

Technical Note

Response to KCC Highways and Transportation and National Highways

Former Tollgate Hotel, Gravesend

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1. Introduction

- 1.1.1 This Technical Note (TN) has been produced on behalf of BP Pulse to address the comments raised by Kent County Council Highways and Transportation (KCC H&T) and National Highways (NH) with respect to the proposals at the former Tollgate Hotel in Gravesend. The site is currently the submit of a live planning application for the development of an Electric Vehicle (EV) charging hub and petrol filling station (Application Reference: GB/20240856).
- 1.1.2 The comments raised by KCC H&T and NH are included at **Appendix A** for completeness.
- 1.1.3 This TN seeks to address comments raised by KCC H&T, which are summarised into the following issues:
- Sustainable Travel;
 - Vehicle Access and Visibility;
 - Parking;
 - Crash Data;
 - Trip Generation and Distribution;
 - Traffic Surveys;
 - Highway Impact; and
 - Modelling.
- 1.1.4 The latter point regarding modelling was also raised by NH and as such, in the interests of completeness, the comments of both parties have been addressed.

- 1.1.5 The response to each of these issues is given in turn below.

2. Sustainable Travel

- 2.1.1 Regarding sustainable travel, KCC H&T's comments are as follows:

"There are Sunday bus services and very limited services during the week (308 has 7 services per day and the 416 has 5 journeys per day). However, it would only be staff travelling by sustainable modes and there are walking and cycling links around the site, including to the residential area to the north, so this is a realistic option. However, the pedestrian link between the southbound bus stop on Wrotham Road north of the underpass is poor and proposals to improve that link for staff should be submitted."

- 2.1.2 Following discussions with KCC H&T, it has been confirmed that the area referenced above comprises a short section of land between the current southbound bus stop on the A227 north of the site and the existing footway under the Tollgate bridge. The area is shown in **Figure 2.1** below.

Figure 2.1 Bus Stop Connection



Source: Google Maps

- 2.1.3 Discussions have been undertaken with the applicant and in principle the applicant is willing to implement this small section of footway. However, at the time of writing, confirmation of the available highway land in this location is awaited, without which the implementation of any footway at this location cannot be achieved by the applicant. Should sufficient highway land be available to undertake these works, the applicant is willing to do so as part of a Section 278 agreement.

3. Vehicle Access and Visibility

- 3.1.1 Regarding vehicle access and visibility, KCC H&T's comments are as follows:

"Access to the site is proposed to remain as existing, with some widening within the site itself. The principal of this is acceptable. However, given the intensification of use under the proposals, a plan showing appropriate visibility splays at the site access and pedestrian

crossing points should be provided to demonstrate these are achievable. Any vegetation within the splays must be maintained at a maximum height of 0.6m.

Vehicle tracking drawings 22052-MA-XX-XX-DR-C-7000 P02 (large car), 22052-MA-XX-XX-DR-C-7005 P02 (oil tanker), 22052-MA-XX-XX-DR-C-7010 P02 (large refuse), 22052-MA-XX-XX-DR-C-7015 P02 (10m Rigid) and EV005-PS-LAY-000-GB00015044-0009-001 B01 / 14170-28 Rev D (oil tanker and HGV) show all noted vehicles are able to access and egress the site in a forward gear. The drawings do not show the vehicle existing the site on to the A2 eastbound slip and should be updated to demonstrate this. However, it is unlikely that this manoeuvre would be an issue.

In my previous pre-app comments, I commented that under the previous application for the PFS – GR/20161215 - included a new dedicated left slip lane on the roundabout at the access to the site. This is not mentioned in the current proposal details. I would expect the traffic generation for the PFS / EV Charging Station / retail to be at least equal, if not greater, than this previous application. It also provided an improved and safer route for pedestrians circulating the roundabout. Has this requirement been considered? I would appreciate a response from the developer on this matter.”

- 3.1.2 Roundabout and pedestrian crossing visibility splay drawings are included at **Appendix B**. The roundabout visibility has been assessed in accordance with the Design Manual for Roads and Bridges (DMRB) CD 116 for a roundabout with an Inscribed Circle Diameter (ICD) of between 60m and 100m. Forward visibility for the site access arm of the roundabout has been shown for a speed of 20mph in light of the low-speed nature of the internal site layout.
- 3.1.3 Pedestrian visibility for pedestrians looking into the site has been assessed assuming a speed limit of 20mph. For pedestrian splays looking towards the roundabout, the drawing included at **Appendix B** highlights the maximum achievable splays.
- 3.1.4 For the northern crossing point, splays have been shown looking towards the A227 (N) arm and across the roundabout circulation. With respect to the former splay, a length of 37m is achievable. The splay has been taken across the blue line land which lies within the control of the applicant; the bank has been avoided to ensure suitability and vegetation within this splay will be cleared, offering a betterment to the existing situation.
- 3.1.5 The plan indicates pedestrians will have clear visibility of the roundabout circulatory carriageway itself, ensuring that vehicles coming from all directions can be seen.
- 3.1.6 With respect to the northern crossing, located on the refuge island, a splay of 48m is achieved looking towards the A227 (N), with pedestrians being provided with visibility across the roundabout circulation.
- 3.1.7 Whilst it is appreciated that the A227 (N) is subject to a 40mph limit, the ATC discussed later in this Note recorded 85th percentile speeds of 33.6mph for southbound vehicles, clearly indicating lower speeds, with further reduction likely on navigating the roundabout itself. As such, it is considered that the splays indicated from the pedestrian crossing are acceptable, with betterment offered compared with the existing conditions.

- 3.1.8 It is not considered that there will be any material increase in pedestrian movements travelling south of the site.
- 3.1.9 In addition to the above, the existing pedestrian / cycle connection from Wrotham Road will be maintained within the site confines, offering a direct connection from the outskirts of Gravesend into the site.
- 3.1.10 Swept path analysis for the left turn movement from the site onto the A2 eastbound on slip is provided for an oil tanker and 10.m rigid vehicle in **Appendix C**. These drawings demonstrate that this movement can be completed by the necessary vehicles.
- 3.1.11 With respect to the improvement scheme previously proposed for the A227 (north) arm of the site access roundabout, in support of Application References: 20131018 and 20160215, following modelling of this roundabout (as will be touched on further in this Note), it is not considered that this improvement is required to support the proposals.

4. Parking

- 4.1.1 Regarding parking matters, KCC H&T's comments are as follows:

"A total of 63 vehicle parking spaces are proposed on site, consisting of 22 standard EV charging spaces, two disabled EV charging spaces, 33 standard spaces, four standard disabled spaces, and four staff spaces. A minimum of one space should be provided for adapted bikes, which requires 1.5m between stands to allow for dismounting. Whilst there may be a shortage of staff parking spaces for the number of staff predicted, it is acceptable that space is available on site for any overflow and would not impact on the public highway.

This provision is considered to be acceptable."

- 4.1.2 This comment is noted and accepted.

5. Crash Data

- 5.1.1 Regarding crash data, KCC H&T's comments are as follows:

"The crash data is for 7 years but doesn't provide much analysis. It just says there were 24 incidents, 29 slight, 5 serious, and their locations. It doesn't show what they took place etc. for the middle roundabout (site access) the crashes are all on EB slip road or Wrotham Road. I consider that the crash record will not be compromised by this proposal.

- 5.1.2 It is noted that a detailed analysis of the incidents was provided in Appendix B of the Transport Assessment submitted in support of the proposals. This concluded that the development proposals would not impact the existing safety record within the site vicinity, as confirmed by KCC H&T.

6. Trip Generation and Distribution

6.1.1 Regarding trip generation and distribution, KCC H&T's comments are as follows:

"The trip generation and distribution assessment is considered to be acceptable."

6.1.2 This comment is noted and accepted.

7. Traffic Surveys

7.1.1 Regarding Traffic Surveys, KCC H&T's comments are as follows:

"As you are no doubt aware, Galley Hill Road in Northfleet has been closed since 10th April 2023. The traffic surveys used to inform the modelling was undertaken on 2nd March 2023- prior to the closure. This may make the traffic numbers an underestimate since the distribution on the network is likely to have changed as a result of the closure. I would suggest a brief ATC survey is undertaken at Tollgate to assess whether the survey data previously obtained is still similar."

7.1.2 Following discussions with KCC H&T, it was agreed that an Automatic Traffic Count (ATC) survey would be undertaken on the A227 (north) arm of the site access roundabout to verify the 2023 surveyed flows. The ATC was undertaken between Tuesday 3rd December 2024 and Monday 9th December 2024. The full data is included in **Appendix D**.

7.1.3 **Table 7.1** below shows a comparison of the 2024 ATC data and the 2023 Manual Classified Count (MCC) data for the A227 (north) arm of the site access roundabout. The average of the weekday AM (08:00-09:00) and PM (17:00-18:00) peaks have been used to provide the 2024 flows. The corresponding differences in flows are also shown – a negative figure indicates that the 2024 data is greater than the 2023, with a positive figure indicating the opposite.

Table 7.1 Wrotham Road 2023 to 2024 Flow Comparison

Direction	2023		2024		Difference	
	AM	PM	AM	PM	AM	PM
Northbound	1,251	1,615	1,281	1,355	-30	+260
Southbound	1,390	1,321	1,453	1,257	-63	+64

7.1.4 Based on the data shown in **Table 7.1**, there were slightly fewer trips in the 2023 AM peak, however, the difference is quite limited and is considered to fall within the daily variation of traffic flows.

7.1.5 For the PM peak, the 2023 data shows greater flows most notably in the northbound direction. Given this, it is considered that the 2023 flows offer a representative baseline assessment for the capacity modelling, with this data having been retained for capacity analysis.

- 7.1.6 The results of the ATC survey have been shared with KCC H&T by email. KCC H&T subsequently confirmed acceptance of the above assessment by email, dated 21/01/2025.

8. Highway Impact

- 8.1.1 Regarding highway impact, KCC H&T's comments are as follows:

"This is covered in the Transport Assessment Addendum dated October 2024.

Junctions assessed:

- *A227 Wrotham Road / Coldharbour Road / Wrotham Road roundabout;*
- *A227 Wrotham Road / A2 eastbound slip road roundabout; and*
- *A227 Wrotham Road / A2 westbound slip road roundabout.*

They have assessed the following years:

- *2023 Baseline;*
- *2025 Opening Year (in accordance with 01/2022 Circular and pre-application discussions with NH); and*
- *2028 Future Year (+5 year horizon)*

They have updated TEMPro from v7.2c to v8.1. The latter has higher growth rates so it is acceptable.

The list of committed developments is very extensive although I have doubts whether many of these developments, given their distance from the proposed site, will have more than a minimal impact. The assessment is acceptable.

- 8.1.2 This comment is noted and accepted.

9. Modelling

- 9.1.1 Regarding modelling, KCC H&T's comments are as follows:

"I am aware that there are some on going queries in the modelling with NH in their consultation response dated 12th November 2024, so will await the outcome of those queries before commenting further on the resulting assessment which indicates that mitigating measures on the roundabout to the south of the A2 (A2 westbound off-slip / Wrotham Road).

As you are aware, I must raise concerns regarding the proposed traffic signal works on the southern roundabout which were required as a Condition (34) of the Coldharbour Road residential development (GR/20141214) and which have still not been undertaken even though the trigger for implementation has been passed. Any implementation of this scheme (requested by NH) would affect considerably affect the modelling results and I

would suggest that both scenarios are modelled - with the traffic signals and with the removal of the left-turn only markings.”

9.1.2 As referenced within KCC H&T’s comments, National Highways (NH) have offered comments regarding the modelling presented as part of the Transport Assessment Addendum (TAA). Within their response, NH made reference to the validation and calibration of the modelling assessments, noting that further work was required in this regard.

9.1.3 Within their comments NH noted the following with respect to queue analysis:

“We require is the average queue within each of the modelled 15-minute time segments to be identified for each arm. Note, this is the total queue on the arm, the sum of each of the lanes. Then, the highest ‘15-minute average’ queue on each arm in each time period is required to be utilised for calibration/validation purposes.”

9.1.4 Following NH’s comments, a detailed review of the videos provided in support of the MCC’s has been undertaken, assessing the queue lengths at minute intervals between 07:45 and 09:15 and 16:45 and 18:15. The results of this assessment are included at **Appendix E**, with the highest 15-minute average queue having been highlighted in blue and summarised for each arm of the roundabouts below in **Table 9.1**.

9.1.5 Please note that the figures detailed below add together the average queues observed within each lane on each of the roundabout arms, as per the comments provided by NH.

Table 9.1 Highest 15-Minute Average Queue Lengths

A227 (N) / A2 Eastbound Off Slip / Site Access Roundabout		
Arm	Peak Period	Maximum 15-Minute Average Queue
A227 Wrotham Road (South)	AM	0.0
	PM	0.0
A2 Eastbound Off Slip	AM	1.3
	PM	6.0
A227 Wrotham Road (North)	AM	1.9
	PM	3.7
A227 (S) / A2 Westbound Off Slip Roundabout		
A227 Wrotham Road (North)	AM	0.0
	PM	0.0
A2 Westbound Off Slip	AM	13.1
	PM	8.7
A227 Wrotham Road (South)	AM	5.5
	PM	3.2

9.1.6 With respect to the queue length review, the following observations should be noted:

- Free flow conditions were observed on the A227 arms under the A2 bridge. At no point during the video review was it seen that vehicles were required to give way to those circulating on the roundabouts;
- With respect to the A2 westbound off-slip, as a result of the camera positioning, it was not possible to see the full extent of queueing. However, as referenced in the TAA, there are periods of material queueing taking place on this arm of the roundabout, most noticeably in the AM peak. Where the queue length materially extended, a figure of 20 vehicles has been used;
- Occasional queues were observed on the A227 (south) arm for the southern roundabout. However, these queues dissipated quickly, lasting only a short period of time, with vehicles often having left the arm before the next minute interval;
- No material queueing was observed on the A227 (north) arm of the site access roundabout. Vehicles were generally found to move slowly through the roundabout with limited stopping. A small level of queueing was observed in the PM peak, but this dissipated quickly; and
- The operation of the A2 eastbound off slip was reviewed. It is noted that as part of Planning Application: GBC/20181271, an improvement scheme was provided for this arm of the roundabout, allowing both lanes to be used for left turn movements, creating equal lane usage. However, on review of the video surveys, at present, this is not occurring with all vehicles turning left using the left-hand lane. Across the course of the video review, only one left turn vehicle was observed using the right-hand lane. This behaviour has corresponding impacts for queueing on this arm.

9.1.7 In light of the queue assessment, the modelling for the roundabouts has been revised. A direct traffic profile has been applied with ARCADY, with traffic flows for each 15-minute interval for the modelling 90-minute peaks having been considered.

9.1.8 Regarding the direct assessment, the following should be noted:

- The 2023 base data was separated into the relevant 15-minute segments, with HGV percentages isolated. The TEMPRO growth rates identified as part of the TA Addendum have then been applied to generate the 2025 and 2028 assessments;
- Using the 2023 base data, the proportion of movements taking place in each 15-minute segment has been identified and applied to the committed development flows. The proportions were established for both the AM and PM peaks and applied accordingly;
- This same approach was applied to the EV, petrol filling station and hotel trips to ensure consistency; and
- The roundabout dimensions for both roundabouts remain unchanged from those presented previously.

9.1.9 The direct traffic flow diagrams can be made available on request.

9.1.10 Using the direct traffic profile, the modelling results are presented below for each junction:

A227 Wrotham Road / A2 Eastbound Slip Road / Site Access Roundabout

- 9.1.11 Utilising a direct profile, the results for the 2023 baseline are presented below in **Table 9.2**, along with the relevant queue data as detailed above for ease of comparison. The ARCADY report for this assessment is included at **Appendix F**.

Table 9.2 A227 Wrotham Road / A2 Eastbound Slips / Site Access roundabout – 2023 Results (Direct Assessment)

Scenario	Location	AM Peak			PM Peak		
		Model		Observed Average Q	Model		Observed Average Q
		RFC	Queue		RFC	Queue	
2023	A227 (N)	0.79	3.6	1.9	0.81	4.1	3.7
	Site Access	0.00	0.0	-	0.03	0.0	-
	A227 (S)	0.42	0.7	0.0	0.45	0.8	0.0
	A2 EB Off Slip	0.32	0.5	1.3	0.58	1.4	6.0

- 9.1.12 For the AM peak, it is clear that the model is overrepresenting the queueing on the A227 (N) arm of the junction, with a very minor underrepresentation on the A2 EB off slip (though this is not considered to be material). During the PM peak, the model is closely replicating the small level of queueing observed for the A227 (N) arm, however, for the A2 EB off slip there is a noticeable difference between the modelled queue and the observed queue.
- 9.1.13 In light of the above, the junction has been considered using lane simulation mode. For the A2 EB off slip, whilst it is appreciated that the lane markings allow for both lanes to be utilised for left turn movements, as detailed above, observations found that only one vehicle in both the AM and PM peak utilised the outside lane for this purpose. Therefore, to better reflect driver behaviour on this arm, the lane simulation model has been refined to assume vehicles using only the inside lane for left turn movements.
- 9.1.14 In addition to this, for the AM peak period, a direct intercept adjustment has been undertaken for the A227 (N) arm to better reflect the observed queueing. This has also been completed for the PM peak, with a further adjustment made during this period for the A2 EB off slip also.
- 9.1.15 The 2023 modelling results are shown in **Table 9.3**, comparing the observed queueing with the modelled queueing following the above methodology, with the associated ARCADY report included at **Appendix G**. Please note that for the RFC values, these have been extracted from the worst-case 15-minute period within the model, where the highest RFC values for the majority of arms have been taken.

Table 9.3 A227 Wrotham Road / A2 Eastbound Slips / Site Access roundabout – 2023 Results (Lane Simulation and Intercept Adjustment)

Scenario	Location	AM Peak			PM Peak		
		Model		Observed Average Q	Model		Observed Average Q
		RFC	Queue		RFC	Queue	
2023	A227 (N)	0.62	1.9	1.9	0.72	3.3	3.7
	Site Access	0.00	0.0	-	0.00	0.0	-
	A227 (S)	0.44	1.2	0.0	0.49	1.2	0.0
	A2 EB Off Slip	0.46	1.2	1.3	0.83	6.1	6.0

- 9.1.16 On assessment of the 2023 base period, the methodology applied to the junction is more reflective of the queue conditions observed. It is, therefore, considered fit for the purposes of assessing the proposed development impact.
- 9.1.17 The resulting capacity modelling for the proposed development is detailed in **Table 9.4** below, with the associated ARCADY report included at **Appendix G**.

Table 9.4 A227 Wrotham Road / A2 Eastbound Slips / Site Access roundabout – Lane Simulation and Intercept Adjustment

Scenario	Location	AM Peak		PM Peak	
		RFC	Queue	RFC	Queue
2025 Do Nothing	A227 (N)	0.60	2.1	0.73	3.8
	Site Access	0.00	0.0	0.00	0.0
	A227 (S)	0.42	1.5	0.50	1.2
	A2 EB Off Slip	0.46	1.3	0.87	7.7
2025 Do Minimum	A227 (N)	0.63	1.9	0.75	3.8
	Site Access	0.35	0.6	0.41	1.1
	A227 (S)	0.46	1.2	0.53	1.3
	A2 EB Off Slip	0.49	1.6	0.87	7.5
2025 DM Sensitivity	A227 (N)	0.62	2.0	0.74	4.6
	Site Access	0.34	0.5	0.37	1.2
	A227 (S)	0.46	1.3	0.53	1.3
	A2 EB Off Slip	0.47	1.3	0.87	8.2
2028 Do Nothing	A227 (N)	0.63	2.3	0.77	4.5
	Site Access	0.00	0.0	0.00	0.0
	A227 (S)	0.45	1.3	0.53	1.4
	A2 EB Off Slip	0.50	1.7	0.96	16.7
2028 Do Minimum	A227 (N)	0.65	2.1	0.79	5.6
	Site Access	0.40	0.9	0.47	1.4
	A227 (S)	0.48	1.4	0.55	1.6
	A2 EB Off Slip	0.52	1.8	0.95	15.4
2028 DM Sensitivity	A227 (N)	0.66	2.4	0.79	5.1
	Site Access	0.36	0.8	0.46	1.6
	A227 (S)	0.48	1.4	0.44	1.5
	A2 EB Off Slip	0.52	1.7	0.97	17.2

- 9.1.18 As shown above, all arms of the roundabout will operate within capacity during the AM peak. During the PM peak, the A2 EB off slip experiences queueing, however, on assessment of the proposed development impact, it is noted that the net increase in queueing as a result of the proposals equates to a maximum of 0.5 vehicles, which is not considered to be 'severe' in the context of the NPPF Paragraph 116.
- 9.1.19 It should be noted that drivers experiencing these increased queues and delays in the future are more likely to change their behaviour and make use of the offside lane to turn left, as was permitted by the recent improvement scheme. Should the lanes be used more equally the above queueing would be negated.
- 9.1.20 The model results for an equal lane usage scenario are shown in **Table 9.5** below, with the ARCADY report included at **Appendix H**.

Table 9.5 A227 Wrotham Road / A2 Eastbound Slips / Site Access roundabout – Equal Lane Usage

Scenario	Location	PM Peak	
		RFC	Queue
2025 Do Nothing	A227 (N)	0.74	3.4
	Site Access	0.00	0.1
	A227 (S)	0.50	1.4
	A2 EB Off Slip	0.65	2.4
2025 Do Minimum	A227 (N)	0.76	4.6
	Site Access	0.40	1.5
	A227 (S)	0.52	1.3
	A2 EB Off Slip	0.72	2.8
2025 DM Sensitivity	A227 (N)	0.74	4.6
	Site Access	0.36	0.8
	A227 (S)	0.52	1.3
	A2 EB Off Slip	0.69	2.7
2028 Do Nothing	A227 (N)	0.77	4.4
	Site Access	0.00	0.0
	A227 (S)	0.53	1.6
	A2 EB Off Slip	0.72	3.0
2028 Do Minimum	A227 (N)	0.79	5.6
	Site Access	0.46	1.4
	A227 (S)	0.54	1.8
	A2 EB Off Slip	0.75	3.7
2028 DM Sensitivity	A227 (N)	0.79	4.9
	Site Access	0.46	1.5
	A227 (S)	0.54	1.3
	A2 EB Off Slip	0.75	3.1

9.1.21 As shown in the above table, if the equal lane usage on the A2 EB off slip arm of the roundabout was to be utilised in accordance with the current arrangement, then the queueing on this arm would be materially reduced. Given the above, it is considered that if queueing is experienced, as indicated in **Table 9.4**, there will be a greater propensity for drivers to utilise both lanes, in turn reducing queueing at this location.

A227 Wrotham Road / A2 Westbound Slip Road roundabout

9.1.22 Utilising a direct profile, the results for the 2023 baseline are presented below in **Table 9.6**, along with the relevant queue data as detailed above for ease of comparison. The associated ARCADY report is included at **Appendix I**.

Table 9.6 A227 Wrotham Road / A2 Westbound Slip Road roundabout – 2023 Results (Direct Assessment)

Scenario	Location	AM Peak			PM Peak		
		Model		Observed Average Q	Model		Observed Average Q
		RFC	Queue		RFC	Queue	
2023	A227 (N)	0.53	1.1	0.0	0.52	1.1	0.0
	A2 WB Off Slip	0.53	1.2	13.1	0.54	1.2	8.7
	A227 (S)	0.63	1.7	5.5	0.53	1.1	3.2

- 9.1.23 On assessment of the results of the modelling, the model does not reflect the queueing experienced on the A2 WB off slip, which is materially greater than the model results show.
- 9.1.24 Considering the above, the model has been revised to better reflect the observed queueing. For this, lane simulation has been utilised. In addition, the approach road half width has been reviewed. Using the dimensions provided by Application Reference: 20181271 it is noted that the dimension for the A2 WB off slip was detailed as 6.1m.
- 9.1.25 However, on review of the usable width of the slip road it is considered that it is less than 6.1m due to the solid white line present. Consideration was given to both a 4.0m and a 5.0m width, with the former resulting in significantly greater queueing than observed. The latter figure, however, is considered to offer a more representative level of queueing based on observations and has been used for the purposes of assessment.
- 9.1.26 The 2023 modelling results are shown in **Table 9.7**, comparing the observed queueing with the modelled queueing following the above methodology with the associated ARCADY report included at **Appendix J**. Please note that for the RFC values, these have been extracted from the worst-case 15-minute period within the model, where the highest RFCs values for the majority of arms have been taken, which for this assessment is between 08:15 and 08:30 and between 17:15 and 17:30 for the 2023 base. For consistency, this segment has then been summarised for all other future scenarios for comparative purposes.

Table 9.7 A227 Wrotham Road / A2 Westbound Slip Road roundabout – 2023 Results (Lane Simulation and Half Width)

Scenario	Location	AM Peak			PM Peak		
		Model		Observed Average Q	Model		Observed Average Q
		RFC	Queue		RFC	Queue	
2023	A227 (N)	0.63	2.4	0.0	0.62	1.8	0.0
	A2 WB Off Slip	0.92	13.1	13.1	0.90	12.2	8.7
	A227 (S)	0.59	2.8	5.5	0.57	1.8	3.2

- 9.1.27 It is considered that the model amendments made better reflect the observed queueing on all arms of the roundabout. It is appreciated that during the PM peak, the modelled queue is greater than the observed queue for the A2 WB off slip. However, as detailed above, due to the camera positioning it was not always possible to establish fully the queue length. Therefore, to err on the side of caution, it is considered acceptable to leave the queue as modelled. For the A227 (S) arm of the junction, it is considered that the modelled queues are not too dissimilar from the observed flows and as such, have been retained. No queueing was observed on the A227 (N)
- 9.1.28 The resulting capacity modelling for the proposed development is detailed in **Table 9.8** below, with the associated ARCADY report included at **Appendix J**.

Table 9.8 A227 Wrotham Road / A2 Eastbound Slips / Site Access roundabout – Lane Simulation and Half Width Results

Scenario	Location	AM Peak		PM Peak	
		RFC	Queue	RFC	Queue
2025 Do Nothing	A227 (N)	0.64	2.6	0.63	2.2
	A2 WB Off Slip	0.94	19.1	0.88	18.2
	A227 (S)	0.60	3.5	0.60	2.0
2025 Do Minimum	A227 (N)	0.68	3.0	0.66	2.2
	A2 WB Off Slip	1.00	44.2	0.93	31.6
	A227 (S)	0.62	3.7	0.60	2.1
2025 DM Sensitivity	A227 (N)	0.68	3.0	0.66	2.3
	A2 WB Off Slip	0.99	42.6	0.93	29.4
	A227 (S)	0.62	3.9	0.60	1.9
2028 Do Nothing	A227 (N)	0.71	3.3	0.67	2.6
	A2 WB Off Slip	0.98	45.7	0.94	27.5
	A227 (S)	0.64	3.8	0.63	2.3
2028 Do Minimum	A227 (N)	0.74	4.1	0.70	2.4
	A2 WB Off Slip	0.98	97.2	0.98	55.6
	A227 (S)	0.64	5.0	0.64	2.4
2028 DM Sensitivity	A227 (N)	0.73	4.2	0.70	2.5
	A2 WB Off Slip	0.99	86.6	0.99	53.7
	A227 (S)	0.64	4.6	0.64	2.2

- 9.1.29 Based on the above, the development proposals do not materially impact the A227 (N) and (S) arms of the junction in either peak. However, the development results in material levels of additional queueing on the A2 WB off slip. As such, consideration has been given to mitigation for this arm of the junction.

9.2 Mitigation Measures

A227 Wrotham Road / A2 Eastbound Slip Road / Site Access Roundabout

- 9.2.1 As detailed within the supporting Transport Assessment Addendum (TAA), the site access arm of the junction is to be improved to support the needs of larger vehicles. The dimensions for this improvement are included as part of the TAA, with the modelling detailed above having been updated to reflect the new geometries for this arm of the roundabout.
- 9.2.2 The resulting modelling is summarised below in **Table 9.9** under the 'Do Something' scenario, with the corresponding ARCADY report included at **Appendix K**. For the AM peak, the 15-minute period of 08:30-08:45 has been summarised and for the PM peak the period of 17:15-17:30 has been isolated.
- 9.2.3 Please note that for the PM peak, equal lane usage has been applied to the A2 Eastbound Off Slip, in light of the comments detailed earlier in this Note.

Table 9.9 A227 Wrotham Road / A2 Eastbound Slips / Site Access roundabout – Improved Site Access

Scenario	Location	AM Peak		PM Peak	
		RFC	Queue	RFC	Queue
2025 DS	A227 (N)	0.62	2.0	0.77	4.9
	Site Access	0.13	0.1	0.15	0.2
	A227 (S)	0.45	1.3	0.47	1.5
	A2 EB Off Slip	0.47	1.4	0.72	2.9
2025 DS Sensitivity	A227 (N)	0.64	2.2	0.75	4.1
	Site Access	0.13	0.2	0.13	0.2
	A227 (S)	0.46	1.6	0.48	1.6
	A2 EB Off Slip	0.49	1.2	0.74	2.6
2028 DS	A227 (N)	0.67	2.2	0.81	4.4
	Site Access	0.14	0.2	0.17	0.3
	A227 (S)	0.47	1.5	0.40	1.7
	A2 EB Off Slip	0.52	1.7	0.79	3.2
2028 DS Sensitivity	A227 (N)	0.65	2.0	0.80	5.6
	Site Access	0.13	0.2	0.15	0.3
	A227 (S)	0.48	1.5	0.49	1.6
	A2 EB Off Slip	0.51	1.6	0.77	3.8

- 9.2.4 Based on the above, the site access arm of the junction will continue to operate within capacity during both peak periods, with the proposed improvements in place.

A227 Wrotham Road / A2 Westbound Slip Road roundabout

- 9.2.5 As detailed within the TAA, the issue for the A2 WB off slip arm is arm is caused by all northbound vehicles using the offside lane only. As such, the mitigation proposes to remove this marking to allow both lanes to be used for vehicles travelling north. The circulatory carriageway width of the roundabout measures approximately 10.5m, capable of accommodating two lane vehicle movements, and the northbound link between the two roundabouts is already marked as being two lanes wide, as is the entry onto the northern roundabout and the exit towards Gravesend.
- 9.2.6 The mitigation would form the removal of the left turn only arrow, to allow for both lanes to be utilised for movements towards Gravesend, with circulatory markings provided on the roundabout gyratory. Advanced signage would be provided on the slip road, to highlight to drivers that both lanes can be utilised for movements towards Gravesend, to ensure more equal lane usage at this location. The resulting mitigation proposals are shown in **Drawing Number 22052-MA-XX-DR-C-0102 P03**.
- 9.2.7 The results of the proposed mitigation, in highway capacity terms, are summarised below in, under the 'Do Something' scenario. The full ARCADY report is included at **Appendix L** for completeness. For the AM peak, the 15-minute period of 08:30-08:45 has been summarised and for the PM peak the period of 17:00-17:15 has been isolated.

Table 9.10 A227 Wrotham Road / A2 Eastbound Slips / Site Access roundabout – Mitigation Proposals

Scenario	Location	AM Peak		PM Peak	
		RFC	Queue	RFC	Queue
2025 DS	A227 (N)	0.75	3.5	0.65	2.2
	A2 WB Off Slip	0.69	4.2	0.75	3.0
	A227 (S)	0.58	3.1	0.61	1.9
2025 DS Sensitivity	A227 (N)	0.74	3.0	0.64	2.1
	A2 WB Off Slip	0.68	3.5	0.74	3.2
	A227 (S)	0.60	3.1	0.61	2.1
2028 DS	A227 (N)	0.82	4.1	0.68	2.5
	A2 WB Off Slip	0.75	4.9	0.76	4.7
	A227 (S)	0.65	4.6	0.63	2.5
2028 DS Sensitivity	A227 (N)	0.80	3.9	0.70	2.5
	A2 WB Off Slip	0.73	4.9	0.79	4.7
	A227 (S)	0.65	4.1	0.66	2.4

- 9.2.8 Based on the above modelling, it is considered that by allowing vehicles to utilise both lanes for movements towards Gravesend, that suitable mitigation is offered, with all arms of the junction now seen to operate within capacity.

9.2.9 Following post-application discussions with both NH and KCC H&T, it is understood that as part of Application Reference: GR20141214, the A2 WB off slip is to be signalised. The plan for this (Drawing no. 684437CH-JAC-A2-HGN-DR-1200-001 Rev P01 (17/08/2020)) has been sourced from NH as per their guidance and can be made available on request.

9.2.10 The following section considers the implications of the signal design in capacity terms.

9.3 Proposed Signal Improvement - A227 Wrotham Road / A2 Westbound Slip Road Roundabout

9.3.1 Using the signal design provided by NH, a LinSig model has been produced for the proposed signalisation scheme. The resulting modelling is summarised in Table 9.11 below, with the LinSig report included at **Appendix M**. Please note that the flows for the LinSig model have been inputted into the model in Passenger Car Units (PCUs).

Table 9.11 A227 Wrotham Road / A2 Eastbound Slips / Site Access roundabout – Lane Simulation and Half Width Results

Scenario	Location	AM Peak		PM Peak	
		DoS (%)	MMQ	DoS (%)	MMQ
2025 Do Nothing	A227 (N)	75.0%	8.4	65.5%	6.8
	A2 WB Off Slip	77.1%	5.6	67.8%	4.5
	A227 (S)	55.7%	1.6	49.8%	1.3
2025 Do Minimum	A227 (N)	79.7%	9.7	69.0%	7.4
	A2 WB Off Slip	81.9%	6.3	68.2%	4.6
	A227 (S)	58.0%	1.7	51.3%	1.3
2025 DM Sensitivity	A227 (N)	79.1%	9.4	69.0%	7.4
	A2 WB Off Slip	81.7%	6.3	67.7%	4.5
	A227 (S)	57.8%	1.7	51.0%	1.3
2028 Do Nothing	A227 (N)	82.1%	10.3	71.0%	7.7
	A2 WB Off Slip	80.5%	6.1	68.4%	4.6
	A227 (S)	60.0%	1.8	53.3%	1.5
2028 Do Minimum	A227 (N)	86.1%	11.9	71.4%	7.7
	A2 WB Off Slip	84.8%	7.1	71.5%	4.9
	A227 (S)	62.4%	2.0	54.8%	1.6
2028 DM Sensitivity	A227 (N)	86.1%	11.9	71.4%	7.7
	A2 WB Off Slip	84.8%	7.1	71.1%	4.9
	A227 (S)	62.4%	2.0	54.6%	1.6

9.3.2 Based on the proposed signal arrangement, there is approximately 130m between the proposed stop line for the A227 (N) arm (which is to be signalised) to the northern, site access roundabout. Assuming a vehicle length of 6.0m this would give each lane capacity to hold

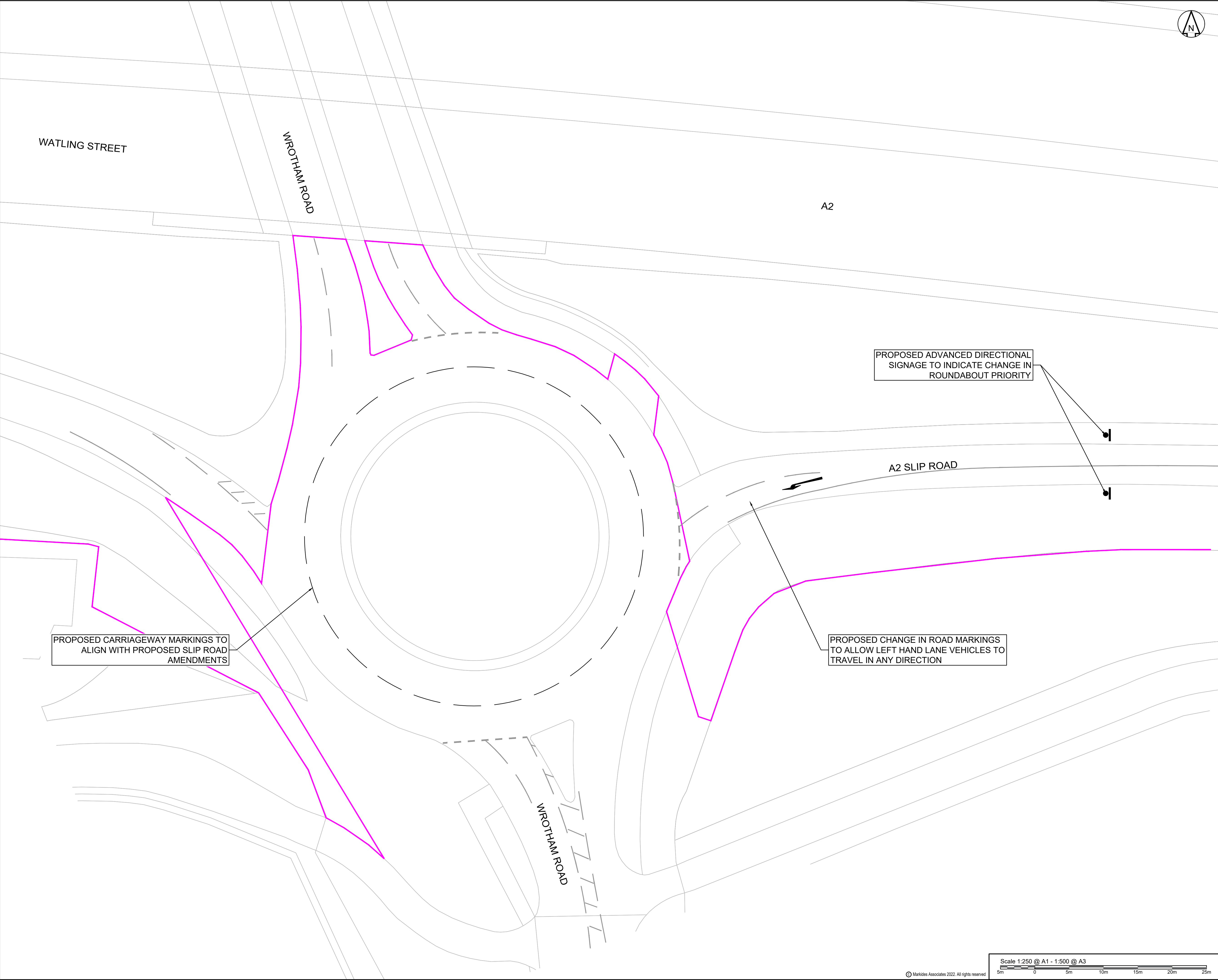
just under 22 vehicles. The maximum queue recorded on the A227 (N) arm is 11.9, ensuring no interaction between the two roundabouts.

- 9.3.3 Given the above results, it is not considered that the development proposals will impact the committed signalisation scheme, with the signal arrangement seen to work within capacity with the development in place.
- 9.3.4 In terms of the proposed mitigation for the development (as detailed above in Section 9.2) it is considered that, subject to the timing of the signal improvement, that this could form an interim scheme in advance of the signals. If, however, the signal scheme is installed prior to occupation of the site, it is not considered that the mitigation detailed would be necessary. As such, any condition wording relating to the provision of the proposed mitigation needs to be considered accordingly to reflect this matter.

10. Summary and Conclusion

- 10.1.1 This Technical Note (TN) has been produced on behalf of BP Pulse to address the comments raised by Kent County Council Highways and Transportation (KCC H&T) and National Highways (NH) with respect to the proposals at the former Tollgate Hotel in Gravesend. The site is currently the submit of a live planning application for the development of an Electric Vehicle (EV) charging hub and petrol filling station (Application Reference: GB/20240856).
- 10.1.2 It is considered that the comments raised by KCC H&T and NH have been suitability addressed, demonstrating no 'severe' highway capacity impact nor any highway safety implications in accordance with the NPPF Paragraph 116.

DRAWINGS



DO NOT SCALE OFF THIS DRAWING

NOTES

1. This drawing is indicative and subject to discussions with local & national highway authorities. This design is also subject to confirmation of land ownership, topography, location of statutory services, detailed design and traffic modelling.
2. This drawing is based upon drawing number XXX supplied by XXX and Markides Associates shall not be liable for any inaccuracies or deficiencies.
3. Markides Associates accept no responsibility for any unauthorised amendments to this drawing. Do not rely on dimensions scaled from this plan.
4. Highway boundary information has been provided by XXX County Council on XXX and has been transcribed by Markides Associates onto an Ordnance Survey base. Markides Associates accepts no liability for the accuracy of the data provided and the highway boundary information shown is subject to checks by a licensed conveyancer.
5. Any swept path analysis has been undertaken using Autodesk vehicle tracking software (AutoTRACK) and Markides Associates shall not be liable for any inaccuracies or deficiencies.

KEY

- OS MAPPING
- (INDICATIVE) NATIONAL HIGHWAYS BOUNDARY
- PROPOSED TRAFFIC SIGN
- EXISTING ROAD MARKINGS
- EXISTING ROAD MARKING TO BE REMOVED

Revision History						
Rev	Comment	By	Chkd	Appr	Date	
P03	FOR INFORMATION	JPB	HA	HA	17.03.25	
P02	FOR INFORMATION	NB	HA	HA	10.04.24	
P01	FOR INFORMATION	AA	HA	HA	08.01.24	
Rev	Comment	By	Chkd	Appr	Date	
Current Revision						
P01	FOR INFORMATION	JPB	HA	HA	17.03.25	
Rev	Comment	By	Chkd	Appr	Date	

S2 - FOR INFORMATION

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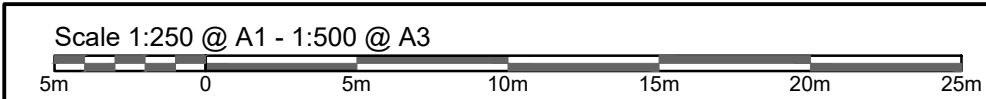
Telephone: 0207 442 2225

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Project
BP TOLL GATE

Drawing Title
ROUNDABOUT SIGN AND
ROAD MARKINGS PROPOSAL

Markides Associates reference: 22052 1:250 @ A1
22052-MA-XX-DR-C-0102 - P03



APPENDIX A – KCC H&T AND NH COMMENTS



National Highways Planning Response (NHPR 24-02) Formal Recommendation to an Application for Planning Permission

From: Christine Allen, Regional Director
Operations Directorate
South East Region
National Highways
PlanningSE@nationalhighways.co.uk

To: Gravesham Borough Council - (FAO Alison Webster)
planning.reps@gravesham.gov.uk

CC: transportplanning@dft.gov.uk
spatialplanning@nationalhighways.co.uk

Council's Reference: 20240856

Location: Former Tollgate Hotel, Watling Street, Gravesend, Kent

Proposal: Demolition of existing buildings to provide an EV charging hub and petrol filling station, including 24 charging bays and supporting electrical infrastructure (12 charging upstands, three substations and two network cabinets), six pump islands with canopy above, a forecourt shop/amenity building, customer parking, two air and water spaces and associated hardstanding and landscaping, accessed from the Wrotham Road/eastbound A2 roundabout junction.

National Highways Ref: NH/24/08483

Referring to the consultation on a planning application dated 23 October 2024 referenced above, in the vicinity of the A249 that forms part of the Strategic Road Network, notice is hereby given that National Highways' formal recommendation is that we:

- ~~a) offer no objection (see reasons at Annex A);~~
- ~~b) recommend that conditions should be attached to any planning permission that may be granted (see Annex A – National Highways recommended Planning Conditions & reasons);~~
- c) recommend that planning permission not be granted for a specified period (see reasons at Annex A);**

d) ~~recommend that the application be refused (see reasons at Annex A)~~

Highways Act 1980 Section 175B is not relevant to this application.¹

This represents National Highways' formal recommendation and is copied to the Department for Transport as per the terms of our Licence.

Should the Local Planning Authority not propose to determine the application in accordance with this recommendation they are required to consult the Secretary of State for Transport, as set out in the [Town and Country Planning \(Development Affecting Trunk Roads\) Direction 2018](#), via transportplanning@dft.gov.uk and may not determine the application until the consultation process is complete.

The Local Planning Authority must also copy any consultation under the 2018 Direction to PlanningSE@nationalhighways.co.uk.

Signature: *NDW*

Date: 03 December 2024

Name: Nigel De Wit

Position: Assistant Spatial Planner

National Highways

Bridge House, 1 Walnut Tree Close, Guildford, Surrey, GU1 4LZ

www.nationalhighways.co.uk

¹ Where relevant, further information will be provided within Annex A.

Annex A **National Highways' assessment of the proposed development**

National Highways has been appointed by the Secretary of State for Transport as a strategic highway company under the provisions of the Infrastructure Act 2015 and is the highway authority, traffic authority and street authority for the Strategic Road Network (SRN). The SRN is a critical national asset and as such we work to ensure that it operates and is managed in the public interest, both in respect of current activities and needs as well as in providing effective stewardship of its long-term operation and integrity.

Recommend that planning permission not be granted for a specified period: Reasons

We will be concerned with proposals that have the potential to impact on the safe and efficient operation of the SRN, in this case, particularly within the vicinity of the A2.

We have reviewed the application including the supporting Transport Assessment (TA) and the Transport Assessment Addendum (TAA). We engaged with pre-application discussions with the applicant's consultants.

It is recommended that the application should not be determined for a period of three months until **3 March 2025**.

This recommendation can be replaced, renewed, or reviewed during the three-month period, or at its end, dependent on progress made with regards to the outstanding matters.

We have set out below our response including actions points (**bold and underlined text**) for the applicant to respond to:

EV Charging Hub

The proposal for 24 charging bays and supporting electrical infrastructure supports the Government's wider ambitions and commitments for decarbonising transport and Net Zero.

Confirmation of Committed Developments from the Local Planning Authority (LPA)

We acknowledge Appendix D of the TAA contains correspondence from the LPA confirming the list of committed developments to be considered.

A227 Wrotham Road/ A2 Eastbound Slip Road/Site Access Roundabout – ARCADY Assessment

We advised at the pre-application stage that the calibration/validation of the 2023 base model of this junction is required to be improved so that it more accurately represents typical operating conditions at this junction during the morning and evening peak hours.

The model has been calibrated / validated against mean queue data within the survey peak hour, this is not the correct approach. **The requirement is that the model is calibrated / validated against the highest of the '15-minute average' queues observed on each arm. The reason for this is that the ARCADY output represents the worst 15-minute results on each arm. We require this matter to be addressed as the current calibration/validation which has been undertaken has significantly improved the performance of the A227 (north) arm (the direct intercept adjustment which has been input is an increase of 750 PCU/hr).** We acknowledge that direct intercept adjustment is the method of Junctions calibration which we require.

We note the link that is provided is to TRL frequently asked questions. We do not accept this as this does not clearly articulate the requirements. Mean queues are appropriate for LinSig and TRANSYT, but for Junctions the queues that are required are the highest 15-minute average on each arm. To be explicitly clear, what we require is the average queue within each of the modelled 15-minute time segments to be identified for each arm. Note, this is the total queue on the arm, the sum of each of the lanes. Then, the highest '15-minute average' queue on each arm in each time period is required to be utilised for calibration/validation purposes.

The soft copy Junctions file should be submitted to allow us to verify.

A227 Wrotham Road/ A2 Westbound Slip Road Roundabout – ARCADY Assessment

The comments for this junction mirror those provided for the junction above.

In addition, we previously noted that if lane simulation is to be used for the mitigation, then lane simulation should also be used for the calibrated / validated model of the existing layout and this is confirmed to have been undertaken.

SRN Mitigation

We have investigated the committed highway mitigation scheme associated with planning application GR20141214 (Land at Coldharbour Road). We note the decision notice contains the condition (condition 34) that no more than 200 dwellings shall be occupied until the A2 (westbound) / A227 junction is improved as shown on drawing

No.PHCOLDHARBOURRD.1/01 (available on the LPA planning portal). Planning permission 20211416 amended the trigger for compliance with condition 34 from a trigger of 200 dwelling occupations until the completion of the improvement to the A2 (west)/A227 junction (as shown on drawing no. PHCOLDHARBOURRD.1/01, or such other scheme of works or variation substantially to the same effect, as may be approved) to such highway improvements to be commenced prior to Friday the Fifth of August 2022 and completed thereafter within 9 calendar months.

The committed mitigation scheme comprises signalisation of the A2 (westbound) off-slip approach together with the 'filling in' of the northern part of the southern roundabout circulatory carriageway, converting from dumbbell arrangement to dogbone arrangement at the southern roundabout.

We acknowledge the subsequent design drawings (these are not on the LPA planning portal) as follows:

- Drawing no. 684437CH-JAC-A2-HGN-DR-1200-001 Rev P01 (17/08/2020) – this drawing provides details of the traffic signals – we note, however this drawing appears to show the existing road marking on the A2 off-slip
- Drawing no. HE601722-AONE-HGN-A2-A227-WROT-DR-C-0001 Rev P01 (dated 09/10/2020) – this drawing is the general arrangement plan and we would suggest this should be referred to for the proposed layout, as we note the arrangement on the A2 off-slip differs from the existing layout shown on the traffic signals drawing and would provide enhanced performance.

The junction assessment which has been undertaken in association with the Former Tollgate Hotel has considered planning application GR20141214 (the portion which is assumed to be not yet occupied) generated traffic within the committed development assumptions. However, the applicant has not currently considered the committed mitigation scheme.

We note that the Former Tollgate Hotel currently proposed mitigation scheme (shown on drawing no. 22052-MA-XX-DR-C-0102 Rev P02) conflicts with the committed mitigation scheme associated with planning application GR20141214.

The applicant should undertake additional junction assessment both without and with the committed mitigation scheme at this junction. This will allow determination of the impact of the committed mitigation scheme and whether any other mitigation is required in addition to the committed mitigation scheme.

Merge/Diverge Assessment

We requested at the pre-application stage that merge/diverge diagrams are provided to support the assessment. These are confirmed to be included within Appendix K of the TAA. The merge / diverge assessment, updated to reflect the committed

development, concludes there is no requirement for mitigation in respect of the merges/diverges. This is accepted.

