS Architects Limited
PLANNING ISSUE

Revision	Description	Date	Drawn	Checked



216 FORT DUNLOP - FORT PARKWAY - BIRMINGHAM - B24 8PD TEL: 0121 747 1843
1000 BRIDLEWAY - FORT ROAD - BIRMINGHAM - B24 8PD TEL: 0121 747 1843

CLIENT ALDI STORES LTD

PROJECT GOLDTHORPE INDUSTRIAL ESTATE
COMMERCIAL RD, GOLDTHORPE

TITLE PROPOSED SITE PLAN

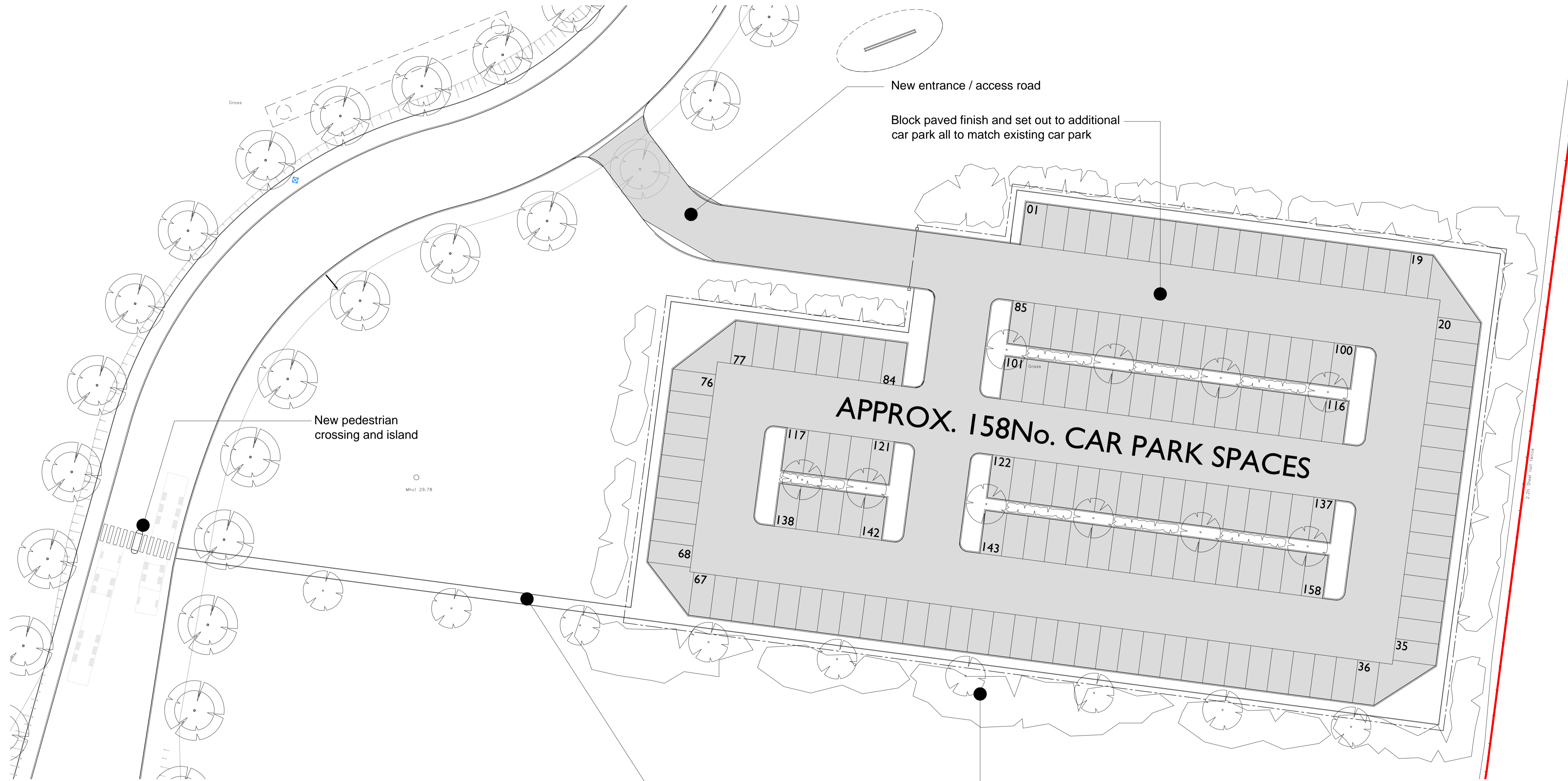
DATE 24.11.15 SCALE 1:1000 @ A0

DRAWN JM CHECKED DJN

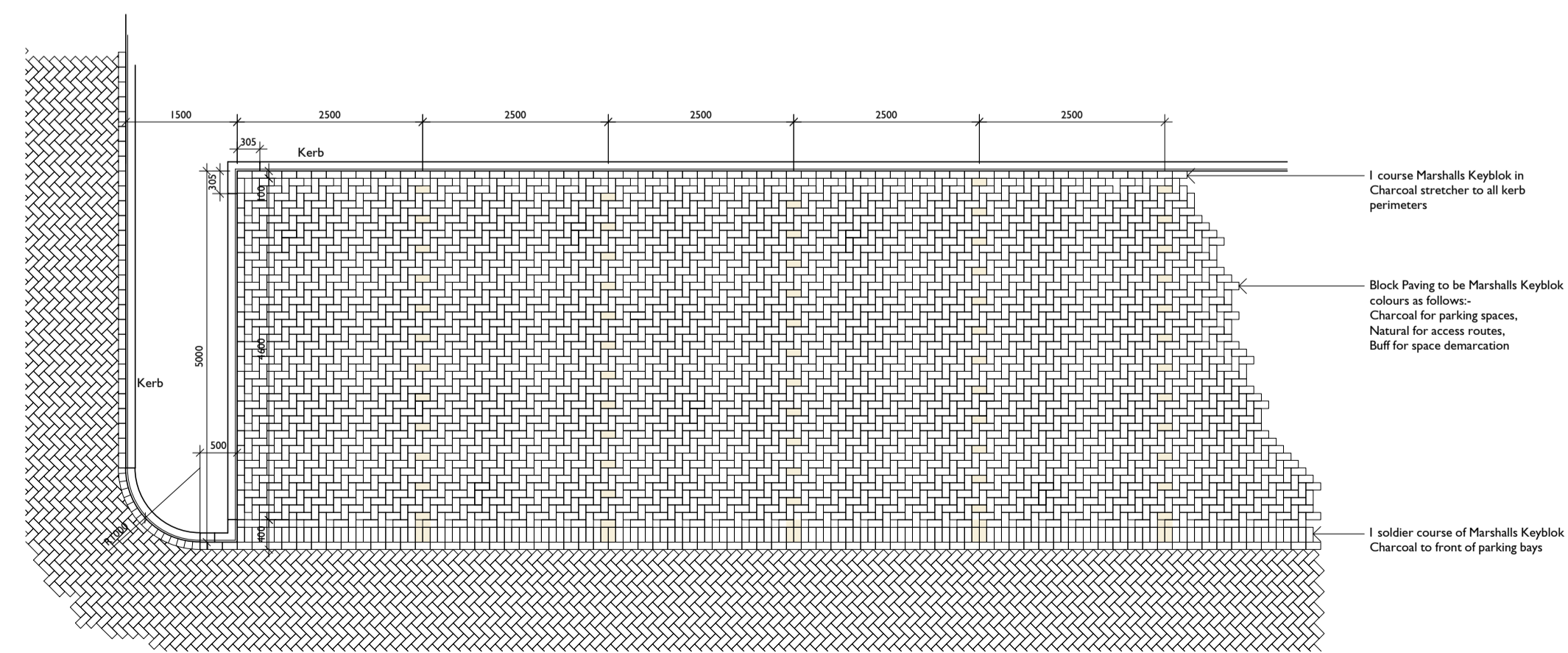
NORTH

DWG No. C15A45-01-P002 REVISION -

FOR SITE PLAN LOCATION REFER TO DRAWING C15A45-01-P002



PROPOSED ADDITIONAL CAR PARK - ENLARGED PLAN SCALE 1:200



CAR PARK - TYPICAL BLOCK PAVING LAYOUT / SPECIFICATION SCALE 1:75

STOAS Architects
PLANNING ISSUE

Revision	Description	Date	Drawn	Checked



216 FORT DUNLOP - FORT PARKWAY - BIRMINGHAM - B24 9FD - TEL 0121 747 1943
1 DUNSTON PLACE - DUNSTON ROAD - CHESTERFIELD - S41 8NL - TEL 01746 389 960

CLIENT ALDI STORES LTD.

PROJECT GOLDTHORPE INDUSTRIAL ESTATE
COMMERCIAL RD, GOLDTHORPE

TITLE ENLARGED PLAN
ADDITIONAL PROPOSED PARKING

DATE	25.11.15	SCALE	1:75/200 @ A1
DRAWN	JM	CHECKED	DJN
NORTH			

DWG No. C15A45-01-P003 REVISION -

Appendix 2
Aldi Access Survey Results



														ANPR Survey	
InSite	Class	Reg	InTime	OutSite	OutTime	Duration	In15MinInt	In30MinInt	In60MinInt	Out15MinInt	Out30MinInt	Out60MinInt	Dur15MinInt	Dur30MinInt	Dur60MinInt
IN	HV	06WX7738	09:07:42	OUT	12:09:22	03:01:40	09:00	09:00	09:00	12:00	12:00	12:00	03:00	03:00	03:00
IN	HV	A10VSL	14:32:38	OUT	15:52:20	01:19:42	14:30	14:30	14:30	15:45	15:30	15:00	01:15	01:00	01:00
IN	LV	AD52GKA	05:37:34	OUT	13:14:57	07:37:23	05:30	05:30	05:00	13:00	13:00	13:00	07:30	07:30	07:00
IN	LV	AD52KHF	10:07:07	OUT	19:45:01	09:37:54	10:00	10:00	10:00	19:45	19:30	19:00	09:30	09:30	09:00
IN	LV	AD54DDL	05:37:05	OUT	13:41:31	08:04:26	05:30	05:30	05:00	13:30	13:30	13:00	08:00	08:00	08:00
IN	LV	AD590UA	07:45:15	OUT	17:03:16	09:18:01	07:45	07:30	07:00	17:00	17:00	17:00	09:15	09:00	09:00
IN	LV	AE05EYP	10:13:33	OUT	19:00:11	08:46:38	10:00	10:00	10:00	19:00	19:00	19:00	08:45	08:30	08:00
IN	LV	AE53SVX	16:52:13	OUT	16:54:30	00:02:17	16:45	16:30	16:00	16:45	16:30	16:00	00:00	00:00	00:00
IN	LV	AF05USE	05:26:40	OUT	17:46:41	12:20:01	05:15	05:00	05:00	17:45	17:30	17:00	12:15	12:00	12:00
IN	LV	AF07YMA	07:08:22	OUT	07:11:43	00:03:21	07:00	07:00	07:00	07:00	07:00	07:00	00:00	00:00	00:00
IN	LV	AF07YMA	09:24:05	OUT	09:27:36	00:03:31	09:15	09:00	09:00	09:15	09:00	09:00	00:00	00:00	00:00
IN	LV	AF52GZA	08:04:22	OUT	16:53:03	08:48:41	08:00	08:00	08:00	16:45	16:30	16:00	08:45	08:30	08:00
IN	LV	AG12JSU	06:24:29	OUT	06:42:23	00:17:54	06:15	06:00	06:00	06:30	06:30	06:00	00:15	00:00	00:00
IN	LV	AG58OCW	09:41:31	OUT	09:54:30	00:12:59	09:30	09:30	09:00	09:45	09:30	09:00	00:00	00:00	00:00
IN	LV	AK08GOV	05:48:08	OUT	18:12:05	12:23:57	05:45	05:30	05:00	18:00	18:00	18:00	12:15	12:00	12:00
IN	HV	AO63JLX	04:39:20	OUT	09:00:32	04:21:12	04:30	04:30	04:00	09:00	09:00	09:00	04:15	04:00	04:00
IN	LV	AP57WOB	14:32:11	OUT	14:32:51	00:00:40	14:30	14:30	14:00	14:30	14:30	14:00	00:00	00:00	00:00
IN	LV	AP57WOB	14:33:24	OUT	14:34:44	00:01:20	14:30	14:30	14:00	14:30	14:30	14:00	00:00	00:00	00:00
IN	LV	AV07WTM	05:47:55	OUT	13:51:31	08:03:36	05:45	05:30	05:00	13:45	13:30	13:00	08:00	08:00	08:00
IN	HV	AV13HPV	05:58:59	OUT	08:43:02	02:44:03	05:45	05:30	05:00	08:30	08:30	08:00	02:30	02:30	02:00
IN	HV	AV62ZPS	14:44:23	OUT	16:11:34	01:27:11	14:30	14:30	14:00	16:00	16:00	16:00	01:15	01:00	01:00
IN	HV	AY06AEZ	11:31:01	OUT	13:32:59	02:01:58	11:30	11:30	11:00	13:30	13:30	13:00	02:00	02:00	02:00
IN	HV	AY15ZJX	05:46:24	OUT	06:53:17	01:06:53	05:45	05:30	05:00	06:45	06:30	06:00	01:00	01:00	01:00
IN	LV	AY64OSX	10:16:18	OUT	13:28:02	03:11:44	10:15	10:00	10:00	13:15	13:00	13:00	03:00	03:00	03:00
IN	HV	B6610BB	15:00:30	OUT	15:44:39	00:44:09	15:00	15:00	15:00	15:30	15:30	15:00	00:30	00:30	00:00
IN	LV	BC15FFE	08:10:13	OUT	12:16:40	04:06:27	08:00	08:00	08:00	12:15	12:00	12:00	04:00	04:00	04:00
IN	LV	BC15PXJ	12:24:01	OUT	12:40:17	00:16:16	12:15	12:00	12:00	12:30	12:30	12:00	00:15	00:00	00:00
IN	HV	BD62MTZ	15:53:57	OUT	16:23:36	00:29:39	15:45	15:30	15:00	16:15	16:00	16:00	00:15	00:00	00:00
IN	HV	BF11UVH	15:53:14	OUT	16:52:42	00:59:28	15:45	15:30	15:00	16:45	16:30	16:00	00:45	00:30	00:00
IN	LV	BF58UFK	13:17:15	OUT	13:20:14	00:02:59	13:15	13:00	13:00	13:15	13:00	13:00	00:00	00:00	00:00
IN	LV	BF65KAU	07:42:30	OUT	17:22:38	09:40:08	07:30	07:30	07:00	17:15	17:00	17:00	09:30	09:30	09:00
IN	LV	BF65HXH	07:26:50	OUT	18:21:49	10:54:59	07:15	07:00	07:00	18:15	18:00	18:00	10:45	10:30	10:15
IN	LV	BG60RWZ	04:49:35	OUT	16:16:59	11:27:24	04:45	04:30	04:00	16:15	16:00	16:00	11:15	11:00	11:00
IN	HV	BG62SXE	17:55:05	OUT	18:19:36	00:24:31	17:45	17:30	17:00	18:15	18:00	18:00	00:15	00:00	00:00
IN	LV	BG63JBY	07:59:18	OUT	13:21:15	05:21:57	07:45	07:30	07:00	13:15	13:00	13:00	05:15	05:00	05:00
IN	LV	BG63JBY	13:56:20	OUT	14:08:45	00:12:25	13:45	13:30	13:00	14:00	14:00	14:00	00:00	00:00	00:00
IN	LV	BJ13FHS	08:13:51	OUT	15:41:41	07:27:50	08:00	08:00	08:00	15:30	15:30	15:00	07:15	07:00	07:00
IN	LV	BJ58PIJ	07:53:00	OUT	16:51:41	08:58:41	07:45	07:30	07:00	16:45	16:30	16:00	08:45	08:30	08:00
IN	LV	BJ65TXL	06:39:27	OUT	18:14:42	11:35:15	06:30	06:30	06:00	18:00	18:00	18:00	11:30	11:30	11:00
IN	HV	BK11LLR	11:31:14	OUT	12:47:55	01:16:41	11:30	11:30	11:00	12:45	12:30	12:00	01:15	01:00	01:00
IN	LV	BK15JWX	06:57:47	OUT	07:00:14	00:02:27	06:45	06:30	06:00	07:00	07:00	07:00	00:00	00:00	00:00
IN	LV	BK15JWX	15:47:03	OUT	18:41:43	02:54:40	15:45	15:30	15:00	18:30	18:30	18:00	02:45	02:30	02:00
IN	LV	BK54KBP	05:34:10	OUT	13:35:04	08:00:54	05:30	05:30	05:00	13:30	13:30	13:00	08:00	08:00	08:00
IN	LV	BK58VLV	07:47:32	OUT	11:13:48	03:26:16	07:45	07:30	07:00	11:00	11:00	11:00	03:15	03:00	03:00
IN	LV	BL12UDV	08:02:50	OUT	16:55:11	08:52:21	08:00	08:00	08:00	16:45	16:30	16:00	08:45	08:30	08:00
IN	LV	BL14RXN	07:46:43	OUT	16:32:59	08:46:16	07:45	07:30	07:00	16:30	16:30	16:00	08:45	08:30	08:00
IN	HV	BL630BB	05:48:22	OUT	06:25:51	00:37:29	05:45	05:30	05:00	06:15	06:00	06:00	00:30	00:30	00:00
IN	LV	BN10AYZ	10:54:14	OUT	11:02:12	00:07:58	10:45	10:30	10:00	11:00	11:00	11:00	00:00	00:00	00:00
IN	LV	BN13GCU	07:47:51	OUT	18:57:48	11:09:57	07:45	07:30	07:00	18:45	18:30	18:00	11:00	11:00	11:00
IN	LV	BN15EEV	07:54:04	OUT	16:46:31	08:52:27	07:45	07:30	07:00	16:45	16:30	16:00	08:45	08:30	08:00
IN	LV	BN61ZZJ	04:36:43	OUT	12:51:49	08:15:06	04:30	04:30	04:00	12:45	12:30	12:00	08:15	08:00	08:00
IN	LV	BN64AZV	08:47:32	OUT	12:19:34	03:32:02	08:45	08:30	08:00	12:15	12:00	12:00	03:30	03:30	03:00
IN	LV	BT05XDY	08:35:03	OUT	17:07:31	08:32:28	08:30	08:30	08:00	17:00	17:00	17:00	08:30	08:30	08:00
IN	LV	BT09LOR	05:45:48	OUT	13:19:14	07:33:26	05:45	05:30	05:00	13:15	13:00	13:00	07:30	07:30	07:00
IN	LV	BT14DSV	10:30:09	OUT	17:33:59	07:03:50	10:30	10:30	10:00	17:30	17:30	17:00	07:00	07:00	07:00
IN	LV	BT62WVA	12:15:53	OUT	12:44:49	00:28:56	12:15	12:00	12:00	12:30	12:30	12:00	00:15	00:00	00:00
IN	HV	BU06FXK	14:40:57	OUT	16:01:31	01:20:34	14:30	14:30	14:00	16:00	16:00	16:00	01:15	01:00	01:00
IN	HV	BU08WCE	13:43:33	OUT	14:34:24	00:50:51	13:30	13:30	13:00	14:30	14:30	14:00	00:45	00:30	00:00
IN	HV	BV65UDZ	10:29:13	OUT	11:46:35	01:17:22	10:15	10:00	10:00	11:45	11:30	11:00	01:15	01:00	01:00
IN	LV	BX07WNH	07:58:30	OUT	10:26:12	02:27:42	07:45	07:30	07:00	10:15	10:00	10:00	02:15	02:00	02:00
IN	LV	BX07WNH	10:39:56	OUT	13:11:39	02:31:43	10:30	10:30	10:00	13:00	13:00	13:00	02:30	02:30	02:00
IN	LV	BX63SZV	07:34:11	OUT	18:43:43	11:09:32	07:30	07:30	07:00	18:30	18:30	18:00	11:00	11:00	11:00
IN	LV	BX63SZW	09:19:04	OUT	09:56:43	00:37:39	09:15	09:00	09:00	09:45	09:30	09:00	00:30	00:30	00:00
IN	LV	BX63SZW	13:45:55	OUT	14:01:48	00:15:53	13:45	13:30	13:00	14:00	14:00	14:00	00:15	00:00	00:00
IN	LV	BX63TAV	07:43:40	OUT	17:22:12	09:38:32	07:30	07:30	07:00	17:15	17:00	17:00	09:30	09:30	09:00
IN	HV	BX64BVF	04:29:36	OUT	05:45:53	01:16:17	04:15	04:00	04:00	05:45	05:30	05:00	01:15	01:00	01:00
IN	HV	CA8895XB	06:42:16	OUT	07:11:50	00:29:34	06:30	06:30	06:00	07:00	07:00	07:00	00:15	00:00	00:00
IN	HV	CA8895XB	07:05:40	OUT	10:27:33	03:21:53	07:00	07:00	07:00	10:15	10:00	10:00	03:15	03:00	03:00
IN	HV	CF03ETY	11:27:23	OUT	12:05:38	00:38:15	11:15	11:00	11:00	12:00	12:00	12:00	00:30	00:30	00:00
IN	LV	CK05GHV	05:32:24	OUT	14:16:49	08:44:25	05:30	05:30	05:00	14:15	14:00	14:00	08:30	08:30	08:00
IN	LV	CK11LGE	07:57:34	OUT	13:19:04	05:21:30	07:45	07:30	07:00	13:15	13:00	13:00	05:15	05:00	05:00
IN	LV	CK11LGE	13:51:37	OUT	16:42:29	02:50:52	13:45	13:30	13:00	16:30	16:30	16:00	02:45	02:30	02:00
IN	HV	CN12EGU	11:18:49	OUT	13:47:22	02:28:33	11:15	11:00	11:00	13:45	13:30	13:00	02:15	02:00	02:00
IN	LV	CN63CVC	11:36:51	OUT	15:44:46	04:07:55	11:30	11:30	11:00	15:30	15:30	15:00	04:00	04:00	04:00
IN	HV	CNAFR72	04:40:33	OUT	05:53:06</										



InSite	Class	Reg	InTime	OutSite	OutTime	Duration	In15MinInt	In30MinInt	In60MinInt	Out15MinInt	Out30MinInt	Out60MinInt	ANPR Survey		
													Dur15MinInt	Dur30MinInt	Dur60MinInt
IN	LV	EJ02GWY	04:34:36	OUT	12:48:02	08:13:26	04:30	04:30	04:00	12:45	12:30	12:00	08:00	08:00	08:00
IN	LV	EJ08WGO	05:54:09	OUT	05:57:41	00:03:32	05:45	05:30	05:00	05:45	05:30	05:00	00:00	00:00	00:00
IN	LV	EN51PKU	06:09:29	OUT	06:11:17	00:01:48	06:00	06:00	06:00	06:00	06:00	06:00	00:00	00:00	00:00
IN	LV	EN51XUU	11:31:53	OUT	17:24:43	05:52:50	11:30	11:30	11:00	17:15	17:00	17:00	05:45	05:30	05:00
IN	LV	E0580BA	03:21:35	OUT	07:31:10	04:09:35	03:15	03:00	03:00	07:30	07:30	07:00	04:00	04:00	04:00
IN	LV	E0580BA	07:40:04	OUT	15:16:42	07:36:38	07:30	07:30	07:00	15:15	15:00	15:00	07:30	07:30	07:00
IN	LV	EX05XWE	08:27:22	OUT	18:18:41	09:51:19	08:15	08:00	08:00	18:15	18:00	18:00	09:45	09:30	09:00
IN	LV	FA04UYV	13:32:39	OUT	14:23:55	00:51:16	13:30	13:30	13:00	14:15	14:00	14:00	00:45	00:30	00:00
IN	LV	FB07CDX	05:36:04	OUT	13:33:42	07:57:38	05:30	05:30	05:00	13:30	13:30	13:00	07:45	07:30	07:00
IN	LV	FD06DLN	10:45:03	OUT	13:02:34	02:17:31	10:45	10:30	10:00	13:00	13:00	13:00	02:15	02:00	02:00
IN	LV	FE13FKK	03:37:18	OUT	12:06:56	08:29:38	03:30	03:30	03:00	12:00	12:00	12:00	08:15	08:00	08:00
IN	LV	FE54MWN	05:43:59	OUT	13:42:46	07:58:47	05:30	05:30	05:00	13:30	13:30	13:00	07:45	07:30	07:00
IN	LV	FE55ETT	05:17:10	OUT	13:50:25	08:33:15	05:15	05:00	05:00	13:45	13:30	13:00	08:30	08:30	08:00
IN	LV	FE60OFD	10:22:44	OUT	18:20:25	07:57:41	10:15	10:00	10:00	18:15	18:00	18:00	07:45	07:30	07:00
IN	LV	FG07VZV	05:29:56	OUT	05:32:07	00:02:11	05:15	05:00	05:00	05:30	05:30	05:00	00:00	00:00	00:00
IN	LV	FG07VZV	05:53:22	OUT	05:56:16	00:02:54	05:45	05:30	05:00	05:45	05:30	05:00	00:00	00:00	00:00
IN	LV	FG07VZV	09:07:14	OUT	09:10:48	00:03:34	09:00	09:00	09:00	09:00	09:00	09:00	00:00	00:00	00:00
IN	LV	FG54YFA	16:45:01	OUT	16:46:03	00:01:02	16:45	16:30	16:00	16:45	16:30	16:00	00:00	00:00	00:00
IN	LV	FH15THK	09:36:01	OUT	11:58:39	02:22:38	09:30	09:30	09:00	11:45	11:30	11:00	02:15	02:00	02:00
IN	LV	FH52JVJ	05:24:57	OUT	14:04:17	08:39:20	05:15	05:00	05:00	14:00	14:00	14:00	08:30	08:30	08:00
IN	LV	FH52OXX	13:25:19	OUT	22:11:09	08:45:50	13:15	13:00	13:00	22:00	22:00	22:00	08:45	08:30	08:00
IN	HV	FJ13XKO	14:55:28	OUT	16:48:36	01:53:08	14:45	14:30	14:00	16:45	16:30	16:00	01:45	01:30	01:00
IN	HV	FJ60EEG	08:50:32	OUT	10:00:59	01:10:27	08:45	08:30	08:00	10:00	10:00	10:00	01:00	01:00	01:00
IN	HV	FJ61ATZ	06:12:17	OUT	21:35:26	15:23:09	06:00	06:00	06:00	21:30	21:30	21:00	15:15	15:00	15:00
IN	HV	FJ61AUA	05:24:51	OUT	21:35:34	16:10:43	05:15	05:00	05:00	21:30	21:30	21:00	16:00	16:00	16:00
IN	LV	FL62ZRX	09:18:51	OUT	17:54:16	08:35:25	09:15	09:00	09:00	17:45	17:30	17:00	08:30	08:30	08:00
IN	HV	FN12ZGG	14:16:45	OUT	15:21:55	01:05:10	14:15	14:00	14:00	15:15	15:00	15:00	01:00	01:00	01:00
IN	HV	FN15RVO	09:25:20	OUT	11:05:52	01:40:32	09:15	09:00	09:00	11:00	11:00	11:00	01:30	01:30	01:00
IN	HV	FN15SHX	06:00:35	OUT	06:58:58	00:58:23	06:00	06:00	06:00	06:45	06:30	06:00	00:45	00:30	00:00
IN	HV	FP12NRF	09:44:59	OUT	10:56:26	01:11:27	09:30	09:30	09:00	10:45	10:30	10:00	01:00	01:00	01:00
IN	HV	FP53EZR	15:24:26	OUT	15:47:55	00:23:29	15:15	15:00	15:00	15:45	15:30	15:00	00:15	00:00	00:00
IN	LV	FP62YWZ	05:26:43	OUT	13:52:10	08:25:27	05:15	05:00	05:00	13:45	13:30	13:00	08:15	08:00	08:00
IN	HV	FP63HMV	16:53:01	OUT	17:41:48	00:48:47	16:45	16:30	16:00	17:30	17:30	17:00	00:45	00:30	00:00
IN	HV	FP63HNA	16:58:46	OUT	18:06:46	01:08:00	16:45	16:30	16:00	18:00	18:00	18:00	01:00	01:00	01:00
IN	HV	FP64LDY	14:09:02	OUT	15:57:18	01:48:16	14:00	14:00	14:00	15:45	15:30	15:00	01:45	01:30	01:00
IN	LV	FR05EAT	04:20:01	OUT	12:45:10	08:25:09	04:15	04:00	04:00	12:45	12:30	12:00	08:15	08:00	08:00
IN	LV	FT63AAJ	07:42:46	OUT	12:11:20	04:28:34	07:30	07:30	07:00	12:00	12:00	12:00	04:15	04:00	04:00
IN	LV	FT63AAJ	12:56:29	OUT	16:39:05	03:42:36	12:45	12:30	12:00	16:30	16:30	16:00	03:30	03:30	03:00
IN	LV	FT63OCB	07:53:18	OUT	16:34:02	08:40:44	07:45	07:30	07:00	16:30	16:30	16:00	08:30	08:30	08:00
IN	LV	FO70RFP	05:46:37	OUT	13:42:37	07:56:00	05:45	05:30	05:00	13:30	13:30	13:00	07:45	07:30	07:00
IN	LV	FV13GBO	10:14:39	OUT	10:17:54	00:03:15	10:00	10:00	10:00	10:15	10:00	10:00	00:00	00:00	00:00
IN	LV	FV13GBO	10:18:06	OUT	15:19:12	05:01:06	10:15	10:00	10:00	15:15	15:00	15:00	05:00	05:00	05:00
IN	LV	FX63KFL	16:50:41	OUT	19:32:26	02:41:45	16:45	16:30	16:00	19:30	19:30	19:00	02:30	02:30	02:00
IN	HV	FX64AGV	14:36:46	OUT	15:38:36	01:01:50	14:30	14:30	14:00	15:30	15:30	15:00	01:00	01:00	01:00
IN	HV	FX64AMU	02:12:17	OUT	02:15:17	00:03:00	02:00	02:00	02:00	02:15	02:00	02:00	00:00	00:00	00:00
IN	HV	FX64AMU	04:28:47	OUT	05:32:28	01:03:41	04:15	04:00	04:00	05:30	05:30	05:00	01:00	01:00	01:00
IN	LV	FY14TKT	14:42:04	OUT	17:29:39	02:47:35	14:30	14:30	14:00	17:15	17:00	17:00	02:45	02:30	02:00
IN	LV	FY58ABV	08:32:42	OUT	09:14:05	00:41:23	08:30	08:30	08:00	09:00	09:00	09:00	00:30	00:30	00:00
IN	HV	FY63HVA	16:43:55	OUT	17:37:16	00:53:21	16:30	16:30	16:00	17:30	17:30	17:00	00:45	00:30	00:00
IN	HV	FY63HVB	14:47:21	OUT	15:53:45	01:06:24	14:45	14:30	14:00	15:45	15:30	15:00	01:00	01:00	01:00
IN	HV	G155PS	16:35:49	OUT	17:35:58	01:00:09	16:30	16:30	16:00	17:30	17:30	17:00	01:00	01:00	01:00
IN	HV	GB52SAM	10:24:16	OUT	12:25:32	02:01:16	10:15	10:00	10:00	12:15	12:00	12:00	02:00	02:00	02:00
IN	LV	GD10KMF	05:43:03	OUT	14:10:57	08:27:54	05:30	05:30	05:00	14:00	14:00	14:00	08:15	08:00	08:00
IN	LV	GD14VDY	13:36:17	OUT	21:20:10	07:43:53	13:30	13:30	13:00	21:15	21:00	21:00	07:30	07:30	07:00
IN	HV	GD489HX	08:00:24	OUT	09:47:13	01:46:49	08:00	08:00	08:00	09:45	09:30	09:00	01:45	01:30	01:00
IN	LV	GF14ODS	07:31:31	OUT	16:41:10	09:09:39	07:30	07:30	07:00	16:30	16:30	16:00	09:00	09:00	09:00
IN	HV	GH6576	06:44:43	OUT	08:32:22	01:47:39	06:30	06:30	06:00	08:30	08:30	08:00	01:45	01:30	01:00
IN	HV	GJ63SWN	16:36:36	OUT	17:18:32	00:41:56	16:30	16:30	16:00	17:15	17:00	17:00	00:30	00:30	00:00
IN	HV	GJ64GFE	20:56:04	OUT	22:22:38	01:26:34	20:45	20:30	20:00	22:15	22:00	22:00	01:15	01:00	01:00
IN	LV	GJ28791	05:27:40	OUT	13:41:33	08:13:53	05:15	05:00	05:00	13:30	13:30	13:00	08:00	08:00	08:00
IN	HV	GN14ZGF	05:26:31	OUT	06:47:06	01:20:35	05:15	05:00	05:00	06:45	06:30	06:00	01:15	01:00	01:00
IN	HV	GN63HCD	08:54:58	OUT	10:05:58	01:11:00	08:45	08:30	08:00	10:00	10:00	10:00	01:00	01:00	01:00
IN	HV	GN63HCD	11:49:20	OUT	12:27:47	00:38:27	11:45	11:30	11:00	12:15	12:00	12:00	00:30	00:30	00:00
IN	HV	GN65OEV	18:44:57	OUT	18:56:19	00:11:22	18:30	18:30	18:00	18:45	18:30	18:00	00:00	00:00	00:00
IN	LV	GP53TKK	12:55:00	OUT	12:59:03	00:04:03	12:45	12:30	12:00	12:45	12:30	12:00	00:00	00:00	00:00
IN	LV	GV14BDF	10:25:48	OUT	11:59:30	01:33:42	10:15	10:00	10:00	11:45	11:30	11:00	01:30	01:30	01:00
IN	LV	H183RNV	05:41:06	OUT	18:14:23	12:33:17	05:30	05:30	05:00	18:00	18:00	18:00	12:30	12:30	12:00
IN	LV	HJ61WKY	10:30:51	OUT	12:18:02	01:47:11	10:30	10:30	10:00	12:15	12:00	12:00	01:45	01:30	01:00
IN	LV	HK54BNV	04:47:28	OUT	12:37:58	07:50:30	04:45	04:30	04:00	12:30	12:30	12:00	07:45	07:30	07:00
IN	LV	HV10HEU	09:20:43	OUT	11:25:22	02:04:39	09:15	09:00	09:00	11:15	11:00	11:00	02:00	02:00	02:00
IN	LV	HV14FKN	04:41:23	OUT	12:38:54	07:57:31	04:30	04:30	04:00	12:30	12:30	12:00	07:45	07:30	07:00
IN	LV	HV54CVX	05:27:26	OUT	13:34:53	08:07:27	05:15	05:00	05:00	13:30	13:30	13:00	08:00	08:00	08:00
IN	HV	HY61VTN	11:24:11	OUT	12:02:50	00:38:39	11:15	11:00	11:00	12:00	12:00	12:00	00:30	00:30	00:00
IN	HV	HY61VTN	14:50:03	OUT	15:31:11	00:41:08	14:45	14:30	14:00	15:30	15:30	15:00	00:30	00:30	00:00
IN	LV	J13													



														ANPR Survey	
InSite	Class	Reg	InTime	OutSite	OutTime	Duration	In15MinInt	In30MinInt	In60MinInt	Out15MinInt	Out30MinInt	Out60MinInt	Dur15MinInt	Dur30MinInt	Dur60MinInt
IN	LV	KU13PLN	07:58:56	OUT	10:36:29	02:37:33	07:45	07:30	07:00	10:30	10:30	10:00	02:30	02:30	02:00
IN	LV	KU56EAW	05:26:56	OUT	14:14:38	08:47:42	05:15	05:00	05:00	14:00	14:00	14:00	08:45	08:30	08:00
IN	LV	KV03SKE	05:41:45	OUT	13:22:44	07:40:59	05:30	05:30	05:00	13:15	13:00	13:00	07:30	07:30	07:00
IN	LV	KV54WWA	07:37:07	OUT	17:02:29	09:25:22	07:30	07:30	07:00	17:00	17:00	17:00	09:15	09:00	09:00
IN	LV	KV58KTF	05:46:34	OUT	05:49:49	00:03:15	05:45	05:30	05:00	05:45	05:30	05:00	00:00	00:00	00:00
IN	HV	KX08ZKE	11:28:23	OUT	12:55:27	01:27:04	11:15	11:00	11:00	12:45	12:30	12:00	01:15	01:00	01:00
IN	HV	KX14NLL	14:50:28	OUT	16:59:44	02:09:16	14:45	14:30	14:00	16:45	16:30	16:00	02:00	02:00	02:00
IN	HV	KX55FJO	08:48:59	OUT	09:59:29	01:10:30	08:45	08:30	08:00	09:45	09:30	09:00	01:00	01:00	01:00
IN	HV	KX63NCZ	14:57:00	OUT	16:01:38	01:04:38	14:45	14:30	14:00	16:00	16:00	16:00	01:00	01:00	01:00
IN	HV	KX65MWA	04:51:56	OUT	06:08:14	01:16:18	04:45	04:30	04:00	06:00	06:00	06:00	01:15	01:00	01:00
IN	LV	KY08FBF	04:16:45	OUT	12:28:06	08:11:21	04:15	04:00	04:00	12:15	12:00	12:00	08:00	08:00	08:00
IN	LV	KY53GKE	05:41:24	OUT	13:33:05	07:51:41	05:30	05:30	05:00	13:30	13:30	13:00	07:45	07:30	07:00
IN	LV	KY55UBG	05:47:11	OUT	13:54:18	08:07:07	05:45	05:30	05:00	13:45	13:30	13:00	08:00	08:00	08:00
IN	LV	L15MGO	05:38:02	OUT	13:42:28	08:04:26	05:30	05:30	05:00	13:30	13:30	13:00	08:00	08:00	08:00
IN	LV	L18KMB	07:49:28	OUT	13:09:54	05:20:26	07:45	07:30	07:00	13:00	13:00	13:00	05:15	05:00	05:00
IN	LV	L18KMB	13:41:26	OUT	17:03:31	03:22:05	13:30	13:30	13:00	17:00	17:00	17:00	03:15	03:00	03:00
IN	LV	L33HHG	05:23:34	OUT	14:50:28	09:26:54	05:15	05:00	05:00	14:45	14:30	14:00	09:15	09:00	09:00
IN	LV	L66CLW	04:40:45	OUT	12:02:30	07:21:45	04:30	04:30	04:00	12:00	12:00	12:00	07:15	07:00	07:00
IN	HV	L70DWM	06:28:29	OUT	06:57:47	00:29:18	06:15	06:00	06:00	06:45	06:30	06:00	00:15	00:00	00:00
IN	LV	L839DKH	05:36:29	OUT	18:05:33	12:29:04	05:30	05:30	05:00	18:00	18:00	18:00	12:15	12:00	12:00
IN	LV	LA06BHU	08:43:56	OUT	16:46:24	08:02:28	08:30	08:30	08:00	16:45	16:30	16:00	08:00	08:00	08:00
IN	LV	LA06BVC	05:46:56	OUT	05:49:20	00:02:24	05:45	05:30	05:00	05:45	05:30	05:00	00:00	00:00	00:00
IN	LV	LA06BVC	13:40:18	OUT	14:02:29	00:22:11	13:30	13:30	13:00	14:00	14:00	14:00	00:15	00:00	00:00
IN	LV	LC56KNR	13:20:30	OUT	13:23:32	00:03:02	13:15	13:00	13:00	13:15	13:00	13:00	00:00	00:00	00:00
IN	LV	LD57LVT	08:46:05	OUT	18:20:47	09:34:42	08:45	08:30	08:00	18:15	18:00	18:00	09:30	09:30	09:00
IN	LV	LG120BT	07:52:43	OUT	16:34:14	08:41:31	07:45	07:30	07:00	16:30	16:30	16:00	08:30	08:30	08:00
IN	LV	LL10BAO	11:54:33	OUT	15:23:50	03:29:17	11:45	11:30	11:00	15:15	15:00	15:00	03:15	03:00	03:00
IN	LV	LL530YP	05:47:27	OUT	14:05:14	08:17:47	05:45	05:30	05:00	14:00	14:00	14:00	08:15	08:00	08:00
IN	HV	LLU36997	12:05:13	OUT	12:51:27	00:46:14	12:00	12:00	12:00	12:45	12:30	12:00	00:45	00:30	00:00
IN	LV	LM13AOP	04:51:34	OUT	13:04:52	08:13:18	04:45	04:30	04:00	13:00	13:00	13:00	08:00	08:00	08:00
IN	LV	LO11HBB	04:49:32	OUT	14:04:59	09:15:27	04:45	04:30	04:00	14:00	14:00	14:00	09:15	09:00	09:00
IN	LV	LO59SGZ	07:36:59	OUT	17:32:14	09:55:15	07:30	07:30	07:00	17:30	17:30	17:00	09:45	09:30	09:00
IN	LV	LS62ZCK	12:14:19	OUT	13:06:10	00:51:51	12:00	12:00	12:00	13:00	13:00	13:00	00:45	00:30	00:00
IN	LV	M17RFS	08:31:25	OUT	18:21:41	09:50:16	08:30	08:30	08:00	18:15	18:00	18:00	09:45	09:30	09:00
IN	HV	M300MCB	05:16:07	OUT	07:03:12	01:47:05	05:15	05:00	05:00	07:00	07:00	07:00	01:45	01:30	01:00
IN	LV	M4FHR	07:57:15	OUT	17:03:38	09:06:23	07:45	07:30	07:00	17:00	17:00	17:00	09:00	09:00	09:00
IN	LV	M4XHL	17:52:24	OUT	18:57:03	01:04:39	17:45	17:30	17:00	18:45	18:30	18:00	01:00	01:00	01:00
IN	LV	MA07FYE	09:20:39	OUT	11:24:21	02:03:42	09:15	09:00	09:00	11:15	11:00	11:00	02:00	02:00	02:00
IN	LV	MA51EYH	07:34:29	OUT	13:02:55	05:28:26	07:30	07:30	07:00	13:00	13:00	13:00	05:15	05:00	05:00
IN	LV	MA51EYH	13:17:05	OUT	16:33:03	03:15:58	13:15	13:00	13:00	16:30	16:30	16:00	03:15	03:00	03:00
IN	LV	MA55AUD	16:31:13	OUT	16:33:34	00:02:21	16:30	16:30	16:00	16:30	16:30	16:00	00:00	00:00	00:00
IN	LV	MC14CGF	10:01:40	OUT	12:44:44	02:43:04	10:00	10:00	10:00	12:30	12:30	12:00	02:00	02:00	02:00
IN	LV	MCS1LUL	14:03:16	OUT	14:05:20	00:02:04	14:00	14:00	14:00	14:00	14:00	14:00	00:00	00:00	00:00
IN	LV	MD14FZC	05:26:45	OUT	13:54:30	08:27:45	05:15	05:00	05:00	13:45	13:30	13:00	08:15	08:00	08:00
IN	LV	MF07FNL	07:37:20	OUT	07:39:12	00:01:52	07:30	07:30	07:00	07:30	07:30	07:00	00:00	00:00	00:00
IN	LV	MJ07RYM	09:04:30	OUT	09:09:25	00:04:55	09:00	09:00	09:00	09:00	09:00	09:00	00:00	00:00	00:00
IN	LV	MK12YCO	07:58:10	OUT	16:38:25	08:40:15	07:45	07:30	07:00	16:30	16:30	16:00	08:30	08:30	08:00
IN	HV	ML63PWN	12:08:15	OUT	13:34:17	01:26:02	12:00	12:00	12:00	13:30	13:30	13:00	01:15	01:00	01:00
IN	LV	MP05NAP	04:23:40	OUT	13:54:39	09:30:59	04:15	04:00	04:00	13:45	13:30	13:00	09:30	09:30	09:00
IN	LV	MT54BXC	07:57:13	OUT	16:32:07	08:34:54	07:45	07:30	07:00	16:30	16:30	16:00	08:30	08:30	08:00
IN	LV	MV07OFC	16:23:04	OUT	17:59:23	01:36:19	16:15	16:00	16:00	17:45	17:30	17:00	01:30	01:30	01:00
IN	LV	MV09BLJ	11:16:39	OUT	11:47:19	00:30:40	11:15	11:00	11:00	11:45	11:30	11:00	00:30	00:30	00:00
IN	HV	MV10XCO	12:16:23	OUT	13:57:22	01:40:59	12:15	12:00	12:00	13:45	13:30	13:00	01:30	01:30	01:00
IN	LV	MV57WCD	05:47:58	OUT	13:20:01	07:32:03	05:45	05:30	05:00	13:15	13:00	13:00	07:30	07:30	07:00
IN	LV	MV58FEY	05:34:36	OUT	13:42:17	08:07:41	05:30	05:30	05:00	13:30	13:30	13:00	08:00	08:00	08:00
IN	LV	MV59VGE	05:40:15	OUT	13:41:07	08:00:52	05:30	05:30	05:00	13:30	13:30	13:00	08:00	08:00	08:00
IN	LV	MV64LLT	08:18:26	OUT	16:39:47	08:21:21	08:15	08:00	08:00	16:30	16:30	16:00	08:15	08:00	08:00
IN	LV	MW11EFO	05:32:35	OUT	14:04:56	08:32:21	05:30	05:30	05:00	14:00	14:00	14:00	08:30	08:30	08:00
IN	LV	MW15EFX	09:52:07	OUT	12:44:47	02:52:40	09:45	09:30	09:00	12:30	12:30	12:00	02:45	02:30	02:00
IN	LV	MW56XKO	05:45:46	OUT	14:09:47	08:24:01	05:45	05:30	05:00	14:00	14:00	14:00	08:15	08:00	08:00
IN	LV	MW58CVV	05:34:56	OUT	16:25:56	10:51:00	05:30	05:30	05:00	16:15	16:00	16:00	10:45	10:30	10:00
IN	HV	MX57AVL	06:59:25	OUT	07:53:36	00:54:11	06:45	06:30	06:00	07:45	07:30	07:00	00:45	00:30	00:00
IN	HV	MX61EWR	14:38:59	OUT	16:22:21	01:43:22	14:30	14:30	14:00	16:15	16:00	16:00	01:30	01:30	01:00
IN	HV	MX62FWG	06:27:47	OUT	07:36:39	01:08:52	06:15	06:00	06:00	07:30	07:30	07:00	01:00	01:00	01:00
IN	HV	MX63OBA	04:26:06	OUT	05:41:58	01:15:52	04:15	04:00	04:00	05:30	05:30	05:00	01:15	01:00	01:00
IN	HV	MX64FLE	09:52:56	OUT	10:01:06	00:08:10	09:45	09:30	09:00	10:00	10:00	10:00	00:00	00:00	00:00
IN	HV	MX64FLE	11:00:49	OUT	12:42:22	01:41:33	11:00	11:00	11:00	12:30	12:30	12:00	01:30	01:30	01:00
IN	LV	N182MGO	05:35:12	OUT	13:32:52	07:57:40	05:30	05:30	05:00	13:30	13:30	13:00	07:45	07:30	07:00
IN	LV	N44DOV	05:50:04	OUT	13:45:32	07:55:28	05:45	05:30	05:00	13:45	13:30	13:00	07:45	07:30	07:00
IN	HV	N88DTS	10:40:51	OUT	12:31:20	01:50:29	10:30	10:30	10:00	12:30	12:30	12:00	01:45	01:30	01:00
IN	LV	NC51FRX	08:37:24	OUT	08:40:31	00:03:07	08:30	08:30	08:00	08:30	08:30	08:00	00:00	00:00	00:00
IN	LV	NC51FRX	14:15:28	OUT	14:19:26	00:03:58	14:15	14:00	14:00	14:15	14:00	14:00	00:00	00:00	00:00
IN	LV	NC53CNE	09:42:44	OUT	10:33:30	00:50:46	09:30	09:30	09:00	10:30	10:30	10:00	00:45	00:30	00:00
IN	LV	NG13KHK	17:39:46	OUT	17:42:12	00:02:26	17:30	17:30	17:00	17:30	17:30	17:00	00:00	00:00	00:00
IN	LV	NJ57TOW	08:59:47	OUT	10:49:51										



