PROPOSED EMPLOYMENT DEVELOPMENT HOLBEACH FOOD ENTERPRISE ZONE, HOLBEACH, LINCOLNSHIRE

ADC Infrastructure Limited, City Buildings, 34-36 Carrington Street, Nottingham, NG1 7FG
tel. 0115 941 4817, www.ADCinfrastructure.com

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1.1 ADC Infrastructure Limited were commissioned by Robert Doughty Consultancy (RDC) on behalf of South Holland District Council (SHDC) to produce this Transport Technical Note in support of the review of the Local Development Order (LDO) for the Food Enterprise Zone (FEZ) in Holbeach.

1.2 The FEZ provides new growth and investment in food, farming and Agri-technologies and is located on land west of the A151 and on the western edge of Holbeach, as shown in **Figure 1**.

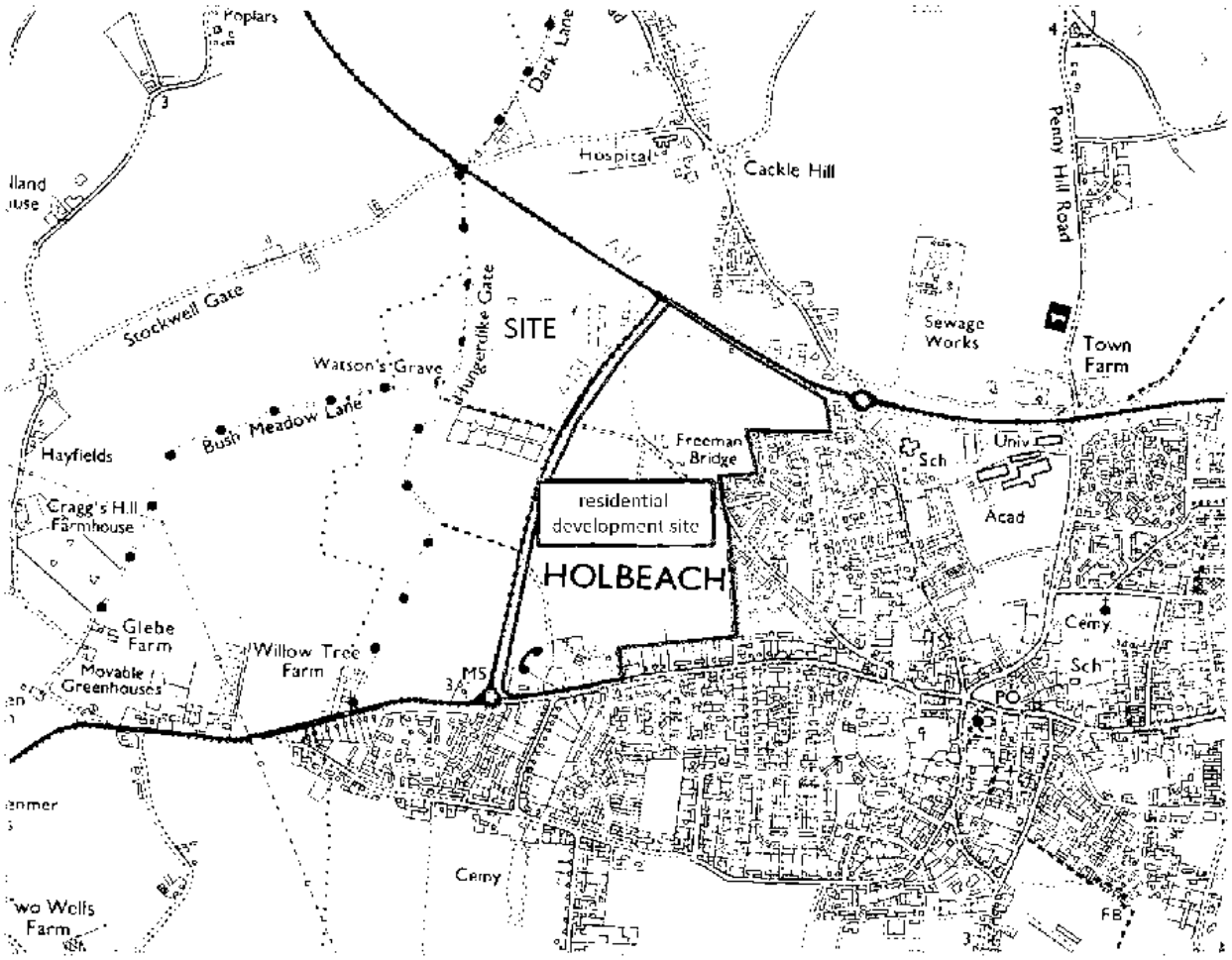


Figure 1: General site location

1.3 ADC Infrastructure Limited produced a Transport Technical Note[1] in August 2016. This was produced in support of the initial LDO for the scheme which was adopted by SHDC in 2018. The LDO is valid for a five-year period and therefore is due to expire in 2023.

1.4 Since the adoption of the LDO, construction has begun and at the time of writing this report, the National Centre for Food Manufacturing has been constructed and is occupied by the University of Lincoln. In addition, 'The Hub' has also been constructed which is a business enterprise centre for small to medium companies across the agri-tech sector and has 25 self-contained office as well as eight self-contained workshops.

1.5 Construction of the full site will not be complete by the time the LDO lapses. Therefore, SHDC wish to review the LDO with the view of extending the LDO.

[1] ADC Infrastructure Transport Technical Note, 3 August 2016

1.6 The Technical Note produced in August 2016 listed the development scenarios that could be promoted for the FEZ and the potential highway impacts of the respective scenarios on the local highway network.

1.7 At the time of writing the highway network was proposed to be changed by the Peppermint Junction improvement scheme. This scheme proposed to replace the A17/A151 priority-controlled ghost island junction with a three-arm roundabout and a new four-arm priority controlled roundabout which would serve the site as well as a consented residential development (application reference: H09-0468-16) to the east of the A151 as highlighted in green in **Figure 1**. Both junctions have now been constructed and are in use.

1.8 This report has therefore been produced to update the findings of the August 2016 Technical Note to assist the review of the LDO with particular focus on the ability of the adjacent highway network to accommodate the proposed development traffic once the site is fully operational.

2.1 As stated in Section 1, the site is currently under construction and the National Centre for Food Manufacturing and 'The Hub' are complete and in use. In addition, based on a site visit of the site undertaken in February 2023, an additional unit is also under construction.

Figure 2: Unit currently under construction

2.2 As per the previous Technical Note produced in August 2016, the study area for this report consists of the following junctions which are also highlighted in **Figure 3**.

1) A151 / site access priority-controlled roundabout
2) A151 / Frontier Agriculture / Sam Crop Sprayers priority-controlled T-junction
3) A17 / A151 priority-controlled roundabout

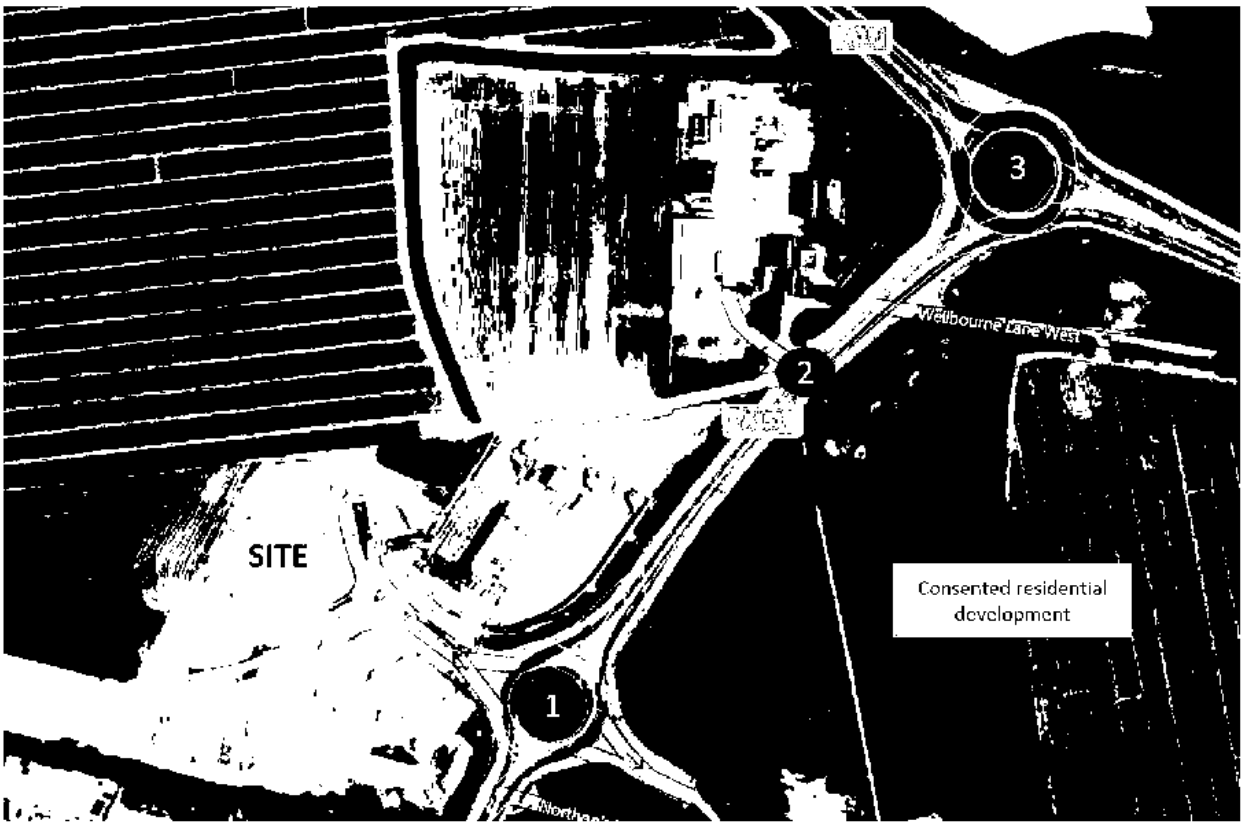


Figure 3: Study area

2.3 As shown in **Figure 4** below, there are two notable committed developments in the vicinity to the site which have been included within the assessments within this Technical Note.

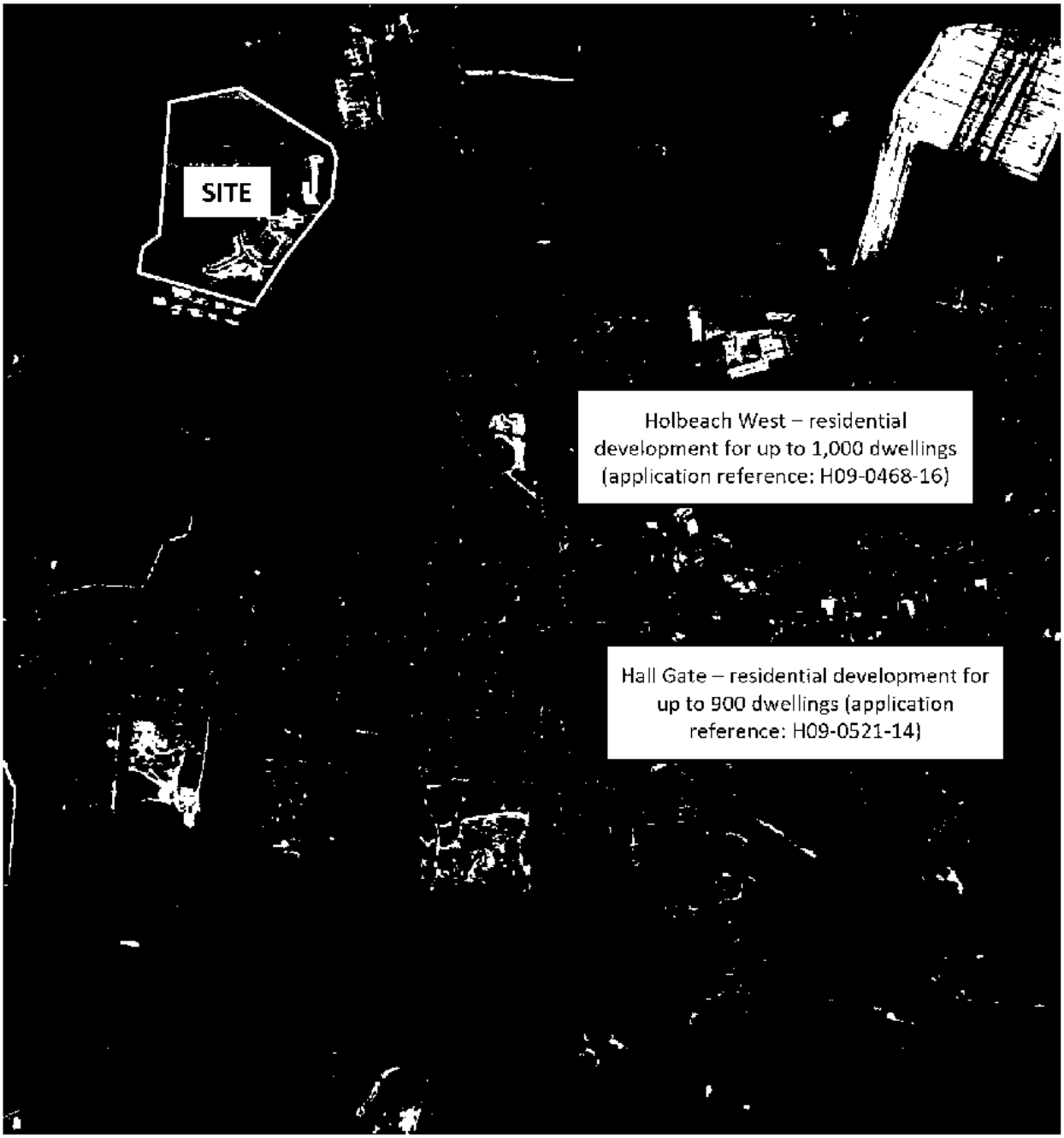


Figure 4: Nearby developments

2.4 To the east of the site, a planning application (application reference: H09-0468-16) for up to 1,000 dwellings was submitted in May 2016. The masterplan for the development is shown in **Figure 5** below and indicates the new A151 / site access roundabout would be used to serve the western part of the development. There would also be an access point at the southern end of the development from Spalding Road. The outline application is yet to be decided.

2.5 However, a separate planning application (application reference: H09-0602-20) for the portion of land highlighted in orange was submitted in July 2020 for the construction of 103 residential dwellings. This development is accessed via extension of Cedar Drive and Oakwood Glade. The

application was approved by SHDC in December 2021 and construction of the development has commenced.

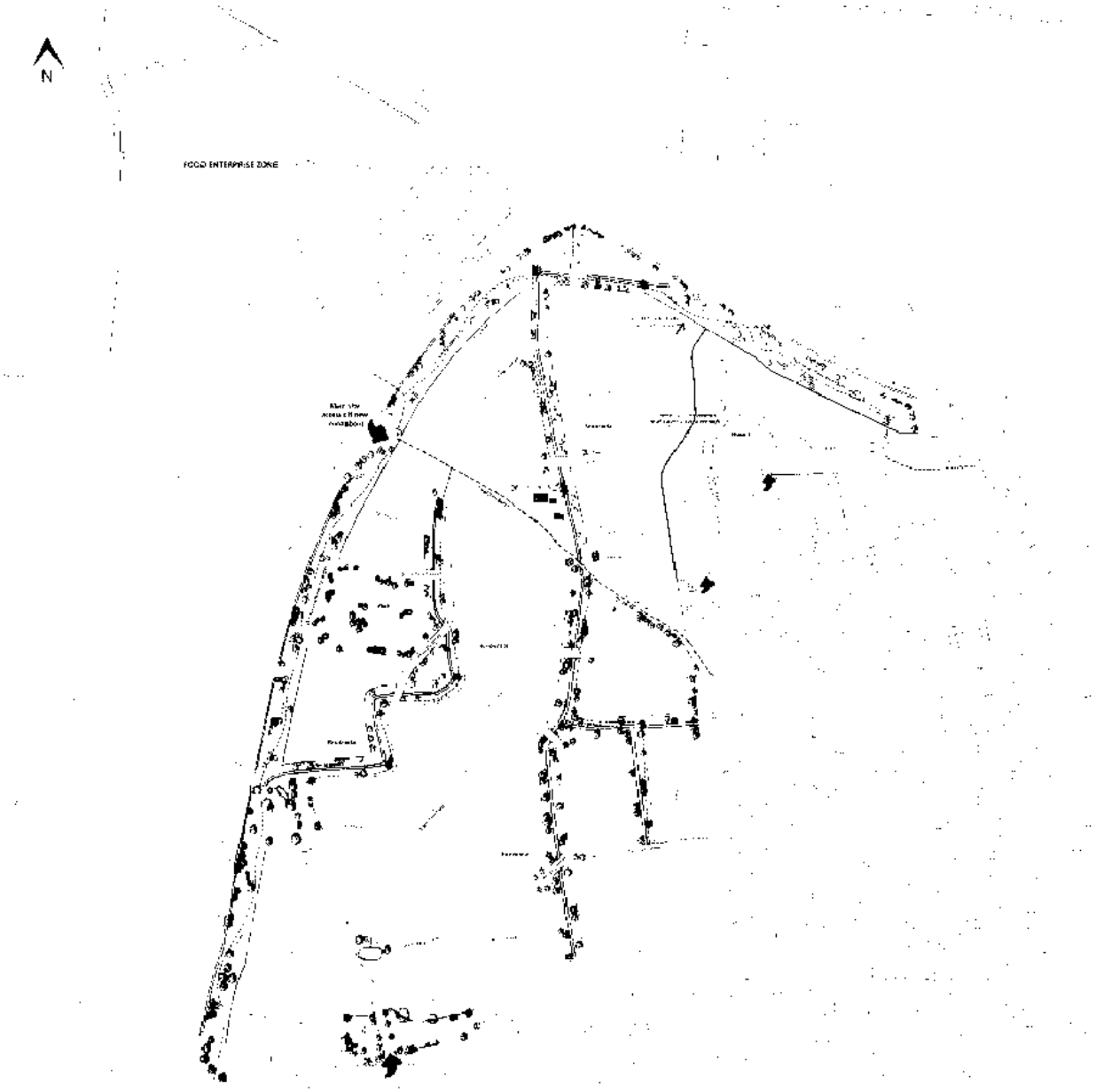


Figure 5: Masterplan for Holbeach West residential development

2.6 To the south of the site, an outline planning application (application reference: H09-0521-14) for up to 900 residential dwellings as well as a primary school. The application was approved by SHDC in December 2016. As shown in **Figure 6**, a new priority-controlled roundabout has been constructed on Hall Gate to the north west of the development as well as a priority-controlled T-junction on Fen Road to the south east. Construction of the development has commenced and some of the houses are occupied.

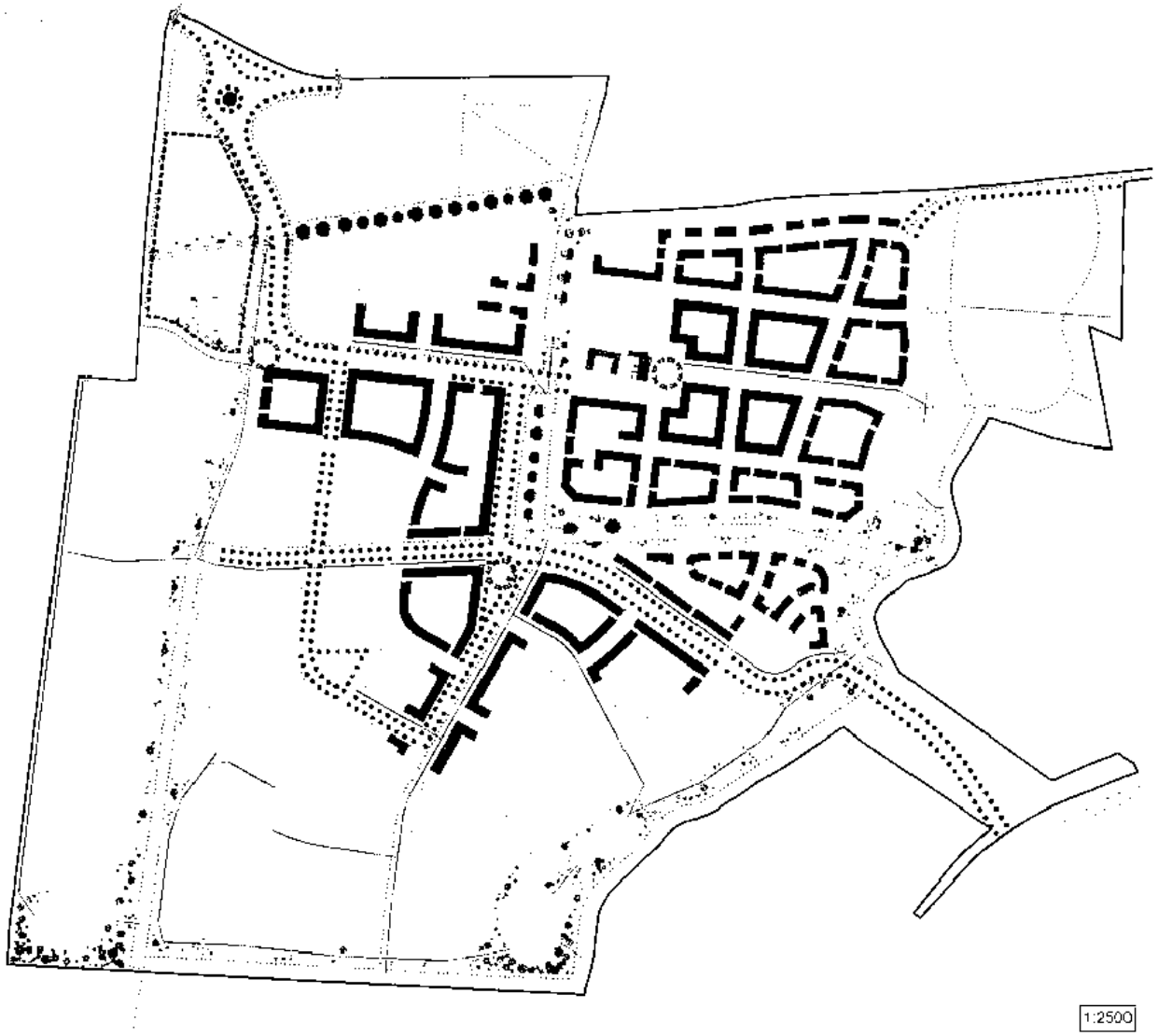


Figure 6: Masterplan for Hall Gate development

2.7 To obtain traffic flow data of the study area junctions, manual traffic counts were undertaken on Tuesday 17 January 2023. The traffic counts are contained in **Appendix A**. The observed morning and evening peak hour traffic flows are shown in **Diagram 1**.

2.8 It is necessary to examine the accident record in the study area to identify any trends that may be made worse by the additional traffic and person trips generated by the proposed development. Therefore, the most recent five-years personal injury accident (PIA) data for the period between 1 January 2017 and 31 December 2022 was obtained from LCC and is shown in **Appendix B**. As shown in **Figure 7**, a total of five accidents have occurred within the study period, all of which were slight in nature.

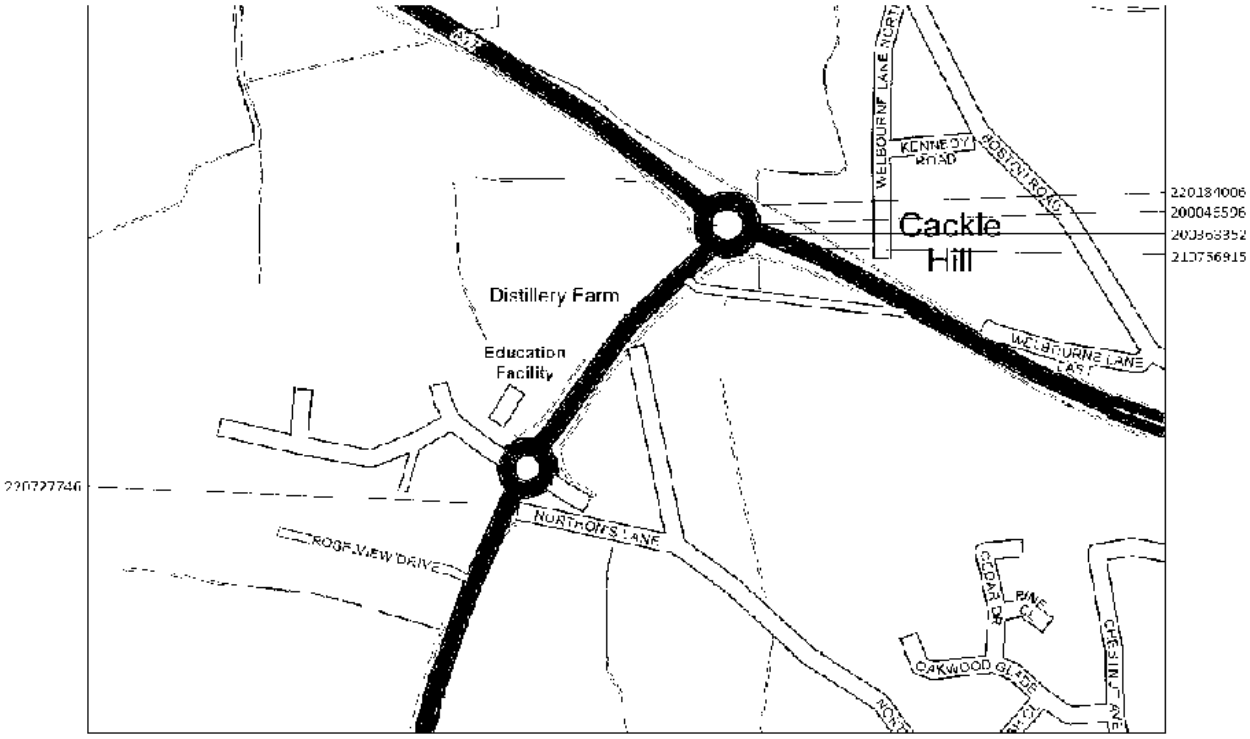


Figure 7: Location of recorded accidents within study area

2.9 Regarding the A151 / site access priority-controlled roundabout, one accident (reference: 220727746) occurred during the study period. The accident in foggy conditions and involved a car travelling north on the A151 towards the roundabout and skidded on ice whilst braking which caused the vehicle to collide with a goods vehicle (7.5 tonnes and over).

2.10 The remaining four accidents occurred at the A17 / A151 priority-controlled roundabout and are described below:

- 200046596 – a car which was travelling west to east on the A17 skidded and overturned at the circulatory carriageway of the roundabout. It was deemed the driver of the car was impaired by alcohol.
- 200363352 – a goods vehicle (3.5 tonnes and under) was travelling south on the A17 with intentions of turning right onto the A151. The driver of the goods vehicle changed lanes to make the right turn manoeuvre but in doing so, collided with a motorcyclist who was travelling straight ahead. It was deemed the driver of the goods vehicle failed to look properly before changing lanes.
- 210756915 – a motorcyclist travelling north on the A17 had to take sudden action to avoid a collision with a car that swerved across lanes. In taking evasive action, the motorcyclist collided with a road sign.
- 220184006 – a goods vehicle (unknown weight) was travelling east to west on the A17 and whilst on the circulatory carriageway, due to a gust of wind, the trailer of the lorry tipped over onto its side.

2.11 In summary, the location and cause of the recorded accidents do not indicate an apparent trend. Hence, it is concluded that there is not an accident problem at the study area junctions.

3.1 The development proposals consist of a new education/employment site to the west of the A151. The development will allow new growth and investment in food, farming and agri-technologies. Construction has begun and at the time of writing this report, the National Centre for Food Manufacturing has been constructed and is occupied by the University of Lincoln. In addition, 'The Hub' has also been constructed which is a business enterprise centre for small to medium companies across the agri-tech sector.

3.2 The breakdown of the floor areas set out in the adopted LDO are shown in **Figure 8** below.

The Floor Areas set out in the adopted LDO were	
B1 (now E)(g))	20,000 sq m (800 delivered 334 under consideration)
B2	20,000 sq m (1,800 delivered with 1421 under consideration)
D1 (F1) education	9,500 sq m (1818 delivered)
D2 (F1) Conference facilities	1500 sq m (none delivered)
A2 financial and professional	1500 (none delivered)

Figure 8: Floor areas for proposed development

3.3 This equates to 20,000sqm for B1 (now Class E (g)) use, 20,000sqm for B2 use, and 9,500sqm for education (D1) use. In addition, there would be up to 1,500sqm use associated with conference facilities and 1,500sqm use associated with financial and professional services.

4.1 To determine the traffic of the proposed Class E (g) use, reference was made to the TRICS database version 7.9.4. All sites in England (excluding London) in the 'Employment – Office' category were selected. Sites up to 50,000sqm were examined in suburban, edge of town centre, and edge of town locations. All weekend surveys were de-selected. The TRICS outputs are contained in **Appendix C** and the average trip rates of the surveyed sites as well as the resultant traffic generation are shown in the table below.

traffic generation - Class E (g) (iii) (formerly part of B1c)		arrive	depart	two-way
trip rates (per 100sqm)	AM peak hour	1.346	0.153	1.499
	PM peak hour	0.124	1.224	1.348
vehicle trips (20,000sqm)	AM peak hour	269	31	300
	PM peak hour	25	245	270

4.2 The TRICS database was examined to determine the traffic generation of the proposed B2 use. All sites in England (excluding London) in the 'Employment – industrial estate' category with a minimum split of 70% for general industrial were selected. Sites up to 30,000sqm were examined in suburban, edge of town centre, edge of town locations. All weekend surveys were de-selected. The TRICS outputs are contained in **Appendix D** and the average trip rates of the surveyed sites as well as the resultant traffic generation are shown in the table below.

traffic generation – B2		arrive	depart	two-way
trip rates (per 100sqm)	AM peak hour	0.457	0.190	0.647
	PM peak hour	0.112	0.479	0.591
vehicle trips (20,000sqm)	AM peak hour	91	38	129
	PM peak hour	22	96	118

4.3 With regards to the composition of the traffic for the B2 use, it is reasonable to assume that the typical peak hour HGV proportion for a B2 site is around 10% of the total traffic generated. The remaining light vehicles are assumed to be staff, visitors and LGV deliveries. The resulting split between light and HGV vehicles is shown in the table below.

vehicle trip split		arrive	depart	two-way
AM peak hour	Light vehicles (90%)	82	34	116
	HGVs (10%)	9	4	13
PM peak hour	Light vehicles (90%)	20	86	106
	HGVs (10%)	2	10	12

4.4 The TRICS database was examined to determine the traffic generation associated with the proposed education use. All sites in England (excluding London) in the 'Education – College/University' category were examined in suburban, edge of town centre, edge of town locations. All weekend surveys were de-selected. The TRICS outputs are contained in **Appendix E** and the average trip rates of the surveyed sites as well as the resultant traffic generation are shown in the table below.

traffic generation – Education (F1)		arrive	depart	two-way
trip rates (per 100sqm)	AM peak hour	1.178	0.342	1.520
	PM peak hour	0.234	0.649	0.883
vehicle trips (9,500sqm)	AM peak hour	112	32	144
	PM peak hour	22	62	84

4.5 The TRICS database was examined to determine the traffic generation associated with the proposed conference as well as financial and professional uses. However, the TRICS database does not provide sites that are comparable to these uses. Therefore, it is considered reasonable to assess the trips associated with the uses based on trip rates for office use as outlined in the table at paragraph 4.1. Therefore, based on the office trip rates, the resultant traffic generation for the conference as well as financial and professional uses is shown in the table below.

traffic generation – Conference + Financial and Professional		arrive	depart	two-way
trip rates (per 100sqm)	AM peak hour	1.346	0.153	1.499
	PM peak hour	0.124	1.224	1.348
vehicle trips (3,000sqm)	AM peak hour	40	5	45
	PM peak hour	4	37	41

4.6 When combining the respective uses summarised above, the overall trip generation for the proposed development is shown in the table below. As shown, in the morning peak hour, there would be 618 two-way vehicular trips and 513 two-way vehicular trips in the evening peak hour.

traffic generation – Overall trips		arrive	depart	two-way
vehicle trips (52,500sqm)	AM peak hour	513	105	618
	PM peak hour	73	440	513

5.1 To determine the distribution pattern of the proposed employment development, reference was made to the 2011 National Census 'Location of usual residence and place of work by method of travel to work' dataset (reference: WU03EW). The data provides information on the in moves and out moves to and from the middle super output layer (MSOA) associated with journeys to work.