Geotech

There are a few minor earthworks parallel to the A2 slip road and a larger cutting for the landscape area at the eastern end which backs onto National Highways land. The infiltration pond is likely to involve excavating next to the SRN.

There is a potential geotech risk, although based upon the submitted information this is not high. We are minded at the appropriate stage of the planning application process to recommend a condition (pre-commencement) to manage geotech risks. This would reference the **Design Manual for Road and Bridges (DMRB) document CD 622: Managing geotechnical risk**.

Drainage, Lighting, Signage, Boundary Treatment, and Construction Environmental Management Plan

Given the proximity of the site to the SRN (A2), we are minded at the appropriate stage in the planning application process to recommend conditions relating to drainage, lighting, signage, boundary treatment, and the need for the preparation, agreement, and adherence to a Construction Environmental Management Plan (CEMP).

Conclusion

Given the above, it is currently not possible to determine whether the application would have an unacceptable impact on the safety, reliability and/or operational efficiency of the SRN.

National Highways currently recommends that planning permission not be granted (other than a refusal if the Council so wishes) for a period of three months until 3 March 2025 to allow the applicant to resolve the outstanding matters.

This recommendation can be replaced, renewed, or reviewed during the three-month period, or at its end, dependent on progress made with regards to the outstanding matters.

Standing advice to the local planning authority

The Climate Change Committee's [2022 Report to Parliament](#) notes that for the UK to achieve net zero carbon status by 2050, action is needed to support a modal shift away from car travel. The NPPF supports this position, with paragraphs 74 and 109 prescribing that significant development should offer a genuine choice of transport

modes, while paragraphs 108 and 114 advise that appropriate opportunities to promote walking, cycling and public transport should be taken up.

Moreover, the build clever and build efficiently criteria as set out in clause 6.1.4 of [PAS2080](#) promote the use of low carbon materials and products, innovative design solutions and construction methods to minimise resource consumption.

These considerations should be weighed alongside any relevant Local Plan policies to ensure that planning decisions are in line with the necessary transition to net zero carbon.



Gravesham Borough Council

Civic Centre
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DA12 1AU

Highways and Transportation

Kroner House
Eurogate Business Park
Ashford
TN24 8XU

Tel: 03000 418181

Date: 21 November 2024

Our Ref:

Application - GB/20240856

Location - Former Tollgate Hotel, Watling Street, Gravesend, Ken

Proposal - Demolition of existing buildings to provide an EV charging hub and petrol filling station, including 24 charging bays and supporting electrical infrastructure (12 charging upstands, three substations and two network cabinets), six pump islands with canopy above, a forecourt shop/amenity building, customer parking, two air and water spaces and associated hardstanding and landscaping, accessed from the Wrotham Road/eastbound A2 roundabout junction

Thank you for your consultation in relation to the above planning application. I have the following comments to make with respect to highway matters :-

This proposal was the subject of highways pre-application advice from both Kent Highways and National Highways in December 2022 when both authorities agreed on the content of a supporting Transport Assessment.

The current application is supported by a Transport Assessment dated 16th September 2024 followed by a Transport Assessment Addendum dated 24th October 2024 which provided traffic modelling information not included in the original Transport Assessment.

I have now had the opportunity to consider both of these documents and would make the following comments:

Sustainable travel

There are no Sunday bus services and very limited services during the week (308 has 7 services per day and the 416 has 5 journeys per day). However, it would only be staff travelling by sustainable modes and there are walking and cycling links around the site, including to the residential area to the north, so this is a realistic option. However the pedestrian link between the southbound bus stop on Wrotham Road north of the underpass is poor and proposals to improve that link for staff should be submitted.

Vehicle Access and Visibility

Access to the site is proposed to remain as existing, with some widening within the site itself. The principal of this is acceptable. However, given the intensification of use under the

proposals, a plan showing appropriate visibility splays at the site access and pedestrian crossing points should be provided to demonstrate these are achievable. Any vegetation within the splays must be maintained at a maximum height of 0.6m.

Vehicle tracking drawings 22052-MA-XX-XX-DR-C-7000 P02 (large car), 22052-MA-XX-XX-DR-C-7005 P02 (oil tanker), 22052-MA-XX-XX-DR-C-7010 P02 (large refuse), 22052-MA-XX-XX-DR-C-7015 P02 (10m Rigid) and EV005-PS-LAY-000-GB00015044-0009-001 B01 / 14170-28 Rev D (oil tanker and HGV) show all noted vehicles are able to access and egress the site in a forward gear. The drawings do not show the vehicle existing the site on to the A2 eastbound slip, and should be updated to demonstrate this. However, it is unlikely that this manoeuvre would be an issue.

In my previous pre-app comments I commented that under the previous application for the PFS – GR/20161215 - included a new dedicated left slip lane on the roundabout at the access to the site. This is not mentioned in the current proposal details. I would expect the traffic generation for the PFS / EV Charging Station / retail to be at least equal, if not greater, than this previous application. It also provided an improved and safer route for pedestrians circulating the roundabout. Has this requirement been considered? I would appreciate a response from the developer on this matter.

Parking

A total of 63 vehicle parking spaces are proposed on site, consisting of 22 standard EV charging spaces, two disabled EV charging spaces, 33 standard spaces, four standard disabled spaces, and four staff spaces. A minimum of one space should be provided for adapted bikes, which requires 1.5m between stands to allow for dismounting. Whilst there may be a shortage of staff parking spaces for the number of staff predicted, it is accepted that space is available on site for any overflow and would not impact on the public highway.

This provision is considered to be acceptable.

Crash Data

The crash data is for 7 years, but doesn't provide much analysis. It just says there were 34 incidents, 29 slight, 5 serious, and their locations. It doesn't show what year they took place etc. For the middle roundabout (site access) the crashes are all on EB slip road or Wrotham Road. I consider that the crash record will not be compromised by this proposal.

Trip Generation and Distribution

The trip generation and distribution assessment is considered to be acceptable

Traffic Surveys

As you are no doubt aware, Galley Hill Road in Northfleet has been closed since 10th April 2023. The traffic surveys used to inform the the modelling was undertaken on 2nd March 2023 - prior to the closure. This may make the traffic numbers an underestimate since the distribution on the network is likely to have changed as a result of the closure. I would suggest a brief ATC survey is undertaken at Tollgate to assess whether the survey data previously obtained is still similar.

Highway Impact

This is covered in the Transport Assessment Addendum dated October 2024

Junctions assessed:

- A227 Wrotham Road / Coldharbour Road / Wrotham Road roundabout;
- A227 Wrotham Road / A2 eastbound slip road roundabout; and

- A227 Wrotham Road / A2 westbound slip road roundabout.

They have assessed the following years:

- 2023 Baseline;
- 2025 Opening Year (in accordance with 01/2022 Circular and pre-application discussions with NH); and
- 2028 Future Year (+5 year horizon)

They have updated TEMPro from v7.2c to v8.1. The latter has higher growth rates so it is acceptable.

The list of committed developments is very extensive although I have doubts whether many of these developments, given their distance from the proposed site, will have more than a minimal impact. The assessment is acceptable.

Modelling

I am aware that there are some on going queries in the modelling with NH in their consultation response dated 12th November 2024 , so will await the outcome of those queries before commenting further on the resulting assessment which indicates that mitigating measures on the roundabout to the south of the A2 (A2 westbound off-slip / Wrotham Road).

As you are aware, I must raise concerns regarding the proposed traffic signal works on the southern roundabout which were required as a Condition (34) of the Coldharbour Road residential development (GR/20141214) and which have still not been undertaken even though the trigger for implementation has been passed. Any implementation of this scheme (requested by NH) would affect considerably affect the modelling results and I would suggest that both scenarios are modelled - with the traffic signals and with the removal of the left-turn only markings.

Conclusions

In view of the concerns indicated above, particularly in relation to the traffic surveys and modelling, and the additional information requested by National Highways, I would request that a holding objection be placed on this application until such time that these issues have been satisfactorily resolved.

Conditions

Should it be decided to give consent to the current proposal I would recommend the following Conditions to be applied to that consent:

- 63 vehicle parking spaces to be provided on site from first occupation and permanently maintained. Provision to include 22 standard EV charging spaces, two disabled EV charging spaces, 33 standard spaces, four standard disabled spaces, and four staff spaces.
- The 24 electric vehicle charging spaces are to be provided with ultra-rapid electric vehicle charging infrastructure.
- Six covered cycle parking spaces are proposed to be provided. A minimum of one space should be provided for adapted bikes, which requires 1.5m between stands to allow for dismounting.
- As per drawing EV005-PS-LAY-000-GB00015044-0005-002 B01 / 14170-22-1 Rev G, a 3m shared pedestrian cycle route to be provided through the site between the existing routes at the A2 Eastbound onslip and the pedestrian/cycle route to the north of the site (NCR 177), upon first occupation and permanently maintained.

- Construction Management Plan to be submitted and approved prior to any works, including demolition, is commenced.
- Details of visibility splays at the access to be submitted and approved before any works, including demolition, commenced. Any vegetation within the splays must be maintained at a maximum height of 0.6m.

It is important to note that Local Planning Authority (LPA) permission does not convey any approval to carry out works on or affecting the public highway.

Any changes to or affecting the public highway in Kent require the formal agreement of the Highway Authority, Kent County Council (KCC), and it should not be assumed that this will be given because LPA planning permission has been granted.

For this reason, anyone considering works which may affect the public highway, including any highway-owned street furniture or landscape assets such as grass, shrubs and trees, is advised to engage with KCC Highways and Transportation at an early stage in the design process.

Across the county there are pieces of land next to private homes and gardens and near the highway that do not look like roads or pavements but are actually part of the public highway.

Some of this highway land is owned by Kent County Council whilst some is owned by third party owners. Irrespective of the ownership, this land may have 'highway rights' over the topsoil.

Works on private land may also affect the public highway. These include works to cellars, to retaining walls which support the highway or land above the highway, and to balconies, signs or other structures which project over the highway. Such works also require the approval of the Highway Authority.

Kent County Council has now introduced a pre-application advice service in addition to a full formal technical approval process for new or altered highway assets, with the aim of improving future maintainability. Further details are available on our website below:

<https://www.kent.gov.uk/roads-and-travel/highway-permits-and-licences/highways-permissions-and-technical-guidance>.

This process applies to all development works affecting the public highway other than applications for vehicle crossings, which are covered by a separate approval process. Further details on this are available on our website below:

<https://www.kent.gov.uk/roads-and-travel/highway-permits-and-licences/apply-for-a-dropped-kerb/dropped-kerb-contractor-information>

Once planning approval for any development has been granted by the LPA, it is the responsibility of the applicant to ensure that before development commences, all necessary highway approvals and consents have been obtained, and that the limits of the highway boundary have been clearly established, since failure to do so may result in enforcement action being taken by the Highway Authority.

The applicant must also ensure that the details shown on the approved plans agree in every aspect with those approved under the relevant legislation and common law. It is therefore important for the applicant to contact KCC Highways and Transportation to progress this aspect of the works prior to commencement on site.

Further guidance for applicants, including information about how to clarify the highway boundary and links to application forms for vehicular crossings and other highway matters, may be found on Kent County Council's website:

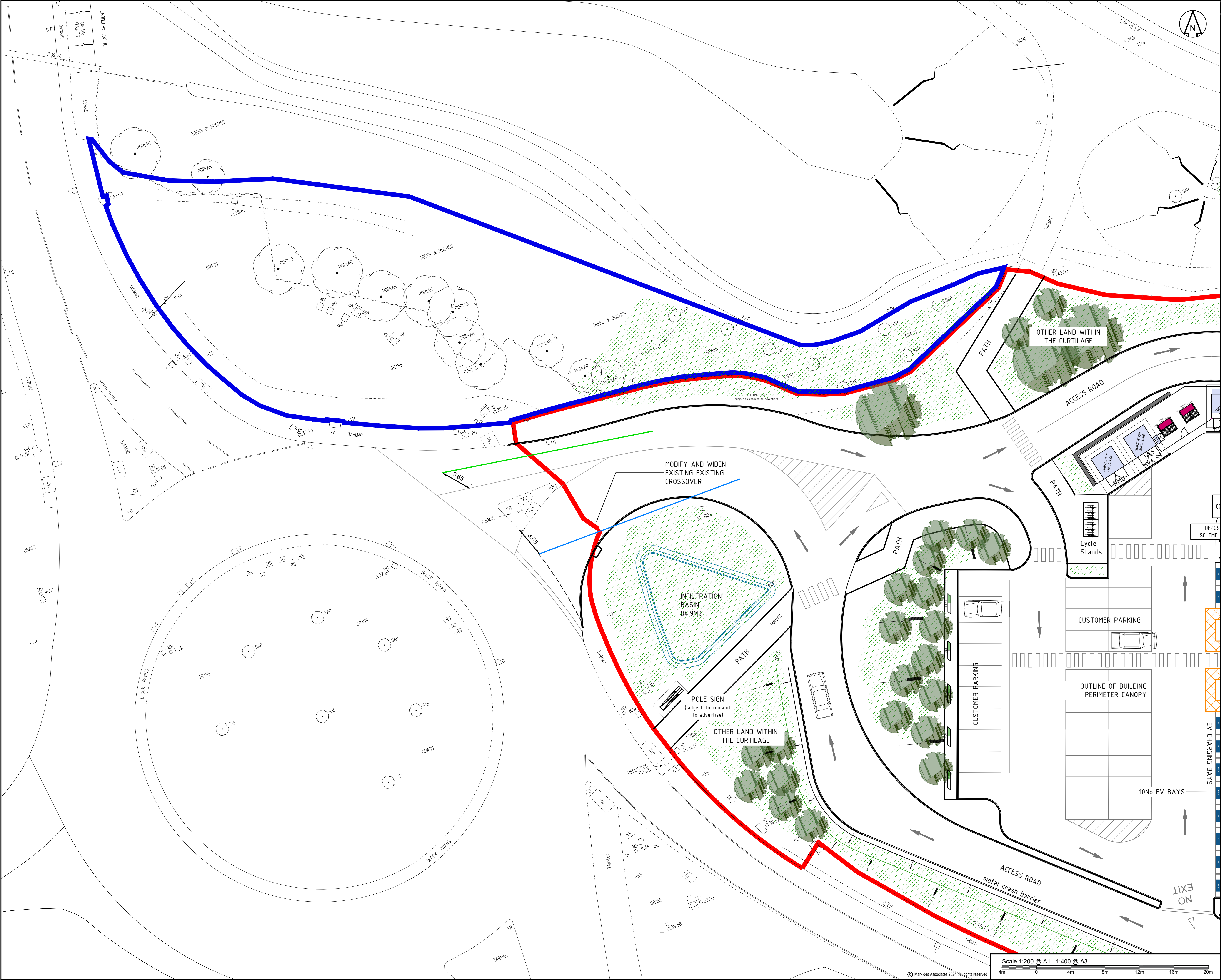
<https://www.kent.gov.uk/roads-and-travel/highway-permits-and-licences/highways-permissions-and-technical-guidance>. Alternatively, KCC Highways and Transportation may be contacted by telephone: 03000 418181.

Yours faithfully

Director of Highways & Transportation

*This is a statutory technical response on behalf of KCC as Highway Authority. If you wish to make representations in relation to highways matters associated with the planning application under consideration, please make these directly to the Planning Authority.

APPENDIX B – VISIBILITY SPLAY DRAWINGS



DO NOT SCALE OFF THIS DRAWING

NOTES

- This drawing is indicative and subject to discussions with local & national highway authorities. This design is also subject to confirmation of land ownership, topography, location of statutory services, detailed design and traffic modelling.
- This drawing is based upon drawing number 14170-22-1 supplied by MBH and Markides Associates shall not be liable for any inaccuracies or deficiencies.
- Markides Associates accept no responsibility for any unauthorised amendments to this drawing. Do not rely on dimensions scaled from this plan.

KEY

- 25m Forward Entry Visibility Splay (20mph)
- 25m Forward Exit Visibility Splay (20mph)

Revision History					
Rev	Comment	By	Chkd	Appr	Date
P01	FOR INFORMATION	NB	HA	JB	17.12.24
Rev	Comment	By	Chkd	Appr	Date
P01	FOR INFORMATION	NB	HA	JB	17.12.24
Rev	Comment	By	Chkd	Appr	Date

S2 - FOR INFORMATION

BP PULSE

MARKIDES ASSOCIATES
TRANSPORT PLANNING AND ENGINEERING

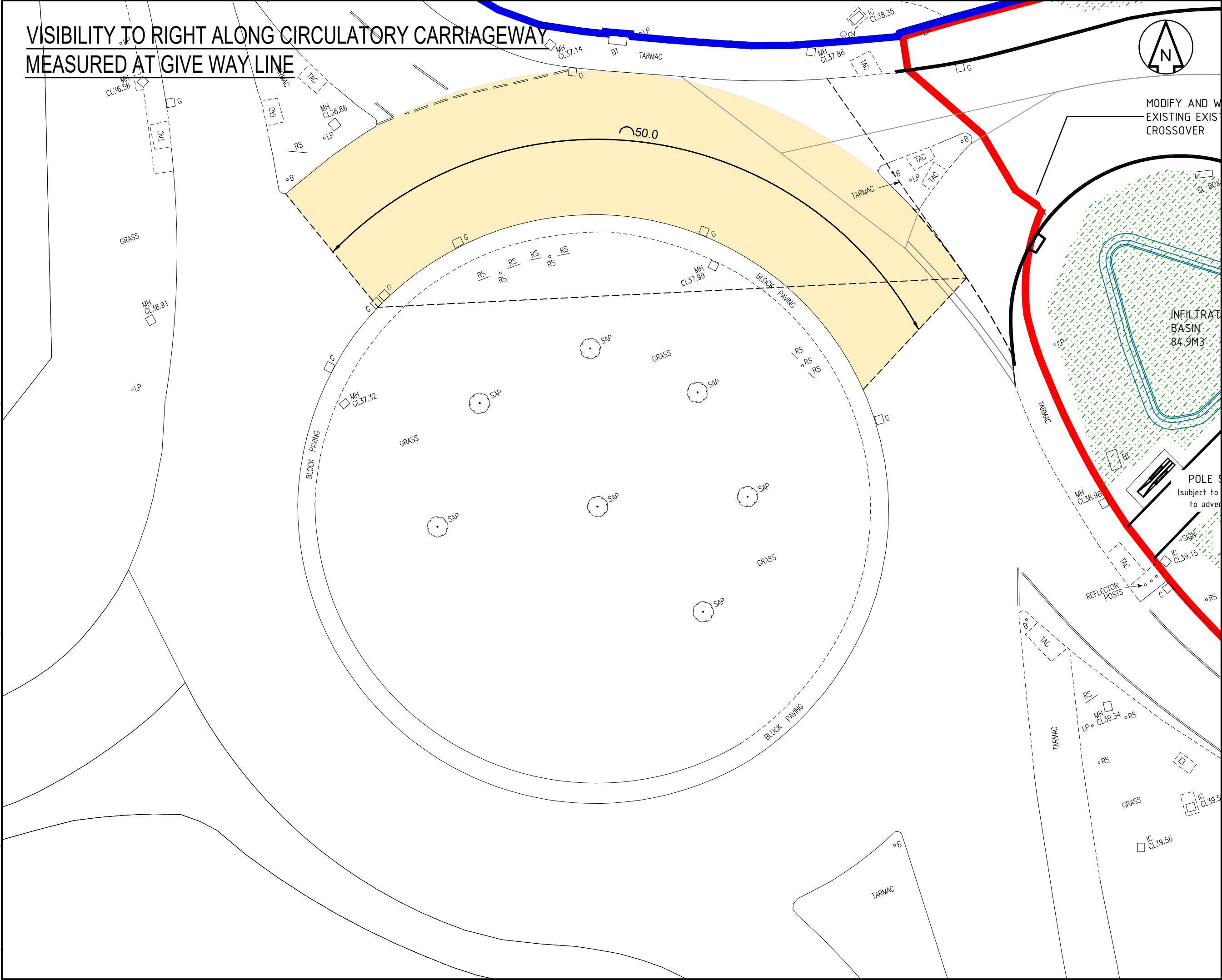
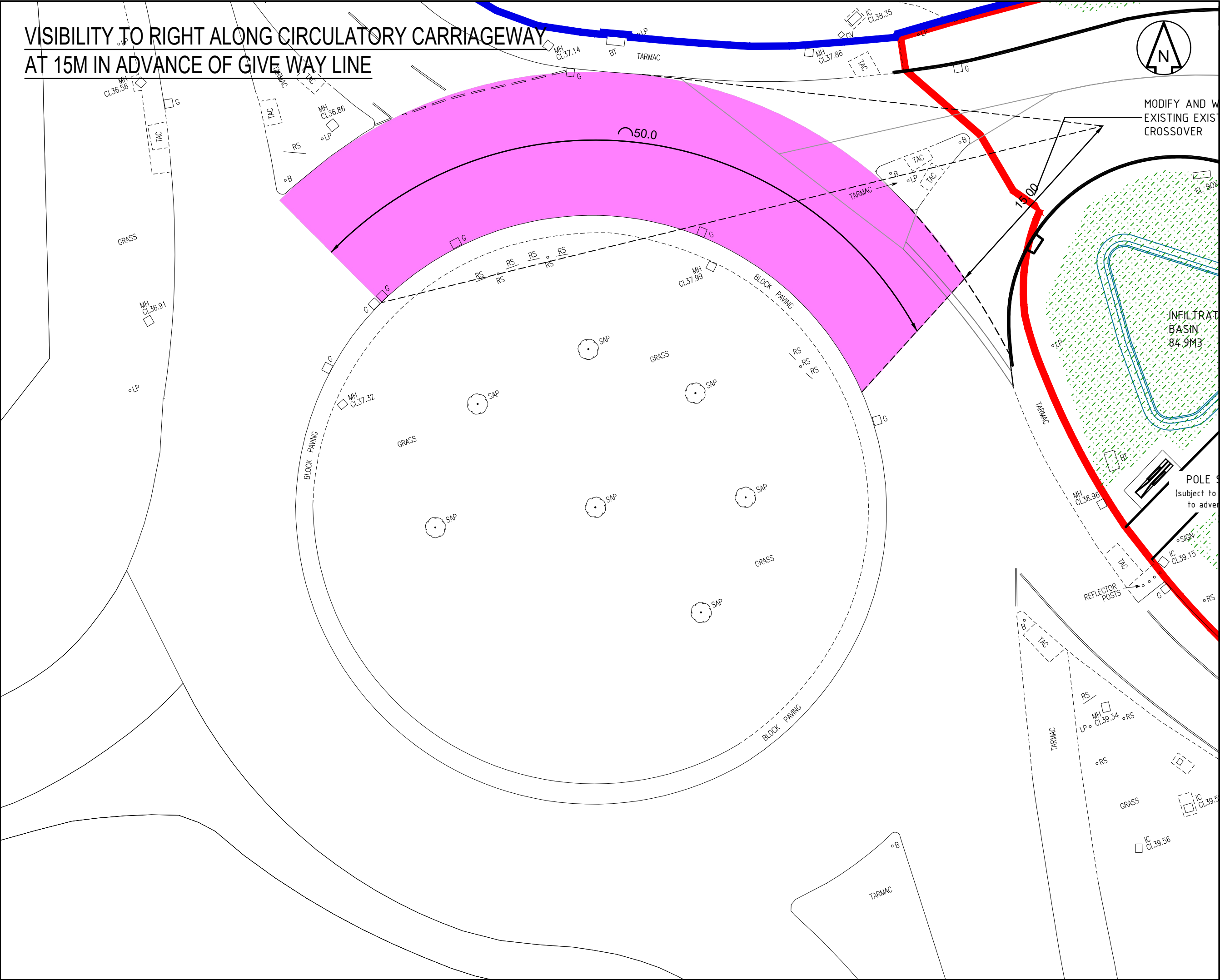
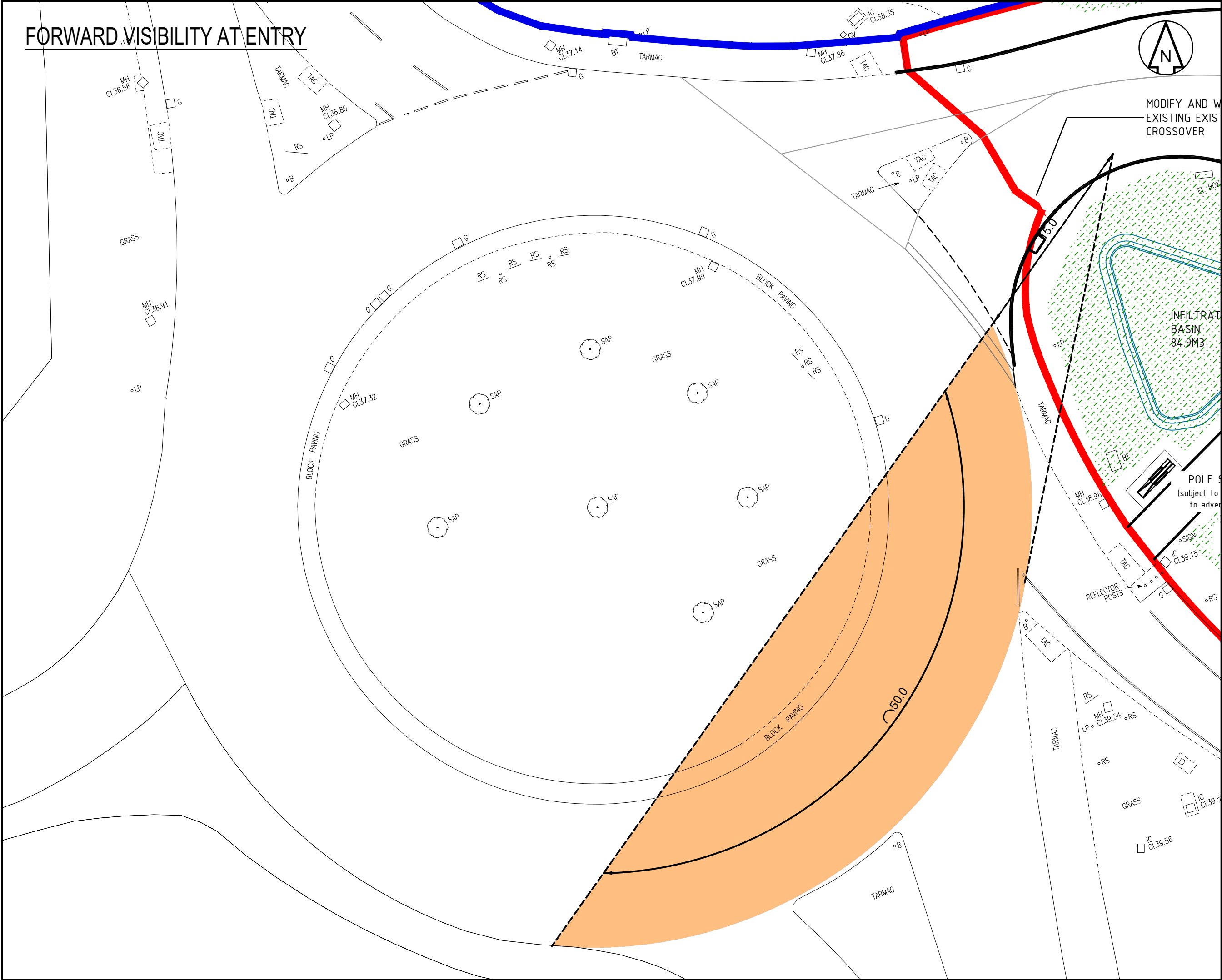
Project: **BP TOLLGATE, GRAVESEND**

Drawing Title: **FORWARD VISIBILITY SPLAY**

Markides Associates reference: 22052 1:200 @ A1

22052-MA-XX-DR-C-0131 - P01

M:\Projects\2022\22052 - BP Tollgate, Gravesend\05 CAD-EMV\05 CAD-EMV\22052-MA-XX-DR-C-0131 - 0131 VISIBILITY SPLAY.dwg



DO NOT SCALE OFF THIS DRAWING

NOTES

1. This drawing is indicative and subject to discussions with local & national highway authorities. This design is also subject to confirmation of land ownership, topography, location of statutory services, detailed design and traffic modelling.
2. This drawing is based upon drawing number 14170-22-1 supplied by MBH and Markides Associates shall not be liable for any inaccuracies or deficiencies.
3. Markides Associates accept no responsibility for any unauthorised amendments to this drawing. Do not rely on dimensions scaled from this plan.

Revision History					
Rev	Comment	By	Chkd	Appr	Date
P01	FOR INFORMATION	NB	HA	JB	17.12.24

Current Revision					
Rev	Comment	By	Chkd	Appr	Date
P01	FOR INFORMATION	NB	HA	JB	17.12.24

S2 - FOR INFORMATION

BP PULSE


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TRANSPORT PLANNING AND ENGINEERING

Project: BP TOLLGATE, GRAVESEND

Drawing Title: VISIBILITY SPLAYS

Scale 1:250 @ A1 - 1:500 @ A3

Markides Associates reference: 22052 1:250 @ A1

22052-MA-XX-DR-C-0132 - P01



DO NOT SCALE OFF THIS DRAWING

NOTES

- This drawing is indicative and subject to discussions with local & national highway authorities. This design is also subject to confirmation of land ownership, topography, location of statutory services, detailed design and traffic modelling.
- This drawing is based upon drawing number 14170-22-1 supplied by MBH and Markides Associates shall not be liable for any inaccuracies or deficiencies.
- Markides Associates accept no responsibility for any unauthorised amendments to this drawing. Do not rely on dimensions scaled from this plan.

KEY

- 1.5m x 80m Pedestrian Visibility Splay (40mph)
- 1.5m x 37m Achievable Pedestrian Visibility Splay
- 1.5m x 67m Achievable Pedestrian Visibility Splay
- 1.0m x 25m Pedestrian Visibility Splay (20mph)
- 1.0m x 80m Pedestrian Visibility Splay
- 1.0m x 48m Achievable Pedestrian Visibility Splay

Revision History					
Rev	Comment	By	Chkd	Appr	Date
P01	FOR INFORMATION	NB	HA	JB	17.12.24
10	FOR INFORMATION	NB	HA	JB	17.12.24

S2 - FOR INFORMATION

BP PULSE

MARKIDES ASSOCIATES
TRANSPORT PLANNING AND ENGINEERING

Project: **BP TOLLGATE, GRAVESEND**

Drawing Title: **PEDESTRIAN VISIBILITY SPLAYS**

Scale 1:200 @ A1 - 1:400 @ A3

4m 0 4m 8m 12m 16m 20m

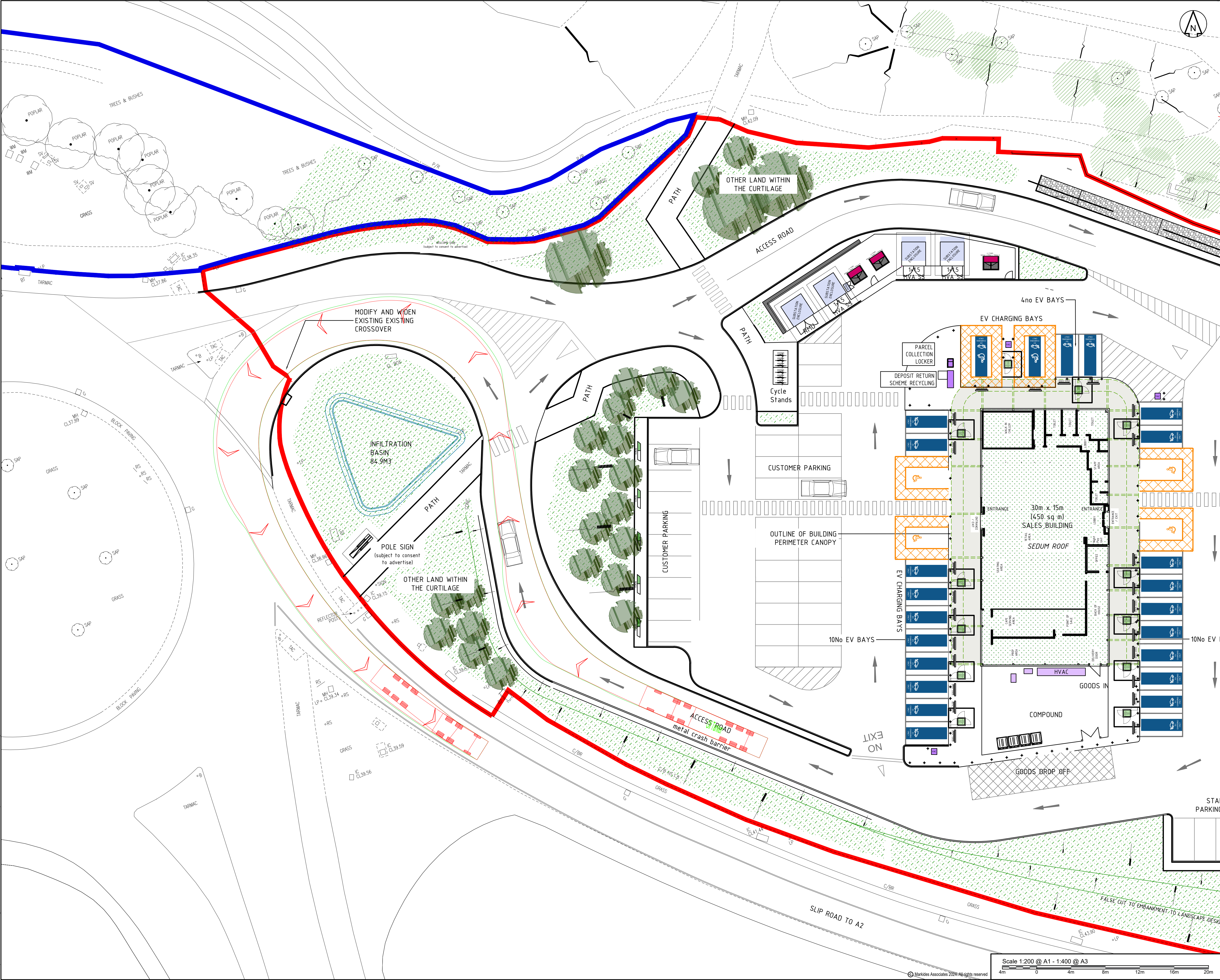
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Markides Associates reference: 22052

1:200 @ A1

22052-MA-XX-DR-C-0130 - P01

APPENDIX C – SWEPT PATH ANALYSIS



DO NOT SCALE OFF THIS DRAWING

NOTES

1. This drawing is indicative and subject to discussions with local & national highway authorities. This design is also subject to confirmation of land ownership, topography, location of statutory services, detailed design and traffic modelling.

2. This drawing is based upon drawing number 14170-22-1 supplied by MBH and Markides Associates shall not be liable for any inaccuracies or deficiencies.

3. Markides Associates accept no responsibility for any unauthorised amendments to this drawing. Do not rely on dimensions scaled from this plan.

4. Any swept path analysis has been undertaken using Autodesk vehicle tracking software (AutoTRACK) and Markides Associates shall not be liable for any inaccuracies or deficiencies.

Oil Tanker

Overall Length

Overall Width

Overall Body Height

Min Body Ground Clearance

Track Width

Lock to lock time

Kerb to Kerb Turning Radius

15.280m

2.500m

2.704m

0.416m

2.450m

4.00s

6.670m

KEY

VEHICLE BODY LINE

VEHICLE WHEEL LINE

REVERSE GEAR

Revision History

Rev	For Information	Comment	By	Chkd	Appr	Date
P01	FOR INFORMATION		NB	HA	HA	16.12.24

Current Revision

Rev	For Information	Comment	By	Chkd	Appr	Date
P01	FOR INFORMATION		NB	HA	HA	16.12.24

S2 - FOR INFORMATION

BP PULSE

MARKIDES ASSOCIATES

TRANSPORT PLANNING AND ENGINEERING

Project

BP TOLLGATE, GRAVESEND

Drawing Title

SWEPT PATH ANALYSIS OIL TANKER

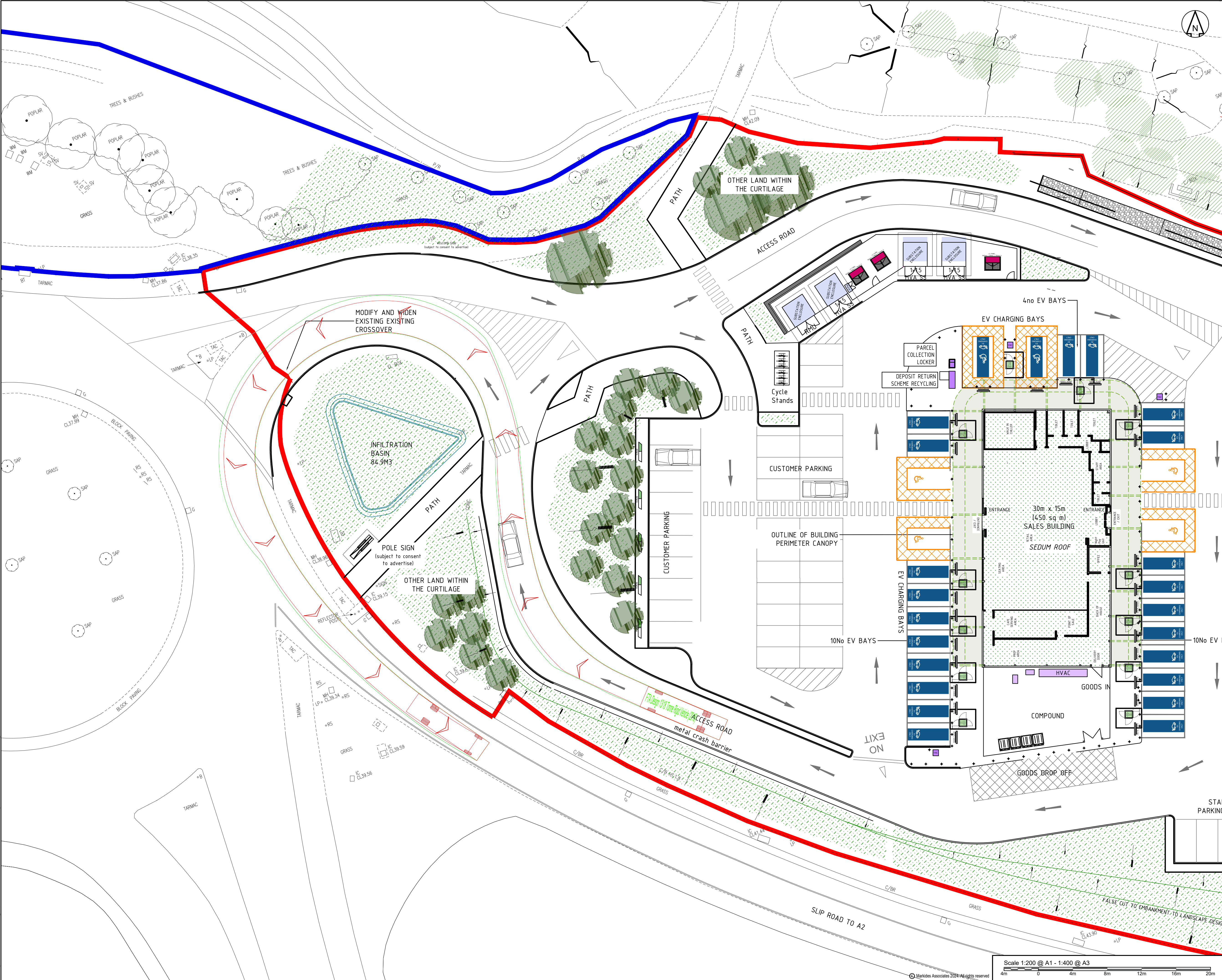
Markides Associates reference:

22052

1:200 @ A1

22052-MA-XX-DR-C-7060

- P01



DO NOT SCALE OFF THIS DRAWING

NOTES

1. This drawing is indicative and subject to discussions with local & national highway authorities. This design is also subject to confirmation of land ownership, topography, location of statutory services, detailed design and traffic modelling.

2. This drawing is based upon drawing number 14170-22-1 supplied by MBH and Markides Associates shall not be liable for any inaccuracies or deficiencies.

3. Markides Associates accept no responsibility for any unauthorised amendments to this drawing. Do not rely on dimensions scaled from this plan.

4. Any swept path analysis has been undertaken using Autodesk vehicle tracking software (AutoTRACK) and Markides Associates shall not be liable for any inaccuracies or deficiencies.

10

1.4

0.1

10

1.4

0.1

FTA Design 13/18 Tonne Rigid Vehicle (2016)

Overall Length

Overall Width

Overall Body Height

Min Body Ground Clearance

Track Width

Look to look time

Kerb to Kerb Turning Radius

10.000m

2.550m

3.645m

0.440m

2.470m

3.00s

11.000m

KEY

VEHICLE BODY LINE

VEHICLE WHEEL LINE

REVERSE GEAR

Revision History

Rev	Comment	By	Chkd	Appr	Date
P01	FOR INFORMATION	NB	HA	HA	16.12.24

Current Revision

Rev	Comment	By	Chkd	Appr	Date
P01	FOR INFORMATION	NB	HA	HA	16.12.24

S2 - FOR INFORMATION

BP PULSE

1st floor

The Bridge

73 - 83 Southwark Bridge Road

London SE1 1QD

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E: enquiries@markidesassociates.co.uk

W: www.markidesassociates.co.uk

Project

BP TOLLGATE, GRAVESEND

Drawing Title

SWEPT PATH ANALYSIS

10M RIGID

Markides Associates reference:

22052

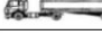
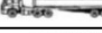
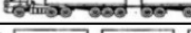
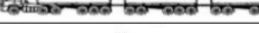
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22052-MA-XX-DR-C-7061

- P01

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APPENDIX D – ATC SURVEY DATA

Class		Axles	Groups	Description	Parameters	Dominant Vehicle	Aggregate
1	SV	2	1 OR 2	Short - Car, light Van	$d(1) \geq 1.7\text{m}$, $d(1) \leq 3.2\text{m}$ & axles=2		Light
2	SVT	3, 4 OR 5	3	Short Towing - Trailer, Caravan, Boat, etc.	groups=3, $d(1) \geq 2.1\text{m}$, $d(1) \leq 3.2\text{m}$, $d(2) \geq 2.1\text{m}$ & axles=3,4,5		
3	TB2	2	2	Two axle truck or Bus	$d(1) > 3.2\text{m}$ & axles=2		Medium
4	TB3	3	2	Three axle truck or Bus	axles=3 & groups=2		
5	T4	>3	2	Four axle truck	axles>3 & groups=2		
6	ART3	3	3	Three axle articulated vehicle or Rigid vehicle and trailer	$d(1) > 3.2\text{m}$, axles=3 & groups=3		Heavy
7	ART4	4	>2	Four axle articulated vehicle or Rigid vehicle and trailer	$d(2) < 2.1\text{m}$ or $d(1) < 2.1\text{m}$ or $d(1) > 3.2\text{m}$ axles = 4 & groups>2		
8	ART5	5	>2	Five axle articulated vehicle or Rigid vehicle and trailer	$d(2) < 2.1\text{m}$ or $d(1) < 2.1\text{m}$ or $d(1) > 3.2\text{m}$ axles = 5 & groups>2		
9	ART6	>=6	>2	Six (or more) axle articulated vehicle or Rigid vehicle and trailer	axles=6 & groups>2 or axles>6 & groups=3		
10	BD	>6	4	B-Double or Heavy truck and trailer	groups=4 & axles>6		
11	DRT	>6	5	Double road train or Heavy truck and two trailers	groups=5,6 & axles>6		
12	TRT	>6	>6	Triple road train or Heavy truck and three (or more) trailers	groups>6 & axles>6		Light
14	M/C	2	1 OR 2	Motorcycle	$d(1) \geq 1.18\text{m}$, $d(1) \leq 1.7\text{m}$ & axles=2		
15	CYCLE	2	1 OR 2	Cycle	$d(1) < 1.18$ & axles=2		

K&MTRAFFIC SURVEYS

SITE: ATC - a227 Gravesend

LOCATION: Attached to signpost

GRID REFERENCE: 51.417946, 0.359219

DIRECTION: NORTHBOUND SPEED LIMIT: 40

03 December 2024

Time [--]	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	137	126	0	8	1	1	0	0	1	0	0	0	0	0	0	34.5	39.5
0100	78	64	0	10	1	1	0	1	0	0	0	0	0	1	0	33.8	39.5
0200	62	46	0	12	0	0	0	2	1	0	0	0	0	1	0	33.9	38.2
0300	83	64	0	16	0	0	0	1	1	0	0	0	0	1	0	34	38.2
0400	101	80	0	17	0	0	0	1	0	2	0	0	0	1	0	35	40.1
0500	278	230	1	39	0	1	0	2	2	3	0	0	0	0	0	34.4	38.5
0600	471	411	0	57	0	1	0	0	1	0	0	0	0	1	0	32.9	36.9
0700	943	864	1	63	6	1	0	1	0	0	1	0	0	4	2	29.9	34.6
0800	1335	1231	4	81	0	2	0	3	3	1	0	1	0	4	5	27.5	33
0900	1139	1012	6	98	2	5	1	2	2	4	1	2	1	0	3	29.9	34.1
1000	1022	912	2	95	5	2	0	3	0	1	0	0	0	1	1	30.4	34
1100	1012	908	4	78	2	3	0	6	0	4	0	0	0	4	3	31.3	35
1200	1101	977	8	99	1	4	1	1	2	4	0	0	0	3	1	30.7	34.8
1300	1055	938	5	86	4	2	0	3	2	3	2	2	0	7	1	30.8	34.9
1400	1211	1100	2	85	4	8	0	2	1	1	0	2	1	3	2	29.4	33.8
1500	1367	1274	3	61	1	8	0	2	2	5	0	1	0	7	3	27.4	32.3
1600	1368	1292	3	52	3	1	0	2	1	0	0	2	0	7	5	26.8	31.4
1700	1496	1387	9	62	2	4	0	6	1	7	1	1	2	12	2	25.9	30.1
1800	1317	1215	8	73	4	3	0	2	0	5	0	0	0	6	1	28.5	32.4
1900	1007	910	3	75	1	3	0	2	1	1	0	0	0	9	2	30.7	34.6
2000	708	658	5	31	1	4	0	1	1	0	0	0	0	7	0	31.8	36
2100	613	577	1	29	1	0	0	1	1	0	0	0	0	3	0	31.9	36
2200	461	429	1	23	1	0	1	1	0	1	0	0	0	4	0	33.3	37.7
2300	278	254	0	17	0	1	0	2	1	0	1	0	0	2	0	33.7	38.4
07-19	14366	13110	55	933	34	43	2	33	14	35	5	11	4	58	29	28.8	33.4
06-22	17165	15666	64	1125	37	51	2	37	18	36	5	11	4	78	31	29.3	34
06-00	17904	16349	65	1165	38	52	3	40	19	37	6	11	4	84	31	29.4	34.2
00-00	18643	16959	66	1267	40	55	3	47	24	42	6	11	4	88	31	29.6	34.5

04 December 2024

Time [--	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	148	123	0	22	2	1	0	0	0	0	0	0	0	0	0	33.3	37.8
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0200	61	53	0	7	1	0	0	0	0	0	0	0	0	0	0	33.1	36.8
0300	96	73	0	22	1	0	0	0	0	0	0	0	0	0	0	33.4	38.4
0400	121	98	0	17	1	0	0	2	2	0	0	1	0	0	0	34.7	40.1
0500	259	212	1	39	2	2	0	1	1	1	0	0	0	0	0	34.5	38.6
0600	463	404	0	49	1	4	0	2	1	1	0	0	0	1	0	32.3	37
0700	772	705	1	50	3	1	0	3	2	0	1	0	0	6	0	31.3	35.7
0800	1133	1046	4	55	2	5	0	0	2	8	1	2	1	5	2	29.3	33.8
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1100	1020	915	2	90	1	2	0	4	1	1	0	0	0	2	2	31.5	35.2
1200	1064	937	4	100	3	2	0	4	2	7	0	0	0	3	2	31.3	35
1300	1049	933	6	96	3	1	0	3	0	2	0	0	0	4	1	31	34.9
1400	1218	1114	3	78	3	4	0	7	1	3	1	0	0	3	1	30	34.7
1500	1401	1296	3	72	4	9	0	3	0	5	0	4	0	4	1	27.4	31.9
1600	1131	1038	4	66	5	3	1	2	1	0	0	0	0	10	1	28.3	33.2
1700	1478	1355	9	78	4	14	1	2	1	3	0	1	0	10	0	26.5	31.1
1800	1340	1216	4	95	4	3	0	6	2	2	0	1	0	5	2	28.3	32.2
1900	1066	980	5	58	3	1	0	6	1	1	2	0	0	9	0	29.9	34.2
2000	722	662	3	45	0	0	0	1	1	0	0	0	0	5	5	32.2	36.7
2100	608	570	2	26	1	0	0	0	2	1	0	0	0	6	0	33	37.3
2200	517	485	1	21	1	0	0	0	0	1	0	0	0	8	0	33.4	37.2
2300	305	280	0	20	1	1	0	0	0	1	0	0	0	2	0	33.9	38.2
07-19	13742	12465	45	964	38	49	4	36	15	40	4	8	1	55	18	29.4	34.1
06-22	16601	15081	55	1142	43	54	4	45	20	43	6	8	1	76	23	29.8	34.4
06-00	17423	15846	56	1183	45	55	4	45	20	45	6	8	1	86	23	30	34.7
00-00	18200	16481	57	1298	54	58	4	50	25	46	6	9	1	88	23	30.1	34.9