InSite	Class	Reg	InTime	OutSite	OutTime	Duration	In15MinInt	In30MinInt	In60MinInt	Out15MinInt	Out30MinInt	Out60MinInt	ANPR Survey		
													Dur15MinInt	Dur30MinInt	Dur60MinInt
IN	LV	OW15KLM	11:57:52	OUT	15:45:31	03:47:39	11:45	11:30	11:00	15:45	15:30	15:00	03:45	03:30	03:00
IN	LV	P17JOD	09:34:32	OUT	09:39:20	00:04:48	09:30	09:30	09:00	09:30	09:30	09:00	00:00	00:00	00:00
IN	LV	P30NDM	08:38:16	OUT	12:12:02	03:33:46	08:30	08:30	08:00	12:00	12:00	12:00	03:30	03:30	03:00
IN	LV	P30NDM	12:49:26	OUT	16:34:44	03:45:18	12:45	12:30	12:00	16:30	16:30	16:00	03:45	03:30	03:00
IN	HV	P7ETL	08:00:37	OUT	09:33:34	01:32:57	08:00	08:00	08:00	09:30	09:30	09:00	01:30	01:30	01:00
IN	HV	P999STS	08:22:46	OUT	09:54:02	01:31:16	08:15	08:00	08:00	09:45	09:30	09:00	01:30	01:30	01:00
IN	HV	PF05EUL	11:50:08	OUT	13:01:47	01:11:39	11:45	11:30	11:00	13:00	13:00	13:00	01:00	01:00	01:00
IN	LV	PF07JVP	04:38:56	OUT	12:04:35	07:25:39	04:30	04:30	04:00	12:00	12:00	12:00	07:15	07:00	07:00
IN	LV	PF52SVN	13:00:00	OUT	13:47:28	00:47:28	13:00	13:00	13:00	13:45	13:30	13:00	00:45	00:30	00:00
IN	HV	PF64EFH	05:29:50	OUT	06:48:28	01:18:38	05:15	05:00	05:00	06:45	06:30	06:00	01:15	01:00	01:00
IN	HV	PG04WEX	08:40:34	OUT	09:30:37	00:50:03	08:30	08:30	08:00	09:30	09:30	09:00	00:45	00:30	00:00
IN	LV	PJ08HVW	04:35:41	OUT	13:00:03	08:24:22	04:30	04:30	04:00	13:00	13:00	13:00	08:15	08:00	08:00
IN	LV	PK07EHM	14:01:36	OUT	14:05:06	00:03:30	14:00	14:00	14:00	14:00	14:00	14:00	00:00	00:00	00:00
IN	HV	PK60ZXD	11:28:19	OUT	14:39:02	03:10:43	11:15	11:00	11:00	14:30	14:30	14:00	03:00	03:00	03:00
IN	HV	PK64YEV	12:27:28	OUT	15:46:19	03:18:51	12:15	12:00	12:00	15:45	15:30	15:00	03:15	03:00	03:00
IN	HV	PN08RHY	11:33:24	OUT	14:42:51	03:09:27	11:30	11:30	11:00	14:30	14:30	14:00	03:00	03:00	03:00
IN	HV	PN61DVT	09:34:18	OUT	10:27:15	00:52:57	09:30	09:30	09:00	10:15	10:00	10:00	00:45	00:30	00:00
IN	HV	PO13KYU	16:30:20	OUT	16:34:26	00:04:06	16:30	16:30	16:00	16:30	16:30	16:00	00:00	00:00	00:00
IN	LV	PO63DNN	15:42:54	OUT	15:44:48	00:01:54	15:30	15:30	15:00	15:30	15:30	15:00	00:00	00:00	00:00
IN	LV	PX112HM	04:35:09	OUT	13:04:05	08:28:56	04:30	04:30	04:00	13:00	13:00	13:00	08:15	08:00	08:00
IN	HV	R12BYC	08:14:55	OUT	09:34:30	01:19:35	08:00	08:00	08:00	09:30	09:30	09:00	01:15	01:00	01:00
IN	LV	R270VRX	10:06:19	OUT	10:55:11	00:48:52	10:00	10:00	10:00	10:45	10:30	10:00	00:45	00:30	00:00
IN	HV	R730LOG	06:03:38	OUT	06:56:18	00:52:40	06:00	06:00	06:00	06:45	06:30	06:00	00:45	00:30	00:00
IN	LV	R759LRF	07:26:56	OUT	18:14:47	10:47:51	07:15	07:00	07:00	18:00	18:00	18:00	10:45	10:30	10:00
IN	LV	R88CDB	05:45:52	OUT	13:34:10	07:48:18	05:45	05:30	05:00	13:30	13:30	13:00	07:45	07:30	07:00
IN	LV	RA04DHY	04:36:42	OUT	12:52:00	08:15:18	04:30	04:30	04:00	12:45	12:30	12:00	08:15	08:00	08:00
IN	LV	RE10VJF	03:17:31	OUT	15:11:12	11:53:41	03:15	03:00	03:00	15:00	15:00	15:00	11:45	11:30	11:00
IN	HV	RN59EHN	14:23:21	OUT	15:34:06	01:10:45	14:15	14:00	14:00	15:30	15:30	15:00	01:00	01:00	01:00
IN	LV	RY53CWN	16:25:49	OUT	18:19:40	01:53:51	16:15	16:00	16:00	18:15	18:00	18:00	01:45	01:30	01:00
IN	LV	RY54RFX	04:36:46	OUT	11:59:45	07:22:59	04:30	04:30	04:00	11:45	11:30	11:00	07:15	07:00	07:00
IN	LV	S21WAD	07:40:42	OUT	16:36:50	08:56:08	07:30	07:30	07:00	16:30	16:30	16:00	08:45	08:30	08:00
IN	HV	S50AHT	13:04:00	OUT	14:31:02	01:27:02	13:00	13:00	13:00	14:30	14:30	14:00	01:15	01:00	01:00
IN	LV	S6EFT	09:36:36	OUT	17:03:30	07:26:54	09:30	09:30	09:00	17:00	17:00	17:00	07:15	07:00	07:00
IN	LV	SA60XVC	05:40:44	OUT	18:11:44	12:31:00	05:30	05:30	05:00	18:00	18:00	18:00	12:30	12:30	12:00
IN	LV	SB04AYS	05:44:53	OUT	13:30:17	07:45:24	05:30	05:30	05:00	13:30	13:30	13:00	07:45	07:30	07:00
IN	LV	SB61NPZ	04:12:49	OUT	10:40:09	06:27:20	04:00	04:00	04:00	10:30	10:30	10:00	06:15	06:30	06:00
IN	LV	SC04BLK	05:49:22	OUT	13:22:53	07:33:31	05:45	05:30	05:00	13:15	13:00	13:00	07:30	07:30	07:00
IN	LV	SD57CZG	05:51:58	OUT	16:03:58	10:12:00	05:45	05:30	05:00	16:00	16:00	16:00	10:00	10:00	10:00
IN	LV	SEG45	10:17:02	OUT	18:38:02	08:21:00	10:15	10:00	10:00	18:30	18:30	18:00	08:15	08:00	08:00
IN	LV	SG07KZA	05:49:20	OUT	14:47:04	08:57:44	05:45	05:30	05:00	14:45	14:30	14:00	08:45	08:30	08:00
IN	LV	SG09WFN	04:28:51	OUT	11:57:20	07:28:29	04:15	04:00	04:00	11:45	11:30	11:00	07:15	07:00	07:00
IN	LV	SG59VWV	09:10:49	OUT	09:15:26	00:04:37	09:00	09:00	09:00	09:15	09:00	09:00	00:00	00:00	00:00
IN	LV	SH06LEE	12:12:04	OUT	15:31:15	03:19:11	12:00	12:00	12:00	15:30	15:30	15:00	03:15	03:00	03:00
IN	LV	SH09TXA	09:53:16	OUT	18:34:57	08:41:41	09:45	09:30	09:00	18:30	18:30	18:00	08:30	08:30	08:00
IN	LV	SH51UTJ	09:26:18	OUT	11:24:32	01:58:14	09:15	09:00	09:00	11:15	11:00	11:00	01:45	01:30	01:00
IN	HV	SJ08TAY	09:55:49	OUT	10:41:21	00:45:32	09:45	09:30	09:00	10:30	10:30	10:00	00:45	00:30	00:00
IN	LV	SJ57GXA	10:18:56	OUT	19:46:05	09:27:09	10:15	10:00	10:00	19:45	19:30	19:00	09:15	09:00	09:00
IN	LV	SJ64VLL	12:05:25	OUT	12:41:55	00:36:30	12:00	12:00	12:00	12:30	12:30	12:00	00:30	00:30	00:00
IN	LV	SJ770ZT	04:40:38	OUT	15:01:33	10:20:55	04:30	04:30	04:00	15:00	15:00	15:00	10:15	10:00	10:00
IN	LV	SK60VXR	04:34:14	OUT	12:07:23	07:33:09	04:30	04:30	04:00	12:00	12:00	12:00	07:30	07:30	07:00
IN	LV	SK62HZX	09:13:31	OUT	11:26:31	02:13:00	09:00	09:00	09:00	11:15	11:00	11:00	02:00	02:00	02:00
IN	HV	SL60JWZ	08:09:55	OUT	09:08:40	00:58:45	08:00	08:00	08:00	09:00	09:00	09:00	00:45	00:30	00:00
IN	HV	SL60JWZ	13:04:47	OUT	18:11:14	05:06:27	13:00	13:00	13:00	18:00	18:00	18:00	05:00	05:00	05:00
IN	LV	SP58YJU	16:51:47	OUT	16:52:32	00:00:45	16:45	16:30	16:00	16:45	16:30	16:00	00:00	00:00	00:00
IN	HV	SW62HFX	04:35:20	OUT	08:18:32	03:43:12	04:30	04:30	04:00	08:15	08:00	08:00	03:30	03:30	03:00
IN	LV	T450BVA	07:48:09	OUT	16:07:07	08:18:58	07:45	07:30	07:00	16:00	16:00	16:00	08:15	08:00	08:00
IN	LV	T700IDY	07:38:35	OUT	16:54:32	09:15:57	07:30	07:30	07:00	16:45	16:30	16:00	09:15	09:00	09:00
IN	LV	T927MND	07:51:00	OUT	14:42:55	06:51:55	07:45	07:30	07:00	14:30	14:30	14:00	06:45	06:30	06:00
IN	LV	TF07VKT	04:25:23	OUT	13:01:21	08:35:58	04:15	04:00	04:00	13:00	13:00	13:00	08:30	08:30	08:00
IN	HV	TJ22720	17:16:14	OUT	18:03:49	00:47:35	17:15	17:00	17:00	18:00	18:00	18:00	00:45	00:30	00:00
IN	LV	TN07YLM	14:32:14	OUT	19:11:11	04:38:57	14:30	14:30	14:00	19:00	19:00	19:00	04:30	04:30	04:00
IN	LV	V111AEW	04:46:42	OUT	14:35:57	09:49:15	04:45	04:30	04:00	14:30	14:30	14:00	09:45	09:30	09:00
IN	HV	V20ETL	12:11:24	OUT	12:35:59	00:24:35	12:00	12:00	12:00	12:30	12:30	12:00	00:15	00:00	00:00
IN	LV	V271GGR	04:55:09	OUT	04:57:29	00:02:20	04:45	04:30	04:00	04:45	04:30	04:00	00:00	00:00	00:00
IN	LV	V271GGR	13:12:11	OUT	13:14:45	00:02:34	13:00	13:00	13:00	13:00	13:00	13:00	00:00	00:00	00:00
IN	HV	V8FHM	18:04:03	OUT	18:20:43	00:16:40	18:00	18:00	18:00	18:15	18:00	18:00	00:15	00:00	00:00
IN	HV	VK60YKH	14:39:13	OUT	15:55:06	01:15:53	14:30	14:30	14:00	15:45	15:30	15:00	01:15	01:00	01:00
IN	LV	VN53SUX	05:47:09	OUT	13:33:03	07:45:54	05:45	05:30	05:00	13:30	13:30	13:00	07:45	07:30	07:00
IN	LV	VN53VNB	11:08:49	OUT	18:21:30	07:12:41	11:00	11:00	11:00	18:15	18:00	18:00	07:00	07:00	07:00
IN	HV	VN59EBP	14:11:48	OUT	15:29:31	01:17:43	14:00	14:00	14:00	15:15	15:00	15:00	01:15	01:00	01:00
IN	LV	VX07KAE	04:42:49	OUT	12:02:55	07:20:06	04:30	04:30	04:00	12:00	12:00	12:00	07:15	07:00	07:00
IN	LV	VX59BYU	09:04:24	OUT	11:25:50	02:21:26	09:00	09:00	09:00	11:15	11:00	11:00	02:15	02:00	02:00
IN	LV	W5HTE	07:57:29	OUT	12:05:13	04:07:44	07:45	07:30	07:00	12:00	12:00	12:00	04:00	04:00	04:00
IN	LV	W5HTE	12:51:10	OUT	16:35:02	03:43:52	12:45	12:30	12:00	16:30	16:30	16:00	03:30	03:30	03:00
IN	LV	W891NAU													



InSite	Class	Reg	InTime	OutSite	OutTime	Duration	In15MinInt	In30MinInt	In60MinInt	Out15MinInt	Out30MinInt	Out60MinInt	ANPR Survey		
													Dur15MinInt	Dur30MinInt	Dur60MinInt
IN	HV	Y781NUH	14:20:03	OUT	15:23:22	01:03:19	14:15	14:00	14:00	15:15	15:00	15:00	01:00	01:00	01:00
IN	LV	Y843YAT	09:56:05	OUT	17:49:32	07:53:27	09:45	09:30	09:00	17:45	17:30	17:00	07:45	07:30	07:00
IN	LV	Y953YFP	05:27:24	OUT	13:42:08	08:14:44	05:15	05:00	05:00	13:30	13:30	13:00	08:00	08:00	08:00
IN	LV	YA07VXY	05:45:09	OUT	15:08:44	09:23:35	05:45	05:30	05:00	15:00	15:00	15:00	09:15	09:00	09:00
IN	LV	YA15LFP	09:06:33	OUT	12:45:23	03:38:50	09:00	09:00	09:00	12:45	12:30	12:00	03:30	03:30	03:00
IN	HV	YB14FCX	12:33:32	OUT	13:51:51	01:18:19	12:30	12:30	12:00	13:45	13:30	13:00	01:15	01:00	01:00
IN	LV	YB15TOJ	07:20:11	OUT	18:14:28	10:54:17	07:15	07:00	07:00	18:00	18:00	18:00	10:45	10:30	10:00
IN	LV	YB53OXA	11:47:15	OUT	11:49:55	00:02:40	11:45	11:30	11:00	11:45	11:30	11:00	00:00	00:00	00:00
IN	LV	YC05WHF	04:47:26	OUT	16:36:45	11:49:19	04:45	04:30	04:00	16:30	16:30	16:00	11:45	11:30	11:00
IN	LV	YC12GXT	07:58:32	OUT	16:36:47	08:38:15	07:45	07:30	07:00	16:30	16:30	16:00	08:30	08:30	08:00
IN	HV	YC13BUT	04:43:17	OUT	06:09:44	01:26:27	04:30	04:30	04:00	06:00	06:00	06:00	01:15	01:00	01:00
IN	LV	YC520DE	09:49:27	OUT	11:23:31	01:34:04	09:45	09:30	09:00	11:15	11:00	11:00	01:30	01:30	01:00
IN	LV	YC55XWW	05:43:42	OUT	13:42:59	07:59:17	05:30	05:30	05:00	13:30	13:30	13:00	07:45	07:30	07:00
IN	LV	YC62LGL	09:28:58	OUT	12:20:00	02:51:02	09:15	09:00	09:00	12:15	12:00	12:00	02:45	02:30	02:00
IN	HV	YC64OHS	05:54:31	OUT	06:35:35	00:41:04	05:45	05:30	05:00	06:30	06:30	06:00	00:00	00:30	00:00
IN	HV	YC64OHS	08:20:22	OUT	09:08:30	00:48:08	08:15	08:00	08:00	09:00	09:00	09:00	00:45	00:30	00:00
IN	HV	YC64OHS	11:47:26	OUT	12:21:12	00:33:46	11:45	11:30	11:00	12:15	12:00	12:00	00:30	00:30	00:00
IN	HV	YC64OHS	14:54:24	OUT	15:35:21	00:40:57	14:45	14:30	14:00	15:30	15:30	15:00	00:30	00:30	00:00
IN	LV	YC64XUS	09:01:06	OUT	13:18:42	04:17:36	09:00	09:00	09:00	13:15	13:00	13:00	04:15	04:00	04:00
IN	LV	YD06JRB	12:21:17	OUT	12:34:08	00:12:51	12:15	12:00	12:00	12:30	12:30	12:00	00:00	00:00	00:00
IN	LV	YD62FYB	05:32:28	OUT	18:34:40	13:02:12	05:30	05:30	05:00	18:30	18:30	18:00	13:00	13:00	13:00
IN	LV	YD65XIU	09:03:54	OUT	15:45:33	06:41:39	09:00	09:00	09:00	15:45	15:30	15:00	06:30	06:30	06:00
IN	HV	YE12YUR	09:11:45	OUT	10:12:46	01:01:01	09:00	09:00	09:00	10:00	10:00	10:00	01:00	01:00	01:00
IN	LV	YE54XSZ	13:39:45	OUT	21:53:49	08:14:04	13:30	13:30	13:00	21:45	21:30	21:00	08:00	08:00	08:00
IN	LV	YE58JTX	05:41:35	OUT	14:08:10	08:26:35	05:30	05:30	05:00	14:00	14:00	14:00	08:15	08:00	08:00
IN	LV	YE59JSC	05:33:30	OUT	05:36:17	00:02:47	05:30	05:30	05:00	05:30	05:30	05:00	00:00	00:00	00:00
IN	HV	YE64TFO	11:29:21	OUT	12:53:52	01:24:31	11:15	11:00	11:00	12:45	12:30	12:00	01:15	01:00	01:00
IN	LV	YF05HKH	05:45:53	OUT	13:42:49	07:56:56	05:45	05:30	05:00	13:30	13:30	13:00	07:45	07:30	07:00
IN	LV	YF05XTU	10:14:05	OUT	18:35:01	08:20:56	10:00	10:00	10:00	18:30	18:30	18:00	08:15	08:00	08:00
IN	LV	YF06VZX	10:07:13	OUT	15:05:04	04:57:51	10:00	10:00	10:00	15:00	15:00	15:00	04:45	04:30	04:00
IN	LV	YF10KSU	05:39:46	OUT	05:42:02	00:02:16	05:30	05:30	05:00	05:30	05:30	05:00	00:00	00:00	00:00
IN	LV	YF13ZUC	09:17:22	OUT	11:45:08	02:27:46	09:15	09:00	09:00	11:45	11:30	11:00	02:15	02:00	02:00
IN	LV	YF15MVV	09:15:24	OUT	09:54:47	00:39:23	09:15	09:00	09:00	09:45	09:30	09:00	00:30	00:30	00:00
IN	LV	YF53FZW	05:43:41	OUT	14:05:25	08:21:44	05:30	05:30	05:00	14:00	14:00	14:00	08:15	08:00	08:00
IN	LV	YF57HCK	07:30:59	OUT	16:44:15	09:13:16	07:30	07:30	07:00	16:30	16:30	16:00	09:00	09:00	09:00
IN	LV	YF57TWX	04:45:03	OUT	13:30:56	08:45:53	04:45	04:30	04:00	13:30	13:30	13:00	08:45	08:30	08:00
IN	LV	YF60TLO	11:42:57	OUT	21:18:43	09:35:46	11:30	11:30	11:00	21:15	21:00	21:00	09:30	09:30	09:00
IN	HV	YF63JWE	04:02:28	OUT	05:08:16	01:05:48	04:00	04:00	04:00	05:00	05:00	05:00	01:00	01:00	01:00
IN	LV	YG05LHF	05:37:41	OUT	13:42:25	08:04:44	05:30	05:30	05:00	13:30	13:30	13:00	08:00	08:00	08:00
IN	LV	YG07ZGB	04:57:55	OUT	14:01:15	09:03:20	04:45	04:30	04:00	14:00	14:00	14:00	09:00	09:00	09:00
IN	LV	YG14OPB	05:19:18	OUT	17:48:09	12:28:51	05:15	05:00	05:00	17:45	17:30	17:00	12:15	12:00	12:00
IN	LV	YG14ZGX	05:30:56	OUT	13:54:26	08:23:30	05:30	05:30	05:00	13:45	13:30	13:00	08:15	08:00	08:00
IN	LV	YG51MTL	05:42:59	OUT	13:57:04	08:14:05	05:30	05:30	05:00	13:45	13:30	13:00	08:00	08:00	08:00
IN	LV	YG55PXY	11:32:54	OUT	18:07:46	06:34:52	11:30	11:30	11:00	18:00	18:00	18:00	06:30	06:30	06:00
IN	LV	YG58UDB	07:00:10	OUT	16:12:33	09:12:23	07:00	07:00	07:00	16:00	16:00	16:00	09:00	09:00	09:00
IN	LV	YH04BCE	05:52:00	OUT	14:37:44	08:45:44	05:45	05:30	05:00	14:30	14:30	14:00	08:45	08:30	08:00
IN	LV	YH08AZG	08:45:41	OUT	16:32:10	07:46:29	08:45	08:30	08:00	16:30	16:30	16:00	07:45	07:30	07:00
IN	LV	YH13KKA	04:46:28	OUT	12:34:54	07:48:26	04:45	04:30	04:00	12:30	12:30	12:00	07:45	07:30	07:00
IN	LV	YH51LJT	05:31:13	OUT	13:29:51	07:58:38	05:30	05:30	05:00	13:15	13:00	13:00	07:45	07:30	07:00
IN	LV	YH53BVR	05:06:41	OUT	13:35:54	08:29:13	05:00	05:00	05:00	13:30	13:30	13:00	08:15	08:00	08:00
IN	LV	YH54ECA	10:11:23	OUT	10:14:20	00:02:57	10:00	10:00	10:00	10:00	10:00	10:00	00:00	00:00	00:00
IN	LV	YH62WVR	04:51:25	OUT	11:02:06	06:10:41	04:45	04:30	04:00	11:00	11:00	11:00	06:00	06:00	06:00
IN	LV	YH64SVO	15:14:05	OUT	17:11:14	01:57:09	15:00	15:00	15:00	17:00	17:00	17:00	01:45	01:30	01:00
IN	HV	YJ07NTK	05:16:34	OUT	06:30:26	01:13:52	05:15	05:00	05:00	06:30	06:30	06:00	01:00	01:00	01:00
IN	LV	YJ53XSO	11:52:03	OUT	11:58:00	00:05:57	11:45	11:30	11:00	11:45	11:30	11:00	00:00	00:00	00:00
IN	LV	YJ64XUP	07:35:47	OUT	10:41:01	03:05:14	07:30	07:30	07:00	10:30	10:30	10:00	03:00	03:00	03:00
IN	LV	YJ64XUP	10:46:56	OUT	10:53:01	00:06:05	10:45	10:30	10:00	10:45	10:30	10:00	00:00	00:00	00:00
IN	HV	YJ65JUC	04:52:36	OUT	06:13:48	01:21:12	04:45	04:30	04:00	06:00	06:00	06:00	01:15	01:00	01:00
IN	LV	YK02XRC	07:52:18	OUT	13:07:20	05:15:02	07:45	07:30	07:00	13:00	13:00	13:00	05:15	05:00	05:00
IN	LV	YK02XRC	13:51:43	OUT	16:34:56	02:43:13	13:45	13:30	13:00	16:30	16:30	16:00	02:30	02:30	02:00
IN	HV	YK12GJO	04:26:15	OUT	05:26:08	00:59:53	04:15	04:00	04:00	05:15	05:00	05:00	00:45	00:30	00:00
IN	LV	YK54MPJ	09:56:02	OUT	09:58:49	00:02:47	09:45	09:30	09:00	09:45	09:30	09:00	00:00	00:00	00:00
IN	LV	YK54MPJ	17:23:27	OUT	17:25:47	00:02:20	17:15	17:00	17:00	17:15	17:00	17:00	00:00	00:00	00:00
IN	HV	YK59HTO	04:35:05	OUT	06:05:32	01:30:27	04:30	04:30	04:00	06:00	06:00	06:00	01:30	01:30	01:00
IN	HV	YK61ZNY	04:57:50	OUT	06:29:02	01:31:12	04:45	04:30	04:00	06:15	06:00	06:00	01:30	01:30	01:00
IN	LV	YK63WVZ	12:09:19	OUT	15:20:41	03:11:22	12:00	12:00	12:00	15:15	15:00	15:00	03:00	03:00	03:00
IN	LV	YK63XSA	06:53:21	OUT	15:37:02	08:43:41	06:45	06:30	06:00	15:30	15:30	15:00	08:30	08:30	08:00
IN	HV	YK64LJU	09:33:33	OUT	09:36:42	00:03:09	09:30	09:30	09:00	09:30	09:30	09:00	00:00	00:00	00:00
IN	HV	YK64LJU	11:49:48	OUT	14:55:13	03:05:25	11:45	11:30	11:00	14:45	14:30	14:00	03:00	03:00	03:00
IN	LV	YL53JYW	11:33:29	OUT	12:18:16	00:44:47	11:30	11:30	11:00	12:15	12:00	12:00	00:30	00:30	00:00
IN	LV	YM02FWY	09:02:13	OUT	11:54:01	02:51:48	09:00	09:00	09:00	11:45	11:30	11:00	02:45	02:30	02:00
IN	LV	YM02FWY	15:00:12	OUT	16:01:52	01:01:40	15:00	15:00	15:00	16:00	16:00	16:00	01:00	01:00	01:00
IN	LV	YM54MVF	08:44:07	OUT	17:13:50	08:29:43	08:30	08:30	08:00	17:00	17:00	17:00	08:15	08:00	08:00
IN	LV	YN05OTZ	07:50:55	OUT	17:03:57	09:13:02	07:45	07:30	07:00	17:00	17:00	17:00			



														ANPR Survey	
InSite	Class	Reg	InTime	OutSite	OutTime	Duration	In15MinInt	In30MinInt	In60MinInt	Out15MinInt	Out30MinInt	Out60MinInt	Dur15MinInt	Dur30MinInt	Dur60MinInt
IN	HV	YR60ZHE	09:23:52	OUT	09:27:04	00:03:12	09:15	09:00	09:00	09:15	09:00	09:00	00:00	00:00	00:00
IN	HV	YR60ZHE	09:39:38	OUT	09:44:04	00:04:26	09:30	09:30	09:00	09:30	09:00	09:00	00:00	00:00	00:00
IN	LV	YR61EHX	08:01:28	OUT	16:45:47	08:44:19	08:00	08:00	08:00	16:45	16:30	16:00	08:30	08:30	08:00
IN	LV	YR64NTK	09:36:05	OUT	11:58:45	02:22:40	09:30	09:30	09:00	11:45	11:30	11:00	02:15	02:00	02:00
IN	LV	YS03KBV	05:41:32	OUT	13:30:24	07:48:52	05:30	05:30	05:00	13:30	13:30	13:00	07:45	07:30	07:00
IN	LV	YS13MZL	13:38:03	OUT	22:06:42	08:28:39	13:30	13:30	13:00	22:00	22:00	22:00	08:15	08:00	08:00
IN	LV	YS51JHO	05:51:54	OUT	18:07:15	12:15:21	05:45	05:30	05:00	18:00	18:00	18:00	12:15	12:00	12:00
IN	LV	YS54KKG	09:20:07	OUT	11:24:34	02:04:27	09:15	09:00	09:00	11:15	11:00	11:00	02:00	02:00	02:00
IN	LV	YS59NTM	19:21:50	OUT	19:24:01	00:02:11	19:15	19:00	19:00	19:15	19:00	19:00	00:00	00:00	00:00
IN	LV	YS63WDF	07:56:43	OUT	10:04:27	02:07:44	07:45	07:30	07:00	10:00	10:00	10:00	02:00	02:00	02:00
IN	LV	YS63ZXB	08:20:01	OUT	16:55:18	08:35:17	08:15	08:00	08:00	16:45	16:30	16:00	08:30	08:30	08:00
IN	LV	YT03TXP	09:44:53	OUT	11:25:01	01:40:08	09:30	09:30	09:00	11:15	11:00	11:00	01:30	01:30	01:00
IN	LV	YT07LYS	13:36:40	OUT	22:08:15	08:31:35	13:30	13:30	13:00	22:00	22:00	22:00	08:30	08:30	08:00
IN	LV	YT10OCX	05:46:54	OUT	17:15:18	11:28:24	05:45	05:30	05:00	17:15	17:00	17:00	11:15	11:00	11:00
IN	HV	YT10UGA	18:12:37	OUT	20:42:56	02:30:19	18:00	18:00	18:00	20:30	20:30	20:00	02:30	02:30	02:00
IN	HV	YT10VJM	06:29:38	OUT	07:01:27	00:31:49	06:15	06:00	06:00	07:00	07:00	07:00	00:30	00:30	00:00
IN	LV	YT11NMU	07:39:01	OUT	16:36:50	08:57:49	07:30	07:30	07:00	16:30	16:30	16:00	08:45	08:30	08:00
IN	LV	YT12VDL	16:16:33	OUT	16:19:24	00:02:51	16:15	16:00	16:00	16:15	16:00	16:00	00:00	00:00	00:00
IN	LV	YT15GFE	04:19:22	OUT	05:37:36	01:18:14	04:15	04:00	04:00	05:30	05:30	05:00	01:15	01:00	01:00
IN	LV	YT53DWM	05:43:44	OUT	13:41:49	07:58:05	05:30	05:30	05:00	13:30	13:30	13:00	07:45	07:30	07:00
IN	LV	YT56XTJ	11:02:53	OUT	11:05:12	00:02:19	11:00	11:00	11:00	11:00	11:00	11:00	00:00	00:00	00:00
IN	LV	YT570PO	13:04:17	OUT	13:05:00	00:00:43	13:00	13:00	13:00	13:00	13:00	13:00	00:00	00:00	00:00
IN	LV	YT58KAU	07:57:48	OUT	16:50:37	08:52:49	07:45	07:30	07:00	16:45	16:30	16:00	08:45	08:30	08:00
IN	LV	YT60KRX	05:38:17	OUT	05:40:48	00:02:31	05:30	05:30	05:00	05:30	05:30	05:00	00:00	00:00	00:00
IN	LV	YU04FHX	05:33:25	OUT	13:38:57	08:05:32	05:30	05:30	05:00	13:30	13:30	13:00	08:00	08:00	08:00
IN	LV	YV51RYX	10:27:00	OUT	22:11:43	11:44:43	10:15	10:00	10:00	22:00	22:00	22:00	11:30	11:30	11:00
IN	HV	YX07KKR	07:50:47	OUT	09:21:42	01:30:55	07:45	07:30	07:00	09:15	09:00	09:00	01:30	01:30	01:00
IN	LV	YX08ECW	08:03:08	OUT	11:31:34	03:28:26	08:00	08:00	08:00	11:30	11:30	11:00	03:15	03:00	03:00
IN	HV	YX10FDY	07:03:58	OUT	07:38:55	00:34:57	07:00	07:00	07:00	07:30	07:30	07:00	00:30	00:30	00:00
IN	HV	YX12BHK	08:41:37	OUT	10:20:32	01:38:55	08:30	08:30	08:00	10:15	10:00	10:00	01:30	01:30	01:00
IN	HV	YX12BLJ	14:44:29	OUT	16:03:40	01:19:11	14:30	14:30	14:00	16:00	16:00	16:00	01:15	01:00	01:00
IN	HV	YX12BLK	03:01:30	OUT	12:06:49	09:05:19	03:00	03:00	03:00	12:00	12:00	12:00	09:00	09:00	09:00
IN	HV	YX12BLK	15:05:32	OUT	17:27:33	02:22:01	15:00	15:00	15:00	17:15	17:00	17:00	02:15	02:00	02:00
IN	HV	YX12BLN	08:23:59	OUT	10:12:19	01:48:20	08:15	08:00	08:00	10:00	10:00	10:00	01:45	01:30	01:00
IN	HV	YX14AEM	05:34:06	OUT	07:22:03	01:47:57	05:30	05:30	05:00	07:15	07:00	07:00	01:45	01:30	01:00
IN	HV	YX15DFU	06:39:23	OUT	17:05:13	10:25:50	06:30	06:30	06:00	17:00	17:00	17:00	10:15	10:00	10:00
IN	HV	YX15DFV	04:29:29	OUT	11:00:44	06:31:15	04:15	04:00	04:00	11:00	11:00	11:00	06:30	06:30	06:00
IN	HV	YX15DFV	16:02:27	OUT	20:39:03	04:36:36	16:00	16:00	16:00	20:30	20:30	20:00	04:30	04:30	04:00
IN	HV	YX15DGO	09:59:40	OUT	12:31:29	02:31:49	09:45	09:30	09:00	12:30	12:30	12:00	02:30	02:30	02:00
IN	HV	YX15DGU	04:51:04	OUT	14:14:07	09:23:03	04:45	04:30	04:00	14:00	14:00	14:00	09:15	09:00	09:00
IN	HV	YX15DGV	08:44:56	OUT	10:20:23	01:35:27	08:30	08:30	08:00	10:15	10:00	10:00	01:30	01:30	01:00
IN	HV	YX15DGY	04:24:52	OUT	12:42:38	08:17:46	04:15	04:00	04:00	12:30	12:30	12:00	08:15	08:00	08:00
IN	HV	YX15DGY	14:50:41	OUT	17:01:55	02:11:14	14:45	14:30	14:00	17:00	17:00	17:00	02:00	02:00	02:00
IN	HV	YX15DGG	08:19:36	OUT	10:09:16	01:49:40	08:15	08:00	08:00	10:00	10:00	10:00	01:45	01:30	01:00
IN	HV	YX15DGG	15:17:52	OUT	20:43:14	05:25:22	15:15	15:00	15:00	20:30	20:30	20:00	05:15	05:00	05:00
IN	HV	YX15DHA	16:28:34	OUT	18:34:33	02:05:59	16:15	16:00	16:00	18:30	18:30	18:00	02:00	02:00	02:00
IN	HV	YX15DHD	05:53:38	OUT	13:24:13	07:30:35	05:45	05:30	05:00	13:15	13:00	13:00	07:30	07:30	07:00
IN	HV	YX15DHD	16:10:06	OUT	18:33:41	02:23:35	16:00	16:00	16:00	18:30	18:30	18:00	02:15	02:00	02:00
IN	HV	YX15DHE	04:47:40	OUT	13:49:40	09:02:00	04:45	04:30	04:00	13:45	13:30	13:00	09:00	09:00	09:00
IN	HV	YX15DHF	03:31:34	OUT	12:28:02	08:56:28	03:30	03:30	03:00	12:15	12:00	12:00	08:45	08:30	08:00
IN	HV	YX15DHG	08:15:13	OUT	09:54:08	01:38:55	08:15	08:00	08:00	09:45	09:30	09:00	01:30	01:30	01:00
IN	HV	YX15DHG	15:18:23	OUT	20:18:40	05:00:17	15:15	15:00	15:00	20:15	20:00	20:00	05:00	05:00	05:00
IN	LV	YX15DHJ	04:33:18	OUT	12:15:51	07:42:33	04:30	04:30	04:00	12:15	12:00	12:00	07:30	07:30	07:00
IN	HV	YX15DHL	16:52:35	OUT	19:23:29	02:30:54	16:45	16:30	16:00	19:15	19:00	19:00	02:30	02:30	02:00
IN	HV	YX15DHL	16:01:25	OUT	17:12:09	01:10:44	16:00	16:00	16:00	17:00	17:00	17:00	01:00	01:00	01:00
IN	HV	YX15DHN	10:14:35	OUT	12:40:00	02:25:25	10:00	10:00	10:00	12:30	12:30	12:00	02:15	02:00	02:00
IN	HV	YX15DHO	00:40:41	OUT	03:53:53	03:13:12	00:30	00:30	00:00	03:45	03:30	03:00	03:00	03:00	03:00
IN	HV	YX15DHO	07:15:51	OUT	12:10:49	04:54:58	07:15	07:00	07:00	12:00	12:00	12:00	04:45	04:30	04:00
IN	HV	YX15DHU	09:54:20	OUT	12:54:12	02:59:52	09:45	09:30	09:00	12:45	12:30	12:00	02:45	02:30	02:00
IN	HV	YX15DHV	00:35:08	OUT	00:40:57	00:05:49	00:30	00:30	00:00	00:30	00:30	00:00	00:00	00:00	00:00
IN	HV	YX15DHV	03:05:13	OUT	05:01:06	01:55:53	03:00	03:00	03:00	05:00	05:00	05:00	01:45	01:30	01:00
IN	HV	YX15DHV	07:27:36	OUT	12:01:26	04:33:50	07:15	07:00	07:00	12:00	12:00	12:00	04:30	04:30	04:00
IN	HV	YX15DHz	08:28:22	OUT	11:04:18	02:35:56	08:15	08:00	08:00	11:00	11:00	11:00	02:30	02:30	02:00
IN	HV	YX15DHz	12:16:10	OUT	13:46:07	01:29:57	12:15	12:00	12:00	13:45	13:30	13:00	01:15	01:00	01:00
IN	LV	YY05Mkk	07:46:47	OUT	18:36:45	10:49:58	07:45	07:30	07:00	18:30	18:30	18:00	10:45	10:30	10:00
IN	HV	YY62HXA	13:33:39	OUT	14:41:31	01:07:52	13:30	13:30	13:00	14:30	14:30	14:00	01:00	01:00	01:00
IN	HV	YY63JSU	16:00:41	OUT	16:44:10	00:43:29	16:00	16:00	16:00	16:30	16:30	16:00	00:30	00:30	00:00
IN	LV	YY63JUE	10:46:25	OUT	11:31:37	00:45:12	10:45	10:30	10:00	11:30	11:30	11:00	00:45	00:30	00:00
IN	LV	YY64WUP	13:44:16	OUT	21:54:25	08:10:09	13:30	13:30	13:00	21:45	21:30	21:00	08:00	08:00	08:00