5.2 The development is located in the 'South Holland 003' MSOA. Therefore, the data for the South Holland 007 MSOA was examined to identify where people working in MSOA, who travel by car, travel from. This approach is appropriate given that it is likely that new employees within the development will display similar travel patterns to existing employees in the South Holland 007 MSOA. From this information, the travel route was estimated using Google Maps, and the proportion using each highway route was identified. A copy of the Census data is contained in **Appendix F** and the trip distribution pattern is summarised in **Figure 9** below and in **Diagram 2**.

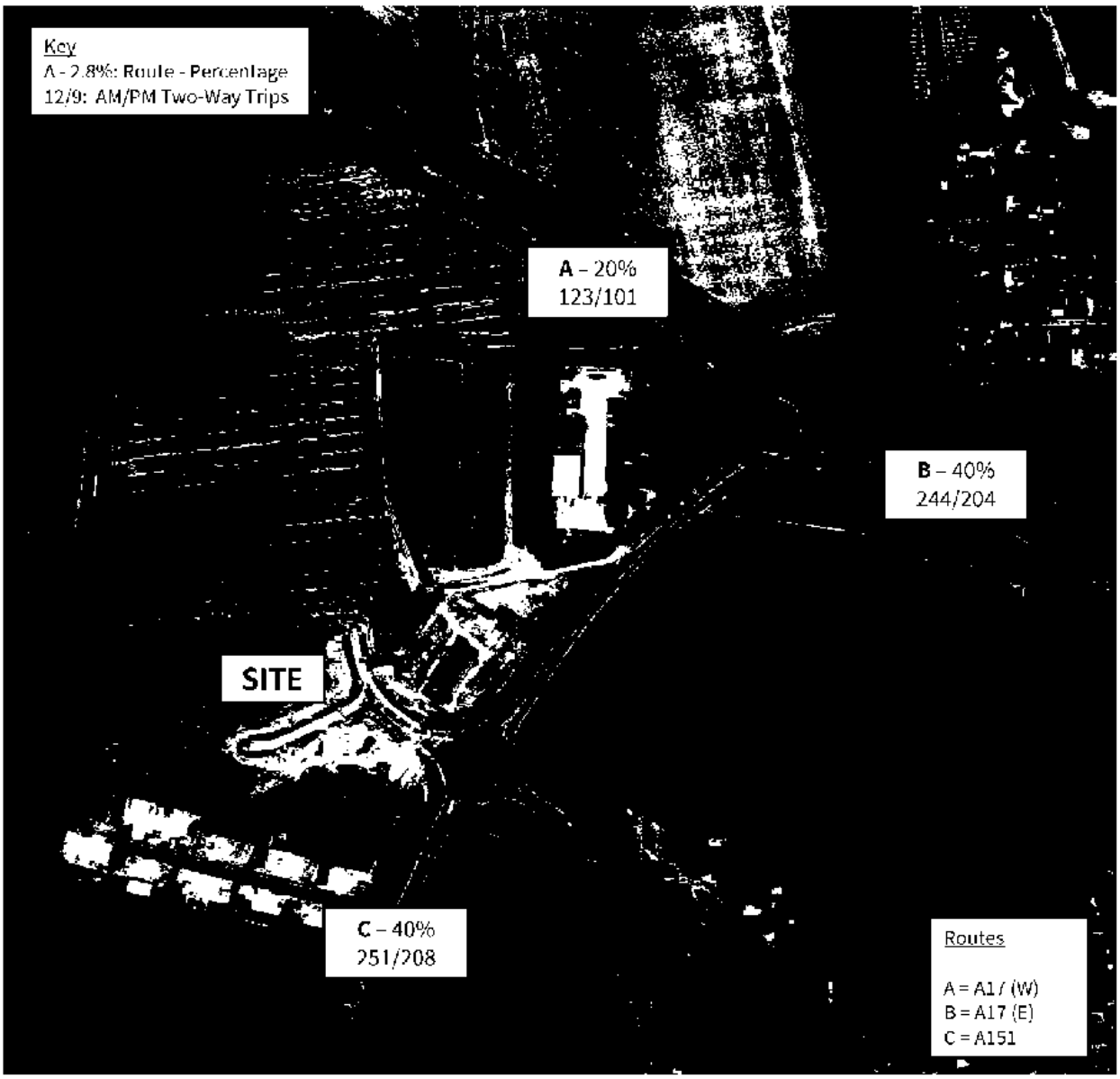


Figure 9: Trip distribution pattern and assignment of development traffic

5.3 As shown above, the traffic will divide at the site access with the A151, with 40% routing to/from the south along the A151 towards the A151 Spalding Road which extends to Holbeach to the east and the A16 and Spalding to the west. The remaining 60% would to/from the north towards the

junction with the A17. The traffic will split further at this junction with 20% routing to/from the north west towards the A52 whilst the remaining 40% routing to/from the south east towards the A1101, A47 and Kings Lynn.

5.4 The overall development traffic (table at paragraph 4.5) was assigned to the local highway network in accordance with the distribution pattern and the resultant morning and evening development traffic assignment is summarised in **Figure 9** and contained in **Diagram 3.** In a peak hour, there would be up to 251 two-way vehicular trips travelling to and from the south of the site whilst there would be up to 367 two-way vehicular trips travelling to and from the north which would split at the A17/A151 roundabout. In the worst case morning peak hour, 123 two-way trips route to/from the north east whilst the remaining 244 would route to/from the south east.

5.5 As stated in Section 2, the site is currently in use and, therefore, generated traffic movements. Based on the information provided, 4,418sqm of floorspace has been delivered. Taking into account the trip rates summarised in Section 4, this equates to 49 two-way vehicular traffic movements in the morning peak hour and 37 two-way trips in the evening peak hour. These trips should already be on the local highway network and, hence, can be discounted from the development traffic assignment traffic flows. However, to be robust, the traffic generated by the overall development has been assessed.

6.1 As stated in Section 2, manual traffic counts were undertaken at the study area junctions on Tuesday 17 January 2023. The observed morning and evening peak hour traffic flows are shown in **Diagram 1**.

6.2 The LDO takes effect on the date it is adopted by SHDC and will be valid for five years. Hence, on the basis the extension of the LDO is adopted by SHDC this year, that would mean it would be due to expire in 2028. Hence, an assessment year of 2028 has been adopted for the capacity assessment of the study area junctions.

6.3 In addition, the site has been promoted as an employment allocation in the South East Lincolnshire Local Plan which was adopted in March 2019 and extends to 2036. Hence, an assessment year of 2036 has also been adopted.

6.4 The observed traffic flows were therefore growthed to 2028 and 2036 levels using TEMPRO (version 7.2b, dataset 72), which includes links to the National Traffic Model. The TEMPRO output is in **Appendix G** and shows the growth rates for 'all roads' within the South Holland 003 MSOA as follows:

- 2023 to 2028 AM 1.0605
- 2023 to 2028 PM 1.0613
- 2023 to 2036 AM 1.1373
- 2023 to 2036 PM 1.1401

The resultant 2028 and 2036 Base traffic flows are contained in **Diagrams 4 and 5** respectively.

6.5 In addition to background growth, it is necessary to include traffic flows associated with any committed developments within the 2028 and 2036 assessment year traffic flows. The Government's planning practice guidance states *"It is important to give appropriate considerations to cumulative impacts arising from other committed developments (i.e. development that is consented or allocated where there is a reasonable degree of certainty it will proceed within the next three years)".*

6.6 As stated in Section 2, there are two notable developments in the vicinity of the site. Traffic flows have therefore been extracted from the respective Transport Assessments.

6.7 To the east of the site, a planning application (application reference: H09-0468-16) for up to 1,000 dwellings was submitted in May 2016. The outline application is yet to be decided. However, a separate planning application (application reference: H09-0602-20) for the portion of land highlighted in orange was submitted in July 2020 for the construction of 103 residential dwellings. The application was approved by SHDC in December 2021 and construction of the development has commenced. The traffic flows at the study area junctions associated with the scheme is shown in **Diagram 6**.

6.8 To the south of the site, an outline planning application (application reference: H09-0521-14) for up to 900 residential dwellings as well as a primary school. The application was approved by SHDC in December 2016. Construction of the development has commenced and some of the

houses are occupied. Therefore, given there are houses that are occupied, some of the trips associated with the development is already on the local highway network. However, to be robust, the traffic generated by the overall development has been assessed. The traffic flows at the study area junctions associated with the scheme is shown in **Diagram 7**.

6.9 The total committed development flows is shown in **Diagram 8** and were added to the 2028 Base traffic flows to produce the 2028 Background traffic flows which is shown in **Diagram 9**. For the 2036 scenario, the total committed development flows were added to the 2036 Base traffic flows to produce the 2036 Background traffic flows which is shown in **Diagram 10**.

6.10 The proposed development flows shown in **Diagram 3** were added to the 2028 Background flows to give the 2028 With Development traffic flows which is contained in **Diagram 11.**

6.11 For the 2036 scenario, the proposed development flows were added to the 2036Background flows to give the 2036 With Development traffic flows which is contained in **Diagram 12.**

7.1 The A151 / site access is a four-arm priority-controlled roundabout as shown in **Figure 10**. A model of the roundabout was built using Junctions 9 ARCADY software with junction geometries extracted from OS mapping. The model was tested using the 2023 Observed flows, 2028 and 2036 Base flows, 2028 and 2036 Background flows and 2028 and 2036 With Development flows. The results are summarised in the table below and the ARCADY outputs are in **Appendix H**.

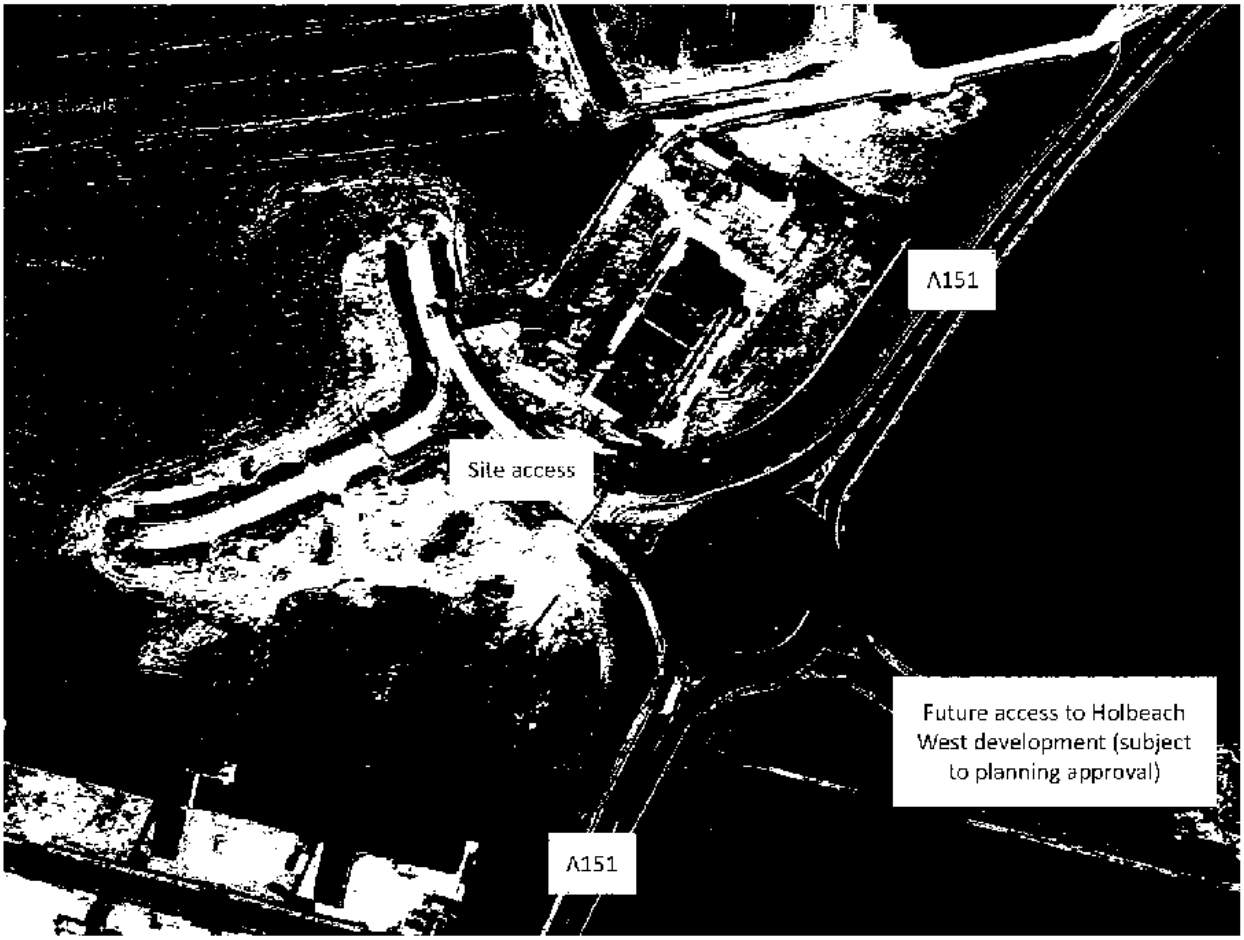


Figure 10: A151 / site access priority-controlled roundabout

	AM peak hour			PM peak hour		
	Queue (veh)	Delay (s)	RFC	Queue (veh)	Delay (s)	RFC
2023 Observed						
A151 (S)	0.5	3.45	32%	0.3	3.01	24%
Site access	0.0	0.0	0%	0.0	2.06	1%
A151 (N)	0.4	3.15	30%	0.3	2.76	25%
Future access to Holbeach West	0.0	0.00	0%	0.0	0.00	0%
2028 Base						
A151 (S)	0.5	3.56	34%	0.3	3.06	26%
Site access	0.0	0.00	0%	0.0	2.07	1%
A151 (N)	0.5	3.23	32%	0.4	2.82	27%
Future access to Holbeach West	0.0	0.00	0%	0.0	0.00	0%

2036 Base						
A151 (S)	0.6	3.69	36%	0.4	3.16	28%
Site access	0.0	0.00	0%	0.0	2.10	1%
A151 (N)	0.5	3.35	34%	0.4	2.90	29%
Future access to Holbeach West	0.0	0.00	0%	0.0	0.00	0%
2028 Background						
A151 (S)	0.8	4.40	43%	0.5	3.50	33%
Site access	0.0	0.00	0%	0.0	2.26	1%
A151 (N)	0.6	3.53	39%	0.7	3.60	43%
Future access to Holbeach West	0.3	3.70	22%	0.1	3.24	12%
2036 Background						
A151 (S)	0.8	4.61	46%	0.5	3.61	35%
Site access	0.0	0.00	0%	0.0	2.29	1%
A151 (N)	0.7	3.68	41%	0.8	3.73	45%
Future access to Holbeach West	0.3	3.79	22%	0.1	3.30	12%
2028 With Development						
A151 (S)	2.0	8.49	67%	0.6	3.71	36%
Site access	0.1	2.83	8%	0.5	3.36	32%
A151 (N)	1.4	5.18	58%	0.9	4.32	49%
Future access to Holbeach West	0.4	4.82	27%	0.2	3.71	13%
2036 With Development						
A151 (S)	2.3	9.33	70%	0.6	3.84	38%
Site access	0.1	2.88	9%	0.5	3.43	32%
A151 (N)	1.5	5.50	61%	1.0	4.51	51%
Future access to Holbeach West	0.4	4.98	27%	0.2	3.79	14%

7.2 As shown in the table above, the junction operates at 32% of capacity in the worst case morning peak hour. In 2028, it is forecast to operate at 34% when taking into account background growth associated with TEMPRO growth factors. With the addition of the traffic related to the committed developments, it is forecast to operate at 43%. With the development in place, the junction is forecast to operate at 67% and, therefore, with spare capacity.

7.3 In 2036, it is forecast to operate at 36% when taking into account background growth associated with TEMPRO growth factors. With the addition of the traffic related to the committed developments, it is forecast to operate at 46%. With the development in place, the junction is forecast to operate at 70% and, therefore, with spare capacity.

7.4 In Section 2, it was confirmed only one accident occurred at the junction within the study period. Hence, there is no accident problem.

7.5 Therefore, the operation of the junction would not be compromised in terms of capacity, congestion, or highway safety as a result of the development and no mitigation measures are proposed.

7.6 The A151 / Frontier Agriculture / Sam Crop Sprayers junction is a priority-controlled T-junction as shown in **Figure 11**. A model of the T-junction was built using Junctions 9 PICADY software with junction geometries extracted from OS mapping. The model was tested using the 2023 Observed flows, 2028 and 2036 Base flows, 2028 and 2036 Background flows and 2028 and 2036 With

Development flows. The results are summarised in the table below and the PICADY outputs are in **Appendix I**.

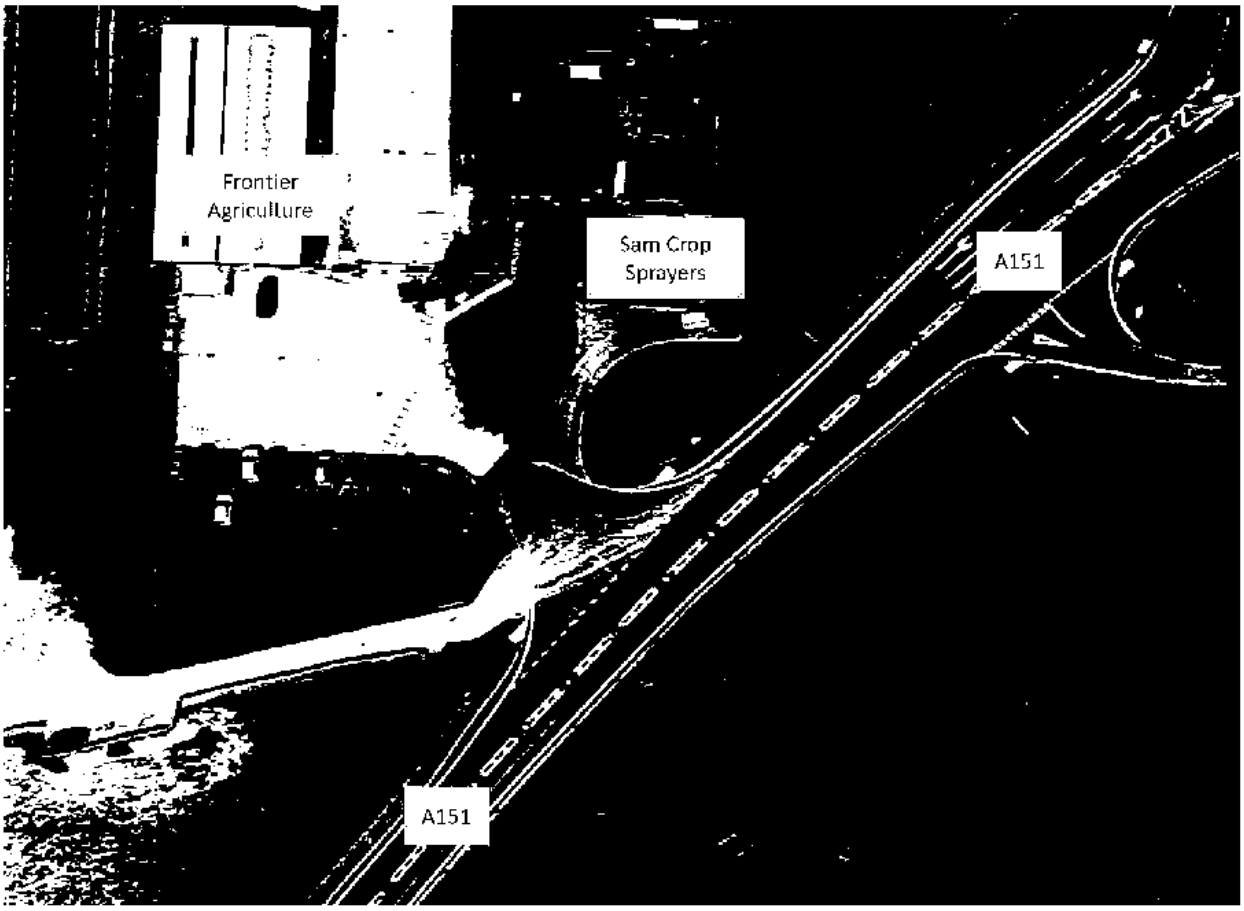


Figure 11: A151 / Frontier Agriculture / Sam Crop Sprayers priority-controlled T-junction

	AM peak hour			PM peak hour		
	Queue (veh)	Delay (s)	RFC	Queue (veh)	Delay (s)	RFC
2023 Observed						
A151 (S)	0.0	0.00	0%	0.0	0.00	0%
Frontier Agriculture	0.0	0.00	0%	0.0	0.00	0%
A151 (N)	0.0	4.54	0%	0.0	0.00	0%
2028 Base						
A151 (S)	0.0	0.00	0%	0.0	0.00	0%
Frontier Agriculture	0.0	0.00	0%	0.0	0.00	0%
A151 (N)	0.5	4.49	0%	0.0	0.00	0%
2036 Base						
A151 (S)	0.0	0.00	0%	0.0	0.00	0%
Frontier Agriculture	0.0	0.00	0%	0.0	0.00	0%
A151 (N)	0.6	4.42	0%	0.0	0.00	0%
2028 Background						
A151 (S)	0.0	0.00	0%	0.0	0.00	0%
Frontier Agriculture	0.0	0.00	0%	0.0	0.00	0%
A151 (N)	0.0	4.38	0%	0.0	0.00	0%
2036 Background						
A151 (S)	0.0	0.00	0%	0.0	0.00	0%
Frontier Agriculture	0.0	0.00	0%	0.0	0.00	0%

A151 (N)	0.0	4.31	0%	0.0	0.00	0%
2028 With Development						
A151 (S)	0.0	0.00	0%	0.0	0.00	0%
Frontier Agriculture	0.0	0.00	0%	0.0	0.00	0%
A151 (N)	0.0	3.69	1%	0.0	0.00	0%
2036 With Development						
A151 (S)	0.0	0.00	0%	0.0	0.00	0%
Frontier Agriculture	0.0	0.00	0%	0.0	0.00	0%
A151 (N)	0.0	3.64	1%	0.0	0.00	0%

7.7 As shown in the table above, the junction performs significantly within capacity with no queuing and minimal delay. With the addition of background growth related to TEMPRO growth factors committed development as well as the proposed development, the junction would still perform with significant spare capacity.

7.8 In Section 2, it was confirmed no recorded accidents occurred at the junction within the study period.

7.9 Thus, there would be no adverse capacity or safety impacts at the junction because of the development and no mitigation measures are proposed.

7.10 The A17 / A151 junction is a three-arm priority-controlled roundabout as shown in **Figure 12**. A model of the roundabout was built using Junctions 9 ARCADY software with junction geometries extracted from OS mapping. The model was tested using the 2023 Observed flows, 2028 and 2036 Base flows, 2028 and 2036 Background flows and 2028 and 2036 With Development flows. The results are summarised in the table below and the ARCADY outputs are in **Appendix J**.

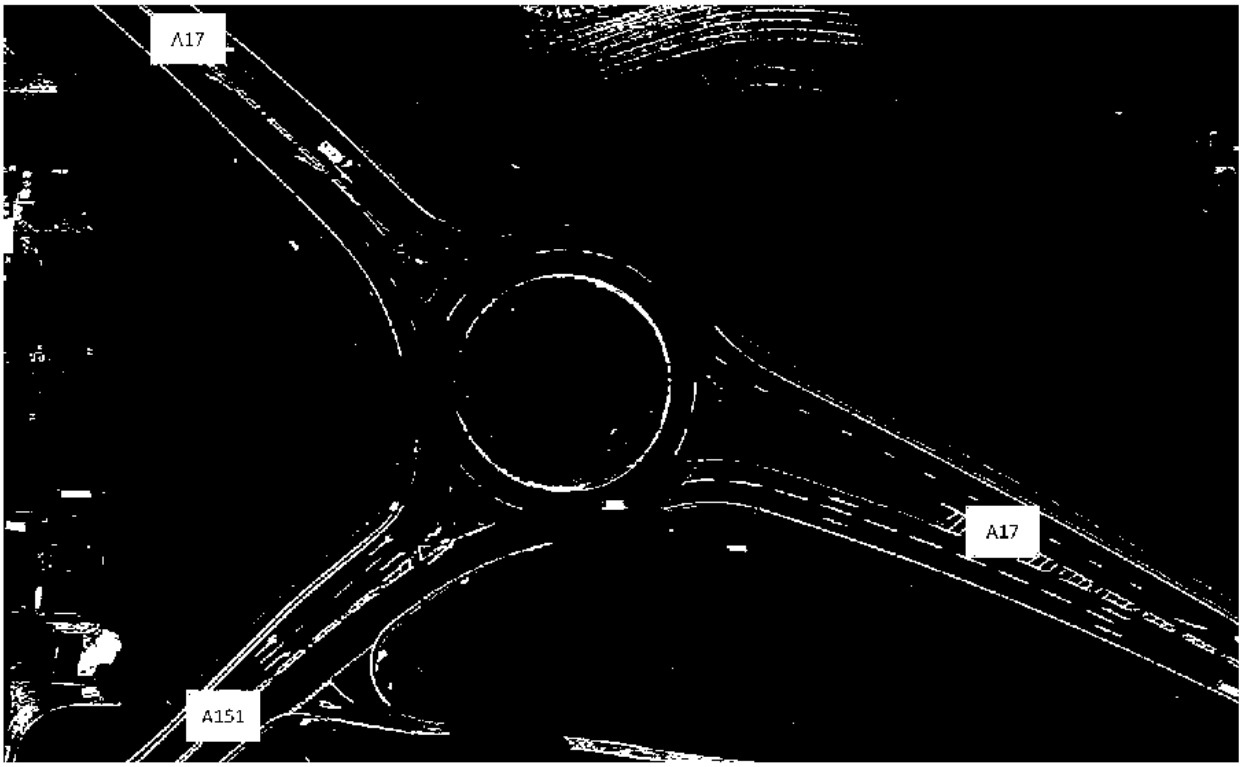


Figure 12: A17 / A151 priority-controlled roundabout

	AM peak hour			PM peak hour		
	Queue (veh)	Delay (s)	RFC	Queue (veh)	Delay (s)	RFC
2023 Observed						
A151	0.4	3.00	29%	0.3	2.72	23%
A17 (W)	0.8	4.14	46%	0.5	3.25	35%
A17 (E)	1.0	3.37	49%	0.9	3.16	48%
2028 Base						
A151	0.4	3.14	31%	0.3	2.83	24%
A17 (W)	1.0	4.43	49%	0.6	3.40	38%
A17 (E)	1.1	3.58	52%	1.1	3.36	51%
2036 Base						
A151	0.5	3.35	34%	0.4	2.98	27%
A17 (W)	1.1	4.88	53%	0.7	3.61	41%
A17 (E)	1.3	3.90	56%	1.2	3.66	55%
2028 Background						
A151	0.9	3.99	47%	0.5	3.16	34%
A17 (W)	1.2	5.40	55%	0.7	3.82	42%
A17 (E)	1.3	3.90	56%	1.6	4.26	62%
2036 Background						
A151	1.0	4.35	50%	0.6	3.37	36%
A17 (W)	1.4	6.09	59%	0.8	4.08	46%
A17 (E)	1.5	4.29	60%	1.9	4.75	65%
2028 With Development						
A151	1.0	4.28	51%	1.0	4.15	50%
A17 (W)	1.6	6.54	62%	0.9	4.38	46%
A17 (E)	2.1	5.39	68%	1.7	4.46	63%
2036 With Development						
A151	1.2	4.71	54%	1.1	4.51	53%
A17 (W)	2.0	7.61	67%	1.0	4.73	50%
A17 (E)	2.5	6.22	72%	2.0	5.01	67%

7.11 As shown in the table above, the junction performs at 49% of capacity in the worst case morning peak hour. In 2028, it is forecast to operate at 52% when taking into account background growth associated with TEMPRO growth factors. With the addition of the traffic related to the committed developments, it is forecast to operate at 56%. With the development in place, the junction is forecast to operate at 68% and, therefore, with spare capacity.

7.12 In 2036, it is forecast to operate at 56% when taking into account background growth associated with TEMPRO growth factors. With the addition of the traffic related to the committed developments, it is forecast to operate at 60%. With the development in place, the junction is forecast to operate at 72% and, therefore, with spare capacity.

7.13 In Section 2, it was shown that four accidents occurred at the junction within the study period, all of which were slight in nature. It was deemed adverse weather conditions and driver error were key contributors to the accidents. Hence, there is no accident problem at the junction.

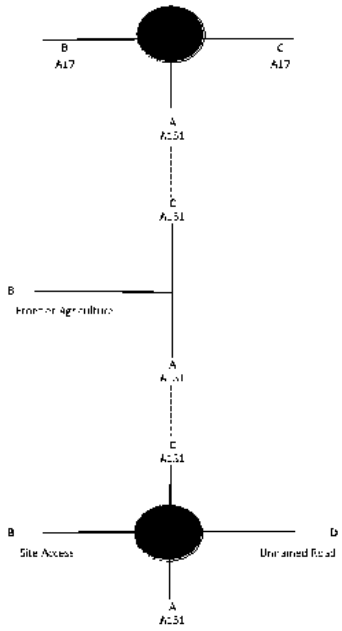
7.14 Therefore, the operation of the junction would not be compromised in terms of capacity, congestion, or highway safety as a result of the development and no mitigation measures are proposed.

8.1 The development proposals consist of a new education/employment site to the west of the A151. Construction has begun and at the time of writing this report, the National Centre for Food Manufacturing has been constructed and is occupied by the University of Lincoln. In addition, 'The Hub' has also been constructed which is a business enterprise centre for small to medium companies across the agri-tech sector. This report has been produced to assist the review of the LDO with particular focus on the ability of the Peppermint Junction improvement scheme to accommodate the proposed development traffic once the site is fully operational.

8.2 It was confirmed the development would be a mix of 40% for B1 (now Class E (g)) use, 40% for B2 use, and 20% for education (D1) use. To determine the levels of traffic the various uses would generate, the TRICS database was examined. In total, there would be 560 two-way vehicular trips and 460 two-way vehicular trips in the evening peak hour.

8.3 Capacity assessments were undertaken at the A151 / site access and A17 / A151 priority-controlled roundabouts as well as the A151 / Frontier Agriculture priority-controlled T-junction. The capacity assessments demonstrates all three junctions currently perform within capacity. With the addition of background growth related to TEMPRO growth factors and committed developments as well as the traffic generated by the proposed development, the junctions would still continue to operate with spare capacity in the assessment years of 2028 and 2036. Therefore, the additional development traffic can be accommodated on the local road network and no mitigation measures are required as a result of the development.