05 December 2024

Time [--	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	167	149	0	16	1	0	0	0	0	1	0	0	0	0	0	34.4	39.1
0100	86	72	0	11	1	0	0	0	0	0	0	0	0	2	0	35.4	41.5
0200	79	67	0	12	0	0	0	0	0	0	0	0	0	0	0	34.2	39.7
0300	91	66	0	21	3	0	0	0	0	0	0	0	0	1	0	34.3	39.4
0400	116	93	0	15	3	0	0	2	2	0	0	0	0	1	0	33.5	38.3
0500	383	312	0	60	2	1	0	4	1	2	1	0	0	0	0	33.4	37.4
0600	497	420	4	60	2	1	0	2	2	3	0	0	0	3	0	32.7	36.4
0700	782	699	2	58	4	3	0	1	4	2	0	0	0	7	2	30.4	35.2
0800	1372	1283	5	48	7	7	2	7	0	2	0	0	1	7	3	21.7	29.8
0900	1130	1032	3	81	2	2	0	3	0	3	0	0	1	1	2	29.7	33.8
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1100	1051	929	6	92	2	4	0	3	5	3	1	1	0	5	0	30.4	34.4
1200	1085	956	3	103	3	7	0	3	2	2	0	1	0	3	2	30.3	34.3
1300	1025	902	6	96	1	5	0	1	2	5	0	0	0	6	1	31.4	35
1400	1169	1084	7	61	3	2	0	2	3	4	0	0	0	2	1	29.1	33.4
1500	1332	1239	7	64	4	4	0	3	0	5	0	1	0	5	0	27.1	32.3
1600	1208	1135	2	45	3	1	1	3	1	4	1	4	0	5	3	25.7	30.6
1700	1257	1163	5	60	1	4	0	6	2	3	1	1	3	7	1	26.4	31.1
1800	1353	1253	8	67	3	6	1	5	1	2	0	1	0	5	1	26.6	31.2
1900	1019	926	13	59	0	0	2	5	3	3	0	0	0	8	0	26.5	30.8
2000	688	639	2	31	4	2	0	0	0	1	0	0	0	8	1	25.9	30
2100	516	466	1	39	3	0	1	0	0	2	0	0	0	4	0	27.2	32.2
2200	452	413	4	26	1	1	1	2	2	0	0	0	0	2	0	31.4	35.5
2300	266	240	1	21	0	0	0	0	0	0	0	0	0	3	1	33.1	37.5
07-19	13813	12608	56	866	38	49	4	40	22	39	3	9	5	57	17	28	33.2
06-22	16533	15059	76	1055	47	52	7	47	27	48	3	9	5	80	18	27.9	33.1
06-00	17251	15712	81	1102	48	53	8	49	29	48	3	9	5	85	19	28.1	33.3
00-00	18173	16471	81	1237	58	54	8	55	32	51	4	9	5	89	19	28.4	33.7

06 December 2024

Time [--	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	193	165	0	20	4	0	0	0	3	0	0	0	0	1	0	34.2	38.9
0100	97	79	0	13	2	0	0	1	1	0	0	0	0	1	0	34.2	38.7
0200	104	84	0	17	2	0	0	0	1	0	0	0	0	0	0	34.7	39.7
0300	94	75	0	17	0	0	0	0	0	2	0	0	0	0	0	34.3	39.6
0400	101	81	1	13	2	0	0	3	0	1	0	0	0	0	0	34.9	39.8
0500	243	209	0	27	0	0	0	1	1	5	0	0	0	0	0	35.3	39.4
0600	525	446	1	61	4	3	1	3	1	2	0	0	0	2	1	32.3	36.6
0700	981	883	3	73	2	5	0	2	1	5	0	0	1	4	2	30.3	35.2
0800	1298	1215	6	57	3	5	0	2	1	3	0	3	0	2	1	28.6	33.4
0900	1148	1051	2	68	5	5	0	4	1	0	1	2	1	3	5	30.7	34.7
1000	1103	990	5	94	3	1	0	2	0	3	0	0	0	2	3	31.3	35.2
1100	1112	997	8	88	3	5	0	3	3	3	0	1	0	1	0	30.6	34.3
1200	1191	1095	8	69	2	1	1	3	1	2	0	0	2	6	1	30.3	34.7
1300	1216	1121	4	70	2	4	2	2	0	1	0	0	0	8	2	30.7	34.2
1400	1206	1122	5	65	3	1	0	2	1	2	0	0	2	2	1	29.8	34.4
1500	1305	1244	1	37	0	5	0	3	3	2	1	2	2	2	3	27.3	32.4
1600	1453	1353	9	57	2	2	0	3	3	7	0	0	2	9	6	25.7	30.4
1700	1374	1280	10	50	2	6	3	6	1	6	1	1	1	2	5	26	30.9
1800	1205	1133	8	33	5	4	0	7	1	0	0	0	1	9	4	28.6	32.9
1900	933	846	5	65	1	0	0	4	2	2	0	0	0	8	0	31	34.7
2000	769	705	2	40	3	1	0	4	1	1	0	0	0	12	0	31.8	35.5
2100	903	839	4	43	1	4	1	1	0	1	1	0	0	8	0	30.5	34.9
2200	687	648	3	28	0	0	1	2	1	1	0	0	0	3	0	31.8	35.6
2300	560	531	1	18	1	0	0	2	3	2	0	0	0	2	0	31.7	35.9
07-19	14592	13484	69	761	32	44	6	39	16	34	3	9	12	50	33	29	33.8
06-22	17722	16320	81	970	41	52	8	51	20	40	4	9	12	80	34	29.4	34.1
06-00	18969	17499	85	1016	42	52	9	55	24	43	4	9	12	85	34	29.5	34.2
00-00	19801	18192	86	1123	52	52	9	60	30	51	4	9	12	87	34	29.8	34.6

07 December 2024

Time [--	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	379	352	0	25	1	0	0	0	1	0	0	0	0	0	0	32.8	37
0100	225	209	0	16	0	0	0	0	0	0	0	0	0	0	0	33.5	37.6
0200	113	102	0	10	0	0	0	0	1	0	0	0	0	0	0	34.3	39.4
0300	96	78	0	14	1	0	1	0	0	0	0	0	0	2	0	34.3	39.1
0400	85	75	0	5	0	1	0	3	0	1	0	0	0	0	0	34.3	38.7
0500	100	86	0	10	1	1	0	0	2	0	0	0	0	0	0	34.5	40.2
0600	241	208	0	27	1	0	0	1	0	1	0	0	0	3	0	33.3	38.3
0700	439	387	1	40	2	1	0	0	3	3	1	0	0	1	0	33	37.2
0800	736	660	5	63	1	1	0	3	0	1	0	0	0	0	2	32.9	36.7
0900	853	793	2	55	0	1	0	1	0	0	0	0	0	0	1	32.1	36.1
1000	1009	943	2	52	2	2	0	2	0	0	0	0	0	1	5	31	34.6
1100	1097	1037	5	46	0	2	0	3	1	1	0	0	0	1	1	30.2	34.4
1200	1179	1121	2	48	0	2	0	2	0	0	1	0	0	1	2	30	33.8
1300	1165	1097	4	54	1	2	2	0	0	1	0	0	0	2	2	30.8	34.7
1400	1130	1068	4	46	2	2	0	2	0	1	0	0	0	3	2	31	34.7
1500	1139	1078	2	44	2	3	0	2	0	0	1	0	0	3	4	30.8	35
1600	988	939	6	37	2	2	0	1	0	1	0	0	0	0	0	29.7	33.6
1700	1007	947	3	40	2	4	0	1	0	1	0	0	0	3	6	29.6	33.4
1800	849	803	4	35	1	1	0	2	0	1	0	0	0	2	0	31.5	35.3
1900	700	665	1	26	1	1	0	0	0	1	1	0	0	3	1	31.5	35.3
2000	584	560	1	16	2	0	0	1	0	1	0	0	0	3	0	32	35.7
2100	522	498	0	18	0	1	0	0	0	1	0	0	0	1	3	32.5	36
2200	451	433	0	14	2	0	0	0	0	0	0	0	0	2	0	32.7	36.2
2300	377	362	0	12	1	0	0	0	0	0	0	0	0	2	0	32.5	36.7
07-19	11591	10873	40	560	15	23	2	19	4	10	3	0	0	17	25	30.9	34.9
06-22	13638	12804	42	647	19	25	2	21	4	14	4	0	0	27	29	31.1	35.1
06-00	14466	13599	42	673	22	25	2	21	4	14	4	0	0	31	29	31.1	35.2
00-00	15464	14501	42	753	25	27	3	24	8	15	4	0	0	33	29	31.3	35.5

08 December 2024

Time [--	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	278	258	0	17	1	0	0	2	0	0	0	0	0	0	0	33.6	37.6
0100	200	191	0	7	0	0	0	1	0	1	0	0	0	0	0	33.6	37.5
0200	89	82	0	6	0	0	0	0	1	0	0	0	0	0	0	34.4	39.6
0300	70	63	0	6	1	0	0	0	0	0	0	0	0	0	0	35.4	40.7
0400	82	70	0	8	1	0	1	0	0	0	0	0	0	2	0	34.4	38.9
0500	95	78	1	11	4	1	0	0	0	0	0	0	0	0	0	33.6	38.9
0600	134	120	0	10	2	0	0	0	0	2	0	0	0	0	0	34.2	39.3
0700	174	158	0	14	0	0	0	0	0	1	0	0	0	0	1	33.6	37.8
0800	341	315	0	22	1	0	0	0	1	1	0	0	0	1	0	34.1	38.3
0900	634	601	2	30	0	0	0	0	0	0	0	0	0	1	0	32.7	36.7
1000	907	866	3	28	0	1	0	0	0	3	0	0	0	2	4	31.6	35.7
1100	979	935	5	31	0	1	1	2	0	1	0	0	0	1	2	31.6	35.6
1200	1228	1174	4	35	1	3	0	2	0	4	0	0	0	1	4	29.4	33.7
1300	1103	1062	5	26	0	0	0	3	1	0	0	0	0	3	3	30.6	34.3
1400	1040	984	3	44	0	2	0	0	0	3	0	0	0	2	2	32	35.8
1500	994	943	2	39	1	0	0	3	0	2	0	0	0	3	1	31.9	35.9
1600	927	882	1	34	2	2	0	2	0	1	0	0	0	2	1	31.6	35.2
1700	849	813	4	26	2	0	0	2	1	0	0	0	0	1	0	31.1	34.9
1800	737	702	1	28	0	1	0	0	1	0	0	0	0	2	2	31.8	35.8
1900	610	581	0	17	1	0	0	1	0	0	0	0	0	9	1	32.5	36.2
2000	523	484	0	34	1	0	0	0	0	0	0	0	0	4	0	32.5	36.2
2100	390	368	1	19	1	0	0	0	0	0	0	0	0	1	0	32.3	37.2
2200	296	275	0	15	2	1	0	1	1	0	0	0	0	1	0	33	38.1
2300	181	167	0	10	0	0	0	0	0	2	0	0	0	2	0	34.1	38.7
07-19	9913	9435	30	357	7	10	1	14	4	16	0	0	0	19	20	31.4	35.6
06-22	11570	10988	31	437	12	10	1	15	4	18	0	0	0	33	21	31.6	35.7
06-00	12047	11430	31	462	14	11	1	16	5	20	0	0	0	36	21	31.7	35.8
00-00	12861	12172	32	517	21	12	2	19	6	21	0	0	0	38	21	31.8	36

09 December 2024

Time [--	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	127	117	0	8	0	0	1	0	0	0	0	0	0	1	0	33.3	37.7
0100	72	63	0	6	1	0	0	1	0	1	0	0	0	0	0	32.3	37
0200	57	44	0	13	0	0	0	0	0	0	0	0	0	0	0	35.4	39.4
0300	57	50	0	6	0	0	0	0	0	1	0	0	0	0	0	33.7	37.3
0400	82	64	0	13	1	0	0	2	0	0	0	0	0	1	1	34.4	39.1
0500	240	200	0	36	0	1	0	0	1	1	0	0	0	1	0	33.5	37.7
0600	435	372	1	49	1	0	1	1	1	3	0	1	0	2	3	32.2	36.4
0700	903	827	3	50	3	5	1	4	0	0	0	0	1	5	4	30.1	34.1
0800	1265	1188	0	46	3	4	2	5	1	5	0	0	2	3	6	28.3	32.8
0900	1103	1004	2	81	2	3	0	4	3	1	0	1	0	1	1	30.8	34.7
1000	932	842	3	72	4	1	1	0	0	2	0	2	0	1	4	30.8	34.8
1100	1037	942	4	73	2	0	0	5	3	2	1	1	0	3	1	31	34.7
1200	1065	959	6	79	1	3	0	1	4	4	0	1	0	6	1	30.6	34.3
1300	1051	963	3	71	3	2	0	2	0	2	0	0	0	3	2	31	34.9
1400	1202	1110	2	65	5	3	0	1	5	3	0	0	1	4	3	29.3	33.9
1500	1391	1312	6	50	4	4	0	3	0	0	0	0	0	9	3	25.8	32
1600	1376	1277	6	73	4	2	0	1	3	3	0	1	0	4	2	25.6	30.3
1700	1170	1087	8	52	2	5	1	3	0	4	0	0	0	6	2	27.5	32
1800	1227	1149	4	46	6	4	0	5	1	3	0	0	0	6	3	27.8	32
1900	897	827	4	54	1	2	0	2	0	2	0	0	0	5	0	30.2	33.9
2000	549	510	2	30	0	0	0	0	0	2	0	0	0	5	0	31.5	35.5
2100	453	425	2	19	1	0	0	1	3	0	0	0	0	2	0	31.4	35.3
2200	341	316	1	21	1	0	1	0	0	0	0	0	0	1	0	31.8	36.1
2300	282	261	0	17	0	0	0	1	0	0	0	0	0	3	0	31.9	36.7
07-19	13722	12660	47	758	39	36	5	34	20	29	1	6	4	51	32	28.8	33.6
06-22	16056	14794	56	910	42	38	6	38	24	36	1	7	4	65	35	29.2	33.8
06-00	16679	15371	57	948	43	38	7	39	24	36	1	7	4	69	35	29.3	33.9
00-00	17314	15909	57	1030	45	39	8	42	25	39	1	7	4	72	36	29.4	34.1

K&MTRAFFIC SURVEYS

SITE: ATC - a227 Gravesend

LOCATION: Attached to signpost

GRID REFERENCE: 51.417946, 0.359219

DIRECTION: NORTHBOUND

SPEED LIMIT: 40

03 December 2024

Time [--]	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85
0000	137	0	0	0	39	62	30	5	1	0	0	0	0	0	0	0	34.5	39.5
0100	78	1	2	1	16	39	15	4	0	0	0	0	0	0	0	0	33.8	39.5
0200	62	0	0	0	17	32	13	0	0	0	0	0	0	0	0	0	33.9	38.2
0300	83	0	0	5	11	48	18	1	0	0	0	0	0	0	0	0	34	38.2
0400	101	0	0	1	23	46	24	7	0	0	0	0	0	0	0	0	35	40.1
0500	278	0	0	4	51	161	58	3	1	0	0	0	0	0	0	0	34.4	38.5
0600	471	0	0	11	140	260	55	5	0	0	0	0	0	0	0	0	32.9	36.9
0700	943	6	16	89	454	331	44	2	1	0	0	0	0	0	0	0	29.9	34.6
0800	1335	32	87	213	652	316	30	4	1	0	0	0	0	0	0	0	27.5	33
0900	1139	5	7	84	627	375	38	3	0	0	0	0	0	0	0	0	29.9	34.1
1000	1022	3	0	78	493	401	42	2	2	0	0	0	1	0	0	0	30.4	34
1100	1012	3	0	46	436	461	59	7	0	0	0	0	0	0	0	0	31.3	35
1200	1101	1	3	59	551	431	51	5	0	0	0	0	0	0	0	0	30.7	34.8
1300	1055	5	9	55	468	459	56	2	1	0	0	0	0	0	0	0	30.8	34.9
1400	1211	15	29	120	619	370	54	3	1	0	0	0	0	0	0	0	29.4	33.8
1500	1367	25	91	241	715	258	28	9	0	0	0	0	0	0	0	0	27.4	32.3
1600	1368	30	54	299	755	210	19	1	0	0	0	0	0	0	0	0	26.8	31.4
1700	1496	21	90	434	799	141	8	1	0	0	1	1	0	0	0	0	25.9	30.1
1800	1317	5	19	192	779	288	32	2	0	0	0	0	0	0	0	0	28.5	32.4
1900	1007	1	1	59	472	430	43	1	0	0	0	0	0	0	0	0	30.7	34.6
2000	708	1	5	23	282	327	62	5	3	0	0	0	0	0	0	0	31.8	36
2100	613	0	0	40	221	289	50	12	1	0	0	0	0	0	0	0	31.9	36
2200	461	0	0	7	144	226	71	10	3	0	0	0	0	0	0	0	33.3	37.7
2300	278	0	1	8	71	140	51	6	0	1	0	0	0	0	0	0	33.7	38.4
07-19	14366	151	405	1910	7348	4041	461	41	6	0	1	1	1	0	0	0	28.8	33.4
06-22	17165	153	411	2043	8463	5347	671	64	10	0	1	1	1	0	0	0	29.3	34
06-00	17904	153	412	2058	8678	5713	793	80	13	1	1	1	1	0	0	0	29.4	34.2
00-00	18643	154	414	2069	8835	6101	951	100	15	1	1	1	1	0	0	0	29.6	34.5

04 December 2024

Time [--	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85
0000	148	0	0	3	46	73	22	3	1	0	0	0	0	0	0	0	33.3	37.8
0100	92	0	0	2	24	50	15	1	0	0	0	0	0	0	0	0	33.5	38.5
0200	61	0	0	2	13	38	8	0	0	0	0	0	0	0	0	0	33.1	36.8
0300	96	0	0	4	28	45	16	2	1	0	0	0	0	0	0	0	33.4	38.4
0400	121	0	0	1	23	69	23	5	0	0	0	0	0	0	0	0	34.7	40.1
0500	259	0	0	4	55	137	56	5	1	1	0	0	0	0	0	0	34.5	38.6
0600	463	0	3	26	146	221	63	2	1	0	0	1	0	0	0	0	32.3	37
0700	772	7	15	41	293	356	52	8	0	0	0	0	0	0	0	0	31.3	35.7
0800	1133	11	43	123	533	386	32	5	0	0	0	0	0	0	0	0	29.3	33.8
0900	1116	9	17	111	517	410	48	3	1	0	0	0	0	0	0	0	30	34.3
1000	1020	4	12	48	443	442	64	7	0	0	0	0	0	0	0	0	31.1	35.3
1100	1020	2	3	32	446	460	69	7	1	0	0	0	0	0	0	0	31.5	35.2
1200	1064	3	1	34	472	488	62	3	1	0	0	0	0	0	0	0	31.3	35
1300	1049	1	4	58	468	455	57	4	2	0	0	0	0	0	0	0	31	34.9
1400	1218	16	17	102	574	447	51	10	0	0	0	0	1	0	0	0	30	34.7
1500	1401	16	77	275	761	245	23	2	1	0	0	0	0	1	0	0	27.4	31.9
1600	1131	18	36	180	573	294	25	3	1	0	0	0	1	0	0	0	28.3	33.2
1700	1478	19	98	356	779	200	22	4	0	0	0	0	0	0	0	0	26.5	31.1
1800	1340	3	10	220	800	276	27	3	1	0	0	0	0	0	0	0	28.3	32.2
1900	1066	0	6	120	535	356	44	4	0	1	0	0	0	0	0	0	29.9	34.2
2000	722	4	2	11	267	354	74	9	1	0	0	0	0	0	0	0	32.2	36.7
2100	608	0	2	17	173	324	81	7	4	0	0	0	0	0	0	0	33	37.3
2200	517	0	0	4	143	294	67	8	1	0	0	0	0	0	0	0	33.4	37.2
2300	305	0	0	1	74	172	50	7	0	1	0	0	0	0	0	0	33.9	38.2
07-19	13742	109	333	1580	6659	4459	532	59	8	0	0	0	2	1	0	0	29.4	34.1
06-22	16601	113	346	1754	7780	5714	794	81	14	1	0	1	2	1	0	0	29.8	34.4
06-00	17423	113	346	1759	7997	6180	911	96	15	2	0	1	2	1	0	0	30	34.7
00-00	18200	113	346	1775	8186	6592	1051	112	18	3	0	1	2	1	0	0	30.1	34.9

05 December 2024

Time [--	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85
0000	167	0	0	1	33	92	35	5	1	0	0	0	0	0	0	0	34.4	39.1
0100	86	0	0	1	20	35	22	8	0	0	0	0	0	0	0	0	35.4	41.5
0200	79	0	3	0	16	39	17	3	1	0	0	0	0	0	0	0	34.2	39.7
0300	91	0	0	1	26	39	20	4	1	0	0	0	0	0	0	0	34.3	39.4
0400	116	0	0	3	30	58	20	5	0	0	0	0	0	0	0	0	33.5	38.3
0500	383	0	0	6	108	210	52	6	1	0	0	0	0	0	0	0	33.4	37.4
0600	497	0	4	11	150	275	52	5	0	0	0	0	0	0	0	0	32.7	36.4
0700	782	11	29	52	306	329	51	3	1	0	0	0	0	0	0	0	30.4	35.2
0800	1372	226	290	340	381	113	5	1	0	11	2	0	0	0	2	1	21.7	29.8
0900	1130	10	17	100	580	380	37	5	1	0	0	0	0	0	0	0	29.7	33.8
1000	1049	4	2	87	524	377	49	6	0	0	0	0	0	0	0	0	30.2	34.2
1100	1051	2	7	103	469	418	46	3	1	0	2	0	0	0	0	0	30.4	34.4
1200	1085	4	6	84	524	412	49	6	0	0	0	0	0	0	0	0	30.3	34.3
1300	1025	3	1	37	420	514	46	3	1	0	0	0	0	0	0	0	31.4	35
1400	1169	9	38	105	631	351	32	3	0	0	0	0	0	0	0	0	29.1	33.4
1500	1332	33	113	218	658	275	32	3	0	0	0	0	0	0	0	0	27.1	32.3
1600	1208	20	85	372	577	145	7	1	0	1	0	0	0	0	0	0	25.7	30.6
1700	1257	18	65	323	662	177	9	2	0	0	0	0	0	0	0	1	26.4	31.1
1800	1353	4	65	368	706	196	13	1	0	0	0	0	0	0	0	0	26.6	31.2
1900	1019	2	59	259	565	126	8	0	0	0	0	0	0	0	0	0	26.5	30.8
2000	688	1	20	256	341	64	4	2	0	0	0	0	0	0	0	0	25.9	30
2100	516	0	30	128	242	106	7	3	0	0	0	0	0	0	0	0	27.2	32.2
2200	452	0	5	26	185	205	28	3	0	0	0	0	0	0	0	0	31.4	35.5
2300	266	0	2	5	85	130	38	5	1	0	0	0	0	0	0	0	33.1	37.5
07-19	13813	344	718	2189	6438	3687	376	37	4	12	4	0	0	0	2	2	28	33.2
06-22	16533	347	831	2843	7736	4258	447	47	4	12	4	0	0	0	2	2	27.9	33.1
06-00	17251	347	838	2874	8006	4593	513	55	5	12	4	0	0	0	2	2	28.1	33.3
00-00	18173	347	841	2886	8239	5066	679	86	9	12	4	0	0	0	2	2	28.4	33.7

06 December 2024

Time [--	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85
0000	193	0	0	2	42	105	38	4	2	0	0	0	0	0	0	0	34.2	38.9
0100	97	0	0	0	25	45	24	3	0	0	0	0	0	0	0	0	34.2	38.7
0200	104	0	0	2	25	51	22	3	1	0	0	0	0	0	0	0	34.7	39.7
0300	94	0	0	1	20	51	20	2	0	0	0	0	0	0	0	0	34.3	39.6
0400	101	0	1	1	19	43	32	4	1	0	0	0	0	0	0	0	34.9	39.8
0500	243	0	0	1	38	131	61	10	1	1	0	0	0	0	0	0	35.3	39.4
0600	525	1	0	24	180	265	51	4	0	0	0	0	0	0	0	0	32.3	36.6
0700	981	10	28	104	357	412	62	6	1	1	0	0	0	0	0	0	30.3	35.2
0800	1298	34	63	140	590	441	27	2	0	0	1	0	0	0	0	0	28.6	33.4
0900	1148	13	13	69	489	501	58	5	0	0	0	0	0	0	0	0	30.7	34.7
1000	1103	4	2	44	467	511	67	8	0	0	0	0	0	0	0	0	31.3	35.2
1100	1112	0	13	71	513	458	52	4	1	0	0	0	0	0	0	0	30.6	34.3
1200	1191	7	15	91	558	443	72	3	2	0	0	0	0	0	0	0	30.3	34.7
1300	1216	3	5	64	601	493	45	5	0	0	0	0	0	0	0	0	30.7	34.2
1400	1206	13	26	115	582	400	65	5	0	0	0	0	0	0	0	0	29.8	34.4
1500	1305	45	97	186	675	268	27	5	1	0	0	0	0	0	0	1	27.3	32.4
1600	1453	24	91	441	729	155	12	0	0	0	1	0	0	0	0	0	25.7	30.4
1700	1374	20	122	343	706	173	8	2	0	0	0	0	0	0	0	0	26	30.9
1800	1205	18	16	186	635	317	28	4	1	0	0	0	0	0	0	0	28.6	32.9
1900	933	0	0	40	489	347	51	3	2	0	0	0	0	1	0	0	31	34.7
2000	769	0	0	18	327	360	54	9	1	0	0	0	0	0	0	0	31.8	35.5
2100	903	2	0	62	452	327	55	5	0	0	0	0	0	0	0	0	30.5	34.9
2200	687	0	2	26	265	335	56	3	0	0	0	0	0	0	0	0	31.8	35.6
2300	560	0	2	24	231	251	48	4	0	0	0	0	0	0	0	0	31.7	35.9
07-19	14592	191	491	1854	6902	4572	523	49	6	1	2	0	0	0	0	1	29	33.8
06-22	17722	194	491	1998	8350	5871	734	70	9	1	2	0	0	1	0	1	29.4	34.1
06-00	18969	194	495	2048	8846	6457	838	77	9	1	2	0	0	1	0	1	29.5	34.2
00-00	19801	194	496	2055	9015	6883	1035	103	14	2	2	0	0	1	0	1	29.8	34.6

07 December 2024

Time [--	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85
0000	379	0	0	5	134	188	46	5	1	0	0	0	0	0	0	0	32.8	37
0100	225	0	1	1	62	122	33	6	0	0	0	0	0	0	0	0	33.5	37.6
0200	113	0	0	2	26	53	27	5	0	0	0	0	0	0	0	0	34.3	39.4
0300	96	0	1	1	22	49	19	3	1	0	0	0	0	0	0	0	34.3	39.1
0400	85	0	1	0	20	40	20	4	0	0	0	0	0	0	0	0	34.3	38.7
0500	100	0	0	3	16	55	22	4	0	0	0	0	0	0	0	0	34.5	40.2
0600	241	0	1	7	60	130	40	3	0	0	0	0	0	0	0	0	33.3	38.3
0700	439	0	0	6	126	245	55	5	2	0	0	0	0	0	0	0	33	37.2
0800	736	2	0	15	214	417	81	6	1	0	0	0	0	0	0	0	32.9	36.7
0900	853	1	0	22	333	410	82	5	0	0	0	0	0	0	0	0	32.1	36.1
1000	1009	6	1	54	454	445	36	9	0	3	0	0	0	0	1	0	31	34.6
1100	1097	4	4	71	565	399	51	3	0	0	0	0	0	0	0	0	30.2	34.4
1200	1179	6	10	91	621	395	50	4	2	0	0	0	0	0	0	0	30	33.8
1300	1165	4	4	72	542	473	61	8	1	0	0	0	0	0	0	0	30.8	34.7
1400	1130	2	10	55	502	490	61	9	1	0	0	0	0	0	0	0	31	34.7
1500	1139	2	3	74	552	425	68	14	1	0	0	0	0	0	0	0	30.8	35
1600	988	2	11	77	559	303	34	2	0	0	0	0	0	0	0	0	29.7	33.6
1700	1007	5	11	93	572	287	34	4	0	0	1	0	0	0	0	0	29.6	33.4
1800	849	0	0	26	398	361	56	8	0	0	0	0	0	0	0	0	31.5	35.3
1900	700	1	3	33	289	321	43	9	0	0	0	0	0	0	0	1	31.5	35.3
2000	584	0	2	13	234	284	47	4	0	0	0	0	0	0	0	0	32	35.7
2100	522	3	1	12	180	278	36	9	1	1	0	0	0	0	1	0	32.5	36
2200	451	0	0	10	141	250	44	6	0	0	0	0	0	0	0	0	32.7	36.2
2300	377	0	0	5	148	180	40	3	0	1	0	0	0	0	0	0	32.5	36.7
07-19	11591	34	54	656	5438	4650	669	77	8	3	1	0	0	0	1	0	30.9	34.9
06-22	13638	38	61	721	6201	5663	835	102	9	4	1	0	0	0	2	1	31.1	35.1
06-00	14466	38	61	736	6490	6093	919	111	9	5	1	0	0	0	2	1	31.1	35.2
00-00	15464	38	64	748	6770	6600	1086	138	11	5	1	0	0	0	2	1	31.3	35.5

08 December 2024

Time [--	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85
0000	278	0	0	5	70	153	44	5	1	0	0	0	0	0	0	0	33.6	37.6
0100	200	0	0	2	52	109	36	1	0	0	0	0	0	0	0	0	33.6	37.5
0200	89	0	1	0	22	43	18	4	1	0	0	0	0	0	0	0	34.4	39.6
0300	70	0	0	1	15	32	18	4	0	0	0	0	0	0	0	0	35.4	40.7
0400	82	0	0	2	16	42	20	2	0	0	0	0	0	0	0	0	34.4	38.9
0500	95	0	0	1	31	42	15	6	0	0	0	0	0	0	0	0	33.6	38.9
0600	134	0	0	2	35	62	29	6	0	0	0	0	0	0	0	0	34.2	39.3
0700	174	1	0	5	42	97	23	5	0	1	0	0	0	0	0	0	33.6	37.8
0800	341	0	0	1	82	179	74	5	0	0	0	0	0	0	0	0	34.1	38.3
0900	634	0	0	16	204	346	60	6	2	0	0	0	0	0	0	0	32.7	36.7
1000	907	4	0	42	340	444	75	2	0	0	0	0	0	0	0	0	31.6	35.7
1100	979	2	0	45	379	484	64	4	1	0	0	0	0	0	0	0	31.6	35.6
1200	1228	7	11	146	622	407	34	1	0	0	0	0	0	0	0	0	29.4	33.7
1300	1103	4	1	61	558	421	51	3	2	0	0	2	0	0	0	0	30.6	34.3
1400	1040	3	0	35	402	501	89	8	0	0	0	0	0	2	0	0	32	35.8
1500	994	1	6	32	382	498	71	3	0	0	0	0	0	0	1	0	31.9	35.9
1600	927	2	0	29	370	457	63	5	1	0	0	0	0	0	0	0	31.6	35.2
1700	849	0	3	35	385	385	37	3	1	0	0	0	0	0	0	0	31.1	34.9
1800	737	2	0	33	270	367	60	5	0	0	0	0	0	0	0	0	31.8	35.8
1900	610	1	0	9	203	329	65	3	0	0	0	0	0	0	0	0	32.5	36.2
2000	523	0	1	8	177	292	40	5	0	0	0	0	0	0	0	0	32.5	36.2
2100	390	0	2	18	128	185	55	1	1	0	0	0	0	0	0	0	32.3	37.2
2200	296	0	2	8	98	134	43	10	1	0	0	0	0	0	0	0	33	38.1
2300	181	0	0	3	45	91	35	7	0	0	0	0	0	0	0	0	34.1	38.7
07-19	9913	26	21	480	4036	4586	701	50	7	1	0	2	0	2	1	0	31.4	35.6
06-22	11570	27	24	517	4579	5454	890	65	8	1	0	2	0	2	1	0	31.6	35.7
06-00	12047	27	26	528	4722	5679	968	82	9	1	0	2	0	2	1	0	31.7	35.8
00-00	12861	27	27	539	4928	6100	1119	104	11	1	0	2	0	2	1	0	31.8	36

09 December 2024

Time [--	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85
0000	127	0	0	3	34	67	22	0	1	0	0	0	0	0	0	0	33.3	37.7
0100	72	0	0	5	24	33	8	2	0	0	0	0	0	0	0	0	32.3	37
0200	57	0	0	0	10	23	22	1	1	0	0	0	0	0	0	0	35.4	39.4
0300	57	0	0	0	20	29	6	1	0	0	0	1	0	0	0	0	33.7	37.3
0400	82	1	0	0	21	32	27	1	0	0	0	0	0	0	0	0	34.4	39.1
0500	240	0	1	1	55	143	36	4	0	0	0	0	0	0	0	0	33.5	37.7
0600	435	5	0	6	153	230	37	3	1	0	0	0	0	0	0	0	32.2	36.4
0700	903	5	15	71	462	314	26	1	5	1	0	1	2	0	0	0	30.1	34.1
0800	1265	14	40	173	710	300	28	0	0	0	0	0	0	0	0	0	28.3	32.8
0900	1103	3	6	53	531	443	62	5	0	0	0	0	0	0	0	0	30.8	34.7
1000	932	5	7	64	381	432	42	1	0	0	0	0	0	0	0	0	30.8	34.8
1100	1037	2	5	54	493	434	38	6	1	1	1	0	0	0	0	2	31	34.7
1200	1065	5	14	65	466	467	39	7	0	1	0	1	0	0	0	0	30.6	34.3
1300	1051	4	2	64	449	474	51	7	0	0	0	0	0	0	0	0	31	34.9
1400	1202	16	22	139	609	362	48	5	0	0	1	0	0	0	0	0	29.3	33.9
1500	1391	76	158	259	624	243	27	3	0	1	0	0	0	0	0	0	25.8	32
1600	1376	29	99	404	680	150	10	4	0	0	0	0	0	0	0	0	25.6	30.3
1700	1170	5	45	232	644	212	31	1	0	0	0	0	0	0	0	0	27.5	32
1800	1227	15	41	195	732	214	26	3	0	1	0	0	0	0	0	0	27.8	32
1900	897	0	4	55	489	322	24	3	0	0	0	0	0	0	0	0	30.2	33.9
2000	549	0	0	21	248	245	33	2	0	0	0	0	0	0	0	0	31.5	35.5
2100	453	0	0	15	227	180	25	6	0	0	0	0	0	0	0	0	31.4	35.3
2200	341	0	1	11	133	163	28	5	0	0	0	0	0	0	0	0	31.8	36.1
2300	282	0	1	11	122	117	25	6	0	0	0	0	0	0	0	0	31.9	36.7
07-19	13722	179	454	1773	6781	4045	428	43	6	5	2	2	2	0	0	2	28.8	33.6
06-22	16056	184	458	1870	7898	5022	547	57	7	5	2	2	2	0	0	2	29.2	33.8
06-00	16679	184	460	1892	8153	5302	600	68	7	5	2	2	2	0	0	2	29.3	33.9
00-00	17314	185	461	1901	8317	5629	721	77	9	5	2	3	2	0	0	2	29.4	34.1

Grand Total

Time [--	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85
--	120456	1058	2649	11973	54290	42971	6642	720	87	29	10	7	5	4	5	6	30	34.8

K&MTRAFFIC SURVEYS

SITE: ATC - a227 Gravesend

LOCATION: Attached to signpost

GRID REFERENCE: 51.417946, 0.359219

DIRECTION: NORTHBOUND

SPEED LIMIT: 40

	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Averages	
	03-Dec	04-Dec	05-Dec	06-Dec	07-Dec	08-Dec	09-Dec	1-5.	1-7.
Hour									
0000-0100	137	148	167	193	379	278	127	154.4	204.1
0100-0200	78	92	86	97	225	200	72	85	121.4
0200-0300	62	61	79	104	113	89	57	72.6	80.7
0300-0400	83	96	91	94	96	70	57	84.2	83.9
0400-0500	101	121	116	101	85	82	82	104.2	98.3
0500-0600	278	259	383	243	100	95	240	280.6	228.3
0600-0700	471	463	497	525	241	134	435	478.2	395.1
0700-0800	943	772	782	981	439	174	903	876.2	713.4
0800-0900	1335	1133	1372	1298	736	341	1265	1280.6	1068.6
0900-1000	1139	1116	1130	1148	853	634	1103	1127.2	1017.6
1000-1100	1022	1020	1049	1103	1009	907	932	1025.2	1006
1100-1200	1012	1020	1051	1112	1097	979	1037	1046.4	1044
1200-1300	1101	1064	1085	1191	1179	1228	1065	1101.2	1130.4
1300-1400	1055	1049	1025	1216	1165	1103	1051	1079.2	1094.9
1400-1500	1211	1218	1169	1206	1130	1040	1202	1201.2	1168
1500-1600	1367	1401	1332	1305	1139	994	1391	1359.2	1275.6
1600-1700	1368	1131	1208	1453	988	927	1376	1307.2	1207.3
1700-1800	1496	1478	1257	1374	1007	849	1170	1355	1233
1800-1900	1317	1340	1353	1205	849	737	1227	1288.4	1146.9
1900-2000	1007	1066	1019	933	700	610	897	984.4	890.3
2000-2100	708	722	688	769	584	523	549	687.2	649
2100-2200	613	608	516	903	522	390	453	618.6	572.1
2200-2300	461	517	452	687	451	296	341	491.6	457.9
2300-2400	278	305	266	560	377	181	282	338.2	321.3
Totals									
0700-1900	14366	13742	13813	14592	11591	9913	13722	14047	13105.6
0600-2200	17165	16601	16533	17722	13638	11570	16056	16815.4	15612.1
0600-0000	17904	17423	17251	18969	14466	12047	16679	17645.2	16391.3
0000-0000	18643	18200	18173	19801	15464	12861	17314	18426.2	17208
AM Peak	800	800	800	800	1100	1100	800		
	1335	1133	1372	1298	1097	979	1265		
PM Peak	1700	1700	1800	1600	1200	1200	1500		
	1496	1478	1353	1453	1179	1228	1391		

K&MTRAFFIC SURVEYS

SITE: ATC - a227 Gravesend

LOCATION: Attached to signpost

GRID REFERENCE: 51.417946, 0.359219

DIRECTION: SOUTHBOUND SPEED LIMIT: 40

03 December 2024

Time [--]	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	90	78	0	9	0	1	0	1	0	0	0	0	0	1	0	35.1	41.3
0100	67	51	0	11	0	1	0	1	1	0	0	0	0	2	0	34.7	39.9
0200	53	38	0	11	0	1	0	2	1	0	0	0	0	0	0	33.3	39.2
0300	96	68	0	22	1	0	0	1	1	1	0	0	0	2	0	34.3	39.2
0400	190	148	0	35	0	0	0	0	2	2	0	1	0	2	0	34.2	37.9
0500	654	521	0	108	3	4	1	4	2	3	1	0	0	7	0	33	37.1
0600	958	789	5	132	10	5	0	3	2	5	0	0	0	7	0	30.5	34.3
0700	1448	1290	28	93	11	12	0	1	1	6	1	0	1	3	1	24.7	30.3
0800	1530	1381	45	55	5	20	3	7	1	8	2	2	0	1	0	20.7	28.1
0900	1294	1150	19	107	3	4	0	4	1	2	1	1	1	1	0	26.9	31.4
1000	1089	949	6	107	4	8	0	2	0	5	1	2	0	4	1	29.1	32.8
1100	1087	970	6	87	4	6	0	0	2	4	1	1	0	5	1	29.5	33
1200	1131	1030	11	74	4	5	0	1	1	2	0	0	0	2	1	28.8	32.8
1300	1181	1045	20	82	5	6	2	6	1	4	1	2	0	7	0	25.1	32.3
1400	1300	1140	20	112	4	7	2	5	1	2	2	1	0	4	0	24.2	31.2
1500	1390	1261	41	45	6	17	1	3	1	9	0	2	0	3	1	20.3	28.5
1600	1417	1270	43	45	9	18	2	9	3	5	4	1	0	8	0	18.5	27.1
1700	1271	1193	13	45	2	3	0	2	1	2	0	3	0	6	1	24	30.4
1800	1036	973	5	41	4	0	0	0	2	2	1	0	0	8	0	28.7	33
1900	873	816	2	47	4	1	0	0	0	0	0	0	0	3	0	31.2	34.6
2000	573	527	1	39	3	0	0	0	0	0	0	0	0	3	0	32.4	35.9
2100	495	462	1	26	3	0	0	0	0	1	0	0	0	2	0	32.5	36.2
2200	274	245	2	23	0	0	0	1	1	1	0	0	0	1	0	33.8	37.7
2300	173	152	1	17	0	0	0	2	1	0	0	0	0	0	0	33.8	37.9
07-19	15174	13652	257	893	61	106	10	40	15	51	14	15	2	52	6	24.7	31.4
06-22	18073	16246	266	1137	81	112	10	43	17	57	14	15	2	67	6	25.8	32.4
06-00	18520	16643	269	1177	81	112	10	46	19	58	14	15	2	68	6	25.9	32.7
00-00	19670	17547	269	1373	85	119	11	55	26	64	15	16	2	82	6	26.4	33.1

04 December 2024

Time [--	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	110	88	0	17	0	2	0	1	1	1	0	0	0	0	0	33.9	38.9
0100	56	40	0	8	2	1	0	1	3	0	0	0	0	1	0	34	39.9
0200	47	36	0	10	0	0	0	1	0	0	0	0	0	0	0	33.4	37.6
0300	95	67	0	21	2	0	0	0	1	2	0	0	0	2	0	33	38.7
0400	179	141	0	26	5	0	0	0	1	5	0	0	0	1	0	33.9	38.5
0500	603	483	1	88	12	8	0	2	0	2	0	0	0	6	1	33	36.2
0600	901	748	2	118	7	6	1	2	3	5	1	0	1	7	0	30.2	34.7
0700	1366	1197	19	106	12	11	3	7	3	2	1	1	1	2	1	23.1	30.6
0800	1493	1324	41	65	12	21	4	6	1	12	4	1	0	1	1	20.2	28
0900	1155	1059	5	74	5	4	0	3	1	0	0	0	0	4	0	30	33.7
1000	999	884	5	89	4	4	1	0	6	4	0	1	0	1	0	29.9	33.7
1100	1092	979	9	87	7	2	0	0	0	4	0	1	0	3	0	29.1	33.2
1200	1185	1061	15	91	3	4	0	2	0	5	1	0	0	3	0	28.3	32.8
1300	1150	1017	10	101	3	4	1	0	2	4	1	1	0	5	1	28.9	33.1
1400	1253	1114	18	92	7	8	2	2	0	5	0	2	0	3	0	26.1	32.4
1500	1334	1210	33	53	6	13	1	0	0	7	1	2	0	6	2	20.4	28.8
1600	1334	1184	41	69	5	15	0	5	2	5	2	1	1	4	0	20.6	29.3
1700	1238	1140	19	54	3	2	0	5	1	2	1	3	0	8	0	25.5	30.9
1800	1064	991	5	55	1	0	0	1	1	5	0	0	0	5	0	28.7	32.5
1900	881	811	3	54	2	2	1	1	1	0	0	1	0	5	0	30.5	34.1
2000	609	570	1	31	3	0	0	1	0	0	0	0	0	2	1	32.1	35.9
2100	529	499	0	22	2	0	0	0	2	1	0	0	0	3	0	32.5	36.1
2200	305	275	0	24	1	0	0	1	1	0	0	0	0	3	0	33.2	37.5
2300	172	153	0	17	1	1	0	0	0	0	0	0	0	0	0	33.3	37.5
07-19	14663	13160	220	936	68	88	12	31	17	55	11	13	2	45	5	25.5	32.1
06-22	17583	15788	226	1161	82	96	14	35	23	61	12	14	3	62	6	26.4	32.8
06-00	18060	16216	226	1202	84	97	14	36	24	61	12	14	3	65	6	26.6	33
00-00	19150	17071	227	1372	105	108	14	41	30	71	12	14	3	75	7	27	33.4

05 December 2024

Time [--	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	114	95	0	14	2	0	0	1	1	1	0	0	0	0	0	33.4	38.3
0100	60	44	0	11	2	0	0	0	1	1	0	0	0	1	0	33.4	39
0200	45	36	0	9	0	0	0	0	0	0	0	0	0	0	0	34.2	40.7
0300	96	73	0	16	2	0	0	0	2	1	0	0	0	2	0	33.6	38.6
0400	184	146	0	25	3	0	0	0	4	3	0	0	0	2	1	31.6	36.2
0500	493	378	2	91	5	6	0	2	2	5	0	0	0	1	1	32	36
0600	851	687	4	134	6	3	1	4	2	2	0	0	0	8	0	29.9	33.9
0700	1302	1153	22	97	5	12	0	2	1	3	0	1	1	4	1	22.9	30.8
0800	1383	1286	26	38	6	10	2	3	1	4	0	2	1	4	0	17.3	22.2
0900	1224	1067	22	102	7	11	0	2	2	3	0	2	0	6	0	23.7	31.8
1000	1037	920	5	91	2	7	0	2	3	3	0	0	0	4	0	28.9	33.7
1100	1109	979	11	96	1	1	3	3	3	5	2	1	0	3	1	26.8	32.3
1200	1181	1041	18	84	5	8	0	5	0	8	2	1	0	9	0	26.5	32
1300	1186	1037	16	100	1	11	0	1	1	9	0	3	0	7	0	27.1	32.5
1400	1243	1100	37	78	2	8	0	4	1	5	1	4	0	3	0	22.5	31.7
1500	1274	1162	25	52	4	13	2	3	0	4	2	0	1	3	3	20.7	29.2
1600	1346	1230	34	44	3	20	1	4	0	5	0	0	0	4	1	16.4	20
1700	1230	1122	30	40	3	18	1	2	0	5	1	3	0	4	1	19.9	28.9
1800	1012	951	7	42	0	1	1	1	0	3	0	0	0	6	0	27.5	31.2
1900	820	761	8	39	0	3	1	0	0	0	0	1	0	7	0	26.6	30.9
2000	590	540	0	42	3	1	0	0	0	1	0	0	0	3	0	27.8	31.9
2100	503	463	1	29	2	0	0	1	1	0	0	0	0	4	2	29.2	33.9
2200	294	275	2	13	1	1	0	0	1	0	0	0	0	1	0	32.8	36.2
2300	174	154	1	14	1	0	0	0	1	0	0	0	0	3	0	33.7	38.3
07-19	14527	13048	253	864	39	120	10	32	12	57	8	17	3	57	7	23	31.1
06-22	17291	15499	266	1108	50	127	12	37	15	60	8	18	3	79	9	23.9	31.4
06-00	17759	15928	269	1135	52	128	12	37	17	60	8	18	3	83	9	24.1	31.7
00-00	18751	16700	271	1301	66	134	12	40	27	71	8	18	3	89	11	24.6	32.1

06 December 2024

Time [--	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	136	121	0	8	3	0	0	1	0	0	0	0	0	3	0	33.2	37.5
0100	87	77	0	7	0	0	0	1	2	0	0	0	0	0	0	34.8	39.9
0200	82	67	0	12	2	0	0	1	0	0	0	0	0	0	0	34.2	38.7
0300	104	78	0	21	2	0	0	0	1	0	0	1	0	1	0	34.8	39.4
0400	178	141	0	23	1	2	0	1	3	4	0	0	0	3	0	34.2	38
0500	548	440	3	88	6	3	1	0	3	2	0	0	0	2	0	32.6	36.2
0600	863	695	2	125	10	6	1	4	3	6	1	0	0	9	1	30.4	34.8
0700	1277	1146	12	94	7	4	1	1	0	3	1	1	0	7	0	27.1	32.1
0800	1420	1299	31	40	9	20	0	6	1	8	2	4	0	0	0	18.9	28.3
0900	1241	1113	23	83	2	10	0	2	0	3	1	0	0	4	0	26.5	32.5
1000	1138	1018	3	95	5	9	0	1	1	2	0	0	0	4	0	29.2	33
1100	1189	1064	8	96	7	5	1	0	0	5	0	0	1	2	0	29.4	33.1
1200	1263	1122	30	73	1	13	1	1	2	6	3	2	0	8	1	24.2	31.4
1300	1288	1153	15	96	2	7	1	3	0	2	1	1	0	7	0	27	31.9
1400	1346	1210	29	72	2	14	0	5	1	6	2	0	0	4	1	22.9	30.8
1500	1430	1288	47	50	5	15	2	2	2	7	5	0	0	5	2	17.6	23.3
1600	1327	1213	33	40	3	14	0	3	4	3	1	2	0	10	1	20.7	29
1700	1305	1209	25	42	7	12	1	2	0	2	1	1	0	3	0	21.7	30
1800	1216	1139	12	48	3	3	0	0	2	3	0	1	0	4	1	26.8	32
1900	809	750	6	39	4	0	0	1	1	0	0	0	0	8	0	31.1	34.7
2000	622	583	2	25	2	1	0	0	1	0	0	0	0	7	1	31.3	35.1
2100	485	450	0	24	2	2	0	0	0	1	0	0	0	5	1	31.3	35.4
2200	398	373	0	22	1	0	0	0	1	1	0	0	0	0	0	32.4	36.6
2300	310	296	0	12	0	0	0	0	0	0	0	0	0	2	0	32.5	36.7
07-19	15440	13974	268	829	53	126	7	26	13	50	17	12	1	58	6	24.1	31.5
06-22	18219	16452	278	1042	71	135	8	31	18	57	18	12	1	87	9	25.2	32.3
06-00	18927	17121	278	1076	72	135	8	31	19	58	18	12	1	89	9	25.4	32.5
00-00	20062	18045	281	1235	86	140	9	35	28	64	18	13	1	98	9	25.9	33