Appendix 3 Parking Assessment

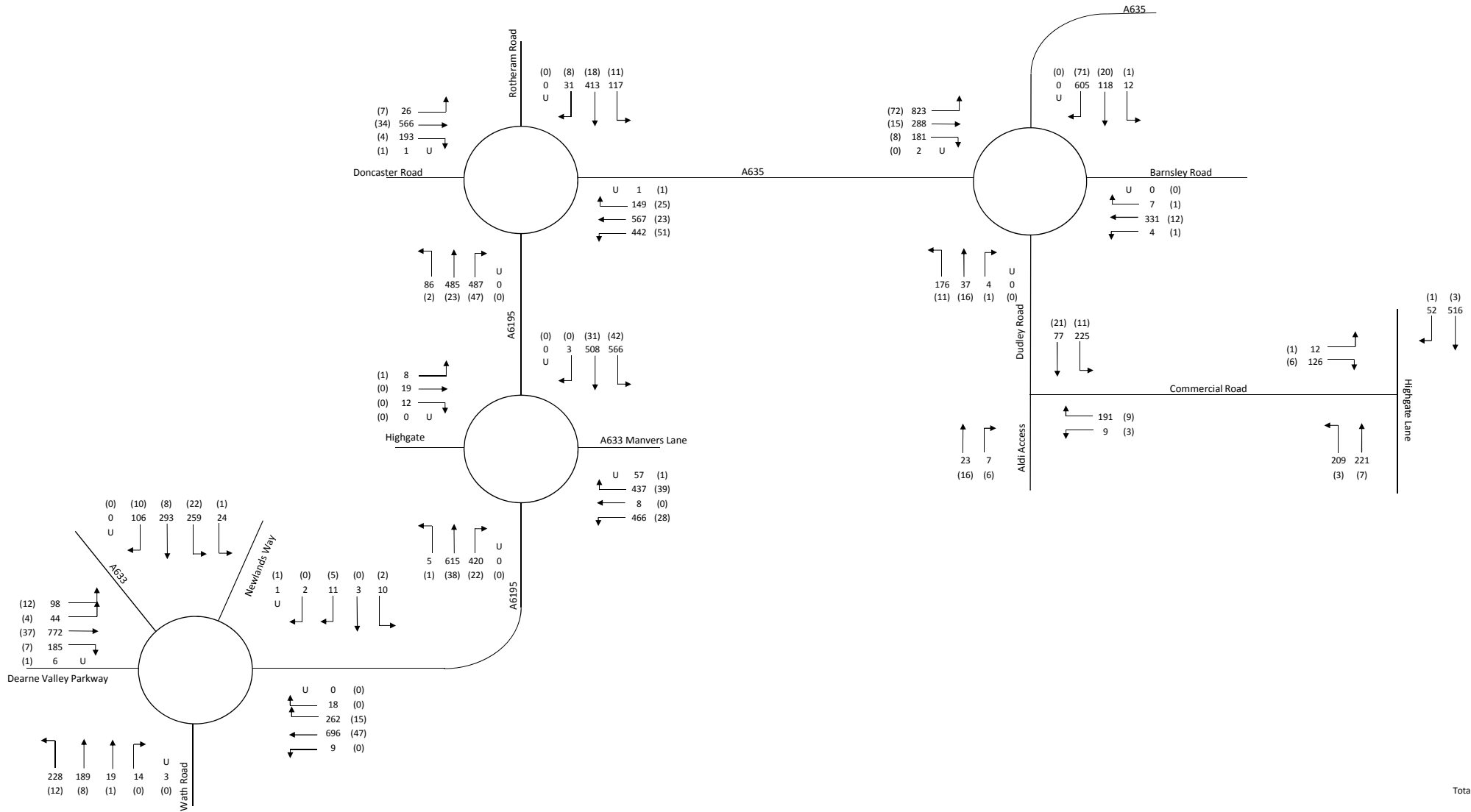
2016 Survey Data - Access Road

October 2015 Survey Data										Projected New Arrivals / Departures			Total Site Attraction							
Time	Light Vehicles			Heavy Vehicles			Accumulation		Time	IN LV	OUT LV	Time	IN			OUT			Car Park	
	Arrivals	Departures	Total	Arrivals	Departures	Total	Accumulation	Capacity					LV	HV	TOTAL	LV	HV	TOTAL	Accumulation	Capacity
00:00	3	29	32	0	9	9	101	253	00:00	1	6	00:00	4	0	4	35	9	44	122	411
00:15	1	5	6	2	2	4	97	253	00:15	0	1	00:15	1	2	3	6	2	8	117	411
00:30	0	3	3	2	3	5	94	253	00:30	0	1	00:30	0	2	2	4	3	7	114	411
00:45	0	1	1	0	2	2	93	253	00:45	0	0	00:45	0	0	0	1	2	3	112	411
01:00	0	3	3	1	0	1	90	253	01:00	0	1	01:00	0	1	1	4	0	4	109	411
01:15	0	0	0	1	4	5	90	253	01:15	0	0	01:15	0	1	1	0	4	4	109	411
01:30	0	1	1	0	1	1	89	253	01:30	0	0	01:30	0	0	0	1	1	2	108	411
01:45	0	3	3	1	1	2	86	253	01:45	0	1	01:45	0	1	1	4	1	5	104	411
02:00	0	0	0	2	0	2	86	253	02:00	0	0	02:00	0	2	2	0	0	0	104	411
02:15	0	0	0	0	2	2	86	253	02:15	0	0	02:15	0	0	0	0	2	2	104	411
02:30	0	0	0	2	1	3	86	253	02:30	0	0	02:30	0	2	2	0	1	1	104	411
02:45	0	0	0	1	1	2	86	253	02:45	0	0	02:45	0	1	1	0	1	1	104	411
03:00	1	6	7	2	1	3	81	253	03:00	0	1	03:00	1	2	3	7	1	8	98	411
03:15	4	1	5	1	0	1	84	253	03:15	1	0	03:15	5	1	6	1	0	1	102	411
03:30	5	5	10	2	1	3	84	253	03:30	1	1	03:30	6	2	8	6	1	7	102	411
03:45	3	1	4	4	2	6	86	253	03:45	1	0	03:45	4	4	8	1	2	3	104	411
04:00	3	4	7	8	1	9	85	253	04:00	1	1	04:00	4	8	12	5	1	6	103	411
04:15	10	2	12	9	0	9	93	253	04:15	2	9	04:15	12	9	21	2	0	2	112	411
04:30	24	11	35	12	1	13	106	253	04:30	5	2	04:30	29	12	41	13	1	14	128	411
04:45	14	5	19	9	0	9	115	253	04:45	3	1	04:45	17	9	26	6	0	6	139	411
05:00	5	3	8	4	7	11	117	253	05:00	1	1	05:00	6	4	10	4	7	11	141	411
05:15	19	5	24	13	3	16	131	253	05:15	4	1	05:15	23	13	36	6	3	9	158	411
05:30	44	6	50	3	6	9	169	253	05:30	9	1	05:30	53	3	56	7	6	13	204	411
05:45	36	9	45	12	6	18	196	253	05:45	8	2	05:45	44	12	56	11	6	17	237	411
06:00	1	5	6	6	10	16	192	253	06:00	0	1	06:00	1	6	7	6	10	16	232	411
06:15	2	10	12	5	8	13	184	253	06:15	0	2	06:15	2	5	7	12	8	20	222	411
06:30	1	3	4	6	9	15	182	253	06:30	0	1	06:30	1	6	7	4	9	13	220	411
06:45	3	0	3	2	13	15	185	253	06:45	1	0	06:45	4	2	6	0	13	13	224	411
07:00	3	4	7	4	5	9	184	253	07:00	1	1	07:00	4	4	8	5	5	10	222	411
07:15	6	0	6	2	3	5	190	253	07:15	1	0	07:15	7	2	9	0	3	3	230	411
07:30	18	8	26	1	2	3	200	253	07:30	4	2	07:30	22	1	23	10	2	12	242	411
07:45	33	1	34	3	3	6	232	253	07:45	7	0	07:45	40	3	43	1	3	4	280	411
08:00	9	3	12	8	0	8	238	253	08:00	2	1	08:00	11	8	19	4	0	4	288	411
08:15	4	1	5	8	2	10	241	253	08:15	1	0	08:15	5	8	13	1	2	3	291	411
08:30	8	2	10	4	6	10	247	253	08:30	2	0	08:30	10	4	14	2	6	8	299	411
08:45	10	4	14	7	1	8	253	253	08:45	2	1	08:45	12	7	19	5	1	6	306	411
09:00	12	5	17	4	5	9	260	253	09:00	3	1	09:00	15	4	19	6	5	11	314	411
09:15	17	6	23	2	2	4	271	253	09:15	4	1	09:15	21	2	23	7	2	9	328	411
09:30	9	3	12	5	5	10	277	253	09:30	2	1	09:30	11	5	16	4	5	9	335	411
09:45	8	4	12	6	5	11	281	253	09:45	2	1	09:45	10	6	16	5	5	10	340	411
10:00	13	3	16	3	7	10	291	253	10:00	3	1	10:00	16	3	19	4	7	11	352	411
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10:30	6	4	10	5	3	8	304	253	10:30	1	1	10:30	7	5	12	5	3	8	367	411
10:45	4	3	7	1	3	4	305	253	10:45	1	1	10:45	5	1	6	4	3	7	369	411
11:00	4	5	9	1	6	7	304	253	11:00	1	1	11:00	5	1	6	6	6	12	367	411
11:15	1	11	12	9	0	9	294	253	11:15	0	2	11:15	1	9	10	13	0	13	355	411
11:30	14	2	16	5	3	8	306	253	11:30	3	0	11:30	17	5	22	2	3	5	370	411
11:45	7	13	20	6	7	13	300	253	11:45	1	3	11:45	8	6	14	16	7	23	363	411
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12:15	5	12	17	4	7	11	283	253	12:15	1	3	12:15	6	4	10	15	7	22	342	411
12:30	1	15	16	2	6	8	269	253	12:30	0	3	12:30	1	2	3	18	6	24	325	411
12:45	6	15	21	2	7	9	260	253	12:45	1	3	12:45	7	2	9	18	7	25	314	411
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13:15	10	22	32	2	3	5	231	253	13:15	2	5	13:15	12	2	14	27	3	30	279	411
13:30	11	34	45	4	4	8	208	253	13:30	2	7	13:30	13	4	17	41	4	45	251	411
13:45	8	14	22	2	6	8	202	253	13:45	2	3	13:45	10	2	12	17	6	23	244	411
14:00	3	20	23	4	1	5	185	253	14:00	1	4	14:00	4	4	8	24	1	25	224	411
14:15	7	5	12	5	1	6	187	253	14:15	1	1	14:15	8	5	13	6	1	7	226	411
14:30	7	5	12	9	9	18	189	253	14:30	1	1	14:30	8	9	17	6	9	15	228	411
14:45	1	5	6	7	5	12	185	253	14:45	0	1	14:45	1	7	8	6	5	11	224	411
15:00	4	8	12	4	1	5	181	253	15:00	1	2	15:00	5	4	9	10	1	11	219	411
15:15	4	4	8	4	4	8	181	253	15:15	1	1	15:15	5	4	9	5	4	9	219	411
15:30	3	8	11	2	5	7	176	253	15:30	1	2	15:30	4	2	6	10	5	15	213	411
15:45	4	3	7	4	6	10	177	253	15:45	1	1	15:45	5	4	9	4	6	10	214	411
16:00	2	9	11	8	5	13	170	253	16:00	0	2	16:00	2	8	10	11	5	16	206	411
16:15	6	8	14	6	3	9	168	253	16:15	1	2	16:15	7	6	13	10	3	13	203	411
16:30	5	23	28	7	2	9	150	253	16:30	1	5	16:30	6	7	13	28	2	30	181	411

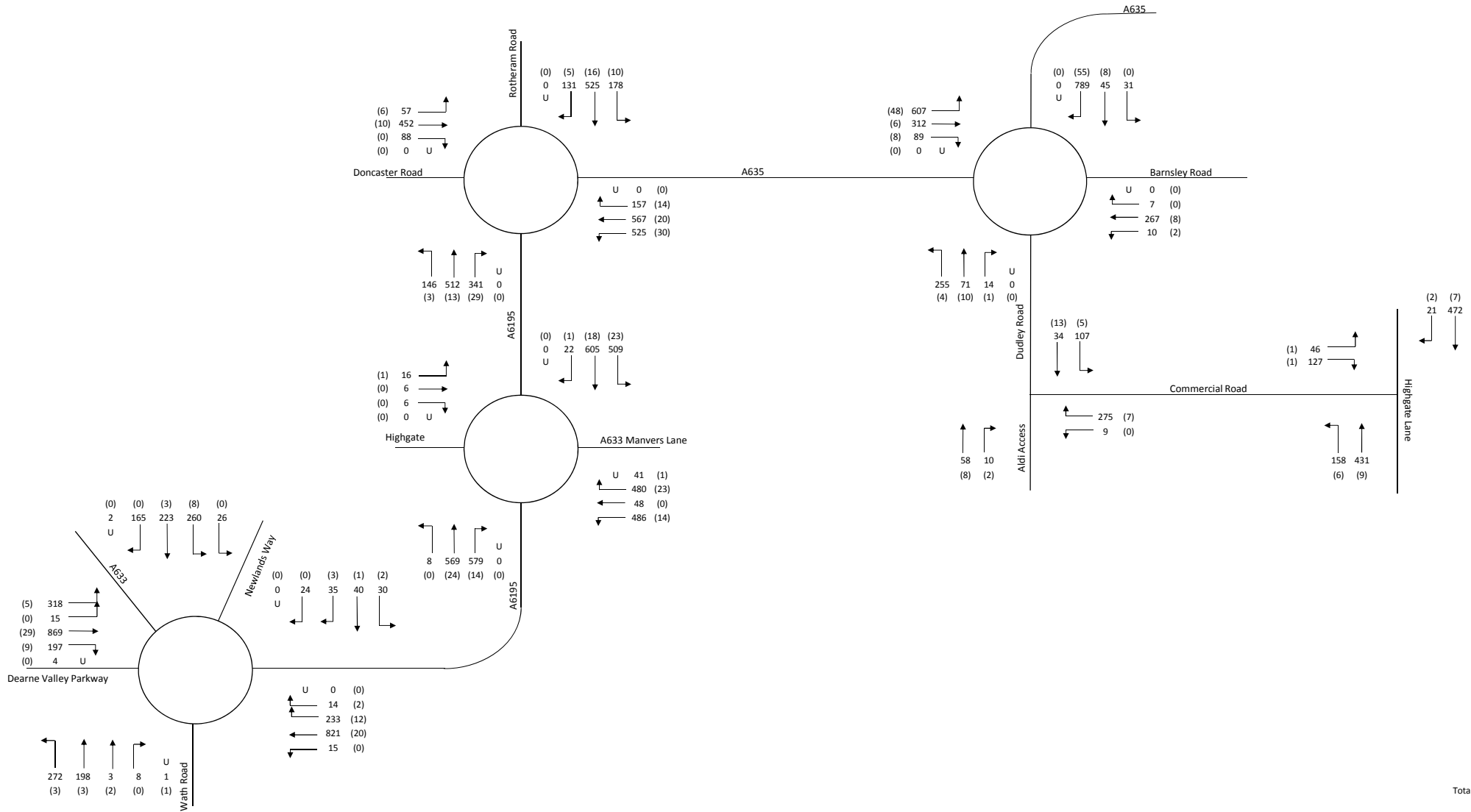
2016 Survey Data - Access Road

October 2015 Survey Data										Projected New Arrivals / Departures			Total Site Attraction									
Time	Light Vehicles			Heavy Vehicles			Accumulation		Time	IN LV	OUT LV	Time	IN			OUT			Car Park			
	Arrivals	Departures	Total	Arrivals	Departures	Total	Accumulation	Capacity					LV	HV	TOTAL	LV	HV	TOTAL	Accumulation	Capacity		
16:45	7	18	25	3	3	6	139	253	16:45	1	4	16:45	8	3	11	22	3	25	168	411		
17:00	4	9	13	6	4	10	134	253	17:00	1	2	17:00	5	6	11	11	4	15	162	411		
17:15	13	7	20	5	3	8	140	253	17:15	3	1	17:15	16	5	21	8	3	11	169	411		
17:30	12	8	20	4	4	8	144	253	17:30	3	2	17:30	15	4	19	10	4	14	174	411		
17:45	4	5	9	3	2	5	143	253	17:45	1	1	17:45	5	3	8	6	2	8	173	411		
18:00	1	13	14	5	3	8	131	253	18:00	0	3	18:00	1	5	6	16	3	19	158	411		
18:15	0	9	9	0	6	6	122	253	18:15	0	2	18:15	0	0	0	11	6	17	147	411		
18:30	5	13	18	1	7	8	114	253	18:30	1	3	18:30	6	1	7	16	7	23	138	411		
18:45	1	5	6	2	2	4	110	253	18:45	0	1	18:45	1	2	3	6	2	8	133	411		
19:00	1	5	6	1	2	3	106	253	19:00	0	1	19:00	1	1	2	6	2	8	128	411		
19:15	5	1	6	3	4	7	110	253	19:15	1	0	19:15	6	3	9	1	4	5	133	411		
19:30	11	2	13	4	4	8	119	253	19:30	2	0	19:30	13	4	17	2	4	6	144	411		
19:45	7	3	10	1	2	3	123	253	19:45	1	1	19:45	8	1	9	4	2	6	149	411		
20:00	0	3	3	0	6	6	120	253	20:00	0	1	20:00	0	0	0	4	6	10	145	411		
20:15	0	1	1	1	5	6	119	253	20:15	0	0	20:15	0	1	1	1	5	6	144	411		
20:30	1	1	2	1	7	8	119	253	20:30	0	0	20:30	1	1	2	1	7	8	144	411		
20:45	1	0	1	3	1	4	120	253	20:45	0	0	20:45	1	3	4	0	1	1	145	411		
21:00	0	2	2	0	0	0	118	253	21:00	0	0	21:00	0	0	0	2	0	2	143	411		
21:15	6	3	9	2	0	2	121	253	21:15	1	1	21:15	7	2	9	4	0	4	146	411		
21:30	14	3	17	1	3	4	132	253	21:30	3	1	21:30	17	1	18	4	3	7	160	411		
21:45	7	6	13	4	0	4	133	253	21:45	1	1	21:45	8	4	12	7	0	7	161	411		
22:00	0	12	12	4	2	6	121	253	22:00	0	3	22:00	0	4	4	15	2	17	146	411		
22:15	0	1	1	3	1	4	120	253	22:15	0	0	22:15	0	3	3	1	1	2	145	411		
22:30	0	1	1	2	0	2	119	253	22:30	0	0	22:30	0	2	2	1	0	1	144	411		
22:45	0	2	2	2	0	2	117	253	22:45	0	0	22:45	0	2	2	2	0	2	141	411		
23:00	0	5	5	3	1	4	112	253	23:00	0	1	23:00	0	3	3	6	1	7	135	411		
23:15	1	2	3	2	3	5	111	253	23:15	0	0	23:15	1	2	3	2	3	5	134	411		
23:30	0	0	0	3	0	3	111	253	23:30	0	0	23:30	0	3	3	0	0	0	134	411		
23:45	0	0	0	1	1	2	111	253	23:45	0	0	23:45	0	1	1	0	1	1	134	411		

**Appendix 4
Survey Flows and Raw
Survey Data**



Total Vehicles 0
HGVs (0)



Total Vehicles 0
HGVs (0)

Traffic Flow Diagrams: Darlington

PM Peak (16:30 - 17:30) -

Surveyed 2016 Total Flows






















APPENDIX A

Vehicle Categories

COBA VEHICLE CATEGORIES

<p>CAR</p>	 SALOON  ESTATE  PEOPLE CARRIER  CAR TOWING CARAVAN / TRAILER
<p>LIGHT GOODS VEHICLE (LGV)</p>	 VAN  <3.5 TONNES – single rear tyres  PICK-UP
<p>OTHER GOODS VEHICLE (OGV1)</p>	 > 3.5 TONNES – twin rear tyres  2-AXLES RIGID  2-AXLES RIGID  3 AXLES-RIGID
<p>OTHER GOODS VEHICLE (OGV2)</p>	 4 OR MORE AXLES RIGID  3-AXLES ARTIC  4 OR MORE AXLES ARTIC  OTHER GOODS VEHICLE WITH TRAILER
<p>BUSES & COACHES (PSV)</p>	 DOUBLE DECK BUS  SINGLE DECK BUS OR COACH

COBA VEHICLE CATEGORIES

Definition of Categories

The various components of traffic have different characteristics in terms of operating costs, growth and occupancy. The most common categories into which the traffic is split in COBA; these are defined as:

Cars (CARS)

Including taxis, estate cars, 'people carriers' and other passenger vehicles (for example, minibuses and camper vans) with a gross vehicle weight of less than 3.5 tonnes, normally ones which can accommodate not more than 15 seats. Three-wheeled cars, motor invalid carriages, Land Rovers, Range Rovers and Jeeps and smaller ambulances are included. Cars towing caravans or trailers are counted as one vehicle unless included as a separate class.

Light Goods Vehicles (LGV)

Includes all goods vehicles up to 3.5 tonnes gross vehicle weight (goods vehicles over 3.5 tonnes have sideguards fitted between axles), including those towing a trailer or caravan. This includes all car delivery vans and those of the next larger carrying capacity such as transit vans. Included here are small pickup vans, three-wheeled goods vehicles, milk floats and pedestrian controlled motor vehicles. Most of this group is delivery vans of one type or another.

Other Goods Vehicles (OGV 1)

Includes all rigid vehicles over 3.5 tonnes gross vehicle weight with two or three axles Includes larger ambulances, tractors (without trailers), road rollers for tarmac pressing, box vans and similar large vans. A two or three axle motor tractive unit without a trailer is also included.

Other Goods Vehicles (OGV 2)

This category includes all rigid vehicles with four or more axles and all articulated vehicles. Also included in this class are OGV1 goods vehicles towing a caravan or trailer.

Buses and Coaches (PSV)

Includes all public service vehicles and works buses with a gross vehicle weight of 3.5 tonnes or more, usually vehicles with more than 16 seats.



APPENDIX B

Classified Count Data

SITE: 1

DAY: Tuesday

LOCATION: Hollygrove Rbt/A635/Barnsley Road

DATE: 15.03.2016

TIME	A TO D			A TO C			A TO B			A TO A		
	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT
07:30	191	14	205	58	5	63	48	0	48	2	0	2
07:45	199	22	221	72	2	74	47	1	48	0	0	0
H/TOT	390	36	426	130	7	137	95	1	96	2	0	2
08:00	189	19	208	62	5	67	47	4	51	0	0	0
08:15	172	17	189	81	3	84	31	3	34	0	0	0
08:30	179	28	207	79	4	83	45	0	45	0	0	0
08:45	142	24	166	74	1	75	39	2	41	0	0	0
H/TOT	682	88	770	296	13	309	162	9	171	0	0	0
09:00	104	13	117	62	2	64	29	0	29	0	0	0
09:15	130	23	153	63	1	64	9	0	9	1	0	1
H/TOT	234	36	270	125	3	128	38	0	38	1	0	1
P/TOT	1306	160	1466	551	23	574	295	10	305	3	0	3

TIME	A TO D			A TO C			A TO B			A TO A		
	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT
16:30	132	14	146	80	1	81	25	2	27	0	0	0
16:45	132	7	139	70	4	74	20	2	22	0	0	0
H/TOT	264	21	285	150	5	155	45	4	49	0	0	0
17:00	149	19	168	76	1	77	16	2	18	0	0	0
17:15	146	8	154	80	0	80	20	2	22	0	0	0
17:30	137	7	144	70	4	74	19	0	19	0	0	0
17:45	133	13	146	69	5	74	16	1	17	0	0	0
H/TOT	565	47	612	295	10	305	71	5	76	0	0	0
18:00	113	2	115	74	0	74	12	0	12	0	0	0
18:15	99	7	106	56	2	58	10	0	10	1	0	1
H/TOT	212	9	221	130	2	132	22	0	22	1	0	1
P/TOT	1041	77	1118	575	17	592	138	9	147	1	0	1

SITE: 1

DAY: Tuesday

LOCATION: Hollygrove Rbt/A635/Barnsley Road

DATE: 15.03.2016

TIME	B TO A			B TO D			B TO C			B TO B		
	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT
07:30	55	2	57	4	4	8	0	0	0	0	0	0
07:45	35	1	36	5	3	8	0	1	1	0	0	0
H/TOT	90	3	93	9	7	16	0	1	1	0	0	0
08:00	44	6	50	9	5	14	1	0	1	0	0	0
08:15	31	2	33	3	4	7	2	0	2	0	0	0
08:30	39	2	41	1	4	5	3	0	3	0	0	0
08:45	42	3	45	6	8	14	1	1	2	0	0	0
H/TOT	156	13	169	19	21	40	7	1	8	0	0	0
09:00	22	2	24	4	2	6	2	0	2	0	0	0
09:15	22	3	25	3	1	4	0	0	0	0	0	0
H/TOT	44	5	49	7	3	10	2	0	2	0	0	0
P/TOT	290	21	311	35	31	66	9	2	11	0	0	0

TIME	B TO A			B TO D			B TO C			B TO B		
	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT
16:30	79	2	81	19	4	23	4	0	4	0	0	0
16:45	52	2	54	12	2	14	4	0	4	0	0	0
H/TOT	131	4	135	31	6	37	8	0	8	0	0	0
17:00	75	0	75	22	1	23	4	1	5	0	0	0
17:15	45	0	45	8	3	11	1	0	1	0	0	0
17:30	51	1	52	6	6	12	2	0	2	0	0	0
17:45	26	1	27	3	2	5	2	0	2	0	0	0
H/TOT	197	2	199	39	12	51	9	1	10	0	0	0
18:00	44	0	44	10	5	15	0	1	1	0	0	0
18:15	26	2	28	4	2	6	1	0	1	0	0	0
H/TOT	70	2	72	14	7	21	1	1	2	0	0	0
P/TOT	398	8	406	84	25	109	18	2	20	0	0	0

SITE: 1

DAY: Tuesday

LOCATION: Hollygrove Rbt/A635/Barnsley Road

DATE: 15.03.2016

TIME	C TO B			C TO A			C TO D			C TO C		
	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT
07:30	0	0	0	84	3	87	1	0	1	0	0	0
07:45	3	0	3	74	2	76	2	0	2	0	0	0
H/TOT	3	0	3	158	5	163	3	0	3	0	0	0
08:00	0	1	1	85	6	91	2	0	2	0	0	0
08:15	0	0	0	76	1	77	1	1	2	0	0	0
08:30	2	0	2	61	6	67	0	0	0	0	0	0
08:45	3	0	3	69	0	69	2	0	2	0	0	0
H/TOT	5	1	6	291	13	304	5	1	6	0	0	0
09:00	1	1	2	67	6	73	0	0	0	0	0	0
09:15	2	0	2	63	4	67	0	0	0	0	0	0
H/TOT	3	1	4	130	10	140	0	0	0	0	0	0
P/TOT	11	2	13	579	28	607	8	1	9	0	0	0

TIME	C TO B			C TO A			C TO D			C TO C		
	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT
16:30	1	1	2	63	1	64	1	0	1	0	0	0
16:45	3	0	3	66	3	69	1	0	1	0	0	0
H/TOT	4	1	5	129	4	133	2	0	2	0	0	0
17:00	3	0	3	61	3	64	4	0	4	0	0	0
17:15	1	1	2	69	1	70	1	0	1	0	0	0
17:30	1	0	1	80	1	81	2	0	2	0	0	0
17:45	1	0	1	63	1	64	3	0	3	0	0	0
H/TOT	6	1	7	273	6	279	10	0	10	0	0	0
18:00	1	0	1	48	2	50	2	0	2	0	0	0
18:15	0	1	1	48	3	51	1	0	1	0	0	0
H/TOT	1	1	2	96	5	101	3	0	3	0	0	0
P/TOT	11	3	14	498	15	513	15	0	15	0	0	0

SITE: 1

DAY: Tuesday

LOCATION: Hollygrove Rbt/A635/Barnsley Road

DATE: 15.03.2016

TIME	D TO C			D TO B			D TO A			D TO D		
	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT
07:30	1	0	1	26	5	31	145	15	160	0	0	0
07:45	2	0	2	26	5	31	139	22	161	0	0	0
H/TOT	3	0	3	52	10	62	284	37	321	0	0	0
08:00	6	1	7	26	6	32	122	19	141	0	0	0
08:15	2	0	2	20	4	24	128	15	143	0	0	0
08:30	1	0	1	15	7	22	129	18	147	0	0	0
08:45	2	0	2	20	6	26	93	14	107	0	0	0
H/TOT	11	1	12	81	23	104	472	66	538	0	0	0
09:00	1	0	1	9	7	16	91	12	103	0	0	0
09:15	2	1	3	7	2	9	83	12	95	0	0	0
H/TOT	3	1	4	16	9	25	174	24	198	0	0	0
P/TOT	17	2	19	149	42	191	930	127	1057	0	0	0

TIME	D TO C			D TO B			D TO A			D TO D		
	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT
16:30	6	0	6	7	1	8	168	14	182	0	0	0
16:45	11	0	11	10	4	14	199	13	212	0	0	0
H/TOT	17	0	17	17	5	22	367	27	394	0	0	0
17:00	9	0	9	9	3	12	206	13	219	0	0	0
17:15	5	0	5	11	0	11	161	15	176	0	0	0
17:30	7	0	7	13	3	16	164	6	170	0	0	0
17:45	6	1	7	9	1	10	174	9	183	0	0	0
H/TOT	27	1	28	42	7	49	705	43	748	0	0	0
18:00	4	0	4	8	2	10	125	3	128	0	0	0
18:15	6	0	6	7	3	10	114	7	121	0	0	0
H/TOT	10	0	10	15	5	20	239	10	249	0	0	0
P/TOT	54	1	55	74	17	91	1311	80	1391	0	0	0

SITE: 1

DAY: Tuesday

LOCATION: Hollygrove Rbt/A635/Barnsley Road

DATE: 15.03.2016

TIME	TO ARM A		TOT	FROM ARM A		TOT
	LV	HV		LV	HV	
07:30	286	20	306	299	19	318
07:45	248	25	273	318	25	343
H/TOT	534	45	579	617	44	661
08:00	251	31	282	298	28	326
08:15	235	18	253	284	23	307
08:30	229	26	255	303	32	335
08:45	204	17	221	255	27	282
H/TOT	919	92	1011	1140	110	1250
09:00	180	20	200	195	15	210
09:15	169	19	188	203	24	227
H/TOT	349	39	388	398	39	437
P/TOT	1802	176	1978	2155	193	2348

TIME	TO ARM A		TOT	FROM ARM A		TOT
	LV	HV		LV	HV	
16:30	310	17	327	237	17	254
16:45	317	18	335	222	13	235
H/TOT	627	35	662	459	30	489
17:00	342	16	358	241	22	263
17:15	275	16	291	246	10	256
17:30	295	8	303	226	11	237
17:45	263	11	274	218	19	237
H/TOT	1175	51	1226	931	62	993
18:00	217	5	222	199	2	201
18:15	189	12	201	166	9	175
H/TOT	406	17	423	365	11	376
P/TOT	2208	103	2311	1755	103	1858

SITE: 1

DAY: Tuesday

LOCATION: Hollygrove Rbt/A635/Barnsley Road

DATE: 15.03.2016

TIME	TO ARM B		TOT	FROM ARM B		TOT
	LV	HV		LV	HV	
07:30	74	5	79	59	6	65
07:45	76	6	82	40	5	45
H/TOT	150	11	161	99	11	110
08:00	73	11	84	54	11	65
08:15	51	7	58	36	6	42
08:30	62	7	69	43	6	49
08:45	62	8	70	49	12	61
H/TOT	248	33	281	182	35	217
09:00	39	8	47	28	4	32
09:15	18	2	20	25	4	29
H/TOT	57	10	67	53	8	61
P/TOT	455	54	509	334	54	388

TIME	TO ARM B		TOT	FROM ARM B		TOT
	LV	HV		LV	HV	
16:30	33	4	37	102	6	108
16:45	33	6	39	68	4	72
H/TOT	66	10	76	170	10	180
17:00	28	5	33	101	2	103
17:15	32	3	35	54	3	57
17:30	33	3	36	59	7	66
17:45	26	2	28	31	3	34
H/TOT	119	13	132	245	15	260
18:00	21	2	23	54	6	60
18:15	17	4	21	31	4	35
H/TOT	38	6	44	85	10	95
P/TOT	223	29	252	500	35	535

SITE: 1

DAY: Tuesday

LOCATION: Hollygrove Rbt/A635/Barnsley Road

DATE: 15.03.2016

TIME	TO ARM C		TOT	FROM ARM C		TOT
	LV	HV		LV	HV	
07:30	59	5	64	85	3	88
07:45	74	3	77	79	2	81
H/TOT	133	8	141	164	5	169
08:00	69	6	75	87	7	94
08:15	85	3	88	77	2	79
08:30	83	4	87	63	6	69
08:45	77	2	79	74	0	74
H/TOT	314	15	329	301	15	316
09:00	65	2	67	68	7	75
09:15	65	2	67	65	4	69
H/TOT	130	4	134	133	11	144
P/TOT	577	27	604	598	31	629

TIME	TO ARM C		TOT	FROM ARM C		TOT
	LV	HV		LV	HV	
16:30	90	1	91	65	2	67
16:45	85	4	89	70	3	73
H/TOT	175	5	180	135	5	140
17:00	89	2	91	68	3	71
17:15	86	0	86	71	2	73
17:30	79	4	83	83	1	84
17:45	77	6	83	67	1	68
H/TOT	331	12	343	289	7	296
18:00	78	1	79	51	2	53
18:15	63	2	65	49	4	53
H/TOT	141	3	144	100	6	106
P/TOT	647	20	667	524	18	542

SITE: 1

DAY: Tuesday

LOCATION: Hollygrove Rbt/A635/Barnsley Road

DATE: 15.03.2016

TIME	TO ARM D		TOT	FROM ARM D		TOT
	LV	HV		LV	HV	
07:30	196	18	214	172	20	192
07:45	206	25	231	167	27	194
H/TOT	402	43	445	339	47	386
08:00	200	24	224	154	26	180
08:15	176	22	198	150	19	169
08:30	180	32	212	145	25	170
08:45	150	32	182	115	20	135
H/TOT	706	110	816	564	90	654
09:00	108	15	123	101	19	120
09:15	133	24	157	92	15	107
H/TOT	241	39	280	193	34	227
P/TOT	1349	192	1541	1096	171	1267

TIME	TO ARM D		TOT	FROM ARM D		TOT
	LV	HV		LV	HV	
16:30	152	18	170	181	15	196
16:45	145	9	154	220	17	237
H/TOT	297	27	324	401	32	433
17:00	175	20	195	224	16	240
17:15	155	11	166	177	15	192
17:30	145	13	158	184	9	193
17:45	139	15	154	189	11	200
H/TOT	614	59	673	774	51	825
18:00	125	7	132	137	5	142
18:15	104	9	113	127	10	137
H/TOT	229	16	245	264	15	279
P/TOT	1140	102	1242	1439	98	1537

SITE: 2

DAY: Tuesday

LOCATION: A635 Doncaster Road/A6195 Rotherham Road

DATE: 15.03.2016

TIME	A TO D			A TO C			A TO B			A TO A		
	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT
07:30	30	2	32	101	6	107	4	3	7	0	0	0
07:45	26	3	29	95	3	98	7	0	7	0	0	0
H/TOT	56	5	61	196	9	205	11	3	14	0	0	0
08:00	26	2	28	88	8	96	5	3	8	0	0	0
08:15	24	4	28	111	1	112	7	2	9	0	0	0
08:30	32	6	38	80	9	89	9	3	12	0	0	0
08:45	27	5	32	110	8	118	5	3	8	0	0	0
H/TOT	109	17	126	389	26	415	26	11	37	0	0	0
09:00	21	5	26	123	6	129	9	1	10	0	0	0
09:15	21	7	28	97	5	102	19	1	20	0	0	0
H/TOT	42	12	54	220	11	231	28	2	30	0	0	0
P/TOT	207	34	241	805	46	851	65	16	81	0	0	0

TIME	A TO D			A TO C			A TO B			A TO A		
	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT
16:30	44	0	44	115	6	121	21	0	21	0	0	0
16:45	38	6	44	129	4	133	30	4	34	0	0	0
H/TOT	82	6	88	244	10	254	51	4	55	0	0	0
17:00	43	3	46	126	2	128	32	0	32	0	0	0
17:15	43	1	44	139	4	143	43	1	44	0	0	0
17:30	35	2	37	119	2	121	28	2	30	0	0	0
17:45	21	2	23	107	5	112	17	0	17	0	0	0
H/TOT	142	8	150	491	13	504	120	3	123	0	0	0
18:00	24	1	25	90	1	91	31	2	33	0	0	0
18:15	26	0	26	85	2	87	20	2	22	0	0	0
H/TOT	50	1	51	175	3	178	51	4	55	0	0	0
P/TOT	274	15	289	910	26	936	222	11	233	0	0	0

SITE: 2

DAY: Tuesday

LOCATION: A635 Doncaster Road/A6195 Rotherham Road

DATE: 15.03.2016

TIME	B TO A			B TO D			B TO C			B TO B		
	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT
07:30	10	3	13	135	12	147	42	0	42	0	0	0
07:45	0	1	1	147	5	152	50	0	50	0	0	0
H/TOT	10	4	14	282	17	299	92	0	92	0	0	0
08:00	6	0	6	122	9	131	45	1	46	0	1	1
08:15	3	3	6	128	8	136	52	3	55	0	0	0
08:30	8	3	11	130	8	138	34	2	36	0	0	0
08:45	13	2	15	88	4	92	37	1	38	0	0	0
H/TOT	30	8	38	468	29	497	168	7	175	0	1	1
09:00	9	1	10	86	3	89	33	2	35	0	0	0
09:15	8	2	10	86	10	96	30	3	33	0	0	0
H/TOT	17	3	20	172	13	185	63	5	68	0	0	0
P/TOT	57	15	72	922	59	981	323	12	335	0	1	1

TIME	B TO A			B TO D			B TO C			B TO B		
	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT
16:30	11	1	12	100	1	101	23	0	23	0	0	0
16:45	16	2	18	101	6	107	23	0	23	0	0	0
H/TOT	27	3	30	201	7	208	46	0	46	0	0	0
17:00	14	2	16	128	1	129	28	0	28	0	0	0
17:15	10	1	11	113	2	115	14	0	14	0	0	0
17:30	12	1	13	109	4	113	25	2	27	0	0	0
17:45	21	1	22	109	5	114	26	0	26	0	0	0
H/TOT	57	5	62	459	12	471	93	2	95	0	0	0
18:00	16	2	18	94	4	98	22	0	22	0	0	0
18:15	13	2	15	75	2	77	32	0	32	0	0	0
H/TOT	29	4	33	169	6	175	54	0	54	0	0	0
P/TOT	113	12	125	829	25	854	193	2	195	0	0	0

SITE: 2

DAY: Tuesday

LOCATION: A635 Doncaster Road/A6195 Rotherham Road

DATE: 15.03.2016

TIME	C TO B			C TO A			C TO D			C TO C		
	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT
07:30	16	0	16	130	4	134	108	7	115	0	0	0
07:45	21	1	22	120	6	126	105	15	120	0	0	0
H/TOT	37	1	38	250	10	260	213	22	235	0	0	0
08:00	24	1	25	113	5	118	121	11	132	0	0	0
08:15	23	0	23	99	8	107	106	14	120	0	0	0
08:30	30	3	33	85	10	95	103	17	120	0	0	0
08:45	24	1	25	97	2	99	108	18	126	0	0	0
H/TOT	101	5	106	394	25	419	438	60	498	0	0	0
09:00	25	0	25	79	12	91	80	2	82	0	0	0
09:15	16	1	17	70	15	85	83	13	96	0	0	0
H/TOT	41	1	42	149	27	176	163	15	178	0	0	0
P/TOT	179	7	186	793	62	855	814	97	911	0	0	0