AM



A17 / A151 Roundabout - Junction 3

Lights

	A	B	C	Total
A	0	96	330	426
B	31	0	335	366
C	335	468	1	804
Total	366	564	672	1772

HGVs

	A	B	C	Total
A	0	7	81	88
B	5	0	96	101
C	37	93	0	130
Total	42	100	127	269

Total

	A	B	C	Total
A	0	103	867	970
B	36	0	971	967
C	372	561	1	934
Total	408	634	989	2041

HGV %

	A	B	C	Total
A	0.0%	0.0%	8.4%	
B	13.9%	0.0%	9.9%	
C	9.9%	16.6%	0.0%	
Total				

A151 / Frontier Agriculture T-Junction - Junction 2

Lights

	A	B	C	Total
A	0	1	486	486
B	3	0	1	3
C	336	1	0	337
Total	338	2	486	826

HGVs

	A	B	C	Total
A	0	0	45	45
B	1	0	0	1
C	51	0	0	51
Total	52	0	45	97

Total

	A	B	C	Total
A	0	1	440	441
B	3	0	1	4
C	447	1	0	448
Total	450	2	441	893

HGV %

	A	B	C	Total
A	0.0%	0.0%	10.2%	
B	33.3%	0.0%	0.0%	
C	11.4%	0.0%	0.0%	
Total				

A151 / Site Access Roundabout - Junction 1

Lights

	A	B	C	D	Total
A	1	4	386	0	401
B	0	0	0	0	0
C	53	0	0	0	102
D	0	0	0	0	0
Total	382	13	496	0	501

HGVs

	A	B	C	D	Total
A	0	0	42	0	42
B	0	0	0	0	0
C	50	1	0	0	52
D	0	0	0	0	0
Total	50	1	45	0	97

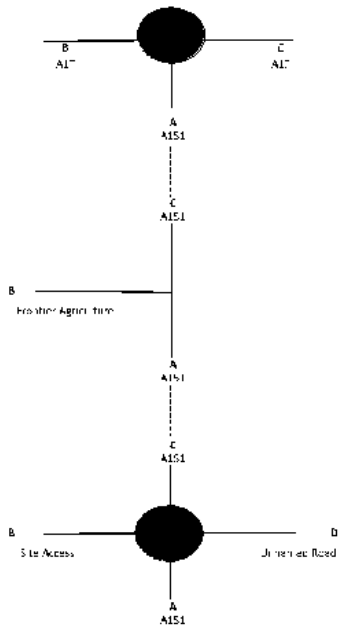
Total

	A	B	C	D	Total
A	1	4	440	0	445
B	0	0	0	0	0
C	442	10	0	0	452
D	0	0	0	0	0
Total	443	14	441	0	898

HGV %

	A	B	C	D	Total
A	0.0%	0.0%	10.0%	0.0%	
B	0.0%	0.0%	0.0%	0.0%	
C	11.5%	20.0%	0.0%	0.0%	
D	0.0%	0.0%	0.0%	0.0%	
Total					

PM



A17 / A151 Roundabout - Junction 3

Lights

	A	B	C	Total
A	0	34	270	304
B	43	0	442	485
C	349	544	1	894
Total	392	603	713	1708

HGVs

	A	B	C	Total
A	0	2	40	42
B	5	0	88	93
C	54	62	1	117
Total	59	64	81	152

Total

	A	B	C	Total
A	0	41	310	351
B	48	0	529	578
C	404	606	2	1013
Total	452	647	794	1970

HGV %

	A	B	C	Total
A	0.0%	8.3%	6.3%	
B	5.3%	0.0%	12.0%	
C	4.9%	10.2%	50.0%	
Total				

A151 / Frontier Agriculture T-Junction - Junction 2

Lights

	A	B	C	Total
A	0	0	309	309
B	0	0	3	3
C	388	0	0	388
Total	388	0	312	710

HGVs

	A	B	C	Total
A	0	0	34	34
B	0	0	0	0
C	17	0	0	17
Total	17	0	34	70

Total

	A	B	C	Total
A	0	0	352	352
B	0	0	2	2
C	405	0	0	405
Total	405	0	354	759

HGV %

	A	B	C	Total
A	0.0%	0.0%	9.7%	
B	0.0%	0.0%	0.0%	
C	4.2%	0.0%	0.0%	
Total				

A151 / Site Access Roundabout - Junction 1

Lights

	A	B	C	D	Total
A	0	3	323	1	327
B	5	0	7	2	14
C	386	2	0	0	388
D	1	0	0	0	1
Total	392	5	330	1	728

HGVs

	A	B	C	D	Total
A	1	0	22	1	24
B	0	0	0	0	0
C	15	0	0	1	17
D	1	0	0	0	1
Total	17	0	22	1	40

Total

	A	B	C	D	Total
A	1	3	346	1	351
B	5	0	7	2	12
C	402	2	0	1	405
D	2	0	0	0	2
Total	410	5	353	2	770

HGV %

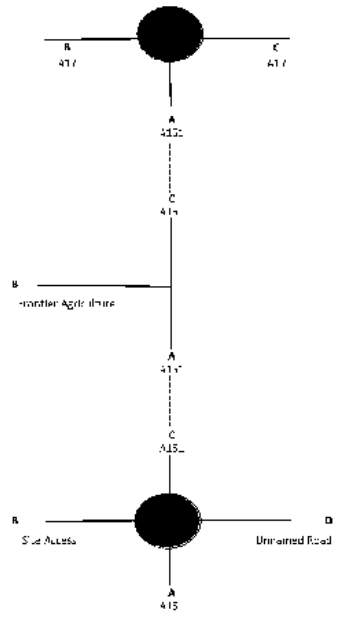
	A	B	C	D	Total
A	0.0%	0.0%	6.4%	0.0%	
B	0.0%	0.0%	0.0%	0.0%	
C	4.0%	0.0%	0.0%	100%	
D	50.0%	0.0%	0.0%	0.0%	
Total					

DIAGRAM 1

2023 OBSERVED TRAFFIC FLOWS

ADC

AM



A17 / A151 Roundabout - Junction 3

Lights

	A	B	C	Total
A		20%	40%	
B	19.8%			
C	80.2%			
Total				

HGVs

	A	B	C	Total
A				
B				
C				
Total				

Total

	A	B	C	Total
A				
B				
C				
Total				

HGV %

	A	B	C	Total
A				
B				
C				
Total				

A151 / Frontier Agriculture T-Junction - Junction 2

Lights

	A	B	C	Total
A			60%	
B				
C	60%			
Total				

HGVs

	A	B	C	Total
A				
B				
C				
Total				

Total

	A	B	C	Total
A				
B				
C				
Total				

HGV %

	A	B	C	Total
A				
B				
C				
Total				

A151 / Site Access Roundabout - Junction 1

Lights

	A	B	C	D	Total
A		40%			
B	40.4%		59.6%		
C		50%			
D					
Total					

HGVs

	A	B	C	D	Total
A					
B					
C					
D					
Total					

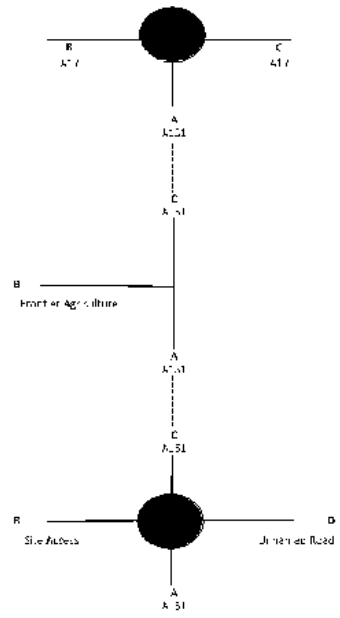
Total

	A	B	C	D	Total
A					
B					
C					
D					
Total					

HGV %

	A	B	C	D	Total
A					
B					
C					
D					
Total					

PM



A17 / A151 Roundabout - Junction 3

Lights

	A	B	C	Total
A		20%	40%	
B	20%			
C	40%			
Total				

HGVs

	A	B	C	Total
A				0
B				0
C				0
Total	0	0	0	0

Total

	A	B	C	Total
A				
B				
C				
Total				

HGV %

	A	B	C	Total
A				
B				
C				
Total				

A151 / Frontier Agriculture T-Junction - Junction 2

Lights

	A	B	C	Total
A			60%	
B				
C	60%			
Total				

HGVs

	A	B	C	Total
A				
B				
C				
Total				

Total

	A	B	C	Total
A				
B				
C				
Total				

HGV %

	A	B	C	Total
A				
B				
C				
Total				

A151 / Site Access Roundabout - Junction 1

Lights

	A	B	C	D	Total
A		40%			
B	40%		60%		
C		60%			
D					
Total					

HGVs

	A	B	C	D	Total
A					
B					
C					
D					
Total					

Total

	A	B	C	D	Total
A					
B					
C					
D					
Total					

HGV %

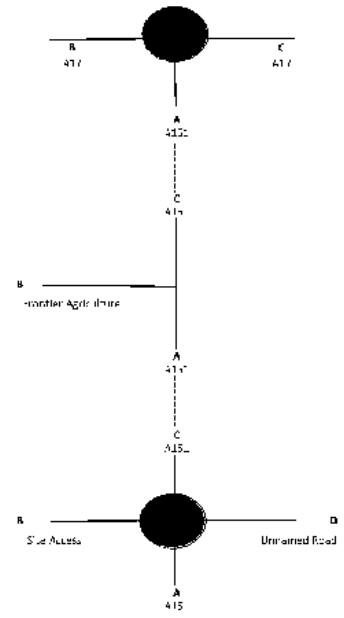
	A	B	C	D	Total
A					
B					
C					
D					
Total					

DIAGRAM 2

TRIP DISTRIBUTION PATTERN

ADC

AM



A17 / A151 Roundabout - Junction 3

Lights

	A	B	C	Total
A		20	40	
B	200			
C	300			
Total				360

HGVs

	A	B	C	otal
A		1	1	
B	2			
C	4			
Total				7

Total

	A	B	C	Total
A	0	21	11	
B	202	0	0	
C	203	0	0	
Total				367

HGV %

	A	B	C	Total
A				
B				
C				
Total				

A151 / Frontier Agriculture T-Junction - Junction 2

Lights

	A	B	C	Total
A			60	
B				
C	300			
Total				360

HGVs

	A	B	C	Total
A			2	
B				
C	5			
Total				7

Total

	A	B	C	Total
A	0	0	62	
B	0	0	0	
C	305	0	0	
Total				367

HGV %

	A	B	C	Total
A				
B				
C				
Total				

A151 / Site Access Roundabout - Junction 1

Lights

	A	B	C	D	Total
A		264			
B	41		60		
C		300			
D					
Total					605

HGVs

	A	B	C	D	Total
A		4			
B	7		7		
C		5			
D					
Total					13

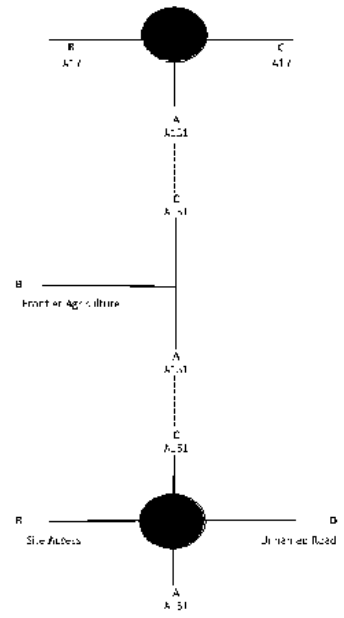
Total

	A	B	C	D	Total
A	0	268	0	0	
B	43	0	62	2	
C	0	305	0	0	
D	0	0	0	0	
Total					618

HGV %

	A	B	C	D	Total
A					
B					
C					
D					
Total					

PM



A17 / A151 Roundabout - Junction 3

Lights

	A	B	C	Total
A		35	171	
B	37			
C	98			
Total				246

HGVs

	A	B	C	ota
A		2	4	
B	0			
C				
Total				7

Total

	A	B	C	Total
A	0	87	175	
B	74	0	0	
C	29	0	0	
Total				325

HGV %

	A	B	C	Total
A				
B				
C				
Total				

A151 / Frontier Agriculture T-Junction - Junction 2

Lights

	A	B	C	Total
A			257	
B				
C	12			
Total				269

HGVs

	A	B	C	Total
A			6	
B				
C				
Total				7

Total

	A	B	C	Total
A	0	0	763	
B	0	0	0	
C	13	0	0	
Total				326

HGV %

	A	B	C	Total
A				
B				
C				
Total				

A151 / Site Access Roundabout - Junction 1

Lights

	A	B	C	D	Total
A		25			
B	174		304		
C		72			
D					
Total					501

HGVs

	A	B	C	D	Total
A		1			
B	4		6		
C		1			
D					
Total					12

Total

	A	B	C	D	Total
A	0	26	0	0	
B	178	0	262	0	
C	0	44	0	0	
D	0	0	0	0	
Total					513

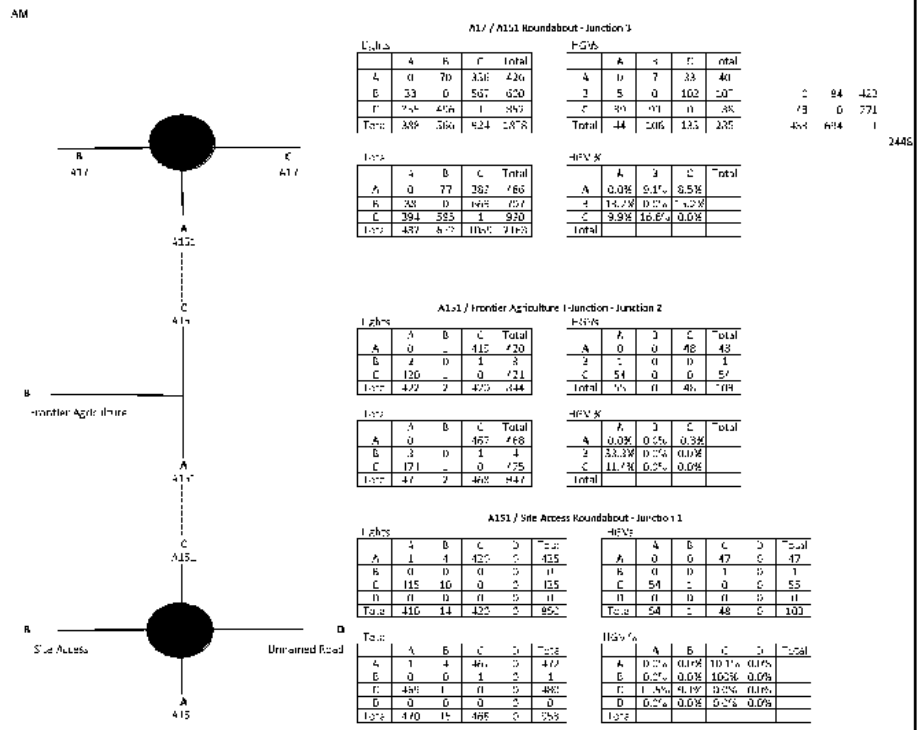
HGV %

	A	B	C	D	Total
A					
B					
C					
D					
Total					

DIAGRAM 3

ASSIGNMENT DEVELOPMENT TRAFFIC FLOWS

ADC



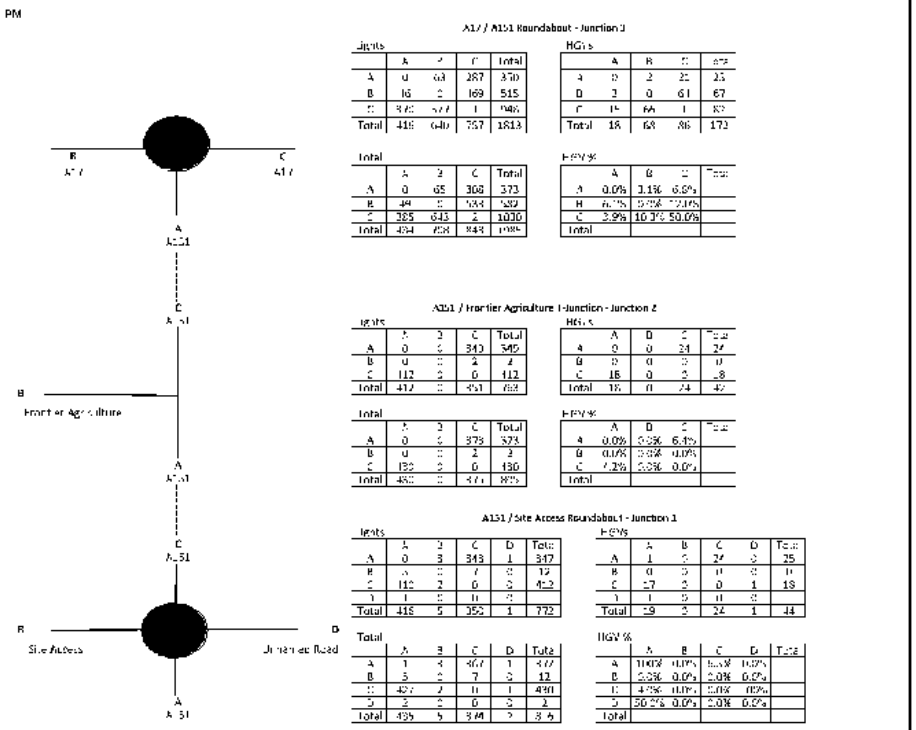
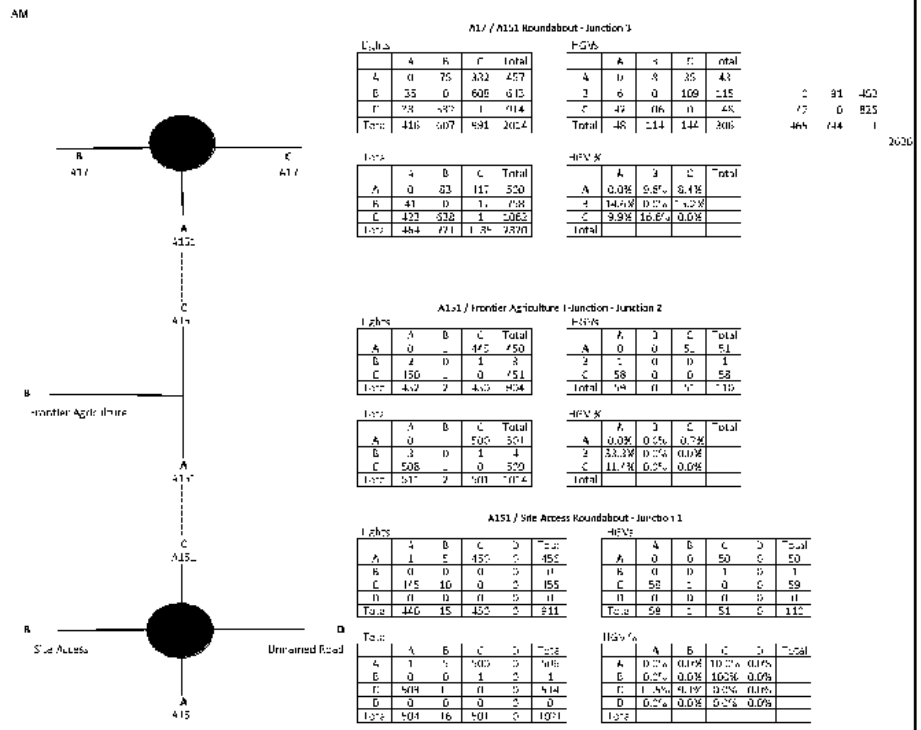


DIAGRAM 4

2028 BASE TRAFFIC FLOWS

ADC



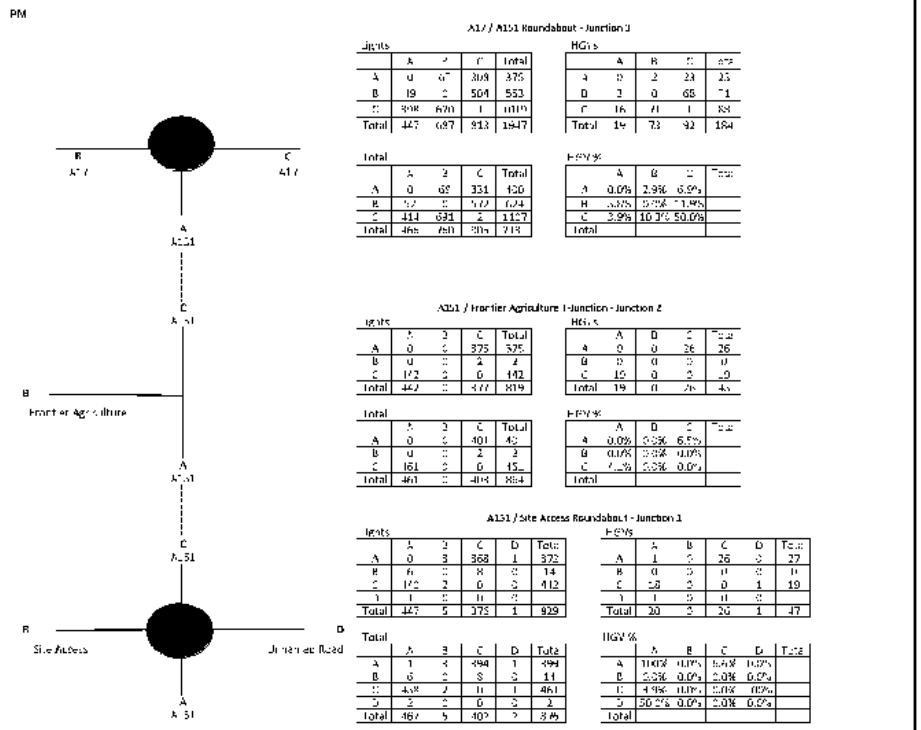


DIAGRAM 5

2036 BASE TRAFFIC FLOWS

ADC

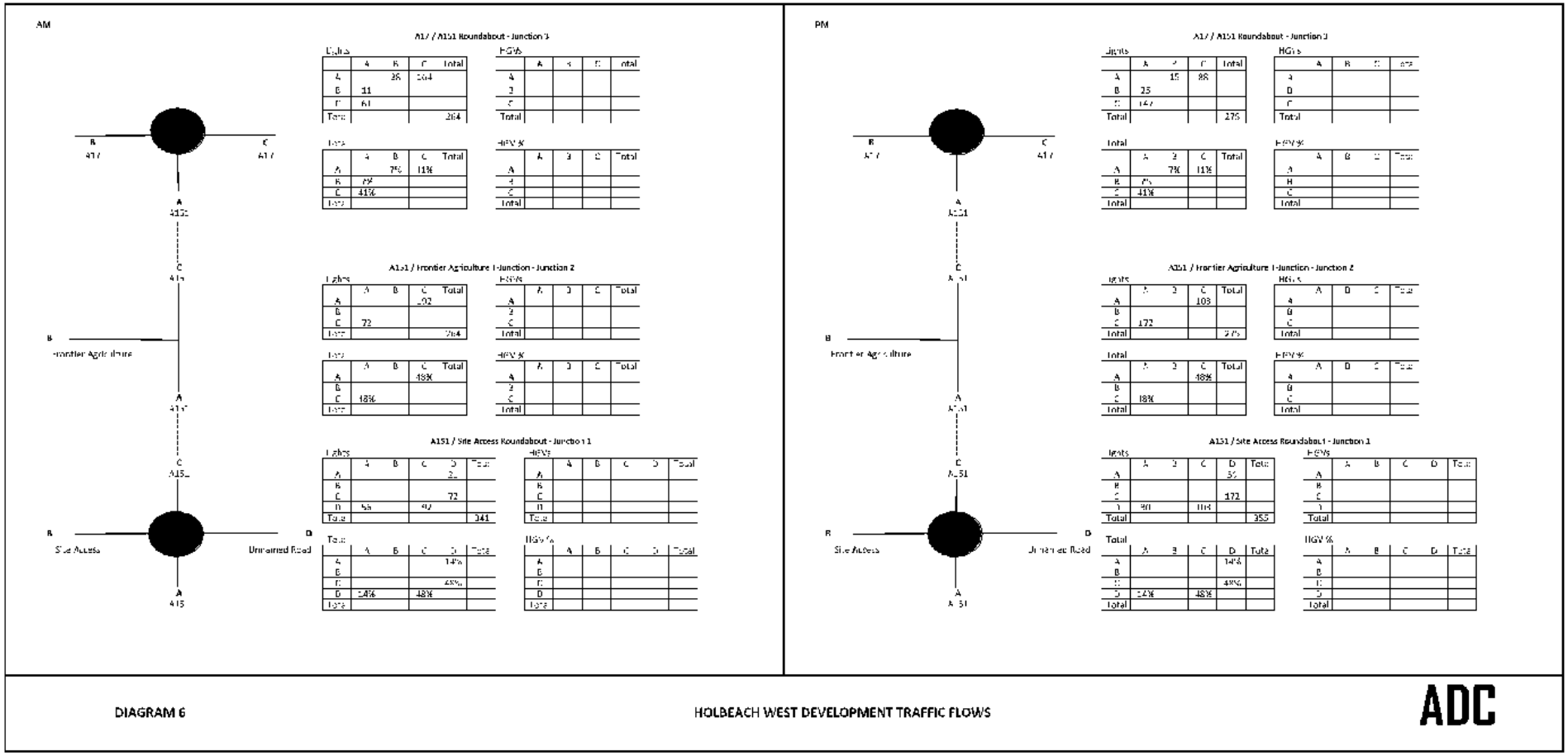


DIAGRAM 6

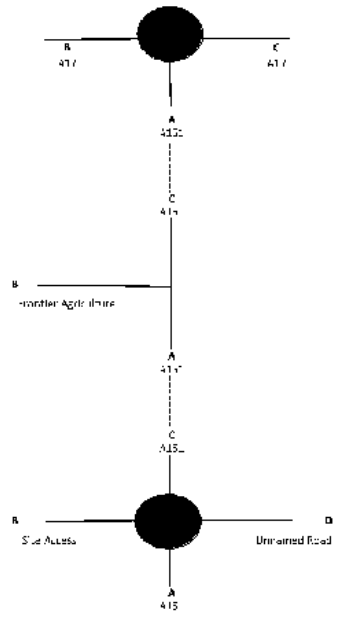
HOLBEACH WEST DEVELOPMENT TRAFFIC FLOWS

ADC

1000 units

		A	B	
Trip Rates	AM	0.15	0.40	0.55
	PM	0.36	0.21	0.57
Traffic Generation	AM	149	400	549
	PM	359	214	573

AM



A17 / A151 Roundabout - Junction 3

Lights

	A	B	C	Total
A		22	51	
B	9			
C	72			
Total				102

HGVs

	A	B	C	Total
A				
B				
C				
Total				

Total

	A	B	C	Total
A				
B				
C				
Total				

HGV %

	A	B	C	Total
A				
B				
C				
Total				

A151 / Frontier Agriculture Junction - Junction 2

Lights

	A	B	C	Total
A			78	
B				
C	23			
Total				133

HGVs

	A	B	C	Total
A				
B				
C				
Total				

Total

	A	B	C	Total
A				
B				
C				
Total				

HGV %

	A	B	C	Total
A				
B				
C				
Total				

A151 / Site Access Roundabout - Junction 1

Lights

	A	B	C	D	Total
A			78		
B					
C	29				
D					
Total					102

HGVs

	A	B	C	D	Total
A					
B					
C					
D					
Total					

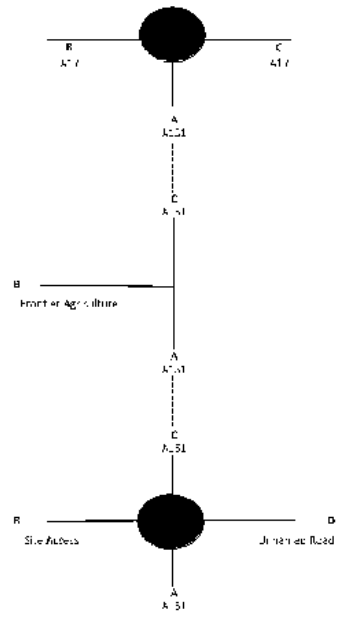
Total

	A	B	C	D	Total
A					
B					
C					
D					
Total					

HGV %

	A	B	C	D	Total
A					
B					
C					
D					
Total					

PM



A17 / A151 Roundabout - Junction 3

Lights

	A	B	C	Total
A		14	33	
B	23			
C	51			
Total				120

HGVs

	A	B	C	Total
A				
B				
C				
Total				

Total

	A	B	C	Total
A				
B				
C				
Total				

HGV %

	A	B	C	Total
A				
B				
C				
Total				

A151 / Frontier Agriculture Junction - Junction 2

Lights

	A	B	C	Total
A			46	
B				
C	74			
Total				120

HGVs

	A	B	C	Total
A				
B				
C				
Total				

Total

	A	B	C	Total
A				
B				
C				
Total				

HGV %

	A	B	C	Total
A				
B				
C				
Total				

A151 / Site Access Roundabout - Junction 1

Lights

	A	B	C	D	Total
A			46		
B					
C	74				
D					
Total					120

HGVs

	A	B	C	D	Total
A					
B					
C					
D					
Total					

Total

	A	B	C	D	Total
A					
B					
C					
D					
Total					

HGV %

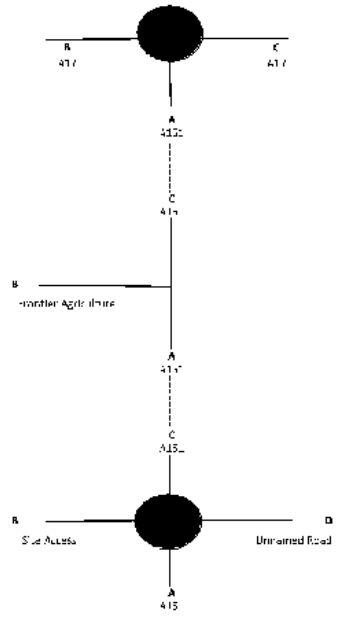
	A	B	C	D	Total
A					
B					
C					
D					
Total					

DIAGRAM 7

HALL GATE DEVELOPMENT TRAFFIC FLOWS

ADC

AM



A17 / A151 Roundabout - Junction 1

Lights

	A	B	C	Total
A	0	70	215	
B	22	0	0	
C	81	0	0	
Total				388

HGVs

	A	B	C	Total
A				
B				
C				
Total				

Total

	A	B	C	Total
A				
B				
C				
Total				

HGV %

	A	B	C	Total
A				
B				
C				
Total				

A151 / Frontier Agriculture T-Junction - Junction 2

Lights

	A	B	C	Total
A	0	0	265	
B	0	0	0	
C	301	0	0	
Total				566

HGVs

	A	B	C	Total
A				
B				
C				
Total				

Total

	A	B	C	Total
A				
B				
C				
Total				

HGV %

	A	B	C	Total
A				
B				
C				
Total				

A151 / Site Access Roundabout - Junction 1

Lights

	A	B	C	D	Total
A	0	0	78	21	
B	0	0	0	0	
C	29	0	0	72	
D	55	0	40	0	
Total					440

HGVs

	A	B	C	D	Total
A					
B					
C					
D					
Total					

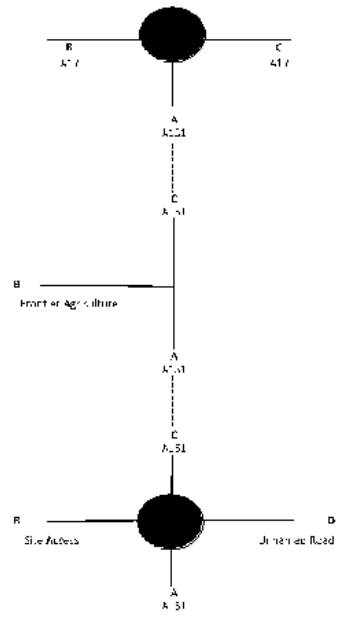
Total

	A	B	C	D	Total
A					
B					
C					
D					
Total					

HGV %

	A	B	C	D	Total
A					
B					
C					
D					
Total					

PM



A17 / A151 Roundabout - Junction 1

Lights

	A	B	C	Total
A	0	29	128	
B	18	0	0	
C	108	0	0	
Total				345

HGVs

	A	B	C	Total
A				
B				
C				
Total				

Total

	A	B	C	Total
A				
B				
C				
Total				

HGV %

	A	B	C	Total
A				
B				
C				
Total				

A151 / Frontier Agriculture T-Junction - Junction 2

Lights

	A	B	C	Total
A	0	6	140	
B	0	0	0	
C	245	0	0	
Total				390

HGVs

	A	B	C	Total
A				
B				
C				
Total				

Total

	A	B	C	Total
A				
B				
C				
Total				

HGV %

	A	B	C	Total
A				
B				
C				
Total				

A151 / Site Access Roundabout - Junction 1

Lights

	A	B	C	D	Total
A	0	6	46	36	
B	0	0	0	0	
C	77	0	0	172	
D	90	0	104	0	
Total					475

HGVs

	A	B	C	D	Total
A					
B					
C					
D					
Total					

Total

	A	B	C	D	Total
A					
B					
C					
D					
Total					

HGV %

	A	B	C	D	Total
A					
B					
C					
D					
Total					

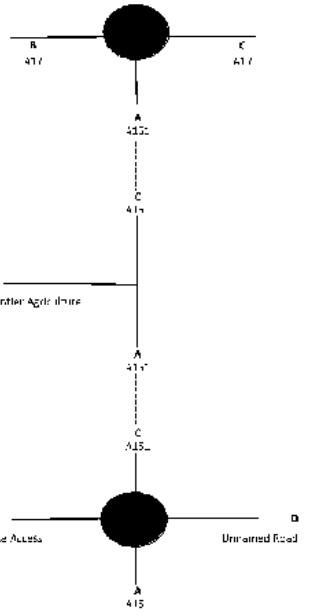
DIAGRAM 8

COMMITTED DEVELOPMENT TRAFFIC FLOWS

ADC

AM

A17 / A151 Roundabout - Junction 1



Lights

	A	B	C	Total
A	0	120	571	691
B	53	0	567	620
C	486	456	1	943
Total	539	576	1139	2244