07 December 2024

Time [--	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	205	185	0	17	1	0	0	0	1	0	0	0	0	1	0	32.8	36.6
0100	150	136	1	13	0	0	0	0	0	0	0	0	0	0	0	32.7	37.1
0200	95	87	0	5	0	0	0	0	3	0	0	0	0	0	0	33.4	38.1
0300	113	99	0	9	1	1	0	0	1	0	0	0	0	2	0	33.9	38.5
0400	107	94	0	8	1	0	0	0	4	0	0	0	0	0	0	33.8	37.1
0500	196	169	0	23	0	0	0	0	2	0	0	0	0	2	0	34.3	38.4
0600	345	287	2	48	2	1	0	1	1	1	0	0	0	2	0	32.9	36.5
0700	509	446	1	52	1	1	0	0	1	3	0	0	0	4	0	32.7	35.6
0800	748	691	2	52	0	1	0	0	0	2	0	0	0	0	0	31.7	35.3
0900	971	907	3	51	6	0	0	0	0	1	0	0	0	3	0	30.5	34.2
1000	1093	1033	5	51	2	0	0	0	0	2	0	0	0	0	0	29.3	33
1100	1175	1116	8	39	1	2	0	2	0	4	0	0	0	3	0	28.4	32.8
1200	1260	1195	13	42	2	2	0	2	0	2	0	0	0	2	0	27.8	32.7
1300	1183	1119	6	39	6	4	0	2	0	4	0	0	0	3	0	29.4	33.2
1400	1090	1042	3	38	4	0	0	0	1	1	1	0	0	0	0	29.7	34.2
1500	1074	1023	7	31	5	0	1	0	2	3	0	0	0	2	0	28.8	33.4
1600	1041	978	8	42	5	1	0	3	0	3	0	0	0	1	0	28.6	32.9
1700	940	902	2	29	2	0	0	0	1	1	0	1	0	2	0	29.3	33.2
1800	798	759	0	30	4	1	0	0	0	2	0	0	0	2	0	31.1	34.6
1900	625	598	1	22	1	0	0	0	0	0	0	0	0	3	0	31.5	34.8
2000	535	512	2	20	0	1	0	0	0	0	0	0	0	0	0	31.9	35.4
2100	458	427	1	22	2	0	0	0	2	0	0	0	0	3	1	32.2	35.7
2200	352	335	0	13	3	0	0	0	0	0	0	0	0	0	1	32.2	36.7
2300	292	276	0	11	1	0	0	1	0	1	0	0	0	2	0	32.8	36.6
07-19	11882	11211	58	496	38	12	1	9	5	28	1	1	0	22	0	29.5	33.7
06-22	13845	13035	64	608	43	14	1	10	8	29	1	1	0	30	1	29.9	34
06-00	14489	13646	64	632	47	14	1	11	8	30	1	1	0	32	2	30	34.1
00-00	15355	14416	65	707	50	15	1	11	19	30	1	1	0	37	2	30.2	34.3

08 December 2024

Time [--	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	210	195	0	13	0	0	1	0	0	0	0	0	0	1	0	33.3	37.6
0100	156	150	1	3	1	0	0	0	1	0	0	0	0	0	0	34	38.1
0200	85	79	0	4	1	0	0	0	1	0	0	0	0	0	0	33.2	37.4
0300	89	81	0	6	1	0	0	0	0	0	0	0	0	0	1	34.6	38.6
0400	76	69	0	4	1	1	0	0	0	0	0	0	0	1	0	34.8	39.3
0500	151	133	0	14	1	2	1	0	0	0	0	0	0	0	0	34	37.4
0600	184	160	0	21	2	0	0	0	1	0	0	0	0	0	0	34.3	38.5
0700	260	231	1	23	3	0	1	0	0	0	0	0	0	1	0	33.4	36.8
0800	432	397	0	28	3	1	0	1	0	2	0	0	0	0	0	32.2	35.9
0900	684	648	3	29	2	0	0	0	0	0	0	0	0	2	0	32	35.4
1000	1025	980	2	31	3	4	0	0	1	1	0	0	0	2	1	30.9	34.3
1100	1110	1065	13	25	0	2	0	0	0	4	0	0	0	1	0	30.1	33.7
1200	1231	1166	6	42	1	6	0	3	1	1	1	1	1	1	1	27.9	32.5
1300	1171	1127	8	26	1	1	0	0	1	2	0	1	0	4	0	30.3	33.7
1400	1007	965	3	31	2	1	0	1	1	1	0	1	0	1	0	30.5	34.2
1500	982	939	4	33	1	0	0	0	0	3	0	0	0	2	0	30.8	34.6
1600	805	765	8	23	4	1	0	0	0	1	0	0	0	3	0	30.7	34.7
1700	736	706	2	19	1	1	0	0	1	1	0	1	0	4	0	31.7	35.1
1800	646	616	0	21	2	1	0	1	1	1	1	0	0	2	0	31.7	35.5
1900	581	549	3	23	1	0	0	0	1	1	0	0	0	3	0	31.6	35.4
2000	404	384	0	18	0	0	0	0	0	0	0	0	0	1	1	32.6	36.4
2100	345	328	1	14	2	0	0	0	0	0	0	0	0	0	0	32.1	35.8
2200	262	250	1	8	1	0	0	1	0	1	0	0	0	0	0	33.4	37.5
2300	174	165	0	6	2	0	0	0	0	0	0	0	0	1	0	33.2	37
07-19	10089	9605	50	331	23	18	1	6	6	17	2	4	1	23	2	30.6	34.4
06-22	11603	11026	54	407	28	18	1	6	8	18	2	4	1	27	3	30.8	34.7
06-00	12039	11441	55	421	31	18	1	7	8	19	2	4	1	28	3	30.9	34.8
00-00	12806	12148	56	465	36	21	3	7	10	19	2	4	1	30	4	31.1	35

09 December 2024

Time [--	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	85	74	0	5	1	1	0	0	1	0	0	1	0	2	0	33.7	39.1
0100	60	51	0	4	1	0	0	0	1	2	0	0	0	1	0	33.2	37.1
0200	48	38	0	9	1	0	0	0	0	0	0	0	0	0	0	34.2	38.9
0300	66	55	0	6	0	0	0	1	1	0	0	0	0	1	2	32.8	38.3
0400	137	112	0	15	2	1	0	0	1	5	0	0	0	1	0	33.4	37.6
0500	544	453	1	72	7	1	0	1	1	6	0	0	0	0	2	32.6	36.4
0600	796	665	4	103	10	2	1	3	1	2	0	0	0	5	0	30.4	34.4
0700	1334	1198	16	97	4	4	1	1	2	6	0	1	0	3	1	26.3	31.4
0800	1441	1300	33	76	5	9	1	2	4	6	0	1	1	2	1	23.4	30.2
0900	1073	988	12	56	2	3	1	2	2	4	0	0	0	3	0	29.6	33.4
1000	1072	941	8	98	4	6	0	2	1	6	1	1	0	4	0	29.4	33.4
1100	1093	965	10	98	5	1	0	1	3	3	1	0	1	5	0	29.9	33.6
1200	1197	1080	10	80	7	7	1	2	0	3	0	2	0	5	0	26.1	32.4
1300	1100	976	16	87	8	4	0	1	0	1	1	0	1	4	1	28.8	33.6
1400	1242	1138	24	53	1	8	0	6	1	6	1	0	1	3	0	24.7	31.3
1500	1316	1235	14	51	3	2	0	3	2	2	1	1	0	1	1	23.1	29.6
1600	1337	1213	23	69	6	9	0	4	0	3	0	3	0	7	0	21.3	29
1700	1239	1163	13	44	3	5	0	4	0	2	1	0	0	4	0	26.2	31.7
1800	1046	981	10	48	0	5	0	0	0	0	1	0	0	1	0	26.7	32.1
1900	804	755	4	37	2	1	0	0	0	2	0	0	0	3	0	30.8	34.6
2000	528	494	4	25	2	0	0	0	0	0	0	0	0	3	0	31.4	35.6
2100	480	459	1	16	0	0	0	0	0	1	0	0	0	3	0	31.7	35.6
2200	320	303	0	16	0	0	0	0	1	0	0	0	0	0	0	33	36.4
2300	181	169	0	12	0	0	0	0	0	0	0	0	0	0	0	33.7	38.5
07-19	14490	13178	189	857	48	63	4	28	15	42	7	9	4	42	4	26.1	32.2
06-22	17098	15551	202	1038	62	66	5	31	16	47	7	9	4	56	4	26.8	32.8
06-00	17599	16023	202	1066	62	66	5	31	17	47	7	9	4	56	4	27	32.9
00-00	18539	16806	203	1177	74	69	5	33	22	60	7	10	4	61	8	27.3	33.2

K&MTRAFFIC SURVEYS

SITE: ATC - a227 Gravesend

LOCATION: Attached to signpost

GRID REFERENCE: 51.417946, 0.359219

DIRECTION: SOUTHBOUND

SPEED LIMIT: 40

03 December 2024

Time [--	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85
0000	90	0	0	1	16	45	20	8	0	0	0	0	0	0	0	0	35.1	41.3
0100	67	0	0	2	14	33	16	1	1	0	0	0	0	0	0	0	34.7	39.9
0200	53	0	0	1	20	19	10	3	0	0	0	0	0	0	0	0	33.3	39.2
0300	96	0	0	1	19	54	19	2	1	0	0	0	0	0	0	0	34.3	39.2
0400	190	0	0	0	38	112	35	5	0	0	0	0	0	0	0	0	34.2	37.9
0500	654	0	0	14	176	370	91	3	0	0	0	0	0	0	0	0	33	37.1
0600	958	0	7	74	434	401	40	2	0	0	0	0	0	0	0	0	30.5	34.3
0700	1448	29	211	456	582	157	12	0	1	0	0	0	0	0	0	0	24.7	30.3
0800	1530	118	569	422	332	81	3	2	0	0	2	0	1	0	0	0	20.7	28.1
0900	1294	19	95	214	734	220	11	1	0	0	0	0	0	0	0	0	26.9	31.4
1000	1089	5	4	111	672	265	26	3	1	0	0	0	2	0	0	0	29.1	32.8
1100	1087	1	10	107	596	348	24	1	0	0	0	0	0	0	0	0	29.5	33
1200	1131	7	31	128	647	292	25	1	0	0	0	0	0	0	0	0	28.8	32.8
1300	1181	97	198	155	447	267	16	1	0	0	0	0	0	0	0	0	25.1	32.3
1400	1300	122	214	226	531	191	15	1	0	0	0	0	0	0	0	0	24.2	31.2
1500	1390	134	552	333	276	81	9	4	0	0	1	0	0	0	0	0	20.3	28.5
1600	1417	217	627	277	233	57	6	0	0	0	0	0	0	0	0	0	18.5	27.1
1700	1271	85	241	292	495	132	17	5	0	0	2	1	0	0	1	0	24	30.4
1800	1036	6	25	130	560	294	20	1	0	0	0	0	0	0	0	0	28.7	33
1900	873	0	1	34	378	431	27	2	0	0	0	0	0	0	0	0	31.2	34.6
2000	573	0	0	5	206	317	42	3	0	0	0	0	0	0	0	0	32.4	35.9
2100	495	0	0	8	179	257	48	1	0	2	0	0	0	0	0	0	32.5	36.2
2200	274	0	0	1	72	153	43	2	2	1	0	0	0	0	0	0	33.8	37.7
2300	173	0	1	7	28	104	30	1	2	0	0	0	0	0	0	0	33.8	37.9
07-19	15174	840	2777	2851	6105	2385	184	20	2	0	5	1	3	0	1	0	24.7	31.4
06-22	18073	840	2785	2972	7302	3791	341	28	2	2	5	1	3	0	1	0	25.8	32.4
06-00	18520	840	2786	2980	7402	4048	414	31	6	3	5	1	3	0	1	0	25.9	32.7
00-00	19670	840	2786	2999	7685	4681	605	53	8	3	5	1	3	0	1	0	26.4	33.1

04 December 2024

Time [--	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85
0000	110	0	0	3	27	57	21	2	0	0	0	0	0	0	0	0	33.9	38.9
0100	56	0	0	3	15	21	15	2	0	0	0	0	0	0	0	0	34	39.9
0200	47	0	0	1	12	26	7	1	0	0	0	0	0	0	0	0	33.4	37.6
0300	95	0	0	4	29	44	17	1	0	0	0	0	0	0	0	0	33	38.7
0400	179	0	0	6	33	101	36	3	0	0	0	0	0	0	0	0	33.9	38.5
0500	603	1	1	4	151	381	64	1	0	0	0	0	0	0	0	0	33	36.2
0600	901	18	18	70	395	328	66	6	0	0	0	0	0	0	0	0	30.2	34.7
0700	1366	98	375	244	477	154	16	2	0	0	0	0	0	0	0	0	23.1	30.6
0800	1493	109	653	357	278	90	4	2	0	0	0	0	0	0	0	0	20.2	28
0900	1155	1	4	97	628	395	29	0	1	0	0	0	0	0	0	0	30	33.7
1000	999	2	8	85	523	354	25	2	0	0	0	0	0	0	0	0	29.9	33.7
1100	1092	13	32	94	590	332	28	2	1	0	0	0	0	0	0	0	29.1	33.2
1200	1185	11	74	115	627	338	18	1	1	0	0	0	0	0	0	0	28.3	32.8
1300	1150	6	45	134	588	354	21	2	0	0	0	0	0	0	0	0	28.9	33.1
1400	1253	87	142	149	579	281	14	0	0	0	0	0	1	0	0	0	26.1	32.4
1500	1334	167	468	297	305	86	8	1	1	0	0	0	0	1	0	0	20.4	28.8
1600	1334	144	499	295	278	110	7	0	0	0	0	0	1	0	0	0	20.6	29.3
1700	1238	32	134	308	593	160	10	1	0	0	0	0	0	0	0	0	25.5	30.9
1800	1064	4	24	138	593	289	15	1	0	0	0	0	0	0	0	0	28.7	32.5
1900	881	0	1	53	455	331	38	3	0	0	0	0	0	0	0	0	30.5	34.1
2000	609	1	3	16	217	315	51	6	0	0	0	0	0	0	0	0	32.1	35.9
2100	529	0	1	12	173	291	48	4	0	0	0	0	0	0	0	0	32.5	36.1
2200	305	0	0	7	93	157	39	8	1	0	0	0	0	0	0	0	33.2	37.5
2300	172	0	0	7	45	90	30	0	0	0	0	0	0	0	0	0	33.3	37.5
07-19	14663	674	2458	2313	6059	2943	195	14	4	0	0	0	2	1	0	0	25.5	32.1
06-22	17583	693	2481	2464	7299	4208	398	33	4	0	0	0	2	1	0	0	26.4	32.8
06-00	18060	693	2481	2478	7437	4455	467	41	5	0	0	0	2	1	0	0	26.6	33
00-00	19150	694	2482	2499	7704	5085	627	51	5	0	0	0	2	1	0	0	27	33.4

05 December 2024

Time [--	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85
0000	114	0	0	4	32	57	20	1	0	0	0	0	0	0	0	0	33.4	38.3
0100	60	0	1	3	16	27	11	2	0	0	0	0	0	0	0	0	33.4	39
0200	45	0	2	1	7	22	11	2	0	0	0	0	0	0	0	0	34.2	40.7
0300	96	0	0	2	27	48	19	0	0	0	0	0	0	0	0	0	33.6	38.6
0400	184	0	3	6	77	85	12	1	0	0	0	0	0	0	0	0	31.6	36.2
0500	493	0	1	16	190	234	48	4	0	0	0	0	0	0	0	0	32	36
0600	851	3	9	72	433	300	29	5	0	0	0	0	0	0	0	0	29.9	33.9
0700	1302	85	353	285	405	157	16	1	0	0	0	0	0	0	0	0	22.9	30.8
0800	1383	245	756	239	99	31	7	1	0	1	2	0	0	0	1	1	17.3	22.2
0900	1224	75	352	160	413	210	11	2	1	0	0	0	0	0	0	0	23.7	31.8
1000	1037	17	34	115	511	339	19	1	1	0	0	0	0	0	0	0	28.9	33.7
1100	1109	38	68	238	513	226	23	1	0	0	2	0	0	0	0	0	26.8	32.3
1200	1181	45	109	196	579	240	8	2	1	0	0	0	0	0	0	1	26.5	32
1300	1186	29	90	221	543	281	21	0	0	1	0	0	0	0	0	0	27.1	32.5
1400	1243	150	370	148	352	207	16	0	0	0	0	0	0	0	0	0	22.5	31.7
1500	1274	206	366	265	353	76	5	3	0	0	0	0	0	0	0	0	20.7	29.2
1600	1346	273	768	214	67	17	3	2	0	1	0	1	0	0	0	0	16.4	20
1700	1230	156	520	210	260	78	4	1	0	0	0	0	0	0	0	1	19.9	28.9
1800	1012	0	10	220	618	156	6	2	0	0	0	0	0	0	0	0	27.5	31.2
1900	820	15	28	219	451	103	4	0	0	0	0	0	0	0	0	0	26.6	30.9
2000	590	0	6	124	342	112	6	0	0	0	0	0	0	0	0	0	27.8	31.9
2100	503	1	19	54	258	152	17	2	0	0	0	0	0	0	0	0	29.2	33.9
2200	294	0	0	4	89	172	27	2	0	0	0	0	0	0	0	0	32.8	36.2
2300	174	0	0	3	43	96	28	4	0	0	0	0	0	0	0	0	33.7	38.3
07-19	14527	1319	3796	2511	4713	2018	139	16	3	3	4	1	0	0	1	3	23	31.1
06-22	17291	1338	3858	2980	6197	2685	195	23	3	3	4	1	0	0	1	3	23.9	31.4
06-00	17759	1338	3858	2987	6329	2953	250	29	3	3	4	1	0	0	1	3	24.1	31.7
00-00	18751	1338	3865	3019	6678	3426	371	39	3	3	4	1	0	0	1	3	24.6	32.1

06 December 2024

Time [--	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85
0000	136	0	0	4	38	72	20	2	0	0	0	0	0	0	0	0	33.2	37.5
0100	87	0	0	1	17	49	16	4	0	0	0	0	0	0	0	0	34.8	39.9
0200	82	0	0	0	18	46	16	1	1	0	0	0	0	0	0	0	34.2	38.7
0300	104	0	0	2	19	58	20	4	0	1	0	0	0	0	0	0	34.8	39.4
0400	178	0	0	1	42	97	34	4	0	0	0	0	0	0	0	0	34.2	38
0500	548	0	0	8	174	320	45	0	1	0	0	0	0	0	0	0	32.6	36.2
0600	863	3	1	65	428	322	41	3	0	0	0	0	0	0	0	0	30.4	34.8
0700	1277	39	110	184	666	253	24	1	0	0	0	0	0	0	0	0	27.1	32.1
0800	1420	222	694	171	233	90	6	1	0	1	1	0	0	0	1	0	18.9	28.3
0900	1241	63	133	181	539	304	20	1	0	0	0	0	0	0	0	0	26.5	32.5
1000	1138	8	20	132	603	352	21	2	0	0	0	0	0	0	0	0	29.2	33
1100	1189	6	16	81	697	359	29	1	0	0	0	0	0	0	0	0	29.4	33.1
1200	1263	68	263	280	445	180	24	2	0	0	0	1	0	0	0	0	24.2	31.4
1300	1288	12	133	214	659	250	16	2	1	0	0	0	0	1	0	0	27	31.9
1400	1346	81	392	295	393	166	17	1	0	0	0	0	0	0	1	0	22.9	30.8
1500	1430	280	686	294	116	42	3	5	0	1	1	0	0	0	0	2	17.6	23.3
1600	1327	157	451	276	345	97	1	0	0	0	0	0	0	0	0	0	20.7	29
1700	1305	111	421	301	337	130	5	0	0	0	0	0	0	0	0	0	21.7	30
1800	1216	20	90	244	612	235	15	0	0	0	0	0	0	0	0	0	26.8	32
1900	809	0	1	27	400	336	39	4	1	0	0	0	0	1	0	0	31.1	34.7
2000	622	0	1	33	257	292	37	2	0	0	0	0	0	0	0	0	31.3	35.1
2100	485	2	3	20	225	195	33	7	0	0	0	0	0	0	0	0	31.3	35.4
2200	398	0	1	11	154	184	37	11	0	0	0	0	0	0	0	0	32.4	36.6
2300	310	0	0	4	115	153	30	7	1	0	0	0	0	0	0	0	32.5	36.7
07-19	15440	1067	3409	2653	5645	2458	181	16	1	2	2	1	0	1	2	2	24.1	31.5
06-22	18219	1072	3415	2798	6955	3603	331	32	2	2	2	1	0	2	2	2	25.2	32.3
06-00	18927	1072	3416	2813	7224	3940	398	50	3	2	2	1	0	2	2	2	25.4	32.5
00-00	20062	1072	3416	2829	7532	4582	549	65	5	3	2	1	0	2	2	2	25.9	33

07 December 2024

Time [--	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85
0000	205	0	0	1	74	104	22	4	0	0	0	0	0	0	0	0	32.8	36.6
0100	150	0	0	2	51	77	17	3	0	0	0	0	0	0	0	0	32.7	37.1
0200	95	0	0	3	25	50	14	2	1	0	0	0	0	0	0	0	33.4	38.1
0300	113	0	0	1	31	58	16	5	2	0	0	0	0	0	0	0	33.9	38.5
0400	107	0	0	0	27	65	14	1	0	0	0	0	0	0	0	0	33.8	37.1
0500	196	0	0	1	39	115	37	4	0	0	0	0	0	0	0	0	34.3	38.4
0600	345	0	1	6	106	197	29	5	0	1	0	0	0	0	0	0	32.9	36.5
0700	509	0	0	3	146	321	36	3	0	0	0	0	0	0	0	0	32.7	35.6
0800	748	0	0	18	307	387	33	3	0	0	0	0	0	0	0	0	31.7	35.3
0900	971	0	2	61	495	380	28	5	0	0	0	0	0	0	0	0	30.5	34.2
1000	1093	2	7	117	626	315	24	2	0	0	0	0	0	0	0	0	29.3	33
1100	1175	9	49	151	629	319	17	1	0	0	0	0	0	0	0	0	28.4	32.8
1200	1260	14	102	173	598	347	24	0	2	0	0	0	0	0	0	0	27.8	32.7
1300	1183	1	12	133	622	388	26	1	0	0	0	0	0	0	0	0	29.4	33.2
1400	1090	1	19	114	551	362	40	3	0	0	0	0	0	0	0	0	29.7	34.2
1500	1074	9	43	132	510	357	20	3	0	0	0	0	0	0	0	0	28.8	33.4
1600	1041	5	36	132	577	260	27	4	0	0	0	0	0	0	0	0	28.6	32.9
1700	940	1	15	107	501	290	24	1	0	0	1	0	0	0	0	0	29.3	33.2
1800	798	0	0	30	374	368	22	4	0	0	0	0	0	0	0	0	31.1	34.6
1900	625	0	0	22	261	303	34	3	1	0	0	0	0	0	0	1	31.5	34.8
2000	535	0	0	14	204	281	32	4	0	0	0	0	0	0	0	0	31.9	35.4
2100	458	1	2	15	183	216	33	5	1	0	0	0	0	0	2	0	32.2	35.7
2200	352	0	0	8	137	170	33	4	0	0	0	0	0	0	0	0	32.2	36.7
2300	292	0	0	4	99	150	30	8	0	1	0	0	0	0	0	0	32.8	36.6
07-19	11882	42	285	1171	5936	4094	321	30	2	0	1	0	0	0	0	0	29.5	33.7
06-22	13845	43	288	1228	6690	5091	449	47	4	1	1	0	0	0	2	1	29.9	34
06-00	14489	43	288	1240	6926	5411	512	59	4	2	1	0	0	0	2	1	30	34.1
00-00	15355	43	288	1248	7173	5880	632	78	7	2	1	0	0	0	2	1	30.2	34.3

08 December 2024

Time [--	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85
0000	210	0	1	3	57	115	30	3	1	0	0	0	0	0	0	0	33.3	37.6
0100	156	0	0	2	34	92	22	5	1	0	0	0	0	0	0	0	34	38.1
0200	85	0	0	5	25	42	9	4	0	0	0	0	0	0	0	0	33.2	37.4
0300	89	0	1	0	18	50	15	4	1	0	0	0	0	0	0	0	34.6	38.6
0400	76	0	0	0	14	46	14	2	0	0	0	0	0	0	0	0	34.8	39.3
0500	151	0	0	2	32	94	18	4	1	0	0	0	0	0	0	0	34	37.4
0600	184	0	0	0	36	115	31	2	0	0	0	0	0	0	0	0	34.3	38.5
0700	260	0	0	0	59	167	32	2	0	0	0	0	0	0	0	0	33.4	36.8
0800	432	0	0	12	161	217	38	4	0	0	0	0	0	0	0	0	32.2	35.9
0900	684	0	0	15	269	352	43	4	1	0	0	0	0	0	0	0	32	35.4
1000	1025	0	6	42	482	454	39	2	0	0	0	0	0	0	0	0	30.9	34.3
1100	1110	0	19	72	551	440	26	2	0	0	0	0	0	0	0	0	30.1	33.7
1200	1231	7	84	175	640	304	20	1	0	0	0	0	0	0	0	0	27.9	32.5
1300	1171	4	5	76	626	417	34	5	2	0	0	1	0	0	1	0	30.3	33.7
1400	1007	1	1	58	520	391	34	1	0	0	0	0	0	1	0	0	30.5	34.2
1500	982	0	1	67	428	447	38	0	0	0	0	0	0	0	1	0	30.8	34.6
1600	805	1	5	59	352	346	38	3	1	0	0	0	0	0	0	0	30.7	34.7
1700	736	0	2	12	324	351	41	3	3	0	0	0	0	0	0	0	31.7	35.1
1800	646	0	0	23	273	298	51	1	0	0	0	0	0	0	0	0	31.7	35.5
1900	581	0	5	28	203	314	25	6	0	0	0	0	0	0	0	0	31.6	35.4
2000	404	0	3	9	119	229	36	8	0	0	0	0	0	0	0	0	32.6	36.4
2100	345	0	0	9	129	172	32	3	0	0	0	0	0	0	0	0	32.1	35.8
2200	262	0	1	4	68	149	34	6	0	0	0	0	0	0	0	0	33.4	37.5
2300	174	0	0	7	42	103	19	2	1	0	0	0	0	0	0	0	33.2	37
07-19	10089	13	123	611	4685	4184	434	28	7	0	0	1	0	1	2	0	30.6	34.4
06-22	11603	13	131	657	5172	5014	558	47	7	0	0	1	0	1	2	0	30.8	34.7
06-00	12039	13	132	668	5282	5266	611	55	8	0	0	1	0	1	2	0	30.9	34.8
00-00	12806	13	134	680	5462	5705	719	77	12	0	0	1	0	1	2	0	31.1	35

09 December 2024

Time [--	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85
0000	85	0	1	2	17	45	18	2	0	0	0	0	0	0	0	0	33.7	39.1
0100	60	0	0	3	16	33	6	1	1	0	0	0	0	0	0	0	33.2	37.1
0200	48	0	1	1	10	23	12	0	1	0	0	0	0	0	0	0	34.2	38.9
0300	66	0	2	1	17	33	11	2	0	0	0	0	0	0	0	0	32.8	38.3
0400	137	0	0	2	34	79	20	2	0	0	0	0	0	0	0	0	33.4	37.6
0500	544	0	6	10	161	312	54	0	0	1	0	0	0	0	0	0	32.6	36.4
0600	796	2	7	61	364	331	29	2	0	0	0	0	0	0	0	0	30.4	34.4
0700	1334	12	176	251	658	221	12	0	1	2	0	1	0	0	0	0	26.3	31.4
0800	1441	53	382	298	563	135	10	0	0	0	0	0	0	0	0	0	23.4	30.2
0900	1073	1	15	95	571	364	26	1	0	0	0	0	0	0	0	0	29.6	33.4
1000	1072	11	33	86	557	357	28	0	0	0	0	0	0	0	0	0	29.4	33.4
1100	1093	4	11	74	598	375	27	2	0	0	0	0	0	0	0	2	29.9	33.6
1200	1197	52	185	111	579	249	18	0	0	1	0	2	0	0	0	0	26.1	32.4
1300	1100	33	49	86	524	374	31	2	0	1	0	0	0	0	0	0	28.8	33.6
1400	1242	69	223	250	484	195	18	2	0	0	1	0	0	0	0	0	24.7	31.3
1500	1316	80	287	336	490	115	6	2	0	0	0	0	0	0	0	0	23.1	29.6
1600	1337	123	448	308	364	85	6	3	0	0	0	0	0	0	0	0	21.3	29
1700	1239	50	103	259	587	218	22	0	0	0	0	0	0	0	0	0	26.2	31.7
1800	1046	43	119	119	508	241	13	2	0	1	0	0	0	0	0	0	26.7	32.1
1900	804	0	9	26	386	350	31	2	0	0	0	0	0	0	0	0	30.8	34.6
2000	528	0	1	25	215	255	30	2	0	0	0	0	0	0	0	0	31.4	35.6
2100	480	0	0	23	189	226	37	4	1	0	0	0	0	0	0	0	31.7	35.6
2200	320	0	1	4	91	193	25	6	0	0	0	0	0	0	0	0	33	36.4
2300	181	0	0	2	48	95	33	2	1	0	0	0	0	0	0	0	33.7	38.5
07-19	14490	531	2031	2273	6483	2929	217	14	1	5	1	3	0	0	0	2	26.1	32.2
06-22	17098	533	2048	2408	7637	4091	344	24	2	5	1	3	0	0	0	2	26.8	32.8
06-00	17599	533	2049	2414	7776	4379	402	32	3	5	1	3	0	0	0	2	27	32.9
00-00	18539	533	2059	2433	8031	4904	523	39	5	6	1	3	0	0	0	2	27.3	33.2

Grand Total

Time [--	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85
--	124333	4533	15030	15707	50265	34263	4026	402	45	17	13	7	5	4	8	8	27.2	33.6

K&M TRAFFIC SURVEYS

SITE: ATC - a227 Gravesend

LOCATION: Attached to signpost

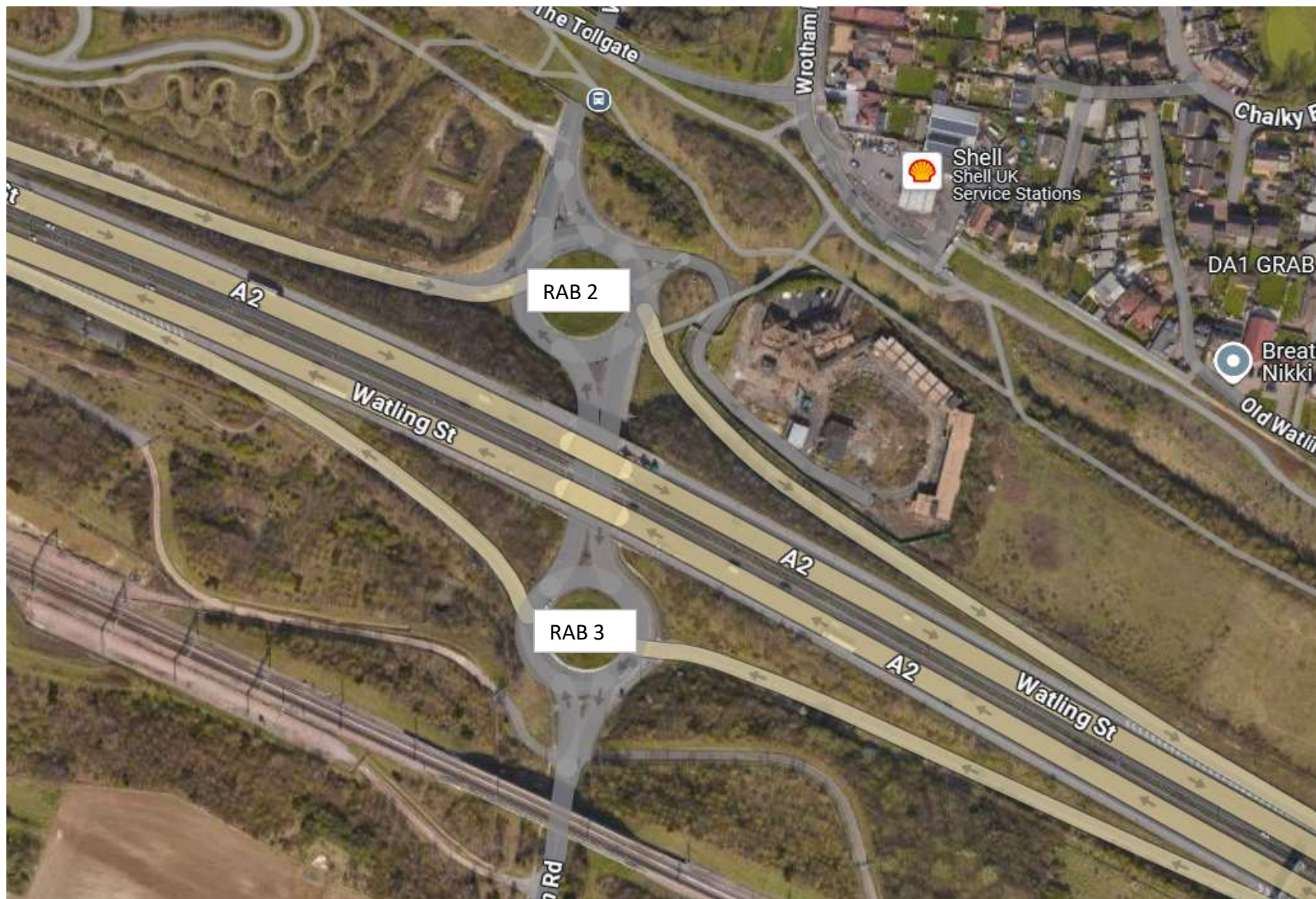
GRID REFERENCE: 51.417946, 0.359219

DIRECTION: SOUTHBOUND

SPEED LIMIT: 40

	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Averages	
	03-Dec	04-Dec	05-Dec	06-Dec	07-Dec	08-Dec	09-Dec	1-5.	1-7.
Hour									
0000-0100	90	110	114	136	205	210	85	107	135.7
0100-0200	67	56	60	87	150	156	60	66	90.9
0200-0300	53	47	45	82	95	85	48	55	65
0300-0400	96	95	96	104	113	89	66	91.4	94.1
0400-0500	190	179	184	178	107	76	137	173.6	150.1
0500-0600	654	603	493	548	196	151	544	568.4	455.6
0600-0700	958	901	851	863	345	184	796	873.8	699.7
0700-0800	1448	1366	1302	1277	509	260	1334	1345.4	1070.9
0800-0900	1530	1493	1383	1420	748	432	1441	1453.4	1206.7
0900-1000	1294	1155	1224	1241	971	684	1073	1197.4	1091.7
1000-1100	1089	999	1037	1138	1093	1025	1072	1067	1064.7
1100-1200	1087	1092	1109	1189	1175	1110	1093	1114	1122.1
1200-1300	1131	1185	1181	1263	1260	1231	1197	1191.4	1206.9
1300-1400	1181	1150	1186	1288	1183	1171	1100	1181	1179.9
1400-1500	1300	1253	1243	1346	1090	1007	1242	1276.8	1211.6
1500-1600	1390	1334	1274	1430	1074	982	1316	1348.8	1257.1
1600-1700	1417	1334	1346	1327	1041	805	1337	1352.2	1229.6
1700-1800	1271	1238	1230	1305	940	736	1239	1256.6	1137
1800-1900	1036	1064	1012	1216	798	646	1046	1074.8	974
1900-2000	873	881	820	809	625	581	804	837.4	770.4
2000-2100	573	609	590	622	535	404	528	584.4	551.6
2100-2200	495	529	503	485	458	345	480	498.4	470.7
2200-2300	274	305	294	398	352	262	320	318.2	315
2300-2400	173	172	174	310	292	174	181	202	210.9
Totals									
0700-1900	15174	14663	14527	15440	11882	10089	14490	14858.8	13752.1
0600-2200	18073	17583	17291	18219	13845	11603	17098	17652.8	16244.6
0600-0000	18520	18060	17759	18927	14489	12039	17599	18173	16770.4
0000-0000	19670	19150	18751	20062	15355	12806	18539	19234.4	17761.9
AM Peak	800	800	800	800	1100	1100	800		
	1530	1493	1383	1420	1175	1110	1441		
PM Peak	1600	1600	1600	1500	1200	1200	1600		
	1417	1334	1346	1430	1260	1231	1337		

APPENDIX E – QUEUE LENGTH REVIEW



Wrotham Road (South) Left Lane (LL)				Wrotham Road (South) Right Lane (RL)				A2 Exit East LL (left turn only)				A2 Exit East RL (left / straight turn)				Wrotham Road (North) LL				Wrotham Road (North) RL			
AM Peak Period - 07:45 to 09:15																							
Time	Queue Length	Time	Queue Length	Time	Queue Length	Time	Queue Length	Time	Queue Length	Time	Queue Length	Time	Queue Length	Time	Queue Length	Time	Queue Length	Time	Queue Length	Time	Queue Length		
07:45	0	07:45	0	07:45	0	07:45	0	07:45	0	07:45	0	07:45	0	07:45	0	07:45	0	07:45	0	07:45	0		
07:46	0	07:46	0	07:46	0	07:46	0	07:46	0	07:46	0	07:46	0	07:46	0	07:46	0	07:46	0	07:46	0		
07:47	0	07:47	0	07:47	0	07:47	0	07:47	0	07:47	0	07:47	0	07:47	0	07:47	0	07:47	0	07:47	0		
07:48	0	07:48	0	07:48	0	07:48	0	07:48	0	07:48	0	07:48	0	07:48	3	07:48	5	07:48	0	07:48	5		
07:49	0	07:49	0	07:49	0	07:49	0	07:49	0	07:49	0	07:49	0	07:49	2	07:49	3	07:49	0	07:49	3		
07:50	0	07:50	0	07:50	0	07:50	0	07:50	0	07:50	0	07:50	0	07:50	0	07:50	1	07:50	0	07:50	1		
07:51	0	07:51	0	07:51	0	07:51	0	07:51	0	07:51	0	07:51	0	07:51	0	07:51	0	07:51	0	07:51	0		
07:52	0	07:52	0	07:52	0	07:52	0	07:52	0	07:52	0	07:52	0	07:52	0	07:52	0	07:52	0	07:52	0		
07:53	0	07:53	0	07:53	0	07:53	0	07:53	2	07:53	2	07:53	0	07:53	0	07:53	0	07:53	0	07:53	0		
07:54	0	07:54	0	07:54	0	07:54	0	07:54	0	07:54	0	07:54	2	07:54	2	07:54	3	07:54	0	07:54	3		
07:55	0	07:55	0	07:55	0	07:55	0	07:55	0	07:55	0	07:55	4	07:55	4	07:55	3	07:55	0	07:55	3		
07:56	0	07:56	0	07:56	0	07:56	0	07:56	0	07:56	0	07:56	0	07:56	0	07:56	0	07:56	0	07:56	0		
07:57	0	07:57	0	07:57	0	07:57	3	07:57	1	07:57	1	07:57	0	07:57	0	07:57	0	07:57	0	07:57	0		
07:58	0	07:58	0	07:58	0	07:58	0	07:58	1	07:58	1	07:58	2	07:58	2	07:58	1	07:58	0	07:58	1		
07:59	0	07:59	0	07:59	0	07:59	0	07:59	0	07:59	0	07:59	0	07:59	0	07:59	0	07:59	0	07:59	0		
Average Maximum Range	0.0 0 0	Average Maximum Range	0.0 0 0	Average Maximum Range	0.2 3 0-3	Average Maximum Range	0.3 2 0-2	Average Maximum Range	0.9 4 0-4	Average Maximum Range	1.1 5 0-5	Average Maximum Range	0.0 0 0	Average Maximum Range	0.1 2 0-2	Average Maximum Range	0.2 3 0-3	Average Maximum Range	0.5 3 0-3	Average Maximum Range	0.0 0 0	Average Maximum Range	0.1 2 0-2
08:00	0	08:00	0	08:00	0	08:00	3	08:00	1	08:00	0	08:00	0	08:00	0	08:00	0	08:00	0	08:00	0		
08:01	0	08:01	0	08:01	0	08:01	0	08:01	0	08:01	0	08:01	0	08:01	0	08:01	0	08:01	0	08:01	0		
08:02	0	08:02	0	08:02	0	08:02	0	08:02	0	08:02	0	08:02	0	08:02	0	08:02	0	08:02	0	08:02	0		
08:03	0	08:03	0	08:03	0	08:03	0	08:03	1	08:03	1	08:03	0	08:03	0	08:03	0	08:03	0	08:03	0		
08:04	0	08:04	0	08:04	0	08:04	0	08:04	0	08:04	0	08:04	0	08:04	0	08:04	0	08:04	0	08:04	0		
08:05	0	08:05	0	08:05	0	08:05	2	08:05	1	08:05	1	08:05	0	08:05	0	08:05	0	08:05	0	08:05	0		
08:06	0	08:06	0	08:06	0	08:06	0	08:06	0	08:06	0	08:06	0	08:06	0	08:06	0	08:06	0	08:06	0		
08:07	0	08:07	0	08:07	0	08:07	0	08:07	0	08:07	0	08:07	0	08:07	0	08:07	0	08:07	0	08:07	0		
08:08	0	08:08	0	08:08	0	08:08	0	08:08	1	08:08	1	08:08	0	08:08	0	08:08	0	08:08	0	08:08	0		
08:09	0	08:09	0	08:09	0	08:09	0	08:09	0	08:09	0	08:09	0	08:09	0	08:09	0	08:09	0	08:09	0		
08:10	0	08:10	0	08:10	0	08:10	0	08:10	0	08:10	0	08:10	0	08:10	0	08:10	0	08:10	0	08:10	0		
08:11	0	08:11	0	08:11	0	08:11	0	08:11	0	08:11	0	08:11	0	08:11	0	08:11	0	08:11	0	08:11	0		
08:12	0	08:12	0	08:12	0	08:12	0	08:12	0	08:12	0	08:12	0	08:12	0	08:12	0	08:12	0	08:12	0		
08:13	0	08:13	0	08:13	0	08:13	0	08:13	0	08:13	0	08:13	0	08:13	0	08:13	2	08:13	0	08:13	2		
08:14	0	08:14	0	08:14	0	08:14	0	08:14	2	08:14	2	08:14	0	08:14	0	08:14	0	08:14	0	08:14	0		
Average Maximum Range	0.0 0 0	Average Maximum Range	0.0 0 0	Average Maximum Range	0.3 3 0-2	Average Maximum Range	0.4 2 0-2	Average Maximum Range	0.0 0 0	Average Maximum Range	0.1 2 0-2	Average Maximum Range	0.0 0 0	Average Maximum Range	0.2 3 0-3	Average Maximum Range	0.5 3 0-3	Average Maximum Range	0.0 0 0	Average Maximum Range	0.0 0 0	Average Maximum Range	0.1 2 0-2
08:15	0	08:15	0	08:15	0	08:15	0	08:15	1	08:15	1	08:15	0	08:15	0	08:15	0	08:15	0	08:15	0		
08:16	0	08:16	0	08:16	0	08:16	0	08:16	1	08:16	1	08:16	0	08:16	0	08:16	0	08:16	0	08:16	0		
08:17	0	08:17	0	08:17	0	08:17	0	08:17	0	08:17	0	08:17	0	08:17	0	08:17	0	08:17	0	08:17	0		
08:18	0	08:18	0	08:18	0	08:18	3	08:18	0	08:18	0	08:18	0	08:18	0	08:18	3	08:18	0	08:18	3		
08:19	0	08:19	0	08:19	0	08:19	0	08:19	0	08:19	0	08:19	0	08:19	0	08:19	0	08:19	0	08:19	0		
08:20	0	08:20	0	08:20	0	08:20	0	08:20	1	08:20	1	08:20	3	08:20	3	08:20	2	08:20	0	08:20	2		
08:21	0	08:21	0	08:21	0	08:21	3	08:21	1	08:21	1	08:21	0	08:21	0	08:21	0	08:21	0	08:21	0		
08:22	0	08:22	0	08:22	0	08:22	0	08:22	1	08:22	1	08:22	0	08:22	0	08:22	0	08:22	0	08:22	0		
08:23	0	08:23	0	08:23	0	08:23	0	08:23	0	08:23	0	08:23	0	08:23	0	08:23	0	08:23	0	08:23	0		
08:24	0	08:24	0	08:24	0	08:24	0	08:24	1	08:24	1	08:24	0	08:24	0	08:24	0	08:24	0	08:24	0		
08:25	0	08:25	0	08:25	0	08:25	0	08:25	2	08:25	2	08:25	0	08:25	0	08:25	0	08:25	0	08:25	0		
08:26	0	08:26	0	08:26	0	08:26	1	08:26	2	08:26	2	08:26	0	08:26	0	08:26	0	08:26	0	08:26	0		
08:27	0	08:27	0	08:27	0	08:27	0	08:27	0	08:27	0	08:27	0	08:27	0	08:27	2	08:27	0	08:27	2		
08:28	0	08:28	0	08:28	0	08:28	0	08:28	0	08:28	0	08:28	0	08:28	0	08:28	0	08:28	0	08:28	0		
08:29	0	08:29	0	08:29	0	08:29	0	08:29	0	08:29	0	08:29	0	08:29	0	08:29	0	08:29	0	08:29	0		
Average Maximum Range	0.0 0 0	Average Maximum Range	0.0 0 0	Average Maximum Range	0.5 3 0-3	Average Maximum Range	0.7 2 0-2	Average Maximum Range	0.2 3 0-3	Average Maximum Range	0.5 3 0-3	Average Maximum Range	0.0 0 0	Average Maximum Range	0.2 3 0-3	Average Maximum Range	0.5 3 0-3	Average Maximum Range	0.0 0 0	Average Maximum Range	0.0 0 0	Average Maximum Range	0.5 3 0-3
08:30	0	08:30	0	08:30	0	08:30	3	08:30	2	08:30	2	08:30	0	08:30	0	08:30	0	08:30	0	08:30	0		
08:31	0	08:31	0	08:31	0	08:31	0	08:31	3	08:31	3	08:31	0	08:31	0	08:31	0	08:31	0	08:31	0		
08:32	0	08:32	0	08:32	0	08:32	0	08:32	0	08:32	0	08:32	1	08:32	1	08:32	2	08:32	0	08:32	2		
08:33	0	08:33	0	08:33	0	08:33	0	08:33	0	08:33	0	08:33	0	08:33	0	08:33	0	08:33	0	08:33	0		
08:34	0	08:34	0	08:34	0	08:34	0	08:34	0	08:34	0	08:34	1	08:34	1	08:34	3	08:34	0	08:34	3		
08:35	0	08:35	0	08:35	0	08:35	0	08:35	0	08:35	0	08:35	0	08:35	0	08:35	0	08:35	0	08:35	0		
08:36	0	08:36	0	08:36	0	08:36	0	08:36	0	08:36	0	08:36	3	08:36	3	08:36	0	08:36	0	08:36	0		
08:37	0	08:37	0	08:37	0	08:37	0	08:37	0	08:37	0	08:37	0	08:37	0	0							