TIME	C TO B			C TO A			C TO D			C TO C		
	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT
16:30	41	2	43	133	5	138	78	8	86	0	0	0
16:45	34	0	34	130	4	134	93	5	98	0	0	0
H/TOT	75	2	77	263	9	272	171	13	184	0	0	0
17:00	28	1	29	109	3	112	74	11	85	0	0	0
17:15	40	0	40	127	1	128	67	5	72	0	0	0
17:30	34	0	34	136	2	138	66	4	70	0	0	0
17:45	47	0	47	161	3	164	72	9	81	0	0	0
H/TOT	149	1	150	533	9	542	279	29	308	0	0	0
18:00	28	1	29	122	5	127	75	1	76	0	0	0
18:15	27	0	27	125	0	125	53	6	59	0	0	0
H/TOT	55	1	56	247	5	252	128	7	135	0	0	0
P/TOT	279	4	283	1043	23	1066	578	49	627	0	0	0

SITE: 2

DAY: Tuesday

LOCATION: A635 Doncaster Road/A6195 Rotherham Road

DATE: 15.03.2016

TIME	D TO C			D TO B			D TO A			D TO D		
	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT
07:30	108	13	121	145	4	149	33	6	39	0	0	0
07:45	97	12	109	139	8	147	32	5	37	0	0	0
H/TOT	205	25	230	284	12	296	65	11	76	0	0	0
08:00	96	15	111	136	3	139	28	10	38	0	0	0
08:15	90	11	101	124	8	132	31	4	35	0	1	1
08:30	103	16	119	105	8	113	17	6	23	0	0	0
08:45	90	11	101	116	5	121	14	4	18	0	0	0
H/TOT	379	53	432	481	24	505	90	24	114	0	1	1
09:00	62	10	72	98	6	104	14	3	17	0	0	0
09:15	61	8	69	92	7	99	13	5	18	0	1	1
H/TOT	123	18	141	190	13	203	27	8	35	0	1	1
P/TOT	707	96	803	955	49	1004	182	43	225	0	2	2

TIME	D TO C			D TO B			D TO A			D TO D		
	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT
16:30	118	6	124	135	5	140	37	5	42	0	0	0
16:45	137	6	143	133	6	139	32	2	34	0	0	0
H/TOT	255	12	267	268	11	279	69	7	76	0	0	0
17:00	114	7	121	147	4	151	41	4	45	0	0	0
17:15	126	11	137	132	5	137	33	3	36	0	0	0
17:30	117	2	119	141	2	143	37	3	40	0	0	0
17:45	121	8	129	114	3	117	31	0	31	0	0	0
H/TOT	478	28	506	534	14	548	142	10	152	0	0	0
18:00	97	1	98	104	2	106	21	2	23	0	0	0
18:15	74	3	77	90	5	95	17	2	19	0	1	1
H/TOT	171	4	175	194	7	201	38	4	42	0	1	1
P/TOT	904	44	948	996	32	1028	249	21	270	0	1	1

SITE: 2

DAY: Tuesday

LOCATION: A635 Doncaster Road/A6195 Rotherham Road

DATE: 15.03.2016

TIME	TO ARM A		TOT	FROM ARM A		TOT
	LV	HV		LV	HV	
07:30	173	13	186	135	11	146
07:45	152	12	164	128	6	134
H/TOT	325	25	350	263	17	280
08:00	147	15	162	119	13	132
08:15	133	15	148	142	7	149
08:30	110	19	129	121	18	139
08:45	124	8	132	142	16	158
H/TOT	514	57	571	524	54	578
09:00	102	16	118	153	12	165
09:15	91	22	113	137	13	150
H/TOT	193	38	231	290	25	315
P/TOT	1032	120	1152	1077	96	1173

TIME	TO ARM A		TOT	FROM ARM A		TOT
	LV	HV		LV	HV	
16:30	181	11	192	180	6	186
16:45	178	8	186	197	14	211
H/TOT	359	19	378	377	20	397
17:00	164	9	173	201	5	206
17:15	170	5	175	225	6	231
17:30	185	6	191	182	6	188
17:45	213	4	217	145	7	152
H/TOT	732	24	756	753	24	777
18:00	159	9	168	145	4	149
18:15	155	4	159	131	4	135
H/TOT	314	13	327	276	8	284
P/TOT	1405	56	1461	1406	52	1458

SITE: 2

DAY: Tuesday

LOCATION: A635 Doncaster Road/A6195 Rotherham Road

DATE: 15.03.2016

TIME	TO ARM B		TOT	FROM ARM B		TOT
	LV	HV		LV	HV	
07:30	165	7	172	187	15	202
07:45	167	9	176	197	6	203
H/TOT	332	16	348	384	21	405
08:00	165	8	173	173	11	184
08:15	154	10	164	183	14	197
08:30	144	14	158	172	13	185
08:45	145	9	154	138	7	145
H/TOT	608	41	649	666	45	711
09:00	132	7	139	128	6	134
09:15	127	9	136	124	15	139
H/TOT	259	16	275	252	21	273
P/TOT	1199	73	1272	1302	87	1389

TIME	TO ARM B		TOT	FROM ARM B		TOT
	LV	HV		LV	HV	
16:30	197	7	204	134	2	136
16:45	197	10	207	140	8	148
H/TOT	394	17	411	274	10	284
17:00	207	5	212	170	3	173
17:15	215	6	221	137	3	140
17:30	203	4	207	146	7	153
17:45	178	3	181	156	6	162
H/TOT	803	18	821	609	19	628
18:00	163	5	168	132	6	138
18:15	137	7	144	120	4	124
H/TOT	300	12	312	252	10	262
P/TOT	1497	47	1544	1135	39	1174

SITE: 2

DAY: Tuesday

LOCATION: A635 Doncaster Road/A6195 Rotherham Road

DATE: 15.03.2016

TIME	TO ARM C		TOT	FROM ARM C		TOT
	LV	HV		LV	HV	
07:30	251	19	270	254	11	265
07:45	242	15	257	246	22	268
H/TOT	493	34	527	500	33	533
08:00	229	24	253	258	17	275
08:15	253	15	268	228	22	250
08:30	217	27	244	218	30	248
08:45	237	20	257	229	21	250
H/TOT	936	86	1022	933	90	1023
09:00	218	18	236	184	14	198
09:15	188	16	204	169	29	198
H/TOT	406	34	440	353	43	396
P/TOT	1835	154	1989	1786	166	1952

TIME	TO ARM C		TOT	FROM ARM C		TOT
	LV	HV		LV	HV	
16:30	256	12	268	252	15	267
16:45	289	10	299	257	9	266
H/TOT	545	22	567	509	24	533
17:00	268	9	277	211	15	226
17:15	279	15	294	234	6	240
17:30	261	6	267	236	6	242
17:45	254	13	267	280	12	292
H/TOT	1062	43	1105	961	39	1000
18:00	209	2	211	225	7	232
18:15	191	5	196	205	6	211
H/TOT	400	7	407	430	13	443
P/TOT	2007	72	2079	1900	76	1976

SITE: 2

DAY: Tuesday

LOCATION: A635 Doncaster Road/A6195 Rotherham Road

DATE: 15.03.2016

TIME	TO ARM D		TOT	FROM ARM D		TOT
	LV	HV		LV	HV	
07:30	273	21	294	286	23	309
07:45	278	23	301	268	25	293
H/TOT	551	44	595	554	48	602
08:00	269	22	291	260	28	288
08:15	258	27	285	245	24	269
08:30	265	31	296	225	30	255
08:45	223	27	250	220	20	240
H/TOT	1015	107	1122	950	102	1052
09:00	187	10	197	174	19	193
09:15	190	31	221	166	21	187
H/TOT	377	41	418	340	40	380
P/TOT	1943	192	2135	1844	190	2034

TIME	TO ARM D		TOT	FROM ARM D		TOT
	LV	HV		LV	HV	
16:30	222	9	231	290	16	306
16:45	232	17	249	302	14	316
H/TOT	454	26	480	592	30	622
17:00	245	15	260	302	15	317
17:15	223	8	231	291	19	310
17:30	210	10	220	295	7	302
17:45	202	16	218	266	11	277
H/TOT	880	49	929	1154	52	1206
18:00	193	6	199	222	5	227
18:15	154	9	163	181	11	192
H/TOT	347	15	362	403	16	419
P/TOT	1681	90	1771	2149	98	2247

SITE: 3

DAY: Tuesday

LOCATION: Broomhill Rbt/A6195/A633 Manvers Way/Highgate

DATE: 15.03.2016

TIME	A TO D			A TO C			A TO B			A TO A		
	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT
07:30	3	0	3	8	0	8	1	0	1	0	0	0
07:45	3	0	3	4	0	4	3	0	3	0	0	0
H/TOT	6	0	6	12	0	12	4	0	4	0	0	0
08:00	0	0	0	7	0	7	3	0	3	0	0	0
08:15	1	1	2	0	0	0	5	0	5	0	0	0
08:30	2	0	2	3	0	3	4	0	4	0	0	0
08:45	2	1	3	4	0	4	3	0	3	0	0	0
H/TOT	5	2	7	14	0	14	15	0	15	0	0	0
09:00	2	1	3	7	0	7	2	0	2	0	0	0
09:15	1	0	1	5	0	5	1	0	1	0	0	0
H/TOT	3	1	4	12	0	12	3	0	3	0	0	0
P/TOT	14	3	17	38	0	38	22	0	22	0	0	0

TIME	A TO D			A TO C			A TO B			A TO A		
	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT
16:30	7	1	8	1	0	1	2	0	2	0	0	0
16:45	1	0	1	2	0	2	2	0	2	0	0	0
H/TOT	8	1	9	3	0	3	4	0	4	0	0	0
17:00	2	0	2	1	0	1	1	0	1	0	0	0
17:15	5	0	5	2	0	2	1	0	1	0	0	0
17:30	2	0	2	2	1	3	1	0	1	0	0	0
17:45	3	0	3	4	0	4	1	0	1	0	0	0
H/TOT	12	0	12	9	1	10	4	0	4	0	0	0
18:00	1	0	1	4	0	4	2	0	2	0	0	0
18:15	1	0	1	7	0	7	4	0	4	0	0	0
H/TOT	2	0	2	11	0	11	6	0	6	0	0	0
P/TOT	22	1	23	23	1	24	14	0	14	0	0	0

SITE: 3

DAY: Tuesday

LOCATION: Broomhill Rbt/A6195/A633 Manvers Way/Highgate

DATE: 15.03.2016

TIME	B TO A			B TO D			B TO C			B TO B		
	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT
07:30	1	0	1	184	7	191	76	2	78	0	0	0
07:45	2	0	2	131	7	138	80	6	86	0	0	0
H/TOT	3	0	3	315	14	329	156	8	164	0	0	0
08:00	0	0	0	131	9	140	131	6	137	0	0	0
08:15	1	1	2	131	15	146	111	8	119	0	0	0
08:30	2	1	3	145	19	164	89	8	97	0	0	0
08:45	0	1	1	106	9	115	101	9	110	0	0	0
H/TOT	3	3	6	513	52	565	432	31	463	0	0	0
09:00	2	0	2	109	10	119	101	6	107	1	1	2
09:15	1	0	1	99	15	114	97	5	102	0	0	0
H/TOT	3	0	3	208	25	233	198	11	209	1	1	2
P/TOT	9	3	12	1036	91	1127	786	50	836	1	1	2

TIME	B TO A			B TO D			B TO C			B TO B		
	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT
16:30	1	0	1	145	6	151	119	3	122	0	0	0
16:45	3	0	3	133	11	144	162	4	166	0	0	0
H/TOT	4	0	4	278	17	295	281	7	288	0	0	0
17:00	1	0	1	144	5	149	142	4	146	0	0	0
17:15	3	0	3	123	2	125	142	3	145	0	0	0
17:30	1	0	1	100	1	101	135	2	137	0	0	0
17:45	4	0	4	102	3	105	157	3	160	0	0	0
H/TOT	9	0	9	469	11	480	576	12	588	0	0	0
18:00	5	0	5	121	5	126	103	1	104	0	0	0
18:15	3	0	3	102	5	107	108	3	111	0	0	0
H/TOT	8	0	8	223	10	233	211	4	215	0	0	0
P/TOT	21	0	21	970	38	1008	1068	23	1091	0	0	0

SITE: 3

DAY: Tuesday

LOCATION: Broomhill Rbt/A6195/A633 Manvers Way/Highgate

DATE: 15.03.2016

TIME	C TO B			C TO A			C TO D			C TO C		
	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT
07:30	107	7	114	2	0	2	122	11	133	7	0	7
07:45	106	9	115	0	0	0	95	11	106	14	0	14
H/TOT	213	16	229	2	0	2	217	22	239	21	0	21
08:00	112	6	118	3	0	3	102	8	110	16	0	16
08:15	113	6	119	3	0	3	79	9	88	19	1	20
08:30	110	8	118	3	0	3	101	13	114	10	3	13
08:45	75	10	85	0	0	0	79	7	86	14	0	14
H/TOT	410	30	440	9	0	9	361	37	398	59	4	63
09:00	72	7	79	4	1	5	72	4	76	16	1	17
09:15	71	5	76	3	0	3	60	17	77	8	0	8
H/TOT	143	12	155	7	1	8	132	21	153	24	1	25
P/TOT	766	58	824	18	1	19	710	80	790	104	5	109

TIME	C TO B			C TO A			C TO D			C TO C		
	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT
16:30	122	4	126	8	0	8	130	8	138	13	0	13
16:45	127	6	133	10	0	10	100	7	107	13	1	14
H/TOT	249	10	259	18	0	18	230	15	245	26	1	27
17:00	120	3	123	14	0	14	110	4	114	10	0	10
17:15	103	1	104	16	0	16	117	4	121	4	0	4
17:30	140	6	146	15	0	15	133	3	136	9	1	10
17:45	118	3	121	8	0	8	108	7	115	6	0	6
H/TOT	481	13	494	53	0	53	468	18	486	29	1	30
18:00	134	1	135	11	1	12	102	3	105	5	0	5
18:15	114	4	118	5	0	5	90	2	92	1	0	1
H/TOT	248	5	253	16	1	17	192	5	197	6	0	6
P/TOT	978	28	1006	87	1	88	890	38	928	61	2	63

SITE: 3

DAY: Tuesday

LOCATION: Broomhill Rbt/A6195/A633 Manvers Way/Highgate

DATE: 15.03.2016

TIME	D TO C			D TO B			D TO A			D TO D		
	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT
07:30	146	10	156	120	6	126	0	0	0	0	0	0
07:45	118	9	127	122	8	130	0	0	0	0	0	0
H/TOT	264	19	283	242	14	256	0	0	0	0	0	0
08:00	115	13	128	117	11	128	1	0	1	0	0	0
08:15	145	10	155	118	6	124	2	0	2	0	0	0
08:30	83	14	97	108	11	119	5	0	5	0	0	0
08:45	107	9	116	144	12	156	0	0	0	0	0	0
H/TOT	450	46	496	487	40	527	8	0	8	0	0	0
09:00	106	6	112	107	14	121	0	0	0	0	0	0
09:15	75	10	85	115	7	122	3	0	3	0	0	0
H/TOT	181	16	197	222	21	243	3	0	3	0	0	0
P/TOT	895	81	976	951	75	1026	11	0	11	0	0	0

TIME	D TO C			D TO B			D TO A			D TO D		
	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT	LV	HV	TOT
16:30	104	5	109	156	4	160	6	0	6	0	0	0
16:45	115	5	120	136	6	142	0	1	1	0	0	0
H/TOT	219	10	229	292	10	302	6	1	7	0	0	0
17:00	142	5	147	154	2	156	6	0	6	0	0	0
17:15	125	8	133	141	6	147	9	0	9	0	0	0
17:30	122	5	127	133	2	135	11	0	11	0	0	0
17:45	123	5	128	147	7	154	2	0	2	0	0	0
H/TOT	512	23	535	575	17	592	28	0	28	0	0	0
18:00	93	1	94	116	2	118	3	0	3	0	0	0
18:15	95	3	98	110	2	112	0	0	0	0	0	0
H/TOT	188	4	192	226	4	230	3	0	3	0	0	0
P/TOT	919	37	956	1093	31	1124	37	1	38	0	0	0

SITE: 3

DAY: Tuesday

LOCATION: Broomhill Rbt/A6195/A633 Manvers Way/Highgate

DATE: 15.03.2016

TIME	TO ARM A		TOT	FROM ARM A		TOT
	LV	HV		LV	HV	
07:30	3	0	3	12	0	12
07:45	2	0	2	10	0	10
H/TOT	5	0	5	22	0	22
08:00	4	0	4	10	0	10
08:15	6	1	7	6	1	7
08:30	10	1	11	9	0	9
08:45	0	1	1	9	1	10
H/TOT	20	3	23	34	2	36
09:00	6	1	7	11	1	12
09:15	7	0	7	7	0	7
H/TOT	13	1	14	18	1	19
P/TOT	38	4	42	74	3	77

TIME	TO ARM A		TOT	FROM ARM A		TOT
	LV	HV		LV	HV	
16:30	15	0	15	10	1	11
16:45	13	1	14	5	0	5
H/TOT	28	1	29	15	1	16
17:00	21	0	21	4	0	4
17:15	28	0	28	8	0	8
17:30	27	0	27	5	1	6
17:45	14	0	14	8	0	8
H/TOT	90	0	90	25	1	26
18:00	19	1	20	7	0	7
18:15	8	0	8	12	0	12
H/TOT	27	1	28	19	0	19
P/TOT	145	2	147	59	2	61

SITE: 3

DAY: Tuesday

LOCATION: Broomhill Rbt/A6195/A633 Manvers Way/Highgate

DATE: 15.03.2016

TIME	TO ARM B		TOT	FROM ARM B		TOT
	LV	HV		LV	HV	
07:30	228	13	241	261	9	270
07:45	231	17	248	213	13	226
H/TOT	459	30	489	474	22	496
08:00	232	17	249	262	15	277
08:15	236	12	248	243	24	267
08:30	222	19	241	236	28	264
08:45	222	22	244	207	19	226
H/TOT	912	70	982	948	86	1034
09:00	182	22	204	213	17	230
09:15	187	12	199	197	20	217
H/TOT	369	34	403	410	37	447
P/TOT	1740	134	1874	1832	145	1977

TIME	TO ARM B		TOT	FROM ARM B		TOT
	LV	HV		LV	HV	
16:30	280	8	288	265	9	274
16:45	265	12	277	298	15	313
H/TOT	545	20	565	563	24	587
17:00	275	5	280	287	9	296
17:15	245	7	252	268	5	273
17:30	274	8	282	236	3	239
17:45	266	10	276	263	6	269
H/TOT	1060	30	1090	1054	23	1077
18:00	252	3	255	229	6	235
18:15	228	6	234	213	8	221
H/TOT	480	9	489	442	14	456
P/TOT	2085	59	2144	2059	61	2120

SITE: 3

DAY: Tuesday

LOCATION: Broomhill Rbt/A6195/A633 Manvers Way/Highgate

DATE: 15.03.2016

TIME	TO ARM C		TOT	FROM ARM C		TOT
	LV	HV		LV	HV	
07:30	237	12	249	238	18	256
07:45	216	15	231	215	20	235
H/TOT	453	27	480	453	38	491
08:00	269	19	288	233	14	247
08:15	275	19	294	214	16	230
08:30	185	25	210	224	24	248
08:45	226	18	244	168	17	185
H/TOT	955	81	1036	839	71	910
09:00	230	13	243	164	13	177
09:15	185	15	200	142	22	164
H/TOT	415	28	443	306	35	341
P/TOT	1823	136	1959	1598	144	1742

TIME	TO ARM C		TOT	FROM ARM C		TOT
	LV	HV		LV	HV	
16:30	237	8	245	273	12	285
16:45	292	10	302	250	14	264
H/TOT	529	18	547	523	26	549
17:00	295	9	304	254	7	261
17:15	273	11	284	240	5	245
17:30	268	9	277	297	10	307
17:45	290	8	298	240	10	250
H/TOT	1126	37	1163	1031	32	1063
18:00	205	2	207	252	5	257
18:15	211	6	217	210	6	216
H/TOT	416	8	424	462	11	473
P/TOT	2071	63	2134	2016	69	2085

SITE: 3

DAY: Tuesday

LOCATION: Broomhill Rbt/A6195/A633 Manvers Way/Highgate

DATE: 15.03.2016

TIME	TO ARM D		TOT	FROM ARM D		TOT
	LV	HV		LV	HV	
07:30	309	18	327	266	16	282
07:45	229	18	247	240	17	257
H/TOT	538	36	574	506	33	539
08:00	233	17	250	233	24	257
08:15	211	25	236	265	16	281
08:30	248	32	280	196	25	221
08:45	187	17	204	251	21	272
H/TOT	879	91	970	945	86	1031
09:00	183	15	198	213	20	233
09:15	160	32	192	193	17	210
H/TOT	343	47	390	406	37	443
P/TOT	1760	174	1934	1857	156	2013

TIME	TO ARM D		TOT	FROM ARM D		TOT
	LV	HV		LV	HV	
16:30	282	15	297	266	9	275
16:45	234	18	252	251	12	263
H/TOT	516	33	549	517	21	538
17:00	256	9	265	302	7	309
17:15	245	6	251	275	14	289
17:30	235	4	239	266	7	273
17:45	213	10	223	272	12	284
H/TOT	949	29	978	1115	40	1155
18:00	224	8	232	212	3	215
18:15	193	7	200	205	5	210
H/TOT	417	15	432	417	8	425
P/TOT	1882	77	1959	2049	69	2118



6098/ GOLDTHORPE
MARCH 16
MANUAL CLASSIFIED COUNT

SITE: 4

DAY: Tuesday

LOCATION: A6195/A633 Wath Road

DATE: 15,03,2016

TIME	A - E		TOT	A - D		TOT
	LV	HV		LV	HV	
07:30	1	0	1	55	0	55
07:45	5	0	5	50	8	58
H/TOT	6	0	6	105	8	113
08:00	3	0	3	73	5	78
08:15	14	1	15	59	9	68
08:30	10	0	10	51	7	58
08:45	2	0	2	57	6	63
H/TOT	29	1	30	240	27	267
09:00	4	0	4	72	4	76
09:15	3	0	3	58	5	63
H/TOT	7	0	7	130	9	139
P/TOT	42	1	43	475	44	519

TIME	A - E		TOT	A - D		TOT
	LV	HV		LV	HV	
16:30	4	0	4	66	2	68
16:45	11	0	11	59	5	64
H/TOT	15	0	15	125	7	132
17:00	8	0	8	62	0	62
17:15	3	0	3	65	1	66
17:30	0	1	1	59	3	62
17:45	4	0	4	60	3	63
H/TOT	15	1	16	246	7	253
18:00	1	0	1	55	1	56
18:15	1	0	1	53	3	56
H/TOT	2	0	2	108	4	112
P/TOT	32	1	33	479	18	497



6098/ GOLDTHORPE
MARCH 16
MANUAL CLASSIFIED COUNT

SITE: 4

DAY: Tuesday

LOCATION: A6195/A633 Wath Road

DATE: 15,03,2016

TIME	A - C		TOT	A - B		TOT
	LV	HV		LV	HV	
07:30	77	4	81	13	2	15
07:45	59	3	62	20	2	22
H/TOT	136	7	143	33	4	37
08:00	66	0	66	27	4	31
08:15	83	1	84	36	2	38
08:30	63	2	65	40	1	41
08:45	32	0	32	40	0	40
H/TOT	244	3	247	143	7	150
09:00	21	0	21	28	0	28
09:15	27	1	28	39	1	40
H/TOT	48	1	49	67	1	68
P/TOT	428	11	439	243	12	255

TIME	A - C		TOT	A - B		TOT
	LV	HV		LV	HV	
16:30	57	3	60	39	0	39
16:45	54	0	54	41	0	41
H/TOT	111	3	114	80	0	80
17:00	50	0	50	30	0	30
17:15	59	0	59	55	0	55
17:30	42	0	42	37	2	39
17:45	42	0	42	25	0	25
H/TOT	193	0	193	147	2	149
18:00	38	0	38	44	0	44
18:15	32	1	33	31	0	31
H/TOT	70	1	71	75	0	75
P/TOT	374	4	378	302	2	304



6098/ GOLDTHORPE
MARCH 16
MANUAL CLASSIFIED COUNT

SITE: 4

DAY: Tuesday

LOCATION: A6195/A633 Wath Road

DATE: 15,03,2016

TIME	A - A		TOT	B - A		TOT
	LV	HV		LV	HV	
07:30	0	0	0	19	3	22
07:45	0	0	0	21	3	24
H/TOT	0	0	0	40	6	46
08:00	0	0	0	24	1	25
08:15	0	0	0	22	5	27
08:30	0	0	0	29	1	30
08:45	0	0	0	34	2	36
H/TOT	0	0	0	109	9	118
09:00	0	0	0	21	1	22
09:15	2	0	2	25	4	29
H/TOT	2	0	2	46	5	51
P/TOT	2	0	2	195	20	215

TIME	A - A		TOT	B - A		TOT
	LV	HV		LV	HV	
16:30	2	0	2	74	0	74
16:45	0	0	0	70	3	73
H/TOT	2	0	2	144	3	147
17:00	0	0	0	103	2	105
17:15	0	0	0	66	0	66
17:30	0	0	0	72	2	74
17:45	0	0	0	85	2	87
H/TOT	0	0	0	326	6	332
18:00	0	0	0	63	0	63
18:15	0	0	0	45	0	45
H/TOT	0	0	0	108	0	108
P/TOT	2	0	2	578	9	587



6098/ GOLDTHORPE
MARCH 16
MANUAL CLASSIFIED COUNT

SITE: 4

DAY: Tuesday

LOCATION: A6195/A633 Wath Road

DATE: 15,03,2016

TIME	B - E		TOT	B - D		TOT
	LV	HV		LV	HV	
07:30	10	0	10	200	8	208
07:45	11	3	14	162	6	168
H/TOT	21	3	24	362	14	376
08:00	11	1	12	185	11	196
08:15	8	0	8	188	12	200
08:30	0	3	3	170	18	188
08:45	5	0	5	138	13	151
H/TOT	24	4	28	681	54	735
09:00	3	2	5	146	11	157
09:15	3	2	5	140	13	153
H/TOT	6	4	10	286	24	310
P/TOT	51	11	62	1329	92	1421

TIME	B - E		TOT	B - D		TOT
	LV	HV		LV	HV	
16:30	6	0	6	218	7	225
16:45	2	0	2	215	12	227
H/TOT	8	0	8	433	19	452
17:00	7	0	7	216	5	221
17:15	0	0	0	191	5	196
17:30	5	0	5	177	0	177
17:45	0	0	0	197	1	198
H/TOT	12	0	12	781	11	792
18:00	2	0	2	174	5	179
18:15	0	0	0	152	4	156
H/TOT	2	0	2	326	9	335
P/TOT	22	0	22	1540	39	1579



6098/ GOLDTHORPE
MARCH 16
MANUAL CLASSIFIED COUNT

SITE: 4

DAY: Tuesday

LOCATION: A6195/A633 Wath Road

DATE: 15,03,2016

TIME	B - C		TOT	B - B		TOT
	LV	HV		LV	HV	
07:30	40	1	41	3	0	3
07:45	59	2	61	2	0	2
H/TOT	99	3	102	5	0	5
08:00	29	2	31	0	0	0
08:15	50	2	52	0	1	1
08:30	44	0	44	0	0	0
08:45	31	2	33	0	0	0
H/TOT	154	6	160	0	1	1
09:00	22	4	26	1	0	1
09:15	29	2	31	0	0	0
H/TOT	51	6	57	1	0	1
P/TOT	304	15	319	6	1	7

TIME	B - C		TOT	B - B		TOT
	LV	HV		LV	HV	
16:30	31	3	34	0	0	0
16:45	56	2	58	2	0	2
H/TOT	87	5	92	2	0	2
17:00	46	4	50	2	0	2
17:15	55	0	55	0	0	0
17:30	52	0	52	0	0	0
17:45	51	3	54	2	1	3
H/TOT	204	7	211	4	1	5
18:00	62	0	62	0	0	0
18:15	49	0	49	0	0	0
H/TOT	111	0	111	0	0	0
P/TOT	402	12	414	6	1	7



6098/ GOLDTHORPE
MARCH 16
MANUAL CLASSIFIED COUNT

SITE: 4

DAY: Tuesday

LOCATION: A6195/A633 Wath Road

DATE: 15,03,2016

TIME	C - B			C - A		
	LV	HV	TOT	LV	HV	TOT
07:30	48	3	51	40	2	42
07:45	63	2	65	46	4	50
H/TOT	111	5	116	86	6	92
08:00	59	2	61	44	0	44
08:15	46	5	51	51	2	53
08:30	56	2	58	30	5	35
08:45	42	1	43	36	3	39
H/TOT	203	10	213	161	10	171
09:00	36	0	36	38	2	40
09:15	31	4	35	16	0	16
H/TOT	67	4	71	54	2	56
P/TOT	381	19	400	301	18	319

TIME	C - B			C - A		
	LV	HV	TOT	LV	HV	TOT
16:30	59	2	61	57	2	59
16:45	72	0	72	43	0	43
H/TOT	131	2	133	100	2	102
17:00	63	1	64	51	1	52
17:15	75	0	75	44	0	44
17:30	71	1	72	38	0	38
17:45	63	0	63	54	1	55
H/TOT	272	2	274	187	2	189
18:00	46	1	47	31	1	32
18:15	45	1	46	25	0	25
H/TOT	91	2	93	56	1	57
P/TOT	494	6	500	343	5	348



6098/ GOLDTHORPE
MARCH 16
MANUAL CLASSIFIED COUNT

SITE: 4

DAY: Tuesday

LOCATION: A6195/A633 Wath Road

DATE: 15,03,2016

TIME	C - E			C - D		
	LV	HV	TOT	LV	HV	TOT
07:30	3	0	3	2	0	2
07:45	0	1	1	5	0	5
H/TOT	3	1	4	7	0	7
08:00	3	0	3	4	0	4
08:15	12	0	12	3	0	3
08:30	10	0	10	2	0	2
08:45	0	0	0	4	2	6
H/TOT	25	0	25	13	2	15
09:00	5	0	5	6	0	6
09:15	0	2	2	2	2	4
H/TOT	5	2	7	8	2	10
P/TOT	33	3	36	28	4	32

TIME	C - E			C - D		
	LV	HV	TOT	LV	HV	TOT
16:30	0	0	0	0	0	0
16:45	0	1	1	1	0	1
H/TOT	0	1	1	1	0	1
17:00	0	1	1	4	0	4
17:15	1	0	1	3	0	3
17:30	0	0	0	1	0	1
17:45	2	0	2	1	0	1
H/TOT	3	1	4	9	0	9
18:00	1	0	1	3	1	4
18:15	0	0	0	0	0	0
H/TOT	1	0	1	3	1	4
P/TOT	4	2	6	13	1	14



6098/ GOLDTHORPE
MARCH 16
MANUAL CLASSIFIED COUNT

SITE: 4

DAY: Tuesday

LOCATION: A6195/A633 Wath Road

DATE: 15,03,2016

TIME	C - C		TOT	D - C		TOT
	LV	HV		LV	HV	
07:30	1	0	1	3	0	3
07:45	0	0	0	2	0	2
H/TOT	1	0	1	5	0	5
08:00	0	0	0	1	0	1
08:15	2	0	2	3	0	3
08:30	0	0	0	6	0	6
08:45	0	0	0	4	0	4
H/TOT	2	0	2	14	0	14
09:00	2	0	2	3	1	4
09:15	0	0	0	3	0	3
H/TOT	2	0	2	6	1	7
P/TOT	5	0	5	25	1	26

TIME	C - C		TOT	D - C		TOT
	LV	HV		LV	HV	
16:30	0	1	1	3	0	3
16:45	0	0	0	7	0	7
H/TOT	0	1	1	10	0	10
17:00	0	0	0	3	0	3
17:15	0	0	0	2	0	2
17:30	2	0	2	3	0	3
17:45	0	0	0	4	0	4
H/TOT	2	0	2	12	0	12
18:00	1	0	1	2	0	2
18:15	1	0	1	7	0	7
H/TOT	2	0	2	9	0	9
P/TOT	4	1	5	31	0	31



6098/ GOLDTHORPE
MARCH 16
MANUAL CLASSIFIED COUNT

SITE: 4

DAY: Tuesday

LOCATION: A6195/A633 Wath Road

DATE: 15,03,2016

TIME	D - B		TOT	D - A		TOT
	LV	HV		LV	HV	
07:30	172	14	186	61	2	63
07:45	159	14	173	60	3	63
H/TOT	331	28	359	121	5	126
08:00	146	9	155	70	4	74
08:15	172	10	182	56	6	62
08:30	135	10	145	60	6	66
08:45	167	17	184	59	4	63
H/TOT	620	46	666	245	20	265
09:00	137	14	151	36	4	40
09:15	121	7	128	60	3	63
H/TOT	258	21	279	96	7	103
P/TOT	1209	95	1304	462	32	494

TIME	D - B		TOT	D - A		TOT
	LV	HV		LV	HV	
16:30	215	4	219	55	4	59
16:45	193	5	198	53	4	57
H/TOT	408	9	417	108	8	116
17:00	206	6	212	60	2	62
17:15	187	5	192	53	2	55
17:30	206	5	211	71	2	73
17:45	208	6	214	60	3	63
H/TOT	807	22	829	244	9	253
18:00	196	3	199	55	0	55
18:15	167	5	172	52	1	53
H/TOT	363	8	371	107	1	108
P/TOT	1578	39	1617	459	18	477



6098/ GOLDTHORPE
MARCH 16
MANUAL CLASSIFIED COUNT

SITE: 4

DAY: Tuesday

LOCATION: A6195/A633 Wath Road

DATE: 15,03,2016

TIME	D - E			D - D		
	LV	HV	TOT	LV	HV	TOT
07:30	1	0	1	0	0	0
07:45	0	0	0	0	0	0
H/TOT	1	0	1	0	0	0
08:00	5	0	5	0	0	0
08:15	12	0	12	0	0	0
08:30	12	0	12	0	0	0
08:45	11	3	14	0	0	0
H/TOT	40	3	43	0	0	0
09:00	2	2	4	0	0	0
09:15	1	0	1	0	0	0
H/TOT	3	2	5	0	0	0
P/TOT	44	5	49	0	0	0

TIME	D - E			D - D		
	LV	HV	TOT	LV	HV	TOT
16:30	4	0	4	0	0	0
16:45	0	0	0	0	0	0
H/TOT	4	0	4	0	0	0
17:00	5	0	5	0	0	0
17:15	3	2	5	0	0	0
17:30	8	0	8	0	0	0
17:45	4	0	4	0	0	0
H/TOT	20	2	22	0	0	0
18:00	2	1	3	0	0	0
18:15	7	0	7	1	0	1
H/TOT	9	1	10	1	0	1
P/TOT	33	3	36	1	0	1



6098/ GOLDTHORPE
MARCH 16
MANUAL CLASSIFIED COUNT

SITE: 4

DAY: Tuesday

LOCATION: A6195/A633 Wath Road

DATE: 15,03,2016

TIME	E - D			E - C		
	LV	HV	TOT	LV	HV	TOT
07:30	4	0	4	0	0	0
07:45	0	0	0	0	0	0
H/TOT	4	0	4	0	0	0
08:00	2	0	2	2	0	2
08:15	2	2	4	1	0	1
08:30	4	2	6	6	0	6
08:45	2	0	2	1	0	1
H/TOT	10	4	14	10	0	10
09:00	0	1	1	3	0	3
09:15	2	3	5	2	0	2
H/TOT	2	4	6	5	0	5
P/TOT	16	8	24	15	0	15

TIME	E - D			E - C		
	LV	HV	TOT	LV	HV	TOT
16:30	3	1	4	8	1	9
16:45	12	0	12	11	0	11
H/TOT	15	1	16	19	1	20
17:00	10	1	11	15	0	15
17:15	3	0	3	5	0	5
17:30	8	0	8	4	0	4
17:45	3	1	4	5	0	5
H/TOT	24	2	26	29	0	29
18:00	1	0	1	4	0	4
18:15	4	0	4	0	0	0
H/TOT	5	0	5	4	0	4
P/TOT	44	3	47	52	1	53



6098/ GOLDTHORPE
MARCH 16
MANUAL CLASSIFIED COUNT

SITE: 4

DAY: Tuesday

LOCATION: A6195/A633 Wath Road

DATE: 15,03,2016

TIME	E - B		TOT	E - A		TOT
	LV	HV		LV	HV	
07:30	1	1	2	0	0	0
07:45	0	2	2	0	0	0
H/TOT	1	3	4	0	0	0
08:00	1	0	1	1	0	1
08:15	4	2	6	1	0	1
08:30	5	1	6	5	0	5
08:45	1	0	1	3	0	3
H/TOT	11	3	14	10	0	10
09:00	4	0	4	2	1	3
09:15	1	0	1	2	0	2
H/TOT	5	0	5	4	1	5
P/TOT	17	6	23	14	1	15

TIME	E - B		TOT	E - A		TOT
	LV	HV		LV	HV	
16:30	7	2	9	2	0	2
16:45	6	0	6	6	0	6
H/TOT	13	2	15	8	0	8
17:00	17	0	17	11	0	11
17:15	2	1	3	5	0	5
17:30	10	0	10	3	0	3
17:45	3	0	3	1	0	1
H/TOT	32	1	33	20	0	20
18:00	2	0	2	7	0	7
18:15	3	0	3	3	0	3
H/TOT	5	0	5	10	0	10
P/TOT	50	3	53	38	0	38

SITE: 4

DAY: Tuesday

LOCATION: A6195/A633 Wath Road

DATE: 15,03,2016

TIME	E - E		TOT
	LV	HV	
07:30	0	0	0
07:45	0	0	0
H/TOT	0	0	0
08:00	0	1	1
08:15	0	0	0
08:30	0	0	0
08:45	0	0	0
H/TOT	0	1	1
09:00	0	0	0
09:15	0	0	0
H/TOT	0	0	0
P/TOT	0	1	1

TIME	E - E		TOT
	LV	HV	
16:30	0	0	0
16:45	0	0	0
H/TOT	0	0	0
17:00	0	0	0
17:15	0	0	0
17:30	0	0	0
17:45	0	0	0
H/TOT	0	0	0
18:00	0	0	0
18:15	0	0	0
H/TOT	0	0	0
P/TOT	0	0	0



SITE: 4

DAY: Tuesday

LOCATION: A6195/A633 Wath Road

DATE: 15,03,2016

TIME	TO ARM A		TOT	FROM ARM A		TOT
	LV	HV		LV	HV	
07:30	120	7	127	146	6	152
07:45	127	10	137	134	13	147
H/TOT	247	17	264	280	19	299
08:00	139	5	144	169	9	178
08:15	130	13	143	192	13	205
08:30	124	12	136	164	10	174
08:45	132	9	141	131	6	137
H/TOT	525	39	564	656	38	694
09:00	97	8	105	125	4	129
09:15	105	7	112	129	7	136
H/TOT	202	15	217	254	11	265
P/TOT	974	71	1045	1190	68	1258

TIME	TO ARM A		TOT	FROM ARM A		TOT
	LV	HV		LV	HV	
16:30	190	6	196	168	5	173
16:45	172	7	179	165	5	170
H/TOT	362	13	375	333	10	343
17:00	225	5	230	150	0	150
17:15	168	2	170	182	1	183
17:30	184	4	188	138	6	144
17:45	200	6	206	131	3	134
H/TOT	777	17	794	601	10	611
18:00	156	1	157	138	1	139
18:15	125	1	126	117	4	121
H/TOT	281	2	283	255	5	260
P/TOT	1420	32	1452	1189	25	1214



6098/ GOLDTHORPE
MARCH 16
MANUAL CLASSIFIED COUNT

SITE: 4

DAY: Tuesday

LOCATION: A6195/A633 Wath Road

DATE: 15,03,2016

TIME	TO ARM B		TOT	FROM ARM B		TOT
	LV	HV		LV	HV	
07:30	237	20	257	272	12	284
07:45	244	20	264	255	14	269
H/TOT	481	40	521	527	26	553
08:00	233	15	248	249	15	264
08:15	258	20	278	268	20	288
08:30	236	14	250	243	22	265
08:45	250	18	268	208	17	225
H/TOT	977	67	1044	968	74	1042
09:00	206	14	220	193	18	211
09:15	192	12	204	197	21	218
H/TOT	398	26	424	390	39	429
P/TOT	1856	133	1989	1885	139	2024

TIME	TO ARM B		TOT	FROM ARM B		TOT
	LV	HV		LV	HV	
16:30	320	8	328	329	10	339
16:45	314	5	319	345	17	362
H/TOT	634	13	647	674	27	701
17:00	318	7	325	374	11	385
17:15	319	6	325	312	5	317
17:30	324	8	332	306	2	308
17:45	301	7	308	335	7	342
H/TOT	1262	28	1290	1327	25	1352
18:00	288	4	292	301	5	306
18:15	246	6	252	246	4	250
H/TOT	534	10	544	547	9	556
P/TOT	2430	51	2481	2548	61	2609