HGVs

	A	B	C	Total
A	0	7	33	40
B	5	0	102	107
C	30	21	0	51
Total	44	28	135	207

Total

	A	B	C	Total
A	0	127	604	731
B	58	0	669	727
C	475	585	1	1061
Total	533	712	1274	2519

HGV %

	A	B	C	Total
A	0.0%	5.5%	5.5%	
B	8.6%	0.0%	15.3%	
C	6.3%	16.8%	0.0%	
Total				

A151 / Frontier Agriculture Junction - Junction 2

Lights

	A	B	C	Total
A	0	-	684	684
B	4	0	1	5
C	521	-	0	521
Total	525	0	685	1210

HGVs

	A	B	C	Total
A	0	0	48	48
B	1	0	0	1
C	54	0	0	54
Total	55	0	48	103

Total

	A	B	C	Total
A	0	-	732	732
B	5	0	1	6
C	575	-	0	576
Total	580	0	733	1313

HGV %

	A	B	C	Total
A	0.0%	0.0%	6.6%	
B	20.0%	0.0%	0.0%	
C	9.4%	0.0%	0.0%	
Total				

A151 / Site Access Roundabout - Junction 1

Lights

	A	B	C	D	Total
A	1	4	498	2	510
B	0	0	0	0	0
C	141	10	0	72	535
D	53	0	42	0	248
Total	501	14	686	93	1293

HGVs

	A	B	C	D	Total
A	0	0	47	0	47
B	0	0	1	0	1
C	54	1	0	0	55
D	0	0	0	0	0
Total	54	1	48	0	103

Total

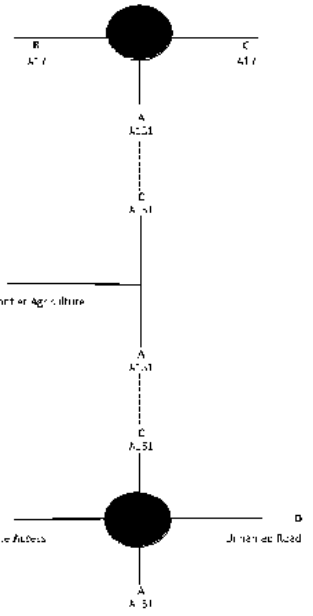
	A	B	C	D	Total
A	1	4	545	2	557
B	0	0	1	0	1
C	487	1	0	72	581
D	53	0	292	0	248
Total	595	15	788	98	1396

HGV %

	A	B	C	D	Total
A	0.0%	0.0%	9.4%	0.0%	
B	0.0%	0.0%	100%	0.0%	
C	11.5%	9.1%	0.0%	0.0%	
D	0.0%	0.0%	0.0%	0.0%	
Total					

PM

A17 / A151 Roundabout - Junction 1



Lights

	A	B	C	Total
A	0	92	407	499
B	97	0	169	553
C	568	277	1	1146
Total	802	669	977	2208

HGVs

	A	B	C	Total
A	0	2	23	25
B	2	0	61	67
C	15	66	1	82
Total	18	68	86	172

Total

	A	B	C	Total
A	0	94	128	522
B	97	0	564	660
C	583	643	2	1228
Total	680	737	968	2380

HGV %

	A	B	C	Total
A	0.0%	2.1%	5.9%	
B	2.1%	0.0%	12.1%	
C	2.6%	10.3%	50.0%	
Total				

A151 / Frontier Agriculture Junction - Junction 2

Lights

	A	B	C	Total
A	0	0	408	436
B	0	-	2	2
C	658	0	0	658
Total	658	0	410	1108

HGVs

	A	B	C	Total
A	0	0	24	24
B	0	0	0	0
C	18	0	0	18
Total	18	0	24	42

Total

	A	B	C	Total
A	0	0	532	532
B	0	-	2	2
C	676	0	0	676
Total	676	-	534	1210

HGV %

	A	B	C	Total
A	0.0%	0.0%	4.6%	
B	0.0%	0.0%	0.0%	
C	2.7%	0.0%	0.0%	
Total				

A151 / Site Access Roundabout - Junction 1

Lights

	A	B	C	D	Total
A	0	3	380	31	413
B	0	-	7	0	12
C	181	2	0	172	556
D	41	0	104	0	194
Total	522	5	499	233	1347

HGVs

	A	B	C	D	Total
A	1	0	24	0	25
B	0	0	0	0	0
C	17	0	0	1	18
D	1	0	0	0	
Total	19	0	24	1	44

Total

	A	B	C	D	Total
A	1	3	404	31	468
B	0	-	7	0	12
C	198	2	0	173	606
D	42	0	104	0	135
Total	538	5	523	234	1391

HGV %

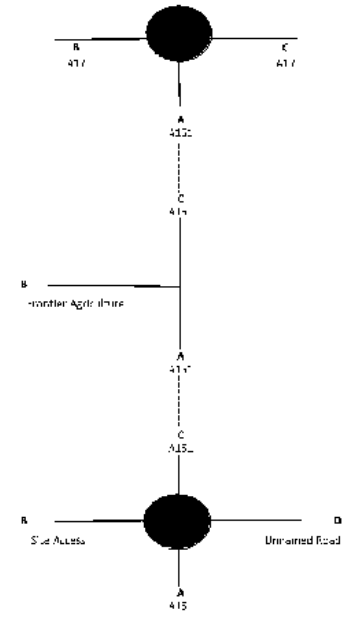
	A	B	C	D	Total
A	100%	0.0%	5.9%	0.0%	
B	0.0%	0.0%	0.0%	0.0%	
C	8.6%	0.0%	0.0%	0.0%	
D	2.4%	0.0%	0.0%	0.0%	
Total					

DIAGRAM 9

2028 BACKGROUND TRAFFIC FLOWS

ADC

AM



A17 / A151 Roundabout - Junction 3

Lights

	A	B	C	Total
A	0	125	596	721
B	55	0	608	663
C	462	532	1	995
Total	517	657	1206	2380

HGVs

	A	B	C	Total
A	0	8	35	43
B	6	0	109	115
C	42	106	0	48
Total	48	114	144	306

Total

	A	B	C	Total
A	0	133	632	765
B	61	0	717	778
C	504	638	1	1143
Total	565	771	1349	2686

HGV %

	A	B	C	Total
A	0.0%	6.0%	5.5%	
B	9.8%	0.0%	15.2%	
C	8.3%	16.6%	0.0%	
Total				

A151 / Frontier Agriculture Junction - Junction 2

Lights

	A	B	C	Total
A	0	-	714	715
B	4	0	1	5
C	551	-	0	551
Total	555	2	715	1272

HGVs

	A	B	C	Total
A	0	0	51	51
B	1	0	0	1
C	58	0	0	58
Total	59	0	51	110

Total

	A	B	C	Total
A	0		765	766
B	5	0	1	6
C	609	-	0	610
Total	614	2	766	1382

HGV %

	A	B	C	Total
A	0.0%	0.0%	6.7%	
B	33.3%	0.0%	0.0%	
C	9.5%	0.0%	0.0%	
Total				

A151 / Site Access Roundabout - Junction 1

Lights

	A	B	C	D	Total
A	1	5	528	2	552
B	0	0	0	0	0
C	171	10	0	72	553
D	53	0	40	0	248
Total	535	15	716	93	1351

HGVs

	A	B	C	D	Total
A	0	0	50	0	50
B	0	0	1	0	1
C	58	1	0	0	59
D	0	0	0	0	0
Total	58	1	51	0	110

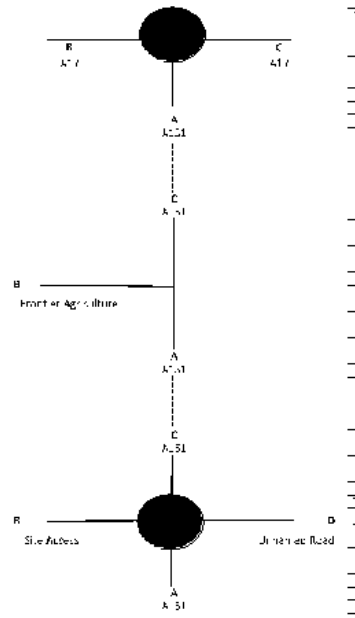
Total

	A	B	C	D	Total
A	1	5	578	2	602
B	0	0	1	0	1
C	542	1	0	72	615
D	53	0	292	0	248
Total	596	16	966	98	1464

HGV %

	A	B	C	D	Total
A	0.0%	0.0%	8.7%	0.0%	
B	0.0%	0.0%	100%	0.0%	
C	11.8%	9.1%	0.0%	0.0%	
D	0.0%	0.0%	0.0%	0.0%	
Total					

PM



A17 / A151 Roundabout - Junction 3

Lights

	A	B	C	Total
A	0	96	428	524
B	97	2	504	602
C	596	670	1	1267
Total	693	768	933	2342

HGVs

	A	B	C	Total
A	0	2	23	25
B	2	0	68	71
C	16	71	1	88
Total	19	73	92	184

Total

	A	B	C	Total
A	0	98	151	549
B	100	2	572	672
C	612	691	2	1305
Total	712	891	1094	2976

HGV %

	A	B	C	Total
A	0.0%	2.0%	5.2%	
B	3.0%	0.0%	11.9%	
C	2.6%	10.3%	50.0%	
Total				

A151 / Frontier Agriculture Junction - Junction 2

Lights

	A	B	C	Total
A	0	6	524	524
B	0	0	2	2
C	688	6	0	686
Total	688	6	526	1214

HGVs

	A	B	C	Total
A	0	0	26	26
B	0	0	0	0
C	18	0	0	18
Total	18	0	26	44

Total

	A	B	C	Total
A	0	6	550	550
B	0	0	2	2
C	707	6	0	707
Total	707	6	552	1259

HGV %

	A	B	C	Total
A	0.0%	0.0%	4.7%	
B	0.0%	0.0%	0.0%	
C	2.7%	0.0%	0.0%	
Total				

A151 / Site Access Roundabout - Junction 1

Lights

	A	B	C	D	Total
A	0	3	414	51	468
B	6	0	8	0	14
C	511	2	0	172	685
D	31	0	104	0	135
Total	551	5	525	223	1304

HGVs

	A	B	C	D	Total
A	1	0	26	0	27
B	0	0	0	0	0
C	18	0	0	1	19
D	1	0	0	0	
Total	20	0	26	1	47

Total

	A	B	C	D	Total
A	1	3	440	51	496
B	6	0	8	0	14
C	552	2	0	173	707
D	32	0	103	0	135
Total	571	5	551	224	1351

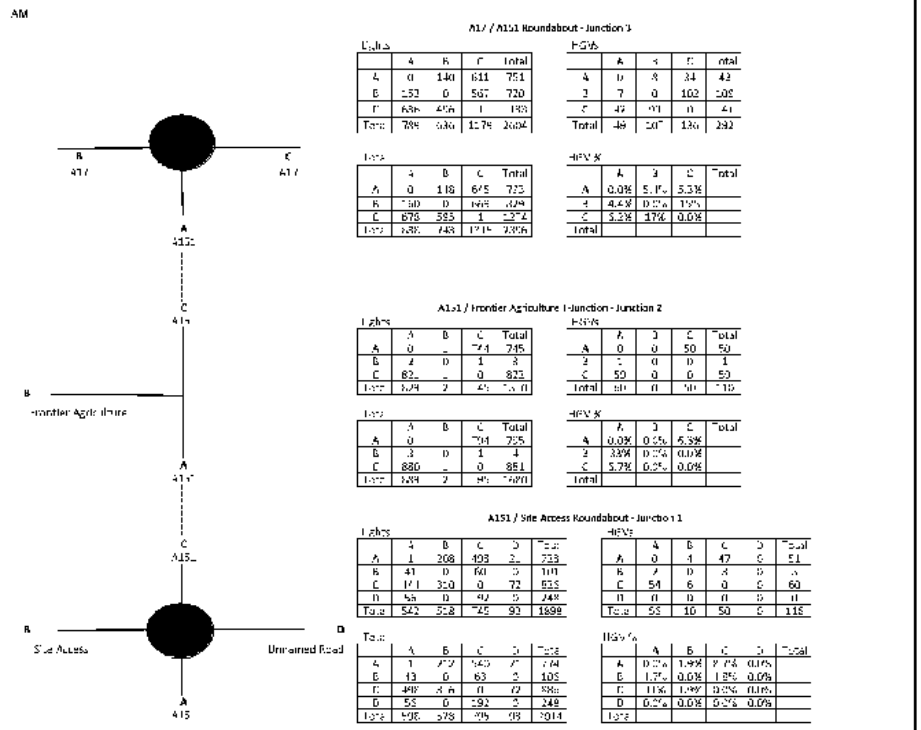
HGV %

	A	B	C	D	Total
A	100%	0.0%	5.9%	0.0%	
B	0.0%	0.0%	0.0%	0.0%	
C	3.4%	0.0%	0.0%	0.0%	
D	3.1%	0.0%	0.0%	0.0%	
Total					

DIAGRAM 10

2036 BACKGROUND TRAFFIC FLOWS

ADC



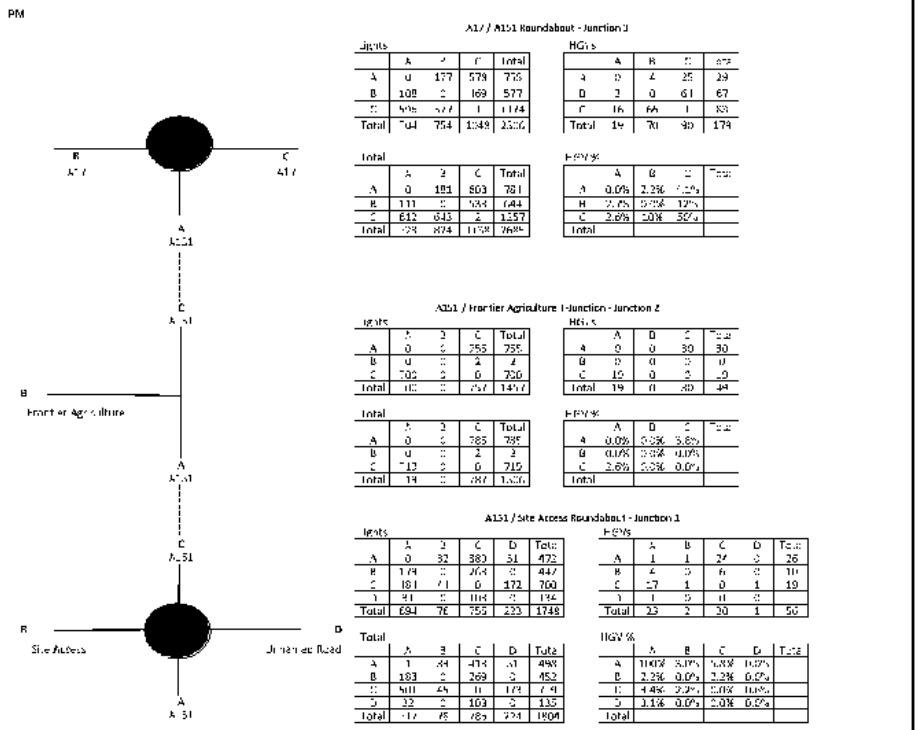
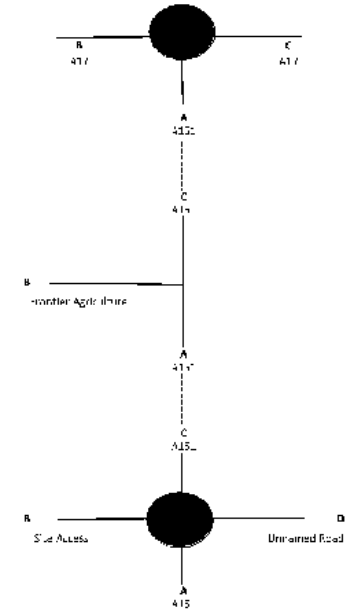


DIAGRAM 11

2028 WITH DEVELOPMENT TRAFFIC FLOWS

ADC

AM



A17 / A151 Roundabout - Junction 1

Lights

	A	B	C	Total
A	0	145	637	781
B	155	0	608	763
C	662	582	1	1245
Total	817	727	1246	2790

HGVs

	A	B	C	Total
A	0	9	36	45
B	8	0	109	117
C	45	106	0	151
Total	53	115	145	313

Total

	A	B	C	Total
A	0	154	673	827
B	163	0	1...	880
C	707	688	1	2246
Total	870	842	1391	3903

HGV %

	A	B	C	Total
A	0.0%	5.8%	5.3%	
B	4.9%	0.0%	15.2%	
C	5.4%	16.6%	0.0%	
Total				

A151 / Frontier Agriculture I-Junction - Junction 2

Lights

	A	B	C	Total
A	0	_	774	775
B	2	0	1	3
C	851	_	0	851
Total	853	2	775	1630

HGVs

	A	B	C	Total
A	0	0	53	53
B	1	0	0	1
C	63	0	0	63
Total	64	0	53	117

Total

	A	B	C	Total
A	0		827	828
B	3	0	1	4
C	914	_	0	915
Total	917	2	828	1747

HGV %

	A	B	C	Total
A	0.0%	0.0%	6.4%	
B	33.3%	0.0%	0.0%	
C	6.9%	0.0%	0.0%	
Total				

A151 / Site Access Roundabout - Junction 1

Lights

	A	B	C	D	Total
A	1	269	528	2_	754
B	41	0	60	0	101
C	171	320	0	72	563
D	58	0	40	0	248
Total	572	589	775	93	1859

HGVs

	A	B	C	D	Total
A	0	1	50	0	52
B	7	0	3	0	3
C	58	6	0	0	64
D	0	0	0	0	0
Total	65	10	53	0	123

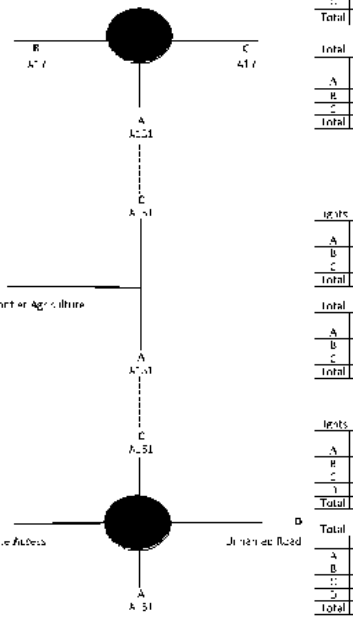
Total

	A	B	C	D	Total
A	1	270	578	2_	806
B	48	0	63	0	105
C	562	326	0	72	960
D	58	0	292	0	248
Total	687	599	935	93	2087

HGV %

	A	B	C	D	Total
A	0.0%	1.9%	9.7%	0.0%	
B	1.7%	0.0%	1.8%	0.0%	
C	11.5%	1.9%	0.0%	0.0%	
D	0.2%	0.0%	0.0%	0.0%	
Total					

PM



A17 / A151 Roundabout - Junction 1

Lights

	A	B	C	Total
A	0	191	589	780
B	111	0	504	615
C	624	670	1	1295
Total	735	861	1104	2700

HGVs

	A	B	C	Total
A	0	4	27	31
B	3	0	68	71
C	17	71	1	89
Total	20	75	96	191

Total

	A	B	C	Total
A	0	195	625	812
B	114	0	572	686
C	641	691	2	1334
Total	755	886	1200	2832

HGV %

	A	B	C	Total
A	0.0%	2.2%	4.3%	
B	2.6%	0.0%	11.9%	
C	2.7%	10.3%	50.0%	
Total				

A151 / Frontier Agriculture I-Junction - Junction 2

Lights

	A	B	C	Total
A	0	0	781	781
B	0	0	2	2
C	750	0	0	750
Total	750	0	783	1533

HGVs

	A	B	C	Total
A	0	0	32	32
B	0	0	0	0
C	20	0	0	20
Total	20	0	32	52

Total

	A	B	C	Total
A	0	0	813	813
B	0	0	2	2
C	770	0	0	770
Total	770	0	815	1585

HGV %

	A	B	C	Total
A	0.0%	0.0%	3.9%	
B	0.0%	0.0%	0.0%	
C	2.7%	0.0%	0.0%	
Total				

A151 / Site Access Roundabout - Junction 1

Lights

	A	B	C	D	Total
A	0	32	414	31	457
B	180	0	264	0	444
C	511	71	0	172	730
D	91	0	114	0	194
Total	785	96	781	203	1825

HGVs

	A	B	C	D	Total
A	1	1	26	0	28
B	4	0	6	0	10
C	28	1	0	1	30
D	1	0	0	0	
Total	34	2	32	1	59

Total

	A	B	C	D	Total
A	1	33	440	31	485
B	184	0	270	0	457
C	539	84	0	173	790
D	92	0	109	0	135
Total	745	95	815	204	1864

HGV %

	A	B	C	D	Total
A	100.0%	3.0%	5.9%	0.0%	
B	2.2%	0.0%	2.2%	0.0%	
C	5.4%	1.2%	0.0%	0.0%	
D	1.1%	0.0%	0.0%	0.0%	
Total					

DIAGRAM 12

2036 WITH DEVELOPMENT TRAFFIC FLOWS

ADC

Place: Holbeach
Date: 17.01.2023
Weather: Cold / Sunny
Junction: J1
Client:
Order no:
Page: 1
of: 1

Time Begin	Entering on: A151 Northbound											Entering on: A17 Eastbound												Entering on: A17 Westbound											
	A1 Northbound			Straight on to A17			Right turn to A17 Eastbound			U-turn at A1/A17 roundabout				A17 Eastbound			Straight on to A151			Right turn to A17 Westbound															
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Veh's	PCUs	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Veh's	PCUs	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Veh's	PCUs	Grand Totals
0700	21	1	22	0	0	0	90	5	95	0	0	0	125		1	0	0	220	20	240	1	0	1	0	0	0

Place: Holbeach
Date: 17.01.2023
Weather: Cold / Sunny
Junction: J3
Client:
Order no:
Page: 1
of: 1

Entering on: A151 Northbound

Time Begin	HGV Articulated Light	HGV Articulated Heavy	HGV Articulated Total	A17 Rbout Light	A17 Rbout Heavy	A17 Rbout Total	Right Turn to A16 Light	Right Turn to A16 Heavy	Right Turn to A16 Total	U-Turn on A16 Light	U-Turn on A16 Heavy	U-Turn on A16 Total	Int Total Vehs	PCUs
07:00	0	0	0	104	4	108	0	0	0	0	0	0	112	
07:15	0	0	0	96	11	107	0	0	0	0	0	0	107	
07:30	0	0	0	94	11	105	0	0	0	0	0	0	105	
07:45	0	0	0	124	12	136	0	0	0	0	0	0	136	
08:00	1	0	1	92	11	103	0	0	0	0	0	0	104	
08:15	0	0	0	73	12	85	0	0	0	0	0	0	85	
08:30	1	0	1	54	8	62	0	0	0	0	0	0	63	
08:45	0	0	0	64	18	82	0	0	0	0	0	0	82	
Total	2	0	2	690	85	775	0	0	0	0	0	0	809	
08:00	0	0	0	78	6	84	0	0	0	0	0	0	84	
08:15	0	0	0	75		82	0	0	0	0	0	0	82	
08:30	0	0	0	77	6	83	0	0	0	0	0	0	83	
08:45	0	0	0	107	4	111	0	0	0	0	0	0	111	
09:00	0	0	0	92	1	93	0	0	0	0	0	0	93	
09:15	0	0	0	81	1	82	0	0	0	0	0	0	82	
09:30	0	0	0	58	1	59	0	0	0	0	0	0	59	
09:45	0	0	0	56	1	57	0	0	0	0	0	0	57	
Total	0	0	0	624	20	644	0	0	0	0	0	0	664	
07:45 - 08:45	1	0	1	376	46	446	0	0	0	0	0	0	461	
08:00 - 09:00	0	0	0	342	24	404	0	0	0	0	0	0	414	

Entering on: Industrial Unit Eastbound

Time Begin	Left Turn to A17 North Light	Left Turn to A17 North Heavy	Left Turn to A17 North Total	Straight on to A16 Light	Straight on to A16 Heavy	Straight on to A16 Total	Right Turn to A17 South Light	Right Turn to A17 South Heavy	Right Turn to A17 South Total	U-Turn on Industrial Unit East Light	U-Turn on Industrial Unit East Heavy	U-Turn on Industrial Unit East Total	Int Total Vehs	PCUs
07:00	0	0	0	1	0	1	0	0	0	0	0	0	1	
07:15	0	0	0	1	0	1	0	0	0	0	0	0	1	
07:30	0	0	0	1	0	1	0	0	0	0	0	0	1	
07:45	0	0	0	1	0	1	0	0	0	0	0	0	1	
08:00	0	0	0	1	0	1	0	0	0	0	0	0	1	
08:15	0	0	0	1	0	1	0	0	0	0	0	0	1	
08:30	0	0	0	1	0	1	0	0	0	0	0	0	1	
08:45	0	0	0	1	0	1	0	0	0	0	0	0	1	
Total	0	0	0	8	0	8	0	0	0	0	0	0	8	
07:45 - 08:45	0	0	0	4	0	4	0	0	0	0	0	0	4	
08:00 - 09:00	0	0	0	4	0	4	0	0	0	0	0	0	4	

Entering on: A151 Southbound

Time Begin	HGV Articulated Light	HGV Articulated Heavy	HGV Articulated Total	A17 Rbout Light	A17 Rbout Heavy	A17 Rbout Total	Right Turn to A16 Light	Right Turn to A16 Heavy	Right Turn to A16 Total	U-Turn on A16 Light	U-Turn on A16 Heavy	U-Turn on A16 Total	Int Total Vehs	PCUs
07:00	0	0	0	0	0	0	0	1	1	0	0	0	1	
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	1	1	0	0	0	1	
07:45 - 08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:00 - 09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	

Site: Holbeach
Date: 17.01.2023
Weather: Cold / Sunny
Junction: J3
Client:
Order no:
Page: 1
of: 1

Entering on: A151 Northbound

Time Begin	Left Turn to Dorrell's / A16			Straight on to A151 North			Right Turn to U/C East			U Turn to A151 South			Total	PCUs
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Vehs	
0700	2	0	2	106	4	110	0	0	0	0	0	0	112	
0715	3	0	3	138	1	139	0	0	0		1	1	143	
0730	2	0	2	92	11	103	0	0	0	0	0	0	105	
0745	1	0	1	127	1	128	0	0	0	0	0	0	129	
0800	0	0	0	92	11	103	0	0	0	0	0	0	104	
0815	5	0	5	72	2	84	0	0	0		1	2	91	
0830	1	0	1	88		88	0	0	0	0	0	0	89	
0845	2	0	2	61	10	75	0	0	0	0	0	0	96	
Total	16	0	16	964	60	777	0	0	0	2	3	5	854	
1000	0	0	0	71	6	77	1	0	1	0	0	0	88	
1015	3	0	3	74	7	81	0	0	0	0	1	1	95	
1030	0	0	0	7	6	92	0	0	0	0	0	0	97	
1045	0	0	0	104	4	108	0	0	0	0	0	0	108	
1700	0	0	0	94	3	97	0	0	0	0	0	0	97	
1715	0	0	0	94	3	97	0	0	0	0	0	0	97	
1730	0	0	0	81	1	82	0	0	0	1	0	1	83	
1745	0	0	0	77	4	81	0	0	0	0	0	0	81	
1800	0	0	0	78	4	82	0	0	0	1	0	1	83	
1815	0	0	0	71	4	74	0	0	0	0	0	0	74	
1830	0	0	0	62	3	65	0	0	0	1	0	1	66	
Total	4	0	4	1,015	54	1,069	1	0	1	3	5	8	1,142	
07:45 - 08:45	4	0	4	886	44	930	0	0	0	1	0	1	935	
08:00 - 09:00	9	0	9	829	31	860	1	0	1	0	1	1	871	

Entering on: University Eastbound

Time Begin	Left Turn to A16 North			Straight on to ...JC East			Right Turn to A151 South			U Turn to Jetlands Way			Total	PCUs
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Vehs	
0700	0	0	0	2	0	2	0	0	0	0	0	0	2	
0715	0	0	0	0	0	0	0	0	0	0	0	0	0	
0730	0	0	0	0	0	0	0	0	0	0	0	0	0	
0745	0	1	1	0	0	0	0	0	0	0	0	0	1	
0800	0	0	0	0	0	0	0	0	0	0	0	0	0	
0815	0	0	0	0	0	0	0	0	0	0	0	0	0	
0830	0	0	0	0	0	0	0	0	0	0	0	0	0	
0845	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	1	1	2	0	2	0	0	0	0	0	0	3	
1000	0	0	0	2	0	2	0	0	0	0	0	0	2	
1015	0	0	0	3	0	3	0	0	0	0	0	0	3	
1030	0	0	0	0	0	0	0	0	0	0	0	0	0	
1045	0	0	0	1	0	1	0	0	0	0	0	0	1	
1700	0	0	0	0	0	0	0	0	0	0	0	0	0	
1715	0	0	0	0	0	0	0	0	0	0	0	0	0	
1730	0	0	0	0	0	0	0	0	0	0	0	0	0	
1745	0	0	0	0	0	0	0	0	0	0	0	0	0	
1800	0	0	0	0	0	0	0	0	0	0	0	0	0	
1815	0	0	0	0	0	0	0	0	0	0	0	0	0	
1830	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	6	0	6	0	0	0	0	0	0	6	
07:45 - 08:45	0	1	1	0	0	0	0	0	0	0	0	0	1	
08:00 - 09:00	0	1	1	0	0	0	0	0	0	0	0	0	1	

Entering on: A151 Southbound

Time Begin	Left Turn to U/C East			Straight on to A151 South			Right Turn to ...ands Way/West			U Turn to A151 North			Total	PCUs
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Vehs	
0700	0	0	0	83	5	88	0	0	2	0	0	0	90	
0715	0	0	0	93	0	93	0		0	1	0	1	94	
0730	0	0	0	92	12	104	0	0	0	0	0	0	104	
0745	0	0	0	93	13	106	0	0	0	1	0	1	107	
0800	0	0	0	117	19	136	0	0	1	0	0	0	136	
0815	0	0	0	87	9	96	0	0	0	2	0	2	98	
0830	0	0	0	74	9	83	0	0	0	0	0	0	83	
0845	0	0	0	62	12	74	0	0	0	2	0	2	76	
Total	0	0	0	801	89	890	0	0	4	6	0	6	900	
1000	0	0	0	108	6	114	0	0	0	1	0	1	116	
1015	0	0	0	95	1	96	0	0	0	1	0	1	97	
1030	0	0	0	94	3	97	0	0	0	0	0	0	97	
1045	0	0	0	98	3	101	0	0	0	0	0	0	101	
1700	0	0	0	84	6	90	0	0	0	1	0	1	91	
1715	0	0	0	84	6	90	0	0	0	1	0	1	91	
1730	0	0	0	78	4	82	0	0	0	1	0	1	83	
1745	0	0	0	78	4	82	0	0	0	0	0	0	82	
1800	0	0	0	78	4	82	0	0	0	0	0	0	82	
1815	0	0	0	71	4	74	0	0	0	0	0	0	74	
1830	0	0	0	62	5	67	0	0	1	0	0	0	68	
Total	0	0	0	1,010	51	1,061	0	0	1	5	0	5	1,067	
07:45 - 08:45	0	0	0	886	51	937	0	0	2	3	0	3	942	
08:00 - 09:00	0	0	0	866	49	915	0	0	2	3	0	3	920	

Entering on: U/C Road Westbound

Time Begin	Left Turn to A151 South			Straight on to ...ands Way/West			Right Turn to A16 / North			U Turn to ...JC East			Total	Grand Totals	Time
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Vehs	PCUs	
0700	0	0	0	0	0	0	0	0	0	0	0	0	0		206	
0715	0	0	0	0	0	0	0	0	0	0	0	0	0		247	
0730	0	0	0	0	0	0	0	0	0	0	0	0	0		275	
0745	0	0	0	0	0	0	0	0	0	0	0	0	0		276	
0800	0	0	0	0	0	0	0	0	0	0	0	0	0		346	
0815	0	0	0	0	0	0	0	0	0	0	0	0	0		352	
0830	0	0	0	0	0	0	0	0	0	0	0	0	0		313	
0845	0	0	0	0	0	0	0	0	0	0	0	0	0		317	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0		2,084	
1000	0	0	0	0	0	0	0	0	0	0	0	0	0		306	
1015	0	0	0	0	0	0	0	0	0	0	0	0	0		315	
1030	0	0	0	0	0	0	0	0	0	0	0	0	0		297	
1045	0	0	0	0	0	0	0	0	0	0	0	0	0		317	
1700	0	0	0	0	0	0	0	0	0	0	0	0	0		283	
1715	0	0	0	0	0	0	0	0	0	0	0	0	0		277	
1730	0	0	0	0	0	0	0	0	0	0	0	0	0		272	
1745	0	0	0	0	0	0	0	0	0	0	0	0	0		239	
1800	0	0	0	0	0	0	0	0	0	0	0	0	0		239	
1815	0	0	0	0	0	0	0	0	0	0	0	0	0		220	
1830	0	0	0	0	0	0	0	0	0	0	0	0	0		196	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0		3,164	
07:45 - 08:45	0	0	0	0	0	0	0	0	0	0	0	0	0		1,248	
08:00 - 09:00	0	0	0	0	0	0	0	0	0	0	0	0	0		1,248	

LINCOLNSHIRE ROAD SAFETY PARTNERSHIP

ACCIDENT REFERENCE: 200046596

Road Number : A17 GRID REF: 535047,325850 SPEED LIMIT: 60
Road 2 Number : A151

PARISH : HOLBEACH DIVISION: DISTRICT: South

POLICE SECTOR : Spalding SEVERITY: Slight
POLICE DIVISION : South

LOCATION : ROUNDABOUT AT A17 AND A151

DESCRIPTION : V1 HAS LEFT THE CARRIAGEWAY NEARSIDE AFTER ATTEMPTING TO EXIT THE ROUNDABOUT TOWARDS KINGS LYNN A17

DATE : 25/01/2020 - Saturday TIME: 130

NUMBER OF VEHICLES : 1
NUMBER OF CASUALTIES: 2

JUNCTION DETAIL : Roundabout
JUNCTION CONTROL: Give Way or Uncontrolled

WEATHER : Fine (Without High Wind)

LIGHT CONDITIONS : Dark - Lit Street Lights

SURFACE CONDITIONS: Wet or Damp

DID AN OFFICER ATTEND THE SCENE? Yes

PRE 2005 CONTRIBUTORY FACTORS

CONTRIBUTORY FACTOR 1:
CONTRIBUTORY FACTOR 2:
CONTRIBUTORY FACTOR 3:

2005+ CONTRIBUTORY FACTORS

1.V1 Very Likely Impaired by alcohol
2.V1 Very Likely Aggressive driving
3.
4.
5.
6.