PM Peak Period - 16:45 to 18:15											
Time	Queue Length	Time	Queue Length	Time	Queue Length	Time	Queue Length	Time	Queue Length	Time	Queue Length
16:45	0	16:45	0	16:45	3	16:45	1	16:45	0	16:45	0
16:46	0	16:46	0	16:46	0	16:46	7	16:46	3	16:46	0
16:47	0	16:47	0	16:47	0	16:47	0	16:47	4	16:47	3
16:48	0	16:48	0	16:48	0	16:48	2	16:48	4	16:48	0
16:49	0	16:49	0	16:49	0	16:49	2	16:49	3	16:49	1
16:50	0	16:50	0	16:50	0	16:50	0	16:50	3	16:50	4
16:51	0	16:51	0	16:51	0	16:51	0	16:51	1	16:51	4
16:52	0	16:52	0	16:52	0	16:52	0	16:52	0	16:52	0
16:53	0	16:53	0	16:53	0	16:53	0	16:53	0	16:53	0
16:54	0	16:54	0	16:54	0	16:54	1	16:54	0	16:54	0
16:55	0	16:55	0	16:55	0	16:55	0	16:55	0	16:55	0
16:56	0	16:56	0	16:56	5	16:56	4	16:56	5	16:56	0
16:57	0	16:57	0	16:57	0	16:57	0	16:57	0	16:57	0
16:58	0	16:58	0	16:58	0	16:58	1	16:58	0	16:58	1
16:59	0	16:59	0	16:59	0	16:59	0	16:59	0	16:59	0
Average	0.0	Average	0.0	Average	0.5	Average	1.2	Average	1.5	Average	0.9
Maximum	0	Maximum	0	Maximum	5	Maximum	7	Maximum	5	Maximum	4
Range	0	Range	0	Range	0-5	Range	0-7	Range	0-5	Range	0-4
17:00	0	17:00	0	17:00	4	17:00	1	17:00	0	17:00	0
17:01	0	17:01	0	17:01	8	17:01	0	17:01	0	17:01	3
17:02	0	17:02	0	17:02	8	17:02	0	17:02	2	17:02	1
17:03	0	17:03	0	17:03	0	17:03	0	17:03	5	17:03	0
17:04	0	17:04	0	17:04	8	17:04	8	17:04	10	17:04	0
17:05	0	17:05	0	17:05	0	17:05	0	17:05	0	17:05	0
17:06	0	17:06	0	17:06	7	17:06	6	17:06	0	17:06	3
17:07	0	17:07	0	17:07	0	17:07	0	17:07	6	17:07	2
17:08	0	17:08	0	17:08	0	17:08	0	17:08	7	17:08	5
17:09	0	17:09	0	17:09	6	17:09	2	17:09	4	17:09	1
17:10	0	17:10	0	17:10	4	17:10	5	17:10	0	17:10	0
17:11	0	17:11	0	17:11	7	17:11	3	17:11	3	17:11	0
17:12	0	17:12	0	17:12	7	17:12	2	17:12	0	17:12	0
17:13	0	17:13	0	17:13	4	17:13	0	17:13	1	17:13	1
17:14	0	17:14	0	17:14	0	17:14	0	17:14	1	17:14	1
Average	0.0	Average	0.0	Average	4.2	Average	1.8	Average	2.6	Average	1.1
Maximum	0	Maximum	0	Maximum	8	Maximum	8	Maximum	10	Maximum	5
Range	0	Range	0	Range	0-8	Range	0-8	Range	0-10	Range	0-5
17:15	0	17:15	0	17:15	1	17:15	1	17:15	3	17:15	1
17:16	0	17:16	0	17:16	0	17:16	0	17:16	4	17:16	0
17:17	0	17:17	0	17:17	0	17:17	1	17:17	3	17:17	2
17:18	0	17:18	0	17:18	0	17:18	1	17:18	0	17:18	2
17:19	0	17:19	0	17:19	0	17:19	0	17:19	2	17:19	0
17:20	0	17:20	0	17:20	0	17:20	3	17:20	0	17:20	0
17:21	0	17:21	0	17:21	0	17:21	0	17:21	2	17:21	0
17:22	0	17:22	0	17:22	2	17:22	2	17:22	1	17:22	1
17:23	0	17:23	0	17:23	9	17:23	4	17:23	0	17:23	0
17:24	0	17:24	0	17:24	10	17:24	6	17:24	0	17:24	4
17:25	0	17:25	0	17:25	6	17:25	2	17:25	0	17:25	0
17:26	0	17:26	0	17:26	7	17:26	2	17:26	5	17:26	0
17:27	0	17:27	0	17:27	11	17:27	8	17:27	0	17:27	2
17:28	0	17:28	0	17:28	0	17:28	5	17:28	4	17:28	0
17:29	0	17:29	0	17:29	1	17:29	0	17:29	0	17:29	0
Average	0.0	Average	0.0	Average	3.1	Average	2.3	Average	1.6	Average	0.8
Maximum	0	Maximum	0	Maximum	11	Maximum	8	Maximum	5	Maximum	4
Range	0	Range	0	Range	0-11	Range	0-8	Range	0-5	Range	0-4
17:30	0	17:30	0	17:30	7	17:30	0	17:30	0	17:30	0
17:31	0	17:31	0	17:31	0	17:31	0	17:31	0	17:31	0
17:32	0	17:32	0	17:32	10	17:32	9	17:32	0	17:32	0
17:33	0	17:33	0	17:33	0	17:33	0	17:33	3	17:33	0
17:34	0	17:34	0	17:34	0	17:34	0	17:34	3	17:34	0
17:35	0	17:35	0	17:35	0	17:35	0	17:35	0	17:35	0
17:36	0	17:36	0	17:36	3	17:36	0	17:36	0	17:36	0
17:37	0	17:37	0	17:37	1	17:37	3	17:37	0	17:37	0
17:38	0	17:38	0	17:38	0	17:38	0	17:38	0	17:38	0
17:39	0	17:39	0	17:39	0	17:39	0	17:39	0	17:39	0
17:40	0	17:40	0	17:40	0	17:40	0	17:40	0	17:40	1
17:41	0	17:41	0	17:41	0	17:41	0	17:41	2	17:41	0
17:42	0	17:42	0	17:42	0	17:42	0	17:42	0	17:42	1
17:43	0	17:43	0	17:43	0	17:43	0	17:43	0	17:43	0
17:44	0	17:44	0	17:44	3	17:44	0	17:44	0	17:44	0
Average	0.0	Average	0.0	Average	1.6	Average	0.8	Average	0.5	Average	0.1
Maximum	0	Maximum	0	Maximum	10	Maximum	9	Maximum	3	Maximum	1
Range	0	Range	0	Range	0-10	Range	0-9	Range	0-3	Range	0-1
17:45	0	17:45	0	17:45	4	17:45	4	17:45	1	17:45	0
17:46	0	17:46	0	17:46	2	17:46	3	17:46	1	17:46	2
17:47	0	17:47	0	17:47	0	17:47	0	17:47	4	17:47	0
17:48	0	17:48	0	17:48	0	17:48	1	17:48	3	17:48	1
17:49	0	17:49	0	17:49	0	17:49	0	17:49	0	17:49	0
17:50	0	17:50	0	17:50	0	17:50	0	17:50	0	17:50	0
17:51	0	17:51	0	17:51	0	17:51	0	17:51	1	17:51	0
17:52	0	17:52	0	17:52	5	17:52	2	17:52	0	17:52	0
17:53	0	17:53	0	17:53	0	17:53	0	17:53	0	17:53	0
17:54	0	17:54	0	17:54	0	17:54	0	17:54	0	17:54	0
17:55	0	17:55	0	17:55	0	17:55	0	17:55	4	17:55	0
17:56	0	17:56	0	17:56	6	17:56	0	17:56	0	17:56	0
17:57	0	17:57	0	17:57	4	17:57	0	17:57	0	17:57	0
17:58	0	17:58	0	17:58	9	17:58	2	17:58	4	17:58	0
17:59	0	17:59	0	17:59	6	17:59	0	17:59	0	17:59	0
Average	0.0	Average	0.0	Average	2.4	Average	0.9	Average	1.2	Average	0.2
Maximum	0	Maximum	0	Maximum	9	Maximum	4	Maximum	4	Maximum	2
Range	0	Range	0	Range	0-9	Range	0-4	Range	0-4	Range	0-2
18:00	0	18:00	0	18:00	3	18:00	1	18:00	0	18:00	0
18:01	0	18:01	0	18:01	2	18:01	1	18:01	2	18:01	0
18:02	0	18:02	0	18:02	0	18:02	2	18:02	0	18:02	1
18:03	0	18:03	0	18:03	0	18:03	2	18:03	0	18:03	0
18:04	0	18:04	0	18:04	0	18:04	0	18:04	2	18:04	2
18:05	0	18:05	0	18:05	1	18:05	0	18:05	0	18:05	0
18:06	0	18:06	0	18:06	0	18:06	0	18:06	0	18:06	0
18:07	0	18:07	0	18:07	0	18:07	0	18:07	0	18:07	0
18:08	0	18:08	0	18:08	0	18:08	0	18:08	1	18:08	1
18:09	0	18:09	0	18:09	0	18:09	0	18:09	0	18:09	0
18:10	0	18:10	0	18:10	0	18:10	0	18:10	0	18:10	0
18:11	0	18:11	0	18:11	0	18:11	1	18:11	0	18:11	0
18:12	0	18:12	0	18:12	0	18:12	1	18:12	0	18:12	0
18:13	0	18:13	0	18:13	0	18:13	0	18:13	4	18:13	2
18:14	0	18:14	0	18:14	0	18:14	0	18:14	0	18:14	0
18:15	0	18:15	0	18:15	0	18:15	1	18:15	0	18:15	0
Average	0.0	Average	0.0	Average	0.4	Average	0.6	Average	0.6	Average	0.4
Maximum	0	Maximum	0	Maximum	3	Maximum	2	Maximum	4	Maximum	2
Range	0	Range	0	Range	0-3	Range	0-2	Range	0-4	Range	0-2

Wrotham Road North Left Lane (LL)				Wrotham Road North Right Lane (RL)				Wrotham Road South LL				Wrotham Road South RL				A2 Exit East LL				A2 Exit East RL			
AM Peak Period - 07:45 to 09:15																							
Time	Queue Length	Time	Queue Length	Time	Queue Length	Time	Queue Length	Time	Queue Length	Time	Queue Length	Time	Queue Length	Time	Queue Length	Time	Queue Length						
07:45	0	07:45	0	07:45	4	07:45	0	07:45	0	07:45	0	07:45	0	07:45	0	07:45	3						
07:46	0	07:46	0	07:46	0	07:46	0	07:46	0	07:46	0	07:46	0	07:46	0	07:46	6						
07:47	0	07:47	0	07:47	5	07:47	0	07:47	0	07:47	0	07:47	0	07:47	0	07:47	6						
07:48	0	07:48	0	07:48	16	07:48	0	07:48	0	07:48	0	07:48	0	07:48	0	07:48	0						
07:49	0	07:49	0	07:49	4	07:49	0	07:49	0	07:49	0	07:49	0	07:49	0	07:49	1						
07:50	0	07:50	0	07:50	8	07:50	1	07:50	1	07:50	1	07:50	1	07:50	0	07:50	6						
07:51	0	07:51	0	07:51	0	07:51	0	07:51	0	07:51	0	07:51	1	07:51	0	07:51	20						
07:52	0	07:52	0	07:52	0	07:52	0	07:52	0	07:52	0	07:52	0	07:52	0	07:52	20						
07:53	0	07:53	0	07:53	4	07:53	2	07:53	2	07:53	2	07:53	1	07:53	1	07:53	20						
07:54	0	07:54	0	07:54	0	07:54	0	07:54	0	07:54	0	07:54	0	07:54	0	07:54	20						
07:55	0	07:55	0	07:55	0	07:55	0	07:55	0	07:55	0	07:55	1	07:55	0	07:55	20						
07:56	0	07:56	0	07:56	0	07:56	0	07:56	0	07:56	0	07:56	0	07:56	0	07:56	20						
07:57	0	07:57	0	07:57	0	07:57	2	07:57	2	07:57	2	07:57	0	07:57	0	07:57	20						
07:58	0	07:58	0	07:58	10	07:58	3	07:58	3	07:58	0	07:58	0	07:58	0	07:58	20						
07:59	0	07:59	0	07:59	6	07:59	3	07:59	3	07:59	3	07:59	1	07:59	0	07:59	10						
Average	0.0	Average	0.0	Average	4.0	Average	0.7	Average	0.3	Average	12.8	Average	0.3	Average	12.8	Average	0.3						
Maximum	0	Maximum	0	Maximum	16	Maximum	3	Maximum	1	Maximum	20	Maximum	1	Maximum	20	Maximum	1						
Range	0	Range	0	Range	0-16	Range	0-3	Range	0-1	Range	0-12	Range	0-1	Range	0-12	Range	0-12						
08:00	0	08:00	0	08:00	4	08:00	2	08:00	2	08:00	1	08:00	0	08:00	0	08:00	10						
08:01	0	08:01	0	08:01	3	08:01	1	08:01	1	08:01	1	08:01	2	08:01	0	08:01	7						
08:02	0	08:02	0	08:02	0	08:02	0	08:02	0	08:02	2	08:02	0	08:02	0	08:02	1						
08:03	0	08:03	0	08:03	0	08:03	0	08:03	0	08:03	0	08:03	0	08:03	0	08:03	9						
08:04	0	08:04	0	08:04	6	08:04	0	08:04	0	08:04	1	08:04	0	08:04	0	08:04	5						
08:05	0	08:05	0	08:05	3	08:05	0	08:05	0	08:05	0	08:05	0	08:05	0	08:05	2						
08:06	0	08:06	0	08:06	2	08:06	1	08:06	1	08:06	1	08:06	1	08:06	0	08:06	6						
08:07	0	08:07	0	08:07	2	08:07	1	08:07	1	08:07	1	08:07	1	08:07	0	08:07	5						
08:08	0	08:08	0	08:08	6	08:08	2	08:08	2	08:08	0	08:08	0	08:08	0	08:08	0						
08:09	0	08:09	0	08:09	10	08:09	0	08:09	0	08:09	0	08:09	0	08:09	0	08:09	7						
08:10	0	08:10	0	08:10	6	08:10	1	08:10	1	08:10	1	08:10	1	08:10	0	08:10	8						
08:11	0	08:11	0	08:11	2	08:11	0	08:11	0	08:11	0	08:11	0	08:11	0	08:11	6						
08:12	0	08:12	0	08:12	1	08:12	1	08:12	1	08:12	2	08:12	2	08:12	0	08:12	6						
08:13	0	08:13	0	08:13	0	08:13	0	08:13	0	08:13	0	08:13	0	08:13	0	08:13	2						
08:14	0	08:14	0	08:14	0	08:14	0	08:14	0	08:14	0	08:14	0	08:14	0	08:14	7						
Average	0.0	Average	0.0	Average	3.0	Average	0.6	Average	0.7	Average	5.9	Average	0.7	Average	5.9	Average	0.7						
Maximum	0	Maximum	0	Maximum	10	Maximum	2	Maximum	2	Maximum	10	Maximum	2	Maximum	10	Maximum	10						
Range	0	Range	0	Range	0-10	Range	0-2	Range	0-2	Range	0-9	Range	0-2	Range	0-9	Range	0-9						
08:15	0	08:15	0	08:15	8	08:15	0	08:15	0	08:15	0	08:15	0	08:15	0	08:15	7						
08:16	0	08:16	0	08:16	5	08:16	1	08:16	1	08:16	0	08:16	0	08:16	0	08:16	8						
08:17	0	08:17	0	08:17	5	08:17	3	08:17	3	08:17	0	08:17	0	08:17	0	08:17	20						
08:18	0	08:18	0	08:18	0	08:18	0	08:18	0	08:18	0	08:18	0	08:18	0	08:18	0						
08:19	0	08:19	0	08:19	15	08:19	5	08:19	5	08:19	2	08:19	2	08:19	0	08:19	20						
08:20	0	08:20	0	08:20	3	08:20	3	08:20	3	08:20	0	08:20	0	08:20	0	08:20	20						
08:21	0	08:21	0	08:21	7	08:21	2	08:21	2	08:21	0	08:21	0	08:21	0	08:21	20						
08:22	0	08:22	0	08:22	2	08:22	0	08:22	0	08:22	0	08:22	0	08:22	0	08:22	20						
08:23	0	08:23	0	08:23	0	08:23	0	08:23	0	08:23	0	08:23	0	08:23	0	08:23	11						
08:24	0	08:24	0	08:24	0	08:24	0	08:24	0	08:24	0	08:24	0	08:24	0	08:24	7						
08:25	0	08:25	0	08:25	0	08:25	0	08:25	0	08:25	1	08:25	3	08:25	0	08:25	3						
08:26	0	08:26	0	08:26	0	08:26	0	08:26	0	08:26	0	08:26	0	08:26	0	08:26	0						
08:27	0	08:27	0	08:27	0	08:27	0	08:27	0	08:27	0	08:27	0	08:27	0	08:27	5						
08:28	0	08:28	0	08:28	7	08:28	1	08:28	1	08:28	0	08:28	0	08:28	0	08:28	5						
08:29	0	08:29	0	08:29	0	08:29	0	08:29	0	08:29	0	08:29	0	08:29	0	08:29	8						
Average	0.0	Average	0.0	Average	3.5	Average	1.0	Average	0.2	Average	11.6	Average	0.2	Average	11.6	Average	0.2						
Maximum	0	Maximum	0	Maximum	15	Maximum	5	Maximum	2	Maximum	20	Maximum	2	Maximum	20	Maximum	2						
Range	0	Range	0	Range	0-15	Range	0-5	Range	0-2	Range	0-11	Range	0-2	Range	0-11	Range	0-11						
08:30	0	08:30	0	08:30	4	08:30	2	08:30	2	08:30	0	08:30	0	08:30	0	08:30	0						
08:31	0	08:31	0	08:31	0	08:31	0	08:31	0	08:31	0	08:31	0	08:31	0	08:31	0						
08:32	0	08:32	0	08:32	0	08:32	0	08:32	0	08:32	0	08:32	0	08:32	0	08:32	3						
08:33	0	08:33	0	08:33	2	08:33	0	08:33	0	08:33	0	08:33	0	08:33	0	08:33	9						
08:34	0	08:34	0	08:34	0	08:34	0	08:34	0	08:34	0	08:34	0	08:34	0	08:34	7						
08:35	0	08:35	0	08:35	0	08:35	3	08:35	3	08:35	0	08:35	0	08:35	0	08:35	3						
08:36	0	08:36	0	08:36	1	08:36	0	08:36	0	08:36	0	08:36	0	08:36	0	08:36	8						
08:37	0	08:37	0	08:37	0	08:37	0	08:37	0	08:37	0	08:37	0	08:37	0	08:37	0						
08:38	0	08:38	0	08:38	0	08:38	0	08:38	0	08:38	0	08:38	0	08:38	0	08:38	2						
08:39	0	08:39	0	08:39	0	08:39	0	08:39	0	08:39	0	08:39	0	08:39	0	08:39	4						
08:40	0	08:40	0	08:40	1	08:40	1	08:40	1	08:40	0	08:40	0	08:40	0	08:40	7						
08:41	0	08:41	0	08:41	6	08:41	2	08:41	2	08:41	0	08:41	0	08:41	0	08:41	8						
08:42	0	08:42	0	08:42	17	08:42	0	08:42	0	08:42	0	08:42	0	08:42	0	08:42	12						
08:43	0	08:43	0	08:43	16	08:43	0	08:43	0	08:43	0	08:43	2	08:43	0	08:43	10						
08:44	0	08:44	0	08:44	9	08:44	1	08:44	1	08:44	0	08:44	0	08:44	0	08:44	8						
Average	0.0	Average	0.0	Average	3.7	Average	0.6	Average	0.1	Average	12.4	Average	0.1	Average	12.4	Average	0.1						
Maximum	0	Maximum	0	Maximum	17	Maximum	3	Maximum	2	Maximum	20	Maximum	2	Maximum	20	Maximum	2						
Range	0	Range	0	Range	0-17	Range	0-3	Range	0-2	Range	0-12	Range	0-2	Range	0-12	Range	0-12						
08:45	0	08:45	0	08:45	6	08:45	0	08:45	0	08:45	0	08:45	0	08:45	0	08:45	4						
08:46	0	08:46	0	08:46	2	08:46	2	08:46	2	08:46	0	08:46	0	08:46	0	08:46	1						
08:47	0	08:47	0	08:47	1	08:47	0	08:47	0	08:47	0	08:47	0	08:47	0	08:47	4						
08:48	0	08:48	0	08:48	1	08:48	1	08:48	1	08:48	0	08:48	1	08:48	0	08:48	8						
08:49	0	08:49	0	08:49	1	08:49	0	08:49	0	08:49	0	08:49	0	08:49	0	08:49	9						
08:50	0	08:50	0	08:50	4	08:50	1	08:50	1	08:50	0	08:50	0	08:50	0	08:50	20						
08:51	0	08:51	0	08:51	9	08:51	0	08:51	0	08:51	0	08:51	0	08:51	0	08:51	20						
08:52	0	08:52	0	08:52	6	08:52	0	08:52	0	08:52	1	08:52	1	08:52	0	08:52	20						
08:53	0	08:53	0	08:53	7	08:53	3	08:53	3	08:53	0	08:53	0	08:53	0	08:53	20						
08:54	0	08:54	0	08:54	5	08:54	0	08:54	0	08:54	0	08:54	0	08:54	0	08:54	20						
08:55	0	08:55	0	08:55	15	08:55	0	08:55	0	08:55	0	08:55	0	08:55	0	08:55	20						
08:56	0	08:56	0	08:56	3	08:56	0	08:56	0	08:56													

PM Peak Period - 16:45 to 18:15											
Time	Queue Length	Time	Queue Length	Time	Queue Length	Time	Queue Length	Time	Queue Length	Time	Queue Length
16:45	0	16:45	0	16:45	7	16:45	0	16:45	4	16:45	4
16:46	0	16:46	0	16:46	1	16:46	0	16:46	0	16:46	4
16:47	0	16:47	0	16:47	0	16:47	0	16:47	0	16:47	7
16:48	0	16:48	0	16:48	3	16:48	0	16:48	0	16:48	8
16:49	0	16:49	0	16:49	0	16:49	0	16:49	1	16:49	6
16:50	0	16:50	0	16:50	2	16:50	1	16:50	0	16:50	3
16:51	0	16:51	0	16:51	0	16:51	0	16:51	0	16:51	0
16:52	0	16:52	0	16:52	2	16:52	0	16:52	1	16:52	0
16:53	0	16:53	0	16:53	3	16:53	0	16:53	0	16:53	4
16:54	0	16:54	0	16:54	2	16:54	0	16:54	0	16:54	5
16:55	0	16:55	0	16:55	1	16:55	0	16:55	0	16:55	10
16:56	0	16:56	0	16:56	0	16:56	0	16:56	0	16:56	15
16:57	0	16:57	0	16:57	0	16:57	0	16:57	0	16:57	20
16:58	0	16:58	0	16:58	3	16:58	2	16:58	0	16:58	20
16:59	0	16:59	0	16:59	6	16:59	1	16:59	0	16:59	12
Average	0.0	Average	0.0	Average	1.9	Average	0.3	Average	0.4	Average	8.3
Maximum	0	Maximum	0	Maximum	7	Maximum	2	Maximum	4	Maximum	20
Range	0	Range	0	Range	0-7	Range	0-2	Range	0-4	Range	0-20
17:00	0	17:00	0	17:00	5	17:00	0	17:00	1	17:00	10
17:01	0	17:01	0	17:01	0	17:01	0	17:01	1	17:01	10
17:02	0	17:02	0	17:02	2	17:02	1	17:02	0	17:02	7
17:03	0	17:03	0	17:03	4	17:03	2	17:03	0	17:03	4
17:04	0	17:04	0	17:04	3	17:04	3	17:04	1	17:04	10
17:05	0	17:05	0	17:05	0	17:05	0	17:05	0	17:05	5
17:06	0	17:06	0	17:06	0	17:06	0	17:06	0	17:06	0
17:07	0	17:07	0	17:07	0	17:07	0	17:07	2	17:07	0
17:08	0	17:08	0	17:08	2	17:08	1	17:08	3	17:08	7
17:09	0	17:09	0	17:09	0	17:09	0	17:09	0	17:09	8
17:10	0	17:10	0	17:10	0	17:10	0	17:10	0	17:10	6
17:11	0	17:11	0	17:11	0	17:11	0	17:11	0	17:11	11
17:12	0	17:12	0	17:12	10	17:12	2	17:12	2	17:12	8
17:13	0	17:13	0	17:13	12	17:13	0	17:13	0	17:13	0
17:14	0	17:14	0	17:14	0	17:14	1	17:14	2	17:14	5
Average	0.0	Average	0.0	Average	2.5	Average	0.7	Average	0.8	Average	6.1
Maximum	0	Maximum	0	Maximum	12	Maximum	3	Maximum	3	Maximum	11
Range	0	Range	0	Range	0-12	Range	0-3	Range	0-3	Range	0-11
17:15	0	17:15	0	17:15	0	17:15	0	17:15	0	17:15	5
17:16	0	17:16	0	17:16	0	17:16	0	17:16	0	17:16	5
17:17	0	17:17	0	17:17	1	17:17	0	17:17	0	17:17	3
17:18	0	17:18	0	17:18	2	17:18	0	17:18	1	17:18	8
17:19	0	17:19	0	17:19	3	17:19	0	17:19	0	17:19	8
17:20	0	17:20	0	17:20	0	17:20	0	17:20	0	17:20	9
17:21	0	17:21	0	17:21	2	17:21	1	17:21	0	17:21	20
17:22	0	17:22	0	17:22	0	17:22	0	17:22	0	17:22	0
17:23	0	17:23	0	17:23	0	17:23	0	17:23	0	17:23	8
17:24	0	17:24	0	17:24	0	17:24	0	17:24	0	17:24	5
17:25	0	17:25	0	17:25	2	17:25	1	17:25	0	17:25	6
17:26	0	17:26	0	17:26	1	17:26	0	17:26	0	17:26	7
17:27	0	17:27	0	17:27	1	17:27	2	17:27	0	17:27	3
17:28	0	17:28	0	17:28	0	17:28	0	17:28	1	17:28	0
17:29	0	17:29	0	17:29	2	17:29	0	17:29	0	17:29	4
Average	0.0	Average	0.0	Average	0.9	Average	0.3	Average	0.1	Average	6.1
Maximum	0	Maximum	0	Maximum	3	Maximum	2	Maximum	1	Maximum	20
Range	0	Range	0	Range	0-3	Range	0-2	Range	0-1	Range	0-20
17:30	0	17:30	0	17:30	0	17:30	0	17:30	2	17:30	5
17:31	0	17:31	0	17:31	2	17:31	0	17:31	1	17:31	5
17:32	0	17:32	0	17:32	0	17:32	0	17:32	0	17:32	0
17:33	0	17:33	0	17:33	0	17:33	0	17:33	0	17:33	0
17:34	0	17:34	0	17:34	0	17:34	0	17:34	0	17:34	0
17:35	0	17:35	0	17:35	0	17:35	0	17:35	0	17:35	1
17:36	0	17:36	0	17:36	3	17:36	0	17:36	0	17:36	5
17:37	0	17:37	0	17:37	1	17:37	1	17:37	0	17:37	1
17:38	0	17:38	0	17:38	0	17:38	0	17:38	0	17:38	1
17:39	0	17:39	0	17:39	0	17:39	0	17:39	1	17:39	2
17:40	0	17:40	0	17:40	4	17:40	0	17:40	0	17:40	9
17:41	0	17:41	0	17:41	4	17:41	0	17:41	1	17:41	9
17:42	0	17:42	0	17:42	8	17:42	0	17:42	1	17:42	9
17:43	0	17:43	0	17:43	0	17:43	0	17:43	2	17:43	8
17:44	0	17:44	0	17:44	1	17:44	1	17:44	0	17:44	6
Average	0.0	Average	0.0	Average	1.3	Average	0.1	Average	0.5	Average	3.9
Maximum	0	Maximum	0	Maximum	8	Maximum	1	Maximum	2	Maximum	9
Range	0	Range	0	Range	0-8	Range	0-1	Range	0-2	Range	0-9
17:45	0	17:45	0	17:45	4	17:45	0	17:45	3	17:45	0
17:46	0	17:46	0	17:46	0	17:46	0	17:46	3	17:46	4
17:47	0	17:47	0	17:47	2	17:47	0	17:47	0	17:47	1
17:48	0	17:48	0	17:48	2	17:48	0	17:48	0	17:48	0
17:49	0	17:49	0	17:49	0	17:49	0	17:49	0	17:49	0
17:50	0	17:50	0	17:50	0	17:50	0	17:50	1	17:50	2
17:51	0	17:51	0	17:51	0	17:51	1	17:51	0	17:51	7
17:52	0	17:52	0	17:52	4	17:52	0	17:52	0	17:52	3
17:53	0	17:53	0	17:53	0	17:53	0	17:53	3	17:53	0
17:54	0	17:54	0	17:54	0	17:54	0	17:54	0	17:54	0
17:55	0	17:55	0	17:55	2	17:55	1	17:55	1	17:55	1
17:56	0	17:56	0	17:56	0	17:56	0	17:56	1	17:56	3
17:57	0	17:57	0	17:57	0	17:57	0	17:57	0	17:57	0
17:58	0	17:58	0	17:58	0	17:58	0	17:58	0	17:58	0
17:59	0	17:59	0	17:59	0	17:59	0	17:59	1	17:59	0
Average	0.0	Average	0.0	Average	0.9	Average	0.1	Average	0.9	Average	1.4
Maximum	0	Maximum	0	Maximum	4	Maximum	1	Maximum	3	Maximum	7
Range	0	Range	0	Range	0-4	Range	0-1	Range	0-3	Range	0-7
18:00	0	18:00	0	18:00	0	18:00	2	18:00	0	18:00	3
18:01	0	18:01	0	18:01	0	18:01	0	18:01	0	18:01	0
18:02	0	18:02	0	18:02	0	18:02	0	18:02	0	18:02	0
18:03	0	18:03	0	18:03	0	18:03	0	18:03	3	18:03	2
18:04	0	18:04	0	18:04	0	18:04	0	18:04	0	18:04	0
18:05	0	18:05	0	18:05	0	18:05	0	18:05	0	18:05	1
18:06	0	18:06	0	18:06	0	18:06	0	18:06	0	18:06	1
18:07	0	18:07	0	18:07	0	18:07	0	18:07	0	18:07	2
18:08	0	18:08	0	18:08	0	18:08	0	18:08	0	18:08	1
18:09	0	18:09	0	18:09	0	18:09	0	18:09	0	18:09	3
18:10	0	18:10	0	18:10	0	18:10	0	18:10	0	18:10	1
18:11	0	18:11	0	18:11	4	18:11	0	18:11	0	18:11	0
18:12	0	18:12	0	18:12	0	18:12	0	18:12	0	18:12	2
18:13	0	18:13	0	18:13	2	18:13	0	18:13	0	18:13	5
18:14	0	18:14	0	18:14	0	18:14	0	18:14	0	18:14	6
18:15	0	18:15	0	18:15	0	18:15	1	18:15	0	18:15	6
Average	0.0	Average	0.0	Average	0.4	Average	0.2	Average	0.2	Average	2.1
Maximum	0	Maximum	0	Maximum	4	Maximum	2	Maximum	3	Maximum	6
Range	0	Range	0	Range	0-4	Range	0-2	Range	0-3	Range	0-6

Roundabout 2 - A227 (N) / A2 EB Off Slip / Site Access

Arm	Peak Period	Max 15-Minute Average Queue
A227 Wrotham Road (South)	AM	0.0
	PM	0.0
A2 Eastbound Off Slip	AM	1.3
	PM	6.0
A227 Wrotham Road (North)	AM	1.9
	PM	3.7

Roundabout 3 - A227 (S) / A2 WB Off Slip

Arm	Peak Period	Max 15-Minute Average Queue
A227 Wrotham Road (North)	AM	0.0
	PM	0.0
A2 Westbound Off Slip	AM	13.1
	PM	8.7
A227 Wrotham Road (South)	AM	5.5
	PM	3.2

APPENDIX F - A227 WROTHAM ROAD / A2 EASTBOUND SLIP ROAD / SITE ACCESS ROUNDABOUT – 2023 DIRECT PROFILE ARCADY MODEL

Junctions 9										
ARCADY 9 - Roundabout Module										
Version: 9.5.1.7462 © Copyright TRL Limited, 2019										
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk										
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution										

Filename: A227_A2 EB Slips_Site Access RB Direct 23.j9

Path: M:\Projects\2022\22052 - BP Tollgate, Gravesend\07. Technical\07.02 Modelling\ARCADY\Direct Assessment

Report generation date: 18/03/2025 16:38:50

»2023, AM

»2023, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
2023										
Arm A227N	D1	3.6	9.11	0.79	A	D2	4.1	9.85	0.81	A
Arm SA		0.0	0.00	0.00	A		0.0	13.29	0.03	B
Arm A227S		0.7	2.54	0.42	A		0.8	2.63	0.45	A
Arm A20FF		0.5	2.65	0.32	A		1.4	4.10	0.58	A

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

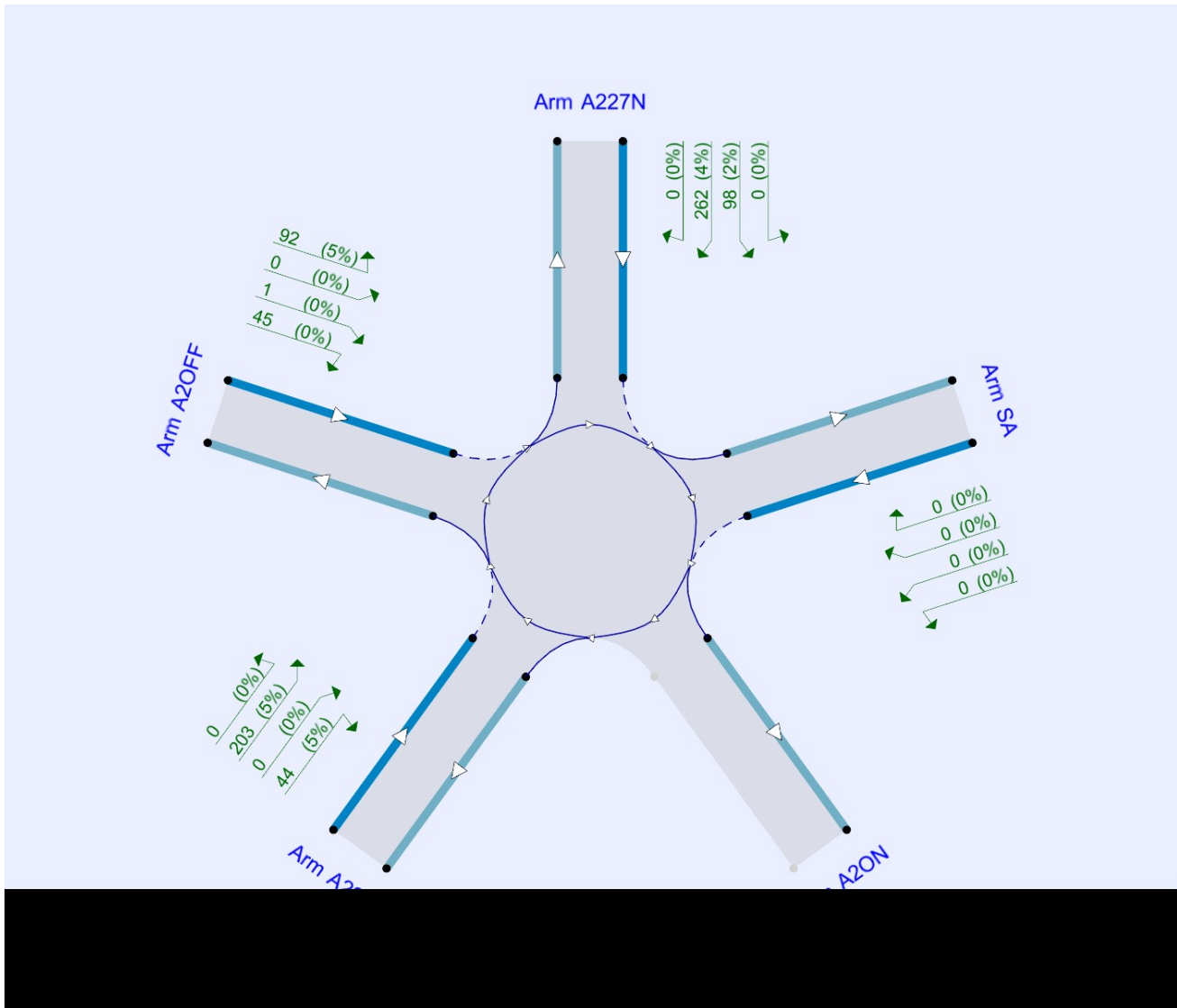
File summary

File Description

Title	
Location	
Site number	
Date	28/03/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	MARKIDES\Markides Associates
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	perTimeSegment	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2023	AM	DIRECT	07:45	09:15	90	15	✓
D2	2023	PM	DIRECT	16:45	18:15	90	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2023, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A227 / A2 EB Slips / Site Access RB	Standard Roundabout		A227N, SA, A2ON, A227S, A2OFF	5.61	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A227N	A227 Wrotham Road (N)	
SA	Site Access	
A2ON	A2 EB On Slip	
A227S	A227 Wrotham Road (S)	
A2OFF	A2 EB Off Slip	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A227N	4.60	9.30	22.1	48.8	63.9	50.0	
SA	3.10	5.50	5.4	12.7	63.9	59.0	
A2ON							✓
A227S	7.10	9.30	17.9	31.1	63.9	47.0	
A2OFF	7.00	10.20	17.9	40.0	63.9	24.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/TS)
A227N	0.600	537.586
SA	0.400	269.987
A2ON		
A227S	0.662	630.126
A2OFF	0.741	715.427

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 period length (min)	Time segment length (min)	Run automatically
D1	2023	AM	DIRECT	07:45	09:15	90	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A227N		DIRECT	✓	100.000
SA		DIRECT	✓	100.000
A2ON				
A227S		DIRECT	✓	100.000
A2OFF		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

07:45 - 08:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	98.00	262.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	203.00	0.00	44.00	0.00	0.00
	A2OFF	92.00	0.00	1.00	45.00	0.00

Demand (Veh/TS)

08:00 - 08:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	109.00	249.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	210.00	0.00	43.00	0.00	0.00
	A2OFF	114.00	1.00	0.00	34.00	0.00

Demand (Veh/TS)

08:15 - 08:30

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	117.00	222.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	202.00	0.00	51.00	0.00	0.00
	A2OFF	118.00	0.00	2.00	40.00	0.00

Demand (Veh/TS)

08:30 - 08:45

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	113.00	249.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	177.00	0.00	54.00	0.00	0.00
	A2OFF	114.00	0.00	0.00	50.00	0.00

Demand (Veh/TS)

08:45 - 09:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	102.00	229.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	217.00	0.00	46.00	1.00	0.00
	A2OFF	99.00	0.00	0.00	42.00	0.00

Demand (Veh/TS)

09:00 - 09:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	89.00	192.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	196.00	0.00	34.00	0.00	0.00
	A2OFF	91.00	0.00	0.00	30.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

07:45 - 08:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	2	4	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	5	0	5	0	0
	A2OFF	5	0	0	0	0

Heavy Vehicle Percentages

08:00 - 08:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	5	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	0	0	0	0
	A2OFF	3	0	0	3	0

Heavy Vehicle Percentages

08:15 - 08:30

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	3	2	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	0	2	0	0
	A2OFF	5	0	0	5	0

Heavy Vehicle Percentages

08:30 - 08:45

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	0	4	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	0	6	0	0
	A2OFF	7	0	0	6	0

Heavy Vehicle Percentages

08:45 - 09:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	3	6	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	0	0	100	0
	A2OFF	4	0	0	2	0

Heavy Vehicle Percentages

09:00 - 09:15

		To				
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	2	5	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	0	0	0	0
	A2OFF	8	0	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
A227N	0.79	9.11	3.6	A	338.50	2031.01
SA	0.00	0.00	0.0	A	0.00	0.00
A2ON						
A227S	0.42	2.54	0.7	A	246.33	1478.01
A2OFF	0.32	2.65	0.5	A	145.50	873.00

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	360.00	360.00	89.75	466.27	0.772	356.74	294.18	0.0	3.3	7.997	A
SA	0.00	0.00	446.50	85.67	0.000	0.00	0.00	0.0	0.0	0.000	A
A2ON			304.51				141.99				
A227S	247.00	247.00	0.00	600.12	0.412	246.30	304.51	0.0	0.7	2.538	A
A2OFF	138.00	138.00	246.30	507.01	0.272	137.63	0.00	0.0	0.4	2.434	A

08:00 - 08:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	358.00	358.00	78.03	472.27	0.758	358.06	323.94	3.3	3.2	7.893	A
SA	0.00	0.00	435.10	90.21	0.000	0.00	1.00	0.0	0.0	0.000	A
A2ON			283.18				151.93				
A227S	253.00	253.00	0.00	624.86	0.405	253.01	283.18	0.7	0.7	2.419	A
A2OFF	149.00	149.00	253.01	511.23	0.291	148.96	0.00	0.4	0.4	2.484	A

08:15 - 08:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	339.00	339.00	92.95	468.92	0.723	339.52	319.98	3.2	2.7	6.988	A
SA	0.00	0.00	432.47	92.68	0.000	0.00	0.00	0.0	0.0	0.000	A
A2ON			262.45				170.02				
A227S	253.00	253.00	0.00	617.79	0.410	252.99	262.45	0.7	0.7	2.466	A
A2OFF	160.00	160.00	252.99	499.68	0.320	159.94	0.00	0.4	0.5	2.649	A

08:30 - 08:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	362.00	362.00	103.98	458.82	0.789	361.09	291.10	2.7	3.6	9.114	A
SA	0.00	0.00	465.07	77.59	0.000	0.00	0.00	0.0	0.0	0.000	A
A2ON			298.26				166.81				
A227S	231.00	231.00	0.00	612.18	0.377	231.08	298.26	0.7	0.6	2.363	A
A2OFF	164.00	164.00	231.08	505.46	0.324	163.99	0.00	0.5	0.5	2.635	A

08:45 - 09:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	331.00	331.00	89.04	459.79	0.720	331.95	315.92	3.6	2.6	7.095	A
SA	0.00	0.00	420.99	94.23	0.000	0.00	0.00	0.0	0.0	0.000	A
A2ON			272.67				148.32				
A227S	264.00	264.00	0.00	622.63	0.424	263.88	272.67	0.6	0.7	2.509	A
A2OFF	141.00	141.00	263.88	500.56	0.282	141.08	0.00	0.5	0.4	2.505	A

09:00 - 09:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	281.00	281.00	64.08	479.12	0.586	282.20	287.14	2.6	1.4	4.599	A
SA	0.00	0.00	346.29	126.60	0.000	0.00	0.00	0.0	0.0	0.000	A
A2ON			222.89				123.40				
A227S	230.00	230.00	0.00	619.59	0.371	230.14	222.89	0.7	0.6	2.311	A
A2OFF	121.00	121.00	230.14	507.82	0.238	121.08	0.00	0.4	0.3	2.329	A

2023, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A227 / A2 EB Slips / Site Access RB	Standard Roundabout		A227N, SA, A2ON, A227S, A2OFF	5.96	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D2	2023	PM	DIRECT	16:45	18:15	90	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A227N		DIRECT	✓	100.000
SA		DIRECT	✓	100.000
A2ON				
A227S		DIRECT	✓	100.000
A2OFF		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

16:45 - 17:00

		To				
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	146.00	219.00	0.00
	SA	0.00	0.00	2.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	191.00	0.00	46.00	0.00	0.00
	A2OFF	174.00	2.00	0.00	87.00	0.00

Demand (Veh/TS)

17:00 - 17:15

		To				
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	144.00	197.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	207.00	0.00	42.00	0.00	0.00
	A2OFF	205.00	0.00	0.00	99.00	0.00

Demand (Veh/TS)

17:15 - 17:30		To					
	From		A227N	SA	A2ON	A227S	A2OFF
		A227N	0.00	0.00	126.00	214.00	0.00
		SA	0.00	0.00	0.00	0.00	0.00
		A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		A227S	227.00	0.00	54.00	0.00	0.00
		A2OFF	197.00	0.00	1.00	84.00	0.00

Demand (Veh/TS)

17:30 - 17:45		To					
	From		A227N	SA	A2ON	A227S	A2OFF
		A227N	0.00	0.00	131.00	197.00	0.00
		SA	0.00	0.00	0.00	0.00	0.00
		A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		A227S	190.00	0.00	43.00	0.00	0.00
		A2OFF	197.00	0.00	1.00	80.00	0.00

Demand (Veh/TS)

17:45 - 18:00		To					
	From		A227N	SA	A2ON	A227S	A2OFF
		A227N	0.00	0.00	130.00	182.00	0.00
		SA	0.00	0.00	0.00	0.00	0.00
		A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		A227S	203.00	0.00	43.00	1.00	0.00
		A2OFF	189.00	0.00	2.00	69.00	0.00

Demand (Veh/TS)

18:00 - 18:15		To					
	From		A227N	SA	A2ON	A227S	A2OFF
		A227N	0.00	0.00	132.00	186.00	0.00
		SA	0.00	0.00	0.00	0.00	0.00
		A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		A227S	155.00	0.00	35.00	0.00	0.00
		A2OFF	174.00	0.00	0.00	73.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

16:45 - 17:00		To					
	From		A227N	SA	A2ON	A227S	A2OFF
		A227N	0	0	1	2	0
		SA	0	0	0	0	0
		A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		A227S	3	0	4	0	0
		A2OFF	2	0	0	0	0

Heavy Vehicle Percentages

17:00 - 17:15		To					
	From		A227N	SA	A2ON	A227S	A2OFF
		A227N	0	0	1	1	0
		SA	0	0	0	0	0
		A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		A227S	0	0	0	0	0
		A2OFF	2	0	0	0	0

Heavy Vehicle Percentages

17:15 - 17:30

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	2	1	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	0	2	0	0
	A2OFF	1	0	0	0	0

Heavy Vehicle Percentages

17:30 - 17:45

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	0	2	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	0	2	0	0
	A2OFF	2	0	0	0	0

Heavy Vehicle Percentages

17:45 - 18:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	3	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	0	0	0	0	0
	A2OFF	1	0	50	0	0

Heavy Vehicle Percentages

18:00 - 18:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	1	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	0	0	0	0
	A2OFF	2	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
A227N	0.81	9.85	4.1	A	334.00	2003.99
SA	0.03	13.29	0.0	B	0.33	2.00
A2ON						
A227S	0.45	2.63	0.8	A	239.50	1437.00
A2OFF	0.58	4.10	1.4	A	272.33	1634.01

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	365.00	365.00	134.54	448.53	0.814	360.88	363.84	0.0	4.1	9.852	A
SA	2.00	2.00	493.43	69.66	0.029	1.97	1.99	0.0	0.0	13.289	B
A2ON			303.20				192.20				
A227S	237.00	237.00	0.00	610.62	0.388	236.37	303.20	0.0	0.6	2.400	A
A2OFF	263.00	263.00	236.37	527.81	0.498	262.01	0.00	0.0	1.0	3.373	A

17:00 - 17:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	341.00	341.00	140.90	448.47	0.760	341.84	411.69	4.1	3.3	8.514	A
SA	0.00	0.00	482.73	75.61	0.000	0.03	0.01	0.0	0.0	0.000	A
A2ON			296.46				186.30				
A227S	249.00	249.00	0.00	630.08	0.395	248.98	296.46	0.6	0.7	2.361	A
A2OFF	304.00	304.00	248.98	523.96	0.580	303.62	0.00	1.0	1.4	4.078	A

17:15 - 17:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	340.00	340.00	139.01	447.36	0.760	340.05	423.90	3.3	3.2	8.400	A
SA	0.00	0.00	479.06	76.16	0.000	0.00	0.00	0.0	0.0	0.000	A
A2ON			297.92				181.14				
A227S	281.00	281.00	0.00	622.72	0.451	280.83	297.92	0.7	0.8	2.631	A
A2OFF	282.00	282.00	280.83	501.46	0.562	282.07	0.00	1.4	1.3	4.103	A

17:30 - 17:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	328.00	328.00	124.11	457.05	0.718	328.62	387.29	3.2	2.6	7.043	A
SA	0.00	0.00	452.73	87.05	0.000	0.00	0.00	0.0	0.0	0.000	A
A2ON			277.53				175.20				
A227S	233.00	233.00	0.00	617.79	0.377	233.21	277.53	0.8	0.6	2.341	A
A2OFF	278.00	278.00	233.21	531.75	0.523	278.19	0.00	1.3	1.1	3.554	A

17:45 - 18:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	312.00	312.00	115.05	458.02	0.681	312.43	392.04	2.6	2.2	6.200	A
SA	0.00	0.00	427.48	95.98	0.000	0.00	0.00	0.0	0.0	0.000	A
A2ON			252.35				175.13				
A227S	247.00	247.00	0.00	630.09	0.392	246.97	252.35	0.6	0.6	2.348	A
A2OFF	260.00	260.00	246.97	526.67	0.494	260.12	0.00	1.1	1.0	3.377	A

18:00 - 18:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	318.00	318.00	108.08	467.98	0.679	318.03	329.33	2.2	2.1	6.006	A
SA	0.00	0.00	426.11	98.34	0.000	0.00	0.00	0.0	0.0	0.000	A
A2ON			259.05				167.06				
A227S	190.00	190.00	0.00	625.04	0.304	190.20	259.05	0.6	0.4	2.072	A
A2OFF	247.00	247.00	190.20	565.47	0.437	247.21	0.00	1.0	0.8	2.829	A

APPENDIX G - A227 WROTHAM ROAD / A2 EASTBOUND SLIP ROAD / SITE ACCESS ROUNDABOUT – ARCADY MODEL

Junctions 9	
ARCADY 9 - Roundabout Module	
Version: 9.5.1.7462 © Copyright TRL Limited, 2019	
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk	
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Filename: A227_A2 EB Slips_Site Access RB Direct AM Lane Sim.j9

Path: M:\Projects\2022\22052 - BP Tollgate, Gravesend\07. Technical\07.02 Modelling\ARCADY\Direct Assessment

Report generation date: 06/03/2025 10:43:33

-
- »2023, AM
 - »2025 Do Nothing, AM
 - »2025 Do Minimum, AM
 - »2025 Do Minimum Residual, AM
 - »2028 Do Nothing, AM
 - »2028 Do Minimum, AM
 - »2028 Do Minimum Residual, AM

Summary of junction performance

	AM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	[Lane Simulation] - 2023				
Arm A227N	D1	1.9	4.34		A
Arm SA		0.0	0.00		A
Arm A227S		1.2	4.05		A
Arm A20FF		1.2	6.15		A
	[Lane Simulation] - 2025 Do Nothing				
Arm A227N	D3	2.1	4.33		A
Arm SA		0.0	0.00		A
Arm A227S		1.5	4.11		A
Arm A20FF		1.3	6.60		A
	[Lane Simulation] - 2025 Do Minimum				
Arm A227N	D5	1.9	4.47		A
Arm SA		0.6	17.23		C
Arm A227S		1.2	4.16		A
Arm A20FF		1.6	6.68		A
	[Lane Simulation] - 2025 Do Minimum Residual				
Arm A227N	D7	2.0	4.49		A
Arm SA		0.5	18.32		C
Arm A227S		1.3	4.15		A
Arm A20FF		1.3	6.86		A
	[Lane Simulation] - 2028 Do Nothing				
Arm A227N	D9	2.3	4.61		A
Arm SA		0.0	0.00		A
Arm A227S		1.3	4.12		A
Arm A20FF		1.7	6.72		A
	[Lane Simulation] - 2028 Do Minimum				
Arm A227N	D11	2.1	4.96		A
Arm SA		0.9	26.89		D
Arm A227S		1.4	4.15		A
Arm A20FF		1.8	7.38		A
	[Lane Simulation] - 2028 Do Minimum Residual				
Arm A227N	D13	2.4	4.98		A
Arm SA		0.8	23.88		C
Arm A227S		1.4	4.20		A
Arm A20FF		1.7	7.27		A

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Arm and junction delays are averages for all movements, including movements with zero delay.