6098/ GOLDTHORPE
MARCH 16
MANUAL CLASSIFIED COUNT

SITE: 4

DAY: Tuesday

LOCATION: A6195/A633 Wath Road

DATE: 15,03,2016

TIME	TO ARM C		TOT	FROM ARM C		TOT
	LV	HV		LV	HV	
07:30	121	5	126	94	5	99
07:45	120	5	125	114	7	121
H/TOT	241	10	251	208	12	220
08:00	98	2	100	110	2	112
08:15	139	3	142	114	7	121
08:30	119	2	121	98	7	105
08:45	68	2	70	82	6	88
H/TOT	424	9	433	404	22	426
09:00	51	5	56	87	2	89
09:15	61	3	64	49	8	57
H/TOT	112	8	120	136	10	146
P/TOT	777	27	804	748	44	792

TIME	TO ARM C		TOT	FROM ARM C		TOT
	LV	HV		LV	HV	
16:30	99	8	107	116	5	121
16:45	128	2	130	116	1	117
H/TOT	227	10	237	232	6	238
17:00	114	4	118	118	3	121
17:15	121	0	121	123	0	123
17:30	103	0	103	112	1	113
17:45	102	3	105	120	1	121
H/TOT	440	7	447	473	5	478
18:00	107	0	107	82	3	85
18:15	89	1	90	71	1	72
H/TOT	196	1	197	153	4	157
P/TOT	863	18	881	858	15	873



6098/ GOLDTHORPE
MARCH 16
MANUAL CLASSIFIED COUNT

SITE: 4

DAY: Tuesday

LOCATION: A6195/A633 Wath Road

DATE: 15,03,2016

TIME	TO ARM D		TOT	FROM ARM D		TOT
	LV	HV		LV	HV	
07:30	261	8	269	237	16	253
07:45	217	14	231	221	17	238
H/TOT	478	22	500	458	33	491
08:00	264	16	280	222	13	235
08:15	252	23	275	243	16	259
08:30	227	27	254	213	16	229
08:45	201	21	222	241	24	265
H/TOT	944	87	1031	919	69	988
09:00	224	16	240	178	21	199
09:15	202	23	225	185	10	195
H/TOT	426	39	465	363	31	394
P/TOT	1848	148	1996	1740	133	1873

TIME	TO ARM D		TOT	FROM ARM D		TOT
	LV	HV		LV	HV	
16:30	287	10	297	277	8	285
16:45	287	17	304	253	9	262
H/TOT	574	27	601	530	17	547
17:00	292	6	298	274	8	282
17:15	262	6	268	245	9	254
17:30	245	3	248	288	7	295
17:45	261	5	266	276	9	285
H/TOT	1060	20	1080	1083	33	1116
18:00	233	7	240	255	4	259
18:15	210	7	217	234	6	240
H/TOT	443	14	457	489	10	499
P/TOT	2077	61	2138	2102	60	2162



6098/ GOLDTHORPE
MARCH 16
MANUAL CLASSIFIED COUNT

SITE: 4

DAY: Tuesday

LOCATION: A6195/A633 Wath Road

DATE: 15,03,2016

TIME	TO ARM E		TOT	FROM ARM E		TOT
	LV	HV		LV	HV	
07:30	15	0	15	5	1	6
07:45	16	4	20	0	2	2
H/TOT	31	4	35	5	3	8
08:00	22	2	24	6	1	7
08:15	46	1	47	8	4	12
08:30	32	3	35	20	3	23
08:45	18	3	21	7	0	7
H/TOT	118	9	127	41	8	49
09:00	14	4	18	9	2	11
09:15	7	4	11	7	3	10
H/TOT	21	8	29	16	5	21
P/TOT	170	21	191	62	16	78

TIME	TO ARM E		TOT	FROM ARM E		TOT
	LV	HV		LV	HV	
16:30	14	0	14	20	4	24
16:45	13	1	14	35	0	35
H/TOT	27	1	28	55	4	59
17:00	20	1	21	53	1	54
17:15	7	2	9	15	1	16
17:30	13	1	14	25	0	25
17:45	10	0	10	12	1	13
H/TOT	50	4	54	105	3	108
18:00	6	1	7	14	0	14
18:15	8	0	8	10	0	10
H/TOT	14	1	15	24	0	24
P/TOT	91	6	97	184	7	191



6098 / Goldthorpe
MAR 2016
MANUAL CLASSIFIED COUNT

SITE: 5

DATE: 15,03,2016

LOCATION: Highgate Ln/Commercial Rd

DAY: TUESDAY

TIME	A to C			A to B		
	LV	HV	TOT	LV	HV	TOT
07:30	136	1	137	19	0	19
07:45	124	1	125	17	1	18
HH/TOT	260	2	262	36	1	37
08:00	124	1	125	9	0	9
08:15	129	0	129	6	0	6
08:30	133	2	135	5	0	5
08:45	99	4	103	10	0	10
H/TOT	485	7	492	30	0	30
09:00	113	3	116	6	1	7
09:15	68	4	72	3	0	3
HH/TOT	181	7	188	9	1	10
P/TOT	926	16	942	75	2	77

TIME	A to C			A to B		
	LV	HV	TOT	LV	HV	TOT
16:30	129	1	130	6	1	7
16:45	115	3	118	7	0	7
HH/TOT	244	4	248	13	1	14
17:00	114	2	116	3	1	4
17:15	107	1	108	3	0	3
17:30	104	2	106	3	1	4
17:45	116	1	117	2	0	2
H/TOT	441	6	447	11	2	13
18:00	96	1	97	2	0	2
18:15	89	1	90	2	0	2
HH/TOT	185	2	187	4	0	4
P/TOT	870	12	882	28	3	31



6098 / Goldthorpe
 MAR 2016
 MANUAL CLASSIFIED COUNT

SITE: 5

DATE: 15.03.2016

LOCATIO Highgate Ln/Commercial Rd

DAY: TUESDAY

TIME	B to A			B to C		
	LV	HV	TOT	LV	HV	TOT
07:30	4	0	4	30	1	31
07:45	4	0	4	25	1	26
H/TOT	8	0	8	55	2	57
08:00	1	1	2	34	4	38
08:15	2	0	2	31	0	31
08:30	2	0	2	29	4	33
08:45	7	0	7	35	0	35
H/TOT	12	1	13	129	8	137
09:00	6	0	6	29	2	31
09:15	2	1	3	5	2	7
H/TOT	8	1	9	34	4	38
P/TOT	28	2	30	218	14	232

TIME	B to A			B to C		
	LV	HV	TOT	LV	HV	TOT
16:30	20	0	20	37	0	37
16:45	6	0	6	32	0	32
H/TOT	26	0	26	69	0	69
17:00	14	1	15	32	0	32
17:15	5	0	5	25	1	26
17:30	6	0	6	31	0	31
17:45	3	1	4	25	0	25
H/TOT	28	2	30	113	1	114
18:00	5	0	5	20	0	20
18:15	3	0	3	16	1	17
H/TOT	8	0	8	36	1	37
P/TOT	62	2	64	218	2	220



6098 / Goldthorpe
MAR 2016
MANUAL CLASSIFIED COUNT

SITE: 5

DATE: 15.03.2016

LOCATIO Highgate Ln/Commercial Rd

DAY: TUESDAY

TIME	C to B			C to A		
	LV	HV	TOT	LV	HV	TOT
07:30	65	0	65	43	1	44
07:45	52	1	53	45	2	47
H/TOT	117	1	118	88	3	91
08:00	49	0	49	58	2	60
08:15	40	2	42	68	2	70
08:30	38	2	40	75	2	77
08:45	44	2	46	79	1	80
H/TOT	171	6	177	280	7	287
09:00	28	0	28	43	1	44
09:15	22	1	23	50	5	55
H/TOT	50	1	51	93	6	99
P/TOT	338	8	346	461	16	477

TIME	C to B			C to A		
	LV	HV	TOT	LV	HV	TOT
16:30	41	3	44	100	3	103
16:45	30	1	31	118	3	121
H/TOT	71	4	75	218	6	224
17:00	41	2	43	105	3	108
17:15	40	0	40	99	0	99
17:30	39	0	39	101	2	103
17:45	19	1	20	96	0	96
H/TOT	139	3	142	401	5	406
18:00	22	1	23	84	0	84
18:15	22	0	22	68	1	69
H/TOT	44	1	45	152	1	153
P/TOT	254	8	262	771	12	783



6098 / Goldthorpe
MAR 2016
MANUAL CLASSIFIED COUNT

SITE: 5

DATE: 15.03.2016

LOCATIO Highgate Ln/Commercial Rd

DAY: TUESDAY

TIME	To Arm A			From Arm A		
	LV	HV	TOT	LV	HV	TOT
07:30	47	1	48	155	1	156
07:45	49	2	51	141	2	143
H/TOT	96	3	99	296	3	299
08:00	59	3	62	133	1	134
08:15	70	2	72	135	0	135
08:30	77	2	79	138	2	140
08:45	86	1	87	109	4	113
H/TOT	292	8	300	515	7	522
09:00	49	1	50	119	4	123
09:15	52	6	58	71	4	75
H/TOT	101	7	108	190	8	198
P/TOT	489	18	507	1001	18	1019

TIME	To Arm A			From Arm A		
	LV	HV	TOT	LV	HV	TOT
16:30	120	3	123	135	2	137
16:45	124	3	127	122	3	125
H/TOT	244	6	250	257	5	262
17:00	119	4	123	117	3	120
17:15	104	0	104	110	1	111
17:30	107	2	109	107	3	110
17:45	99	1	100	118	1	119
H/TOT	429	7	436	452	8	460
18:00	89	0	89	98	1	99
18:15	71	1	72	91	1	92
H/TOT	160	1	161	189	2	191
P/TOT	833	14	847	898	15	913



6098 / Goldthorpe
MAR 2016
MANUAL CLASSIFIED COUNT

SITE: 5

DATE: 15,03,2016

LOCATIO Highgate Ln/Commercial Rd

DAY: TUESDAY

TIME	To Arm B		TOT	From Arm B		TOT
	LV	HV		LV	HV	
07:30	84	0	84	34	1	35
07:45	69	2	71	29	1	30
H/TOT	153	2	155	63	2	65
08:00	58	0	58	35	5	40
08:15	46	2	48	33	0	33
08:30	43	2	45	31	4	35
08:45	54	2	56	42	0	42
H/TOT	201	6	207	141	9	150
09:00	34	1	35	35	2	37
09:15	25	1	26	7	3	10
H/TOT	59	2	61	42	5	47
P/TOT	413	10	423	246	16	262

TIME	To Arm B		TOT	From Arm B		TOT
	LV	HV		LV	HV	
16:30	47	4	51	57	0	57
16:45	37	1	38	38	0	38
H/TOT	84	5	89	95	0	95
17:00	44	3	47	46	1	47
17:15	43	0	43	30	1	31
17:30	42	1	43	37	0	37
17:45	21	1	22	28	1	29
H/TOT	150	5	155	141	3	144
18:00	24	1	25	25	0	25
18:15	24	0	24	19	1	20
H/TOT	48	1	49	44	1	45
P/TOT	282	11	293	280	4	284



6098 / Goldthorpe
MAR 2016
MANUAL CLASSIFIED COUNT

SITE: 5

DATE: 15,03,2016

LOCATIO Highgate Ln/Commercial Rd

DAY: TUESDAY

TIME	To Arm C			From Arm C		
	LV	HV	TOT	LV	HV	TOT
07:30	166	2	168	108	1	109
07:45	149	2	151	97	3	100
H/TOT	315	4	319	205	4	209
08:00	158	5	163	107	2	109
08:15	160	0	160	108	4	112
08:30	162	6	168	113	4	117
08:45	134	4	138	123	3	126
H/TOT	614	15	629	451	13	464
09:00	142	5	147	71	1	72
09:15	73	6	79	72	6	78
H/TOT	215	11	226	143	7	150
P/TOT	1144	30	1174	799	24	823

TIME	To Arm C			From Arm C		
	LV	HV	TOT	LV	HV	TOT
16:30	166	1	167	141	6	147
16:45	147	3	150	148	4	152
H/TOT	313	4	317	289	10	299
17:00	146	2	148	146	5	151
17:15	132	2	134	139	0	139
17:30	135	2	137	140	2	142
17:45	141	1	142	115	1	116
H/TOT	554	7	561	540	8	548
18:00	116	1	117	106	1	107
18:15	105	2	107	90	1	91
H/TOT	221	3	224	196	2	198
P/TOT	1088	14	1102	1025	20	1045



6098 / Goldthorpe
MAR 2016
MANUAL CLASSIFIED COUNT

SITE: 6

DATE: 15,03,2016

LOCATION: Dudley Drive/Commercial Rd

DAY: TUESDAY

TIME	A to C			A to B		
	LV	HV	TOT	LV	HV	TOT
07:30	53	1	54	22	4	26
07:45	53	2	55	21	3	24
HH/TOT	106	3	109	43	7	50
08:00	61	7	68	9	5	14
08:15	47	1	48	4	9	13
08:30	55	5	60	4	4	8
08:45	59	4	63	1	6	7
H/TOT	222	17	239	18	24	42
09:00	41	3	44	3	5	8
09:15	17	1	18	1	2	3
HH/TOT	58	4	62	4	7	11
P/TOT	386	24	410	65	38	103

TIME	A to C			A to B		
	LV	HV	TOT	LV	HV	TOT
16:30	28	2	30	2	3	5
16:45	32	0	32	3	5	8
HH/TOT	60	2	62	5	8	13
17:00	21	2	23	5	3	8
17:15	21	1	22	11	2	13
17:30	23	1	24	9	2	11
17:45	23	0	23	2	2	4
H/TOT	88	4	92	27	9	36
18:00	19	1	20	0	2	2
18:15	15	1	16	0	3	3
HH/TOT	34	2	36	0	5	5
P/TOT	182	8	190	32	22	54



6098 / Goldthorpe
MAR 2016
MANUAL CLASSIFIED COUNT

SITE: 6

DATE: 15.03.2016

LOCATIO Dudley Drive/Commercial Rd

DAY: TUESDAY

TIME	B to A			B to C		
	LV	HV	TOT	LV	HV	TOT
07:30	2	3	5	1	1	2
07:45	1	1	2	0	3	3
H/TOT	3	4	7	1	4	5
08:00	1	7	8	0	2	2
08:15	3	5	8	0	0	0
08:30	2	4	6	2	0	2
08:45	4	7	11	1	1	2
H/TOT	10	23	33	3	3	6
09:00	2	1	3	1	0	1
09:15	1	1	2	1	0	1
H/TOT	3	2	5	2	0	2
P/TOT	16	29	45	6	7	13

TIME	B to A			B to C		
	LV	HV	TOT	LV	HV	TOT
16:30	16	3	19	3	1	4
16:45	14	1	15	2	1	3
H/TOT	30	4	34	5	2	7
17:00	15	1	16	1	0	1
17:15	5	3	8	2	0	2
17:30	4	5	9	1	0	1
17:45	6	1	7	1	0	1
H/TOT	30	10	40	5	0	5
18:00	9	4	13	4	0	4
18:15	11	7	18	1	1	2
H/TOT	20	11	31	5	1	6
P/TOT	80	25	105	15	3	18



6098 / Goldthorpe
MAR 2016
MANUAL CLASSIFIED COUNT

SITE: 6

DATE: 15.03.2016

LOCATIO Dudley Drive/Commercial Rd

DAY: TUESDAY

TIME	C to B			C to A		
	LV	HV	TOT	LV	HV	TOT
07:30	2	0	2	60	3	63
07:45	0	1	1	40	2	42
H/TOT	2	1	3	100	5	105
08:00	2	0	2	50	3	53
08:15	2	2	4	32	1	33
08:30	2	0	2	42	4	46
08:45	0	0	0	43	3	46
H/TOT	6	2	8	167	11	178
09:00	2	0	2	25	3	28
09:15	0	0	0	23	3	26
H/TOT	2	0	2	48	6	54
P/TOT	10	3	13	315	22	337

TIME	C to B			C to A		
	LV	HV	TOT	LV	HV	TOT
16:30	2	0	2	83	3	86
16:45	2	0	2	52	3	55
H/TOT	4	0	4	135	6	141
17:00	0	0	0	84	1	85
17:15	5	0	5	49	0	49
17:30	5	0	5	55	3	58
17:45	1	0	1	25	1	26
H/TOT	11	0	11	213	5	218
18:00	0	0	0	39	2	41
18:15	1	0	1	25	0	25
H/TOT	1	0	1	64	2	66
P/TOT	16	0	16	412	13	425



6098 / Goldthorpe
 MAR 2016
 MANUAL CLASSIFIED COUNT

SITE: 6

DATE: 15.03.2016

LOCATIO Dudley Drive/Commercial Rd

DAY: TUESDAY

TIME	To Arm A			From Arm A		
	LV	HV	TOT	LV	HV	TOT
07:30	62	6	68	75	5	80
07:45	41	3	44	74	5	79
H/TOT	103	9	112	149	10	159
08:00	51	10	61	70	12	82
08:15	35	6	41	51	10	61
08:30	44	8	52	59	9	68
08:45	47	10	57	60	10	70
H/TOT	177	34	211	240	41	281
09:00	27	4	31	44	8	52
09:15	24	4	28	18	3	21
H/TOT	51	8	59	62	11	73
P/TOT	331	51	382	451	62	513

TIME	To Arm A			From Arm A		
	LV	HV	TOT	LV	HV	TOT
16:30	99	6	105	30	5	35
16:45	66	4	70	35	5	40
H/TOT	165	10	175	65	10	75
17:00	99	2	101	26	5	31
17:15	54	3	57	32	3	35
17:30	59	8	67	32	3	35
17:45	31	2	33	25	2	27
H/TOT	243	15	258	115	13	128
18:00	48	6	54	19	3	22
18:15	36	7	43	15	4	19
H/TOT	84	13	97	34	7	41
P/TOT	492	38	530	214	30	244



6098 / Goldthorpe
 MAR 2016
 MANUAL CLASSIFIED COUNT

SITE: 6

DATE: 15,03,2016

LOCATIO Dudley Drive/Commercial Rd

DAY: TUESDAY

TIME	To Arm B		TOT	From Arm B		TOT
	LV	HV		LV	HV	
07:30	24	4	28	3	4	7
07:45	21	4	25	1	4	5
H/TOT	45	8	53	4	8	12
08:00	11	5	16	1	9	10
08:15	6	11	17	3	5	8
08:30	6	4	10	4	4	8
08:45	1	6	7	5	8	13
H/TOT	24	26	50	13	26	39
09:00	5	5	10	3	1	4
09:15	1	2	3	2	1	3
H/TOT	6	7	13	5	2	7
P/TOT	75	41	116	22	36	58

TIME	To Arm B		TOT	From Arm B		TOT
	LV	HV		LV	HV	
16:30	4	3	7	19	4	23
16:45	5	5	10	16	2	18
H/TOT	9	8	17	35	6	41
17:00	5	3	8	16	1	17
17:15	16	2	18	7	3	10
17:30	14	2	16	5	5	10
17:45	3	2	5	7	1	8
H/TOT	38	9	47	35	10	45
18:00	0	2	2	13	4	17
18:15	1	3	4	12	8	20
H/TOT	1	5	6	25	12	37
P/TOT	48	22	70	95	28	123



6098 / Goldthorpe
MAR 2016
MANUAL CLASSIFIED COUNT

SITE: 6

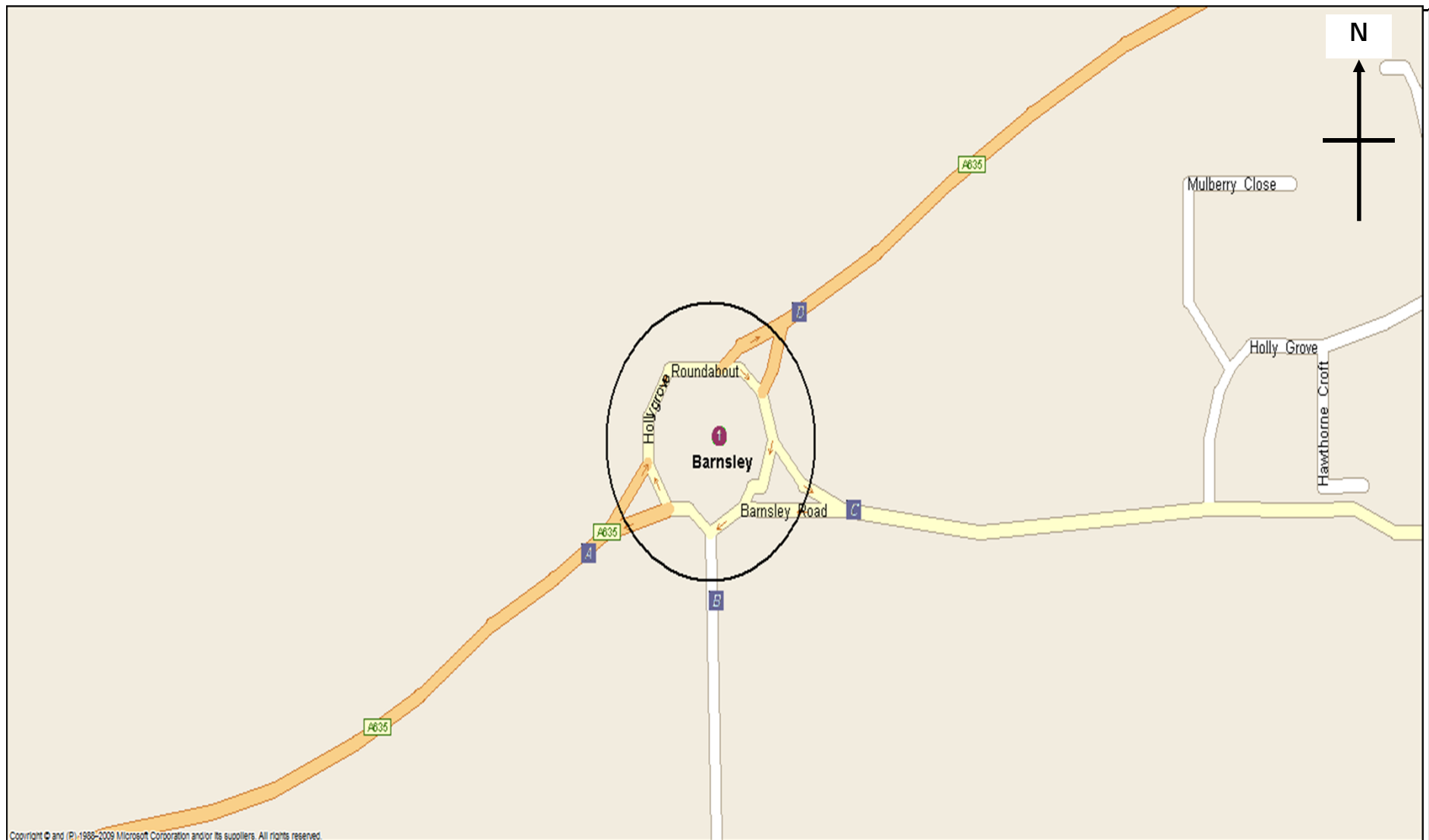
DATE: 15,03,2016

LOCATIO Dudley Drive/Commercial Rd


DAY: TUESDAY

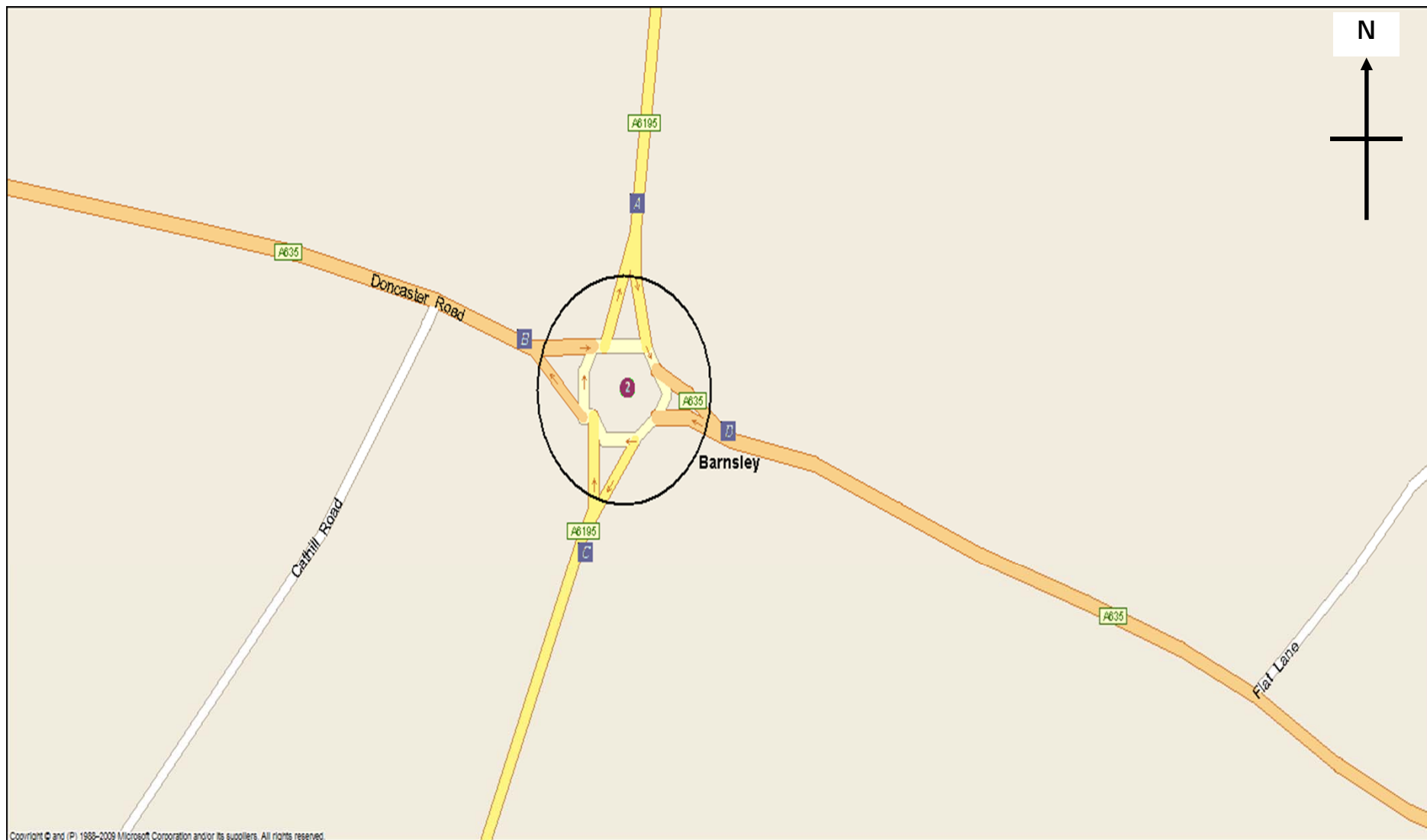
TIME	To Arm C		TOT	From Arm C		TOT
	LV	HV		LV	HV	
07:30	54	2	56	62	3	65
07:45	53	5	58	40	3	43
H/TOT	107	7	114	102	6	108
08:00	61	9	70	52	3	55
08:15	47	1	48	34	3	37
08:30	57	5	62	44	4	48
08:45	60	5	65	43	3	46
H/TOT	225	20	245	173	13	186
09:00	42	3	45	27	3	30
09:15	18	1	19	23	3	26
H/TOT	60	4	64	50	6	56
P/TOT	392	31	423	325	25	350

TIME	To Arm C		TOT	From Arm C		TOT
	LV	HV		LV	HV	
16:30	31	3	34	85	3	88
16:45	34	1	35	54	3	57
H/TOT	65	4	69	139	6	145
17:00	22	2	24	84	1	85
17:15	23	1	24	54	0	54
17:30	24	1	25	60	3	63
17:45	24	0	24	26	1	27
H/TOT	93	4	97	224	5	229
18:00	23	1	24	39	2	41
18:15	16	2	18	26	0	26
H/TOT	39	3	42	65	2	67
P/TOT	197	11	208	428	13	441



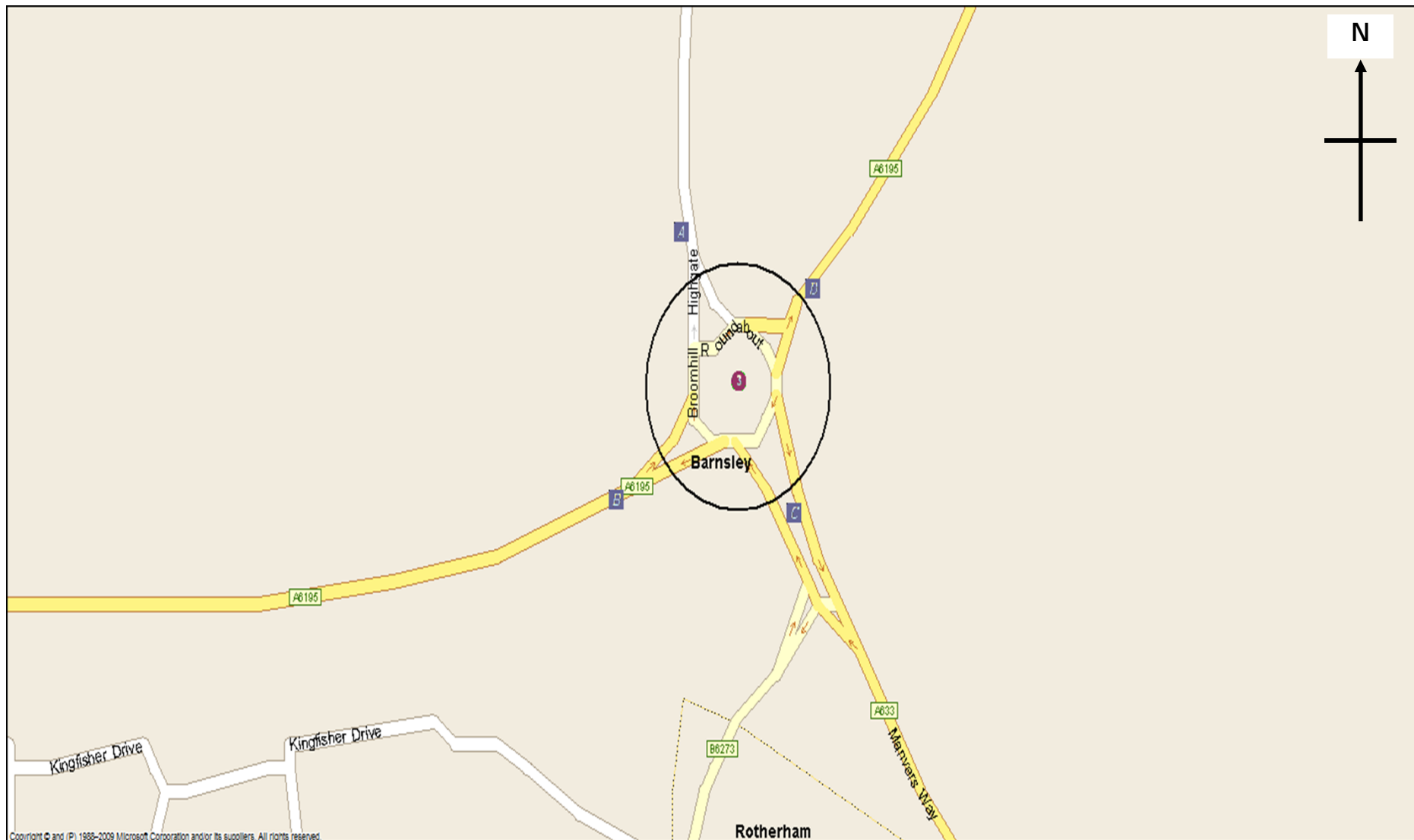
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	Site / Location: Site 1 - Hollygrove Rbt/A635 /Barnsley Road	Project No: 6098	Drawing No: 6098/01	Drawn By: CW
	Survey Date: Tuesday 15th March 2016	Project Name: GOLDTHORPE		
	Survey Times: 0730 - 1930 / 1630 - 1830	Drawing Title: Site Layout and Observed Movements		




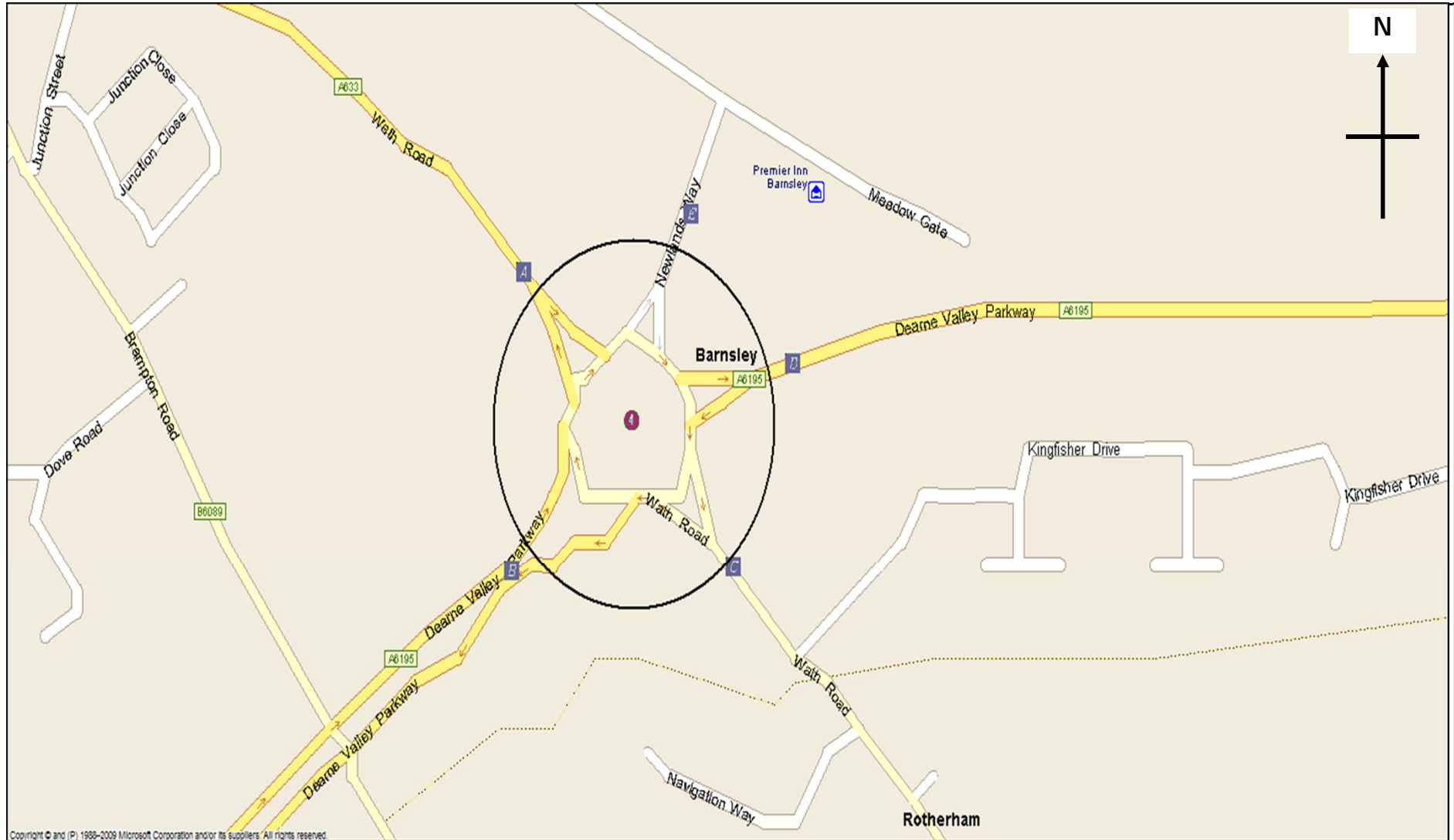
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	Site / Location: Site 2 - A635 Doncaster Road/A6195 Rotherham Road	Project No: 6098	Drawing No: 6098/02	Drawn By: CW
	Survey Date: Tuesday 15th March 2016	Project Name: GOLDTHORPE		
	Survey Times: 0730 - 1930 / 1630 - 1830	Drawing Title: Site Layout and Observed Movements		




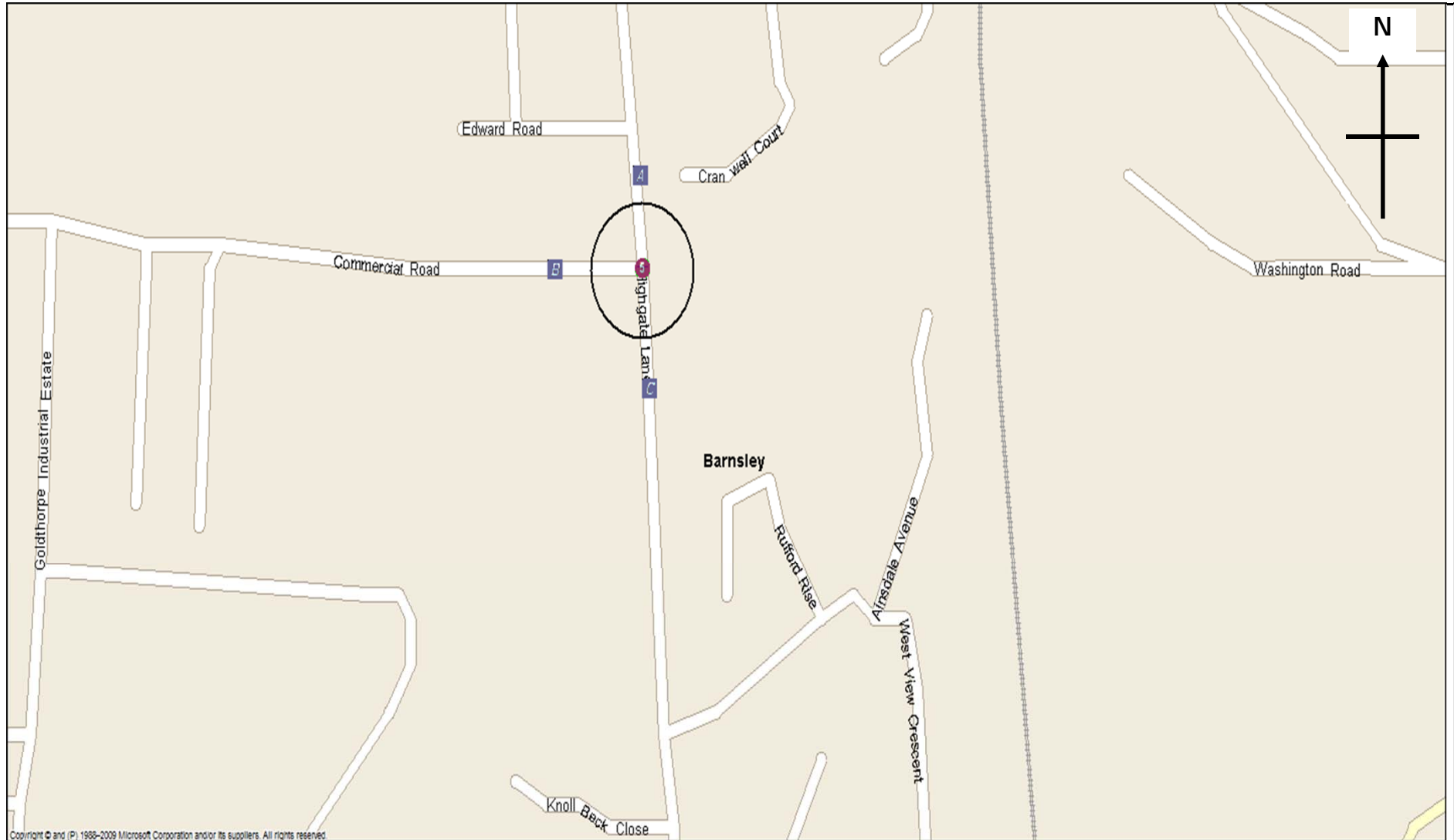
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	Site / Location: Site 3 - Broomhill R/bt A6195/A633 Manvers Way/Highgate	Project No: 6098	Drawing No: 6098/03	Drawn By: CW
	Survey Date: Tuesday 15th March 2016	Project Name: GOLDTHORPE		
	Survey Times: 0730 - 1930 / 1630 - 1830	Drawing Title: Site Layout and Observed Movements		