VEHICLES:

1 Car Going ahead West To East Skidding & Overturned Driver: Male 32 Breath Test: Positive

CASUALTIES:

1 Driver 32 Male Slight In Vehicle 1
2 Veh Passenger 28 Male Slight In Vehicle 1

DATE PRINTED: 02/02/2023

CURRENT DATADATE: 31/12/2022

All Accidents

LINCOLNSHIRE ROAD SAFETY PARTNERSHIP

ACCIDENT REFERENCE: 200363352

Road Number : A17 GRID REF: 535077,325829 SPEED LIMIT: 60
Road 2 Number : A151

PARISH : HOLBEACH DIVISION: DISTRICT: South

POLICE SECTOR : Spalding SEVERITY: Slight
POLICE DIVISION : South

LOCATION : A17 A151 ROUNDABOUT

DESCRIPTION : VEH1 TURNED RIGHT AT THE ROUNDABOUT WITH NO PRIOR INDICATION, VEH1 ON THE INSIDE LANE COLLIDED WITH OFFSIDE OF VEH 1

DATE : 13/07/2020 - Monday TIME: 1100

NUMBER OF VEHICLES : 2
NUMBER OF CASUALTIES: 1

JUNCTION DETAIL : Roundabout
JUNCTION CONTROL: Give Way or Uncontrolled

WEATHER : Fine (Without High Wind)

LIGHT CONDITIONS : Daylight

SURFACE CONDITIONS: Dry

DID AN OFFICER ATTEND THE SCENE? Yes

PRE 2005 CONTRIBUTORY FACTORS

CONTRIBUTORY FACTOR 1:
CONTRIBUTORY FACTOR 2:
CONTRIBUTORY FACTOR 3:

2005+ CONTRIBUTORY FACTORS

1.V1 Very Likely Failed to signal/ Misleading signal
2.V1 Very Likely Failed to look properly
3.
4.
5.
6.

VEHICLES:

1 Goods vehicle 3.5 tonnes mgw and under Changing Lane to Right North West To South West No Skdng /Jck-Knfg /Ovrtrng Driver: Male 76 Breath Test: Negative
2 Motorcycle over 500cc (Combination before 2004) Going ahead North West To South East Overturned Driver: Male 57 Breath Test: Negative

CASUALTIES:

1 Driver 57 Male Slight In Vehicle 2

DATE PRINTED: 02/02/2023

CURRENT DATADATE: 31/12/2022

All Accidents

LINCOLNSHIRE ROAD SAFETY PARTNERSHIP

ACCIDENT REFERENCE: 210756915

Road Number : A17 GRID REF: 535074,325806 SPEED LIMIT: 60
Road 2 Number : A151

PARISH : HOLBEACH DIVISION: DISTRICT: South

POLICE SECTOR : Spalding SEVERITY: Slight
POLICE DIVISION : South

LOCATION : PEPPERMINT JUNCTION AT ROUNABOUT

DESCRIPTION : RIDER IS TRAVELLING IN LANE 2 APPROACHING ROUNDABOUT WHEN A CAR SWERVES FROM LANE 1 TO LANE 2 CAUSING THE RIDER TO TAKE EVASIVE ACTION CAUSING HIM TO COLLIDE WITH A ROAD SIGN AND INJURE HIS LEFT ARM

DATE : 30/12/2021 - Thursday TIME: 1530

NUMBER OF VEHICLES : 1
NUMBER OF CASUALTIES: 1

JUNCTION DETAIL : Roundabout
JUNCTION CONTROL: Give Way or Uncontrolled

WEATHER : Fine (Without High Wind)

LIGHT CONDITIONS : Daylight

SURFACE CONDITIONS: Wet or Damp

DID AN OFFICER ATTEND THE SCENE? No

PRE 2005 CONTRIBUTORY FACTORS

CONTRIBUTORY FACTOR 1:
CONTRIBUTORY FACTOR 2:
CONTRIBUTORY FACTOR 3:

2005+ CONTRIBUTORY FACTORS

1.
2.
3.
4.
5.
6.

VEHICLES:

1 Motorcycle over 500cc (Combination before 2004) Going ahead South East To North West No Skdng /Jck-Knfg /Ovrtrng Driver: Male 58 Breath Test: Driver not contcted at time

CASUALTIES:

1 Driver 58 Male Slight In Vehicle 1

DATE PRINTED: 02/02/2023

CURRENT DATADATE: 31/12/2022

All Accidents

LINCOLNSHIRE ROAD SAFETY PARTNERSHIP

ACCIDENT REFERENCE: 220184006

Road Number : A17 GRID REF: 535041,325854 SPEED LIMIT: 60
Road 2 Number : A151

PARISH : HOLBEACH DIVISION: DISTRICT: South

POLICE SECTOR : Spalding SEVERITY: Slight
POLICE DIVISION : South

LOCATION : PEPPERMINT ROUNDABOUT

DESCRIPTION : LORRY V1 WAS ON PEPPERMINT JUNCTION ROUNDABOUTHEADING TOWARDS SUTTERTON FROM HOLBEACH ON A17. WHILST ON THE ROUNDABOUT A LARGE GUST OF WIND BLOWN THE TRAILER OF THE LORRY, CAUSING IT TO TIP OVER FULLY ONTO ITS SIDE.

DATE : 31/03/2022 - Thursday TIME: 1700

NUMBER OF VEHICLES : 1
NUMBER OF CASUALTIES: 1

JUNCTION DETAIL : Roundabout
JUNCTION CONTROL: Give Way or Uncontrolled

WEATHER : Fine With High Winds

LIGHT CONDITIONS : Daylight

SURFACE CONDITIONS: Dry

DID AN OFFICER ATTEND THE SCENE? Yes

PRE 2005 CONTRIBUTORY FACTORS

CONTRIBUTORY FACTOR 1:
CONTRIBUTORY FACTOR 2:
CONTRIBUTORY FACTOR 3:

2005+ CONTRIBUTORY FACTORS

1.V1 Very Likely Other - Please specify below
2.
3.
4.
5.
6.

VEHICLES:

1 Goods Vehicle - unknown weight Going ahead East To West Overturned Driver: Male 34
Breath Test: Negative

CASUALTIES:

1 Driver 34 Male Slight In Vehicle 1

LINCOLNSHIRE ROAD SAFETY PARTNERSHIP

ACCIDENT REFERENCE: 220727746

Road Number : A151 GRID REF: 534820,325528 SPEED LIMIT: 60
Road 2 Number : A151

PARISH : HOLBEACH DIVISION: DISTRICT: South

POLICE SECTOR : Spalding SEVERITY: Slight
POLICE DIVISION : South

LOCATION : LOCATION ON OUSKIRST OF ROUNDABOUT

DESCRIPTION : VEH 1 DRIVING IN THICK FOG AND SKIDDED ON ICE WHILST BRAKING CAUSING VEH INTO ROUNDABOUT AND STRIKING VEH 2.

DATE : 13/12/2022 - Tuesday TIME: 915

NUMBER OF VEHICLES : 2
NUMBER OF CASUALTIES: 1

JUNCTION DETAIL : Roundabout
JUNCTION CONTROL: Give Way or Uncontrolled

WEATHER : Fog or Mist if a hazard

LIGHT CONDITIONS : Dark - Lit Street Lights

SURFACE CONDITIONS: Frost or Ice

DID AN OFFICER ATTEND THE SCENE? Yes

PRE 2005 CONTRIBUTORY FACTORS

CONTRIBUTORY FACTOR 1:
CONTRIBUTORY FACTOR 2:
CONTRIBUTORY FACTOR 3:

2005+ CONTRIBUTORY FACTORS

1.V1 Very Likely Slippery road (due to weather)
2.
3.
4.
5.
6.

VEHICLES:

1 Car Stopping South West To North East No Skdng /Jck-Knfg /Ovrtrng Driver: Male 65 Breath Test: Negative
2 Goods vehicle 7.5 tonnes mgw and over Going ahead South East To North West No Skdng /Jck-Knfg /Ovrtrng Driver: Male 40 Breath Test: Negative

CASUALTIES:

1 Driver 65 Male Slight In Vehicle 1

Calculation Reference: AUDIT-855401-230208-0254

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : A - OFFICE
TOTAL VEHICLES

Selected regions and areas:

02	**SOUTH EAST**		
	HC	HAMPSHIRE	1 days
	HF	HERTFORDSHIRE	1 days
	KC	KENT	1 days
	PO	PORTSMOUTH	1 days
	SC	SURREY	2 days
	SO	SLOUGH	1 days
03	**SOUTH WEST**		
	DC	DORSET	1 days
04	**EAST ANGLIA**		
	NF	NORFOLK	2 days
	PB	PETERBOROUGH	1 days
	SF	SUFFOLK	2 days
08	**NORTH WEST**		
	MS	MERSEYSIDE	1 days

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

Primary Filtering selection:

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

Parameter: Gross floor area
Actual Range: 5000 to 39230 (units: sqm)
Range Selected by User: 5000 to 50000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/10 to 18/01/20

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

Selected survey days:

Monday	5 days
Tuesday	4 days
Thursday	4 days
Friday	1 days

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

Selected survey types:

Manual count	14 days
Directional ATC Count	0 days

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

Selected Locations:

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

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

Selected Location Sub Categories:

Industrial Zone	1
Commercial Zone	5
Residential Zone	2
Built-Up Zone	5
No Sub Category	1

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

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	1 days - Selected
Servicing vehicles Excluded	13 days - Selected

Secondary Filtering selection:

Use Class:

Not Known	14 days

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

Filter by Site Operations Breakdown:
All Surveys Included

Population within 500m Range:
All Surveys Included

Population within 1 mile:

5,001 to 10,000	4 days
10,001 to 15,000	1 days
15,001 to 20,000	4 days
25,001 to 50,000	5 days

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

Population within 5 miles:

25,001 to 50,000	4 days
75,001 to 100,000	1 days
125,001 to 250,000	5 days
250,001 to 500,000	3 days
500,001 or More	1 days

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

Car ownership within 5 miles:

0.6 to 1.0	2 days
1.1 to 1.5	9 days
1.6 to 2.0	3 days

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

Travel Plan:

Yes	8 days
No	6 days

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

PTAL Rating:

No PTAL Present	14 days

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

LIST OF SITES relevant to selection parameters

1 **DC-02-A-09** **COUNCIL OFFICES** **DORSET**
THE GROVE
DORCHESTER

Edge of Town Centre
Built-Up Zone
Total Gross floor area: 11664 sqm
Survey date: MONDAY *28/11/11* *Survey Type: MANUAL*

2 **HC-02-A-11** **DIY CO. HQ** **HAMPSHIRE**
CHESTNUT AVENUE
CHANDLER'S FORD

Edge of Town
Commercial Zone
Total Gross floor area: 26100 sqm
Survey date: MONDAY *17/10/11* *Survey Type: MANUAL*

3 **HF-02-A-04** **OFFICES** **HERTFORDSHIRE**
STATION WAY
ST ALBANS

Edge of Town Centre
Residential Zone
Total Gross floor area: 5000 sqm
Survey date: THURSDAY *02/10/14* *Survey Type: MANUAL*

4 **KC-02-A-11** **COUNTY HALL** **KENT**
SANDLING ROAD
MAIDSTONE

Edge of Town Centre
Built-Up Zone
Total Gross floor area: 32793 sqm
Survey date: MONDAY *17/10/11* *Survey Type: MANUAL*

5 **MS-02-A-02** **SCIENCE PARK OFFICES** **MERSEYSIDE**
MOUNT PLEASANT
LIVERPOOL

Edge of Town Centre
Built-Up Zone
Total Gross floor area: 11250 sqm
Survey date: TUESDAY *13/11/18* *Survey Type: MANUAL*

6 **NF-02-A-01** **COUNCIL OFFICE** **NORFOLK**
CHAPEL STREET
KING'S LYNN

Edge of Town Centre
Built-Up Zone
Total Gross floor area: 5500 sqm
Survey date: THURSDAY *30/09/10* *Survey Type: MANUAL*

7 **NF-02-A-03** **OFFICES** **NORFOLK**
NORTH QUAY
GREAT YARMOUTH

Edge of Town Centre
Commercial Zone
Total Gross floor area: 5500 sqm
Survey date: TUESDAY *12/09/17* *Survey Type: MANUAL*

8 **PB-02-A-02** **OFFICE** **PETERBOROUGH**
BRETTON WAY
PETERBOROUGH

Edge of Town
Commercial Zone
Total Gross floor area: 6483 sqm
Survey date: THURSDAY *20/10/11* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

9	**PO-02-A-02**	**HMRC**		**PORTSMOUTH**
	NORTHERN ROAD			
	PORTSMOUTH			
	COSHAM			
	Suburban Area (PPS6 Out of Centre)			
	No Sub Category			
	Total Gross floor area:		10100 sqm	
	Survey date: MONDAY		*23/11/15*	*Survey Type: MANUAL*
10	**SC-02-A-16**	**BANK OF AMERICA**		**SURREY**
	STANHOPE ROAD			
	CAMBERLEY			
	Edge of Town			
	Commercial Zone			
	Total Gross floor area:		39230 sqm	
	Survey date: TUESDAY		*10/05/11*	*Survey Type: MANUAL*
11	**SC-02-A-17**	**PHARMACEUTICALS**		**SURREY**
	ST GEORGE'S AVENUE			
	WEYBRIDGE			
	THE HEATH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:		10293 sqm	
	Survey date: TUESDAY		*18/10/11*	*Survey Type: MANUAL*
12	**SF-02-A-01**	**COUNCIL OFFICES**		**SUFFOLK**
	BEETONS WAY			
	BURY ST. EDMUNDS			
	Suburban Area (PPS6 Out of Centre)			
	Industrial Zone			
	Total Gross floor area:		8000 sqm	
	Survey date: MONDAY		*27/09/10*	*Survey Type: MANUAL*
13	**SF-02-A-02**	**OFFICES**		**SUFFOLK**
	BATH STREET			
	IPSWICH			
	Edge of Town Centre			
	Commercial Zone			
	Total Gross floor area:		6505 sqm	
	Survey date: FRIDAY		*19/07/13*	*Survey Type: MANUAL*
14	**SO-02-A-02**	**COUNCIL OFFICES**		**SLOUGH**
	BATH ROAD			
	SLOUGH			
	Edge of Town Centre			
	Built-Up Zone			
	Total Gross floor area:		5050 sqm	
	Survey date: THURSDAY		*27/02/14*	*Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	10100	1.109	1	10100	0.168	1	10100	1.277
07:00 - 08:00	14	13105	0.551	14	13105	0.047	14	13105	0.598
08:00 - 09:00	**14**	**13105**	**1.346**	14	13105	0.153	**14**	**13105**	**1.499**
09:00 - 10:00	14	13105	0.864	14	13105	0.235	14	13105	1.099
10:00 - 11:00	14	13105	0.349	14	13105	0.195	14	13105	0.544
11:00 - 12:00	14	13105	0.273	14	13105	0.250	14	13105	0.523
12:00 - 13:00	14	13105	0.242	14	13105	0.293	14	13105	0.535
13:00 - 14:00	14	13105	0.302	14	13105	0.265	14	13105	0.567
14:00 - 15:00	14	13105	0.246	14	13105	0.289	14	13105	0.535
15:00 - 16:00	14	13105	0.190	14	13105	0.411	14	13105	0.601
16:00 - 17:00	14	13105	0.166	14	13105	0.836	14	13105	1.002
17:00 - 18:00	14	13105	0.124	**14**	**13105**	**1.224**	14	13105	1.348
18:00 - 19:00	14	13105	0.045	14	13105	0.424	14	13105	0.469
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			5.807			4.790			10.597

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

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

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Parameter summary

Trip rate parameter range selected:	5000 - 39230 (units: sqm)
Survey date date range:	01/01/10 - 18/01/20
Number of weekdays (Monday-Friday):	14
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

Calculation Reference: AUDIT-855401-230208-0218

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : D - INDUSTRIAL ESTATE
TOTAL VEHICLES

Selected regions and areas:

02	**SOUTH EAST**		
	ES	EAST SUSSEX	1 days
	KC	KENT	1 days
03	**SOUTH WEST**		
	BR	BRISTOL CITY	1 days
	DV	DEVON	1 days
	PL	PLYMOUTH	1 days
04	**EAST ANGLIA**		
	NF	NORFOLK	1 days
05	**EAST MIDLANDS**		
	LN	LINCOLNSHIRE	1 days
07	**YORKSHIRE & NORTH LINCOLNSHIRE**		
	WY	WEST YORKSHIRE	1 days
08	**NORTH WEST**		
	LC	LANCASHIRE	1 days
09	**NORTH**		
	TW	TYNE & WEAR	1 days

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

Primary Filtering selection:

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

Parameter:	Gross floor area
Actual Range:	1775 to 18018 (units: sqm)
Range Selected by User:	708 to 30000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/10 to 18/02/20

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

Selected survey days:

Monday	3 days
Tuesday	3 days
Wednesday	1 days
Friday	3 days

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

Selected survey types:

Manual count	10 days
Directional ATC Count	0 days

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

Selected Locations:

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

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

Selected Location Sub Categories:

Industrial Zone	5
Residential Zone	4
Village	1

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

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	6 days - Selected
Servicing vehicles Excluded	34 days - Selected

Secondary Filtering selection:

Use Class:

Not Known	10 days

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

Filter by Site Operations Breakdown:

General Industrial	Minimum: 70%

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,000 or Less	2 days
1,001 to 5,000	1 days
15,001 to 20,000	3 days
20,001 to 25,000	1 days
25,001 to 50,000	3 days

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

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	1 days
125,001 to 250,000	5 days
250,001 to 500,000	2 days
500,001 or More	1 days

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

Car ownership within 5 miles:

0.6 to 1.0	4 days
1.1 to 1.5	6 days

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

Travel Plan:

No	10 days

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

PTAL Rating:

No PTAL Present	10 days

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

LIST OF SITES relevant to selection parameters

1 **BR-02-D-04** **INDUSTRIAL ESTATE** **BRISTOL CITY**
CROFTS END ROAD
BRISTOL
SPEEDWELL
Suburban Area (PPS6 Out of Centre)
Industrial Zone
Total Gross floor area: 18018 sqm
Survey date: FRIDAY *29/11/13* *Survey Type: MANUAL*

2 **DV-02-D-07** **INDUSTRIAL ESTATE** **DEVON**
BITTERN ROAD
EXETER
SOWTON IND. ESTATE
Edge of Town
Industrial Zone
Total Gross floor area: 3600 sqm
Survey date: MONDAY *03/07/17* *Survey Type: MANUAL*

3 **ES-02-D-06** **INDUSTRIAL ESTATE** **EAST SUSSEX**
COURTLANDS ROAD
EASTBOURNE

Edge of Town
Residential Zone
Total Gross floor area: 7525 sqm
Survey date: MONDAY *21/10/13* *Survey Type: MANUAL*

4 **KC-02-D-02** **INDUSTRIAL ESTATE** **KENT**
SOUTHWELL ROAD
DEAL

Edge of Town
Residential Zone
Total Gross floor area: 10715 sqm
Survey date: WEDNESDAY *28/11/12* *Survey Type: MANUAL*

5 **LC-02-D-07** **INDUSTRIAL ESTATE** **LANCASHIRE**
CHAIN CAUL WAY
PRESTON
ASHTON-ON-RIBBLE
Edge of Town
Industrial Zone
Total Gross floor area: 4700 sqm
Survey date: FRIDAY *17/11/17* *Survey Type: MANUAL*

6 **LN-02-D-02** **INDUSTRIAL ESTATE** **LINCOLNSHIRE**
STATION ROAD
NEAR BOSTON
SWINESHEAD
Neighbourhood Centre (PPS6 Local Centre)
Village
Total Gross floor area: 4600 sqm
Survey date: TUESDAY *11/12/12* *Survey Type: MANUAL*

7 **NF-02-D-03** **INDUSTRIAL ESTATE** **NORFOLK**
BIDEWELL CLOSE
NORWICH

Edge of Town
Residential Zone
Total Gross floor area: 6000 sqm
Survey date: MONDAY *08/10/12* *Survey Type: MANUAL*

8 **PL-02-D-01** **INDUSTRIAL ESTATE** **PLYMOUTH**
ST MODWEN ROAD
PLYMOUTH

Edge of Town
Industrial Zone
Total Gross floor area: 1775 sqm
Survey date: TUESDAY *17/07/12* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

9	**TW-02-D-07**	**INDUSTRIAL ESTATE**		**TYNE & WEAR**
	SWALWELL BANK			
	GATESHEAD			
	WHICKHAM			
	Edge of Town			
	Residential Zone			
	Total Gross floor area:		6800 sqm	
	Survey date: FRIDAY		*04/10/13*	*Survey Type: MANUAL*
10	**WY-02-D-06**	**INDUSTRIAL ESTATE (PART)**		**WEST YORKSHIRE**
	PIONEER WAY			
	CASTLEFORD			
	Edge of Town			
	Industrial Zone			
	Total Gross floor area:		4328 sqm	
	Survey date: TUESDAY		*23/05/17*	*Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	10	6806	0.301	10	6806	0.071	10	6806	0.372
08:00 - 09:00	**10**	**6806**	**0.457**	10	6806	0.190	**10**	**6806**	**0.647**
09:00 - 10:00	10	6806	0.284	10	6806	0.190	10	6806	0.474
10:00 - 11:00	10	6806	0.203	10	6806	0.178	10	6806	0.381
11:00 - 12:00	10	6806	0.231	10	6806	0.235	10	6806	0.466
12:00 - 13:00	10	6806	0.270	10	6806	0.295	10	6806	0.565
13:00 - 14:00	10	6806	0.269	10	6806	0.241	10	6806	0.510
14:00 - 15:00	10	6806	0.231	10	6806	0.239	10	6806	0.470
15:00 - 16:00	10	6806	0.239	10	6806	0.262	10	6806	0.501
16:00 - 17:00	10	6806	0.207	10	6806	0.369	10	6806	0.576
17:00 - 18:00	10	6806	0.112	**10**	**6806**	**0.479**	10	6806	0.591
18:00 - 19:00	10	6806	0.051	10	6806	0.157	10	6806	0.208
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.855			2.906			5.761

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

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

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Parameter summary

Trip rate parameter range selected:	1775 - 18018 (units: sqm)
Survey date date range:	01/01/10 - 18/02/20
Number of weekdays (Monday-Friday):	10
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

Calculation Reference: AUDIT-855401-230208-0241

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 04 - EDUCATION
Category : C - COLLEGE/UNIVERSITY
TOTAL VEHICLES

Selected regions and areas:

02	**SOUTH EAST**		
	BU	BUCKINGHAMSHIRE	1 days
	ES	EAST SUSSEX	2 days
	EX	ESSEX	1 days
	KC	KENT	1 days
	WS	WEST SUSSEX	2 days
03	**SOUTH WEST**		
	GS	GLOUCESTERSHIRE	2 days
	SD	SWINDON	1 days
04	**EAST ANGLIA**		
	NF	NORFOLK	1 days
	PB	PETERBOROUGH	2 days
	SF	SUFFOLK	1 days
08	**NORTH WEST**		
	LC	LANCASHIRE	1 days
09	**NORTH**		
	TW	TYNE & WEAR	1 days

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

Primary Filtering selection:

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

Parameter: Gross floor area
Actual Range: 5700 to 65000 (units: sqm)
Range Selected by User: 2435 to 80000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/10 to 06/01/20

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

Selected survey days:

Monday	1 days
Tuesday	7 days
Wednesday	2 days
Thursday	5 days
Friday	1 days

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

Selected survey types:

Manual count	16 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	6
Suburban Area (PPS6 Out of Centre)	8
Edge of Town	1
Neighbourhood Centre (PPS6 Local Centre)	1

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

Selected Location Sub Categories:

Residential Zone	10

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

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	3 days - Selected
Servicing vehicles Excluded	15 days - Selected

Secondary Filtering selection:

Use Class:

F1(a)	16 days

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

Population within 500m Range:

All Surveys Included

Population within 1 mile:

5,001 to 10,000	2 days
10,001 to 15,000	2 days
15,001 to 20,000	2 days
20,001 to 25,000	4 days
25,001 to 50,000	6 days

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

Population within 5 miles:

25,001 to 50,000	2 days
50,001 to 75,000	2 days
75,001 to 100,000	3 days
100,001 to 125,000	1 days
125,001 to 250,000	8 days

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

Car ownership within 5 miles:

0.6 to 1.0	5 days
1.1 to 1.5	11 days

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

Travel Plan:

Yes	6 days
No	10 days

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

PTAL Rating:

No PTAL Present	16 days

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

LIST OF SITES relevant to selection parameters

1 **BU-04-C-01** **UNIVERSITY** **BUCKINGHAMSHIRE**
QUEEN ALEXANDRA ROAD
HIGH WYCOMBE

Edge of Town Centre
Built-Up Zone
Total Gross floor area: 36755 sqm
Survey date: TUESDAY *24/01/17* *Survey Type: MANUAL*

2 **ES-04-C-05** **COLLEGE** **EAST SUSSEX**
PENLAND ROAD
BEXHILL ON SEA

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 10125 sqm
Survey date: THURSDAY *03/11/11* *Survey Type: MANUAL*

3 **ES-04-C-07** **COLLEGE** **EAST SUSSEX**
PARKER ROAD
HASTINGS
ORE
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 8402 sqm
Survey date: WEDNESDAY *30/05/12* *Survey Type: MANUAL*

4 **EX-04-C-02** **COLLEGE** **ESSEX**
PRINCES ROAD
CHELMSFORD

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 11000 sqm
Survey date: TUESDAY *15/10/13* *Survey Type: MANUAL*

5 **GS-04-C-01** **COLLEGE** **GLOUCESTERSHIRE**
PRINCESS ELIZABETH WAY
CHELTENHAM

Neighbourhood Centre (PPS6 Local Centre)
No Sub Category
Total Gross floor area: 12500 sqm
Survey date: TUESDAY *27/04/10* *Survey Type: MANUAL*

6 **GS-04-C-02** **COLLEGE** **GLOUCESTERSHIRE**
HORTON ROAD
GLOUCESTER

Suburban Area (PPS6 Out of Centre)
Built-Up Zone
Total Gross floor area: 13204 sqm
Survey date: THURSDAY *28/11/13* *Survey Type: MANUAL*

7 **KC-04-C-02** **COLLEGE** **KENT**
BELLEVUE ROAD
WHITSTABLE

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 12735 sqm
Survey date: TUESDAY *26/09/17* *Survey Type: MANUAL*

8 **LC-04-C-05** **COLLEGE** **LANCASHIRE**
LANGDALE ROAD
LEYLAND

Edge of Town
Residential Zone
Total Gross floor area: 31000 sqm
Survey date: FRIDAY *17/11/17* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

9 **NF-04-C-02** **COLLEGE** **NORFOLK**
IPSWICH ROAD
NORWICH
LAKENHAM
Edge of Town Centre
Residential Zone
Total Gross floor area: 44037 sqm
Survey date: THURSDAY *23/09/10* *Survey Type: MANUAL*

10 **PB-04-C-02** **COLLEGE** **PETERBOROUGH**
BROOK STREET
PETERBOROUGH

Edge of Town Centre
Built-Up Zone
Total Gross floor area: 5700 sqm
Survey date: MONDAY *17/10/16* *Survey Type: MANUAL*

11 **PB-04-C-03** **COLLEGE** **PETERBOROUGH**
PARK CRESCENT
PETERBOROUGH

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 55000 sqm
Survey date: TUESDAY *18/10/16* *Survey Type: MANUAL*