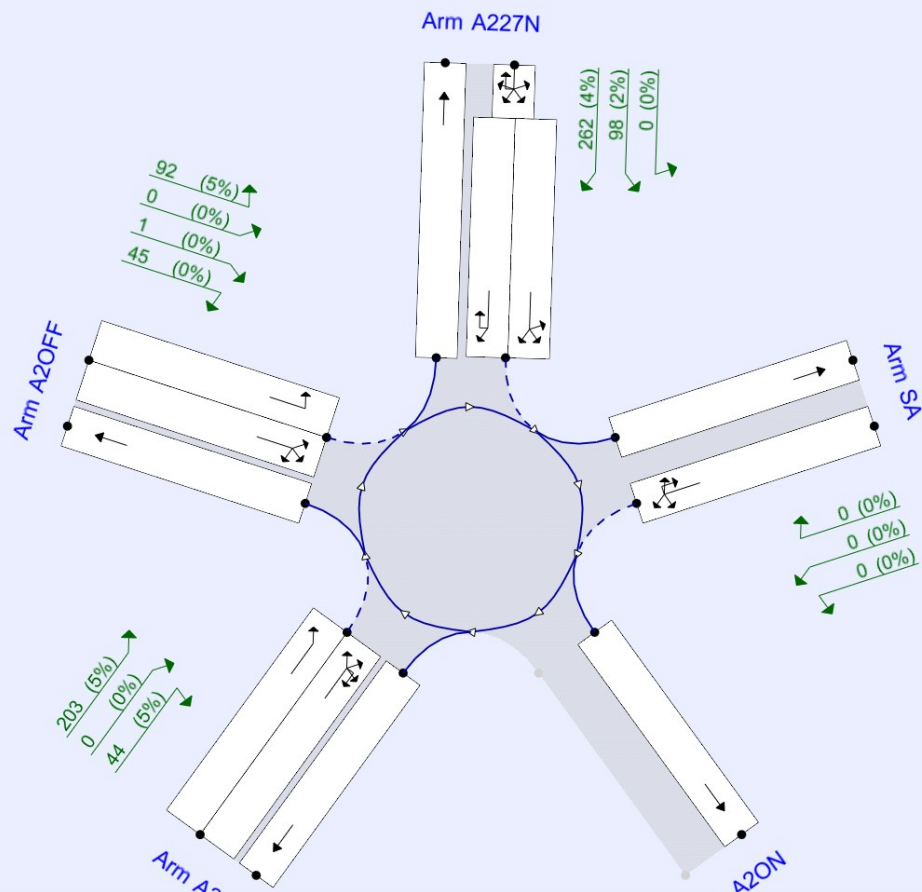
File summary

File Description

Title	
Location	
Site number	
Date	28/03/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	MARKIDES\Markides Associates
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	perTimeSegment	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

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

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials	Last run time taken (s)
Delay	1.00	100000	100000	-1	3	1	60	✓			126805168	27	3.79

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2023	AM	DIRECT	07:45	09:15	90	15	✓
D3	2025 Do Nothing	AM	DIRECT	07:45	09:15	90	15	✓
D5	2025 Do Minimum	AM	DIRECT	07:45	09:15	90	15	✓
D7	2025 Do Minimum Residual	AM	DIRECT	07:45	09:15	90	15	✓
D9	2028 Do Nothing	AM	DIRECT	07:45	09:15	90	15	✓
D11	2028 Do Minimum	AM	DIRECT	07:45	09:15	90	15	✓
D13	2028 Do Minimum Residual	AM	DIRECT	07:45	09:15	90	15	✓

Analysis Set Details

ID	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	✓	100.000	100.000

2023, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A227 / A2 EB Slips / Site Access RB	Standard Roundabout		A227N, SA, A2ON, A227S, A2OFF	4.60	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A227N	A227 Wrotham Road (N)	
SA	Site Access	
A2ON	A2 EB On Slip	
A227S	A227 Wrotham Road (S)	
A2OFF	A2 EB Off Slip	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A227N	4.60	9.30	22.1	48.8	63.9	50.0	
SA	3.10	5.50	5.4	12.7	63.9	59.0	
A2ON							✓
A227S	7.10	9.30	17.9	31.1	63.9	47.0	
A2OFF	7.00	10.20	17.9	40.0	63.9	24.0	

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct intercept adjustment (PCU/TS)
A227N	Direct	Queue Survey	250.00
SA	None		
A2ON			
A227S	None		
A2OFF	None		

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/TS)
A227N	0.600	787.586
SA	0.400	269.987
A2ON		
A227S	0.662	630.126
A2OFF	0.741	715.427

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

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
A227N	Evenly split	10.00
SA	Evenly split	10.00
A2ON	Evenly split	10.00
A227S	Evenly split	10.00
A2OFF	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Minimum capacity (PCU/TS)	Maximum capacity (PCU/TS)	Signalised
A227N	Entry	1	1	SA, A2ON, A227S	✓	5.00		0.00	24999.75	
			2	A227N, A227S	✓	5.00		0.00	24999.75	
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)		Infinity				
			1			Infinity				
SA	Entry	1	1	A227N, SA, A2ON, A227S		Infinity		0.00	24999.75	
	Exit	1	1			Infinity				
A2ON	Exit	1	1			Infinity				
A227S	Entry	1	1	A227N		Infinity		0.00	24999.75	
			2	A227N, SA, A2ON, A227S		Infinity		0.00	24999.75	
	Exit	1	1			Infinity				
A2OFF	Entry	1	1	A227N		Infinity		0.00	24999.75	
			2	SA, A2ON, A227S		Infinity		0.00	24999.75	
	Exit	1	1			Infinity				

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/TS)
A227N	Entry	1	1	0.300	393.793
			2	0.300	393.793
SA	Entry	1	1	0.400	269.987
A227S	Entry	1	1	0.331	315.063
			2	0.331	315.063
A2OFF	Entry	1	1	0.370	357.713
			2	0.370	357.713

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm				
			A227N	SA	A2ON	A227S	A2OFF
A227N	1	1		✓	✓	✓	
		2	✓			✓	
	2	1	✓	✓	✓	✓	✓
SA	1	1	✓	✓	✓	✓	
A227S	1	1	✓				
		2	✓	✓	✓	✓	
A2OFF	1	1	✓				
		2		✓	✓	✓	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2023	AM	DIRECT	07:45	09:15	90	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A227N		DIRECT	✓	100.000
SA		DIRECT	✓	100.000
A2ON				
A227S		DIRECT	✓	100.000
A2OFF		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

07:45 - 08:00		To					
	From		A227N	SA	A2ON	A227S	A2OFF
		A227N	0.00	0.00	98.00	262.00	0.00
		SA	0.00	0.00	0.00	0.00	0.00
		A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		A227S	203.00	0.00	44.00	0.00	0.00
		A2OFF	92.00	0.00	1.00	45.00	0.00

Demand (Veh/TS)

08:00 - 08:15		To					
	From		A227N	SA	A2ON	A227S	A2OFF
		A227N	0.00	0.00	109.00	249.00	0.00
		SA	0.00	0.00	0.00	0.00	0.00
		A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		A227S	210.00	0.00	43.00	0.00	0.00
		A2OFF	114.00	1.00	0.00	34.00	0.00

Demand (Veh/TS)

		To					
08:15 - 08:30	From		A227N	SA	A2ON	A227S	A2OFF
		A227N	0.00	0.00	117.00	222.00	0.00
		SA	0.00	0.00	0.00	0.00	0.00
		A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		A227S	202.00	0.00	51.00	0.00	0.00
		A2OFF	118.00	0.00	2.00	40.00	0.00

Demand (Veh/TS)

		To					
08:30 - 08:45	From		A227N	SA	A2ON	A227S	A2OFF
		A227N	0.00	0.00	113.00	249.00	0.00
		SA	0.00	0.00	0.00	0.00	0.00
		A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		A227S	177.00	0.00	54.00	0.00	0.00
		A2OFF	114.00	0.00	0.00	50.00	0.00

Demand (Veh/TS)

08:45 - 09:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	102.00	229.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	217.00	0.00	46.00	1.00	0.00
	A2OFF	99.00	0.00	0.00	42.00	0.00

Demand (Veh/TS)

09:00 - 09:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	89.00	192.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	196.00	0.00	34.00	0.00	0.00
	A2OFF	91.00	0.00	0.00	30.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

07:45 - 08:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	2	4	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	5	0	5	0	0
	A2OFF	5	0	0	0	0

Heavy Vehicle Percentages

08:00 - 08:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	5	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	0	0	0	0
	A2OFF	3	0	0	3	0

Heavy Vehicle Percentages

08:15 - 08:30

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	3	2	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	0	2	0	0
	A2OFF	5	0	0	5	0

Heavy Vehicle Percentages

08:30 - 08:45

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	0	4	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	0	6	0	0
	A2OFF	7	0	0	6	0

Heavy Vehicle Percentages

08:45 - 09:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	3	6	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	0	0	100	0
	A2OFF	4	0	0	2	0

Heavy Vehicle Percentages

09:00 - 09:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	2	5	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	0	0	0	0
	A2OFF	8	0	0	3	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
A227N	4.34	1.9	A	341.74	2050.41
SA	0.00	0.0	A	0.00	0.00
A2ON					
A227S	4.05	1.2	A	245.28	1471.67
A2OFF	6.15	1.2	A	142.60	855.61

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	360.67	360.67	88.52	360.78	364.04	296.56	0.0	1.8	4.074	A
SA	0.00	0.00	449.22	0.00	0.00	0.00	0.0	0.0	0.000	A
A2ON			0.00			142.00				
A227S	248.33	248.33	0.00	248.89	254.04	307.33	0.0	1.1	3.973	A
A2OFF	137.11	137.11	248.89	136.11	139.93	0.00	0.0	0.9	5.407	A

08:00 - 08:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	360.33	360.33	78.67	358.11	374.04	310.56	1.8	1.9	4.136	A
SA	0.00	0.00	436.33	0.00	0.00	0.44	0.0	0.0	0.000	A
A2ON			0.00			158.22				
A227S	251.78	251.78	0.00	252.56	260.15	277.89	1.1	0.9	3.973	A
A2OFF	135.33	135.33	252.56	136.67	147.89	0.00	0.9	0.4	5.770	A

08:15 - 08:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	342.33	342.33	98.44	344.78	348.33	319.55	1.9	1.0	3.922	A
SA	0.00	0.00	443.22	0.00	0.00	0.00	0.0	0.0	0.000	A
A2ON			0.00			170.89				
A227S	255.25	255.25	0.00	254.61	258.59	272.33	0.9	1.2	3.840	A
A2OFF	163.56	163.56	254.61	163.56	168.63	0.00	0.4	1.2	6.034	A

08:30 - 08:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	372.11	372.11	104.00	373.10	376.04	295.22	1.0	1.9	4.339	A
SA	0.00	0.00	477.22	0.00	0.00	0.00	0.0	0.0	0.000	A
A2ON			0.00			166.67				
A227S	231.89	231.89	0.00	232.22	235.85	310.56	1.2	0.9	3.734	A
A2OFF	166.00	166.00	232.22	167.00	176.11	0.00	1.2	0.7	6.146	A

08:45 - 09:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	331.89	331.89	83.67	334.22	348.85	305.06	1.9	1.1	4.133	A
SA	0.00	0.00	417.89	0.00	0.00	0.00	0.0	0.0	0.000	A
A2ON			0.00			148.22				
A227S	250.44	250.44	0.00	249.89	264.04	269.96	0.9	1.0	4.045	A
A2OFF	137.33	137.33	249.89	138.89	143.85	0.00	0.7	0.5	5.140	A

09:00 - 09:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	283.11	283.11	63.53	281.78	291.44	286.67	1.1	1.2	3.347	A
SA	0.00	0.00	346.22	0.00	0.00	0.00	0.0	0.0	0.000	A
A2ON			0.00			120.11				
A227S	234.11	234.11	0.00	234.00	234.56	226.11	1.0	0.6	3.638	A
A2OFF	116.22	116.22	234.00	116.22	126.07	0.00	0.5	0.7	5.041	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	203.89	354.68	0.574	203.67	206.59	0.0	1.2	4.255	A
			2	A227N, A227S	156.78	351.99	0.445	157.11	157.44	0.0	0.6	3.588	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	360.67			360.67	365.85	0.0	0.0	0.106	A
	Exit	1	1		296.56			296.56	305.56	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.00	84.25	0.000	0.00	0.00	0.0	0.0	0.000	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A
A2ON	Exit	1	1		142.00			142.00	143.15	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	111.22	302.39	0.368	111.33	113.48	0.0	0.6	3.846	A
			2	A227N, SA, A2ON, A227S	137.11	300.70	0.455	137.56	140.56	0.0	0.6	4.077	A
	Exit	1	1		307.33			307.33	309.30	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	92.67	248.92	0.373	91.67	96.56	0.0	0.8	5.983	A
			2	SA, A2ON, A227S	44.44	261.44	0.170	44.44	43.37	0.0	0.1	4.181	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	213.00	357.25	0.595	211.78	216.37	1.2	1.1	4.309	A
			2	A227N, A227S	147.33	350.64	0.420	146.33	157.67	0.6	0.7	3.629	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	360.33			360.33	374.19	0.0	0.0	0.110	A
	Exit	1	1		310.56			310.56	328.67	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.00	88.87	0.000	0.00	0.00	0.0	0.0	0.000	A
	Exit	1	1		0.44			0.44	0.93	0.0	0.0	0.000	A
A2ON	Exit	1	1		158.22			158.22	153.56	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	114.00	311.44	0.366	114.56	119.81	0.6	0.3	3.785	A
			2	A227N, SA, A2ON, A227S	137.78	314.56	0.438	138.00	140.33	0.6	0.6	4.132	A
	Exit	1	1		277.89			277.89	298.93	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	100.78	255.59	0.394	102.56	111.52	0.8	0.2	6.353	A
			2	SA, A2ON, A227S	34.56	255.75	0.136	34.00	36.37	0.1	0.2	3.997	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	203.56	354.90	0.574	205.00	206.44	1.1	0.7	4.222	A
			2	A227N, A227S	139.00	355.60	0.390	139.78	141.89	0.7	0.3	3.297	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	342.33			342.56	347.37	0.0	0.0	0.077	A
			1		319.55			319.55	329.56	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.00	88.34	0.000	0.00	0.00	0.0	0.0	0.000	A
	Exit	1	1		0.00			0.00	0.04	0.0	0.0	0.000	A
A2ON	Exit	1	1		170.89			170.89	171.67	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	114.57	308.19	0.372	114.00	116.93	0.3	0.6	3.494	A
			2	A227N, SA, A2ON, A227S	140.56	308.95	0.455	140.44	141.67	0.6	0.6	4.127	A
	Exit	1	1		272.33			272.33	274.30	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	116.89	249.18	0.469	116.67	122.89	0.2	1.1	6.680	A
			2	SA, A2ON, A227S	46.61	248.61	0.187	46.79	45.74	0.2	0.1	4.290	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	219.22	354.52	0.619	218.89	216.44	0.7	1.4	4.618	A
			2	A227N, A227S	153.11	345.70	0.443	154.33	159.59	0.3	0.4	3.685	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	372.11			372.33	377.00	0.0	0.0	0.112	A
			1		295.22			295.22	302.56	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.00	72.44	0.000	0.00	0.00	0.0	0.0	0.000	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A
A2ON	Exit	1	1		166.67			166.67	169.74	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	99.44	308.19	0.322	99.67	100.59	0.6	0.3	3.561	A
			2	A227N, SA, A2ON, A227S	132.44	304.72	0.435	132.61	135.26	0.6	0.5	3.865	A
	Exit	1	1		310.56			310.56	315.70	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	116.33	250.92	0.463	117.33	122.96	1.1	0.6	6.881	A
			2	SA, A2ON, A227S	49.67	253.35	0.196	49.67	53.15	0.1	0.1	4.477	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	192.78	352.46	0.547	193.45	203.41	1.4	0.9	4.327	A
			2	A227N, A227S	139.11	351.59	0.396	140.78	145.44	0.4	0.3	3.605	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	331.89			331.89	348.07	0.0	0.0	0.105	A
			1		305.06			305.06	318.26	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.00	96.20	0.000	0.00	0.00	0.0	0.0	0.000	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A
A2ON	Exit	1	1		148.22			148.22	153.11	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	113.22	312.60	0.362	113.00	120.37	0.3	0.4	3.781	A
			2	A227N, SA, A2ON, A227S	137.22	311.02	0.441	136.89	143.67	0.5	0.6	4.268	A
	Exit	1	1		269.96			269.96	285.37	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	98.67	252.70	0.391	100.11	102.19	0.6	0.3	5.533	A
			2	SA, A2ON, A227S	38.78	259.87	0.149	38.69	41.67	0.1	0.2	4.205	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	170.67	363.13	0.471	170.67	174.33	0.9	0.8	3.457	A
			2	A227N, A227S	112.26	358.14	0.313	112.00	117.11	0.3	0.4	3.178	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	283.11			283.11	291.59	0.0	0.0	0.001	A
			1		286.67			286.67	295.41	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.00	127.08	0.000	0.00	0.00	0.0	0.0	0.000	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A
A2ON	Exit	1	1		120.11			120.11	123.07	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	106.67	308.52	0.346	106.56	106.63	0.4	0.2	3.570	A
			2	A227N, SA, A2ON, A227S	127.44	310.73	0.410	127.44	127.93	0.6	0.3	3.695	A
	Exit	1	1		226.11			226.11	233.59	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	86.87	254.38	0.340	87.03	94.96	0.3	0.6	5.493	A
			2	SA, A2ON, A227S	29.22	262.32	0.111	28.98	31.11	0.2	0.1	3.705	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

2025 Do Nothing, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A227 / A2 EB Slips / Site Access RB	Standard Roundabout		A227N, SA, A2ON, A227S, A2OFF	4.72	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	2025 Do Nothing	AM	DIRECT	07:45	09:15	90	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A227N		DIRECT	✓	100.000
SA		DIRECT	✓	100.000
A2ON				
A227S		DIRECT	✓	100.000
A2OFF		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

07:45 - 08:00

		To				
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	101.00	270.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	206.00	0.00	44.00	0.00	0.00
	A2OFF	95.00	0.00	1.00	46.00	0.00

Demand (Veh/TS)

08:00 - 08:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	112.00	257.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	213.00	0.00	43.00	0.25	0.00
	A2OFF	118.00	1.00	0.00	35.00	0.00

Demand (Veh/TS)

08:15 - 08:30

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	120.00	229.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	205.00	0.00	51.00	0.00	0.00
	A2OFF	122.00	0.00	2.00	41.00	0.00

Demand (Veh/TS)

08:30 - 08:45

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	116.00	256.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	179.00	0.00	54.00	0.00	0.00
	A2OFF	118.00	0.00	0.50	51.00	0.00

Demand (Veh/TS)

08:45 - 09:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	105.00	236.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	220.00	0.00	46.00	1.00	0.00
	A2OFF	102.00	0.00	0.00	43.00	0.00

Demand (Veh/TS)

09:00 - 09:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	91.00	198.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	198.00	0.00	34.00	0.00	0.00
	A2OFF	94.00	0.00	0.00	30.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

07:45 - 08:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	2	4	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	5	0	5	0	0
	A2OFF	5	0	0	0	0

Heavy Vehicle Percentages

08:00 - 08:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	5	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	0	0	0	0
	A2OFF	3	0	0	3	0

Heavy Vehicle Percentages

08:15 - 08:30

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	3	2	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	0	2	0	0
	A2OFF	5	0	0	5	0

Heavy Vehicle Percentages

08:30 - 08:45

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	0	4	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	0	6	0	0
	A2OFF	7	0	0	6	0

Heavy Vehicle Percentages

08:45 - 09:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	3	6	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	0	0	100	0
	A2OFF	4	0	0	2	0

Heavy Vehicle Percentages

09:00 - 09:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	2	5	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	0	0	0	0
	A2OFF	8	0	0	3	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
A227N	4.33	2.1	A	348.21	2089.24
SA	0.00	0.0	A	0.00	0.00
A2ON					
A227S	4.11	1.5	A	247.12	1482.72
A2OFF	6.60	1.3	A	147.64	885.86

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	374.08	374.08	90.33	374.36	382.38	294.52	0.0	1.8	4.274	A
SA	0.00	0.00	464.77	0.00	0.00	0.00	0.0	0.0	0.000	A
A2ON			0.00			147.06				
A227S	246.81	246.81	0.00	245.65	258.87	317.71	0.0	1.4	4.110	A
A2OFF	139.67	139.67	245.65	139.38	147.12	0.00	0.0	0.9	5.366	A

08:00 - 08:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	363.98	363.98	76.79	364.56	377.67	326.71	1.8	1.9	4.290	A
SA	0.00	0.00	440.42	0.00	0.00	0.92	0.0	0.0	0.000	A
A2ON			0.00			152.13				
A227S	257.02	257.02	0.00	256.62	256.00	288.29	1.4	1.1	3.845	A
A2OFF	146.31	146.31	256.62	146.88	157.02	0.00	0.9	1.1	5.887	A

08:15 - 08:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	350.31	350.31	91.85	349.85	357.17	328.21	1.9	1.7	4.193	A
SA	0.00	0.00	441.69	0.00	0.00	0.00	0.0	0.0	0.000	A
A2ON			0.00			165.92				
A227S	253.93	253.93	0.00	253.15	263.33	275.77	1.1	1.3	3.902	A
A2OFF	165.52	165.52	253.15	166.90	173.37	0.00	1.1	1.1	6.601	A

08:30 - 08:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	370.85	370.85	107.25	370.73	383.73	288.92	1.7	2.1	4.333	A
SA	0.00	0.00	478.04	0.00	0.00	0.00	0.0	0.0	0.000	A
A2ON			0.00			167.65				
A227S	228.00	228.00	0.00	228.92	239.79	310.38	1.3	0.7	3.816	A
A2OFF	167.83	167.83	228.92	167.31	178.31	0.00	1.1	1.1	6.252	A

08:45 - 09:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	337.18	337.18	91.90	336.92	355.13	324.92	2.1	1.8	3.959	A
SA	0.00	0.00	428.94	0.00	0.00	0.00	0.0	0.0	0.000	A
A2ON			0.00			150.46				
A227S	268.79	268.79	0.00	269.83	267.96	278.36	0.7	1.0	3.950	A
A2OFF	145.79	145.79	269.83	147.00	151.69	0.00	1.1	0.9	5.755	A

09:00 - 09:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	292.56	292.56	61.85	291.52	302.44	287.48	1.8	1.2	3.608	A
SA	0.00	0.00	353.50	0.00	0.00	0.00	0.0	0.0	0.000	A
A2ON			0.00			126.23				
A227S	228.00	228.00	0.00	228.52	237.46	227.14	1.0	0.7	3.623	A
A2OFF	120.81	120.81	228.52	120.82	131.54	0.00	0.9	0.7	5.629	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment
07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	209.60	355.86	0.590	210.49	214.96	0.0	1.0	4.423	A
			2	A227N, A227S	164.42	350.22	0.470	164.08	167.42	0.0	0.7	3.755	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	374.08			374.02	384.25	0.0	0.0	0.142	A
	Exit	1	1		294.52			294.52	311.94	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.00	77.73	0.000	0.00	0.00	0.0	0.0	0.000	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A
A2ON	Exit	1	1		147.06			147.06	148.94	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	112.39	300.96	0.374	112.15	117.62	0.0	0.5	3.863	A
			2	A227N, SA, A2ON, A227S	134.42	298.86	0.450	133.48	141.25	0.0	0.9	4.316	A
	Exit	1	1		317.71			317.71	327.48	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	94.79	246.33	0.385	93.75	100.19	0.0	0.7	5.859	A
			2	SA, A2ON, A227S	44.88	262.10	0.171	45.63	46.92	0.0	0.2	4.365	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	210.23	360.95	0.582	210.86	215.90	1.0	1.1	4.468	A
			2	A227N, A227S	153.00	353.19	0.433	153.69	161.77	0.7	0.6	3.615	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	363.98			363.52	377.58	0.0	0.3	0.181	A
	Exit	1	1		326.71			326.71	334.98	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.00	88.27	0.000	0.00	0.00	0.0	0.0	0.000	A
	Exit	1	1		0.92			0.92	1.02	0.0	0.0	0.000	A
A2ON	Exit	1	1		152.13			152.13	154.00	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	117.81	311.24	0.378	117.35	117.56	0.5	0.5	3.635	A
			2	A227N, SA, A2ON, A227S	139.21	313.12	0.445	139.27	138.44	0.9	0.6	4.023	A
	Exit	1	1		288.29			288.29	300.69	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	111.17	252.48	0.440	112.10	120.90	0.7	0.8	6.415	A
			2	SA, A2ON, A227S	35.13	254.25	0.138	34.79	36.12	0.2	0.3	4.131	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	203.42	355.92	0.572	203.25	211.71	1.1	1.0	4.461	A
			2	A227N, A227S	146.89	357.79	0.411	146.60	145.46	0.6	0.7	3.531	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	350.31			350.31	357.21	0.3	0.0	0.114	A
	Exit	1	1		328.21			328.21	338.15	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.00	88.62	0.000	0.00	0.00	0.0	0.0	0.000	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A
A2ON	Exit	1	1		165.92			165.92	178.00	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	113.65	308.33	0.369	113.31	117.62	0.5	0.5	3.724	A
			2	A227N, SA, A2ON, A227S	140.37	308.45	0.455	139.85	145.71	0.6	0.7	4.046	A
	Exit	1	1		275.77			275.77	277.71	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	123.00	250.01	0.491	124.44	127.81	0.8	0.9	7.362	A
			2	SA, A2ON, A227S	42.52	248.03	0.173	42.50	45.56	0.3	0.2	4.451	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	210.06	352.78	0.595	210.29	217.67	1.0	1.3	4.622	A
			2	A227N, A227S	160.90	343.19	0.469	160.36	166.06	0.7	0.8	3.736	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	370.85			370.96	384.08	0.0	0.0	0.090	A
	Exit	1	1		288.92			288.92	307.54	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.00	71.53	0.000	0.00	0.00	0.0	0.0	0.000	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A
A2ON	Exit	1	1		167.65			167.65	170.87	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	99.45	311.25	0.320	100.38	103.13	0.5	0.2	3.582	A
			2	A227N, SA, A2ON, A227S	128.54	303.30	0.424	128.54	136.65	0.7	0.5	3.995	A
	Exit	1	1		310.38			310.38	323.42	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	115.96	252.29	0.459	115.15	124.69	0.9	1.0	6.969	A
			2	SA, A2ON, A227S	51.87	254.57	0.204	52.15	53.62	0.2	0.2	4.597	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	193.90	350.14	0.554	193.21	204.44	1.3	1.2	4.195	A
			2	A227N, A227S	143.19	342.07	0.419	143.65	150.69	0.8	0.6	3.458	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	337.18			337.10	354.88	0.0	0.1	0.071	A
			1		324.92			324.92	328.83	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.00	90.51	0.000	0.00	0.00	0.0	0.0	0.000	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A
A2ON	Exit	1	1		150.46			150.46	153.63	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	122.88	312.20	0.394	123.48	121.38	0.2	0.5	3.759	A
			2	A227N, SA, A2ON, A227S	145.90	310.17	0.470	146.42	146.58	0.5	0.5	4.108	A
	Exit	1	1		278.36			278.36	292.33	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	100.96	247.08	0.408	102.14	108.71	1.0	0.6	6.408	A
			2	SA, A2ON, A227S	44.83	252.51	0.177	44.71	42.98	0.2	0.3	4.148	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	172.73	364.24	0.474	172.04	177.85	1.2	0.8	3.814	A
			2	A227N, A227S	119.83	358.42	0.334	119.65	124.60	0.6	0.4	3.181	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	292.56			292.56	301.73	0.1	0.0	0.054	A
			1		287.48			287.48	304.21	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.00	124.12	0.000	0.00	0.00	0.0	0.0	0.000	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A
A2ON	Exit	1	1		126.23			126.23	127.92	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	104.20	307.33	0.339	104.96	110.75	0.5	0.1	3.437	A
			2	A227N, SA, A2ON, A227S	123.81	312.00	0.397	123.52	126.71	0.5	0.6	3.784	A
	Exit	1	1		227.14			227.14	239.31	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	91.50	251.09	0.364	92.02	101.31	0.6	0.4	6.180	A
			2	SA, A2ON, A227S	29.31	263.86	0.111	28.79	30.23	0.3	0.3	3.877	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

2025 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A227 / A2 EB Slips / Site Access RB	Standard Roundabout		A227N, SA, A2ON, A227S, A2OFF	5.22	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D5	2025 Do Minimum	AM	DIRECT	07:45	09:15	90	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A227N		DIRECT	✓	100.000
SA		DIRECT	✓	100.000
A2ON				
A227S		DIRECT	✓	100.000
A2OFF		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

07:45 - 08:00

		To				
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	7.00	98.00	265.00	0.00
	SA	0.00	0.00	11.00	15.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	206.00	13.00	43.00	0.00	0.00
	A2OFF	95.00	8.00	1.00	46.00	0.00

Demand (Veh/TS)

08:00 - 08:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	7.00	109.00	252.00	0.00
	SA	0.00	0.00	11.00	16.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	213.00	14.00	42.00	0.00	0.00
	A2OFF	118.00	9.00	0.00	35.00	0.00

Demand (Veh/TS)

08:15 - 08:30

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	7.00	117.00	225.00	0.00
	SA	0.00	0.00	11.00	15.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	205.00	13.00	50.00	0.00	0.00
	A2OFF	122.00	8.00	2.00	41.00	0.00

Demand (Veh/TS)

08:30 - 08:45

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	7.00	113.00	252.00	0.00
	SA	0.00	0.00	11.00	15.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	179.00	13.00	53.00	0.00	0.00
	A2OFF	118.00	8.00	0.00	51.00	0.00

Demand (Veh/TS)

08:45 - 09:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	7.00	102.00	232.00	0.00
	SA	0.00	0.00	11.00	15.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	220.00	13.00	45.00	1.00	0.00
	A2OFF	102.00	8.00	0.00	43.00	0.00

Demand (Veh/TS)

09:00 - 09:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	6.00	89.00	195.00	0.00
	SA	0.00	0.00	9.00	13.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	198.00	11.00	33.00	0.00	0.00
	A2OFF	94.00	7.00	0.00	30.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

07:45 - 08:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	4	2	0
	SA	0	0	2	2	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	5	3	5	0	0
	A2OFF	5	4	0	0	0

Heavy Vehicle Percentages

08:00 - 08:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	5	0
	SA	0	0	2	2	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	3	0	0	0
	A2OFF	3	3	0	3	0

Heavy Vehicle Percentages

08:15 - 08:30

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	3	2	0
	SA	0	0	2	2	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	3	2	0	0
	A2OFF	5	4	0	5	0

Heavy Vehicle Percentages

08:30 - 08:45

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	0	4	0
	SA	0	0	2	2	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	3	6	0	0
	A2OFF	7	4	0	6	0

Heavy Vehicle Percentages

08:45 - 09:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	3	6	0
	SA	0	0	2	2	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	3	0	100	0
	A2OFF	4	4	0	2	0

Heavy Vehicle Percentages

09:00 - 09:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	2	5	0
	SA	0	0	2	2	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	3	0	0	0
	A2OFF	8	4	0	3	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
A227N	4.47	1.9	A	348.50	2091.02
SA	17.23	0.6	C	25.25	151.51
A2ON					
A227S	4.16	1.2	A	260.40	1562.43
A2OFF	6.68	1.6	A	157.42	944.51

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	373.68	373.68	111.68	373.61	378.41	297.84	0.0	1.5	4.244	A
SA	24.71	24.71	458.36	24.25	26.45	26.94	0.0	0.5	16.255	C
A2ON			0.00			155.25				
A227S	260.29	260.29	0.00	260.93	273.57	327.35	0.0	1.1	4.125	A
A2OFF	148.81	148.81	260.93	148.59	152.84	0.00	0.0	1.1	5.371	A

08:00 - 08:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	361.15	361.15	99.77	361.42	377.72	330.68	1.5	1.6	4.322	A
SA	28.32	28.32	431.97	28.84	28.44	29.22	0.5	0.4	16.500	C
A2ON			0.00			166.07				
A227S	269.40	269.40	0.00	269.61	271.46	294.74	1.1	1.0	3.958	A
A2OFF	160.97	160.97	269.61	160.86	164.71	0.00	1.1	1.2	6.198	A

08:15 - 08:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	348.77	348.77	113.48	348.32	356.09	320.77	1.6	1.7	4.261	A
SA	26.16	26.16	435.32	25.93	26.46	26.52	0.4	0.4	15.423	C
A2ON			0.00			179.39				
A227S	265.10	265.10	0.00	265.16	272.23	281.82	1.0	1.0	3.982	A
A2OFF	169.35	169.35	265.16	169.13	179.66	0.00	1.2	1.3	6.435	A

08:30 - 08:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	375.42	375.42	125.71	375.13	382.75	301.10	1.7	2.0	4.467	A
SA	25.77	25.77	472.87	25.23	26.56	27.94	0.4	0.6	17.229	C
A2ON			0.00			178.42				
A227S	248.94	248.94	0.00	249.64	254.65	319.68	1.0	1.0	3.958	A
A2OFF	178.48	178.48	249.64	177.16	187.10	0.00	1.3	1.5	6.679	A

08:45 - 09:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	340.39	340.39	110.68	339.74	357.01	322.45	2.0	1.7	4.240	A
SA	25.29	25.29	422.52	25.06	26.02	27.90	0.6	0.4	15.640	C
A2ON			0.00			160.93				
A227S	280.42	280.42	0.00	279.84	285.16	286.64	1.0	1.2	4.156	A
A2OFF	152.81	152.81	279.84	153.29	158.10	0.00	1.5	0.9	5.838	A

09:00 - 09:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	291.36	291.36	80.26	291.93	301.87	291.74	1.7	1.3	3.640	A
SA	21.29	21.29	347.50	21.26	22.71	24.61	0.4	0.2	9.759	A
A2ON			0.00			129.42				
A227S	238.55	238.55	0.00	238.03	243.97	239.42	1.2	1.0	3.690	A
A2OFF	134.45	134.45	238.03	133.93	141.61	0.00	0.9	0.8	5.501	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	211.13	349.93	0.603	211.68	214.34	0.0	1.0	4.477	A
			2	A227N, A227S	162.55	353.35	0.460	161.94	164.06	0.0	0.6	3.646	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	373.68			373.68	379.96	0.0	0.0	0.129	A
	Exit	1	1		297.84			297.84	312.53	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	24.71	80.69	0.306	24.25	26.45	0.0	0.5	16.255	C
	Exit	1	1		26.94			26.94	28.02	0.0	0.0	0.000	A
A2ON	Exit	1	1		155.25			155.25	159.87	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	114.77	300.02	0.383	114.87	121.53	0.0	0.5	3.879	A
			2	A227N, SA, A2ON, A227S	145.52	302.25	0.482	146.06	152.04	0.0	0.6	4.322	A
	Exit	1	1		327.35			327.35	330.85	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	93.36	244.89	0.381	93.13	97.40	0.0	0.8	5.819	A
			2	SA, A2ON, A227S	55.45	255.34	0.217	55.45	55.44	0.0	0.3	4.613	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	212.42	353.46	0.601	212.39	217.81	1.0	1.0	4.574	A
			2	A227N, A227S	148.75	346.73	0.429	149.03	159.91	0.6	0.5	3.694	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	361.15			361.21	377.84	0.0	0.0	0.116	A
	Exit	1	1		330.68			330.68	334.96	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	28.32	89.70	0.315	28.84	28.44	0.5	0.4	16.500	C
	Exit	1	1		29.22			29.22	30.28	0.0	0.0	0.000	A
A2ON	Exit	1	1		166.07			166.07	163.82	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	120.48	312.72	0.385	120.61	121.31	0.5	0.4	3.669	A
			2	A227N, SA, A2ON, A227S	148.97	312.56	0.477	149.00	150.15	0.6	0.6	4.191	A
	Exit	1	1		294.74			294.74	313.28	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	118.70	248.65	0.477	118.61	120.19	0.8	0.9	6.863	A
			2	SA, A2ON, A227S	42.35	250.68	0.169	42.23	44.52	0.3	0.3	4.406	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	208.68	349.16	0.598	208.35	211.88	1.0	1.1	4.497	A
			2	A227N, A227S	140.00	351.26	0.399	139.95	144.20	0.5	0.6	3.565	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	348.77			348.67	356.18	0.0	0.1	0.142	A
	Exit	1	1		320.77			320.77	334.46	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	26.16	89.13	0.295	25.93	26.46	0.4	0.4	15.423	C
	Exit	1	1		26.52			26.52	28.39	0.0	0.0	0.000	A
A2ON	Exit	1	1		179.39			179.39	182.25	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	115.66	310.12	0.373	115.45	118.97	0.4	0.4	3.735	A
			2	A227N, SA, A2ON, A227S	149.45	308.94	0.483	149.71	153.26	0.6	0.7	4.174	A
	Exit	1	1		281.82			281.82	289.33	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	118.61	245.72	0.483	118.65	125.97	0.9	1.0	7.224	A
			2	SA, A2ON, A227S	50.71	246.14	0.206	50.43	53.69	0.3	0.3	4.588	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	220.13	347.68	0.633	219.55	220.82	1.1	1.4	4.702	A
			2	A227N, A227S	155.64	340.30	0.457	155.58	161.94	0.6	0.6	3.787	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	375.42			375.77	382.96	0.1	0.0	0.146	A
	Exit	1	1		301.10			301.10	312.61	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	25.77	72.98	0.354	25.23	26.56	0.4	0.6	17.229	C
	Exit	1	1		27.94			27.94	28.62	0.0	0.0	0.000	A
A2ON	Exit	1	1		178.42			178.42	181.12	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	107.94	309.55	0.349	107.94	107.75	0.4	0.4	3.573	A
			2	A227N, SA, A2ON, A227S	141.00	304.22	0.463	141.75	146.89	0.7	0.6	4.245	A
	Exit	1	1		319.68			319.68	328.70	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	120.35	245.15	0.490	119.13	126.59	1.0	1.2	7.466	A
			2	SA, A2ON, A227S	58.10	248.32	0.234	58.03	60.51	0.3	0.3	5.059	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	201.16	344.05	0.584	201.03	208.53	1.4	1.0	4.460	A
			2	A227N, A227S	138.91	339.08	0.410	138.71	148.48	0.6	0.6	3.672	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	340.39			340.16	356.75	0.0	0.1	0.106	A
			1		322.45			322.45	331.11	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	25.29	91.20	0.277	25.06	26.02	0.6	0.4	15.640	C
	Exit	1	1		27.90			27.90	28.98	0.0	0.0	0.000	A
A2ON	Exit	1	1		160.93			160.93	161.84	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	123.52	312.04	0.396	123.32	126.61	0.4	0.4	3.923	A
			2	A227N, SA, A2ON, A227S	156.90	311.34	0.504	156.52	158.55	0.6	0.8	4.343	A
	Exit	1	1		286.64			286.64	304.37	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	101.87	243.55	0.418	101.90	106.04	1.2	0.7	6.518	A
			2	SA, A2ON, A227S	50.95	246.86	0.206	51.39	52.05	0.3	0.2	4.480	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	174.84	356.67	0.490	175.00	179.81	1.0	0.8	3.826	A
			2	A227N, A227S	117.07	353.12	0.332	116.94	122.06	0.6	0.5	3.252	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	291.36			291.90	301.54	0.1	0.0	0.044	A
			1		291.74			291.74	302.78	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	21.29	124.13	0.171	21.26	22.71	0.4	0.2	9.759	A
	Exit	1	1		24.61			24.61	25.99	0.0	0.0	0.000	A
A2ON	Exit	1	1		129.42			129.42	132.38	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	107.48	308.57	0.348	107.36	110.17	0.4	0.4	3.473	A
			2	A227N, SA, A2ON, A227S	131.08	309.90	0.423	130.68	133.80	0.8	0.6	3.868	A
	Exit	1	1		239.42			239.42	249.01	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	97.31	248.55	0.392	96.84	103.27	0.7	0.7	6.016	A
			2	SA, A2ON, A227S	37.03	258.06	0.143	37.13	38.34	0.2	0.2	4.174	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

2025 Do Minimum Residual, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A227 / A2 EB Slips / Site Access RB	Standard Roundabout		A227N, SA, A2ON, A227S, A2OFF	5.24	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 period length (min)	Time segment length (min)	Run automatically
D7	2025 Do Minimum Residual	AM	DIRECT	07:45	09:15	90	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A227N		DIRECT	✓	100.000
SA		DIRECT	✓	100.000
A2ON				
A227S		DIRECT	✓	100.000
A2OFF		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

07:45 - 08:00

		To				
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	7.00	98.00	265.00	0.00
	SA	0.00	0.00	10.00	14.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	206.00	13.00	43.00	0.00	0.00
	A2OFF	95.00	7.00	1.00	46.00	0.00

Demand (Veh/TS)

08:00 - 08:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	7.00	109.00	252.00	0.00
	SA	0.00	0.00	10.00	14.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	213.00	13.00	42.00	0.00	0.00
	A2OFF	118.00	8.00	0.00	35.00	0.00

Demand (Veh/TS)

08:15 - 08:30

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	7.00	117.00	225.00	0.00
	SA	0.00	0.00	10.00	4.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	205.00	13.00	50.00	0.00	0.00
	A2OFF	122.00	7.00	2.00	41.00	0.00

Demand (Veh/TS)

08:30 - 08:45

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	7.00	113.00	252.00	0.00
	SA	0.00	0.00	10.00	14.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	179.00	13.00	53.00	0.00	0.00
	A2OFF	118.00	7.00	0.00	51.00	0.00

Demand (Veh/TS)

08:45 - 09:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	7.00	102.00	232.00	0.00
	SA	0.00	0.00	10.00	14.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	220.00	13.00	45.00	1.00	0.00
	A2OFF	102.00	7.00	0.00	43.00	0.00

Demand (Veh/TS)

09:00 - 09:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	6.00	89.00	195.00	0.00
	SA	0.00	0.00	8.00	12.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	198.00	10.00	33.00	0.00	0.00
	A2OFF	94.00	6.00	0.00	30.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

07:45 - 08:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	4	2	0
	SA	0	0	2	2	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	5	3	5	0	0
	A2OFF	5	4	0	0	0

Heavy Vehicle Percentages

08:00 - 08:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	5	0
	SA	0	0	3	3	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	3	0	0	0
	A2OFF	3	3	0	3	0

Heavy Vehicle Percentages

08:15 - 08:30

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	3	1	0
	SA	0	0	3	3	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	3	2	0	0
	A2OFF	5	4	0	5	0

Heavy Vehicle Percentages

08:30 - 08:45

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	0	4	0
	SA	0	0	3	3	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	3	6	0	0
	A2OFF	7	4	0	6	0

Heavy Vehicle Percentages

08:45 - 09:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	3	6	0
	SA	0	0	3	3	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	3	0	100	0
	A2OFF	4	4	0	2	0

Heavy Vehicle Percentages

09:00 - 09:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	2	5	0
	SA	0	0	2	2	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	3	0	0	0
	A2OFF	8	4	0	3	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
A227N	4.49	2.0	A	347.81	2086.84
SA	18.32	0.5	C	21.70	130.22
A2ON					
A227S	4.15	1.3	A	259.58	1557.49
A2OFF	6.86	1.3	A	157.77	946.64

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	368.76	368.76	111.48	367.37	375.23	300.41	0.0	2.0	4.185	A
SA	24.65	24.65	452.17	24.39	24.21	26.67	0.0	0.5	18.317	C
A2ON			0.00			148.64				
A227S	260.05	260.05	0.00	259.84	272.53	327.89	0.0	1.2	4.145	A
A2OFF	150.95	150.95	259.84	152.03	154.46	0.00	0.0	0.8	5.578	A

08:00 - 08:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	367.66	367.66	95.55	368.23	383.85	338.82	2.0	1.6	4.364	A
SA	23.76	23.76	436.90	23.93	24.74	26.88	0.5	0.3	15.608	C
A2ON			0.00			160.07				
A227S	269.69	269.69	0.00	270.21	271.31	300.77	1.2	1.1	3.982	A
A2OFF	164.55	164.55	270.21	164.17	165.73	0.00	0.8	1.3	6.296	A

08:15 - 08:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	346.51	346.51	113.94	345.65	355.53	324.33	1.6	1.9	4.175	A
SA	14.14	14.14	433.57	13.99	15.21	26.04	0.3	0.2	12.361	B
A2ON			0.00			178.72				
A227S	266.67	266.67	0.00	267.33	272.12	268.84	1.1	1.1	4.090	A
A2OFF	170.64	170.64	267.33	170.94	180.45	0.00	1.3	1.1	6.858	A

08:30 - 08:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	374.76	374.76	124.60	374.79	381.91	293.91	1.9	1.8	4.493	A
SA	24.74	24.74	472.43	25.40	24.08	26.97	0.2	0.4	17.956	C
A2ON			0.00			177.77				
A227S	244.22	244.22	0.00	244.54	250.50	320.05	1.1	1.1	3.995	A
A2OFF	173.26	173.26	244.54	173.97	186.71	0.00	1.1	1.0	6.291	A

08:45 - 09:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	339.42	339.42	109.01	340.37	358.79	323.23	1.8	1.4	4.304	A
SA	24.46	24.46	423.83	24.39	24.99	25.54	0.4	0.5	15.710	C
A2ON			0.00			160.01				
A227S	278.14	278.14	0.00	277.87	282.15	288.21	1.1	1.3	4.015	A
A2OFF	154.07	154.07	277.87	154.35	158.58	0.00	1.0	0.9	6.069	A

09:00 - 09:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	289.66	289.66	79.43	290.14	302.87	293.82	1.4	1.2	3.633	A
SA	18.36	18.36	347.43	18.33	20.20	22.10	0.5	0.2	9.369	A
A2ON			0.00			126.75				
A227S	238.84	238.84	0.00	239.29	245.07	239.02	1.3	0.9	3.835	A
A2OFF	133.60	133.60	239.29	133.96	139.10	0.00	0.9	0.9	5.418	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	207.16	349.40	0.593	206.58	212.74	0.0	1.1	4.390	A
			2	A227N, A227S	161.76	352.73	0.459	160.78	162.49	0.0	0.8	3.682	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	368.76			368.88	377.31	0.0	0.0	0.102	A
	Exit	1	1		300.41			300.41	312.31	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	24.65	83.23	0.297	24.39	24.21	0.0	0.5	18.317	C
	Exit	1	1		26.67			26.67	27.62	0.0	0.0	0.000	A
A2ON	Exit	1	1		148.64			148.64	155.13	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	115.16	301.30	0.382	115.10	120.71	0.0	0.6	3.888	A
			2	A227N, SA, A2ON, A227S	144.89	299.28	0.484	144.74	151.82	0.0	0.7	4.351	A
	Exit	1	1		327.89			327.89	331.37	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	94.51	244.89	0.386	95.14	97.98	0.0	0.5	6.120	A
			2	SA, A2ON, A227S	56.44	255.92	0.220	56.91	56.48	0.0	0.3	4.677	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	212.23	354.42	0.599	212.58	219.49	1.1	1.0	4.591	A
			2	A227N, A227S	155.53	346.97	0.448	155.64	164.37	0.8	0.6	3.700	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	367.66			367.69	383.42	0.0	0.0	0.150	A
	Exit	1	1		338.82			338.82	339.29	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	23.76	87.06	0.273	23.93	24.74	0.5	0.3	15.608	C
	Exit	1	1		26.88			26.88	28.67	0.0	0.0	0.000	A
A2ON	Exit	1	1		160.07			160.07	161.67	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	121.54	312.18	0.390	122.11	121.48	0.6	0.5	3.756	A
			2	A227N, SA, A2ON, A227S	148.13	311.35	0.476	148.10	149.83	0.7	0.7	4.165	A
	Exit	1	1		300.77			300.77	316.00	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	120.89	247.51	0.489	120.53	122.37	0.5	1.1	6.998	A
			2	SA, A2ON, A227S	43.66	248.15	0.176	43.63	43.37	0.3	0.2	4.310	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	205.83	350.95	0.587	205.27	211.49	1.0	1.1	4.471	A
			2	A227N, A227S	140.44	354.61	0.396	140.47	144.05	0.6	0.7	3.453	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	346.51			346.31	355.79	0.0	0.1	0.119	A
	Exit	1	1		324.33			324.33	336.91	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	14.14	90.28	0.157	13.99	15.21	0.3	0.2	12.361	B
	Exit	1	1		26.04			26.04	26.53	0.0	0.0	0.000	A
A2ON	Exit	1	1		178.72			178.72	184.03	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	116.94	308.89	0.379	117.33	119.53	0.5	0.4	3.731	A
			2	A227N, SA, A2ON, A227S	149.73	308.53	0.485	150.06	152.58	0.7	0.7	4.371	A
	Exit	1	1		268.84			268.84	275.83	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	121.25	243.91	0.496	121.28	128.22	1.1	0.9	7.725	A
			2	SA, A2ON, A227S	49.43	244.52	0.202	49.66	52.23	0.2	0.2	4.746	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	217.07	347.71	0.624	217.14	220.02	1.1	1.1	4.730	A
			2	A227N, A227S	157.63	342.06	0.461	157.63	161.89	0.7	0.7	3.766	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	374.76			374.70	381.90	0.1	0.0	0.168	A
	Exit	1	1		293.91			293.91	307.72	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	24.74	72.68	0.339	25.40	24.08	0.2	0.4	17.956	C
	Exit	1	1		26.97			26.97	27.32	0.0	0.0	0.000	A
A2ON	Exit	1	1		177.77			177.77	178.46	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	103.96	307.85	0.337	103.99	105.83	0.4	0.4	3.599	A
			2	A227N, SA, A2ON, A227S	140.26	303.67	0.462	140.51	144.66	0.7	0.6	4.290	A
	Exit	1	1		320.05			320.05	329.70	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	116.08	246.64	0.471	116.79	125.94	0.9	0.8	7.067	A
			2	SA, A2ON, A227S	57.18	250.04	0.229	57.18	60.77	0.2	0.2	4.708	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	198.89	345.46	0.576	199.07	208.93	1.1	0.9	4.516	A
			2	A227N, A227S	140.91	340.94	0.413	141.25	149.86	0.7	0.5	3.690	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	339.42			339.71	358.42	0.0	0.0	0.130	A
			1		323.23			323.23	328.13	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	24.46	89.35	0.274	24.39	24.99	0.4	0.5	15.710	C
	Exit	1	1		25.54			25.54	27.06	0.0	0.0	0.000	A
A2ON	Exit	1	1		160.01			160.01	162.26	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	125.67	312.25	0.402	125.26	125.76	0.4	0.6	3.731	A
			2	A227N, SA, A2ON, A227S	152.47	311.34	0.490	152.63	156.39	0.6	0.7	4.245	A
	Exit	1	1		288.21			288.21	307.07	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	102.89	243.63	0.422	103.25	106.68	0.8	0.7	6.798	A
			2	SA, A2ON, A227S	51.18	249.52	0.205	51.12	51.90	0.2	0.2	4.600	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	170.64	358.38	0.476	171.18	179.87	0.9	0.7	3.870	A
			2	A227N, A227S	118.90	351.88	0.337	118.96	123.00	0.5	0.5	3.130	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	289.66			289.54	302.56	0.0	0.0	0.060	A
			1		293.82			293.82	302.10	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	18.36	124.64	0.148	18.33	20.20	0.5	0.2	9.369	A
	Exit	1	1		22.10			22.10	23.71	0.0	0.0	0.000	A
A2ON	Exit	1	1		126.75			126.75	132.41	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	106.69	308.23	0.346	107.23	111.06	0.6	0.2	3.614	A
			2	A227N, SA, A2ON, A227S	132.15	310.80	0.425	132.06	134.01	0.7	0.7	4.016	A
	Exit	1	1		239.02			239.02	249.02	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	96.09	248.52	0.386	96.42	101.27	0.7	0.7	5.952	A
			2	SA, A2ON, A227S	37.63	263.20	0.143	37.63	37.83	0.2	0.2	4.055	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