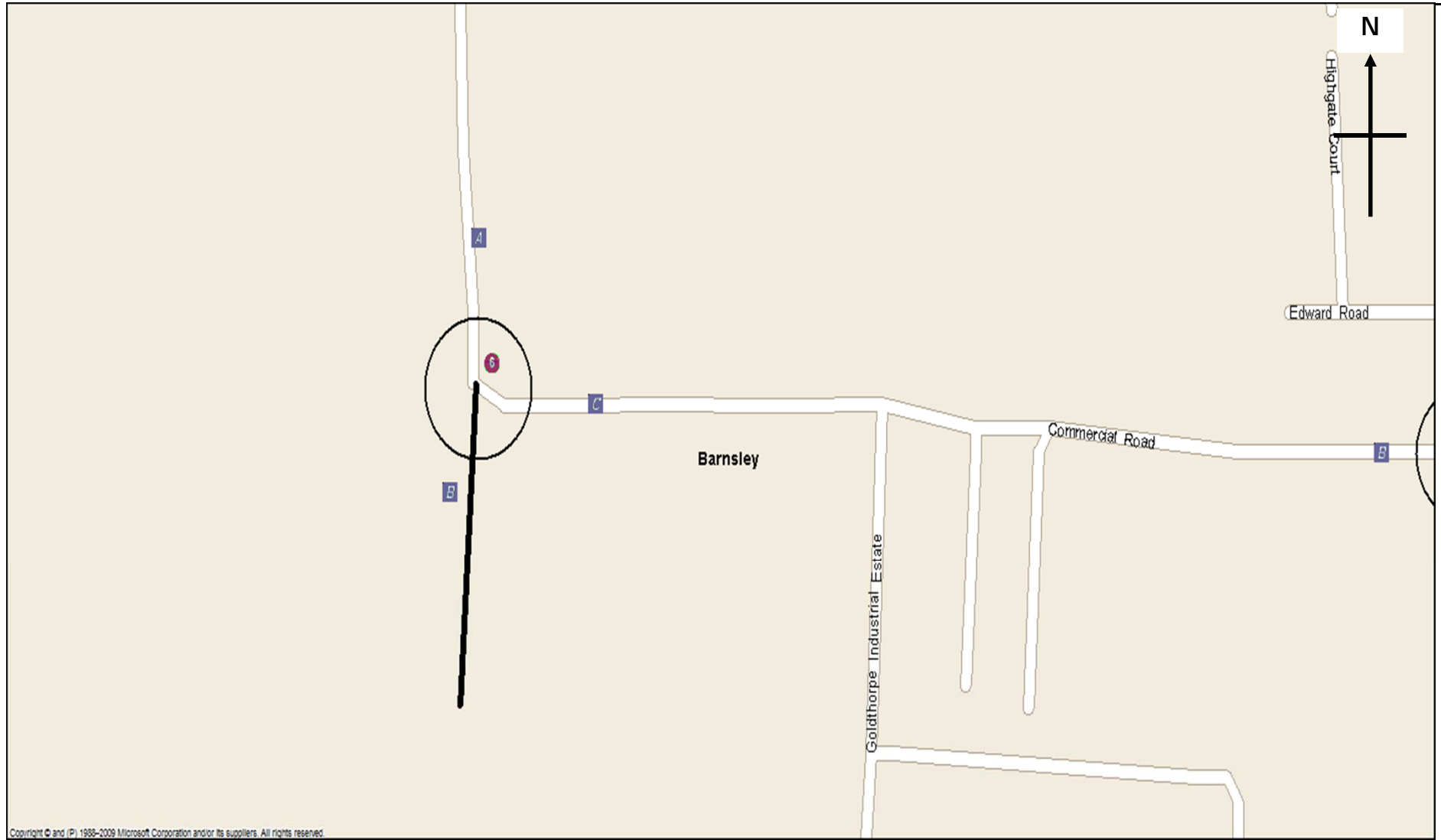
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	Site / Location: Site 4 - A6195/A633 Wath Road	Project No: 6098	Drawing No: 6098/04	Drawn By: CW
	Survey Date: Tuesday 15th March 2016	Project Name: GOLDTHORPE		
	Survey Times: 0730 - 1930 / 1630 - 1830	Drawing Title: Site Layout and Observed Movements		




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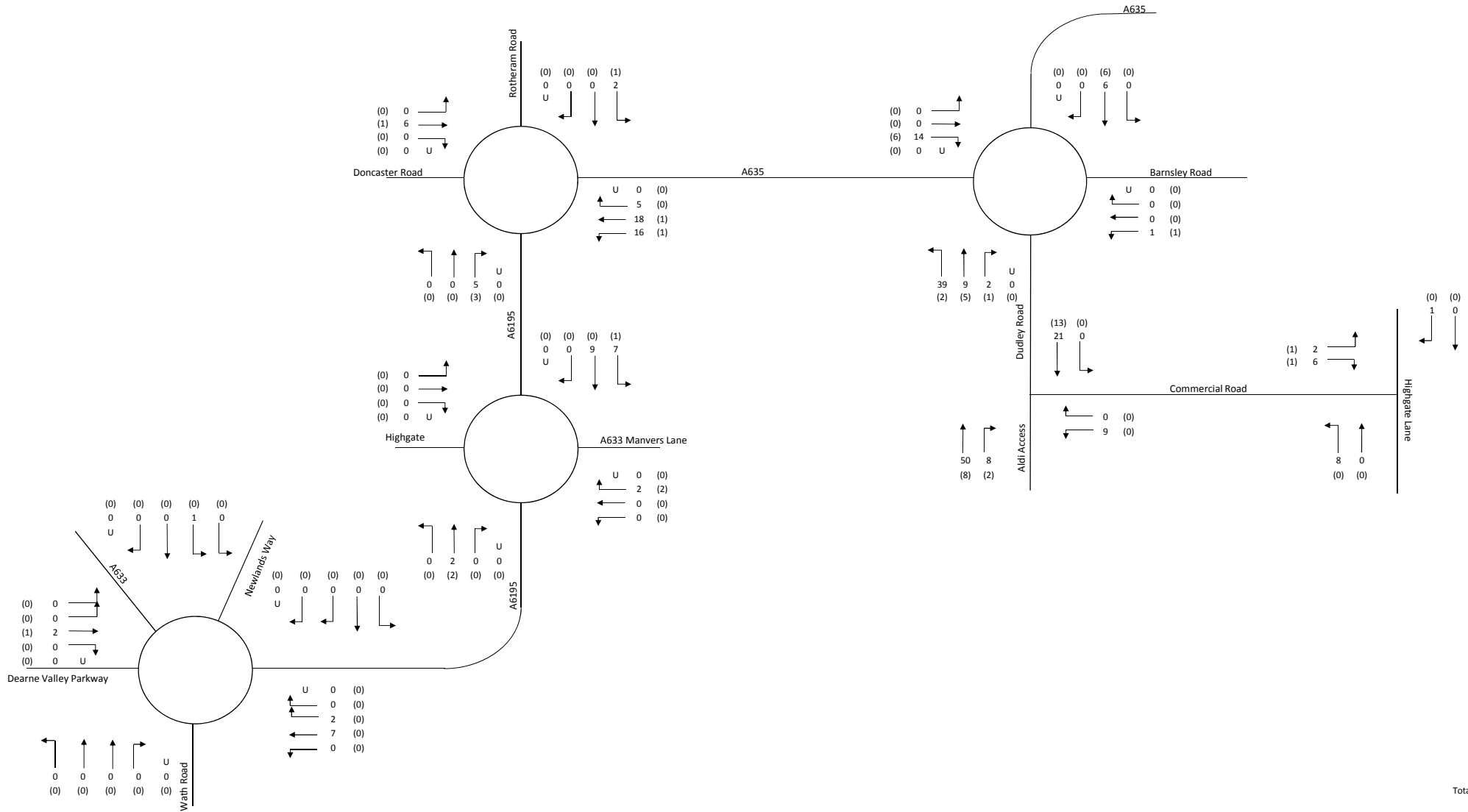
	Site / Location: Site 5 - Highgate Lane/Commercial Road	Project No: 6098	Drawing No: 6098/05	Drawn By: CW
	Survey Date: Tuesday 15th March 2016	Project Name: GOLDTHORPE		
	Survey Times: 0730 - 1930 / 1630 - 1830	Drawing Title: Site Layout and Observed Movements		



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	Site / Location: Site 6 - Commercial Road/Dudley Drive	Project No: 6098	Drawing No: 6098/06	Drawn By: CW
	Survey Date: Tuesday 15th March 2016	Project Name: GOLDTHORPE		
	Survey Times: 0730 - 1930 / 1630 - 1830	Drawing Title: Site Layout and Observed Movements		

Appendix 5
Existing Site Flows



Total Vehicles 0
HGVs (0)

Traffic Flow Diagrams: Darlington

PM Peak (16:30 - 17:30) -

Existing Site Flows



Appendix 6
TEMPRO Assessment

ASSESSMENT OF TRAFFIC GROWTH

TEMPRO DATABASE

8TH MARCH 2016

1.0 - Introduction

This technical note has been produced to set out the methodology used to determine traffic growth factors for the following geographical area:-

Geographical Area	Thurnscoe
--------------------------	-----------

2.0 - Method

Use of the TEMPRO software is generally recognised as the industry standard tool for determining traffic growth factors to apply to surveyed traffic movements in order to estimate the number of vehicles using roads and junctions at a future assessment year.

The TEMPRO software provides a local adjustment to the National Trip End Model (NTEM) to determine localised growth factors for geographical areas and this assessment is based on the following TEMPRO datasets (NTEM) and National Transport Model Forecasts (NTM) forecasts:-

	Version	Notes
TEMPRO Software	6.2	This is the most recent version of the TEMPRO database produced in December 2009
TEMPRO Dataset	NTEM 6.2	This is currently the definitive TEMPRO NTEM dataset for use. (http://www.dft.gov.uk/tempro)
NTM Model	National Transport Model Forecasts 2009 (2003 – 2035)	NTM Forecasts are produced yearly and this is the most recent dataset released March 2010.

3.0 - TEMPRO Parameters

The assessment is based on the following TEMPRO parameters:-

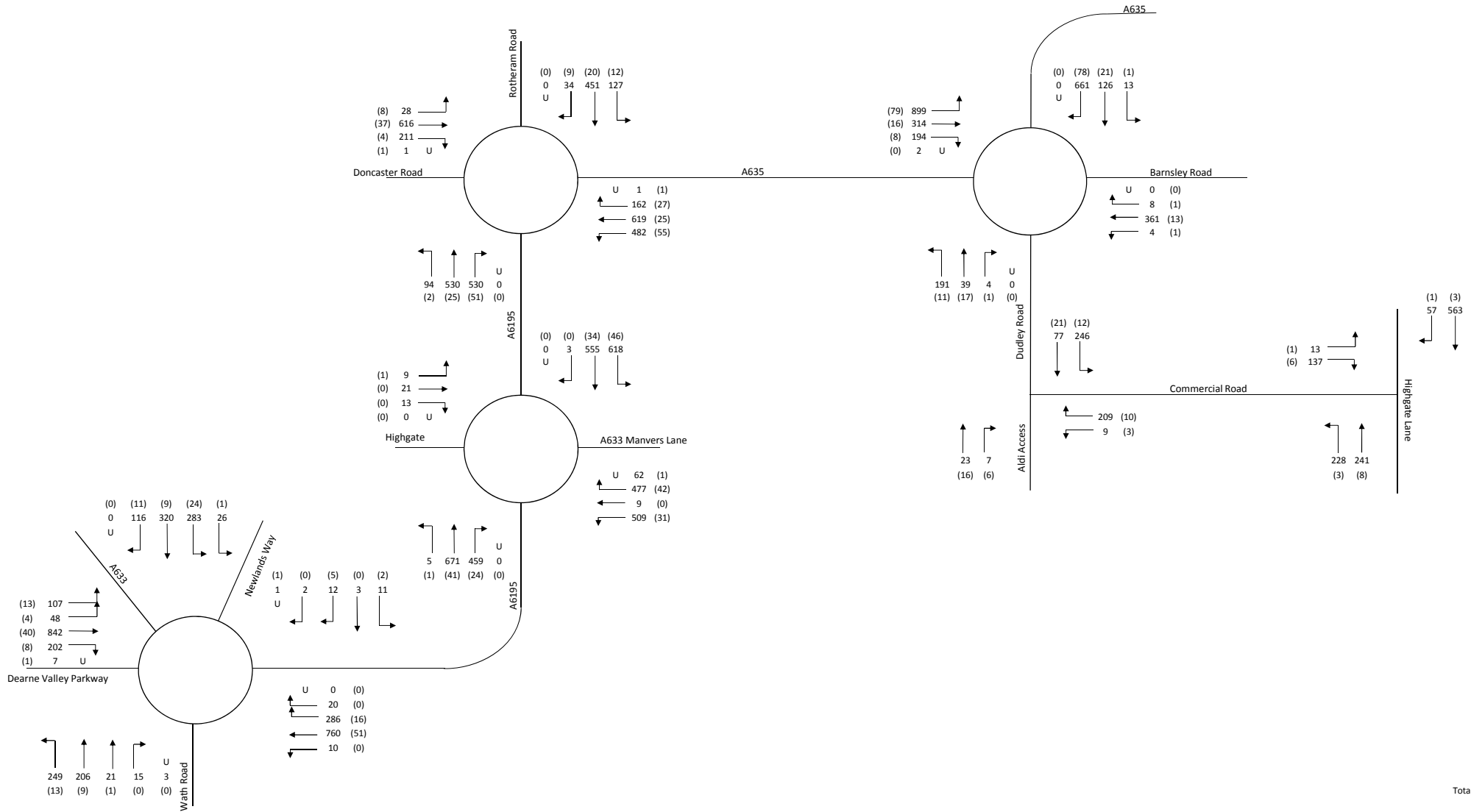
	Version	Notes
Trip End Type	Origin / Destination	Origin / Destination or Production / Attraction
Transport Mode	Car Driver	Walk / Cycle / Car Driver / Car Passenger / Bus or Coach / Rail or Underground – More than one option may be selected
Area Type	All	Urban / Rural / All
Road Type	All	Motorway / Trunk / Principal / Minor / All

4.0 - Growth Factors

The assessment of traffic growth using the TEMPRO software with the aforementioned parameters results in the following local growth factors for the geographical area set out at **Section 1.0**

Surveyed Period	Assessment Year	Time Period	Local Growth Factor
2016	2021	Weekday AM Peak Period (0700 – 0959)	1.0920
		Weekday PM Peak Period (1600 – 1859)	1.0948
		Average Weekday	1.0986

Appendix 7
2021 Base Flows



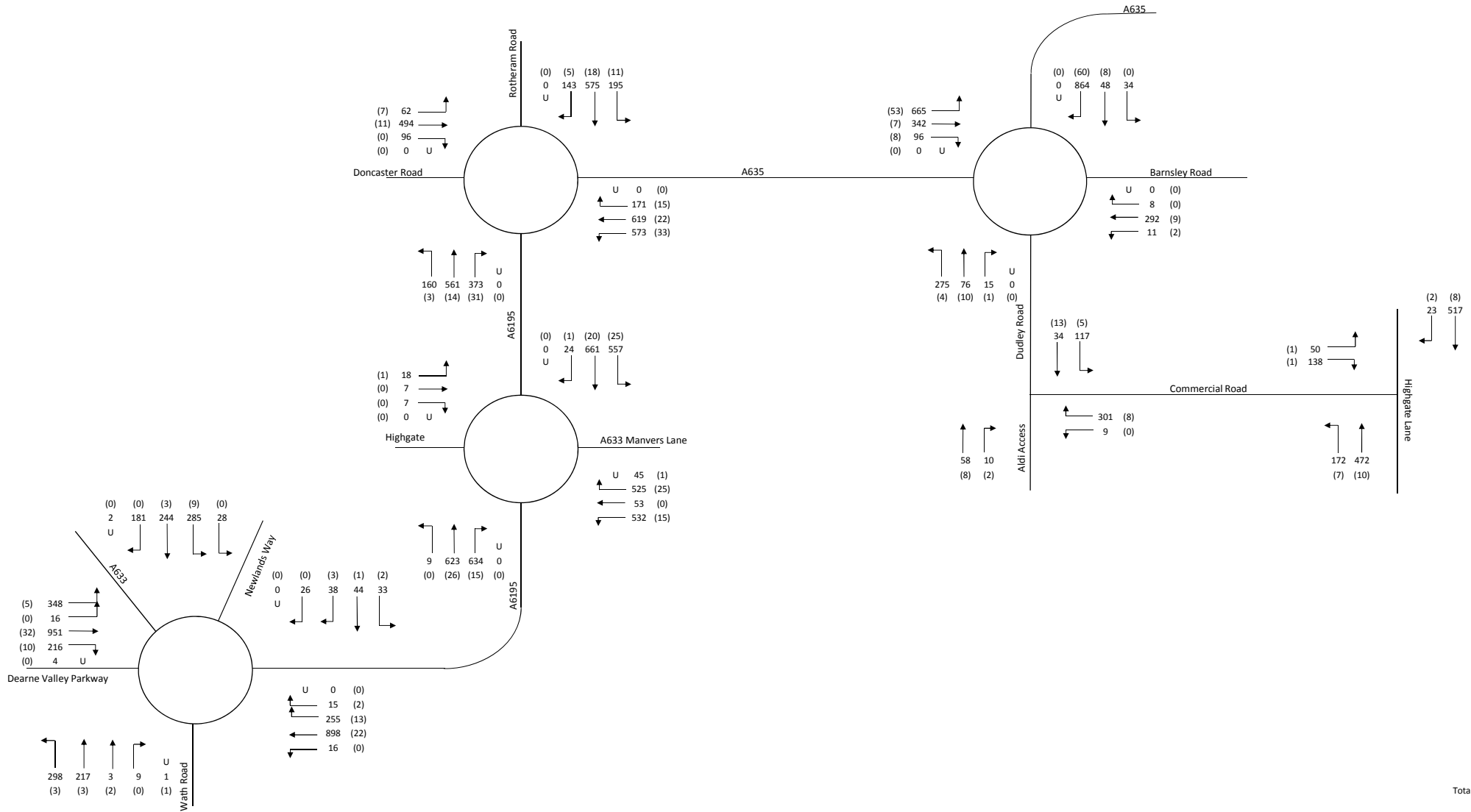
Total Vehicles 0
HGVs (0)

Traffic Flow Diagrams: Darlington

AM Peak (07:30 - 08:30) -

2021 Base Traffic Flows





Total Vehicles 0
HGVs (0)

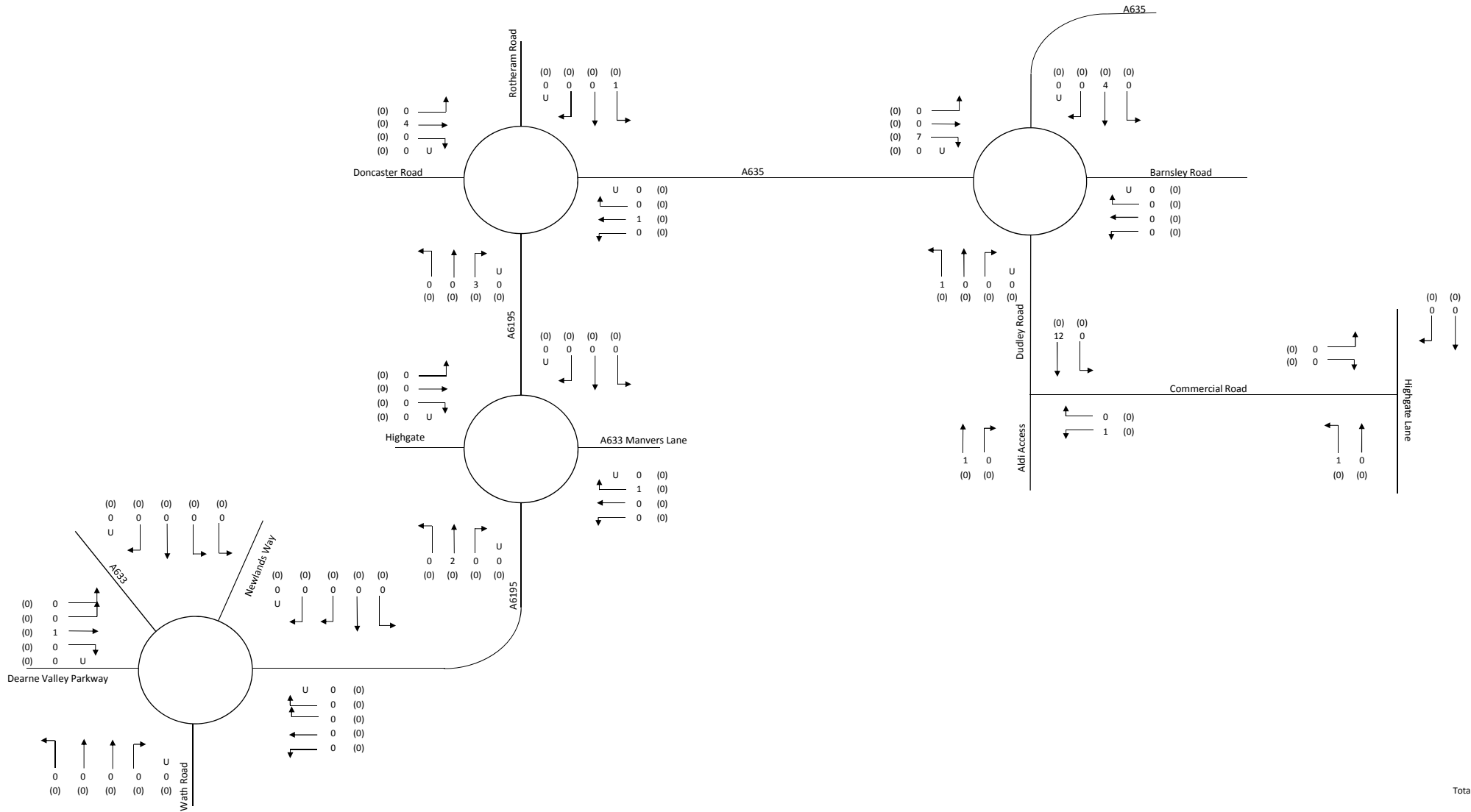
Traffic Flow Diagrams: Darlington

PM Peak (16:30 - 17:30) -

2021 Base Traffic Flows



Appendix 8
Development Flows



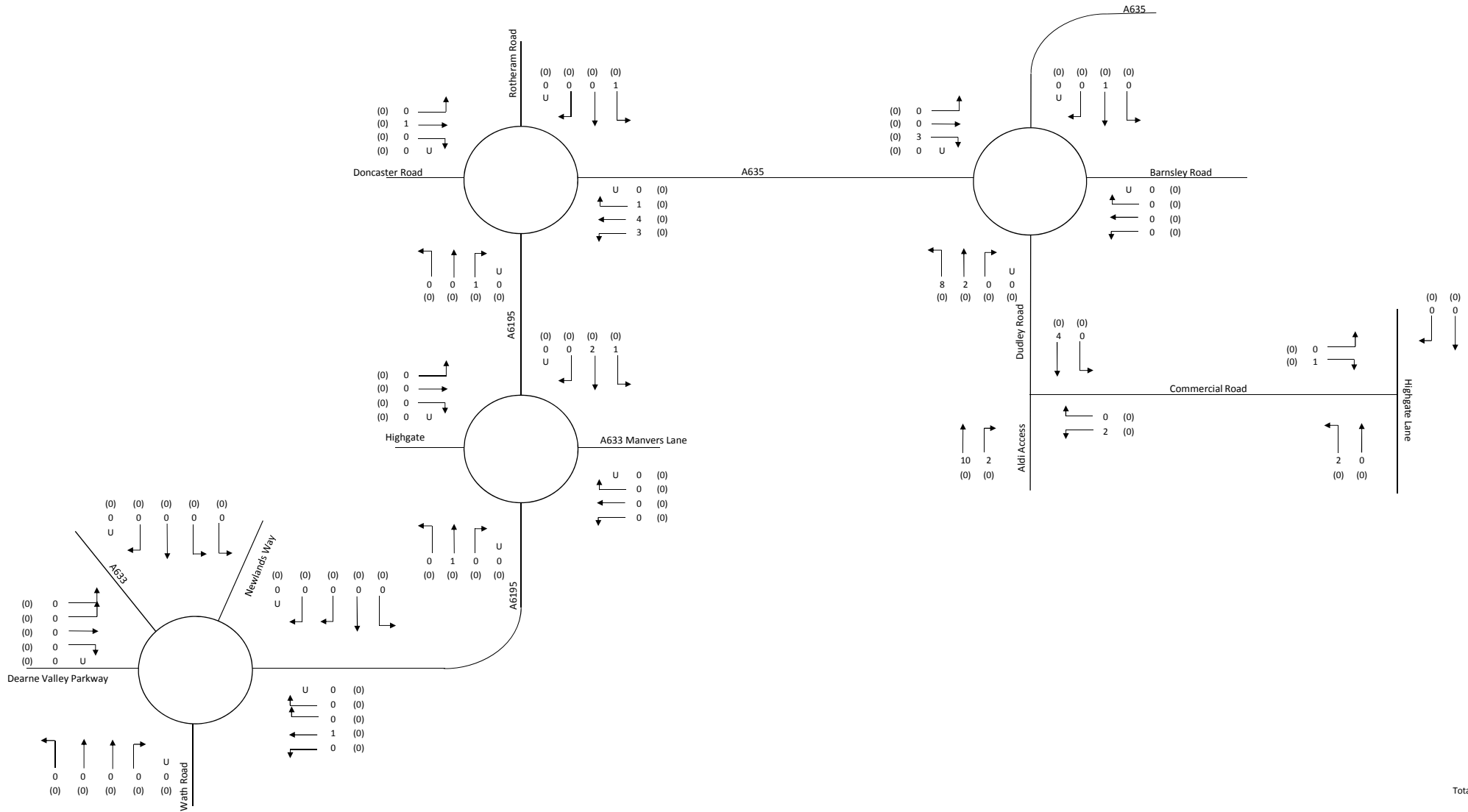
Total Vehicles 0
 HGVs (0)

Traffic Flow Diagrams: Darlington

AM Peak (07:30 - 08:30) -

Proposed Site Flows





Total Vehicles 0
 HGVs (0)

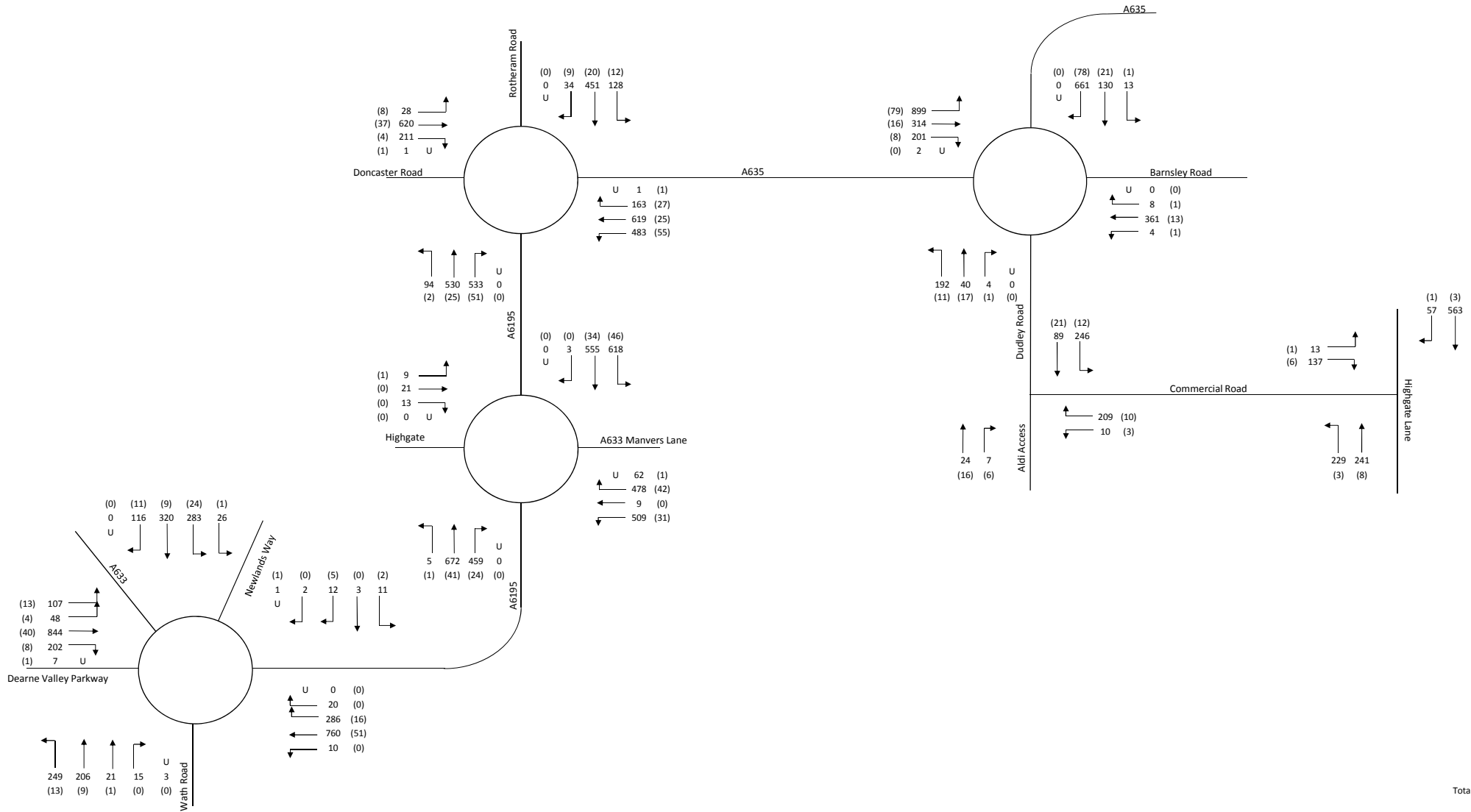
Traffic Flow Diagrams: Darlington

PM Peak (16:30 - 17:30) -

Proposed Site Flows



**Appendix 9
2021 Base Flows plus
Development**



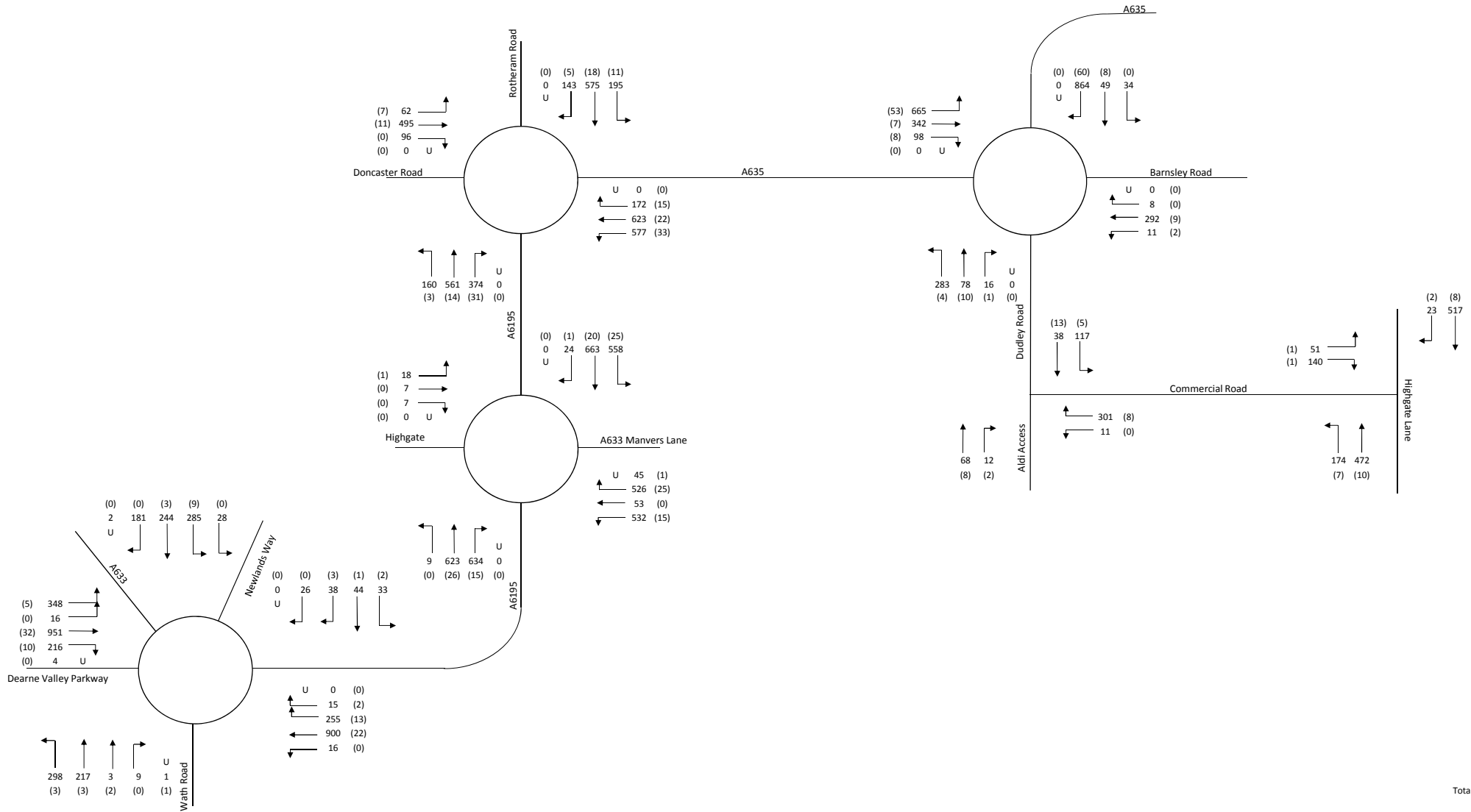
Total Vehicles 0
HGVs (0)

Traffic Flow Diagrams: Darlington

AM Peak (07:30 - 08:30) -

2021 Base Traffic Flows with Development





Total Vehicles 0
HGVs (0)

Traffic Flow Diagrams: Darlington

PM Peak (16:30 - 17:30) -

2021 Base Traffic Flows with Development



Appendix 10
Capacity Modelling Output
Files

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []
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Filename: A6195.A635.Rbt.NoAtoD.j9
Report generation date: Friday, 01, 04, 2016 12:29:45

Summary of junction performance

	AM				PM			
	Queue (Veh)	95% Queue (Veh)	Delay (s)	RFC	Queue (Veh)	95% Queue (Veh)	Delay (s)	RFC
Existing Junction Layout - 2016								
Arm 1	5.6	30.4	36.65	0.87	5.1	25.8	25.03	0.85
Arm 2	1.9	3.2	5.49	0.66	2.2	3.9	5.79	0.69
Arm 3	2.1	3.4	6.58	0.68	1.7	2.3	5.47	0.63
Arm 4	3.8	18.8	16.35	0.80	1.2	2.2	6.44	0.54
Existing Junction Layout - 2021								
Arm 1	22.7	65.0	123.19	1.04	16.0	65.2	70.34	0.98
Arm 2	2.6	5.0	6.95	0.73	3.2	8.2	7.83	0.77
Arm 3	3.2	10.5	9.16	0.76	2.4	3.9	7.16	0.71
Arm 4	9.9	52.3	40.52	0.93	1.6	2.4	8.30	0.62
Existing Junction Layout - 2021+Dev								
Arm 1	24.1	66.3	129.59	1.04	16.3	65.6	71.19	0.98
Arm 2	2.7	5.0	6.96	0.73	3.3	8.9	7.99	0.77
Arm 3	3.2	10.9	9.26	0.77	2.4	4.0	7.24	0.71
Arm 4	10.6	55.1	43.11	0.94	1.6	2.5	8.35	0.63

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

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

File summary

File Description

Title	A635 / A6195 Roundabout
Location	Goldthorpe
Site number	
Date	Thursday, 17, 03, 2016
Version	
Status	
Identifier	
Client	

Jobnumber	
Enumerator	CONNECT\dhough
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75	✓			0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2016	AM	ONE HOUR	07:15	08:45	15	✓
D2	2016	PM	ONE HOUR	16:15	17:45	15	✓
D3	2021	AM	ONE HOUR	07:15	08:45	15	✓
D4	2021	PM	ONE HOUR	16:15	17:45	15	✓
D5	2021+Dev	AM	ONE HOUR	07:15	08:45	15	✓
D6	2021+Dev	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Junction Layout	✓	100.000	100.000

Existing Junction Layout - 2016, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A6195 / A635	Standard Roundabout	1,2,3,4	12.82	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Rotheram Rd N	
2	A635 E	
3	A6195 S	
4	Doncaster Road W	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.87	5.22	12.9	35.0	60.0	37.9	
2	6.53	11.13	7.6	35.3	60.0	18.7	
3	5.31	9.37	11.9	51.4	60.0	8.0	
4	4.83	8.97	7.7	21.1	60.0	24.8	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.515	1468
2	0.729	2603
3	0.711	2430
4	0.608	1962

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2016	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	530	100.000
2		ONE HOUR	✓	1159	100.000
3		ONE HOUR	✓	1058	100.000
4		ONE HOUR	✓	786	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1	2	3	4	
From	1	0	117	413	0	
	2	149	1	442	567	
	3	485	487	0	86	
	4	26	566	193	1	

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	9	4	0
	2	17	100	12	4
	3	5	10	0	2
	4	27	6	2	100

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.87	36.65	5.6	30.4	E	486	730
2	0.66	5.49	1.9	3.2	A	1064	1595
3	0.68	6.58	2.1	3.4	A	971	1456
4	0.80	16.35	3.8	18.8	C	721	1082

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	399	100	935	903	0.442	396	495	0.0	0.8	7.056	A
2	873	218	454	2080	0.420	870	877	0.0	0.7	2.968	A
3	797	199	539	1891	0.421	794	785	0.0	0.7	3.272	A
4	592	148	842	1328	0.445	589	491	0.0	0.8	4.845	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	476	119	1119	807	0.590	474	592	0.8	1.4	10.729	B
2	1042	260	543	2017	0.517	1041	1050	0.7	1.1	3.681	A
3	951	238	645	1816	0.524	950	939	0.7	1.1	4.150	A
4	707	177	1007	1225	0.577	704	587	0.8	1.3	6.881	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	584	146	1363	679	0.859	569	724	1.4	4.9	29.662	D
2	1276	319	655	1939	0.658	1273	1278	1.1	1.9	5.375	A
3	1165	291	788	1713	0.680	1161	1139	1.1	2.1	6.472	A
4	865	216	1231	1086	0.797	856	718	1.3	3.6	15.124	C

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	584	146	1373	674	0.866	581	727	4.9	5.6	36.648	E
2	1276	319	666	1931	0.661	1276	1288	1.9	1.9	5.489	A
3	1165	291	790	1712	0.681	1165	1152	2.1	2.1	6.579	A
4	865	216	1235	1083	0.799	865	720	3.6	3.8	16.354	C

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	476	119	1133	800	0.596	493	596	5.6	1.5	12.300	B
2	1042	260	561	2005	0.520	1045	1065	1.9	1.1	3.762	A
3	951	238	648	1814	0.524	955	958	2.1	1.1	4.212	A
4	707	177	1013	1222	0.578	716	590	3.8	1.4	7.248	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	399	100	943	899	0.444	402	498	1.5	0.8	7.276	A
2	873	218	460	2075	0.420	874	885	1.1	0.7	3.001	A
3	797	199	541	1889	0.422	798	792	1.1	0.7	3.302	A
4	592	148	846	1326	0.446	594	493	1.4	0.8	4.938	A

Queue Variation Results for each time segment

07:15 - 07:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.78	0.55	1.00	1.40	1.45			N/A	N/A
2	0.72	0.55	1.00	1.40	1.45			N/A	N/A
3	0.72	0.55	1.00	1.40	1.45			N/A	N/A
4	0.80	0.55	1.00	1.40	1.45			N/A	N/A

07:30 - 07:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.40	0.05	0.65	3.37	4.97			N/A	N/A
2	1.06	0.06	0.66	2.23	3.18			N/A	N/A
3	1.09	0.05	0.64	2.37	3.42			N/A	N/A
4	1.34	0.05	0.52	3.26	4.92			N/A	N/A

07:45 - 08:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	4.91	0.05	0.46	13.89	25.11			N/A	N/A
2	1.89	0.03	0.26	1.89	1.89			N/A	N/A
3	2.08	0.03	0.27	2.08	2.08			N/A	N/A
4	3.63	0.03	0.32	6.03	18.79			N/A	N/A

08:00 - 08:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
-----	------------	-----------	-----------	-----------	-----------	--------------------	----------------	---	--

1	5.56	0.04	0.37	13.07	30.41			N/A	N/A
2	1.93	0.03	0.26	1.93	1.93			N/A	N/A
3	2.11	0.03	0.27	2.11	2.11			N/A	N/A
4	3.80	0.03	0.29	3.80	14.06			N/A	N/A

08:15 - 08:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.52	0.04	0.40	3.97	6.99			N/A	N/A
2	1.09	0.17	1.05	1.62	1.88			N/A	N/A
3	1.11	0.11	1.02	1.79	2.24			N/A	N/A
4	1.40	0.05	0.49	3.50	5.38			N/A	N/A

08:30 - 08:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.81	0.03	0.30	1.30	3.94			N/A	N/A
2	0.73	0.06	0.67	1.49	1.54			N/A	N/A
3	0.73	0.05	0.53	1.28	1.80			N/A	N/A
4	0.81	0.03	0.34	1.88	3.76			N/A	N/A

Existing Junction Layout - 2016, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A6195 / A635	Standard Roundabout	1,2,3,4	9.60	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2016	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
-----	------------	--------------	--------------	-------------------------	--------------------

1		ONE HOUR	✓	703	100.000
2		ONE HOUR	✓	1249	100.000
3		ONE HOUR	✓	999	100.000
4		ONE HOUR	✓	597	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1	2	3	4	
From	1	0	178	525	0	
	2	157	0	525	567	
	3	512	341	0	146	
	4	57	452	88	0	

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	
From	1	0	6	3	0	
	2	9	0	6	4	
	3	3	9	0	2	
	4	11	2	0	0	

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.85	25.03	5.1	25.8	D	645	968
2	0.69	5.79	2.2	3.9	A	1146	1719
3	0.63	5.47	1.7	2.3	A	917	1375
4	0.54	6.44	1.2	2.2	A	548	822

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	529	132	661	1074	0.493	525	545	0.0	1.0	6.522	A
2	940	235	458	2150	0.437	937	728	0.0	0.8	2.961	A
3	752	188	543	1938	0.388	750	852	0.0	0.6	3.022	A

4	449	112	758	1437	0.313	448	535	0.0	0.5	3.632	A
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16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	632	158	791	1006	0.628	629	652	1.0	1.6	9.483	A
2	1123	281	549	2086	0.538	1121	871	0.8	1.2	3.726	A
3	898	225	650	1862	0.482	897	1020	0.6	0.9	3.723	A
4	537	134	907	1344	0.399	536	640	0.5	0.7	4.449	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	774	194	967	915	0.846	762	797	1.6	4.8	21.953	C
2	1375	344	665	2003	0.687	1371	1063	1.2	2.1	5.663	A
3	1100	275	795	1759	0.625	1097	1242	0.9	1.6	5.413	A
4	657	164	1109	1218	0.540	655	783	0.7	1.2	6.376	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	774	194	970	913	0.848	773	799	4.8	5.1	25.026	D
2	1375	344	674	1997	0.689	1375	1069	2.1	2.2	5.786	A
3	1100	275	797	1758	0.626	1100	1252	1.6	1.7	5.473	A
4	657	164	1112	1216	0.541	657	785	1.2	1.2	6.442	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	632	158	795	1004	0.629	645	655	5.1	1.7	10.394	B
2	1123	281	561	2077	0.541	1127	879	2.2	1.2	3.804	A
3	898	225	653	1860	0.483	901	1035	1.7	0.9	3.766	A
4	537	134	911	1342	0.400	539	643	1.2	0.7	4.494	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	529	132	664	1072	0.494	532	547	1.7	1.0	6.710	A
2	940	235	464	2146	0.438	942	733	1.2	0.8	2.995	A
3	752	188	546	1936	0.388	753	860	0.9	0.6	3.047	A
4	449	112	762	1435	0.313	450	538	0.7	0.5	3.658	A