12 **SD-04-C-01** **COLLEGE** **SWINDON**
NEW COLLEGE DRIVE
SWINDON
WALCOT
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 16600 sqm
Survey date: THURSDAY *22/09/16* *Survey Type: MANUAL*

13 **SF-04-C-01** **COLLEGE** **SUFFOLK**
OUT RISBYGATE
BURY ST. EDMUNDS

Edge of Town Centre
Built-Up Zone
Total Gross floor area: 19000 sqm
Survey date: TUESDAY *28/09/10* *Survey Type: MANUAL*

14 **TW-04-C-01** **COLLEGE** **TYNE & WEAR**
HAWKEY'S LANE
NORTH SHIELDS
CHIRTON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 10505 sqm
Survey date: THURSDAY *04/11/10* *Survey Type: MANUAL*

15 **WS-04-C-06** **UNIVERSITY OF CHICHESTER** **WEST SUSSEX**
UPPER BOGNOR ROAD
BOGNOR REGIS

Edge of Town Centre
Residential Zone
Total Gross floor area: 19330 sqm
Survey date: WEDNESDAY *25/04/18* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

16 WS-04-C-07 UNIVERSITY OF CHICHESTER WEST SUSSEX
COLLEGE LANE
CHICHESTER

Edge of Town Centre
No Sub Category
Total Gross floor area: 65000 sqm
Survey date: TUESDAY *24/04/18* *Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 04 - EDUCATION/C - COLLEGE/UNIVERSITY

TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	16	23181	0.257	16	23181	0.051	16	23181	0.308
08:00 - 09:00	**16**	**23181**	**1.178**	16	23181	0.342	**16**	**23181**	**1.520**
09:00 - 10:00	16	23181	0.530	16	23181	0.231	16	23181	0.761
10:00 - 11:00	16	23181	0.235	16	23181	0.154	16	23181	0.389
11:00 - 12:00	16	23181	0.235	16	23181	0.219	16	23181	0.454
12:00 - 13:00	16	23181	0.287	16	23181	0.335	16	23181	0.622
13:00 - 14:00	16	23181	0.266	16	23181	0.268	16	23181	0.534
14:00 - 15:00	16	23181	0.193	16	23181	0.342	16	23181	0.535
15:00 - 16:00	16	23181	0.252	16	23181	0.456	16	23181	0.708
16:00 - 17:00	16	23181	0.234	**16**	**23181**	**0.649**	16	23181	0.883
17:00 - 18:00	16	23181	0.275	16	23181	0.491	16	23181	0.766
18:00 - 19:00	15	24166	0.246	15	24166	0.225	15	24166	0.471
19:00 - 20:00	14	25169	0.112	14	25169	0.219	14	25169	0.331
20:00 - 21:00	13	26089	0.077	13	26089	0.248	13	26089	0.325
21:00 - 22:00	13	26089	0.021	13	26089	0.202	13	26089	0.223
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.398			4.432			8.830

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

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

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Parameter summary

Trip rate parameter range selected:	5700 - 65000 (units: sqm)
Survey date date range:	01/01/10 - 06/01/20
Number of weekdays (Monday-Friday):	16
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	2
Surveys manually removed from selection:	0

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

WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level)

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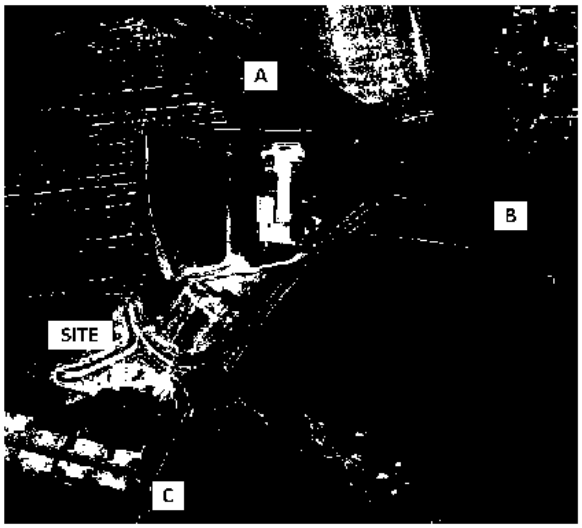
population	All usual residents aged 16 and over in employment the week before the census
units	Persons
date	2011
method of travel to work	Driving a car or van

Usual residence : 2011 census merged local authority district	place of work E02005467 : South Holland 008		A	B	C	
E02005465 : South Holland 001	37		37			
E02005466 : South Holland 002	138			138		
E02005467 : South Holland 003	240			120	120	
E02005468 : South Holland 004	126		58		68	
E02005469 : South Holland 005	99				99	
E02005470 : South Holland 006	40				40	
E02005471 : South Holland 007	38				38	
E02005472 : South Holland 008	92			92		
E02005473 : South Holland 009	35				35	
E02005474 : South Holland 010	137			64	64	
E02005475 : South Holland 011	23				23	
Boston	59		59			
King's Lynn and West Norfolk	38			38		
South Kesteven	34		17		17	
Fenland	27			14	14	
North Kesteven	21		21			
Peterborough	18				18	
East Lindsey	6		6			
Lincoln	5		5			
Huntingdonshire	5				5	
Ipswich	3			3		
North Lincolnshire	2		2			
West Lindsey	2		2			
East Cambridgeshire	2			2		
Uttlesford	2				2	
North East Lincolnshire	1		1			
Leicester	1				1	
South Derbyshire	1		1			
Harborough	1				1	
North West Leicestershire	1		1			
East Hertfordshire	1				1	
Newark and Sherwood	1		1			
Tamworth	1		1			
Cambridge	1				1	
Breckland	1			1		
North Norfolk	1			1		
Rushmoor	1				1	
Shepway	1				1	
Total	**1,184**	**Total**	234	472	478	1184
		%	20%	40%	40%	100%



Dataset Version: 72
Result Type: Trip ends by time period
Base Year: 2023
Future Year: 2028
Trip Purpose Group: All purposes
Time Period: Weekday AM peak period (0700 - 0959)
Trip End Type: Origin/Destination
Alternative Assumptions Applied: No

Growth Factor

Area Description Level	Name	All purposes Origin	Destination
E02005467	South Holland 003	1.0406	1.0365

Future Year - Base Year

Area Description Level	Name	All purposes Origin	Destination
E02005467	South Holland 003	70	57

Base Year

Area Description Level	Name	All purposes Origin	Destination
E02005467	South Holland 003	1,728	1,553

Future Year

Area Description Level	Name	All purposes Origin	Destination
E02005467	South Holland 003	1,798	1,610

ALL ROADS

Level	Area	Local Growth Figure
E02005467	South Holland 003	1.0405

Dataset Version: 72
Result Type: Trip ends by time period
Base Year: 2023
Future Year: 2028
Trip Purpose Group: All purposes
Time Period: Weekday PM peak period (1600 - 1859)
Trip End Type: Origin/Destination
Alternative Assumptions Applied: No

Growth Factor

Area Description Level	Name	All purposes Origin	Destination
E02005467	South Holland 003	1.0383	1.0425

Future Year - Base Year

Area Description Level	Name	All purposes Origin	Destination
E02005467	South Holland 003	65	74

Base Year

Area Description Level	Name	All purposes Origin	Destination
E02005467	South Holland 003	1,707	1,829

Future Year

Area Description Level	Name	All purposes Origin	Destination
E02005467	South Holland 003	1,772	1,903

ALL ROADS

Level	Area	Local Growth Figure
E02005467	South Holland 003	1.0613

Dataset Version: 72
Result Type: Trip ends by time period
Base Year: 2023
Future Year: 2036
Trip Purpose Group: All purposes
Time Period: Weekday AM peak period (0700 - 0959)
Trip End Type: Origin/Destination
Alternative Assumptions Applied: No

Growth Factor

Area Description Level	Name	All purposes Origin	Destination
E02005467	South Holland 003	1.1110	1.0936

Future Year - Base Year

Area Description Level	Name	All purposes Origin	Destination
E02005467	South Holland 003	192	145

Base Year

Area Description Level	Name	All purposes Origin	Destination
E02005467	South Holland 003	1,728	1,553

Future Year

Area Description Level	Name	All purposes Origin	Destination
E02005467	South Holland 003	1,920	1,698

ALL ROADS

Level	Area	Local Growth Figure
E02005467	South Holland 003	1.1375

Dataset Version: 72
Result Type: Trip ends by time period
Base Year: 2023
Future Year: 2036
Trip Purpose Group: All purposes
Time Period: Weekday PM peak period (1600 - 1859)
Trip End Type: Origin/Destination
Alternative Assumptions Applied: No

Growth Factor

Area Description Level	Name	All purposes Origin	Destination
E02005467	South Holland 003	1.0999	1.1251

Future Year - Base Year

Area Description Level	Name	All purposes Origin	Destination
E02005467	South Holland 003	171	201

Base Year

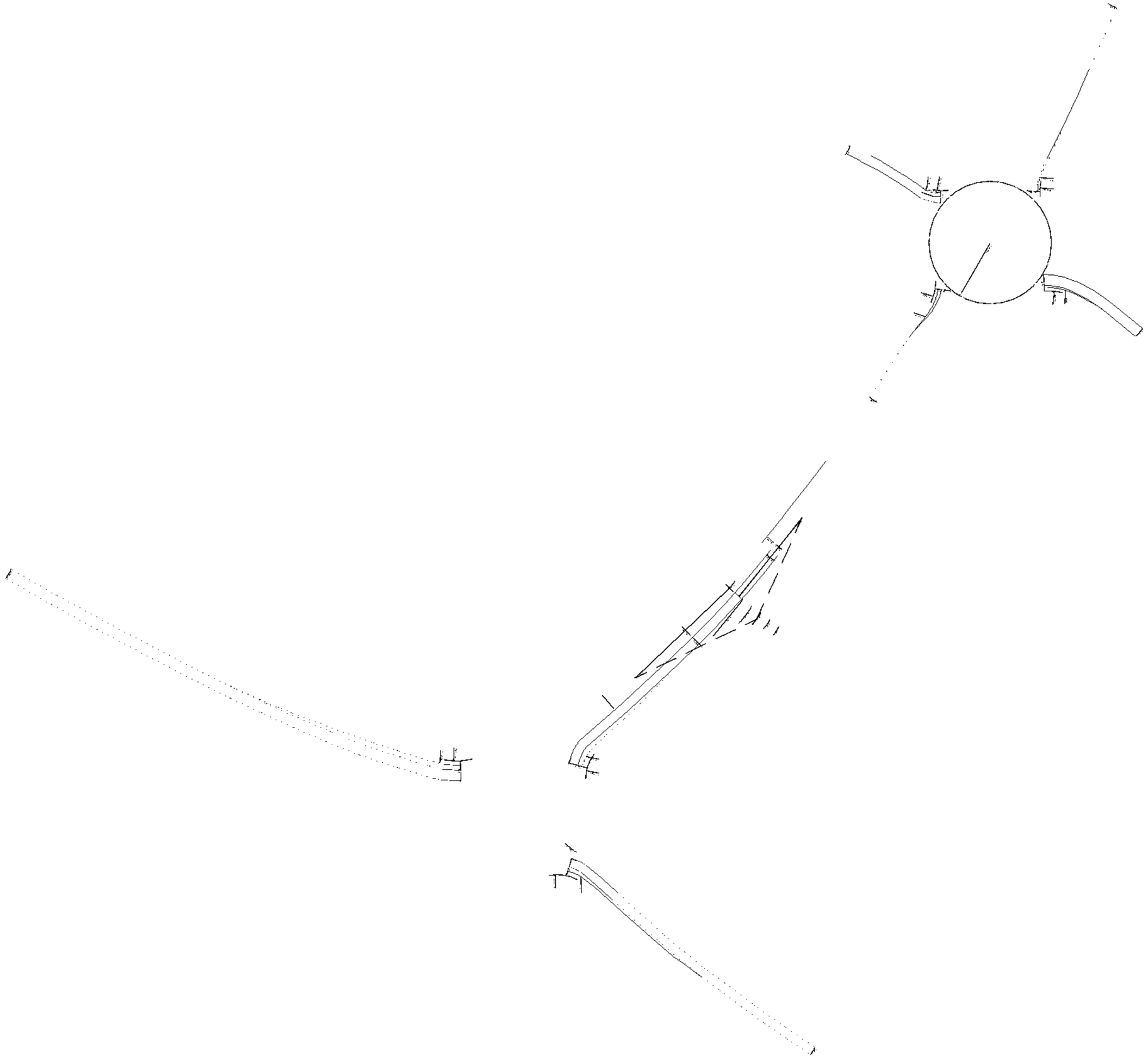
Area Description Level	Name	All purposes Origin	Destination
E02005467	South Holland 003	1,707	1,829

Future Year

Area Description Level	Name	All purposes Origin	Destination
E02005467	South Holland 003	1,878	2,030

ALL ROADS

Level	Area	Local Growth Figure
E02005467	South Holland 003	1.1407



Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.0.3896
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+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

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Filename: A151 - site access v2.j9
Path: C:\Users\ADC\Dropbox (ADC Infrastructure)\!!! ADC Projects\ADC1485 Holbeach FEZ\Calculations\Junction models
Report generation date: 23/02/2023 12:52:03

Summary of junction performance

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Traffic flows - 2023 Observed						
Arm 1	0.5	3.45	0.32	0.3	3.01	0.24
Arm 2	0.0	0.00	0.00	0.0	2.06	0.01
Arm 3	0.4	3.15	0.30	0.3	2.75	0.25
Arm 4	0.0	0.00	0.00	0.0	0.00	0.00
Traffic flows - 2028 Base						
Arm 1	0.5	3.56	0.34	0.3	3.06	0.26
Arm 2	0.0	0.00	0.00	0.0	2.07	0.01
Arm 3	0.5	3.23	0.32	0.4	2.82	0.27
Arm 4	0.0	0.00	0.00	0.0	0.00	0.00
Traffic flows - 2036 Base						
Arm 1	0.6	3.69	0.36	0.4	3.16	0.28
Arm 2	0.0	0.00	0.00	0.0	2.10	0.01
Arm 3	0.5	3.35	0.34	0.4	2.90	0.29
Arm 4	0.0	0.00	0.00	0.0	0.00	0.00
Traffic flows - 2028 Background						
Arm 1	0.8	4.40	0.43	0.5	3.50	0.33
Arm 2	0.0	0.00	0.00	0.0	2.25	0.01
Arm 3	0.6	3.53	0.39	0.7	3.60	0.43
Arm 4	0.3	3.70	0.22	0.1	3.24	0.12
Traffic flows - 2036 Background						
Arm 1	0.8	4.61	0.46	0.5	3.61	0.35
Arm 2	0.0	0.00	0.00	0.0	2.29	0.01
Arm 3	0.7	3.68	0.41	0.8	3.73	0.45
Arm 4	0.3	3.79	0.22	0.1	3.30	0.12
Traffic flows - 2028 WD						
Arm 1	2.0	8.49	0.67	0.6	3.71	0.36
Arm 2	0.1	2.83	0.08	0.5	3.36	0.32
Arm 3	1.4	5.18	0.58	0.9	4.32	0.49
Arm 4	0.4	4.82	0.27	0.2	3.71	0.13
Traffic flows - 2036 WD						
Arm 1	2.3	9.33	0.70	0.6	3.84	0.38
Arm 2	0.1	2.88	0.09	0.5	3.43	0.32
Arm 3	1.5	5.50	0.61	1.0	4.51	0.51
Arm 4	0.4	4.98	0.27	0.2	3.79	0.14

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	A151 - site access
Location	Holbeach
Site number	
Date	10/02/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADC-AUTOCAD\ADC
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Observed	AM	ONE HOUR	07:45	09:15	15
D2	2023 Observed	PM	ONE HOUR	16:45	18:15	15
D3	2028 Base	AM	ONE HOUR	07:45	09:15	15
D4	2028 Base	PM	ONE HOUR	16:45	18:15	15
D5	2036 Base	AM	ONE HOUR	07:45	09:15	15
D6	2036 Base	PM	ONE HOUR	16:45	18:15	15
D7	2028 Background	AM	ONE HOUR	07:45	09:15	15
D8	2028 Background	PM	ONE HOUR	16:45	18:15	15
D9	2036 Background	AM	ONE HOUR	07:45	09:15	15
D10	2036 Background	PM	ONE HOUR	16:45	18:15	15
D11	2028 WD	AM	ONE HOUR	07:45	09:15	15
D12	2028 WD	PM	ONE HOUR	16:45	18:15	15
D13	2036 WD	AM	ONE HOUR	07:45	09:15	15
D14	2036 WD	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Traffic flows	100.000

Traffic flows - 2023 Observed, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A151 - site access	Standard Roundabout		1, 2, 3, 4	3.30	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A151 (S)	
2	Site access	
3	A151 (N)	
4	Holbeach West access	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	4.30	5.71	37.8	17.8	54.2	27.0	
2	4.73	7.25	27.8	24.8	54.2	32.0	
3	4.10	6.87	25.0	21.5	54.2	36.0	
4	4.20	5.77	9.0	17.4	54.2	23.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.588	1693
2	0.650	2030
3	0.607	1829
4	0.576	1604

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Observed	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	445	100.000
2		✓	1	100.000
3		✓	452	100.000
4		✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1	2	3	4
From	1	1	4	440	0
	2	0	0	1	0
	3	442	10	0	0
	4	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	10	0
	2	0	0	100	0
	3	12	10	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.32	3.45	0.5	A
2	0.00	0.00	0.0	A
3	0.30	3.15	0.4	A
4	0.00	0.00	0.0	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	335	8	1536	0.218	334	0.3	2.992	A
2	0	331	897	0.000	0	0.0	0.000	A
3	340	0.75	1641	0.207	339	0.3	2.763	A
4	0	340	1386	0.000	0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	400	9	1535	0.261	400	0.4	3.170	A
2	0	398	873	0.000	0	0.0	0.000	A
3	406	0.90	1641	0.248	406	0.3	2.915	A
4	0	407	1343	0.000	0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	490	11	1534	0.319	489	0.5	3.444	A
2	0	485	842	0.000	0	0.0	0.000	A
3	498	1	1641	0.303	497	0.4	3.148	A
4	0	498	1284	0.000	0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	490	11	1534	0.319	490	0.5	3.447	A
2	0	486	842	0.000	0	0.0	0.000	A
3	498	1	1641	0.303	498	0.4	3.148	A
4	0	499	1284	0.000	0	0.0	0.000	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	400	9	1535	0.261	401	0.4	3.173	A
2	0	397	873	0.000	0	0.0	0.000	A
3	406	0.90	1641	0.248	407	0.3	2.917	A
4	0	408	1342	0.000	0	0.0	0.000	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	335	8	1536	0.218	335	0.3	3.000	A
2	0	332	896	0.000	0	0.0	0.000	A
3	340	0.75	1641	0.207	341	0.3	2.768	A
4	0	341	1385	0.000	0	0.0	0.000	A

Traffic flows - 2023 Observed, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A151 - site access	Standard Roundabout		1, 2, 3, 4	2.86	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2023 Observed	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	351	100.000
2		✓	12	100.000
3		✓	465	100.000
4		✓	2	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1	2	3	4
From	1	1	3	346	1
	2	5	0	7	0
	3	402	2	0	1
	4	2	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	100	0	7	0
	2	0	0	0	0
	3	4	0	0	100
	4	50	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.24	3.01	0.3	A
2	0.01	2.06	0.0	A
3	0.25	2.78	0.3	A
4	0.00	0.00	0.0	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	284	2	1584	0.167	283	0.2	2.724	A
2	9	281	1849	0.005	9	0.0	1.956	A
3	305	5	1752	0.174	304	0.2	2.485	A
4	0	308	946	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	316	2	1584	0.199	315	0.2	2.837	A
2	11	313	1813	0.006	11	0.0	1.987	A
3	334	6	1751	0.208	364	0.3	2.594	A
4	0	368	922	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	386	2	1584	0.244	386	0.3	3.005	A
2	13	383	1784	0.007	13	0.0	2.055	A
3	446	8	1750	0.255	446	0.3	2.759	A
4	0	451	889	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	386	2	1584	0.244	386	0.3	3.005	A
2	13	383	1784	0.007	13	0.0	2.055	A
3	446	8	1750	0.255	446	0.3	2.759	A
4	0	451	889	0.000	0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	316	2	1584	0.199	316	0.2	2.840	A
2	11	313	1813	0.006	11	0.0	1.997	A
3	364	6	1751	0.208	364	0.3	2.597	A
4	0	369	922	0.000	0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	264	2	1584	0.167	264	0.2	2.729	A
2	9	262	1848	0.005	9	0.0	1.957	A
3	305	5	1752	0.174	305	0.2	2.488	A
4	0	309	948	0.000	0	0.0	0.000	A

Traffic flows - 2028 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A151 - site access	Standard Roundabout		1, 2, 3, 4	3.39	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2028 Base	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	472	100.000
2		✓	1	100.000
3		✓	480	100.000
4		✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1	2	3	4
From	1	1	4	467	0
	2	0	0	1	0
	3	469	11	0	0
	4	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	10	0
	2	0	0	100	0
	3	12	9	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.34	3.56	0.5	A
2	0.00	0.00	0.0	A
3	0.32	3.23	0.5	A
4	0.00	0.00	0.0	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	353	8	1534	0.232	354	0.3	3.048	A
2	0	351	889	0.000	0	0.0	0.000	A
3	361	0.75	1641	0.220	360	0.3	2.807	A
4	0	361	1372	0.000	0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	424	10	1533	0.277	424	0.4	3.245	A
2	0	420	865	0.000	0	0.0	0.000	A
3	432	0.90	1641	0.263	431	0.4	2.975	A
4	0	432	1327	0.000	0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	520	12	1532	0.339	519	0.5	3.552	A
2	0	515	831	0.000	0	0.0	0.000	A
3	528	1	1641	0.322	528	0.5	3.232	A
4	0	529	1284	0.000	0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	520	12	1532	0.339	520	0.5	3.555	A
2	0	515	831	0.000	0	0.0	0.000	A
3	528	1	1641	0.322	528	0.5	3.235	A
4	0	530	1284	0.000	0	0.0	0.000	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	424	10	1533	0.277	425	0.4	3.251	A
2	0	421	884	0.000	0	0.0	0.000	A
3	432	0.90	1841	0.263	432	0.4	2.980	A
4	0	433	1325	0.000	0	0.0	0.000	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	353	8	1534	0.232	356	0.3	3.055	A
2	0	353	889	0.000	0	0.0	0.000	A
3	381	0.75	1841	0.220	382	0.3	2.813	A
4	0	382	1371	0.000	0	0.0	0.000	A

Traffic flows - 2028 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A151 - site access	Standard Roundabout		1, 2, 3, 4	2.92	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2028 Base	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	372	100.000
2		✓	12	100.000
3		✓	430	100.000
4		✓	2	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1	2	3	4
From	1	1	3	367	1
	2	5	0	7	0
	3	427	2	0	1
	4	2	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	100	0	7	0
	2	0	0	0	0
	3	4	0	0	100
	4	50	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.26	3.06	0.3	A
2	0.01	2.07	0.0	A
3	0.27	2.82	0.4	A
4	0.00	0.00	0.0	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	280	2	1586	0.177	279	0.2	2.754	A
2	9	277	1838	0.005	9	0.0	1.968	A
3	324	5	1752	0.185	323	0.2	2.517	A
4	0	327	939	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	334	2	1586	0.211	334	0.3	2.876	A
2	11	332	1809	0.006	11	0.0	2.011	A
3	387	6	1751	0.221	386	0.3	2.637	A
4	0	391	913	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	410	2	1586	0.258	409	0.3	3.060	A
2	13	406	1748	0.008	13	0.0	2.074	A
3	473	8	1750	0.270	473	0.4	2.818	A
4	0	479	878	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	410	2	1586	0.258	410	0.3	3.060	A
2	13	406	1748	0.008	13	0.0	2.074	A
3	473	8	1750	0.270	473	0.4	2.818	A
4	0	479	878	0.000	0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	334	2	1586	0.211	335	0.3	2.877	A
2	11	332	1800	0.006	11	0.0	2.012	A
3	387	6	1751	0.221	387	0.3	2.640	A
4	0	391	913	0.000	0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	280	2	1586	0.177	280	0.2	2.757	A
2	9	278	1837	0.005	9	0.0	1.970	A
3	324	5	1752	0.185	324	0.2	2.520	A
4	0	328	938	0.000	0	0.0	0.000	A

Traffic flows - 2036 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A151 - site access	Standard Roundabout		1, 2, 3, 4	3.51	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2036 Base	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	50a	100.000
2		✓	1	100.000
3		✓	514	100.000
4		✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1	2	3	4
From	1	1	5	500	0
	2	0	0	1	0
	3	503	11	0	0
	4	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	10	0
	2	0	0	100	0
	3	12	9	0	0
	4	50	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.36	3.89	0.6	A
2	0.00	0.00	0.0	A
3	0.34	3.35	0.5	A
4	0.00	0.00	0.0	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	381	8	1536	0.248	380	0.3	3.111	A
2	0	376	881	0.000	0	0.0	0.000	A
3	387	0.75	1641	0.236	386	0.3	2.865	A
4	0	386	1243	0.000	0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	455	10	1535	0.296	455	0.4	3.332	A
2	0	450	854	0.000	0	0.0	0.000	A
3	462	0.90	1641	0.282	462	0.4	3.052	A
4	0	463	1198	0.000	0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	557	12	1533	0.363	557	0.6	3.683	A
2	0	551	818	0.000	0	0.0	0.000	A
3	566	1	1641	0.345	565	0.5	3.345	A
4	0	566	1137	0.000	0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	557	12	1533	0.363	557	0.6	3.686	A
2	0	552	818	0.000	0	0.0	0.000	A
3	566	1	1641	0.345	566	0.5	3.348	A
4	0	567	1137	0.000	0	0.0	0.000	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	455	10	1535	0.296	455	0.4	3.336	A
2	0	451	854	0.000	0	0.0	0.000	A
3	462	0.90	1641	0.282	463	0.4	3.055	A
4	0	464	1198	0.000	0	0.0	0.000	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	381	8	1536	0.248	381	0.3	3.118	A
2	0	378	880	0.000	0	0.0	0.000	A
3	387	0.75	1641	0.236	387	0.3	2.871	A
4	0	388	1242	0.000	0	0.0	0.000	A

Traffic flows - 2036 Base , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A151 - site access	Standard Roundabout		1, 2, 3, 4	3.01	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2036 Base	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	399	100.000
2		✓	14	100.000
3		✓	481	100.000
4		✓	2	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1	2	3	4
From	1	1	3	394	1
	2	6	0	8	0
	3	458	2	0	1
	4	2	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	100	0	7	0
	2	0	0	0	0
	3	4	0	0	100
	4	50	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.28	3.16	0.4	A
2	0.01	2.10	0.0	A
3	0.29	2.90	0.4	A
4	0.00	0.00	0.0	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	300	2	1579	0.190	299	0.2	2.813	A
2	11	297	1823	0.006	11	0.0	1.986	A
3	347	6	1752	0.198	346	0.2	2.560	A
4	0	351	929	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	359	2	1579	0.227	358	0.3	2.950	A
2	13	356	1782	0.007	13	0.0	2.034	A
3	414	7	1751	0.237	414	0.3	2.692	A
4	0	420	902	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	439	2	1578	0.278	439	0.4	3.159	A
2	15	436	1727	0.009	15	0.0	2.103	A
3	508	9	1750	0.290	507	0.4	2.896	A
4	0	514	864	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	439	2	1578	0.278	439	0.4	3.159	A
2	15	436	1726	0.009	15	0.0	2.103	A
3	508	9	1750	0.290	508	0.4	2.896	A
4	0	514	864	0.000	0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	359	2	1579	0.227	359	0.3	2.952	A
2	13	356	1782	0.007	13	0.0	2.036	A
3	414	7	1751	0.237	415	0.3	2.696	A
4	0	420	901	0.000	0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	300	2	1579	0.190	301	0.2	2.818	A
2	11	298	1822	0.006	11	0.0	1.986	A
3	347	6	1752	0.198	347	0.2	2.564	A
4	0	352	929	0.000	0	0.0	0.000	A

Traffic flows - 2028 Background, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A151 - site access	Standard Roundabout		1, 2, 3, 4	3.92	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2028 Background	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	586	100.000
2		✓	1	100.000
3		✓	581	100.000
4		✓	248	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1	2	3	4
From	1	1	4	540	21
	2	0	0	1	0
	3	498	11	0	72
	4	58	0	192	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	9	0
	2	0	0	100	0
	3	11	9	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.43	4.40	0.8	A
2	0.00	0.00	0.0	A
3	0.39	3.53	0.6	A
4	0.22	3.70	0.3	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	426	132	1480	0.288	425	0.4	3.407	A
2	0	566	820	0.000	0	0.0	0.000	A
3	437	17	1663	0.263	436	0.4	2.932	A
4	187	383	1360	0.137	186	0.2	3.065	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	509	182	1483	0.348	508	0.5	3.767	A
2	0	677	781	0.000	0	0.0	0.000	A
3	522	20	1661	0.314	522	0.5	3.161	A
4	223	458	1312	0.170	223	0.2	3.305	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	623	223	1441	0.432	622	0.8	4.392	A
2	0	829	729	0.000	0	0.0	0.000	A
3	640	24	1658	0.386	639	0.6	3.530	A
4	273	561	1246	0.219	273	0.3	3.698	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	623	224	1441	0.432	623	0.8	4.401	A
2	0	830	729	0.000	0	0.0	0.000	A
3	640	24	1658	0.386	640	0.6	3.533	A
4	273	562	1246	0.219	273	0.3	3.699	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	509	183	1463	0.348	510	0.5	3.780	A
2	0	879	781	0.000	0	0.0	0.000	A
3	522	20	1661	0.314	523	0.5	3.167	A
4	223	439	1311	0.170	223	0.2	3.311	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	426	153	1480	0.288	427	0.4	3.422	A
2	0	568	819	0.000	0	0.0	0.000	A
3	437	17	1683	0.263	438	0.4	2.939	A
4	187	384	1359	0.137	187	0.2	3.073	A

Traffic flows - 2028 Background, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A151 - site access	Standard Roundabout		1, 2, 3, 4	3.51	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2028 Background	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	468	100.000
2		✓	12	100.000
3		✓	878	100.000
4		✓	135	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1	2	3	4
From	1	1	3	413	51
	2	5	0	7	0
	3	501	2	0	173
	4	32	0	103	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	100	0	6	0
	2	0	0	0	0
	3	3	0	0	1
	4	3	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.33	3.50	0.5	A
2	0.01	2.25	0.0	A
3	0.43	3.80	0.7	A
4	0.12	3.24	0.1	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	352	79	1583	0.225	351	0.3	2.968	A
2	9	426	1741	0.005	9	0.0	2.078	A
3	509	43	1756	0.290	507	0.4	2.879	A
4	102	382	1366	0.074	101	0.1	2.846	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	421	94	1554	0.271	420	0.4	3.174	A
2	11	510	1684	0.006	11	0.0	2.151	A
3	608	51	1751	0.347	607	0.5	3.145	A
4	121	457	1322	0.092	121	0.1	2.988	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	515	116	1543	0.334	515	0.5	3.500	A
2	13	625	1606	0.008	13	0.0	2.259	A
3	744	63	1744	0.427	743	0.7	3.594	A
4	149	560	1261	0.118	149	0.1	3.235	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	515	116	1542	0.334	515	0.5	3.503	A
2	13	625	1606	0.008	13	0.0	2.260	A
3	744	63	1744	0.427	744	0.7	3.599	A
4	149	560	1261	0.118	149	0.1	3.236	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	421	94	1554	0.271	421	0.4	3.180	A
2	11	511	1883	0.006	11	0.0	2.153	A
3	608	51	1751	0.347	609	0.5	3.152	A
4	121	438	1321	0.092	121	0.1	3.000	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	352	79	1583	0.225	353	0.3	2.974	A
2	9	428	1740	0.005	9	0.0	2.081	A
3	509	43	1756	0.290	509	0.4	2.890	A
4	102	384	1385	0.074	102	0.1	2.848	A