2028 Do Nothing, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A227 / A2 EB Slips / Site Access RB	Standard Roundabout		A227N, SA, A2ON, A227S, A2OFF	4.88	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D9	2028 Do Nothing	AM	DIRECT	07:45	09:15	90	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A227N		DIRECT	✓	100.000
SA		DIRECT	✓	100.000
A2ON				
A227S		DIRECT	✓	100.000
A2OFF		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

07:45 - 08:00

		To				
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	106.00	290.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	213.00	0.00	46.00	0.00	0.00
	A2OFF	103.00	0.00	1.00	48.00	0.00

Demand (Veh/TS)

08:00 - 08:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	118.00	277.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	220.00	0.00	44.00	0.00	0.00
	A2OFF	126.00	1.00	0.00	36.00	0.00

Demand (Veh/TS)

08:15 - 08:30

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	126.00	248.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	212.00	0.00	53.00	0.00	0.00
	A2OFF	130.00	0.00	2.00	43.00	0.00

Demand (Veh/TS)

08:30 - 08:45

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	122.00	276.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	186.00	0.00	56.00	0.00	0.00
	A2OFF	126.00	0.00	0.00	53.00	0.00

Demand (Veh/TS)

08:45 - 09:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	110.00	256.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	228.00	0.00	48.00	1.00	0.00
	A2OFF	110.00	0.00	0.00	45.00	0.00

Demand (Veh/TS)

09:00 - 09:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	96.00	215.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	205.00	0.00	35.00	0.00	0.00
	A2OFF	101.00	0.00	0.00	32.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

07:45 - 08:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	4	2	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	5	0	5	0	0
	A2OFF	5	0	0	0	0

Heavy Vehicle Percentages

08:00 - 08:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	4	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	0	0	0	0
	A2OFF	2	0	0	3	0

Heavy Vehicle Percentages

08:15 - 08:30

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	3	2	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	0	2	0	0
	A2OFF	5	0	0	5	0

Heavy Vehicle Percentages

08:30 - 08:45

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	0	4	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	0	6	0	0
	A2OFF	7	0	0	6	0

Heavy Vehicle Percentages

08:45 - 09:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	3	5	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	0	0	100	0
	A2OFF	4	0	0	2	0

Heavy Vehicle Percentages

09:00 - 09:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	2	5	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	0	0	0	0
	A2OFF	7	0	0	3	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
A227N	4.61	2.3	A	373.07	2238.43
SA	0.00	0.0	A	0.00	0.00
A2ON					
A227S	4.12	1.3	A	258.83	1552.97
A2OFF	6.72	1.7	A	159.71	958.27

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	397.36	397.36	96.58	397.55	404.85	315.30	0.0	2.2	4.414	A
SA	0.00	0.00	494.14	0.00	0.00	0.00	0.0	0.0	0.000	A
A2ON			0.00			151.49				
A227S	258.33	258.33	0.00	257.52	273.70	342.60	0.0	1.2	4.121	A
A2OFF	154.40	154.40	257.52	154.37	158.51	0.00	0.0	1.1	5.906	A

08:00 - 08:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	392.17	392.17	82.28	391.52	405.41	347.02	2.2	2.2	4.430	A
SA	0.00	0.00	473.02	0.00	0.00	0.80	0.0	0.0	0.000	A
A2ON			0.00			163.97				
A227S	265.17	265.17	0.00	265.16	268.51	309.06	1.2	1.1	3.914	A
A2OFF	163.66	163.66	265.16	164.14	167.04	0.00	1.1	1.2	6.426	A

08:15 - 08:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	372.24	372.24	98.20	371.17	380.18	342.74	2.2	1.9	4.430	A
SA	0.00	0.00	469.36	0.00	0.00	0.00	0.0	0.0	0.000	A
A2ON			0.00			181.07				
A227S	268.43	268.43	0.00	267.92	271.43	288.30	1.1	1.3	3.996	A
A2OFF	173.82	173.82	267.92	173.06	181.67	0.00	1.2	1.6	6.715	A

08:30 - 08:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	393.15	393.15	107.32	393.36	408.38	313.63	1.9	2.2	4.612	A
SA	0.00	0.00	500.67	0.00	0.00	0.00	0.0	0.0	0.000	A
A2ON			0.00			171.65				
A227S	242.56	242.56	0.00	242.79	247.89	328.95	1.3	1.1	3.966	A
A2OFF	177.95	177.95	242.79	178.16	189.12	0.00	1.6	1.1	6.413	A

08:45 - 09:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	370.37	370.37	94.20	369.71	383.13	333.35	2.2	2.0	4.330	A
SA	0.00	0.00	463.90	0.00	0.00	0.00	0.0	0.0	0.000	A
A2ON			0.00			160.13				
A227S	272.76	272.76	0.00	272.85	278.28	303.77	1.1	1.2	3.958	A
A2OFF	153.39	153.39	272.85	154.69	159.15	0.00	1.1	0.8	5.911	A

09:00 - 09:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	313.31	313.31	69.03	313.19	322.71	311.61	2.0	1.2	3.688	A
SA	0.00	0.00	382.22	0.00	0.00	0.00	0.0	0.0	0.000	A
A2ON			0.00			128.67				
A227S	245.45	245.45	0.00	245.44	246.06	253.55	1.2	1.0	3.764	A
A2OFF	135.15	135.15	245.44	135.21	143.57	0.00	0.8	0.9	5.872	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment
07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	221.32	353.00	0.627	221.43	226.28	0.0	1.2	4.606	A
			2	A227N, A227S	176.20	356.58	0.494	176.11	178.57	0.0	0.8	3.781	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	397.36			397.51	406.88	0.0	0.2	0.174	A
	Exit	1	1		315.30			315.30	333.38	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.00	67.28	0.000	0.00	0.00	0.0	0.0	0.000	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A
A2ON	Exit	1	1		151.49			151.49	158.93	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	117.39	298.71	0.393	117.18	124.30	0.0	0.5	3.930	A
			2	A227N, SA, A2ON, A227S	140.94	300.50	0.469	140.35	149.41	0.0	0.7	4.279	A
	Exit	1	1		342.60			342.60	344.76	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	103.78	245.27	0.424	103.34	108.37	0.0	0.9	6.615	A
			2	SA, A2ON, A227S	50.61	257.46	0.197	51.03	50.15	0.0	0.2	4.435	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	226.75	359.82	0.630	226.52	231.26	1.2	1.3	4.549	A
			2	A227N, A227S	165.12	355.00	0.465	164.99	174.15	0.8	0.8	3.762	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	392.17			391.78	405.53	0.2	0.2	0.216	A
	Exit	1	1		347.02			347.02	351.94	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.00	75.57	0.000	0.00	0.00	0.0	0.0	0.000	A
	Exit	1	1		0.80			0.80	0.93	0.0	0.0	0.000	A
A2ON	Exit	1	1		163.97			163.97	164.18	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	120.80	311.38	0.388	120.62	122.62	0.5	0.5	3.730	A
			2	A227N, SA, A2ON, A227S	144.30	312.81	0.461	144.50	145.89	0.7	0.6	4.068	A
	Exit	1	1		309.06			309.06	323.91	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	127.55	253.74	0.502	127.90	128.71	0.9	1.0	7.085	A
			2	SA, A2ON, A227S	36.12	249.43	0.145	36.24	38.33	0.2	0.2	4.195	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	214.63	353.94	0.606	214.07	221.90	1.3	1.2	4.671	A
			2	A227N, A227S	157.49	355.71	0.443	157.10	158.28	0.8	0.7	3.651	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	372.24			372.12	379.93	0.2	0.0	0.184	A
	Exit	1	1		342.74			342.74	352.45	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.00	77.39	0.000	0.00	0.00	0.0	0.0	0.000	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A
A2ON	Exit	1	1		181.07			181.07	185.07	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	120.59	309.68	0.390	120.56	121.53	0.5	0.5	3.788	A
			2	A227N, SA, A2ON, A227S	147.83	308.65	0.479	147.33	149.89	0.6	0.8	4.164	A
	Exit	1	1		288.30			288.30	295.76	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	128.88	244.99	0.526	128.35	134.62	1.0	1.4	7.422	A
			2	SA, A2ON, A227S	44.94	244.62	0.184	44.67	47.05	0.2	0.3	4.676	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	223.63	353.38	0.633	223.60	230.72	1.2	1.4	4.830	A
			2	A227N, A227S	169.40	346.86	0.489	169.75	177.65	0.7	0.8	3.945	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	393.15			393.03	408.67	0.0	0.1	0.163	A
	Exit	1	1		313.63			313.63	322.74	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.00	63.01	0.000	0.00	0.00	0.0	0.0	0.000	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A
A2ON	Exit	1	1		171.65			171.65	178.54	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	106.55	309.78	0.344	106.31	107.58	0.5	0.5	3.680	A
			2	A227N, SA, A2ON, A227S	135.98	305.40	0.446	136.48	140.31	0.8	0.6	4.189	A
	Exit	1	1		328.95			328.95	344.10	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	125.17	248.85	0.503	125.08	133.37	1.4	0.9	7.243	A
			2	SA, A2ON, A227S	52.75	246.31	0.214	53.10	55.75	0.3	0.2	4.431	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	211.92	350.03	0.605	211.57	220.24	1.4	1.2	4.505	A
			2	A227N, A227S	158.23	346.94	0.456	158.13	162.89	0.8	0.7	3.714	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	370.37			370.22	382.95	0.1	0.0	0.161	A
			1		333.35			333.35	341.13	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.00	76.82	0.000	0.00	0.00	0.0	0.0	0.000	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A
A2ON	Exit	1	1		160.13			160.13	163.99	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	122.79	312.10	0.394	123.02	126.47	0.5	0.5	3.726	A
			2	A227N, SA, A2ON, A227S	149.97	310.69	0.483	149.88	151.81	0.6	0.7	4.153	A
	Exit	1	1		303.77			303.77	315.44	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	108.80	245.44	0.443	110.02	113.51	0.9	0.6	6.557	A
			2	SA, A2ON, A227S	44.58	249.40	0.179	44.67	45.63	0.2	0.2	4.337	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	184.16	362.60	0.508	183.83	188.14	1.2	0.8	3.866	A
			2	A227N, A227S	129.09	353.63	0.365	129.36	134.57	0.7	0.4	3.268	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	313.31			313.25	321.91	0.0	0.0	0.069	A
			1		311.61			311.61	320.63	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.00	111.94	0.000	0.00	0.00	0.0	0.0	0.000	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A
A2ON	Exit	1	1		128.67			128.67	130.21	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	114.39	309.99	0.369	114.42	114.10	0.5	0.4	3.597	A
			2	A227N, SA, A2ON, A227S	131.06	310.28	0.422	131.02	131.96	0.7	0.6	3.907	A
	Exit	1	1		253.55			253.55	261.50	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	102.42	248.16	0.413	102.65	110.18	0.6	0.8	6.438	A
			2	SA, A2ON, A227S	32.73	258.09	0.127	32.55	33.40	0.2	0.2	4.069	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

2028 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A227 / A2 EB Slips / Site Access RB	Standard Roundabout		A227N, SA, A2ON, A227S, A2OFF	5.87	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 period length (min)	Time segment length (min)	Run automatically
D11	2028 Do Minimum	AM	DIRECT	07:45	09:15	90	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A227N		DIRECT	✓	100.000
SA		DIRECT	✓	100.000
A2ON				
A227S		DIRECT	✓	100.000
A2OFF		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

07:45 - 08:00

		To				
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	7.00	103.00	286.00	0.00
	SA	0.00	0.00	11.00	15.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	213.00	13.00	44.00	0.00	0.00
	A2OFF	103.00	8.00	1.00	48.00	0.00

Demand (Veh/TS)

08:00 - 08:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	7.00	115.00	272.00	0.00
	SA	0.00	0.00	11.00	16.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	220.00	14.00	43.00	0.00	0.00
	A2OFF	126.00	9.00	0.00	36.00	0.00

Demand (Veh/TS)

08:15 - 08:30

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	7.00	123.00	244.00	0.00
	SA	0.00	0.00	11.00	15.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	212.00	13.00	52.00	0.00	0.00
	A2OFF	130.00	8.00	2.00	43.00	0.00

Demand (Veh/TS)

08:30 - 08:45

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	7.00	119.00	272.00	0.00
	SA	0.00	0.00	11.00	15.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	186.00	13.00	55.00	0.00	0.00
	A2OFF	126.00	8.00	0.00	53.00	0.00

Demand (Veh/TS)

08:45 - 09:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	7.00	108.00	251.00	0.00
	SA	0.00	0.00	11.00	15.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	228.00	13.00	47.00	1.00	0.00
	A2OFF	110.00	8.00	0.00	45.00	0.00

Demand (Veh/TS)

09:00 - 09:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	6.00	94.00	211.00	0.00
	SA	0.00	0.00	9.00	13.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	205.00	11.00	34.00	0.00	0.00
	A2OFF	101.00	7.00	0.00	32.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

07:45 - 08:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	4	2	0
	SA	0	0	2	2	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	5	3	5	0	0
	A2OFF	5	4	0	0	0

Heavy Vehicle Percentages

08:00 - 08:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	5	0
	SA	0	0	2	2	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	3	0	0	0
	A2OFF	2	3	0	3	0

Heavy Vehicle Percentages

08:15 - 08:30

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	3	2	0
	SA	0	0	2	2	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	3	2	0	0
	A2OFF	5	4	0	5	0

Heavy Vehicle Percentages

08:30 - 08:45

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	0	4	0
	SA	0	0	2	2	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	3	6	0	0
	A2OFF	7	4	0	6	0

Heavy Vehicle Percentages

08:45 - 09:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	3	5	0
	SA	0	0	2	2	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	3	0	100	0
	A2OFF	4	4	0	2	0

Heavy Vehicle Percentages

09:00 - 09:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	2	5	0
	SA	0	0	2	2	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	3	0	0	0
	A2OFF	7	4	0	3	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
A227N	4.96	2.1	A	371.12	2226.74
SA	26.89	0.9	D	25.92	155.54
A2ON					
A227S	4.15	1.4	A	268.24	1609.44
A2OFF	7.38	1.8	A	167.59	1005.56

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	397.33	397.33	112.96	397.72	402.67	315.44	0.0	2.1	4.543	A
SA	26.70	26.70	481.93	26.99	26.85	28.73	0.0	0.7	21.540	C
A2ON			0.00			158.23				
A227S	268.40	268.40	0.00	268.16	280.63	350.70	0.0	1.1	4.141	A
A2OFF	160.43	160.43	268.16	160.25	164.19	0.00	0.0	1.1	5.804	A

08:00 - 08:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	388.90	388.90	104.73	389.79	406.27	344.46	2.1	2.0	4.737	A
SA	28.72	28.72	463.64	28.72	27.66	30.88	0.7	0.6	20.511	C
A2ON			0.00			169.77				
A227S	276.89	276.89	0.00	277.19	280.03	322.57	1.1	1.1	4.033	A
A2OFF	171.59	171.59	277.19	172.01	174.44	0.00	1.1	1.0	6.507	A

08:15 - 08:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	372.00	372.00	118.51	372.39	379.65	339.83	2.0	1.7	4.410	A
SA	26.58	26.58	463.52	27.24	27.10	27.40	0.6	0.5	20.877	C
A2ON			0.00			189.39				
A227S	275.56	275.56	0.00	276.27	281.22	301.37	1.1	1.2	4.148	A
A2OFF	182.98	182.98	276.27	182.08	190.05	0.00	1.0	1.8	7.382	A

08:30 - 08:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	392.73	392.73	130.28	392.53	403.51	311.20	1.7	2.1	4.955	A
SA	25.47	25.47	494.82	25.37	26.30	27.98	0.5	0.9	26.890	D
A2ON			0.00			182.58				
A227S	253.85	253.85	0.00	253.52	262.88	337.61	1.2	1.1	4.083	A
A2OFF	187.54	187.54	253.52	187.96	200.91	0.00	1.8	1.4	7.101	A

08:45 - 09:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	366.50	366.50	111.80	366.35	382.06	340.90	2.1	1.9	4.500	A
SA	25.66	25.66	451.25	25.46	26.78	26.91	0.9	0.6	18.703	C
A2ON			0.00			166.63				
A227S	290.05	290.05	0.00	289.90	290.31	310.07	1.1	1.4	4.115	A
A2OFF	162.70	162.70	289.90	162.79	170.80	0.00	1.4	1.1	6.227	A

09:00 - 09:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	309.12	309.12	86.08	309.04	325.21	299.97	1.9	1.3	3.810	A
SA	22.31	22.31	370.45	22.54	23.49	24.60	0.6	0.2	10.907	B
A2ON			0.00			137.61				
A227S	244.60	244.60	0.00	244.46	252.28	255.42	1.4	1.1	3.805	A
A2OFF	140.85	140.85	244.46	141.59	149.47	0.00	1.1	0.7	5.610	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	224.50	348.90	0.643	224.85	226.96	0.0	1.1	4.729	A
			2	A227N, A227S	173.20	351.27	0.493	172.87	175.71	0.0	0.9	3.926	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	397.33			397.75	404.71	0.0	0.1	0.166	A
	Exit	1	1		315.44			315.44	328.61	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	26.70	71.41	0.374	26.99	26.85	0.0	0.7	21.540	C
	Exit	1	1		28.73			28.73	29.47	0.0	0.0	0.000	A
A2ON	Exit	1	1		158.23			158.23	163.67	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	118.66	299.17	0.397	118.54	125.66	0.0	0.4	3.874	A
			2	A227N, SA, A2ON, A227S	149.73	301.63	0.496	149.61	154.97	0.0	0.7	4.357	A
	Exit	1	1		350.70			350.70	352.59	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	103.43	240.99	0.429	103.48	106.73	0.0	0.8	6.441	A
			2	SA, A2ON, A227S	56.98	251.87	0.226	56.81	57.46	0.0	0.3	4.663	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	223.49	353.62	0.632	224.14	231.40	1.1	1.2	4.881	A
			2	A227N, A227S	165.65	346.28	0.479	165.65	174.87	0.9	0.7	3.924	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	388.90			389.14	406.27	0.1	0.1	0.262	A
	Exit	1	1		344.46			344.46	349.59	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	28.72	77.92	0.368	28.72	27.66	0.7	0.6	20.511	C
	Exit	1	1		30.88			30.88	30.99	0.0	0.0	0.000	A
A2ON	Exit	1	1		169.77			169.77	171.20	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	121.81	312.03	0.390	121.79	124.67	0.4	0.5	3.823	A
			2	A227N, SA, A2ON, A227S	155.07	312.59	0.496	155.44	155.36	0.7	0.6	4.201	A
	Exit	1	1		322.57			322.57	336.61	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	125.41	248.94	0.504	125.82	127.54	0.8	0.8	7.223	A
			2	SA, A2ON, A227S	46.25	247.79	0.186	46.19	46.89	0.3	0.2	4.547	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	216.09	348.22	0.620	216.86	222.12	1.2	1.1	4.715	A
			2	A227N, A227S	156.12	350.23	0.446	155.53	157.53	0.7	0.7	3.682	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	372.00			372.21	379.37	0.1	0.0	0.125	A
	Exit	1	1		339.83			339.83	348.96	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	26.58	78.47	0.340	27.24	27.10	0.6	0.5	20.877	C
	Exit	1	1		27.40			27.40	28.12	0.0	0.0	0.000	A
A2ON	Exit	1	1		189.39			189.39	191.20	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	121.19	309.10	0.392	121.60	123.37	0.5	0.5	3.848	A
			2	A227N, SA, A2ON, A227S	154.37	309.48	0.499	154.66	157.85	0.6	0.8	4.382	A
	Exit	1	1		301.37			301.37	309.74	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	130.51	242.10	0.540	129.48	134.88	0.8	1.5	8.398	A
			2	SA, A2ON, A227S	52.46	243.43	0.216	52.76	55.17	0.2	0.2	4.899	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	223.46	346.08	0.646	223.49	228.66	1.1	1.2	5.133	A
			2	A227N, A227S	169.04	340.87	0.496	169.04	174.85	0.7	0.7	4.000	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	392.73			392.49	403.84	0.0	0.1	0.308	A
	Exit	1	1		311.20			311.20	325.51	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	25.47	63.66	0.400	25.37	26.30	0.5	0.9	26.890	D
	Exit	1	1		27.98			27.98	29.11	0.0	0.0	0.000	A
A2ON	Exit	1	1		182.58			182.58	187.81	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	107.20	309.83	0.346	107.26	110.57	0.5	0.4	3.689	A
			2	A227N, SA, A2ON, A227S	146.61	304.29	0.482	146.26	152.31	0.8	0.7	4.373	A
	Exit	1	1		337.61			337.61	351.17	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	126.00	243.11	0.518	126.12	135.44	1.5	1.1	8.130	A
			2	SA, A2ON, A227S	61.54	246.80	0.249	61.84	65.48	0.2	0.3	5.015	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	211.10	345.72	0.610	210.95	221.12	1.2	1.2	4.719	A
			2	A227N, A227S	155.29	343.26	0.453	155.41	160.94	0.7	0.7	3.849	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	366.50			366.39	381.92	0.1	0.0	0.145	A
			1		340.90			340.90	344.53	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	25.66	81.34	0.316	25.46	26.78	0.9	0.6	18.703	C
	Exit	1	1		26.91			26.91	28.94	0.0	0.0	0.000	A
A2ON	Exit	1	1		166.63			166.63	170.12	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	132.27	312.96	0.423	132.36	130.21	0.4	0.5	3.901	A
			2	A227N, SA, A2ON, A227S	157.76	310.50	0.508	157.54	160.10	0.7	0.8	4.290	A
	Exit	1	1		310.07			310.07	326.36	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	110.32	238.60	0.462	110.55	115.56	1.1	0.8	7.014	A
			2	SA, A2ON, A227S	52.35	242.36	0.216	52.25	55.24	0.3	0.3	4.606	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	183.77	355.37	0.517	183.71	191.74	1.2	0.9	4.015	A
			2	A227N, A227S	125.32	349.52	0.358	125.25	133.47	0.7	0.5	3.419	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	309.12			309.09	324.63	0.0	0.0	0.036	A
			1		299.97			299.97	316.72	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	22.31	114.37	0.195	22.54	23.49	0.6	0.2	10.907	B
	Exit	1	1		24.60			24.60	25.22	0.0	0.0	0.000	A
A2ON	Exit	1	1		137.61			137.61	138.94	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	109.27	309.42	0.353	109.07	113.86	0.5	0.5	3.607	A
			2	A227N, SA, A2ON, A227S	135.30	311.09	0.435	135.44	138.42	0.8	0.6	3.967	A
	Exit	1	1		255.42			255.42	269.55	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	100.99	248.50	0.406	101.97	109.54	0.8	0.5	6.144	A
			2	SA, A2ON, A227S	39.92	259.58	0.153	39.65	39.92	0.3	0.2	4.204	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

2028 Do Minimum Residual, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A227 / A2 EB Slips / Site Access RB	Standard Roundabout		A227N, SA, A2ON, A227S, A2OFF	5.72	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D13	2028 Do Minimum Residual	AM	DIRECT	07:45	09:15	90	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A227N		DIRECT	✓	100.000
SA		DIRECT	✓	100.000
A2ON				
A227S		DIRECT	✓	100.000
A2OFF		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

07:45 - 08:00

		To				
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	7.00	103.00	286.00	0.00
	SA	0.00	0.00	10.00	14.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	213.00	13.00	44.00	0.00	0.00
	A2OFF	103.00	7.00	1.00	48.00	0.00

Demand (Veh/TS)

08:00 - 08:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	7.00	115.00	272.00	0.00
	SA	0.00	0.00	10.00	14.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	220.00	13.00	43.00	0.00	0.00
	A2OFF	126.00	8.00	0.00	36.00	0.00

Demand (Veh/TS)

08:15 - 08:30

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	7.00	123.00	244.00	0.00
	SA	0.00	0.00	10.00	14.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	212.00	13.00	52.00	0.00	0.00
	A2OFF	130.00	7.00	2.00	43.00	0.00

Demand (Veh/TS)

08:30 - 08:45

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	7.00	119.00	272.00	0.00
	SA	0.00	0.00	10.00	14.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	186.00	13.00	55.00	0.00	0.00
	A2OFF	126.00	7.00	0.00	53.00	0.00

Demand (Veh/TS)

08:45 - 09:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	7.00	108.00	251.00	0.00
	SA	0.00	0.00	10.00	14.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	228.00	13.00	47.00	1.00	0.00
	A2OFF	110.00	7.00	0.00	45.00	0.00

Demand (Veh/TS)

09:00 - 09:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	6.00	94.00	211.00	0.00
	SA	0.00	0.00	8.00	12.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	205.00	10.00	34.00	0.00	0.00
	A2OFF	101.00	6.00	0.00	32.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

07:45 - 08:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	4	2	0
	SA	0	0	2	2	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	5	3	5	0	0
	A2OFF	5	4	0	0	0

Heavy Vehicle Percentages

08:00 - 08:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	5	0
	SA	0	0	3	3	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	3	0	0	0
	A2OFF	2	3	0	3	0

Heavy Vehicle Percentages

08:15 - 08:30

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	3	2	0
	SA	0	0	3	3	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	3	2	0	0
	A2OFF	5	4	0	5	0

Heavy Vehicle Percentages

08:30 - 08:45

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	0	4	0
	SA	0	0	3	3	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	3	6	0	0
	A2OFF	7	4	0	6	0

Heavy Vehicle Percentages

08:45 - 09:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	3	5	0
	SA	0	0	3	3	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	3	0	100	0
	A2OFF	4	4	0	2	0

Heavy Vehicle Percentages

09:00 - 09:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	2	5	0
	SA	0	0	2	2	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	3	0	0	0
	A2OFF	7	4	0	3	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
A227N	4.98	2.4	A	372.12	2232.73
SA	23.88	0.8	C	23.11	138.67
A2ON					
A227S	4.20	1.4	A	266.76	1600.57
A2OFF	7.27	1.7	A	165.99	995.97

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	393.27	393.27	114.45	393.03	405.17	312.77	0.0	2.4	4.467	A
SA	24.12	24.12	479.94	24.27	23.96	27.54	0.0	0.6	23.284	C
A2ON			0.00			157.39				
A227S	267.83	267.83	0.00	268.10	280.95	346.78	0.0	1.2	4.179	A
A2OFF	158.61	158.61	268.10	159.12	164.19	0.00	0.0	1.1	5.802	A

08:00 - 08:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	397.87	397.87	99.98	397.07	414.11	345.06	2.4	2.1	4.981	A
SA	24.00	24.00	469.34	24.95	25.14	27.77	0.6	0.6	23.882	C
A2ON			0.00			170.67				
A227S	273.92	273.92	0.00	273.09	278.24	323.55	1.2	1.3	4.013	A
A2OFF	171.51	171.51	273.09	171.95	173.45	0.00	1.1	1.3	6.715	A

08:15 - 08:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	370.25	370.25	111.74	369.86	382.31	342.06	2.1	2.1	4.545	A
SA	23.16	23.16	456.80	23.23	24.76	24.79	0.6	0.4	18.842	C
A2ON			0.00			183.21				
A227S	273.66	273.66	0.00	273.39	283.14	296.82	1.3	1.3	4.098	A
A2OFF	179.99	179.99	273.39	180.42	188.98	0.00	1.3	1.3	7.206	A

08:30 - 08:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	397.63	397.63	126.00	396.42	408.26	312.38	2.1	2.3	4.954	A
SA	22.84	22.84	495.48	22.43	23.99	26.94	0.4	0.8	23.708	C
A2ON			0.00			184.65				
A227S	254.17	254.17	0.00	254.41	262.74	333.27	1.3	1.2	4.203	A
A2OFF	184.57	184.57	254.41	184.03	199.51	0.00	1.3	1.6	7.272	A

08:45 - 09:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	367.78	367.78	110.20	366.80	382.95	334.63	2.3	2.0	4.647	A
SA	24.56	24.56	451.22	23.82	25.35	25.78	0.8	0.5	19.617	C
A2ON			0.00			162.71				
A227S	285.51	285.51	0.00	284.20	289.89	312.30	1.2	1.4	4.204	A
A2OFF	160.99	160.99	284.20	160.63	169.76	0.00	1.6	1.1	6.110	A

09:00 - 09:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	306.06	306.06	80.23	305.79	322.18	305.79	2.0	1.4	3.753	A
SA	19.96	19.96	364.63	20.14	20.70	21.39	0.5	0.2	10.865	B
A2ON			0.00			132.89				
A227S	245.96	245.96	0.00	246.48	255.08	251.88	1.4	1.0	3.894	A
A2OFF	140.17	140.17	246.48	139.61	148.21	0.00	1.1	1.1	5.882	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment
07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	221.44	348.79	0.635	221.14	227.54	0.0	1.4	4.680	A
			2	A227N, A227S	172.07	351.96	0.489	171.89	177.62	0.0	1.0	3.800	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	393.27			393.50	407.58	0.0	0.0	0.175	A
	Exit	1	1		312.77			312.77	328.90	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	24.12	71.95	0.337	24.27	23.96	0.0	0.6	23.284	C
	Exit	1	1		27.54			27.54	27.50	0.0	0.0	0.000	A
A2ON	Exit	1	1		157.39			157.39	163.69	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	119.11	300.27	0.397	119.38	125.00	0.0	0.4	3.899	A
			2	A227N, SA, A2ON, A227S	148.72	300.10	0.496	148.88	155.95	0.0	0.8	4.403	A
	Exit	1	1		346.78			346.78	354.18	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	101.20	241.33	0.419	101.61	107.21	0.0	0.8	6.504	A
			2	SA, A2ON, A227S	57.43	252.15	0.228	57.53	56.98	0.0	0.3	4.539	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	226.54	352.94	0.642	226.13	234.42	1.4	1.3	5.040	A
			2	A227N, A227S	171.09	346.04	0.494	170.94	179.69	1.0	0.7	3.988	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	397.87			397.63	413.78	0.0	0.1	0.391	A
	Exit	1	1		345.06			345.06	349.53	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	24.00	73.49	0.325	24.95	25.14	0.6	0.6	23.882	C
	Exit	1	1		27.77			27.77	28.83	0.0	0.0	0.000	A
A2ON	Exit	1	1		170.67			170.67	171.62	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	122.84	311.03	0.395	122.29	125.28	0.4	0.5	3.706	A
			2	A227N, SA, A2ON, A227S	151.10	312.48	0.483	150.80	152.96	0.8	0.8	4.264	A
	Exit	1	1		323.55			323.55	340.94	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	126.83	250.44	0.507	127.28	127.89	0.8	1.1	7.538	A
			2	SA, A2ON, A227S	44.67	247.94	0.180	44.67	45.55	0.3	0.2	4.357	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	217.99	350.02	0.623	217.75	226.32	1.3	1.2	4.725	A
			2	A227N, A227S	152.08	352.08	0.432	152.08	155.99	0.7	0.7	3.674	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	370.25			370.04	382.29	0.1	0.2	0.249	A
	Exit	1	1		342.06			342.06	353.27	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	23.16	80.27	0.289	23.23	24.76	0.6	0.4	18.842	C
	Exit	1	1		24.79			24.79	26.65	0.0	0.0	0.000	A
A2ON	Exit	1	1		183.21			183.21	192.55	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	119.32	309.41	0.386	119.42	123.98	0.5	0.5	3.854	A
			2	A227N, SA, A2ON, A227S	154.43	308.34	0.501	153.95	159.16	0.8	0.8	4.288	A
	Exit	1	1		296.82			296.82	306.71	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	130.19	243.55	0.535	130.32	135.15	1.1	1.0	8.228	A
			2	SA, A2ON, A227S	49.72	244.48	0.204	50.14	53.83	0.2	0.3	4.664	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	229.46	347.85	0.660	229.52	232.74	1.2	1.3	5.066	A
			2	A227N, A227S	167.58	340.05	0.492	166.90	175.51	0.7	0.8	4.150	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	397.63			397.04	408.37	0.2	0.2	0.275	A
	Exit	1	1		312.38			312.38	326.20	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	22.84	63.22	0.361	22.43	23.99	0.4	0.8	23.708	C
	Exit	1	1		26.94			26.94	27.61	0.0	0.0	0.000	A
A2ON	Exit	1	1		184.65			184.65	187.36	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	107.50	308.35	0.349	107.82	111.73	0.5	0.4	3.854	A
			2	A227N, SA, A2ON, A227S	146.67	305.61	0.480	146.60	151.01	0.8	0.8	4.465	A
	Exit	1	1		333.27			333.27	353.34	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	127.54	243.73	0.523	126.89	135.74	1.0	1.3	8.312	A
			2	SA, A2ON, A227S	57.09	245.26	0.233	57.09	63.77	0.3	0.3	5.079	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	213.47	346.85	0.615	212.91	220.82	1.3	1.2	4.860	A
			2	A227N, A227S	154.22	341.40	0.452	153.89	162.13	0.8	0.7	3.931	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	367.78			367.57	382.83	0.2	0.1	0.182	A
			1		334.63			334.63	343.35	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	24.56	79.90	0.308	23.82	25.35	0.8	0.5	19.617	C
	Exit	1	1		25.78			25.78	27.99	0.0	0.0	0.000	A
A2ON	Exit	1	1		162.71			162.71	169.68	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	129.02	312.21	0.413	128.20	129.40	0.4	0.7	3.930	A
			2	A227N, SA, A2ON, A227S	156.45	310.11	0.504	156.00	160.50	0.8	0.8	4.428	A
	Exit	1	1		312.30			312.30	326.93	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	109.89	241.88	0.454	109.89	116.01	1.3	0.9	6.833	A
			2	SA, A2ON, A227S	51.10	245.80	0.208	50.73	53.75	0.3	0.3	4.580	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	181.81	357.05	0.509	181.75	189.55	1.2	0.9	3.995	A
			2	A227N, A227S	124.13	351.21	0.354	124.04	132.62	0.7	0.4	3.293	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	306.06			305.94	321.50	0.1	0.1	0.044	A
			1		305.79			305.79	319.10	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	19.96	116.24	0.172	20.14	20.70	0.5	0.2	10.865	B
	Exit	1	1		21.39			21.39	22.95	0.0	0.0	0.000	A
A2ON	Exit	1	1		132.89			132.89	136.43	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	111.80	307.59	0.363	112.54	116.23	0.7	0.3	3.675	A
			2	A227N, SA, A2ON, A227S	134.08	310.73	0.431	133.97	138.85	0.8	0.6	4.077	A
	Exit	1	1		251.88			251.88	267.69	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	101.91	247.13	0.413	101.35	108.27	0.9	0.9	6.463	A
			2	SA, A2ON, A227S	38.23	255.02	0.150	38.20	39.94	0.3	0.2	4.356	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

Junctions 9	
ARCADY 9 - Roundabout Module	
Version: 9.5.1.7462 © Copyright TRL Limited, 2019	
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Filename: A227_A2 EB Slips_Site Access RB PM Lane Sim.j9

Path: M:\Projects\2022\22052 - BP Tollgate, Gravesend\07. Technical\07.02 Modelling\ARCADY\Direct Assessment

Report generation date: 06/03/2025 11:23:59

-
- »2023, PM
 - »2025 Do Nothing, PM
 - »2025 Do Minimum, PM
 - »2025 Do Minimum Residual, PM
 - »2028 Do Nothing, PM
 - »2028 Do Minimum, PM
 - »2028 Do Minimum Residual, PM

Summary of junction performance

	PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	[Lane Simulation] - 2023				
Arm A227N	D2	3.3	8.32		A
Arm SA		0.0	56.03		F
Arm A227S		1.2	4.13		A
Arm A20FF		6.1	17.67		C
	[Lane Simulation] - 2025 Do Nothing				
Arm A227N	D4	3.8	8.70		A
Arm SA		0.0	19.21		C
Arm A227S		1.2	4.09		A
Arm A20FF		7.7	20.50		C
	[Lane Simulation] - 2025 Do Minimum				
Arm A227N	D6	3.8	9.57		A
Arm SA		1.1	28.16		D
Arm A227S		1.3	4.25		A
Arm A20FF		7.5	20.09		C
	[Lane Simulation] - 2025 Do Minimum Residual				
Arm A227N	D8	4.6	9.80		A
Arm SA		1.2	29.29		D
Arm A227S		1.3	4.29		A
Arm A20FF		8.2	22.27		C
	[Lane Simulation] - 2028 Do Nothing				
Arm A227N	D10	4.5	10.18		B
Arm SA		0.0	0.00		A
Arm A227S		1.4	4.23		A
Arm A20FF		16.7	42.76		E
	[Lane Simulation] - 2028 Do Minimum				
Arm A227N	D12	5.6	11.94		B
Arm SA		1.4	38.82		E
Arm A227S		1.6	4.36		A
Arm A20FF		15.4	41.95		E
	[Lane Simulation] - 2028 Do Minimum Residual				
Arm A227N	D14	5.1	11.37		B
Arm SA		1.6	40.64		E
Arm A227S		1.5	4.34		A
Arm A20FF		17.2	42.78		E

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Arm and junction delays are averages for all movements, including movements with zero delay.

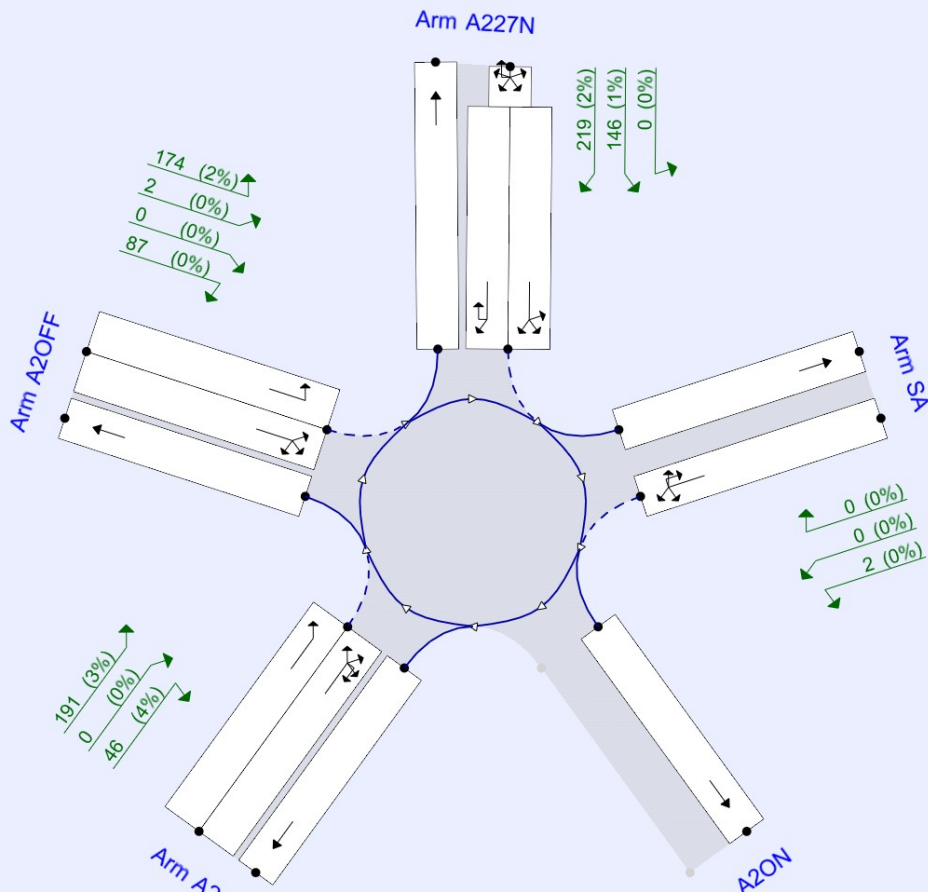
File summary

File Description

Title	
Location	
Site number	
Date	28/03/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	MARKIDES\Markides Associates
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	perTimeSegment	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

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

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials	Last run time taken (s)
Delay	1.00	100000	100000	-1	3	1	60	✓			943341053	101	18.86

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D2	2023	PM	DIRECT	16:45	18:15	90	15	✓
D4	2025 Do Nothing	PM	DIRECT	16:45	18:15	90	15	✓
D6	2025 Do Minimum	PM	DIRECT	16:45	18:15	90	15	✓
D8	2025 Do Minimum Residual	PM	DIRECT	16:45	18:15	90	15	✓
D10	2028 Do Nothing	PM	DIRECT	16:45	18:15	90	15	✓
D12	2028 Do Minimum	PM	DIRECT	16:45	18:15	90	15	✓
D14	2028 Do Minimum Residual	PM	DIRECT	16:45	18:15	90	15	✓

Analysis Set Details

ID	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	✓	100.000	100.000

2023, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A227 / A2 EB Slips / Site Access RB	Standard Roundabout		A227N, SA, A2ON, A227S, A2OFF	10.15	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A227N	A227 Wrotham Road (N)	
SA	Site Access	
A2ON	A2 EB On Slip	
A227S	A227 Wrotham Road (S)	
A2OFF	A2 EB Off Slip	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A227N	4.60	9.30	22.1	48.8	63.9	50.0	
SA	3.10	5.50	5.4	12.7	63.9	59.0	
A2ON							✓
A227S	7.10	9.30	17.9	31.1	63.9	47.0	
A2OFF	7.00	10.20	17.9	40.0	63.9	24.0	

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct intercept adjustment (PCU/TS)
A227N	Direct	Queue Survey	100.00
SA	None		
A2ON			
A227S	None		
A2OFF	Direct	Queue Survey	-25.00

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/TS)
A227N	0.600	637.586
SA	0.400	269.987
A2ON		
A227S	0.662	630.126
A2OFF	0.741	690.427

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

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
A227N	Evenly split	10.00
SA	Evenly split	10.00
A2ON	Evenly split	10.00
A227S	Evenly split	10.00
A2OFF	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Minimum capacity (PCU/TS)	Maximum capacity (PCU/TS)	Signalised
A227N	Entry	1	1	SA, A2ON, A227S	✓	5.00		0.00	24999.75	
			2	A227N, A227S	✓	5.00		0.00	24999.75	
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)		Infinity				
			1			Infinity				
SA	Entry	1	1	A227N, SA, A2ON, A227S		Infinity		0.00	24999.75	
	Exit	1	1			Infinity				
A2ON	Exit	1	1			Infinity				
A227S	Entry	1	1	A227N		Infinity		0.00	24999.75	
			2	A227N, SA, A2ON, A227S		Infinity		0.00	24999.75	
	Exit	1	1			Infinity				
A2OFF	Entry	1	1	A227N		Infinity		0.00	24999.75	
			2	SA, A2ON, A227S		Infinity		0.00	24999.75	
	Exit	1	1			Infinity				

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/TS)
A227N	Entry	1	1	0.300	318.793
			2	0.300	318.793
SA	Entry	1	1	0.400	269.987
A227S	Entry	1	1	0.331	315.063
			2	0.331	315.063
A2OFF	Entry	1	1	0.370	345.213
			2	0.370	345.213

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm				
			A227N	SA	A2ON	A227S	A2OFF
A227N	1	1		✓	✓	✓	
		2	✓			✓	
	2	1	✓	✓	✓	✓	✓
SA	1	1	✓	✓	✓	✓	
A227S	1	1	✓				
		2	✓	✓	✓	✓	
A2OFF	1	1	✓				
		2		✓	✓	✓	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D2	2023	PM	DIRECT	16:45	18:15	90	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A227N		DIRECT	✓	100.000
SA		DIRECT	✓	100.000
A2ON				
A227S		DIRECT	✓	100.000
A2OFF		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

16:45 - 17:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	146.00	219.00	0.00
	SA	0.00	0.00	2.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	191.00	0.00	46.00	0.00	0.00
	A2OFF	174.00	2.00	0.00	87.00	0.00

Demand (Veh/TS)

17:00 - 17:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	144.00	197.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	207.00	0.00	42.00	0.00	0.00
	A2OFF	205.00	0.00	0.00	99.00	0.00

Demand (Veh/TS)

17:15 - 17:30

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	126.00	214.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	227.00	0.00	54.00	0.00	0.00
	A2OFF	197.00	0.00	1.00	84.00	0.00

Demand (Veh/TS)

17:30 - 17:45

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	131.00	197.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	190.00	0.00	43.00	0.00	0.00
	A2OFF	197.00	0.00	1.00	80.00	0.00

Demand (Veh/TS)

17:45 - 18:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	130.00	182.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	203.00	0.00	43.00	1.00	0.00
	A2OFF	189.00	0.00	2.00	69.00	0.00

Demand (Veh/TS)

18:00 - 18:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	132.00	186.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	155.00	0.00	35.00	0.00	0.00
	A2OFF	174.00	0.00	0.00	73.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

16:45 - 17:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	2	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	3	0	4	0	0
	A2OFF	2	0	0	0	0

Heavy Vehicle Percentages

17:00 - 17:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	1	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	0	0	0	0	0
	A2OFF	2	0	0	0	0

Heavy Vehicle Percentages

17:15 - 17:30

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	2	1	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	0	2	0	0
	A2OFF	1	0	0	0	0

Heavy Vehicle Percentages

17:30 - 17:45

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	0	2	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	0	2	0	0
	A2OFF	2	0	0	0	0

Heavy Vehicle Percentages

17:45 - 18:00

		To				
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	3	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	0	0	0	0	0
	A2OFF	1	0	50	0	0

Heavy Vehicle Percentages

18:00 - 18:15

		To				
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	1	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	0	0	0	0
	A2OFF	2	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
A227N	8.32	3.3	A	335.81	2014.86
SA	56.03	0.0	F	0.46	2.76
A2ON					
A227S	4.13	1.2	A	240.90	1445.37
A2OFF	17.67	6.1	C	272.34	1634.01

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	364.04	364.04	137.88	364.81	364.99	364.04	0.0	3.3	8.320	A
SA	2.29	2.29	500.61	2.26	2.39	2.08	0.0	0.0	14.676	B
A2ON			0.00			193.99				
A227S	238.75	238.75	0.00	238.78	245.22	308.88	0.0	1.2	3.893	A
A2OFF	262.90	262.90	238.78	263.14	264.34	0.00	0.0	2.8	9.470	A

17:00 - 17:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	344.46	344.46	140.79	345.00	345.41	411.89	3.3	2.8	7.719	A
SA	0.45	0.45	485.60	0.48	0.87	0.12	0.0	0.0	13.473	B
A2ON			0.00			188.29				
A227S	249.39	249.39	0.21	249.15	250.62	297.65	1.2	1.1	3.808	A
A2OFF	305.20	305.20	249.36	303.33	305.62	0.00	2.8	6.0	16.342	C

17:15 - 17:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	340.93	340.93	138.15	340.46	343.37	421.98	2.8	2.7	7.136	A
SA	0.03	0.03	478.60	0.06	0.13	0.03	0.0	0.0	15.872	C
A2ON			0.00			180.71				
A227S	280.25	280.25	0.06	281.26	284.37	297.89	1.1	1.0	4.128	A
A2OFF	278.97	278.97	281.32	278.82	282.32	0.00	6.0	6.0	17.666	C

17:30 - 17:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	332.17	332.17	127.22	332.02	332.45	385.22	2.7	2.7	6.748	A
SA	0.00	0.00	459.24	0.00	0.01	0.00	0.0	0.0	56.031	F
A2ON			0.00			177.00				
A227S	234.03	234.03	0.00	233.88	238.19	282.24	1.0	1.0	3.735	A
A2OFF	279.24	279.24	233.88	278.55	282.70	0.00	6.0	4.5	15.517	C

17:45 - 18:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	313.93	313.93	116.94	313.81	319.99	395.17	2.7	2.1	6.697	A
SA	0.00	0.00	430.79	0.00	0.00	0.00	0.0	0.0	0.000	A
A2ON			0.00			177.42				
A227S	251.70	251.70	0.00	252.09	248.64	253.34	1.0	1.0	3.714	A
A2OFF	258.89	258.89	252.09	260.02	265.34	0.00	4.5	3.4	13.249	B