Queue Variation Results for each time segment

16:15 - 16:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.96	0.55	1.00	1.40	1.45			N/A	N/A
2	0.77	0.55	1.00	1.40	1.45			N/A	N/A
3	0.63	0.55	1.00	1.40	1.45			N/A	N/A
4	0.45	0.00	0.00	0.45	0.45			N/A	N/A

1	1.04	123.19	22.7	65.0	F	530	796
2	0.73	6.95	2.6	5.0	A	1160	1740
3	0.76	9.16	3.2	10.5	A	1059	1588
4	0.93	40.52	9.9	52.3	E	785	1178

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	435	109	1018	860	0.506	431	540	0.0	1.0	8.312	A
2	952	238	495	2052	0.464	948	954	0.0	0.9	3.252	A
3	869	217	587	1858	0.468	865	856	0.0	0.9	3.615	A
4	644	161	917	1282	0.503	640	536	0.0	1.0	5.576	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	520	130	1217	756	0.687	515	646	1.0	2.1	14.691	B
2	1136	284	592	1985	0.573	1134	1141	0.9	1.3	4.224	A
3	1037	259	703	1776	0.584	1035	1023	0.9	1.4	4.848	A
4	770	192	1097	1170	0.658	766	641	1.0	1.9	8.839	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	636	159	1468	625	1.018	589	788	2.1	13.9	65.649	F
2	1392	348	687	1919	0.725	1387	1371	1.3	2.6	6.706	A
3	1271	318	859	1664	0.763	1264	1214	1.4	3.1	8.835	A
4	942	236	1340	1019	0.925	917	783	1.9	8.4	29.781	D

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	636	159	1490	614	1.037	601	792	13.9	22.7	123.190	F
2	1392	348	701	1909	0.729	1391	1390	2.6	2.6	6.950	A
3	1271	318	862	1662	0.764	1270	1230	3.1	3.2	9.164	A
4	942	236	1346	1015	0.929	936	786	8.4	9.9	40.521	E

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	520	130	1256	736	0.706	600	652	22.7	2.6	39.381	E
2	1136	284	667	1932	0.588	1141	1189	2.6	1.4	4.578	A
3	1037	259	707	1773	0.585	1044	1101	3.2	1.4	4.990	A
4	770	192	1106	1164	0.661	801	645	9.9	2.0	10.743	B

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	435	109	1028	855	0.509	441	543	2.6	1.1	8.829	A
2	952	238	505	2045	0.465	954	964	1.4	0.9	3.307	A
3	869	217	591	1855	0.468	871	868	1.4	0.9	3.663	A
4	644	161	923	1278	0.504	648	539	2.0	1.0	5.748	A

Queue Variation Results for each time segment

07:15 - 07:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.00	0.21	1.02	1.31	1.68			N/A	N/A
2	0.86	0.55	1.00	1.40	1.45			N/A	N/A
3	0.87	0.55	1.00	1.40	1.45			N/A	N/A
4	1.00	0.53	1.02	1.15	1.15			N/A	N/A

07:30 - 07:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	2.09	0.05	0.54	5.60	8.83			N/A	N/A
2	1.33	0.05	0.49	3.26	4.97			N/A	N/A
3	1.39	0.05	0.47	3.51	5.48			N/A	N/A
4	1.87	0.05	0.46	4.99	8.23			N/A	N/A

07:45 - 08:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	13.88	0.82	9.34	31.06	40.35			N/A	N/A
2	2.57	0.03	0.27	2.57	4.22			N/A	N/A
3	3.10	0.03	0.29	3.10	10.49			N/A	N/A
4	8.35	0.07	1.14	24.19	38.64			N/A	N/A

08:00 - 08:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	22.72	1.04	15.97	50.40	64.97			N/A	N/A
2	2.64	0.03	0.27	2.64	2.64			N/A	N/A
3	3.17	0.03	0.27	3.17	3.72			N/A	N/A
4	9.92	0.05	0.48	28.05	52.31			N/A	N/A

08:15 - 08:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	2.61	0.04	0.38	6.76	13.67			N/A	N/A
2	1.44	0.11	1.17	2.70	3.54			N/A	N/A
3	1.43	0.07	0.91	3.15	4.49			N/A	N/A
4	2.01	0.04	0.38	5.30	10.04			N/A	N/A

08:30 - 08:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.06	0.03	0.28	1.06	3.04			N/A	N/A
2	0.88	0.05	0.48	1.85	2.75			N/A	N/A

3	0.89	0.04	0.40	2.07	3.46			N/A	N/A
4	1.03	0.03	0.29	1.03	4.67			N/A	N/A

Existing Junction Layout - 2021, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A6195 / A635	Standard Roundabout	1,2,3,4	20.06	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2021	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	770	100.000
2		ONE HOUR	✓	1363	100.000
3		ONE HOUR	✓	1094	100.000
4		ONE HOUR	✓	652	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1	2	3	4
From	1	0	195	575	0
	2	171	0	573	619
	3	561	373	0	160
	4	62	494	96	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	6	3	0
	2	9	0	6	4
	3	3	8	0	2
	4	11	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.98	70.34	16.0	65.2	F	707	1060
2	0.77	7.83	3.2	8.2	A	1251	1876
3	0.71	7.16	2.4	3.9	A	1004	1506
4	0.62	8.30	1.6	2.4	A	598	897

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	580	145	722	1042	0.556	575	596	0.0	1.2	7.629	A
2	1026	257	501	2120	0.484	1022	796	0.0	0.9	3.270	A
3	824	206	593	1904	0.433	821	931	0.0	0.8	3.313	A
4	491	123	829	1393	0.352	489	584	0.0	0.5	3.971	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	692	173	864	968	0.715	688	713	1.2	2.4	12.618	B
2	1225	306	600	2050	0.598	1223	952	0.9	1.5	4.344	A
3	983	246	709	1821	0.540	982	1114	0.8	1.2	4.282	A
4	586	147	992	1291	0.454	585	699	0.5	0.8	5.087	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	848	212	1056	869	0.976	809	871	2.4	12.0	44.822	E
2	1501	375	710	1971	0.761	1494	1156	1.5	3.1	7.444	A
3	1205	301	866	1709	0.705	1200	1338	1.2	2.3	7.007	A
4	718	179	1212	1154	0.622	715	854	0.8	1.6	8.138	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	848	212	1060	867	0.978	832	874	12.0	16.0	70.338	F
2	1501	375	727	1959	0.766	1500	1165	3.1	3.2	7.827	A
3	1205	301	870	1707	0.706	1204	1357	2.3	2.4	7.164	A
4	718	179	1216	1151	0.624	718	857	1.6	1.6	8.302	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	692	173	870	965	0.717	746	717	16.0	2.7	20.050	C
2	1225	306	644	2018	0.607	1232	972	3.2	1.6	4.614	A
3	983	246	714	1817	0.541	988	1161	2.4	1.2	4.366	A
4	586	147	998	1287	0.455	589	704	1.6	0.8	5.181	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	580	145	727	1040	0.558	585	599	2.7	1.3	8.019	A
2	1026	257	510	2114	0.485	1029	802	1.6	1.0	3.326	A
3	824	206	596	1901	0.433	825	942	1.2	0.8	3.352	A
4	491	123	834	1390	0.353	492	588	0.8	0.5	4.015	A

Queue Variation Results for each time segment

16:15 - 16:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.23	0.51	1.16	1.67	1.88			N/A	N/A
2	0.93	0.55	1.00	1.40	1.45			N/A	N/A
3	0.76	0.55	1.00	1.40	1.45			N/A	N/A
4	0.54	0.54	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	2.39	0.05	0.66	6.47	10.15			N/A	N/A
2	1.47	0.05	0.45	3.79	6.06			N/A	N/A
3	1.16	0.05	0.56	2.69	3.93			N/A	N/A
4	0.82	0.07	0.78	1.25	1.71			N/A	N/A

16:45 - 17:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	11.97	0.19	5.67	30.88	43.12			N/A	N/A
2	3.08	0.03	0.28	3.08	8.19			N/A	N/A
3	2.33	0.03	0.27	2.33	3.48			N/A	N/A
4	1.61	0.03	0.27	1.61	1.61			N/A	N/A

17:00 - 17:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
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1	16.04	0.13	5.52	44.46	65.24			N/A	N/A
2	3.20	0.03	0.27	3.20	3.20			N/A	N/A
3	2.37	0.03	0.27	2.37	2.37			N/A	N/A
4	1.63	0.03	0.27	1.63	2.43			N/A	N/A

17:15 - 17:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	2.69	0.04	0.38	6.99	14.05			N/A	N/A
2	1.56	0.08	1.09	3.33	4.58			N/A	N/A
3	1.19	0.09	1.02	2.01	2.76			N/A	N/A
4	0.84	0.10	0.88	1.49	1.51			N/A	N/A

17:30 - 17:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.28	0.03	0.29	1.40	5.38			N/A	N/A
2	0.95	0.04	0.43	2.23	3.55			N/A	N/A
3	0.77	0.05	0.47	1.55	2.14			N/A	N/A
4	0.55	0.04	0.45	1.35	1.47			N/A	N/A

Existing Junction Layout - 2021+Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A6195 / A635	Standard Roundabout	1,2,3,4	33.74	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2021+Dev	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
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1		ONE HOUR	✓	579	100.000
2		ONE HOUR	✓	1266	100.000
3		ONE HOUR	✓	1157	100.000
4		ONE HOUR	✓	860	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1	2	3	4	
From	1	0	128	451	0	
	2	163	1	483	619	
	3	530	533	0	94	
	4	28	620	211	1	

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	
From	1	0	9	4	0	
	2	17	100	12	4	
	3	5	10	0	2	
	4	27	6	2	100	

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	1.04	129.59	24.1	66.3	F	531	797
2	0.73	6.96	2.7	5.0	A	1162	1743
3	0.77	9.26	3.2	10.9	A	1062	1593
4	0.94	43.11	10.6	55.1	E	789	1184

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	436	109	1023	858	0.508	432	541	0.0	1.0	8.377	A
2	953	238	495	2052	0.464	950	960	0.0	0.9	3.257	A
3	871	218	588	1857	0.469	868	857	0.0	0.9	3.626	A

4	647	162	920	1280	0.506	643	536	0.0	1.0	5.620	A
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07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	521	130	1224	753	0.691	516	647	1.0	2.1	14.930	B
2	1138	285	592	1985	0.573	1136	1148	0.9	1.3	4.233	A
3	1040	260	704	1775	0.586	1038	1024	0.9	1.4	4.872	A
4	773	193	1101	1168	0.662	770	641	1.0	1.9	8.964	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	637	159	1474	622	1.025	588	789	2.1	14.5	67.906	F
2	1394	348	685	1920	0.726	1389	1377	1.3	2.6	6.717	A
3	1274	318	860	1664	0.766	1267	1213	1.4	3.1	8.923	A
4	947	237	1344	1016	0.932	919	783	1.9	8.8	31.022	D

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	637	159	1497	610	1.045	599	793	14.5	24.1	129.589	F
2	1394	348	698	1910	0.730	1394	1398	2.6	2.7	6.956	A
3	1274	318	863	1661	0.767	1274	1229	3.1	3.2	9.263	A
4	947	237	1351	1012	0.936	940	786	8.8	10.6	43.107	E

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	521	130	1264	732	0.711	606	653	24.1	2.7	44.004	E
2	1138	285	671	1929	0.590	1143	1199	2.7	1.5	4.606	A
3	1040	260	708	1772	0.587	1047	1106	3.2	1.4	5.014	A
4	773	193	1110	1162	0.665	807	645	10.6	2.1	11.097	B

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	436	109	1033	852	0.511	442	544	2.7	1.1	8.918	A
2	953	238	505	2045	0.466	955	971	1.5	0.9	3.313	A
3	871	218	592	1855	0.470	873	869	1.4	0.9	3.678	A
4	647	162	926	1276	0.507	651	539	2.1	1.0	5.798	A

Queue Variation Results for each time segment

07:15 - 07:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.01	0.19	1.02	1.38	1.73			N/A	N/A
2	0.86	0.55	1.00	1.40	1.45			N/A	N/A
3	0.88	0.55	1.00	1.40	1.45			N/A	N/A
4	1.01	0.52	1.03	1.34	1.34			N/A	N/A

1	0.98	71.19	16.3	65.6	F	707	1060
2	0.77	7.99	3.3	8.9	A	1259	1888
3	0.71	7.24	2.4	4.0	A	1005	1507
4	0.63	8.35	1.6	2.5	A	599	899

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	580	145	724	1041	0.557	575	596	0.0	1.2	7.641	A
2	1033	258	501	2120	0.487	1029	797	0.0	0.9	3.291	A
3	824	206	596	1901	0.434	821	934	0.0	0.8	3.323	A
4	492	123	830	1392	0.353	489	587	0.0	0.5	3.978	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	692	173	866	967	0.716	688	713	1.2	2.4	12.658	B
2	1233	308	600	2050	0.602	1231	954	0.9	1.5	4.387	A
3	984	246	713	1818	0.542	983	1117	0.8	1.2	4.302	A
4	587	147	993	1290	0.455	586	703	0.5	0.8	5.102	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	848	212	1058	868	0.977	809	872	2.4	12.1	45.173	E
2	1511	378	709	1972	0.766	1504	1158	1.5	3.2	7.591	A
3	1206	301	871	1705	0.707	1201	1342	1.2	2.4	7.074	A
4	719	180	1214	1153	0.624	716	858	0.8	1.6	8.183	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	848	212	1062	865	0.980	831	875	12.1	16.3	71.185	F
2	1511	378	726	1959	0.771	1510	1167	3.2	3.3	7.994	A
3	1206	301	875	1703	0.708	1205	1361	2.4	2.4	7.238	A
4	719	180	1219	1150	0.625	719	862	1.6	1.6	8.351	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	692	173	872	964	0.718	746	718	16.3	2.7	20.301	C
2	1233	308	644	2018	0.611	1240	974	3.3	1.6	4.668	A
3	984	246	719	1814	0.543	989	1166	2.4	1.2	4.390	A
4	587	147	1000	1286	0.456	590	708	1.6	0.8	5.195	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	580	145	728	1039	0.558	585	600	2.7	1.3	8.036	A
2	1033	258	510	2114	0.489	1035	804	1.6	1.0	3.345	A
3	824	206	600	1899	0.434	826	945	1.2	0.8	3.361	A
4	492	123	835	1389	0.354	493	591	0.8	0.6	4.021	A

Queue Variation Results for each time segment

16:15 - 16:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.23	0.51	1.16	1.68	1.88			N/A	N/A
2	0.94	0.55	1.00	1.40	1.45			N/A	N/A
3	0.76	0.55	1.00	1.40	1.45			N/A	N/A
4	0.54	0.54	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	2.40	0.05	0.66	6.49	10.19			N/A	N/A
2	1.49	0.05	0.45	3.87	6.25			N/A	N/A
3	1.17	0.05	0.55	2.71	3.96			N/A	N/A
4	0.83	0.07	0.78	1.27	1.73			N/A	N/A

16:45 - 17:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	12.09	0.20	5.80	31.04	43.23			N/A	N/A
2	3.16	0.03	0.28	3.16	8.92			N/A	N/A
3	2.35	0.03	0.27	2.35	3.68			N/A	N/A
4	1.62	0.03	0.27	1.62	1.62			N/A	N/A

17:00 - 17:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	16.26	0.14	5.78	44.89	65.61			N/A	N/A
2	3.29	0.03	0.27	3.29	3.29			N/A	N/A
3	2.39	0.03	0.27	2.39	2.39			N/A	N/A
4	1.65	0.03	0.27	1.65	2.46			N/A	N/A

17:15 - 17:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	2.70	0.04	0.38	7.02	14.12			N/A	N/A
2	1.59	0.08	1.08	3.46	4.76			N/A	N/A
3	1.20	0.09	1.02	2.06	2.80			N/A	N/A
4	0.85	0.10	0.88	1.50	1.53			N/A	N/A

17:30 - 17:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.29	0.03	0.29	1.39	5.37			N/A	N/A
2	0.96	0.04	0.42	2.30	3.66			N/A	N/A

3	0.77	0.05	0.47	1.57	2.19			N/A	N/A
4	0.55	0.04	0.45	1.35	1.48			N/A	N/A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []
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Filename: A6195.A633.Rbt.j9

Report generation date: Friday, 01, 04, 2016 12:32:14

Summary of junction performance

	AM				PM			
	Queue (Veh)	95% Queue (Veh)	Delay (s)	RFC	Queue (Veh)	95% Queue (Veh)	Delay (s)	RFC
Existing Junction Layout - 2016								
Arm 1	2.8	7.3	8.52	0.74	3.7	15.7	10.99	0.79
Arm 2	1.4	1.7	4.66	0.58	1.7	2.6	5.41	0.64
Arm 3	2.6	6.3	8.36	0.73	4.2	19.2	12.08	0.81
Arm 4	0.1	0.5	4.93	0.06	0.0	0.5	5.36	0.04
Existing Junction Layout - 2021								
Arm 1	4.4	21.1	12.72	0.82	7.4	37.5	20.46	0.89
Arm 2	1.8	2.8	5.64	0.65	2.5	4.3	7.04	0.71
Arm 3	4.1	18.9	12.15	0.81	8.9	48.7	24.35	0.91
Arm 4	0.1	0.5	5.69	0.07	0.1	0.5	6.33	0.06
Existing Junction Layout - 2021+Dev								
Arm 1	4.4	21.1	12.72	0.82	7.5	38.6	20.81	0.89
Arm 2	1.8	2.8	5.65	0.65	2.5	4.4	7.07	0.71
Arm 3	4.1	19.1	12.23	0.81	8.9	48.9	24.45	0.91
Arm 4	0.1	0.5	5.70	0.07	0.1	0.5	6.34	0.06

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

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

File summary

File Description

Title	A633 / A6195 Roundabout
Location	Goldthorpe
Site number	
Date	Thursday, 17, 03, 2016
Version	
Status	
Identifier	
Client	

Jobnumber	
Enumerator	CONNECT.dhough
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75	✓			0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2016	AM	ONE HOUR	07:15	08:45	15	✓
D2	2016	PM	ONE HOUR	16:15	17:45	15	✓
D3	2021	AM	ONE HOUR	07:15	08:45	15	✓
D4	2021	PM	ONE HOUR	16:15	17:45	15	✓
D5	2021+Dev	AM	ONE HOUR	07:15	08:45	15	✓
D6	2021+Dev	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Junction Layout	✓	100.000	100.000

Existing Junction Layout - 2016, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A6195 / A633	Standard Roundabout	1,2,3,4	7.22	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A6195 N	
2	A633 E	
3	A6195 S	
4	Highgate	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	4.65	9.33	9.4	38.1	60.7	16.9	
2	6.51	7.54	27.3	35.4	60.7	18.9	
3	5.17	9.34	8.4	34.5	60.7	39.3	
4	4.04	7.62	12.8	25.8	60.7	26.4	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.638	2089
2	0.687	2385
3	0.607	2032
4	0.583	1839

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2016	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	1077	100.000
2		ONE HOUR	✓	968	100.000
3		ONE HOUR	✓	1040	100.000
4		ONE HOUR	✓	39	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1	2	3	4	
From	1	0	566	508	3	
	2	437	57	466	8	
	3	615	420	0	5	
	4	8	19	12	0	

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	
From	1	0	7	6	0	
	2	9	2	6	0	
	3	6	5	0	20	
	4	13	0	0	0	

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.74	8.52	2.8	7.3	A	988	1482
2	0.58	4.66	1.4	1.7	A	888	1332
3	0.73	8.36	2.6	6.3	A	954	1431
4	0.06	4.93	0.1	0.5	A	36	54

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	811	203	381	1719	0.472	807	795	0.0	0.9	3.934	A
2	729	182	392	1962	0.371	726	796	0.0	0.6	2.908	A
3	783	196	379	1685	0.465	780	739	0.0	0.9	3.962	A
4	29	7	1146	1099	0.027	29	12	0.0	0.0	3.365	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	968	242	456	1672	0.579	966	951	0.9	1.4	5.087	A
2	870	218	469	1910	0.456	869	953	0.6	0.8	3.456	A
3	935	234	453	1639	0.571	933	885	0.9	1.3	5.089	A
4	35	9	1372	962	0.036	35	14	0.0	0.0	3.883	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	1186	296	557	1609	0.737	1180	1163	1.4	2.7	8.296	A
2	1066	266	573	1839	0.580	1064	1164	0.8	1.4	4.629	A
3	1145	286	555	1576	0.727	1140	1082	1.3	2.6	8.165	A
4	43	11	1677	777	0.055	43	18	0.0	0.1	4.902	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	1186	296	559	1608	0.738	1186	1167	2.7	2.8	8.519	A
2	1066	266	576	1837	0.580	1066	1169	1.4	1.4	4.665	A
3	1145	286	556	1575	0.727	1145	1085	2.6	2.6	8.358	A
4	43	11	1683	774	0.056	43	18	0.1	0.1	4.926	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	968	242	459	1670	0.580	974	957	2.8	1.4	5.209	A
2	870	218	473	1907	0.456	872	960	1.4	0.8	3.484	A
3	935	234	455	1638	0.571	940	890	2.6	1.3	5.196	A
4	35	9	1381	957	0.037	35	14	0.1	0.0	3.906	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	811	203	383	1717	0.472	813	800	1.4	0.9	3.987	A
2	729	182	395	1960	0.372	730	801	0.8	0.6	2.929	A
3	783	196	381	1684	0.465	785	744	1.3	0.9	4.013	A
4	29	7	1154	1095	0.027	29	12	0.0	0.0	3.381	A

Queue Variation Results for each time segment

07:15 - 07:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.89	0.55	1.00	1.40	1.45			N/A	N/A
2	0.59	0.55	1.00	1.40	1.45			N/A	N/A
3	0.86	0.55	1.00	1.40	1.45			N/A	N/A
4	0.03	0.00	0.00	0.03	0.03			N/A	N/A

07:30 - 07:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.36	0.05	0.56	3.29	4.93			N/A	N/A
2	0.83	0.07	0.79	1.28	1.73			N/A	N/A
3	1.31	0.05	0.61	3.08	4.63			N/A	N/A
4	0.04	0.03	0.25	0.45	0.48			N/A	N/A

07:45 - 08:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	2.71	0.03	0.28	2.71	7.32			N/A	N/A
2	1.36	0.03	0.26	1.36	1.36			N/A	N/A
3	2.57	0.03	0.28	2.57	6.35			N/A	N/A
4	0.06	0.03	0.26	0.46	0.49			N/A	N/A

08:00 - 08:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
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1	2.76	0.03	0.27	2.76	2.76			N/A	N/A
2	1.37	0.03	0.26	1.37	1.37			N/A	N/A
3	2.62	0.03	0.27	2.62	2.62			N/A	N/A
4	0.06	0.00	0.00	0.06	0.06			N/A	N/A

08:15 - 08:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.40	0.07	0.98	2.91	3.99			N/A	N/A
2	0.84	0.42	0.97	1.41	1.46			N/A	N/A
3	1.35	0.08	0.99	2.75	3.75			N/A	N/A
4	0.04	0.00	0.00	0.04	0.04			N/A	N/A

08:30 - 08:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.90	0.04	0.44	2.00	3.15			N/A	N/A
2	0.59	0.07	0.70	1.34	1.42			N/A	N/A
3	0.88	0.04	0.45	1.92	2.92			N/A	N/A
4	0.03	0.00	0.00	0.03	0.03			N/A	N/A

Existing Junction Layout - 2016, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A6195 / A633	Standard Roundabout	1,2,3,4	9.57	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2016	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
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1		ONE HOUR	✓	1136	100.000
2		ONE HOUR	✓	1055	100.000
3		ONE HOUR	✓	1156	100.000
4		ONE HOUR	✓	28	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1	2	3	4
From	1	0	509	605	22
	2	480	41	486	48
	3	569	579	0	8
	4	16	6	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	5	3	5
	2	5	2	3	0
	3	4	2	0	0
	4	6	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.79	10.99	3.7	15.7	B	1042	1564
2	0.64	5.41	1.7	2.6	A	968	1452
3	0.81	12.08	4.2	19.2	B	1061	1591
4	0.04	5.36	0.0	0.5	A	26	39

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	855	214	474	1716	0.498	851	798	0.0	1.0	4.143	A
2	794	199	474	1978	0.402	792	851	0.0	0.7	3.028	A
3	870	218	443	1696	0.513	866	823	0.0	1.0	4.318	A

4	21	5	1251	1045	0.020	21	58	0.0	0.0	3.514	A
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16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	1021	255	567	1658	0.616	1019	956	1.0	1.6	5.613	A
2	948	237	568	1914	0.495	947	1018	0.7	1.0	3.718	A
3	1039	260	531	1642	0.633	1037	984	1.0	1.7	5.917	A
4	25	6	1497	901	0.028	25	70	0.0	0.0	4.108	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	1251	313	691	1580	0.792	1243	1167	1.6	3.6	10.443	B
2	1162	290	692	1829	0.635	1159	1241	1.0	1.7	5.346	A
3	1273	318	649	1570	0.811	1263	1202	1.7	4.0	11.420	B
4	31	8	1827	709	0.043	31	86	0.0	0.0	5.309	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	1251	313	696	1577	0.793	1250	1172	3.6	3.7	10.992	B
2	1162	290	697	1826	0.636	1162	1249	1.7	1.7	5.414	A
3	1273	318	651	1569	0.811	1272	1208	4.0	4.2	12.085	B
4	31	8	1837	703	0.044	31	86	0.0	0.0	5.355	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	1021	255	573	1654	0.618	1030	964	3.7	1.6	5.841	A
2	948	237	574	1910	0.497	951	1029	1.7	1.0	3.765	A
3	1039	260	533	1641	0.633	1049	992	4.2	1.8	6.178	A
4	25	6	1511	893	0.028	25	70	0.0	0.0	4.148	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	855	214	477	1714	0.499	858	804	1.6	1.0	4.217	A
2	794	199	478	1975	0.402	796	857	1.0	0.7	3.056	A
3	870	218	446	1694	0.514	873	828	1.8	1.1	4.397	A
4	21	5	1260	1040	0.020	21	59	0.0	0.0	3.535	A

Queue Variation Results for each time segment

16:15 - 16:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.98	0.55	1.00	1.40	1.45			N/A	N/A
2	0.67	0.55	1.00	1.40	1.45			N/A	N/A
3	1.04	0.55	1.00	1.40	1.45			N/A	N/A
4	0.02	0.00	0.00	0.02	0.02			N/A	N/A

16:30 - 16:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.58	0.05	0.48	4.07	6.47			N/A	N/A
2	0.97	0.06	0.73	1.86	2.62			N/A	N/A
3	1.69	0.05	0.47	4.45	7.08			N/A	N/A
4	0.03	0.03	0.25	0.45	0.48			N/A	N/A

16:45 - 17:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	3.61	0.03	0.30	3.61	15.68			N/A	N/A
2	1.71	0.03	0.26	1.71	1.71			N/A	N/A
3	4.02	0.03	0.31	4.85	19.16			N/A	N/A
4	0.05	0.03	0.25	0.45	0.48			N/A	N/A

17:00 - 17:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	3.72	0.03	0.28	3.72	7.09			N/A	N/A
2	1.73	0.03	0.26	1.73	1.73			N/A	N/A
3	4.15	0.03	0.28	4.15	10.10			N/A	N/A
4	0.05	0.00	0.00	0.05	0.05			N/A	N/A

17:15 - 17:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.64	0.06	0.77	3.99	5.94			N/A	N/A
2	0.99	0.19	1.01	1.31	1.68			N/A	N/A
3	1.76	0.05	0.64	4.51	6.87			N/A	N/A
4	0.03	0.00	0.00	0.03	0.03			N/A	N/A

17:30 - 17:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.00	0.04	0.38	2.52	4.43			N/A	N/A
2	0.68	0.06	0.66	1.05	1.05			N/A	N/A
3	1.07	0.04	0.36	2.67	4.95			N/A	N/A
4	0.02	0.00	0.00	0.02	0.02			N/A	N/A

Existing Junction Layout - 2021, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A6195 / A633	Standard Roundabout	1,2,3,4	10.24	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2021	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	1176	100.000
2		ONE HOUR	✓	1057	100.000
3		ONE HOUR	✓	1135	100.000
4		ONE HOUR	✓	43	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1	2	3	4
From	1	0	618	555	3
	2	477	62	509	9
	3	671	459	0	5
	4	9	21	13	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	7	6	0
	2	9	2	6	0
	3	6	5	0	20
	4	13	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
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1	0.82	12.72	4.4	21.1	B	1079	1619
2	0.65	5.64	1.8	2.8	A	970	1455
3	0.81	12.15	4.1	18.9	B	1041	1562
4	0.07	5.69	0.1	0.5	A	39	59

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	885	221	416	1697	0.522	881	867	0.0	1.1	4.389	A
2	796	199	428	1938	0.411	793	869	0.0	0.7	3.136	A
3	854	214	413	1664	0.514	850	807	0.0	1.0	4.405	A
4	32	8	1251	1035	0.031	32	13	0.0	0.0	3.589	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	1057	264	498	1646	0.642	1054	1038	1.1	1.8	6.058	A
2	950	238	512	1881	0.505	949	1040	0.7	1.0	3.858	A
3	1020	255	495	1613	0.632	1018	966	1.0	1.7	6.019	A
4	39	10	1497	886	0.044	39	15	0.0	0.0	4.248	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	1295	324	607	1578	0.821	1285	1267	1.8	4.3	11.895	B
2	1164	291	624	1805	0.645	1161	1268	1.0	1.8	5.564	A
3	1250	312	605	1545	0.809	1241	1180	1.7	4.0	11.494	B
4	47	12	1827	686	0.069	47	19	0.0	0.1	5.634	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	1295	324	611	1575	0.822	1294	1274	4.3	4.4	12.723	B
2	1164	291	628	1802	0.646	1164	1277	1.8	1.8	5.641	A
3	1250	312	607	1544	0.809	1249	1185	4.0	4.1	12.154	B
4	47	12	1837	680	0.070	47	19	0.1	0.1	5.688	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	1057	264	503	1643	0.644	1068	1047	4.4	1.8	6.368	A
2	950	238	518	1876	0.506	953	1052	1.8	1.0	3.914	A
3	1020	255	497	1612	0.633	1030	975	4.1	1.8	6.283	A
4	39	10	1511	877	0.044	39	15	0.1	0.0	4.293	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	885	221	419	1695	0.522	888	873	1.8	1.1	4.479	A
2	796	199	431	1936	0.411	797	876	1.0	0.7	3.165	A
3	854	214	416	1662	0.514	857	813	1.8	1.1	4.488	A
4	32	8	1260	1030	0.031	32	13	0.0	0.0	3.612	A

Queue Variation Results for each time segment

07:15 - 07:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.08	0.55	1.00	1.40	1.45			N/A	N/A
2	0.69	0.55	1.00	1.40	1.45			N/A	N/A
3	1.05	0.55	1.00	1.40	1.45			N/A	N/A
4	0.03	0.00	0.00	0.03	0.03			N/A	N/A

07:30 - 07:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.76	0.05	0.47	4.68	7.53			N/A	N/A
2	1.01	0.06	0.72	1.96	2.80			N/A	N/A
3	1.69	0.05	0.48	4.44	7.01			N/A	N/A
4	0.05	0.03	0.25	0.45	0.48			N/A	N/A

07:45 - 08:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	4.27	0.03	0.32	5.91	21.07			N/A	N/A
2	1.79	0.03	0.26	1.79	1.79			N/A	N/A
3	3.97	0.03	0.31	4.77	18.90			N/A	N/A
4	0.07	0.03	0.26	0.47	0.49			N/A	N/A

08:00 - 08:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	4.44	0.03	0.28	4.44	12.20			N/A	N/A
2	1.81	0.03	0.26	1.81	1.81			N/A	N/A
3	4.10	0.03	0.28	4.10	9.94			N/A	N/A
4	0.07	0.00	0.00	0.07	0.07			N/A	N/A

08:15 - 08:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.84	0.05	0.59	4.78	7.40			N/A	N/A
2	1.03	0.17	1.02	1.49	1.80			N/A	N/A
3	1.76	0.05	0.64	4.51	6.86			N/A	N/A
4	0.05	0.00	0.00	0.05	0.05			N/A	N/A

08:30 - 08:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.10	0.04	0.36	2.73	5.26			N/A	N/A
2	0.70	0.06	0.66	1.37	1.37			N/A	N/A

3	1.07	0.04	0.36	2.67	4.94			N/A	N/A
4	0.03	0.00	0.00	0.03	0.03			N/A	N/A

Existing Junction Layout - 2021, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A6195 / A633	Standard Roundabout	1,2,3,4	17.47	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2021	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	1242	100.000
2		ONE HOUR	✓	1155	100.000
3		ONE HOUR	✓	1266	100.000
4		ONE HOUR	✓	32	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1	2	3	4	
From	1	0	557	661	24	
	2	525	45	532	53	
	3	623	634	0	9	
	4	18	7	7	0	

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	
From	1	0	5	3	5	
	2	5	2	3	0	
	3	4	2	0	0	
	4	6	0	0	0	

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.89	20.46	7.4	37.5	C	1140	1710
2	0.71	7.04	2.5	4.3	A	1060	1590
3	0.91	24.35	8.9	48.7	C	1162	1743
4	0.06	6.33	0.1	0.5	A	29	44

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	935	234	519	1688	0.554	930	874	0.0	1.2	4.721	A
2	870	217	518	1948	0.446	866	931	0.0	0.8	3.319	A
3	953	238	485	1670	0.571	948	899	0.0	1.3	4.949	A
4	24	6	1369	977	0.025	24	64	0.0	0.0	3.775	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	1117	279	621	1624	0.688	1113	1045	1.2	2.1	6.997	A
2	1038	260	620	1878	0.553	1037	1114	0.8	1.2	4.267	A
3	1138	285	581	1612	0.706	1134	1076	1.3	2.3	7.473	A
4	29	7	1638	820	0.035	29	77	0.0	0.0	4.547	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	1367	342	751	1541	0.887	1349	1270	2.1	6.7	17.299	C
2	1272	318	752	1789	0.711	1267	1349	1.2	2.4	6.842	A
3	1394	348	709	1533	0.909	1371	1309	2.3	8.0	19.982	C
4	35	9	1987	616	0.057	35	94	0.0	0.1	6.195	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	1367	342	761	1535	0.891	1365	1282	6.7	7.4	20.456	C
2	1272	318	760	1783	0.713	1271	1366	2.4	2.5	7.036	A
3	1394	348	712	1531	0.910	1390	1320	8.0	8.9	24.350	C
4	35	9	2008	604	0.058	35	95	0.1	0.1	6.331	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	1117	279	636	1614	0.692	1137	1063	7.4	2.3	7.844	A
2	1038	260	633	1869	0.555	1043	1140	2.5	1.3	4.380	A
3	1138	285	585	1609	0.707	1164	1092	8.9	2.5	8.520	A
4	29	7	1670	801	0.036	29	78	0.1	0.0	4.660	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	935	234	524	1685	0.555	939	881	2.3	1.3	4.857	A
2	870	217	523	1945	0.447	871	940	1.3	0.8	3.361	A
3	953	238	488	1668	0.571	958	906	2.5	1.3	5.098	A
4	24	6	1381	970	0.025	24	65	0.0	0.0	3.806	A

Queue Variation Results for each time segment

16:15 - 16:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.23	0.56	1.13	1.52	1.76			N/A	N/A
2	0.80	0.55	1.00	1.40	1.45			N/A	N/A
3	1.31	0.56	1.21	1.70	1.87			N/A	N/A
4	0.03	0.00	0.00	0.03	0.03			N/A	N/A

16:30 - 16:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	2.15	0.05	0.45	5.86	9.80			N/A	N/A
2	1.22	0.05	0.53	2.87	4.33			N/A	N/A
3	2.34	0.05	0.46	6.44	10.80			N/A	N/A
4	0.04	0.03	0.25	0.45	0.48			N/A	N/A

16:45 - 17:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	6.70	0.04	0.41	17.59	36.44			N/A	N/A
2	2.40	0.03	0.27	2.40	3.60			N/A	N/A
3	8.02	0.05	0.48	22.77	41.82			N/A	N/A
4	0.06	0.03	0.26	0.46	0.49			N/A	N/A

17:00 - 17:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	7.36	0.03	0.33	11.32	37.48			N/A	N/A
2	2.45	0.03	0.27	2.45	2.45			N/A	N/A
3	8.87	0.04	0.36	18.94	48.67			N/A	N/A
4	0.06	0.00	0.00	0.06	0.06			N/A	N/A

1	7.36	0.03	0.33	11.32	37.48			N/A	N/A
2	2.45	0.03	0.27	2.45	2.45			N/A	N/A
3	8.87	0.04	0.36	18.94	48.67			N/A	N/A
4	0.06	0.00	0.00	0.06	0.06			N/A	N/A

17:15 - 17:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	2.30	0.04	0.44	6.33	10.79			N/A	N/A
2	1.26	0.10	1.06	2.28	2.94			N/A	N/A
3	2.49	0.04	0.42	6.83	12.16			N/A	N/A
4	0.04	0.00	0.00	0.04	0.04			N/A	N/A

17:30 - 17:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.26	0.03	0.32	2.51	6.49			N/A	N/A
2	0.81	0.05	0.48	1.67	2.39			N/A	N/A
3	1.35	0.03	0.31	2.37	6.89			N/A	N/A
4	0.03	0.00	0.00	0.03	0.03			N/A	N/A

Existing Junction Layout - 2021+Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A6195 / A633	Standard Roundabout	1,2,3,4	10.27	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2021+Dev	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)

1		ONE HOUR	✓	1176	100.000
2		ONE HOUR	✓	1058	100.000
3		ONE HOUR	✓	1136	100.000
4		ONE HOUR	✓	43	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1	2	3	4
From	1	0	618	555	3
	2	478	62	509	9
	3	672	459	0	5
	4	9	21	13	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	7	6	0
	2	9	2	6	0
	3	6	5	0	20
	4	12	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.82	12.72	4.4	21.1	B	1079	1619
2	0.65	5.65	1.8	2.8	A	971	1456
3	0.81	12.23	4.1	19.1	B	1042	1564
4	0.07	5.70	0.1	0.5	A	39	59

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	885	221	416	1697	0.522	881	869	0.0	1.1	4.389	A
2	797	199	428	1938	0.411	794	869	0.0	0.7	3.138	A
3	855	214	414	1663	0.514	851	807	0.0	1.0	4.410	A

4	32	8	1252	1034	0.031	32	13	0.0	0.0	3.592	A
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07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	1057	264	498	1646	0.642	1054	1040	1.1	1.8	6.058	A
2	951	238	512	1881	0.506	950	1040	0.7	1.0	3.862	A
3	1021	255	496	1613	0.633	1019	966	1.0	1.7	6.034	A
4	39	10	1499	885	0.044	39	15	0.0	0.0	4.253	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	1295	324	607	1578	0.821	1285	1269	1.8	4.3	11.901	B
2	1165	291	624	1805	0.646	1162	1268	1.0	1.8	5.574	A
3	1251	313	606	1544	0.810	1242	1180	1.7	4.0	11.555	B
4	47	12	1829	685	0.069	47	19	0.0	0.1	5.644	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	1295	324	611	1575	0.822	1294	1276	4.3	4.4	12.723	B
2	1165	291	628	1802	0.647	1165	1277	1.8	1.8	5.651	A
3	1251	313	608	1543	0.810	1250	1185	4.0	4.1	12.226	B
4	47	12	1839	679	0.070	47	19	0.1	0.1	5.699	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	1057	264	503	1643	0.644	1068	1049	4.4	1.8	6.370	A
2	951	238	518	1876	0.507	954	1052	1.8	1.0	3.916	A
3	1021	255	498	1611	0.634	1031	975	4.1	1.8	6.300	A
4	39	10	1513	876	0.044	39	15	0.1	0.0	4.299	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	885	221	419	1695	0.522	888	875	1.8	1.1	4.477	A
2	797	199	431	1935	0.412	798	876	1.0	0.7	3.167	A
3	855	214	416	1662	0.515	858	813	1.8	1.1	4.494	A
4	32	8	1261	1029	0.031	32	13	0.0	0.0	3.612	A

Queue Variation Results for each time segment

07:15 - 07:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.08	0.55	1.00	1.40	1.45			N/A	N/A
2	0.69	0.55	1.00	1.40	1.45			N/A	N/A
3	1.05	0.55	1.00	1.40	1.45			N/A	N/A
4	0.03	0.00	0.00	0.03	0.03			N/A	N/A

1	0.89	20.81	7.5	38.6	C	1142	1714
2	0.71	7.07	2.5	4.4	A	1061	1591
3	0.91	24.45	8.9	48.9	C	1162	1743
4	0.06	6.34	0.1	0.5	A	29	44