Traffic flows - 2036 Background, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A151 - site access	Standard Roundabout		1, 2, 3, 4	4.08	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2036 Background	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	800	100.000
2		✓	1	100.000
3		✓	815	100.000
4		✓	248	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1	2	3	4
From	1	1	5	573	21
	2	0	0	1	0
	3	532	11	0	72
	4	58	0	192	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	9	0
	2	0	0	100	0
	3	11	9	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.46	4.61	0.8	A
2	0.00	0.00	0.0	A
3	0.41	3.68	0.7	A
4	0.22	3.79	0.3	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	452	132	1480	0.305	450	0.4	3.489	A
2	0	590	811	0.000	0	0.0	0.000	A
3	463	16	1660	0.279	461	0.4	2.999	A
4	187	408	1343	0.139	186	0.2	3.109	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	539	182	1463	0.369	539	0.6	3.891	A
2	0	707	771	0.000	0	0.0	0.000	A
3	553	20	1656	0.333	552	0.5	3.253	A
4	223	488	1292	0.173	223	0.2	3.366	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	661	223	1441	0.458	660	0.8	4.601	A
2	0	865	716	0.000	0	0.0	0.000	A
3	677	24	1656	0.409	676	0.7	3.669	A
4	273	598	1222	0.223	273	0.3	3.792	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	661	224	1441	0.458	661	0.8	4.613	A
2	0	866	716	0.000	0	0.0	0.000	A
3	677	24	1656	0.409	677	0.7	3.677	A
4	273	599	1222	0.224	273	0.3	3.793	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	539	183	1463	0.369	540	0.6	3.905	A
2	0	709	770	0.000	0	0.0	0.000	A
3	553	20	1658	0.333	554	0.5	3.262	A
4	223	490	1291	0.173	223	0.2	3.373	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	452	153	1479	0.305	452	0.4	3.508	A
2	0	593	810	0.000	0	0.0	0.000	A
3	463	17	1659	0.279	463	0.4	3.011	A
4	187	410	1342	0.139	187	0.2	3.118	A

Traffic flows - 2036 Background, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A151 - site access	Standard Roundabout		1, 2, 3, 4	3.63	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D10	2036 Background	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	495	100.000
2		✓	14	100.000
3		✓	707	100.000
4		✓	135	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1	2	3	4
From	1	1	3	440	51
	2	6	0	8	0
	3	532	2	0	173
	4	32	0	103	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	100	0	6	0
	2	0	0	0	0
	3	3	0	0	1
	4	3	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.35	3.81	0.5	A
2	0.01	2.29	0.0	A
3	0.45	3.73	0.8	A
4	0.12	3.30	0.1	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	373	79	1581	0.239	371	0.3	3.023	A
2	11	446	1727	0.006	11	0.0	2.097	A
3	532	44	1755	0.303	531	0.4	2.936	A
4	102	406	1352	0.075	101	0.1	2.878	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	445	94	1553	0.287	445	0.4	3.249	A
2	13	534	1667	0.008	13	0.0	2.175	A
3	636	52	1750	0.363	635	0.6	3.227	A
4	121	486	1305	0.093	121	0.1	3.041	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	545	116	1541	0.354	544	0.5	3.611	A
2	15	654	1586	0.010	15	0.0	2.292	A
3	778	64	1743	0.447	777	0.8	3.725	A
4	149	595	1240	0.120	149	0.1	3.297	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	545	116	1541	0.354	545	0.5	3.614	A
2	15	655	1585	0.010	15	0.0	2.293	A
3	778	64	1743	0.447	778	0.8	3.731	A
4	149	596	1240	0.120	149	0.1	3.298	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	445	94	1553	0.287	445	0.4	3.255	A
2	13	536	1835	0.008	13	0.0	2.178	A
3	636	52	1750	0.363	637	0.6	3.235	A
4	121	487	1304	0.093	121	0.1	3.043	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	373	79	1581	0.239	373	0.3	3.032	A
2	11	448	1725	0.006	11	0.0	2.098	A
3	532	44	1755	0.303	533	0.4	2.946	A
4	102	408	1351	0.075	102	0.1	2.881	A

Traffic flows - 2028 WD, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A151 - site access	Standard Roundabout		1, 2, 3, 4	6.30	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D11	2028 WD	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	773	100.000
2		✓	106	100.000
3		✓	888	100.000
4		✓	248	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1	2	3	4
From	1	1	211	540	21
	2	43	0	63	0
	3	498	316	0	72
	4	58	0	192	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	2	9	0
	2	5	0	5	0
	3	11	2	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.67	8.49	2.0	A
2	0.08	2.83	0.1	A
3	0.58	5.18	1.4	A
4	0.27	4.82	0.4	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	582	381	1374	0.423	579	0.7	4.511	A
2	80	565	1534	0.051	80	0.1	2.424	A
3	667	49	1684	0.396	664	0.7	3.522	A
4	187	643	1206	0.155	186	0.2	3.526	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	695	456	1332	0.522	694	1.1	5.623	A
2	95	677	1491	0.064	95	0.1	2.579	A
3	796	58	1678	0.475	796	0.9	4.073	A
4	223	770	1128	0.198	223	0.2	3.875	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	851	558	1275	0.667	848	2.0	8.350	A
2	117	827	1392	0.084	117	0.1	2.822	A
3	976	71	1671	0.584	974	1.4	5.149	A
4	273	943	1022	0.267	273	0.4	4.803	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	851	559	1275	0.668	851	2.0	8.491	A
2	117	830	1390	0.084	117	0.1	2.827	A
3	976	72	1671	0.584	975	1.4	5.178	A
4	273	945	1020	0.268	273	0.4	4.816	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	695	458	1331	0.522	698	1.1	5.720	A
2	95	881	1488	0.064	95	0.1	2.584	A
3	796	59	1678	0.475	798	0.9	4.100	A
4	223	773	1126	0.198	223	0.2	3.988	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	582	383	1373	0.424	583	0.7	4.566	A
2	80	569	1562	0.051	80	0.1	2.428	A
3	667	49	1684	0.396	668	0.7	3.546	A
4	187	647	1204	0.155	187	0.2	3.538	A

Traffic flows - 2028 WD, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A151 - site access	Standard Roundabout		1, 2, 3, 4	3.87	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)
D12	2028 WD	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	498	100.000
2		✓	452	100.000
3		✓	719	100.000
4		✓	135	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1	2	3	4
From	1	1	33	413	51
	2	183	0	269	0
	3	501	45	0	173
	4	32	0	103	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	100	3	6	0
	2	2	0	2	0
	3	3	2	0	1
	4	3	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.36	3.71	0.6	A
2	0.32	3.36	0.5	A
3	0.49	4.32	0.9	A
4	0.13	3.71	0.2	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	375	111	1548	0.242	374	0.3	3.068	A
2	340	426	1709	0.200	339	0.2	2.644	A
3	541	176	1675	0.323	539	0.5	3.163	A
4	102	548	1289	0.080	101	0.1	3.082	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	448	133	1534	0.292	447	0.4	3.313	A
2	406	510	1644	0.247	406	0.3	2.906	A
3	646	211	1654	0.391	646	0.6	3.567	A
4	121	656	1205	0.101	121	0.1	3.319	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	548	163	1517	0.361	548	0.6	3.712	A
2	498	625	1589	0.317	497	0.5	3.357	A
3	792	258	1626	0.487	790	0.9	4.304	A
4	149	803	1119	0.133	148	0.2	3.709	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	548	163	1517	0.361	548	0.6	3.715	A
2	498	625	1588	0.317	498	0.5	3.361	A
3	792	259	1626	0.487	792	0.9	4.316	A
4	149	804	1118	0.133	149	0.2	3.712	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	448	133	1534	0.292	448	0.4	3.317	A
2	406	511	1644	0.247	407	0.3	2.913	A
3	646	212	1654	0.391	648	0.6	3.582	A
4	121	637	1204	0.101	122	0.1	3.324	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	375	112	1546	0.243	375	0.3	3.075	A
2	340	428	1699	0.200	341	0.3	2.650	A
3	541	177	1675	0.323	542	0.5	3.178	A
4	102	550	1286	0.080	102	0.1	3.087	A

Traffic flows - 2036 WD , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A151 - site access	Standard Roundabout		1, 2, 3, 4	6.80	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)
D13	2036 WD	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	807	100.000
2		✓	106	100.000
3		✓	920	100.000
4		✓	248	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1	2	3	4
From	1	1	212	573	21
	2	43	0	63	0
	3	532	316	0	72
	4	58	0	192	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	2	9	0
	2	5	0	5	0
	3	11	2	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.70	9.33	2.3	A
2	0.09	2.88	0.1	A
3	0.61	5.50	1.5	A
4	0.27	4.98	0.4	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	608	381	1374	0.442	604	0.8	4.662	A
2	89	590	1547	0.052	88	0.1	2.453	A
3	693	49	1681	0.412	690	0.7	3.622	A
4	187	669	1190	0.157	186	0.2	3.584	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	725	456	1332	0.545	724	1.2	5.908	A
2	95	706	1479	0.065	95	0.1	2.617	A
3	827	58	1675	0.494	826	1.0	4.234	A
4	223	801	1108	0.201	223	0.3	4.064	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	880	558	1275	0.697	884	2.2	9.125	A
2	117	863	1387	0.085	117	0.1	2.879	A
3	1013	71	1668	0.607	1011	1.5	5.462	A
4	273	980	998	0.274	273	0.4	4.962	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	889	559	1274	0.697	888	2.3	9.326	A
2	117	866	1385	0.086	117	0.1	2.884	A
3	1013	72	1667	0.607	1013	1.5	5.499	A
4	273	982	996	0.274	273	0.4	4.977	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	725	458	1331	0.545	730	1.2	5.032	A
2	95	711	1487	0.065	95	0.1	2.624	A
3	827	59	1675	0.494	829	1.0	4.268	A
4	223	804	1105	0.202	223	0.3	4.080	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	608	383	1372	0.443	609	0.8	4.728	A
2	80	594	1544	0.052	80	0.1	2.458	A
3	693	49	1681	0.412	694	0.7	3.653	A
4	187	673	1186	0.157	187	0.2	3.597	A

Traffic flows - 2036 WD , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A151 - site access	Standard Roundabout		1, 2, 3, 4	4.01	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)
D14	2036 WD	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	525	100.000
2		✓	454	100.000
3		✓	750	100.000
4		✓	135	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1	2	3	4
From	1	1	33	440	51
	2	184	0	270	0
	3	532	45	0	173
	4	32	0	103	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	100	3	6	0
	2	2	0	2	0
	3	3	2	0	1
	4	3	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.38	3.84	0.6	A
2	0.32	3.43	0.5	A
3	0.51	4.51	1.0	A
4	0.14	3.79	0.2	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	395	111	1545	0.256	394	0.3	3.124	A
2	342	446	1686	0.203	341	0.3	2.674	A
3	565	177	1674	0.337	563	0.5	3.233	A
4	102	572	1255	0.081	101	0.1	3.120	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	472	133	1532	0.308	472	0.4	3.394	A
2	408	534	1628	0.251	408	0.3	2.950	A
3	674	212	1653	0.408	674	0.7	3.673	A
4	121	684	1189	0.102	121	0.1	3.372	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	578	163	1515	0.381	577	0.6	3.835	A
2	500	654	1548	0.323	499	0.5	3.429	A
3	826	260	1625	0.508	824	1.0	4.492	A
4	149	838	1098	0.135	148	0.2	3.790	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	578	163	1515	0.381	578	0.6	3.840	A
2	500	655	1548	0.323	500	0.5	3.433	A
3	826	260	1624	0.508	826	1.0	4.507	A
4	149	839	1097	0.135	149	0.2	3.793	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	472	133	1532	0.308	473	0.4	3.402	A
2	408	536	1627	0.251	409	0.3	2.955	A
3	674	212	1653	0.408	676	0.7	3.687	A
4	121	686	1187	0.102	122	0.1	3.380	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	395	112	1544	0.256	396	0.3	3.134	A
2	342	448	1685	0.203	342	0.3	2.682	A
3	565	178	1674	0.337	565	0.5	3.248	A
4	102	574	1253	0.081	102	0.1	3.125	A

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.0.3896
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+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

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Filename: A151 - Frontier Agri v2.j9
Path: C:\Users\ADC\Dropbox (ADC Infrastructure)\!!! ADC Projects\ADC1485 Holbeach FEZ\Calculations\Junction models
Report generation date: 23/02/2023 09:44:43

Summary of junction performance

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
	Traffic flows - 2023 Observed					
Stream B-C	0.0	0.00	0.00	0.0	0.00	0.00
Stream B-A	0.0	0.00	0.00	0.0	0.00	0.00
Stream C-AB	0.0	4.54	0.00	0.0	0.00	0.00
	Traffic flows - 2028 Base					
Stream B-C	0.0	0.00	0.00	0.0	0.00	0.00
Stream B-A	0.0	0.00	0.00	0.0	0.00	0.00
Stream C-AB	0.0	4.49	0.00	0.0	0.00	0.00
	Traffic flows - 2036 Base					
Stream B-C	0.0	0.00	0.00	0.0	0.00	0.00
Stream B-A	0.0	0.00	0.00	0.0	0.00	0.00
Stream C-AB	0.0	4.42	0.00	0.0	0.00	0.00
	Traffic flows - 2028 Background					
Stream B-C	0.0	0.00	0.00	0.0	0.00	0.00
Stream B-A	0.0	0.00	0.00	0.0	0.00	0.00
Stream C-AB	0.0	4.38	0.00	0.0	0.00	0.00
	Traffic flows - 2036 Background					
Stream B-C	0.0	0.00	0.00	0.0	0.00	0.00
Stream B-A	0.0	0.00	0.00	0.0	0.00	0.00
Stream C-AB	0.0	4.31	0.00	0.0	0.00	0.00
	Traffic flows - 2028 WD					
Stream B-C	0.0	0.00	0.00	0.0	0.00	0.00
Stream B-A	0.0	0.00	0.00	0.0	0.00	0.00
Stream C-AB	0.0	3.69	0.01	0.0	0.00	0.00
	Traffic flows - 2036 WD					
Stream B-C	0.0	0.00	0.00	0.0	0.00	0.00
Stream B-A	0.0	0.00	0.00	0.0	0.00	0.00
Stream C-AB	0.0	3.84	0.01	0.0	0.00	0.00

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

File summary

File Description

Title	A151 - Frontier Agriculture
Location	Holbeach
Site number	
Date	10/02/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADC-AUTOCAD\ADC
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Observed	AM	ONE HOUR	07:45	09:15	15
D2	2023 Observed	PM	ONE HOUR	16:45	18:15	15
D3	2028 Base	AM	ONE HOUR	07:45	09:15	15
D4	2028 Base	PM	ONE HOUR	16:45	18:15	15
D5	2036 Base	AM	ONE HOUR	07:45	09:15	15
D6	2036 Base	PM	ONE HOUR	16:45	18:15	15
D7	2028 Background	AM	ONE HOUR	07:45	09:15	15
D8	2028 Background	PM	ONE HOUR	16:45	18:15	15
D9	2036 Background	AM	ONE HOUR	07:45	09:15	15
D10	2036 Background	PM	ONE HOUR	16:45	18:15	15
D11	2028 WD	AM	ONE HOUR	07:45	09:15	15
D12	2028 WD	PM	ONE HOUR	16:45	18:15	15
D13	2036 WD	AM	ONE HOUR	07:45	09:15	15
D14	2036 WD	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Traffic flows	100.000

Traffic flows - 2023 Observed, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A151 - Frontier Agriculture	T-Junction	Two-way		0.01	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A151 (S)		Major
B	Frontier Agriculture		Minor
C	A151 (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	9.68			150.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	9.31	6.34	5.15	4.81	✓	3.00	58	45

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	548	0.084	0.212	0.133	0.303
1	B-C	889	0.089	0.224	-	-
1	C-B	861	0.215	0.215	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Observed	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	441	100.000
B		✓	4	100.000
C		✓	448	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	1	440
	B	3	0	1
	C	447	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	10
	B	33	0	0
	C	11	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.00	0.00	0.0	A
C-AB	0.00	4.54	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	807	0.000	0	0.0	0.000	A
B-A	0	315	0.000	0	0.0	0.000	A
C-AB	1	797	0.002	1	0.0	4.521	A
C-A	338			338			
A-B	0.75			0.75			
A-C	331			331			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	591	0.000	0	0.0	0.000	A
B-A	0	297	0.000	0	0.0	0.000	A
C-AB	2	828	0.002	2	0.0	4.345	A
C-A	401			401			
A-B	0.90			0.90			
A-C	398			398			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	589	0.000	0	0.0	0.000	A
B-A	0	271	0.000	0	0.0	0.000	A
C-AB	3	872	0.003	3	0.0	4.127	A
C-A	491			491			
A-B	1			1			
A-C	484			484			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	589	0.000	0	0.0	0.000	A
B-A	0	271	0.000	0	0.0	0.000	A
C-AB	3	872	0.003	3	0.0	4.142	A
C-A	491			491			
A-B	1			1			
A-C	484			484			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	591	0.000	0	0.0	0.000	A
B-A	0	297	0.000	0	0.0	0.000	A
C-AB	2	828	0.002	2	0.0	4.382	A
C-A	401			401			
A-B	0.90			0.90			
A-C	398			398			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	607	0.000	0	0.0	0.000	A
B-A	0	315	0.000	0	0.0	0.000	A
C-AB	1	797	0.002	1	0.0	4.540	A
C-A	336			336			
A-B	0.75			0.75			
A-C	331			331			

Traffic flows - 2023 Observed, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A151 - Frontier Agriculture	T-Junction	Two-way		0.00	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2023 Observed	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	352	100.000
B		✓	2	100.000
C		✓	405	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	352
	B	0	0	2
	C	405	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	7
	B	0	0	0
	C	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	626	0.000	0	0.0	0.000	A
B-A	0	446	0.000	0	0.0	0.000	A
C-AB	0	588	0.000	0	0.0	0.000	A
C-A	305			305			
A-B	0			0			
A-C	265			265			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	613	0.000	0	0.0	0.000	A
B-A	0	428	0.000	0	0.0	0.000	A
C-AB	0	576	0.000	0	0.0	0.000	A
C-A	364			364			
A-B	0			0			
A-C	316			316			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	596	0.000	0	0.0	0.000	A
B-A	0	398	0.000	0	0.0	0.000	A
C-AB	0	560	0.000	0	0.0	0.000	A
C-A	448			448			
A-B	0			0			
A-C	388			388			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	596	0.000	0	0.0	0.000	A
B-A	0	398	0.000	0	0.0	0.000	A
C-AB	0	560	0.000	0	0.0	0.000	A
C-A	448			448			
A-B	0			0			
A-C	388			388			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	813	0.000	0	0.0	0.000	A
B-A	0	426	0.000	0	0.0	0.000	A
C-AB	0	576	0.000	0	0.0	0.000	A
C-A	364			364			
A-B	0			0			
A-C	318			318			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	826	0.000	0	0.0	0.000	A
B-A	0	448	0.000	0	0.0	0.000	A
C-AB	0	588	0.000	0	0.0	0.000	A
C-A	305			305			
A-B	0			0			
A-C	265			265			

Traffic flows - 2028 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A151 - Frontier Agriculture	T-Junction	Two-way		0.01	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2028 Base	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	488	100.000
B		✓	4	100.000
C		✓	475	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	1	487
	B	3	0	1
	C	474	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	10
	B	33	0	0
	C	11	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.00	0.00	0.0	A
C-AB	0.00	4.49	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	802	0.000	0	0.0	0.000	A
B-A	0	309	0.000	0	0.0	0.000	A
C-AB	1	807	0.002	1	0.0	4.470	A
C-A	356			356			
A-B	0.75			0.75			
A-C	352			352			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	585	0.000	0	0.0	0.000	A
B-A	0	290	0.000	0	0.0	0.000	A
C-AB	2	839	0.002	2	0.0	4.286	A
C-A	425			425			
A-B	0.90			0.90			
A-C	420			420			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	562	0.000	0	0.0	0.000	A
B-A	0	252	0.000	0	0.0	0.000	A
C-AB	3	886	0.003	3	0.0	4.058	A
C-A	520			520			
A-B	1			1			
A-C	514			514			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	562	0.000	0	0.0	0.000	A
B-A	0	252	0.000	0	0.0	0.000	A
C-AB	3	886	0.003	3	0.0	4.073	A
C-A	520			520			
A-B	1			1			
A-C	514			514			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	585	0.000	0	0.0	0.000	A
B-A	0	290	0.000	0	0.0	0.000	A
C-AB	2	839	0.002	2	0.0	4.321	A
C-A	425			425			
A-B	0.90			0.90			
A-C	429			429			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	802	0.000	0	0.0	0.000	A
B-A	0	399	0.000	0	0.0	0.000	A
C-AB	1	806	0.002	1	0.0	4.489	A
C-A	356			356			
A-B	0.75			0.75			
A-C	352			352			

Traffic flows - 2028 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A151 - Frontier Agriculture	T-Junction	Two-way		0.00	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2028 Base	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	373	100.000
B		✓	2	100.000
C		✓	430	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	373
	B	0	0	2
	C	430	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	6
	B	0	0	0
	C	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	622	0.000	0	0.0	0.000	A
B-A	0	439	0.000	0	0.0	0.000	A
C-AB	0	584	0.000	0	0.0	0.000	A
C-A	324			324			
A-B	0			0			
A-C	281			281			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	609	0.000	0	0.0	0.000	A
B-A	0	418	0.000	0	0.0	0.000	A
C-AB	0	572	0.000	0	0.0	0.000	A
C-A	387			387			
A-B	0			0			
A-C	335			335			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	591	0.000	0	0.0	0.000	A
B-A	0	389	0.000	0	0.0	0.000	A
C-AB	0	555	0.000	0	0.0	0.000	A
C-A	473			473			
A-B	0			0			
A-C	411			411			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	591	0.000	0	0.0	0.000	A
B-A	0	389	0.000	0	0.0	0.000	A
C-AB	0	555	0.000	0	0.0	0.000	A
C-A	473			473			
A-B	0			0			
A-C	411			411			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	809	0.000	0	0.0	0.000	A
B-A	0	418	0.000	0	0.0	0.000	A
C-AB	0	572	0.000	0	0.0	0.000	A
C-A	387			387			
A-B	0			0			
A-C	335			335			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	822	0.000	0	0.0	0.000	A
B-A	0	439	0.000	0	0.0	0.000	A
C-AB	0	584	0.000	0	0.0	0.000	A
C-A	324			324			
A-B	0			0			
A-C	281			281			

Traffic flows - 2036 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A151 - Frontier Agriculture	T-Junction	Two-way		0.01	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2036 Base	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	501	100.000
B		✓	4	100.000
C		✓	509	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	1	500
	B	3	0	1
	C	508	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	10
	B	33	0	0
	C	11	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.00	0.00	0.0	A
C-AB	0.00	4.42	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	596	0.000	0	0.0	0.000	A
B-A	0	302	0.000	0	0.0	0.000	A
C-AB	1	819	0.002	1	0.0	4.404	A
C-A	382			382			
A-B	0.75			0.75			
A-C	376			376			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	578	0.000	0	0.0	0.000	A
B-A	0	281	0.000	0	0.0	0.000	A
C-AB	2	854	0.002	2	0.0	4.211	A
C-A	456			456			
A-B	0.90			0.90			
A-C	449			449			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	553	0.000	0	0.0	0.000	A
B-A	0	252	0.000	0	0.0	0.000	A
C-AB	3	906	0.003	3	0.0	3.972	A
C-A	558			558			
A-B	1			1			
A-C	551			551			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	553	0.000	0	0.0	0.000	A
B-A	0	252	0.000	0	0.0	0.000	A
C-AB	3	906	0.003	3	0.0	3.986	A
C-A	558			558			
A-B	1			1			
A-C	551			551			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	578	0.000	0	0.0	0.000	A
B-A	0	281	0.000	0	0.0	0.000	A
C-AB	2	854	0.002	2	0.0	4.248	A
C-A	456			456			
A-B	0.90			0.90			
A-C	449			449			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	598	0.000	0	0.0	0.000	A
B-A	0	302	0.000	0	0.0	0.000	A
C-AB	1	818	0.002	1	0.0	4.424	A
C-A	382			382			
A-B	0.75			0.75			
A-C	376			376			

Traffic flows - 2036 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A151 - Frontier Agriculture	T-Junction	Two-way		0.00	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2036 Base	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	401	100.000
B		✓	2	100.000
C		✓	461	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	401
	B	0	0	2
	C	461	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	7
	B	0	0	0
	C	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	617	0.000	0	0.0	0.000	A
B-A	0	431	0.000	0	0.0	0.000	A
C-AB	0	580	0.000	0	0.0	0.000	A
C-A	347			347			
A-B	0			0			
A-C	302			302			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	603	0.000	0	0.0	0.000	A
B-A	0	409	0.000	0	0.0	0.000	A
C-AB	0	567	0.000	0	0.0	0.000	A
C-A	414			414			
A-B	0			0			
A-C	360			360			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	583	0.000	0	0.0	0.000	A
B-A	0	378	0.000	0	0.0	0.000	A
C-AB	0	548	0.000	0	0.0	0.000	A
C-A	508			508			
A-B	0			0			
A-C	442			442			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	583	0.000	0	0.0	0.000	A
B-A	0	378	0.000	0	0.0	0.000	A
C-AB	0	548	0.000	0	0.0	0.000	A
C-A	508			508			
A-B	0			0			
A-C	442			442			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	803	0.000	0	0.0	0.000	A
B-A	0	409	0.000	0	0.0	0.000	A
C-AB	0	567	0.000	0	0.0	0.000	A
C-A	414			414			
A-B	0			0			
A-C	389			389			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	817	0.000	0	0.0	0.000	A
B-A	0	431	0.000	0	0.0	0.000	A
C-AB	0	580	0.000	0	0.0	0.000	A
C-A	347			347			
A-B	0			0			
A-C	302			302			

Traffic flows - 2028 Background, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A151 - Frontier Agriculture	T-Junction	Two-way		0.01	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2028 Background	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	733	100.000
B		✓	4	100.000
C		✓	576	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	1	732
	B	3	0	1
	C	575	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	7
	B	33	0	0
	C	9	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.00	0.00	0.0	A
C-AB	0.00	4.38	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	557	0.000	0	0.0	0.000	A
B-A	0	270	0.000	0	0.0	0.000	A
C-AB	2	827	0.002	2	0.0	4.363	A
C-A	432			432			
A-B	0.75			0.75			
A-C	551			551			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	531	0.000	0	0.0	0.000	A
B-A	0	243	0.000	0	0.0	0.000	A
C-AB	2	866	0.003	2	0.0	4.153	A
C-A	518			518			
A-B	0.90			0.90			
A-C	658			658			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	496	0.000	0	0.0	0.000	A
B-A	0	265	0.000	0	0.0	0.000	A
C-AB	3	926	0.004	3	0.0	3.891	A
C-A	631			631			
A-B	1			1			
A-C	806			806			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	496	0.000	0	0.0	0.000	A
B-A	0	265	0.000	0	0.0	0.000	A
C-AB	3	926	0.004	3	0.0	3.903	A
C-A	631			631			
A-B	1			1			
A-C	806			806			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	531	0.000	0	0.0	0.000	A
B-A	0	243	0.000	0	0.0	0.000	A
C-AB	2	866	0.003	2	0.0	4.185	A
C-A	516			516			
A-B	0.90			0.90			
A-C	658			658			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	557	0.000	0	0.0	0.000	A
B-A	0	270	0.000	0	0.0	0.000	A
C-AB	2	826	0.002	2	0.0	4.380	A
C-A	432			432			
A-B	0.75			0.75			
A-C	551			551			

Traffic flows - 2028 Background, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A151 - Frontier Agriculture	T-Junction	Two-way		0.00	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2028 Background	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	522	100.000
B		✓	2	100.000
C		✓	376	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	522
	B	0	0	2
	C	376	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	5
	B	0	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	597	0.000	0	0.0	0.000	A
B-A	0	391	0.000	0	0.0	0.000	A
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	509			509			
A-B	0			0			
A-C	393			393			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	579	0.000	0	0.0	0.000	A
B-A	0	381	0.000	0	0.0	0.000	A
C-AB	0	548	0.000	0	0.0	0.000	A
C-A	608			608			
A-B	0			0			
A-C	469			469			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	554	0.000	0	0.0	0.000	A
B-A	0	319	0.000	0	0.0	0.000	A
C-AB	0	524	0.000	0	0.0	0.000	A
C-A	744			744			
A-B	0			0			
A-C	575			575			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	554	0.000	0	0.0	0.000	A
B-A	0	319	0.000	0	0.0	0.000	A
C-AB	0	524	0.000	0	0.0	0.000	A
C-A	744			744			
A-B	0			0			
A-C	575			575			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	579	0.000	0	0.0	0.000	A
B-A	0	361	0.000	0	0.0	0.000	A
C-AB	0	548	0.000	0	0.0	0.000	A
C-A	608			608			
A-B	0			0			
A-C	489			489			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	597	0.000	0	0.0	0.000	A
B-A	0	391	0.000	0	0.0	0.000	A
C-AB	0	565	0.000	0	0.0	0.000	A
C-A	509			509			
A-B	0			0			
A-C	393			393			

Traffic flows - 2036 Background, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A151 - Frontier Agriculture	T-Junction	Two-way		0.01	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2036 Background	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	736	100.000
B		✓	4	100.000
C		✓	810	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	1	765
	B	3	0	1
	C	809	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	7
	B	33	0	0
	C	10	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.00	0.00	0.0	A
C-AB	0.00	4.31	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	551	0.000	0	0.0	0.000	A
B-A	0	253	0.000	0	0.0	0.000	A
C-AB	2	840	0.002	2	0.0	4.286	A
C-A	458			458			
A-B	0.75			0.75			
A-C	576			576			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	524	0.000	0	0.0	0.000	A
B-A	0	234	0.000	0	0.0	0.000	A
C-AB	2	883	0.003	2	0.0	4.077	A
C-A	548			548			
A-B	0.90			0.90			
A-C	688			688			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	487	0.000	0	0.0	0.000	A
B-A	0	194	0.000	0	0.0	0.000	A
C-AB	4	947	0.004	4	0.0	3.803	A
C-A	688			368			
A-B	1			1			
A-C	842			842			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	487	0.000	0	0.0	0.000	A
B-A	0	194	0.000	0	0.0	0.000	A
C-AB	4	947	0.004	4	0.0	3.815	A
C-A	688			368			
A-B	1			1			
A-C	842			842			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	524	0.000	0	0.0	0.000	A
B-A	0	234	0.000	0	0.0	0.000	A
C-AB	2	883	0.003	2	0.0	4.110	A
C-A	546			546			
A-B	0.90			0.90			
A-C	688			688			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	551	0.000	0	0.0	0.000	A
B-A	0	253	0.000	0	0.0	0.000	A
C-AB	2	839	0.002	2	0.0	4.313	A
C-A	458			458			
A-B	0.75			0.75			
A-C	576			576			

Traffic flows - 2036 Background , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A151 - Frontier Agriculture	T-Junction	Two-way		0.00	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D10	2036 Background	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	550	100.000
B		✓	2	100.000
C		✓	707	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	550
	B	0	0	2
	C	707	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	5
	B	0	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	592	0.000	0	0.0	0.000	A
B-A	0	383	0.000	0	0.0	0.000	A
C-AB	0	560	0.000	0	0.0	0.000	A
C-A	532			532			
A-B	0			0			
A-C	414			414			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	573	0.000	0	0.0	0.000	A
B-A	0	351	0.000	0	0.0	0.000	A
C-AB	0	542	0.000	0	0.0	0.000	A
C-A	636			636			
A-B	0			0			
A-C	494			494			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	547	0.000	0	0.0	0.000	A
B-A	0	307	0.000	0	0.0	0.000	A
C-AB	0	517	0.000	0	0.0	0.000	A
C-A	778			778			
A-B	0			0			
A-C	606			606			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	547	0.000	0	0.0	0.000	A
B-A	0	307	0.000	0	0.0	0.000	A
C-AB	0	517	0.000	0	0.0	0.000	A
C-A	778			778			
A-B	0			0			
A-C	606			606			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	573	0.000	0	0.0	0.000	A
B-A	0	351	0.000	0	0.0	0.000	A
C-AB	0	542	0.000	0	0.0	0.000	A
C-A	636			636			
A-B	0			0			
A-C	494			494			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	592	0.000	0	0.0	0.000	A
B-A	0	383	0.000	0	0.0	0.000	A
C-AB	0	580	0.000	0	0.0	0.000	A
C-A	532			532			
A-B	0			0			
A-C	414			414			

Traffic flows - 2028 WD, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A151 - Frontier Agriculture	T-Junction	Two-way		0.01	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)
D11	2028 WD	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	795	100.000
B		✓	4	100.000
C		✓	881	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	1	794
	B	3	0	1
	C	880	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	6
	B	33	0	0
	C	7	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.00	0.00	0.0	A
C-AB	0.01	3.59	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	547	0.000	0	0.0	0.000	A
B-A	0	239	0.000	0	0.0	0.000	A
C-AB	2	980	0.002	2	0.0	3.679	A
C-A	661			661			
A-B	0.75			0.75			
A-C	598			598			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	519	0.000	0	0.0	0.000	A
B-A	0	206	0.000	0	0.0	0.000	A
C-AB	4	1055	0.003	4	0.0	3.416	A
C-A	788			788			
A-B	0.90			0.90			
A-C	714			714			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	481	0.000	0	0.0	0.000	A
B-A	0	180	0.000	0	0.0	0.000	A
C-AB	7	1165	0.006	7	0.0	3.102	A
C-A	963			963			
A-B	1			1			
A-C	874			874			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	481	0.000	0	0.0	0.000	A
B-A	0	180	0.000	0	0.0	0.000	A
C-AB	7	1165	0.006	7	0.0	3.107	A
C-A	963			963			
A-B	1			1			
A-C	874			874			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	519	0.000	0	0.0	0.000	A
B-A	0	206	0.000	0	0.0	0.000	A
C-AB	4	1055	0.003	4	0.0	3.438	A
C-A	788			788			
A-B	0.90			0.90			
A-C	714			714			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	547	0.000	0	0.0	0.000	A
B-A	0	239	0.000	0	0.0	0.000	A
C-AB	2	980	0.002	2	0.0	3.693	A
C-A	661			661			
A-B	0.75			0.75			
A-C	598			598			

Traffic flows - 2028 WD, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A151 - Frontier Agriculture	T-Junction	Two-way		0.00	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D12	2028 WD	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	785	100.000
B		✓	2	100.000
C		✓	719	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	785
	B	0	0	2
	C	719	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	4
	B	0	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	551	0.000	0	0.0	0.000	A
B-A	0	344	0.000	0	0.0	0.000	A
C-AB	0	522	0.000	0	0.0	0.000	A
C-A	541			541			
A-B	0			0			
A-C	591			591			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	524	0.000	0	0.0	0.000	A
B-A	0	304	0.000	0	0.0	0.000	A
C-AB	0	497	0.000	0	0.0	0.000	A
C-A	648			648			
A-B	0			0			
A-C	706			706			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	487	0.000	0	0.0	0.000	A
B-A	0	249	0.000	0	0.0	0.000	A
C-AB	0	462	0.000	0	0.0	0.000	A
C-A	792			792			
A-B	0			0			
A-C	864			864			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	487	0.000	0	0.0	0.000	A
B-A	0	249	0.000	0	0.0	0.000	A
C-AB	0	462	0.000	0	0.0	0.000	A
C-A	792			792			
A-B	0			0			
A-C	864			864			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	524	0.000	0	0.0	0.000	A
B-A	0	304	0.000	0	0.0	0.000	A
C-AB	0	497	0.000	0	0.0	0.000	A
C-A	646			646			
A-B	0			0			
A-C	708			708			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	551	0.000	0	0.0	0.000	A
B-A	0	344	0.000	0	0.0	0.000	A
C-AB	0	522	0.000	0	0.0	0.000	A
C-A	541			541			
A-B	0			0			
A-C	591			591			

Traffic flows - 2036 WD, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A151 - Frontier Agriculture	T-Junction	Two-way		0.01	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)
D13	2036 WD	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	828	100.000
B		✓	4	100.000
C		✓	915	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	1	827
	B	3	0	1
	C	914	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	6
	B	33	0	0
	C	7	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.00	0.00	0.0	A
C-AB	0.01	3.64	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	541	0.000	0	0.0	0.000	A
B-A	0	232	0.000	0	0.0	0.000	A
C-AB	2	995	0.002	2	0.0	3.624	A
C-A	686			686			
A-B	0.75			0.75			
A-C	623			623			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	512	0.000	0	0.0	0.000	A
B-A	0	198	0.000	0	0.0	0.000	A
C-AB	4	1074	0.004	4	0.0	3.357	A
C-A	819			819			
A-B	0.90			0.90			
A-C	743			743			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	472	0.000	0	0.0	0.000	A
B-A	0	150	0.000	0	0.0	0.000	A
C-AB	7	1189	0.006	7	0.0	3.039	A
C-A	1000			1000			
A-B	1			1			
A-C	911			911			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	472	0.000	0	0.0	0.000	A
B-A	0	150	0.000	0	0.0	0.000	A
C-AB	7	1189	0.006	7	0.0	3.044	A
C-A	1000			1000			
A-B	1			1			
A-C	911			911			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	512	0.000	0	0.0	0.000	A
B-A	0	198	0.000	0	0.0	0.000	A
C-AB	4	1074	0.004	4	0.0	3.377	A
C-A	819			819			
A-B	0.90			0.90			
A-C	743			743			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	541	0.000	0	0.0	0.000	A
B-A	0	232	0.000	0	0.0	0.000	A
C-AB	2	995	0.002	2	0.0	3.637	A
C-A	686			686			
A-B	0.75			0.75			
A-C	623			623			

Traffic flows - 2036 WD , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A151 - Frontier Agriculture	T-Junction	Two-way		0.00	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D14	2036 WD	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	813	100.000
B		✓	2	100.000
C		✓	750	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	813
	B	0	0	2
	C	750	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	4
	B	0	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	546	0.000	0	0.0	0.000	A
B-A	0	336	0.000	0	0.0	0.000	A
C-AB	0	517	0.000	0	0.0	0.000	A
C-A	565			565			
A-B	0			0			
A-C	612			612			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	518	0.000	0	0.0	0.000	A
B-A	0	295	0.000	0	0.0	0.000	A
C-AB	0	491	0.000	0	0.0	0.000	A
C-A	674			674			
A-B	0			0			
A-C	731			731			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	480	0.000	0	0.0	0.000	A
B-A	0	238	0.000	0	0.0	0.000	A
C-AB	0	455	0.000	0	0.0	0.000	A
C-A	828			828			
A-B	0			0			
A-C	895			895			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	480	0.000	0	0.0	0.000	A
B-A	0	238	0.000	0	0.0	0.000	A
C-AB	0	455	0.000	0	0.0	0.000	A
C-A	828			828			
A-B	0			0			
A-C	895			895			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	518	0.000	0	0.0	0.000	A
B-A	0	295	0.000	0	0.0	0.000	A
C-AB	0	491	0.000	0	0.0	0.000	A
C-A	674			674			
A-B	0			0			
A-C	731			731			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	546	0.000	0	0.0	0.000	A
B-A	0	338	0.000	0	0.0	0.000	A
C-AB	0	517	0.000	0	0.0	0.000	A
C-A	565			565			
A-B	0			0			
A-C	612			612			

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.0.3896
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+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

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Filename: A17 - A151 v2.j9
Path: C:\Users\ADC\Dropbox (ADC Infrastructure)\!!! ADC Projects\ADC1485 Holbeach FEZ\Calculations\Junction models
Report generation date: 23/02/2023 10:07:54

Summary of junction performance

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Traffic flows - 2023 Observed						
Arm 1	0.4	3.00	0.29	0.3	2.72	0.23
Arm 2	0.8	4.14	0.46	0.5	3.25	0.35
Arm 3	1.0	3.37	0.49	0.9	3.16	0.48
Traffic flows - 2028 Base						
Arm 1	0.4	3.14	0.31	0.3	2.83	0.24
Arm 2	1.0	4.43	0.49	0.6	3.40	0.38
Arm 3	1.1	3.58	0.52	1.1	3.36	0.51
Traffic flows - 2036 Base						
Arm 1	0.5	3.35	0.34	0.4	2.98	0.27
Arm 2	1.1	4.88	0.53	0.7	3.61	0.41
Arm 3	1.3	3.90	0.56	1.2	3.66	0.55
Traffic flows - 2028 Background						
Arm 1	0.9	3.99	0.47	0.5	3.16	0.34
Arm 2	1.2	5.40	0.55	0.7	3.82	0.42
Arm 3	1.3	3.90	0.56	1.6	4.26	0.62
Traffic flows - 2036 Background						
Arm 1	1.0	4.35	0.50	0.6	3.37	0.38
Arm 2	1.4	6.09	0.59	0.8	4.08	0.46
Arm 3	1.5	4.29	0.60	1.9	4.75	0.65
Traffic flows - 2028 WD						
Arm 1	1.0	4.28	0.51	1.0	4.15	0.50
Arm 2	1.8	6.54	0.62	0.9	4.38	0.46
Arm 3	2.1	5.39	0.68	1.7	4.46	0.63
Traffic flows - 2036 WD						
Arm 1	1.2	4.71	0.54	1.1	4.51	0.53
Arm 2	2.0	7.61	0.67	1.0	4.73	0.50
Arm 3	2.5	6.22	0.72	2.0	5.01	0.67

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	A17 - A151
Location	Holbeach
Site number	
Date	08/02/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADC-AUTOCAD\ADC
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Observed	AM	ONE HOUR	07:45	09:15	15
D2	2023 Observed	PM	ONE HOUR	16:45	18:15	15
D3	2028 Base	AM	ONE HOUR	07:45	09:15	15
D4	2028 Base	PM	ONE HOUR	16:45	18:15	15
D5	2036 Base	AM	ONE HOUR	07:45	09:15	15
D6	2036 Base	PM	ONE HOUR	16:45	18:15	15
D7	2028 Background	AM	ONE HOUR	07:45	09:15	15
D8	2028 Background	PM	ONE HOUR	16:45	18:15	15
D9	2036 Background	AM	ONE HOUR	07:45	09:15	15
D10	2036 Background	PM	ONE HOUR	16:45	18:15	15
D11	2028 WD	AM	ONE HOUR	07:45	09:15	15
D12	2028 WD	PM	ONE HOUR	16:45	18:15	15
D13	2036 WD	AM	ONE HOUR	07:45	09:15	15
D14	2036 WD	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Traffic flows	100.000

Traffic flows - 2023 Observed, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A17 - A151	Standard Roundabout		1, 2, 3	3.55	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A151	
2	A17 (W)	
3	A17 (E)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	4.14	8.20	64.0	16.7	60.0	23.0	
2	3.87	7.64	75.0	18.2	60.0	33.0	
3	4.72	8.95	108.0	25.3	60.0	50.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.687	2310
2	0.626	2122
3	0.636	2418

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Observed	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	440	100.000
2		✓	667	100.000
3		✓	934	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	73	367
	2	36	0	631
	3	372	561	1

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	10	8
	2	14	0	15
	3	10	17	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.29	3.00	0.4	A
2	0.46	4.14	0.8	A
3	0.49	3.37	1.0	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	331	422	1826	0.181	330	0.2	2.406	A
2	502	276	1681	0.299	500	0.4	3.046	A
3	703	27	2104	0.334	701	0.5	2.562	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	396	505	1766	0.224	395	0.3	2.626	A
2	600	331	1649	0.364	599	0.6	3.428	A
3	840	32	2101	0.400	839	0.7	2.851	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	484	618	1685	0.287	484	0.4	2.997	A
2	734	405	1805	0.458	733	0.8	4.125	A
3	1028	40	2095	0.491	1027	1.0	3.365	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	484	619	1685	0.288	484	0.4	2.998	A
2	734	405	1805	0.458	734	0.8	4.136	A
3	1028	40	2095	0.491	1028	1.0	3.371	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	396	506	1755	0.224	396	0.3	2.629	A
2	600	331	1648	0.364	601	0.6	3.439	A
3	840	32	2101	0.400	841	0.7	2.861	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	331	424	1824	0.182	332	0.2	2.411	A
2	502	277	1680	0.299	503	0.4	3.058	A
3	703	27	2104	0.334	704	0.5	2.571	A

Traffic flows - 2023 Observed , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A17 - A151	Standard Roundabout		1, 2, 3	3.11	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2023 Observed	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	351	100.000
2		✓	548	100.000
3		✓	971	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	61	290
	2	46	0	502
	3	363	606	2

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	7
	2	7	0	12
	3	4	10	50

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.23	2.72	0.3	A
2	0.35	3.25	0.5	A
3	0.48	3.15	0.9	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	264	457	1858	0.142	264	0.2	2.256	A
2	413	219	1771	0.233	411	0.3	2.645	A
3	731	35	2217	0.330	729	0.5	2.415	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	316	548	1798	0.176	315	0.2	2.431	A
2	493	262	1745	0.282	492	0.4	2.873	A
3	873	41	2213	0.394	872	0.6	2.683	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	386	669	1711	0.226	385	0.3	2.717	A
2	603	321	1719	0.353	603	0.5	3.251	A
3	1069	51	2207	0.484	1068	0.9	3.158	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	386	669	1711	0.226	386	0.3	2.718	A
2	603	321	1709	0.353	603	0.5	3.254	A
3	1069	51	2207	0.484	1069	0.9	3.163	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	316	547	1795	0.176	316	0.2	2.435	A
2	493	263	1745	0.282	493	0.4	2.877	A
3	873	41	2213	0.394	874	0.7	2.692	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	284	458	1857	0.142	284	0.2	2.260	A
2	413	220	1779	0.233	413	0.3	2.651	A
3	731	35	2217	0.330	732	0.5	2.423	A

Traffic flows - 2028 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A17 - A151	Standard Roundabout		1, 2, 3	3.77	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2028 Base	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	466	100.000
2		✓	707	100.000
3		✓	990	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	77	389
	2	38	0	669
	3	394	595	1

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	9	9
	2	13	0	15
	3	10	17	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.31	3.14	0.4	A
2	0.49	4.43	1.0	A
3	0.52	3.58	1.1	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	351	447	1807	0.194	350	0.2	2.469	A
2	532	293	1671	0.318	530	0.5	3.149	A
3	743	29	2103	0.354	743	0.5	2.641	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	419	535	1744	0.240	419	0.3	2.715	A
2	636	350	1637	0.388	635	0.8	3.589	A
3	890	34	2100	0.424	889	0.7	2.972	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	513	655	1658	0.309	513	0.4	3.139	A
2	778	429	1591	0.489	777	0.9	4.416	A
3	1090	42	2095	0.520	1089	1.1	3.573	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	513	656	1658	0.309	513	0.4	3.143	A
2	778	429	1591	0.489	778	1.0	4.431	A
3	1090	42	2095	0.520	1090	1.1	3.582	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	419	537	1743	0.240	419	0.3	2.719	A
2	636	351	1637	0.388	637	0.8	3.608	A
3	890	34	2100	0.424	891	0.7	2.981	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	351	449	1806	0.194	351	0.2	2.476	A
2	532	294	1671	0.319	533	0.5	3.167	A
3	745	29	2103	0.354	746	0.6	2.653	A

Traffic flows - 2028 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A17 - A151	Standard Roundabout		1, 2, 3	3.28	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2028 Base	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	373	100.000
2		✓	582	100.000
3		✓	1030	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	65	308
	2	49	0	533
	3	385	643	2

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	7
	2	6	0	12
	3	4	10	50

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.24	2.83	0.3	A
2	0.38	3.40	0.6	A
3	0.51	3.36	1.1	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	281	484	1841	0.153	280	0.2	2.305	A
2	438	233	1783	0.248	437	0.3	2.711	A
3	775	37	2215	0.350	773	0.5	2.494	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	335	579	1775	0.189	335	0.2	2.500	A
2	523	279	1736	0.301	523	0.4	2.967	A
3	926	44	2210	0.419	925	0.7	2.800	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	411	709	1685	0.244	410	0.3	2.825	A
2	641	341	1698	0.377	640	0.6	3.400	A
3	1134	54	2204	0.515	1133	1.1	3.356	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	411	710	1684	0.244	411	0.3	2.826	A
2	641	341	1698	0.377	641	0.6	3.403	A
3	1134	54	2204	0.515	1134	1.1	3.364	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	335	581	1774	0.189	336	0.2	2.503	A
2	523	279	1736	0.301	524	0.4	2.974	A
3	926	44	2210	0.419	927	0.7	2.808	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	281	486	1839	0.153	281	0.2	2.310	A
2	438	234	1783	0.249	439	0.3	2.718	A
3	775	37	2215	0.350	776	0.5	2.505	A

Traffic flows - 2036 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A17 - A151	Standard Roundabout		1, 2, 3	4.11	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2036 Base	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	500	100.000
2		✓	758	100.000
3		✓	1062	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	83	417
	2	41	0	717
	3	423	638	1

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	10	8
	2	15	0	15
	3	10	17	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.34	3.35	0.5	A
2	0.53	4.88	1.1	A
3	0.56	3.90	1.3	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	376	480	1784	0.211	375	0.3	2.554	A
2	571	314	1658	0.344	569	0.5	3.299	A
3	800	31	2102	0.380	797	0.6	2.755	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	449	574	1717	0.262	449	0.4	2.840	A
2	681	375	1622	0.420	681	0.7	3.821	A
3	955	37	2098	0.455	954	0.8	3.146	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	551	703	1625	0.339	550	0.5	3.347	A
2	835	460	1572	0.531	833	1.1	4.860	A
3	1169	45	2092	0.559	1168	1.3	3.886	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	551	704	1624	0.339	551	0.5	3.352	A
2	835	460	1572	0.531	835	1.1	4.883	A
3	1169	45	2092	0.559	1169	1.3	3.900	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	449	575	1716	0.262	450	0.4	2.845	A
2	681	376	1621	0.420	683	0.7	3.843	A
3	955	37	2098	0.455	956	0.8	3.160	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	376	482	1783	0.211	377	0.3	2.562	A
2	571	315	1657	0.344	571	0.5	3.319	A
3	800	31	2102	0.380	800	0.6	2.770	A

Traffic flows - 2036 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A17 - A151	Standard Roundabout		1, 2, 3	3.52	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2036 Base	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	400	100.000
2		✓	624	100.000
3		✓	1107	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	69	331
	2	52	0	572
	3	414	691	2

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	7
	2	6	0	12
	3	4	10	50

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.27	2.98	0.4	A
2	0.41	3.81	0.7	A
3	0.55	3.86	1.2	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	301	520	1815	0.166	300	0.2	2.375	A
2	470	250	1755	0.268	468	0.4	2.798	A
3	833	39	2214	0.376	831	0.8	2.599	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	360	622	1744	0.206	359	0.3	2.600	A
2	561	299	1725	0.325	560	0.5	3.089	A
3	995	47	2209	0.451	994	0.8	2.963	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	440	762	1647	0.267	440	0.4	2.982	A
2	687	366	1685	0.408	686	0.7	3.601	A
3	1219	57	2202	0.554	1217	1.2	3.650	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	440	763	1645	0.267	440	0.4	2.984	A
2	687	367	1685	0.408	687	0.7	3.608	A
3	1219	57	2202	0.554	1219	1.2	3.661	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	360	624	1743	0.206	360	0.3	2.603	A
2	561	300	1725	0.325	562	0.5	3.089	A
3	995	47	2209	0.451	997	0.8	2.976	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	301	522	1813	0.166	301	0.2	2.382	A
2	470	251	1754	0.268	470	0.4	2.804	A
3	833	39	2214	0.377	834	0.6	2.611	A

Traffic flows - 2028 Background, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A17 - A151	Standard Roundabout		1, 2, 3	4.37	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2028 Background	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	731	100.000
2		✓	727	100.000
3		✓	1071	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	127	604
	2	58	0	669
	3	475	595	1

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	6	8
	2	9	0	15
	3	8	17	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.47	3.99	0.9	A
2	0.55	5.40	1.2	A
3	0.56	3.90	1.3	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	550	447	1860	0.296	549	0.4	2.740	A
2	547	454	1589	0.344	545	0.5	3.440	A
3	806	43	2114	0.381	804	0.6	2.742	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	657	535	1798	0.366	657	0.6	3.158	A
2	654	543	1538	0.425	653	0.7	4.064	A
3	963	52	2109	0.457	962	0.8	3.139	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	805	655	1707	0.471	804	0.9	3.978	A
2	800	665	1468	0.545	799	1.2	5.367	A
3	1179	64	2101	0.561	1177	1.3	3.889	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	805	656	1707	0.472	805	0.9	3.992	A
2	800	666	1467	0.546	800	1.2	5.389	A
3	1179	64	2101	0.561	1179	1.3	3.903	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	657	537	1795	0.366	656	0.6	3.171	A
2	654	545	1537	0.425	655	0.7	4.083	A
3	963	52	2109	0.457	965	0.8	3.150	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	550	449	1859	0.296	551	0.4	2.752	A
2	547	456	1588	0.345	548	0.5	3.463	A
3	806	44	2114	0.381	807	0.6	2.755	A

Traffic flows - 2028 Background, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A17 - A151	Standard Roundabout		1, 2, 3	3.90	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2028 Background	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	522	100.000
2		✓	630	100.000
3		✓	1228	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	94	428
	2	97	0	533
	3	583	643	2

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	2	5
	2	3	0	12
	3	3	10	50

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.34	3.18	0.5	A
2	0.42	3.82	0.7	A
3	0.62	4.25	1.6	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	393	484	1872	0.210	392	0.3	2.432	A
2	474	323	1728	0.275	473	0.4	2.867	A
3	925	73	2219	0.417	922	0.7	2.769	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	469	579	1805	0.260	469	0.4	2.695	A
2	566	386	1689	0.335	565	0.5	3.204	A
3	1104	87	2219	0.500	1103	1.0	3.249	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	575	709	1713	0.335	574	0.5	3.158	A
2	694	473	1637	0.424	693	0.7	3.808	A
3	1352	107	2197	0.615	1350	1.6	4.236	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	575	710	1712	0.336	575	0.5	3.163	A
2	694	473	1637	0.424	694	0.7	3.815	A
3	1352	107	2197	0.615	1352	1.6	4.260	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	469	581	1803	0.260	470	0.4	2.700	A
2	566	387	1688	0.335	567	0.5	3.213	A
3	1104	87	2219	0.500	1103	1.0	3.269	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	393	486	1870	0.210	393	0.3	2.437	A
2	474	324	1726	0.275	475	0.4	2.880	A
3	925	73	2219	0.417	926	0.7	2.788	A

Traffic flows - 2036 Background, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A17 - A151	Standard Roundabout		1, 2, 3	4.84	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2036 Background	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	765	100.000
2		✓	778	100.000
3		✓	1143	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	133	632
	2	61	0	717
	3	504	638	1

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	6	8
	2	10	0	15
	3	8	17	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.50	4.35	1.0	A
2	0.59	6.09	1.4	A
3	0.60	4.29	1.5	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	576	480	1835	0.314	574	0.5	2.851	A
2	586	475	1578	0.372	583	0.8	3.618	A
3	861	46	2111	0.408	858	0.7	2.866	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	688	574	1793	0.389	687	0.8	3.336	A
2	699	568	1522	0.460	698	0.8	4.365	A
3	1028	55	2105	0.488	1029	0.9	3.333	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	842	702	1671	0.504	841	1.0	4.327	A
2	857	696	1449	0.591	854	1.4	6.031	A
3	1258	67	2098	0.600	1256	1.5	4.267	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	842	704	1670	0.504	842	1.0	4.347	A
2	857	697	1448	0.592	857	1.4	6.085	A
3	1258	67	2098	0.600	1258	1.5	4.290	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	688	576	1764	0.390	689	0.8	3.351	A
2	699	570	1521	0.460	702	0.9	4.406	A
3	1028	55	2105	0.488	1030	1.0	3.355	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	576	482	1834	0.314	577	0.5	2.865	A
2	586	477	1575	0.372	587	0.6	3.650	A
3	861	48	2111	0.408	862	0.7	2.882	A

Traffic flows - 2036 Background, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A17 - A151	Standard Roundabout		1, 2, 3	4.28	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D10	2036 Background	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	549	100.000
2		✓	672	100.000
3		✓	1305	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	98	451
	2	109	0	572
	3	612	691	2

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	2	5
	2	3	0	12
	3	3	10	50

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.36	3.37	0.6	A
2	0.46	4.08	0.8	A
3	0.65	4.75	1.9	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	413	520	1844	0.224	412	0.3	2.512	A
2	506	340	1717	0.295	504	0.4	2.965	A
3	982	75	2217	0.443	979	0.8	2.902	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	494	622	1772	0.279	493	0.4	2.815	A
2	604	407	1677	0.360	604	0.6	3.352	A
3	1173	90	2207	0.532	1172	1.1	3.472	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	604	761	1674	0.361	604	0.6	3.363	A
2	740	498	1622	0.456	739	0.8	4.069	A
3	1437	110	2194	0.655	1434	1.9	4.715	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	604	763	1673	0.361	604	0.6	3.369	A
2	740	498	1622	0.456	740	0.8	4.080	A
3	1437	110	2194	0.655	1437	1.9	4.753	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	494	625	1770	0.279	494	0.4	2.824	A
2	604	408	1676	0.360	605	0.6	3.366	A
3	1173	90	2207	0.532	1173	1.1	3.501	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	413	522	1842	0.224	414	0.3	2.520	A
2	506	341	1716	0.295	507	0.4	2.977	A
3	982	75	2216	0.443	984	0.8	2.925	A

Traffic flows - 2028 WD, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A17 - A151	Standard Roundabout		1, 2, 3	5.44	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)
D11	2028 WD	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	793	100.000
2		✓	829	100.000
3		✓	1274	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	148	645
	2	160	0	669
	3	678	595	1

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	5	5
	2	4	0	15
	3	6	17	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.51	4.28	1.0	A
2	0.62	6.54	1.8	A
3	0.68	5.39	2.1	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	597	447	1859	0.319	595	0.5	2.823	A
2	824	485	1594	0.391	822	0.8	3.692	A
3	959	120	2105	0.456	958	0.8	3.123	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	713	535	1804	0.395	712	0.8	3.297	A
2	745	580	1539	0.484	744	0.9	4.523	A
3	1145	144	2099	0.548	1144	1.2	3.796	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	873	655	1715	0.509	872	1.0	4.259	A
2	913	710	1483	0.624	910	1.8	6.474	A
3	1403	176	2079	0.678	1399	2.1	5.338	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	873	656	1714	0.509	873	1.0	4.280	A
2	913	711	1483	0.624	913	1.8	6.544	A
3	1403	176	2079	0.678	1403	2.1	5.393	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	713	537	1802	0.396	714	0.7	3.316	A
2	745	582	1538	0.485	748	0.9	4.574	A
3	1145	144	2099	0.548	1149	1.2	3.838	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	597	449	1867	0.320	598	0.5	2.837	A
2	824	487	1593	0.392	625	0.8	3.726	A
3	959	121	2105	0.456	961	0.8	3.153	A

Traffic flows - 2028 WD, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A17 - A151	Standard Roundabout		1, 2, 3	4.35	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D12	2028 WD	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	784	100.000
2		✓	644	100.000
3		✓	1257	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	181	603
	2	111	0	533
	3	612	643	2

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	2	4
	2	3	0	12
	3	3	10	50

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.50	4.15	1.0	A
2	0.46	4.38	0.9	A
3	0.63	4.46	1.7	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	590	484	1892	0.312	588	0.5	2.759	A
2	485	454	1655	0.293	483	0.4	3.067	A
3	946	83	2215	0.427	943	0.7	2.825	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	705	579	1824	0.388	704	0.8	3.213	A
2	579	543	1603	0.361	578	0.8	3.512	A
3	1130	100	2205	0.513	1129	1.0	3.343	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	883	709	1731	0.499	882	1.0	4.133	A
2	709	665	1531	0.463	708	0.9	4.366	A
3	1384	122	2190	0.632	1381	1.7	4.435	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	863	710	1731	0.499	863	1.0	4.150	A
2	709	666	1531	0.463	709	0.9	4.382	A
3	1384	122	2190	0.632	1384	1.7	4.464	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	705	581	1822	0.387	706	0.8	3.228	A
2	579	545	1602	0.361	580	0.8	3.526	A
3	1130	100	2205	0.513	1133	1.1	3.365	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	590	486	1890	0.312	591	0.5	2.772	A
2	485	456	1654	0.293	485	0.4	3.083	A
3	946	84	2215	0.427	948	0.7	2.844	A

Traffic flows - 2036 WD, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A17 - A151	Standard Roundabout		1, 2, 3	6.24	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D13	2036 WD	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	827	100.000
2		✓	880	100.000
3		✓	1346	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	154	673
	2	183	0	717
	3	707	638	1

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	6	5
	2	5	0	15
	3	6	17	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.54	4.71	1.2	A
2	0.67	7.81	2.0	A
3	0.72	6.22	2.5	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	623	479	1840	0.338	621	0.5	2.947	A
2	663	506	1579	0.420	660	0.7	3.908	A
3	1013	122	2097	0.483	1010	0.9	3.301	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	743	574	1779	0.420	743	0.7	3.499	A
2	791	605	1521	0.520	790	1.1	4.913	A
3	1210	146	2082	0.581	1208	1.4	4.114	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	911	701	1673	0.543	909	1.2	4.681	A
2	969	741	1442	0.672	965	2.0	7.490	A
3	1482	179	2061	0.719	1477	2.5	5.121	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	911	703	1674	0.544	911	1.2	4.712	A
2	969	742	1441	0.672	969	2.0	7.614	A
3	1482	179	2061	0.719	1482	2.5	5.215	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	743	577	1768	0.421	745	0.7	3.527	A
2	791	607	1520	0.521	795	1.1	4.992	A
3	1210	147	2081	0.581	1215	1.4	4.177	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	623	482	1838	0.339	623	0.5	2.965	A
2	683	508	1577	0.420	684	0.7	3.948	A
3	1013	123	2096	0.483	1015	0.9	3.335	A

Traffic flows - 2036 WD, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A17 - A151	Standard Roundabout		1, 2, 3	4.80	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)
D14	2036 WD	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		✓	811	100.000
2		✓	686	100.000
3		✓	1334	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1	2	3
From	1	0	185	626
	2	114	0	572
	3	641	691	2

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	2	4
	2	3	0	12
	3	3	10	50

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
1	0.53	4.51	1.1	A
2	0.50	4.73	1.0	A
3	0.67	5.01	2.0	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	611	520	1854	0.328	609	0.5	2.865	A
2	516	471	1645	0.314	515	0.5	3.178	A
3	1004	88	2213	0.454	1001	0.8	2.963	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	729	622	1791	0.407	728	0.7	3.387	A
2	617	564	1591	0.388	618	0.8	3.692	A
3	1199	102	2202	0.545	1198	1.2	3.580	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	893	761	1692	0.528	891	1.1	4.487	A
2	755	690	1516	0.498	754	1.0	4.714	A
3	1469	125	2187	0.671	1465	2.0	4.963	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	893	763	1691	0.528	893	1.1	4.512	A
2	755	691	1515	0.498	755	1.0	4.735	A
3	1469	126	2187	0.671	1469	2.0	5.009	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	729	625	1789	0.408	731	0.7	3.408	A
2	617	566	1590	0.388	618	0.8	3.713	A
3	1199	103	2202	0.545	1203	1.2	3.612	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	611	522	1862	0.328	611	0.5	2.882	A
2	516	473	1644	0.314	517	0.5	3.198	A
3	1004	88	2213	0.454	1005	0.8	2.985	A