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	937	234	519	1688	0.555	932	874	0.0	1.2	4.735	A
2	870	218	520	1947	0.447	867	932	0.0	0.8	3.324	A
3	953	238	486	1670	0.571	948	901	0.0	1.3	4.953	A
4	24	6	1369	977	0.025	24	64	0.0	0.0	3.776	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	1119	280	621	1624	0.689	1116	1046	1.2	2.2	7.031	A
2	1039	260	622	1877	0.554	1038	1115	0.8	1.2	4.278	A
3	1138	285	582	1611	0.706	1134	1078	1.3	2.3	7.479	A
4	29	7	1638	820	0.035	29	77	0.0	0.0	4.550	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	1371	343	751	1542	0.889	1352	1271	2.2	6.8	17.521	C
2	1273	318	754	1787	0.712	1268	1350	1.2	2.4	6.872	A
3	1394	348	711	1532	0.910	1371	1311	2.3	8.0	20.039	C
4	35	9	1988	616	0.057	35	94	0.0	0.1	6.202	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	1371	343	761	1535	0.893	1368	1283	6.8	7.5	20.807	C
2	1273	318	763	1781	0.715	1273	1367	2.4	2.5	7.072	A
3	1394	348	713	1530	0.911	1390	1322	8.0	8.9	24.447	C
4	35	9	2009	603	0.058	35	95	0.1	0.1	6.338	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	1119	280	636	1614	0.693	1140	1064	7.5	2.3	7.908	A
2	1039	260	635	1868	0.556	1044	1141	2.5	1.3	4.395	A
3	1138	285	586	1609	0.707	1164	1094	8.9	2.5	8.534	A
4	29	7	1671	801	0.036	29	78	0.1	0.0	4.664	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	937	234	524	1685	0.556	942	882	2.3	1.3	4.872	A
2	870	218	525	1943	0.448	872	941	1.3	0.8	3.367	A
3	953	238	489	1668	0.571	958	908	2.5	1.4	5.100	A
4	24	6	1382	970	0.025	24	65	0.0	0.0	3.805	A

Queue Variation Results for each time segment

16:15 - 16:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.23	0.56	1.13	1.54	1.78			N/A	N/A
2	0.80	0.55	1.00	1.40	1.45			N/A	N/A
3	1.31	0.56	1.22	1.70	1.87			N/A	N/A
4	0.03	0.00	0.00	0.03	0.03			N/A	N/A

16:30 - 16:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	2.17	0.05	0.45	5.91	9.89			N/A	N/A
2	1.23	0.05	0.53	2.89	4.36			N/A	N/A
3	2.34	0.05	0.46	6.45	10.82			N/A	N/A
4	0.04	0.03	0.25	0.45	0.48			N/A	N/A

16:45 - 17:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	6.81	0.04	0.41	18.06	36.99			N/A	N/A
2	2.41	0.03	0.27	2.41	3.70			N/A	N/A
3	8.04	0.05	0.48	22.87	41.92			N/A	N/A
4	0.06	0.03	0.26	0.46	0.49			N/A	N/A

17:00 - 17:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	7.50	0.03	0.33	11.99	38.62			N/A	N/A
2	2.46	0.03	0.27	2.46	2.46			N/A	N/A
3	8.91	0.04	0.36	19.11	48.89			N/A	N/A
4	0.06	0.00	0.00	0.06	0.06			N/A	N/A

17:15 - 17:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	2.32	0.04	0.44	6.39	10.91			N/A	N/A
2	1.27	0.09	1.06	2.30	2.95			N/A	N/A
3	2.49	0.04	0.42	6.84	12.18			N/A	N/A
4	0.04	0.00	0.00	0.04	0.04			N/A	N/A

17:30 - 17:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	1.27	0.03	0.32	2.50	6.53			N/A	N/A
2	0.82	0.05	0.48	1.68	2.42			N/A	N/A

3	1.35	0.03	0.31	2.37	6.89			N/A	N/A
4	0.03	0.00	0.00	0.03	0.03			N/A	N/A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []
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Filename: A6195.Wath.Rbt.j9

Report generation date: Friday, 01, 04, 2016 12:33:47

Summary of junction performance

	AM				PM			
	Queue (Veh)	95% Queue (Veh)	Delay (s)	RFC	Queue (Veh)	95% Queue (Veh)	Delay (s)	RFC
Existing Junction Layout - 2016								
Arm 1	0.1	0.5	6.13	0.05	0.2	0.7	6.06	0.19
Arm 2	3.9	18.5	13.40	0.80	6.6	33.4	21.00	0.88
Arm 3	0.6	2.6	4.07	0.36	0.7	3.0	4.51	0.40
Arm 4	1.5	2.2	4.58	0.61	2.9	5.8	6.85	0.75
Arm 5	1.1	1.8	5.10	0.52	1.0	2.1	4.79	0.50
Existing Junction Layout - 2021								
Arm 1	0.1	0.5	6.94	0.06	0.3	1.3	7.29	0.24
Arm 2	7.7	41.6	24.77	0.90	21.0	84.5	59.27	0.99
Arm 3	0.7	3.0	4.64	0.41	0.8	3.1	5.27	0.46
Arm 4	2.0	3.6	5.58	0.67	4.6	20.2	10.15	0.83
Arm 5	1.4	1.5	6.23	0.59	1.3	1.5	5.85	0.57
Existing Junction Layout - 2021+Dev								
Arm 1	0.1	0.5	6.95	0.06	0.3	1.3	7.29	0.24
Arm 2	7.7	41.6	24.77	0.90	21.4	85.0	60.33	0.99
Arm 3	0.7	3.0	4.64	0.41	0.8	3.1	5.28	0.46
Arm 4	2.0	3.7	5.60	0.67	4.6	20.2	10.14	0.83
Arm 5	1.4	1.5	6.25	0.59	1.3	1.5	5.85	0.57

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

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

File summary

File Description

Title	A6195 / Wath Road Roundabout
Location	
Site number	
Date	Thursday, 17, 03, 2016
Version	

Status	
Identifier	
Client	
Jobnumber	
Enumerator	CONNECTdthough
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75	✓			0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2016	AM	ONE HOUR	07:15	08:45	15	✓
D2	2016	PM	ONE HOUR	16:15	17:45	15	✓
D3	2021	AM	ONE HOUR	07:15	08:45	15	✓
D4	2021	PM	ONE HOUR	16:15	17:45	15	✓
D5	2021+Dev	AM	ONE HOUR	07:15	08:45	15	✓
D6	2021+Dev	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Junction Layout	✓	100.000	100.000

Existing Junction Layout - 2016, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A6195 / Wath Road Roundabout	Standard Roundabout	1,2,3,4,5	7.32	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Newlands Way	
2	A6195 N	
3	Wath Road E	
4	Dearne Valley Parkway	
5	Wath Road W	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.82	6.35	15.7	24.3	77.9	20.3	
2	3.73	6.66	16.6	32.3	77.9	19.1	
3	5.32	8.82	7.4	33.3	77.9	14.0	
4	7.55	7.82	0.5	19.3	77.9	10.6	
5	5.32	8.42	16.4	22.8	77.9	27.2	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.492	1733
2	0.504	1793
3	0.566	2184
4	0.606	2469
5	0.560	2230

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2016	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	27	100.000
2		ONE HOUR	✓	985	100.000
3		ONE HOUR	✓	453	100.000
4		ONE HOUR	✓	1105	100.000
5		ONE HOUR	✓	682	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1	2	3	4	5
From	1	1	10	3	11	2
	2	18	0	9	696	262
	3	19	14	3	228	189
	4	44	772	185	6	98
	5	24	259	293	106	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	100	20	0	46	0
	2	0	0	0	7	6
	3	5	0	0	5	4
	4	9	5	4	17	12
	5	4	9	3	9	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.05	6.13	0.1	0.5	A	25	37
2	0.80	13.40	3.9	18.5	B	904	1356
3	0.36	4.07	0.6	2.6	A	416	624
4	0.61	4.58	1.5	2.2	A	1014	1521
5	0.52	5.10	1.1	1.8	A	626	939

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	20	5	1229	846	0.024	20	80	0.0	0.0	4.357	A
2	742	185	458	1458	0.509	737	792	0.0	1.0	4.969	A
3	341	85	825	1608	0.212	340	370	0.0	0.3	2.835	A
4	832	208	381	2110	0.394	829	784	0.0	0.6	2.805	A
5	513	128	797	1663	0.309	512	413	0.0	0.4	3.123	A

07:30 - 07:45

Arm	Total	Junction	Circulating	Capacity	RFC	Throughput	Throughput	Start	End	Delay	LOS
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	Demand (Veh/hr)	Arrivals (Veh)	flow (Veh/hr)	(Veh/hr)		(Veh/hr)	(exit side) (Veh/hr)	queue (Veh)	queue (Veh)	(s)	
1	24	6	1471	750	0.032	24	95	0.0	0.0	4.960	A
2	885	221	548	1413	0.627	883	947	1.0	1.6	6.759	A
3	407	102	988	1514	0.269	407	443	0.3	0.4	3.252	A
4	993	248	456	2065	0.481	992	939	0.6	0.9	3.354	A
5	613	153	954	1576	0.389	612	494	0.4	0.6	3.729	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	30	7	1800	619	0.048	30	116	0.0	0.1	6.111	A
2	1085	271	670	1352	0.802	1076	1159	1.6	3.8	12.663	B
3	499	125	1205	1388	0.359	498	542	0.4	0.6	4.039	A
4	1217	304	556	2004	0.607	1214	1146	0.9	1.5	4.545	A
5	751	188	1167	1458	0.515	749	604	0.6	1.0	5.065	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	30	7	1803	617	0.048	30	117	0.1	0.1	6.127	A
2	1085	271	672	1351	0.803	1084	1162	3.8	3.9	13.400	B
3	499	125	1213	1384	0.360	499	543	0.6	0.6	4.068	A
4	1217	304	559	2002	0.608	1217	1152	1.5	1.5	4.581	A
5	751	188	1169	1457	0.515	751	607	1.0	1.1	5.098	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	24	6	1476	748	0.032	24	96	0.1	0.0	4.978	A
2	885	221	550	1412	0.627	894	951	3.9	1.7	7.070	A
3	407	102	1000	1507	0.270	408	444	0.6	0.4	3.276	A
4	993	248	460	2062	0.482	996	948	1.5	0.9	3.382	A
5	613	153	957	1574	0.389	615	498	1.1	0.6	3.760	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	20	5	1235	844	0.024	20	80	0.0	0.0	4.371	A
2	742	185	460	1457	0.509	744	795	1.7	1.0	5.070	A
3	341	85	832	1604	0.213	341	372	0.4	0.3	2.851	A
4	832	208	383	2108	0.395	833	790	0.9	0.7	2.825	A
5	513	128	801	1661	0.309	514	416	0.6	0.4	3.140	A

Queue Variation Results for each time segment

07:15 - 07:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.02	0.00	0.00	0.02	0.02			N/A	N/A
2	1.02	0.55	1.00	1.40	1.45			N/A	N/A

3	0.27	0.00	0.00	0.27	0.27			N/A	N/A
4	0.65	0.55	1.00	1.40	1.45			N/A	N/A
5	0.44	0.00	0.00	0.44	0.44			N/A	N/A

07:30 - 07:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.03	0.03	0.25	0.45	0.48			N/A	N/A
2	1.65	0.05	0.55	4.20	6.49			N/A	N/A
3	0.37	0.00	0.00	0.37	0.37			N/A	N/A
4	0.92	0.06	0.76	1.69	2.20			N/A	N/A
5	0.63	0.08	0.78	1.36	1.43			N/A	N/A

07:45 - 08:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.05	0.03	0.25	0.46	0.48			N/A	N/A
2	3.79	0.03	0.31	5.02	18.49			N/A	N/A
3	0.56	0.03	0.25	0.56	0.56			N/A	N/A
4	1.53	0.03	0.26	1.53	1.53			N/A	N/A
5	1.05	0.03	0.26	1.05	1.05			N/A	N/A

08:00 - 08:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.05	0.00	0.00	0.05	0.05			N/A	N/A
2	3.92	0.03	0.28	3.92	10.68			N/A	N/A
3	0.56	0.03	0.30	1.44	2.62			N/A	N/A
4	1.54	0.03	0.26	1.54	1.54			N/A	N/A
5	1.06	0.03	0.27	1.06	1.82			N/A	N/A

08:15 - 08:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.03	0.00	0.00	0.03	0.03			N/A	N/A
2	1.72	0.05	0.59	4.41	6.76			N/A	N/A
3	0.37	0.00	0.00	0.37	0.37			N/A	N/A
4	0.94	0.36	0.99	1.16	1.16			N/A	N/A
5	0.64	0.25	0.94	1.39	1.44			N/A	N/A

08:30 - 08:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.02	0.00	0.00	0.02	0.02			N/A	N/A
2	1.05	0.04	0.36	2.62	4.86			N/A	N/A
3	0.27	0.00	0.00	0.27	0.27			N/A	N/A
4	0.66	0.07	0.74	1.37	1.44			N/A	N/A
5	0.45	0.04	0.36	1.16	1.33			N/A	N/A

Existing Junction Layout - 2016, PM

Data Errors and Warnings

Severity	Area	Item	Description
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Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.
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Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A6195 / Wath Road Roundabout	Standard Roundabout	1,2,3,4,5	10.24	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2016	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	129	100.000
2		ONE HOUR	✓	1083	100.000
3		ONE HOUR	✓	482	100.000
4		ONE HOUR	✓	1403	100.000
5		ONE HOUR	✓	676	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1	2	3	4	5
From	1	0	30	40	35	24
	2	14	0	15	821	233
	3	3	8	1	272	198
	4	15	869	197	4	318
	5	26	260	223	165	2

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	0	7	3	9	0
	2	14	0	0	2	5
	3	67	0	100	1	2
	4	0	3	5	0	2
	5	0	3	1	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.19	6.06	0.2	0.7	A	118	178
2	0.88	21.00	6.6	33.4	C	994	1491
3	0.40	4.51	0.7	3.0	A	442	663
4	0.75	6.85	2.9	5.8	A	1287	1931
5	0.50	4.79	1.0	2.1	A	620	930

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	97	24	1297	1029	0.094	97	43	0.0	0.1	3.860	A
2	815	204	518	1479	0.551	810	875	0.0	1.2	5.347	A
3	363	91	972	1589	0.228	362	357	0.0	0.3	2.931	A
4	1056	264	362	2174	0.486	1052	972	0.0	0.9	3.200	A
5	509	127	833	1718	0.296	507	581	0.0	0.4	2.970	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	116	29	1552	906	0.128	116	52	0.1	0.1	4.556	A
2	974	243	620	1428	0.682	970	1048	1.2	2.1	7.803	A
3	433	108	1163	1479	0.293	433	427	0.3	0.4	3.438	A
4	1261	315	433	2130	0.592	1259	1163	0.9	1.4	4.126	A
5	608	152	997	1624	0.374	607	695	0.4	0.6	3.537	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	142	36	1898	738	0.192	142	64	0.1	0.2	6.028	A
2	1192	298	759	1359	0.878	1176	1281	2.1	6.1	18.300	C

3	531	133	1413	1337	0.397	530	522	0.4	0.7	4.456	A
4	1545	386	528	2072	0.745	1539	1415	1.4	2.8	6.683	A
5	744	186	1219	1498	0.497	743	848	0.6	1.0	4.760	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	142	36	1903	736	0.193	142	64	0.2	0.2	6.062	A
2	1192	298	761	1358	0.878	1191	1285	6.1	6.6	21.003	C
3	531	133	1427	1328	0.400	531	524	0.7	0.7	4.513	A
4	1545	386	531	2070	0.746	1545	1427	2.8	2.9	6.847	A
5	744	186	1223	1495	0.498	744	853	1.0	1.0	4.794	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	116	29	1560	902	0.129	116	52	0.2	0.1	4.585	A
2	974	243	623	1427	0.683	991	1053	6.6	2.2	8.586	A
3	433	108	1185	1467	0.295	434	430	0.7	0.4	3.491	A
4	1261	315	439	2127	0.593	1267	1180	2.9	1.5	4.216	A
5	608	152	1003	1621	0.375	609	702	1.0	0.6	3.566	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	97	24	1304	1026	0.095	97	44	0.1	0.1	3.878	A
2	815	204	521	1478	0.552	819	880	2.2	1.2	5.498	A
3	363	91	981	1583	0.229	363	359	0.4	0.3	2.951	A
4	1056	264	365	2172	0.486	1058	980	1.5	1.0	3.240	A
5	509	127	838	1715	0.297	510	585	0.6	0.4	2.989	A

Queue Variation Results for each time segment

16:15 - 16:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.10	0.00	0.00	0.10	0.10			N/A	N/A
2	1.21	0.56	1.10	1.38	1.69			N/A	N/A
3	0.29	0.00	0.00	0.29	0.29			N/A	N/A
4	0.94	0.55	1.00	1.40	1.45			N/A	N/A
5	0.42	0.00	0.00	0.42	0.42			N/A	N/A

16:30 - 16:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.15	0.00	0.00	0.15	0.15			N/A	N/A
2	2.09	0.05	0.48	5.65	9.09			N/A	N/A
3	0.41	0.00	0.00	0.41	0.41			N/A	N/A
4	1.44	0.05	0.46	3.69	5.85			N/A	N/A
5	0.59	0.08	0.75	1.35	1.43			N/A	N/A

16:45 - 17:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.24	0.03	0.26	0.46	0.49			N/A	N/A
2	6.15	0.04	0.40	16.02	33.39			N/A	N/A
3	0.65	0.03	0.25	0.65	0.65			N/A	N/A
4	2.85	0.03	0.28	2.85	5.54			N/A	N/A
5	0.98	0.03	0.26	0.98	0.98			N/A	N/A

17:00 - 17:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.24	0.03	0.27	0.48	0.66			N/A	N/A
2	6.61	0.03	0.32	9.46	32.97			N/A	N/A
3	0.66	0.03	0.29	1.31	3.02			N/A	N/A
4	2.90	0.03	0.27	2.90	2.90			N/A	N/A
5	0.99	0.03	0.27	0.99	2.06			N/A	N/A

17:15 - 17:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.15	0.00	0.00	0.15	0.15			N/A	N/A
2	2.21	0.04	0.44	6.03	10.39			N/A	N/A
3	0.42	0.00	0.00	0.42	0.42			N/A	N/A
4	1.47	0.08	1.09	2.95	3.99			N/A	N/A
5	0.60	0.55	1.00	1.40	1.45			N/A	N/A

17:30 - 17:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.11	0.00	0.00	0.11	0.11			N/A	N/A
2	1.25	0.03	0.32	2.56	6.40			N/A	N/A
3	0.30	0.00	0.00	0.30	0.30			N/A	N/A
4	0.95	0.05	0.47	2.10	3.21			N/A	N/A
5	0.42	0.03	0.30	0.89	1.20			N/A	N/A

Existing Junction Layout - 2021, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A6195 / Wath Road Roundabout	Standard Roundabout	1,2,3,4,5	11.44	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2021	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	29	100.000
2		ONE HOUR	✓	1076	100.000
3		ONE HOUR	✓	494	100.000
4		ONE HOUR	✓	1206	100.000
5		ONE HOUR	✓	745	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1	2	3	4	5
From	1	1	11	3	12	2
	2	20	0	10	760	286
	3	21	15	3	249	206
	4	48	842	202	7	107
	5	26	283	320	116	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	100	20	0	46	0
	2	0	0	0	7	6
	3	5	0	0	5	4
	4	9	5	4	17	12
	5	4	9	3	9	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.06	6.94	0.1	0.5	A	27	40
2	0.90	24.77	7.7	41.6	C	987	1481

3	0.41	4.64	0.7	3.0	A	453	680
4	0.67	5.58	2.0	3.6	A	1107	1660
5	0.59	6.23	1.4	1.5	A	684	1025

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	22	5	1341	800	0.027	22	87	0.0	0.0	4.624	A
2	810	203	500	1438	0.563	805	864	0.0	1.3	5.642	A
3	372	93	901	1565	0.238	371	404	0.0	0.3	3.012	A
4	908	227	415	2089	0.435	905	857	0.0	0.8	3.032	A
5	561	140	870	1623	0.346	559	450	0.0	0.5	3.376	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	26	7	1605	695	0.038	26	104	0.0	0.0	5.379	A
2	967	242	598	1389	0.696	963	1033	1.3	2.2	8.385	A
3	444	111	1078	1462	0.304	444	483	0.3	0.4	3.533	A
4	1084	271	497	2040	0.531	1083	1025	0.8	1.1	3.757	A
5	670	167	1040	1528	0.438	669	539	0.5	0.8	4.186	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	32	8	1963	553	0.058	32	127	0.0	0.1	6.914	A
2	1185	296	731	1322	0.896	1166	1264	2.2	7.0	20.801	C
3	544	136	1306	1330	0.409	543	590	0.4	0.7	4.569	A
4	1328	332	604	1975	0.672	1324	1245	1.1	2.0	5.501	A
5	820	205	1272	1400	0.586	818	656	0.8	1.4	6.160	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	32	8	1968	550	0.058	32	128	0.1	0.1	6.942	A
2	1185	296	733	1321	0.897	1182	1267	7.0	7.7	24.772	C
3	544	136	1323	1320	0.412	544	592	0.7	0.7	4.637	A
4	1328	332	609	1972	0.673	1328	1258	2.0	2.0	5.585	A
5	820	205	1276	1398	0.587	820	661	1.4	1.4	6.232	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	26	7	1613	692	0.038	26	105	0.1	0.0	5.406	A
2	967	242	601	1387	0.697	969	1038	7.7	2.4	9.475	A

3	444	111	1104	1447	0.307	445	486	0.7	0.4	3.595	A
4	1084	271	505	2035	0.533	1088	1044	2.0	1.2	3.816	A
5	670	167	1046	1525	0.439	672	547	1.4	0.8	4.231	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	22	5	1348	797	0.027	22	88	0.0	0.0	4.643	A
2	810	203	502	1437	0.564	814	868	2.4	1.3	5.822	A
3	372	93	911	1559	0.239	372	406	0.4	0.3	3.036	A
4	908	227	419	2087	0.435	909	865	1.2	0.8	3.062	A
5	561	140	874	1620	0.346	562	454	0.8	0.5	3.406	A

Queue Variation Results for each time segment

07:15 - 07:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.03	0.00	0.00	0.03	0.03			N/A	N/A
2	1.27	0.56	1.16	1.60	1.80			N/A	N/A
3	0.31	0.00	0.00	0.31	0.31			N/A	N/A
4	0.76	0.55	1.00	1.40	1.45			N/A	N/A
5	0.53	0.53	1.00	1.40	1.45			N/A	N/A

07:30 - 07:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.04	0.03	0.25	0.45	0.48			N/A	N/A
2	2.23	0.05	0.49	6.03	9.76			N/A	N/A
3	0.43	0.00	0.00	0.43	0.43			N/A	N/A
4	1.12	0.05	0.62	2.52	3.65			N/A	N/A
5	0.77	0.07	0.78	1.47	1.47			N/A	N/A

07:45 - 08:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.06	0.03	0.26	0.46	0.49			N/A	N/A
2	7.02	0.05	0.45	19.63	36.93			N/A	N/A
3	0.69	0.03	0.25	0.69	0.69			N/A	N/A
4	2.01	0.03	0.27	2.01	2.01			N/A	N/A
5	1.39	0.03	0.26	1.39	1.39			N/A	N/A

08:00 - 08:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.06	0.00	0.00	0.06	0.06			N/A	N/A
2	7.69	0.03	0.35	15.18	41.60			N/A	N/A
3	0.70	0.03	0.29	1.20	3.04			N/A	N/A
4	2.04	0.03	0.26	2.04	2.04			N/A	N/A
5	1.41	0.03	0.27	1.41	1.41			N/A	N/A

08:15 - 08:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.06	0.00	0.00	0.06	0.06			N/A	N/A
2	7.69	0.03	0.35	15.18	41.60			N/A	N/A
3	0.70	0.03	0.29	1.20	3.04			N/A	N/A
4	2.04	0.03	0.26	2.04	2.04			N/A	N/A
5	1.41	0.03	0.27	1.41	1.41			N/A	N/A

1	0.04	0.00	0.00	0.04	0.04			N/A	N/A
2	2.37	0.04	0.42	6.52	11.51			N/A	N/A
3	0.45	0.00	0.00	0.45	0.45			N/A	N/A
4	1.15	0.15	1.08	1.77	2.05			N/A	N/A
5	0.79	0.16	0.92	1.40	1.46			N/A	N/A

08:30 - 08:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.03	0.00	0.00	0.03	0.03			N/A	N/A
2	1.31	0.03	0.32	2.47	6.74			N/A	N/A
3	0.31	0.00	0.00	0.31	0.31			N/A	N/A
4	0.77	0.06	0.67	1.26	1.75			N/A	N/A
5	0.53	0.05	0.48	1.30	1.40			N/A	N/A

Existing Junction Layout - 2021, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A6195 / Wath Road Roundabout	Standard Roundabout	1,2,3,4,5	22.81	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2021	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	141	100.000
2		ONE HOUR	✓	1184	100.000
3		ONE HOUR	✓	528	100.000
4		ONE HOUR	✓	1535	100.000
5		ONE HOUR	✓	740	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1	2	3	4	5
From	1	0	33	44	38	26
	2	15	0	16	898	255
	3	3	9	1	298	217
	4	16	951	216	4	348
	5	28	285	244	181	2

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	0	7	3	9	0
	2	14	0	0	2	5
	3	67	0	100	1	2
	4	0	3	5	0	2
	5	0	3	1	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.24	7.29	0.3	1.3	A	129	194
2	0.99	59.27	21.0	84.5	F	1086	1630
3	0.46	5.27	0.8	3.1	A	485	727
4	0.83	10.15	4.6	20.2	B	1409	2113
5	0.57	5.85	1.3	1.5	A	679	1019

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	106	27	1420	970	0.109	106	46	0.0	0.1	4.164	A
2	891	223	567	1455	0.613	885	958	0.0	1.6	6.251	A
3	398	99	1061	1538	0.258	396	391	0.0	0.3	3.147	A
4	1156	289	395	2153	0.537	1151	1062	0.0	1.1	3.576	A
5	557	139	911	1674	0.333	555	635	0.0	0.5	3.213	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	127	32	1699	835	0.152	127	56	0.1	0.2	5.080	A
2	1064	266	679	1399	0.761	1058	1147	1.6	3.0	10.385	B
3	475	119	1269	1419	0.334	474	468	0.3	0.5	3.807	A
4	1380	345	473	2106	0.655	1377	1271	1.1	1.9	4.920	A
5	665	166	1090	1571	0.423	664	760	0.5	0.7	3.965	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	155	39	2074	653	0.238	155	67	0.2	0.3	7.210	A
2	1304	326	829	1324	0.985	1254	1400	3.0	15.6	37.116	E
3	581	145	1512	1281	0.454	580	571	0.5	0.8	5.129	A
4	1690	423	569	2047	0.826	1680	1523	1.9	4.5	9.540	A
5	815	204	1329	1435	0.568	812	920	0.7	1.3	5.766	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	155	39	2084	649	0.239	155	68	0.3	0.3	7.292	A
2	1304	326	832	1322	0.986	1282	1407	15.6	21.0	59.267	F
3	581	145	1541	1264	0.460	581	573	0.8	0.8	5.272	A
4	1690	423	576	2043	0.827	1689	1546	4.5	4.6	10.146	B
5	815	204	1337	1430	0.570	815	929	1.3	1.3	5.850	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	127	32	1712	828	0.153	127	57	0.3	0.2	5.137	A
2	1064	266	683	1397	0.762	1135	1157	21.0	3.4	17.140	C
3	475	119	1346	1375	0.345	476	472	0.8	0.5	4.008	A
4	1380	345	491	2094	0.659	1391	1330	4.6	2.0	5.189	A
5	665	166	1101	1565	0.425	668	781	1.3	0.7	4.022	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	106	27	1429	966	0.110	106	47	0.2	0.1	4.192	A
2	891	223	570	1453	0.613	898	965	3.4	1.6	6.570	A
3	398	99	1076	1530	0.260	398	393	0.5	0.4	3.181	A
4	1156	289	399	2151	0.537	1159	1074	2.0	1.2	3.642	A
5	557	139	917	1670	0.334	558	641	0.7	0.5	3.239	A

Queue Variation Results for each time segment

16:15 - 16:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.12	0.00	0.00	0.12	0.12			N/A	N/A
2	1.55	0.44	1.41	2.29	2.78			N/A	N/A

3	0.35	0.00	0.00	0.35	0.35				N/A	N/A
4	1.15	0.55	1.03	1.15	1.15				N/A	N/A
5	0.50	0.00	0.00	0.50	0.50				N/A	N/A

16:30 - 16:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.18	0.00	0.00	0.18	0.18			N/A	N/A
2	3.04	0.05	0.56	8.47	13.79			N/A	N/A
3	0.50	0.00	0.00	0.50	0.50			N/A	N/A
4	1.87	0.04	0.43	5.04	8.65			N/A	N/A
5	0.73	0.07	0.77	1.07	1.07			N/A	N/A

16:45 - 17:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.31	0.03	0.26	0.46	0.49			N/A	N/A
2	15.55	0.23	7.56	40.17	55.95			N/A	N/A
3	0.82	0.03	0.25	0.82	0.82			N/A	N/A
4	4.47	0.03	0.30	4.47	20.21			N/A	N/A
5	1.30	0.03	0.26	1.30	1.30			N/A	N/A

17:00 - 17:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.31	0.03	0.31	1.04	1.29			N/A	N/A
2	20.97	0.16	7.70	57.94	84.48			N/A	N/A
3	0.84	0.03	0.28	0.84	3.10			N/A	N/A
4	4.63	0.03	0.28	4.63	8.81			N/A	N/A
5	1.31	0.03	0.27	1.31	1.51			N/A	N/A

17:15 - 17:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.18	0.00	0.00	0.18	0.18			N/A	N/A
2	3.39	0.04	0.40	9.08	17.72			N/A	N/A
3	0.53	0.53	1.00	1.40	1.45			N/A	N/A
4	1.96	0.06	0.79	5.00	7.59			N/A	N/A
5	0.75	0.20	0.93	1.39	1.45			N/A	N/A

17:30 - 17:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.12	0.00	0.00	0.12	0.12			N/A	N/A
2	1.61	0.03	0.29	1.61	7.13			N/A	N/A
3	0.35	0.00	0.00	0.35	0.35			N/A	N/A
4	1.17	0.04	0.37	2.94	5.50			N/A	N/A
5	0.50	0.05	0.46	1.28	1.39			N/A	N/A

Existing Junction Layout - 2021+Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
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Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.
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Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A6195 / Wath Road Roundabout	Standard Roundabout	1,2,3,4,5	11.44	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2021+Dev	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	29	100.000
2		ONE HOUR	✓	1076	100.000
3		ONE HOUR	✓	494	100.000
4		ONE HOUR	✓	1208	100.000
5		ONE HOUR	✓	745	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1	2	3	4	5
From	1	1	11	3	12	2
	2	20	0	10	760	286
	3	21	15	3	249	206
	4	48	844	202	7	107
	5	26	283	320	116	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	100	20	0	46	0
	2	0	0	0	7	6
	3	5	0	0	5	4
	4	9	5	4	17	12
	5	4	9	3	9	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.06	6.95	0.1	0.5	A	27	40
2	0.90	24.77	7.7	41.6	C	987	1481
3	0.41	4.64	0.7	3.0	A	453	680
4	0.67	5.60	2.0	3.7	A	1108	1663
5	0.59	6.25	1.4	1.5	A	684	1025

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	22	5	1343	800	0.027	22	87	0.0	0.0	4.627	A
2	810	203	500	1438	0.563	805	865	0.0	1.3	5.642	A
3	372	93	901	1565	0.238	371	404	0.0	0.3	3.012	A
4	909	227	415	2089	0.435	906	857	0.0	0.8	3.036	A
5	561	140	871	1622	0.346	559	450	0.0	0.5	3.378	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	26	7	1607	694	0.038	26	104	0.0	0.0	5.385	A
2	967	242	598	1389	0.696	963	1035	1.3	2.2	8.385	A
3	444	111	1078	1462	0.304	444	483	0.3	0.4	3.533	A
4	1086	271	497	2040	0.532	1085	1025	0.8	1.1	3.764	A
5	670	167	1042	1527	0.439	669	539	0.5	0.8	4.191	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	32	8	1965	552	0.058	32	127	0.0	0.1	6.925	A
2	1185	296	731	1322	0.896	1166	1266	2.2	7.0	20.800	C

3	544	136	1306	1330	0.409	543	590	0.4	0.7	4.569	A
4	1330	333	604	1975	0.673	1326	1245	1.1	2.0	5.517	A
5	820	205	1275	1399	0.587	818	656	0.8	1.4	6.173	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	32	8	1971	550	0.058	32	128	0.1	0.1	6.954	A
2	1185	296	733	1321	0.897	1182	1269	7.0	7.7	24.771	C
3	544	136	1323	1320	0.412	544	592	0.7	0.7	4.637	A
4	1330	333	609	1972	0.674	1330	1258	2.0	2.0	5.604	A
5	820	205	1278	1397	0.587	820	661	1.4	1.4	6.245	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	26	7	1615	691	0.038	26	105	0.1	0.0	5.412	A
2	967	242	601	1387	0.697	989	1040	7.7	2.4	9.475	A
3	444	111	1104	1447	0.307	445	486	0.7	0.4	3.597	A
4	1086	271	505	2035	0.534	1090	1044	2.0	1.2	3.823	A
5	670	167	1047	1524	0.439	672	547	1.4	0.8	4.238	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	22	5	1350	797	0.027	22	88	0.0	0.0	4.647	A
2	810	203	502	1437	0.564	814	870	2.4	1.3	5.822	A
3	372	93	911	1559	0.239	372	406	0.4	0.3	3.036	A
4	909	227	419	2087	0.436	911	865	1.2	0.8	3.064	A
5	561	140	876	1619	0.346	562	454	0.8	0.5	3.406	A

Queue Variation Results for each time segment

07:15 - 07:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.03	0.00	0.00	0.03	0.03			N/A	N/A
2	1.27	0.56	1.16	1.60	1.80			N/A	N/A
3	0.31	0.00	0.00	0.31	0.31			N/A	N/A
4	0.77	0.55	1.00	1.40	1.45			N/A	N/A
5	0.53	0.53	1.00	1.40	1.45			N/A	N/A

07:30 - 07:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.04	0.03	0.25	0.45	0.48			N/A	N/A
2	2.23	0.05	0.49	6.03	9.76			N/A	N/A
3	0.43	0.00	0.00	0.43	0.43			N/A	N/A
4	1.13	0.05	0.62	2.53	3.68			N/A	N/A
5	0.77	0.07	0.78	1.48	1.48			N/A	N/A

07:45 - 08:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.06	0.03	0.26	0.46	0.49			N/A	N/A
2	7.02	0.05	0.45	19.63	36.93			N/A	N/A
3	0.69	0.03	0.25	0.69	0.69			N/A	N/A
4	2.02	0.03	0.27	2.02	2.02			N/A	N/A
5	1.40	0.03	0.26	1.40	1.40			N/A	N/A

08:00 - 08:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.06	0.00	0.00	0.06	0.06			N/A	N/A
2	7.69	0.03	0.35	15.18	41.59			N/A	N/A
3	0.70	0.03	0.29	1.20	3.04			N/A	N/A
4	2.05	0.03	0.26	2.05	2.05			N/A	N/A
5	1.41	0.03	0.27	1.41	1.41			N/A	N/A

08:15 - 08:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.04	0.00	0.00	0.04	0.04			N/A	N/A
2	2.37	0.04	0.42	6.52	11.51			N/A	N/A
3	0.45	0.00	0.00	0.45	0.45			N/A	N/A
4	1.15	0.15	1.08	1.78	2.09			N/A	N/A
5	0.79	0.16	0.92	1.40	1.46			N/A	N/A

08:30 - 08:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.03	0.00	0.00	0.03	0.03			N/A	N/A
2	1.31	0.03	0.32	2.47	6.74			N/A	N/A
3	0.31	0.00	0.00	0.31	0.31			N/A	N/A
4	0.78	0.06	0.66	1.28	1.76			N/A	N/A
5	0.53	0.05	0.48	1.30	1.40			N/A	N/A

Existing Junction Layout - 2021+Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A6195 / Wath Road Roundabout	Standard Roundabout	1,2,3,4,5	23.13	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2021+Dev	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	141	100.000
2		ONE HOUR	✓	1186	100.000
3		ONE HOUR	✓	528	100.000
4		ONE HOUR	✓	1535	100.000
5		ONE HOUR	✓	740	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1	2	3	4	5
From	1	0	33	44	38	26
	2	15	0	16	900	255
	3	3	9	1	298	217
	4	16	951	216	4	348
	5	28	285	244	181	2

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	0	7	3	9	0
	2	14	0	0	2	5
	3	67	0	100	1	2
	4	0	3	5	0	2
	5	0	3	1	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.24	7.29	0.3	1.3	A	129	194
2	0.99	60.33	21.4	85.0	F	1088	1632

3	0.46	5.28	0.8	3.1	A	485	727
4	0.83	10.14	4.6	20.2	B	1409	2113
5	0.57	5.85	1.3	1.5	A	679	1019

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	106	27	1420	970	0.109	106	46	0.0	0.1	4.164	A
2	893	223	567	1455	0.614	887	958	0.0	1.6	6.268	A
3	398	99	1063	1537	0.259	396	391	0.0	0.3	3.150	A
4	1156	289	395	2153	0.537	1151	1064	0.0	1.1	3.576	A
5	557	139	911	1674	0.333	555	635	0.0	0.5	3.213	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	127	32	1699	835	0.152	127	56	0.1	0.2	5.080	A
2	1066	267	679	1399	0.762	1060	1147	1.6	3.1	10.437	B
3	475	119	1271	1418	0.335	474	468	0.3	0.5	3.811	A
4	1380	345	473	2106	0.655	1377	1272	1.1	1.9	4.920	A
5	665	166	1090	1571	0.423	664	760	0.5	0.7	3.965	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	155	39	2074	653	0.238	155	67	0.2	0.3	7.210	A
2	1306	326	829	1324	0.986	1255	1400	3.1	15.8	37.540	E
3	581	145	1513	1280	0.454	580	571	0.5	0.8	5.135	A
4	1690	423	569	2047	0.826	1680	1524	1.9	4.5	9.539	A
5	815	204	1329	1435	0.568	812	920	0.7	1.3	5.766	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	155	39	2084	649	0.239	155	68	0.3	0.3	7.292	A
2	1306	326	832	1322	0.988	1283	1407	15.8	21.4	60.334	F
3	581	145	1542	1263	0.460	581	573	0.8	0.8	5.278	A
4	1690	423	576	2043	0.827	1689	1547	4.5	4.6	10.143	B
5	815	204	1337	1430	0.570	815	929	1.3	1.3	5.850	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	127	32	1712	828	0.153	127	57	0.3	0.2	5.139	A
2	1066	267	683	1397	0.763	1138	1157	21.4	3.4	17.507	C

3	475	119	1349	1373	0.346	476	472	0.8	0.5	4.016	A
4	1380	345	492	2094	0.659	1391	1334	4.6	2.0	5.191	A
5	665	166	1101	1565	0.425	668	781	1.3	0.7	4.022	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1	106	27	1429	966	0.110	106	47	0.2	0.1	4.190	A
2	893	223	570	1453	0.614	900	965	3.4	1.6	6.590	A
3	398	99	1077	1529	0.260	398	393	0.5	0.4	3.186	A
4	1156	289	399	2151	0.537	1159	1076	2.0	1.2	3.639	A
5	557	139	917	1670	0.334	558	641	0.7	0.5	3.239	A

Queue Variation Results for each time segment

16:15 - 16:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.12	0.00	0.00	0.12	0.12			N/A	N/A
2	1.56	0.42	1.41	2.32	2.81			N/A	N/A
3	0.35	0.00	0.00	0.35	0.35			N/A	N/A
4	1.15	0.55	1.03	1.15	1.15			N/A	N/A
5	0.50	0.00	0.00	0.50	0.50			N/A	N/A

16:30 - 16:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.18	0.00	0.00	0.18	0.18			N/A	N/A
2	3.06	0.05	0.57	8.53	13.87			N/A	N/A
3	0.50	0.00	0.00	0.50	0.50			N/A	N/A
4	1.87	0.04	0.43	5.04	8.65			N/A	N/A
5	0.73	0.07	0.77	1.07	1.07			N/A	N/A

16:45 - 17:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.31	0.03	0.26	0.46	0.49			N/A	N/A
2	15.81	0.25	7.86	40.55	56.24			N/A	N/A
3	0.82	0.03	0.25	0.82	0.82			N/A	N/A
4	4.47	0.03	0.30	4.47	20.20			N/A	N/A
5	1.30	0.03	0.26	1.30	1.30			N/A	N/A

17:00 - 17:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.31	0.03	0.31	1.04	1.29			N/A	N/A
2	21.44	0.17	8.25	58.73	85.01			N/A	N/A
3	0.85	0.03	0.28	0.85	3.10			N/A	N/A
4	4.63	0.03	0.28	4.63	8.79			N/A	N/A
5	1.31	0.03	0.27	1.31	1.51			N/A	N/A

17:15 - 17:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.31	0.03	0.31	1.04	1.29			N/A	N/A
2	21.44	0.17	8.25	58.73	85.01			N/A	N/A
3	0.85	0.03	0.28	0.85	3.10			N/A	N/A
4	4.63	0.03	0.28	4.63	8.79			N/A	N/A
5	1.31	0.03	0.27	1.31	1.51			N/A	N/A

1	0.18	0.00	0.00	0.18	0.18			N/A	N/A
2	3.41	0.04	0.40	9.15	17.87			N/A	N/A
3	0.53	0.53	1.00	1.40	1.45			N/A	N/A
4	1.96	0.06	0.79	5.00	7.59			N/A	N/A
5	0.75	0.20	0.93	1.39	1.45			N/A	N/A

17:30 - 17:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1	0.12	0.00	0.00	0.12	0.12			N/A	N/A
2	1.62	0.03	0.29	1.62	7.14			N/A	N/A
3	0.35	0.00	0.00	0.35	0.35			N/A	N/A
4	1.17	0.04	0.37	2.94	5.50			N/A	N/A
5	0.50	0.05	0.46	1.28	1.39			N/A	N/A