18:00 - 18:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	319.16	319.16	109.37	317.94	319.48	331.40	2.1	2.3	6.297	A
SA	0.00	0.00	427.31	0.00	0.00	0.00	0.0	0.0	0.000	A
A2ON			0.00			167.26				
A227S	191.29	191.29	0.00	191.09	193.43	260.05	1.0	0.7	3.402	A
A2OFF	249.00	249.00	191.09	249.65	252.06	0.00	3.4	2.1	8.649	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	210.09	273.39	0.768	210.47	210.45	0.0	1.8	8.170	A
			2	A227N, A227S	154.31	271.17	0.569	154.34	154.54	0.0	0.9	5.721	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	364.04			364.34	367.82	0.0	0.5	1.172	A
	Exit	1	1		364.04			364.04	371.65	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	2.29	66.67	0.034	2.26	2.39	0.0	0.0	14.676	B
	Exit	1	1		2.08			2.08	2.06	0.0	0.0	0.000	A
A2ON	Exit	1	1		193.99			193.99	194.60	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	107.20	306.82	0.349	107.23	109.88	0.0	0.5	3.637	A
			2	A227N, SA, A2ON, A227S	131.49	304.94	0.431	131.58	135.34	0.0	0.7	4.102	A
	Exit	1	1		308.88			308.88	308.61	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	172.58	249.17	0.692	172.99	175.23	0.0	2.3	11.500	B
			2	SA, A2ON, A227S	90.24	254.10	0.355	90.15	89.11	0.0	0.5	5.525	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	203.32	274.21	0.742	203.82	205.46	1.8	1.7	7.834	A
			2	A227N, A227S	140.96	274.16	0.514	141.18	139.95	0.9	0.7	5.251	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	344.46			344.26	345.07	0.5	0.4	0.931	A
	Exit	1	1		411.89			411.89	415.70	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.45	74.63	0.006	0.48	0.87	0.0	0.0	13.473	B
	Exit	1	1		0.12			0.12	0.20	0.0	0.0	0.000	A
A2ON	Exit	1	1		188.29			188.29	189.43	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	112.51	314.99	0.357	112.31	114.03	0.5	0.5	3.624	A
			2	A227N, SA, A2ON, A227S	136.87	314.99	0.435	136.84	136.59	0.7	0.6	3.962	A
	Exit	1	1		297.65			297.65	297.20	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	206.44	247.49	0.834	204.59	207.16	2.3	5.5	21.329	C
			2	SA, A2ON, A227S	98.76	252.88	0.391	98.73	98.47	0.5	0.5	5.896	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	196.99	272.21	0.724	196.37	199.63	1.7	1.7	7.380	A
			2	A227N, A227S	144.21	273.85	0.527	144.09	143.73	0.7	0.8	5.457	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	340.93			341.20	343.49	0.4	0.2	0.572	A
			1		421.98			421.98	426.51	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.03	76.15	0.000	0.06	0.13	0.0	0.0	15.872	C
	Exit	1	1		0.03			0.03	0.04	0.0	0.0	0.000	A
A2ON	Exit	1	1		180.71			180.71	184.49	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	126.68	312.12	0.406	127.04	128.37	0.5	0.4	3.866	A
			2	A227N, SA, A2ON, A227S	153.56	311.30	0.493	154.23	156.00	0.6	0.6	4.344	A
	Exit	1	1		297.89			297.89	299.14	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	196.37	237.29	0.828	195.77	197.83	5.5	5.6	22.849	C
			2	SA, A2ON, A227S	82.57	239.91	0.344	83.05	84.49	0.5	0.4	5.635	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	198.06	278.83	0.711	198.21	197.25	1.7	1.5	7.126	A
			2	A227N, A227S	134.08	275.31	0.487	133.81	135.20	0.8	0.9	5.114	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	332.17			332.14	332.32	0.2	0.3	0.434	A
			1		385.22			385.22	395.64	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.00	84.66	0.000	0.00	0.01	0.0	0.0	56.031	F
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A
A2ON	Exit	1	1		177.00			177.00	176.43	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	107.08	309.84	0.346	106.72	107.23	0.4	0.4	3.546	A
			2	A227N, SA, A2ON, A227S	126.98	308.79	0.411	127.16	130.96	0.6	0.6	3.890	A
	Exit	1	1		282.24			282.24	281.28	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	195.12	251.79	0.775	194.58	201.41	5.6	3.9	19.748	C
			2	SA, A2ON, A227S	84.12	256.98	0.327	83.97	81.30	0.4	0.6	5.374	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	193.19	278.79	0.693	192.77	193.57	1.5	1.4	7.002	A
			2	A227N, A227S	121.16	274.19	0.442	121.04	126.42	0.9	0.7	5.010	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	313.93			314.29	319.66	0.3	0.0	0.478	A
			1		395.17			395.17	396.64	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.00	94.43	0.000	0.00	0.00	0.0	0.0	0.000	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A
A2ON	Exit	1	1		177.42			177.42	178.53	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	111.74	315.06	0.355	112.16	111.06	0.4	0.4	3.541	A
			2	A227N, SA, A2ON, A227S	139.96	315.06	0.444	139.93	137.58	0.6	0.6	3.853	A
	Exit	1	1		253.34			253.34	258.79	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	187.90	249.55	0.753	188.58	192.53	3.9	3.1	16.368	C
			2	SA, A2ON, A227S	70.98	247.78	0.286	71.42	72.80	0.6	0.3	4.957	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	193.75	282.99	0.685	192.83	193.38	1.4	1.5	6.672	A
			2	A227N, A227S	125.14	283.27	0.442	125.11	126.10	0.7	0.6	4.782	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	319.16			318.89	319.43	0.0	0.2	0.374	A
			1		331.40			331.40	337.54	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.00	97.86	0.000	0.00	0.00	0.0	0.0	0.000	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A
A2ON	Exit	1	1		167.26			167.26	167.47	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	84.12	310.96	0.271	84.09	85.78	0.4	0.3	3.226	A
			2	A227N, SA, A2ON, A227S	107.17	312.87	0.343	107.04	107.64	0.6	0.4	3.543	A
	Exit	1	1		260.05			260.05	259.95	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	173.70	267.84	0.649	174.12	178.89	3.1	1.9	10.390	B
			2	SA, A2ON, A227S	75.30	273.76	0.275	75.53	73.17	0.3	0.2	4.523	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

2025 Do Nothing, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A227 / A2 EB Slips / Site Access RB	Standard Roundabout		A227N, SA, A2ON, A227S, A2OFF	11.23	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D4	2025 Do Nothing	PM	DIRECT	16:45	18:15	90	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A227N		DIRECT	✓	100.000
SA		DIRECT	✓	100.000
A2ON				
A227S		DIRECT	✓	100.000
A2OFF		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

16:45 - 17:00

		To				
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	148.00	223.00	0.00
	SA	0.00	0.00	2.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	195.00	0.00	46.00	0.00	0.00
	A2OFF	181.00	2.00	0.00	88.00	0.00

Demand (Veh/TS)

17:00 - 17:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	146.00	201.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	211.00	0.00	42.00	0.00	0.00
	A2OFF	213.00	0.00	0.00	100.00	0.00

Demand (Veh/TS)

17:15 - 17:30

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	128.00	219.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	231.00	0.00	54.00	0.00	0.00
	A2OFF	205.00	0.00	1.00	85.00	0.00

Demand (Veh/TS)

17:30 - 17:45

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	133.00	201.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	194.00	0.00	43.00	0.00	0.00
	A2OFF	204.00	0.00	1.00	81.00	0.00

Demand (Veh/TS)

17:45 - 18:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	132.00	186.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	207.00	0.00	43.00	1.00	0.00
	A2OFF	196.00	0.00	2.00	70.00	0.00

Demand (Veh/TS)

18:00 - 18:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	134.00	190.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	158.00	0.00	35.00	0.00	0.00
	A2OFF	181.00	0.00	0.00	74.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

16:45 - 17:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	2	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	3	0	4	0	0
	A2OFF	2	0	0	0	0

Heavy Vehicle Percentages

17:00 - 17:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	2	0	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	0	0	0	0	0
	A2OFF	2	0	0	0	0

Heavy Vehicle Percentages

17:15 - 17:30

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	2	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	0	2	0	0
	A2OFF	1	0	0	0	0

Heavy Vehicle Percentages

17:30 - 17:45

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	0	2	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	0	2	0	0
	A2OFF	1	0	0	0	0

Heavy Vehicle Percentages

17:45 - 18:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	3	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	0	0	0	0	0
	A2OFF	1	0	50	0	0

Heavy Vehicle Percentages

18:00 - 18:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	1	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	0	0	0	0
	A2OFF	2	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
A227N	8.70	3.8	A	339.98	2039.86
SA	19.21	0.0	C	0.42	2.53
A2ON					
A227S	4.09	1.2	A	244.10	1464.58
A2OFF	20.50	7.7	C	281.25	1687.51

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	366.90	366.90	137.58	364.74	372.89	372.37	0.0	3.8	8.696	A
SA	2.16	2.16	500.24	2.11	2.57	2.08	0.0	0.0	13.914	B
A2ON			0.00			193.76				
A227S	240.29	240.29	0.00	240.18	248.52	308.58	0.0	1.0	3.848	A
A2OFF	268.47	268.47	240.18	269.76	270.18	0.00	0.0	2.9	10.482	B

17:00 - 17:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	348.87	348.87	143.45	347.63	349.07	422.68	3.8	3.2	8.173	A
SA	0.29	0.29	491.03	0.29	0.94	0.08	0.0	0.0	12.294	B
A2ON			0.00			186.66				
A227S	250.13	250.13	0.18	250.08	252.82	304.45	1.0	1.2	3.763	A
A2OFF	314.44	314.44	250.26	315.87	314.98	0.00	2.9	6.0	16.856	C

17:15 - 17:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	347.76	347.76	143.17	347.05	352.53	435.23	3.2	2.9	7.724	A
SA	0.08	0.08	490.21	0.08	0.10	0.03	0.0	0.0	19.213	C
A2ON			0.00			185.29				
A227S	285.91	285.91	0.03	286.76	289.84	304.97	1.2	1.2	4.088	A
A2OFF	293.42	293.42	286.79	291.66	291.48	0.00	6.0	7.7	20.499	C

17:30 - 17:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	333.63	333.63	123.66	331.74	338.23	401.66	2.9	2.8	6.727	A
SA	0.00	0.00	455.39	0.00	0.00	0.00	0.0	0.0	0.000	A
A2ON			0.00			175.18				
A227S	239.92	239.92	0.00	239.74	243.10	280.21	1.2	1.0	3.752	A
A2OFF	282.50	282.50	239.74	285.58	289.06	0.00	7.7	4.7	17.783	C

17:45 - 18:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	320.92	320.92	117.95	321.29	326.95	403.18	2.8	2.2	6.827	A
SA	0.00	0.00	439.24	0.00	0.01	0.00	0.0	0.0	13.942	B
A2ON			0.00			180.18				
A227S	252.24	252.24	0.00	252.50	251.20	259.08	1.0	1.0	3.723	A
A2OFF	270.50	270.50	252.50	268.63	272.34	0.00	4.7	4.6	14.651	B

18:00 - 18:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	322.00	322.00	112.74	321.88	327.61	343.08	2.2	2.4	6.669	A
SA	0.00	0.00	434.60	0.00	0.00	0.00	0.0	0.0	0.000	A
A2ON			0.00			167.24				
A227S	196.16	196.16	0.00	195.82	194.40	267.39	1.0	0.8	3.411	A
A2OFF	258.32	258.32	195.82	260.00	260.70	0.00	4.6	2.2	9.435	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment
16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	213.08	273.00	0.781	212.45	216.82	0.0	1.9	8.368	A
			2	A227N, A227S	152.34	271.91	0.561	152.32	156.06	0.0	0.9	5.833	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	366.90			365.42	375.83	0.0	0.9	1.380	A
	Exit	1	1		372.37			372.37	381.01	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	2.16	66.90	0.032	2.11	2.57	0.0	0.0	13.914	B
	Exit	1	1		2.08			2.08	1.97	0.0	0.0	0.000	A
A2ON	Exit	1	1		193.76			193.76	198.18	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	107.55	306.93	0.351	107.58	111.10	0.0	0.5	3.641	A
			2	A227N, SA, A2ON, A227S	132.74	305.95	0.434	132.60	137.42	0.0	0.5	4.016	A
	Exit	1	1		308.58			308.58	312.99	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	178.26	248.75	0.716	178.95	180.31	0.0	2.4	12.978	B
			2	SA, A2ON, A227S	90.24	253.76	0.356	90.82	89.88	0.0	0.4	5.527	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	204.19	272.35	0.749	203.68	206.74	1.9	1.8	8.214	A
			2	A227N, A227S	143.97	275.73	0.522	143.95	142.33	0.9	0.9	5.455	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	348.87			348.16	348.81	0.9	0.6	1.087	A
	Exit	1	1		422.68			422.68	425.15	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.29	72.67	0.004	0.29	0.94	0.0	0.0	12.294	B
	Exit	1	1		0.08			0.08	0.19	0.0	0.0	0.000	A
A2ON	Exit	1	1		186.66			186.66	190.77	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	112.11	315.00	0.356	112.34	114.34	0.5	0.4	3.621	A
			2	A227N, SA, A2ON, A227S	138.03	315.00	0.438	137.74	138.48	0.5	0.7	3.880	A
	Exit	1	1		304.45			304.45	301.70	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	212.58	247.69	0.858	214.63	214.40	2.4	5.2	21.971	C
			2	SA, A2ON, A227S	101.84	252.55	0.403	101.24	100.58	0.4	0.8	6.047	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	199.74	272.22	0.734	199.37	203.83	1.8	1.7	7.711	A
			2	A227N, A227S	148.47	269.60	0.550	147.68	148.69	0.9	1.0	5.779	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	347.76			348.21	352.61	0.6	0.2	0.833	A
	Exit	1	1		435.23			435.23	439.46	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.08	71.32	0.001	0.08	0.10	0.0	0.0	19.213	C
	Exit	1	1		0.03			0.03	0.04	0.0	0.0	0.000	A
A2ON	Exit	1	1		185.29			185.29	185.11	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	130.06	311.47	0.418	130.42	131.30	0.4	0.6	3.858	A
			2	A227N, SA, A2ON, A227S	155.84	311.43	0.500	156.31	158.54	0.7	0.7	4.279	A
	Exit	1	1		304.97			304.97	309.34	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	204.74	235.83	0.869	203.84	205.46	5.2	6.9	26.568	D
			2	SA, A2ON, A227S	88.68	237.80	0.373	87.82	86.03	0.8	0.8	6.033	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	198.53	279.72	0.710	197.63	200.83	1.7	1.8	7.065	A
			2	A227N, A227S	134.52	275.11	0.489	134.11	137.39	1.0	0.8	5.177	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	333.63			333.05	338.15	0.2	0.2	0.421	A
	Exit	1	1		401.66			401.66	406.92	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.00	85.82	0.000	0.00	0.00	0.0	0.0	0.000	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A
A2ON	Exit	1	1		175.18			175.18	178.47	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	107.66	309.87	0.347	107.51	109.15	0.6	0.5	3.546	A
			2	A227N, SA, A2ON, A227S	132.26	308.07	0.429	132.21	133.95	0.7	0.5	3.920	A
	Exit	1	1		280.21			280.21	284.99	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	202.63	252.12	0.803	205.39	208.11	6.9	4.4	22.728	C
			2	SA, A2ON, A227S	79.87	254.67	0.314	80.18	80.95	0.8	0.4	5.286	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	192.66	278.51	0.691	192.74	196.09	1.8	1.4	7.058	A
			2	A227N, A227S	128.68	273.49	0.470	128.55	130.86	0.8	0.8	5.103	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	320.92			321.34	326.48	0.2	0.0	0.548	A
			1		403.18			403.18	405.89	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.00	90.89	0.000	0.00	0.01	0.0	0.0	13.942	B
	Exit	1	1		0.00			0.00	0.01	0.0	0.0	0.000	A
A2ON	Exit	1	1		180.18			180.18	179.76	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	114.84	315.06	0.365	115.13	114.32	0.5	0.4	3.527	A
			2	A227N, SA, A2ON, A227S	137.39	315.06	0.436	137.37	136.89	0.5	0.6	3.887	A
	Exit	1	1		259.08			259.08	264.84	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	196.82	248.84	0.791	195.19	198.90	4.4	4.1	18.187	C
			2	SA, A2ON, A227S	73.68	248.16	0.297	73.42	73.44	0.4	0.5	5.066	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	192.32	282.41	0.681	192.13	196.74	1.4	1.5	6.878	A
			2	A227N, A227S	129.37	282.15	0.458	129.74	130.87	0.8	0.6	4.837	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	322.00			321.71	327.43	0.0	0.4	0.609	A
			1		343.08			343.08	345.47	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.00	95.03	0.000	0.00	0.00	0.0	0.0	0.000	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A
A2ON	Exit	1	1		167.24			167.24	169.75	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	87.55	311.59	0.281	87.24	86.62	0.4	0.4	3.285	A
			2	A227N, SA, A2ON, A227S	108.58	312.39	0.348	108.57	107.78	0.6	0.5	3.512	A
	Exit	1	1		267.39			267.39	267.48	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	181.82	266.87	0.681	183.10	186.01	4.1	1.9	11.483	B
			2	SA, A2ON, A227S	76.50	272.01	0.281	76.89	74.69	0.5	0.3	4.501	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

2025 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A227 / A2 EB Slips / Site Access RB	Standard Roundabout		A227N, SA, A2ON, A227S, A2OFF	12.07	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D6	2025 Do Minimum	PM	DIRECT	16:45	18:15	90	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A227N		DIRECT	✓	100.000
SA		DIRECT	✓	100.000
A2ON				
A227S		DIRECT	✓	100.000
A2OFF		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

16:45 - 17:00

		To				
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	148.00	223.00	0.00
	SA	7.00	0.00	13.00	11.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	192.00	12.00	46.00	0.00	0.00
	A2OFF	177.00	19.00	0.00	87.00	0.00

Demand (Veh/TS)

17:00 - 17:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	146.00	201.00	0.00
	SA	7.00	0.00	12.00	11.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	208.00	12.00	42.00	0.00	0.00
	A2OFF	208.00	18.00	0.00	99.00	0.00

Demand (Veh/TS)

17:15 - 17:30

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	128.00	219.00	0.00
	SA	7.00	0.00	12.00	11.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	228.00	12.00	54.00	0.00	0.00
	A2OFF	200.00	18.00	1.00	83.00	0.00

Demand (Veh/TS)

17:30 - 17:45

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	133.00	201.00	0.00
	SA	7.00	0.00	11.00	11.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	191.00	11.00	43.00	0.00	0.00
	A2OFF	200.00	17.00	1.00	80.00	0.00

Demand (Veh/TS)

17:45 - 18:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	132.00	186.00	0.00
	SA	7.00	0.00	11.00	10.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	204.00	11.00	43.00	1.00	0.00
	A2OFF	192.00	17.00	22.00	68.00	0.00

Demand (Veh/TS)

18:00 - 18:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	134.00	190.00	0.00
	SA	6.00	0.00	10.00	9.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	156.00	10.00	35.00	0.00	0.00
	A2OFF	177.00	15.00	0.00	73.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

16:45 - 17:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	2	0
	SA	0	0	1	1	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	3	1	4	0	0
	A2OFF	2	1	0	0	0

Heavy Vehicle Percentages

17:00 - 17:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	0	0
	SA	0	0	1	1	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	0	1	0	0	0
	A2OFF	2	1	0	0	0

Heavy Vehicle Percentages

17:15 - 17:30

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	2	1	0
	SA	0	0	1	1	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	1	2	0	0
	A2OFF	1	1	0	0	0

Heavy Vehicle Percentages

17:30 - 17:45

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	0	2	0
	SA	0	0	1	1	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	1	2	0	0
	A2OFF	2	1	0	0	0

Heavy Vehicle Percentages

17:45 - 18:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	3	0
	SA	0	0	1	1	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	0	1	0	0	0
	A2OFF	1	1	50	0	0

Heavy Vehicle Percentages

18:00 - 18:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	1	0
	SA	0	0	1	1	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	1	0	0	0
	A2OFF	2	1	0	0	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
A227N	9.57	3.8	A	337.27	2023.63
SA	28.16	1.1	D	28.84	173.06
A2ON					
A227S	4.25	1.3	A	253.61	1521.64
A2OFF	20.09	7.5	C	293.95	1763.72

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	365.04	365.04	164.48	366.31	371.93	371.40	0.0	3.8	9.570	A
SA	31.06	31.06	499.20	31.03	30.93	31.61	0.0	1.1	28.156	D
A2ON			0.00			203.92				
A227S	248.57	248.57	6.70	248.62	255.42	319.58	0.0	1.1	3.952	A
A2OFF	281.33	281.33	255.31	280.59	283.61	0.00	0.0	3.5	10.478	B

17:00 - 17:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	346.20	346.20	173.21	347.78	349.78	420.43	3.8	3.1	8.729	A
SA	29.76	29.76	489.82	30.05	30.52	31.16	1.1	0.7	25.240	D
A2ON			0.00			203.41				
A227S	263.16	263.16	6.84	262.77	259.24	309.60	1.1	1.3	3.941	A
A2OFF	325.47	325.47	269.61	324.02	325.12	0.00	3.5	6.2	15.903	C

17:15 - 17:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	342.48	342.48	166.01	346.73	352.94	439.07	3.1	2.7	8.320	A
SA	30.43	30.43	483.34	30.34	29.81	29.39	0.7	0.8	24.291	C
A2ON			0.00			193.80				
A227S	297.94	297.94	7.13	298.08	296.38	312.75	1.3	1.3	4.249	A
A2OFF	299.86	299.86	305.17	299.86	303.76	0.00	6.2	7.5	20.088	C

17:30 - 17:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	327.67	327.67	153.58	326.76	336.46	397.25	2.7	2.9	7.673	A
SA	29.54	29.54	451.35	29.85	29.60	28.97	0.8	0.5	17.861	C
A2ON			0.00			186.94				
A227S	248.09	248.09	6.60	247.82	250.82	287.69	1.3	1.2	3.936	A
A2OFF	297.70	297.70	254.42	296.40	302.18	0.00	7.5	5.7	17.765	C

17:45 - 18:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	319.10	319.10	160.61	317.59	324.88	406.22	2.9	2.9	7.660	A
SA	27.19	27.19	450.26	26.61	28.26	27.94	0.5	0.6	16.773	C
A2ON			0.00			208.60				
A227S	262.25	262.25	6.96	262.35	259.70	261.38	1.2	0.9	3.838	A
A2OFF	297.33	297.33	269.30	297.55	314.28	0.00	5.7	4.6	14.737	B

18:00 - 18:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	323.57	323.57	133.92	324.12	326.83	336.31	2.9	2.4	7.001	A
SA	25.13	25.13	432.96	25.22	26.11	25.08	0.6	0.3	13.713	B
A2ON			0.00			180.84				
A227S	201.72	201.72	6.29	202.42	203.42	271.06	0.9	0.8	3.565	A
A2OFF	262.15	262.15	208.70	261.53	269.94	0.00	4.6	2.9	9.576	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	211.82	265.44	0.798	211.82	214.69	0.0	2.2	8.971	A
			2	A227N, A227S	154.22	264.12	0.584	154.46	157.24	0.0	1.1	6.325	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	365.04			366.07	375.38	0.0	0.4	1.708	A
	Exit	1	1		371.40			371.40	380.27	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	31.06	67.20	0.464	31.03	30.93	0.0	1.1	28.156	D
	Exit	1	1		31.61			31.61	31.26	0.0	0.0	0.000	A
A2ON	Exit	1	1		203.92			203.92	207.87	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	107.50	302.95	0.355	107.74	111.04	0.0	0.4	3.711	A
			2	A227N, SA, A2ON, A227S	141.10	303.43	0.465	140.88	144.38	0.0	0.7	4.137	A
	Exit	1	1		319.58			319.58	322.48	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	175.27	242.96	0.722	174.64	177.46	0.0	2.7	12.938	B
			2	SA, A2ON, A227S	106.06	247.47	0.429	105.96	106.14	0.0	0.7	6.401	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	205.13	264.94	0.774	205.70	207.10	2.2	1.8	8.580	A
			2	A227N, A227S	142.56	266.64	0.535	142.08	142.68	1.1	1.0	5.870	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	346.20			347.69	349.17	0.4	0.3	1.262	A
	Exit	1	1		420.43			420.43	419.78	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	29.76	72.70	0.409	30.05	30.52	1.1	0.7	25.240	D
	Exit	1	1		31.16			31.16	30.69	0.0	0.0	0.000	A
A2ON	Exit	1	1		203.41			203.41	201.96	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	116.66	312.80	0.373	116.21	114.82	0.4	0.6	3.693	A
			2	A227N, SA, A2ON, A227S	146.50	312.17	0.469	146.57	144.42	0.7	0.7	4.138	A
	Exit	1	1		309.60			309.60	312.24	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	208.42	239.97	0.868	206.35	207.76	2.7	5.5	21.004	C
			2	SA, A2ON, A227S	117.05	244.77	0.478	117.67	117.36	0.7	0.7	6.920	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	197.98	263.83	0.750	199.32	203.04	1.8	1.8	8.247	A
			2	A227N, A227S	146.76	265.66	0.552	147.41	149.90	1.0	0.8	6.062	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	342.48			344.74	352.74	0.3	0.2	1.007	A
	Exit	1	1		439.07			439.07	439.30	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	30.43	73.76	0.413	30.34	29.81	0.7	0.8	24.291	C
	Exit	1	1		29.39			29.39	29.77	0.0	0.0	0.000	A
A2ON	Exit	1	1		193.80			193.80	199.72	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	134.64	309.29	0.435	134.69	131.66	0.6	0.6	3.932	A
			2	A227N, SA, A2ON, A227S	163.30	308.64	0.529	163.39	164.72	0.7	0.8	4.502	A
	Exit	1	1		312.75			312.75	314.10	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	199.13	228.60	0.871	199.03	202.98	5.5	6.8	26.816	D
			2	SA, A2ON, A227S	100.75	230.58	0.437	100.82	100.78	0.7	0.8	6.573	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	195.50	270.41	0.723	194.38	198.22	1.8	1.9	7.818	A
			2	A227N, A227S	132.58	265.84	0.498	132.36	138.24	0.8	0.8	5.697	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	327.67			328.10	336.51	0.2	0.2	0.715	A
	Exit	1	1		397.25			397.25	406.50	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	29.54	86.67	0.341	29.85	29.60	0.8	0.5	17.861	C
	Exit	1	1		28.97			28.97	28.47	0.0	0.0	0.000	A
A2ON	Exit	1	1		186.94			186.94	191.00	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	107.66	306.12	0.352	107.64	109.09	0.6	0.5	3.639	A
			2	A227N, SA, A2ON, A227S	140.42	306.79	0.458	140.18	141.74	0.8	0.7	4.165	A
	Exit	1	1		287.69			287.69	293.10	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	199.61	244.51	0.817	198.41	205.02	6.8	5.0	23.467	C
			2	SA, A2ON, A227S	98.09	248.67	0.394	97.99	97.17	0.8	0.7	6.030	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	190.73	262.54	0.726	189.55	192.58	1.9	1.8	7.985	A
			2	A227N, A227S	128.14	258.25	0.496	128.09	132.30	0.8	0.8	5.497	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	319.10			318.86	324.95	0.2	0.3	0.676	A
			1		406.22			406.22	408.05	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	27.19	81.18	0.334	26.61	28.26	0.5	0.6	16.773	C
	Exit	1	1		27.94			27.94	27.78	0.0	0.0	0.000	A
A2ON	Exit	1	1		208.60			208.60	220.43	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	116.57	312.76	0.373	116.38	114.66	0.5	0.4	3.608	A
			2	A227N, SA, A2ON, A227S	145.68	312.25	0.467	145.97	145.04	0.7	0.5	4.021	A
	Exit	1	1		261.38			261.38	270.86	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	191.78	242.91	0.790	191.59	195.75	5.0	3.8	18.275	C
			2	SA, A2ON, A227S	105.55	221.26	0.477	105.96	118.53	0.7	0.9	8.403	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	193.58	275.20	0.703	193.75	195.59	1.8	1.5	7.313	A
			2	A227N, A227S	130.56	275.80	0.473	130.37	131.24	0.8	0.7	5.012	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	323.57			324.14	326.30	0.3	0.1	0.619	A
			1		336.31			336.31	346.07	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	25.13	94.73	0.265	25.22	26.11	0.6	0.3	13.713	B
	Exit	1	1		25.08			25.08	25.64	0.0	0.0	0.000	A
A2ON	Exit	1	1		180.84			180.84	180.88	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	84.98	309.41	0.275	85.30	86.46	0.4	0.3	3.383	A
			2	A227N, SA, A2ON, A227S	116.74	310.31	0.376	117.12	116.96	0.5	0.5	3.700	A
	Exit	1	1		271.06			271.06	273.71	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	175.44	262.00	0.670	175.61	182.02	3.8	2.2	11.786	B
			2	SA, A2ON, A227S	86.71	266.75	0.325	85.92	87.91	0.9	0.7	5.113	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

2025 Do Minimum Residual, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A227 / A2 EB Slips / Site Access RB	Standard Roundabout		A227N, SA, A2ON, A227S, A2OFF	12.86	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D8	2025 Do Minimum Residual	PM	DIRECT	16:45	18:15	90	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A227N		DIRECT	✓	100.000
SA		DIRECT	✓	100.000
A2ON				
A227S		DIRECT	✓	100.000
A2OFF		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

16:45 - 17:00

		To				
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	148.00	223.00	0.00
	SA	7.00	0.00	13.00	10.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	192.00	11.00	46.00	0.00	0.00
	A2OFF	177.00	18.00	0.00	87.00	0.00

Demand (Veh/TS)

17:00 - 17:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	146.00	201.00	0.00
	SA	7.00	0.00	11.00	10.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	208.00	11.00	42.00	0.00	0.00
	A2OFF	208.00	16.00	0.00	99.00	0.00

Demand (Veh/TS)

17:15 - 17:30

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	128.00	219.00	0.00
	SA	7.00	0.00	11.00	10.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	228.00	11.00	54.00	0.00	0.00
	A2OFF	200.00	16.00	1.00	83.00	0.00

Demand (Veh/TS)

17:30 - 17:45

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	133.00	201.00	0.00
	SA	7.00	0.00	10.00	9.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	191.00	10.00	43.00	0.00	0.00
	A2OFF	200.00	15.00	1.00	80.00	0.00

Demand (Veh/TS)

17:45 - 18:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	132.00	186.00	0.00
	SA	7.00	0.00	10.00	9.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	204.00	10.00	43.00	1.00	0.00
	A2OFF	192.00	14.00	2.00	68.00	0.00

Demand (Veh/TS)

18:00 - 18:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	134.00	190.00	0.00
	SA	6.00	0.00	9.00	9.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	156.00	9.00	35.00	0.00	0.00
	A2OFF	177.00	13.00	0.00	73.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

16:45 - 17:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	2	0
	SA	0	0	1	1	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	3	1	4	0	0
	A2OFF	2	1	0	0	0

Heavy Vehicle Percentages

17:00 - 17:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	0	0
	SA	0	0	2	1	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	0	1	0	0	0
	A2OFF	2	1	0	0	0

Heavy Vehicle Percentages

17:15 - 17:30

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	2	1	0
	SA	0	0	2	1	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	1	2	0	0
	A2OFF	1	1	0	0	0

Heavy Vehicle Percentages

17:30 - 17:45

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	0	2	0
	SA	0	0	2	1	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	1	2	0	0
	A2OFF	2	1	0	0	0

Heavy Vehicle Percentages

17:45 - 18:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	3	0
	SA	0	0	2	1	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	0	1	0	0	0
	A2OFF	1	1	50	0	0

Heavy Vehicle Percentages

18:00 - 18:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	1	0
	SA	0	0	2	1	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	1	0	0	0
	A2OFF	2	1	0	0	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
A227N	9.80	4.6	A	339.87	2039.23
SA	29.29	1.2	D	26.78	160.67
A2ON					
A227S	4.29	1.3	A	248.71	1492.24
A2OFF	22.27	8.2	C	290.37	1742.24

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	371.81	371.81	164.04	369.40	372.85	377.94	0.0	4.5	9.801	A
SA	30.75	30.75	503.68	30.51	29.43	29.76	0.0	1.2	29.291	D
A2ON			0.00			206.68				
A227S	250.34	250.34	6.99	249.97	255.29	320.52	0.0	1.3	3.988	A
A2OFF	285.38	285.38	256.96	285.03	283.71	0.00	0.0	3.4	10.669	B

17:00 - 17:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	347.41	347.41	169.04	348.75	350.27	416.60	4.5	3.3	8.438	A
SA	28.49	28.49	491.85	28.58	29.33	25.91	1.2	0.7	21.846	C
A2ON			0.00			199.29				
A227S	255.00	255.00	6.99	254.81	259.59	314.17	1.3	1.1	3.802	A
A2OFF	323.84	323.84	261.80	323.84	321.67	0.00	3.4	7.0	18.490	C

17:15 - 17:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	342.99	342.99	164.09	344.68	349.86	432.34	3.3	2.8	7.973	A
SA	27.59	27.59	482.12	27.11	28.54	26.65	0.7	0.8	23.417	C
A2ON			0.00			194.93				
A227S	291.08	291.08	6.51	291.37	296.71	307.77	1.1	1.3	4.286	A
A2OFF	298.75	298.75	297.94	298.55	302.46	0.00	7.0	8.3	22.266	C

17:30 - 17:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	334.74	334.74	149.57	333.94	338.67	393.74	2.8	2.8	7.471	A
SA	26.09	26.09	459.35	25.77	26.25	24.19	0.8	0.5	17.853	C
A2ON			0.00			188.17				
A227S	241.31	241.31	7.29	241.58	249.77	289.65	1.3	1.0	4.003	A
A2OFF	293.49	293.49	248.87	294.45	300.57	0.00	8.3	5.3	17.875	C

17:45 - 18:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	319.25	319.25	138.80	320.88	325.46	405.70	2.8	2.2	7.131	A
SA	24.37	24.37	435.56	23.95	25.53	24.16	0.5	0.4	13.582	B
A2ON			0.00			189.45				
A227S	256.31	256.31	6.70	256.50	258.99	263.36	1.0	1.1	3.872	A
A2OFF	279.21	279.21	263.20	281.30	282.79	0.00	5.3	4.3	14.997	B

18:00 - 18:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	322.85	322.85	129.21	321.27	325.88	336.40	2.2	2.6	6.612	A
SA	23.38	23.38	428.87	23.41	24.22	21.59	0.4	0.3	13.186	B
A2ON			0.00			174.64				
A227S	198.25	198.25	6.27	198.11	201.37	271.39	1.1	0.6	3.493	A
A2OFF	261.56	261.56	204.38	261.24	266.88	0.00	4.3	2.6	9.165	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment
16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	213.80	265.29	0.806	213.56	215.61	0.0	2.3	8.935	A
			2	A227N, A227S	156.24	263.60	0.593	155.84	157.24	0.0	1.2	6.219	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	371.81			370.05	376.46	0.0	1.0	1.994	A
	Exit	1	1		377.94			377.94	382.58	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	30.75	65.12	0.472	30.51	29.43	0.0	1.2	29.291	D
	Exit	1	1		29.76			29.76	28.71	0.0	0.0	0.000	A
A2ON	Exit	1	1		206.68			206.68	207.63	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	108.90	303.32	0.359	108.59	110.88	0.0	0.6	3.669	A
			2	A227N, SA, A2ON, A227S	141.43	303.27	0.467	141.38	144.42	0.0	0.7	4.232	A
	Exit	1	1		320.52			320.52	322.35	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	177.21	242.34	0.731	176.87	178.14	0.0	2.7	13.201	B
			2	SA, A2ON, A227S	108.16	246.87	0.438	108.13	105.56	0.0	0.7	6.439	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	205.12	266.09	0.771	205.66	207.42	2.3	2.0	8.307	A
			2	A227N, A227S	142.93	267.93	0.533	143.09	142.85	1.2	1.0	5.707	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	347.41			348.05	349.63	1.0	0.3	1.203	A
	Exit	1	1		416.60			416.60	421.46	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	28.49	72.02	0.395	28.58	29.33	1.2	0.7	21.846	C
	Exit	1	1		25.91			25.91	26.72	0.0	0.0	0.000	A
A2ON	Exit	1	1		199.29			199.29	201.30	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	112.50	312.75	0.360	112.61	115.99	0.6	0.4	3.522	A
			2	A227N, SA, A2ON, A227S	142.50	312.51	0.456	142.21	143.60	0.7	0.8	4.029	A
	Exit	1	1		314.17			314.17	311.37	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	208.10	243.27	0.856	207.27	207.63	2.7	6.2	24.861	C
			2	SA, A2ON, A227S	115.74	247.61	0.467	116.57	114.04	0.7	0.8	6.908	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	196.53	265.21	0.741	197.14	200.69	2.0	1.6	8.002	A
			2	A227N, A227S	147.51	266.02	0.555	147.54	149.17	1.0	1.1	5.911	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	342.99			344.04	349.63	0.3	0.2	0.871	A
	Exit	1	1		432.34			432.34	440.22	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	27.59	73.98	0.374	27.11	28.54	0.7	0.8	23.417	C
	Exit	1	1		26.65			26.65	26.83	0.0	0.0	0.000	A
A2ON	Exit	1	1		194.93			194.93	197.08	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	128.52	309.87	0.415	128.52	130.96	0.4	0.5	3.998	A
			2	A227N, SA, A2ON, A227S	162.51	307.60	0.528	162.88	165.75	0.8	0.7	4.514	A
	Exit	1	1		307.77			307.77	313.42	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	202.13	231.38	0.874	200.76	202.99	6.2	7.6	29.840	D
			2	SA, A2ON, A227S	96.59	233.00	0.415	97.79	99.46	0.8	0.7	6.819	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	197.72	271.53	0.728	196.93	197.73	1.6	1.8	7.781	A
			2	A227N, A227S	137.01	268.31	0.510	136.99	140.94	1.1	0.7	5.475	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	334.74			334.74	338.44	0.2	0.3	0.639	A
	Exit	1	1		393.74			393.74	408.15	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	26.09	83.14	0.314	25.77	26.25	0.8	0.5	17.853	C
	Exit	1	1		24.19			24.19	24.66	0.0	0.0	0.000	A
A2ON	Exit	1	1		188.17			188.17	188.08	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	105.44	307.76	0.343	105.55	109.72	0.5	0.4	3.781	A
			2	A227N, SA, A2ON, A227S	135.80	307.22	0.442	135.97	140.04	0.7	0.6	4.177	A
	Exit	1	1		289.65			289.65	294.37	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	197.30	246.28	0.801	198.11	205.46	7.6	4.5	23.540	C
			2	SA, A2ON, A227S	96.19	251.23	0.383	96.35	95.12	0.7	0.7	6.031	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	192.05	272.44	0.705	192.38	194.65	1.8	1.5	7.463	A
			2	A227N, A227S	127.82	269.44	0.474	128.52	130.81	0.7	0.6	5.170	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	319.25			319.84	325.13	0.3	0.1	0.583	A
			1		405.70			405.70	408.24	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	24.37	91.90	0.265	23.95	25.53	0.5	0.4	13.582	B
	Exit	1	1		24.16			24.16	24.29	0.0	0.0	0.000	A
A2ON	Exit	1	1		189.45			189.45	191.17	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	113.44	312.85	0.363	113.54	115.31	0.4	0.4	3.623	A
			2	A227N, SA, A2ON, A227S	142.88	312.73	0.457	142.96	143.68	0.6	0.7	4.072	A
	Exit	1	1		263.36			263.36	269.07	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	195.16	244.86	0.796	196.39	197.32	4.5	3.8	19.028	C
			2	SA, A2ON, A227S	84.04	244.42	0.344	84.91	85.47	0.7	0.5	5.686	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	193.77	277.26	0.699	192.78	194.26	1.5	1.6	7.057	A
			2	A227N, A227S	129.00	277.21	0.465	128.48	131.62	0.6	0.8	4.959	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	322.85			322.77	326.06	0.1	0.3	0.410	A
			1		336.40			336.40	344.43	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	23.38	95.51	0.244	23.41	24.22	0.4	0.3	13.186	B
	Exit	1	1		21.59			21.59	22.21	0.0	0.0	0.000	A
A2ON	Exit	1	1		174.64			174.64	177.66	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	84.78	309.86	0.273	84.80	86.70	0.4	0.2	3.313	A
			2	A227N, SA, A2ON, A227S	113.46	311.08	0.365	113.28	114.67	0.7	0.4	3.629	A
	Exit	1	1		271.39			271.39	274.05	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	175.29	263.33	0.666	174.91	180.61	3.8	2.1	11.186	B
			2	SA, A2ON, A227S	86.25	268.81	0.321	86.33	86.28	0.5	0.5	5.067	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

2028 Do Nothing, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A227 / A2 EB Slips / Site Access RB	Standard Roundabout		A227N, SA, A2ON, A227S, A2OFF	19.25	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D10	2028 Do Nothing	PM	DIRECT	16:45	18:15	90	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A227N		DIRECT	✓	100.000
SA		DIRECT	✓	100.000
A2ON				
A227S		DIRECT	✓	100.000
A2OFF		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

16:45 - 17:00

		To				
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	153.00	238.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	205.00	0.00	47.00	0.00	0.00
	A2OFF	197.00	2.00	0.00	92.00	0.00

Demand (Veh/TS)

17:00 - 17:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	151.00	216.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	221.00	0.00	43.00	0.00	0.00
	A2OFF	230.00	0.00	0.00	105.00	0.00

Demand (Veh/TS)

17:15 - 17:30

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	133.00	234.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	242.00	0.00	56.00	0.00	0.00
	A2OFF	222.00	0.00	1.00	89.00	0.00

Demand (Veh/TS)

17:30 - 17:45

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	138.00	215.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	204.00	0.00	44.00	0.00	0.00
	A2OFF	221.00	0.00	1.00	85.00	0.00

Demand (Veh/TS)

17:45 - 18:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	137.00	199.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	217.00	0.00	44.00	1.00	0.00
	A2OFF	212.00	0.00	2.00	73.00	0.00

Demand (Veh/TS)

18:00 - 18:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	139.00	202.00	0.00
	SA	0.00	0.00	0.00	0.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	167.00	0.00	36.00	0.00	0.00
	A2OFF	195.00	0.00	0.00	77.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

16:45 - 17:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	2	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	3	0	4	0	0
	A2OFF	2	0	0	0	0

Heavy Vehicle Percentages

17:00 - 17:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	0	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	0	0	0	0	0
	A2OFF	2	0	0	0	0

Heavy Vehicle Percentages

17:15 - 17:30

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	2	1	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	0	2	0	0
	A2OFF	1	0	0	0	0

Heavy Vehicle Percentages

17:30 - 17:45

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	0	1	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	0	2	0	0
	A2OFF	1	0	0	0	0

Heavy Vehicle Percentages

17:45 - 18:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	3	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	0	0	0	0	0
	A2OFF	1	0	50	0	0

Heavy Vehicle Percentages

18:00 - 18:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	1	0
	SA	0	0	0	0	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	0	0	0	0
	A2OFF	2	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
A227N	10.18	4.5	B	358.36	2150.18
SA	0.00	0.0	A	0.00	0.00
A2ON					
A227S	4.23	1.4	A	254.55	1527.32
A2OFF	42.76	16.7	E	301.01	1806.08

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	391.74	391.74	141.99	392.23	393.71	401.31	0.0	4.5	10.176	B
SA	0.00	0.00	532.33	0.00	0.00	1.89	0.0	0.0	0.000	A
A2ON			0.00			200.55				
A227S	252.08	252.08	0.00	252.04	259.23	331.78	0.0	1.1	3.942	A
A2OFF	291.77	291.77	252.04	291.26	290.92	0.00	0.0	5.0	14.221	B

17:00 - 17:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	365.05	365.05	147.57	365.93	370.42	444.92	4.5	3.7	9.222	A
SA	0.00	0.00	513.50	0.00	0.00	0.00	0.0	0.0	0.000	A
A2ON			0.00			193.69				
A227S	263.58	263.58	0.00	263.37	263.97	319.81	1.1	1.1	3.830	A
A2OFF	335.04	335.04	263.37	329.12	331.11	0.00	5.0	13.3	28.883	D

17:15 - 17:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	365.53	365.53	146.28	365.94	371.69	460.82	3.7	3.5	8.655	A
SA	0.00	0.00	512.21	0.00	0.00	0.00	0.0	0.0	0.000	A
A2ON			0.00			191.65				
A227S	299.61	299.61	0.00	299.57	302.48	320.57	1.1	1.4	4.232	A
A2OFF	311.50	311.50	299.57	307.53	310.89	0.00	13.3	16.7	42.756	E

17:30 - 17:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	352.05	352.05	128.79	351.13	355.68	429.28	3.5	3.2	7.701	A
SA	0.00	0.00	479.92	0.00	0.00	0.00	0.0	0.0	0.000	A
A2ON			0.00			181.54				
A227S	247.32	247.32	0.00	247.22	253.57	298.37	1.4	1.1	3.857	A
A2OFF	307.17	307.17	247.22	310.84	314.21	0.00	16.7	11.5	40.187	E

17:45 - 18:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	336.33	336.33	120.25	336.03	343.81	433.82	3.2	2.6	7.339	A
SA	0.00	0.00	456.28	0.00	0.00	0.00	0.0	0.0	0.000	A
A2ON			0.00			182.51				
A227S	262.59	262.59	0.00	262.72	261.98	273.77	1.1	1.0	3.782	A
A2OFF	289.31	289.31	262.72	291.35	295.59	0.00	11.5	8.0	28.209	D

18:00 - 18:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	339.50	339.50	113.78	339.36	343.51	361.30	2.6	2.6	7.030	A
SA	0.00	0.00	453.14	0.00	0.00	0.00	0.0	0.0	0.000	A
A2ON			0.00			175.18				
A227S	202.17	202.17	0.00	202.12	204.42	277.96	1.0	0.8	3.481	A
A2OFF	271.27	271.27	202.12	272.96	281.28	0.00	8.0	3.2	13.827	B

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment
16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	224.56	271.89	0.826	224.60	225.19	0.0	2.3	9.009	A
			2	A227N, A227S	167.31	270.16	0.619	167.63	168.53	0.0	1.2	6.311	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	391.74			391.88	397.21	0.0	1.1	2.308	A
	Exit	1	1		401.31			401.31	407.29	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.00	53.80	0.000	0.00	0.00	0.0	0.0	0.000	A
	Exit	1	1		1.89			1.89	1.91	0.0	0.0	0.000	A
A2ON	Exit	1	1		200.55			200.55	201.43	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	113.50	306.01	0.371	113.53	116.51	0.0	0.5	3.721	A
			2	A227N, SA, A2ON, A227S	138.58	304.51	0.455	138.50	142.72	0.0	0.7	4.123	A
	Exit	1	1		331.78			331.78	333.23	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	197.60	243.95	0.810	197.00	197.17	0.0	4.3	18.255	C
			2	SA, A2ON, A227S	94.18	248.87	0.378	94.26	93.75	0.0	0.6	5.779	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	213.74	272.73	0.784	213.95	216.62	2.3	2.1	8.706	A
			2	A227N, A227S	151.74	274.49	0.553	151.99	153.81	1.2	0.9	5.919	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	365.05			365.49	369.96	1.1	0.7	1.680	A
	Exit	1	1		444.92			444.92	447.22	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.00	64.13	0.000	0.00	0.00	0.0	0.0	0.000	A
	Exit	1	1		0.00			0.00	0.01	0.0	0.0	0.000	A
A2ON	Exit	1	1		193.69			193.69	196.18	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	120.63	315.06	0.383	120.55	120.74	0.5	0.5	3.665	A
			2	A227N, SA, A2ON, A227S	142.95	315.06	0.454	142.82	143.23	0.7	0.6	3.970	A
	Exit	1	1		319.81			319.81	322.10	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	230.31	242.55	0.949	224.06	226.08	4.3	12.6	39.194	E
			2	SA, A2ON, A227S	104.72	247.69	0.423	105.06	105.04	0.6	0.7	6.326	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	207.65	270.10	0.769	207.46	211.82	2.1	2.0	8.351	A
			2	A227N, A227S	158.21	271.67	0.582	158.48	159.87	0.9	1.0	6.049	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	365.53			365.86	371.77	0.7	0.4	1.300	A
	Exit	1	1		460.82			460.82	466.36	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.00	62.71	0.000	0.00	0.00	0.0	0.0	0.000	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A
A2ON	Exit	1	1		191.65			191.65	194.14	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	135.72	311.89	0.435	135.74	137.68	0.5	0.6	3.991	A
			2	A227N, SA, A2ON, A227S	163.89	310.77	0.527	163.83	164.81	0.6	0.8	4.434	A
	Exit	1	1		320.57			320.57	324.56	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	222.41	230.63	0.964	218.33	221.05	12.6	16.1	57.501	F
			2	SA, A2ON, A227S	89.09	232.94	0.382	89.20	89.84	0.7	0.6	6.236	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	206.68	278.94	0.741	206.23	207.88	2.0	1.9	7.746	A
			2	A227N, A227S	145.23	276.92	0.524	144.90	147.79	1.0	1.0	5.559	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	352.05			351.91	355.45	0.4	0.4	0.862	A
	Exit	1	1		429.28			429.28	437.06	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.00	76.87	0.000	0.00	0.00	0.0	0.0	0.000	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A
A2ON	Exit	1	1		181.54			181.54	184.46	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	111.96	309.13	0.362	111.93	114.57	0.6	0.5	3.683	A
			2	A227N, SA, A2ON, A227S	135.36	308.97	0.438	135.28	139.00	0.8	0.6	4.001	A
	Exit	1	1		298.37			298.37	301.94	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	221.78	249.32	0.890	225.40	228.47	16.1	11.0	53.544	F
			2	SA, A2ON, A227S	85.39	251.89	0.339	85.45	85.74	0.6	0.5	5.703	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	200.28	277.86	0.721	200.17	203.83	1.9	1.6	7.484	A
			2	A227N, A227S	135.97	274.25	0.496	135.87	139.98	1.0	0.8	5.294	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	336.33			336.25	343.39	0.4	0.2	0.741	A
			1		433.82			433.82	435.86	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.00	84.21	0.000	0.00	0.00	0.0	0.0	0.000	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A
A2ON	Exit	1	1		182.51			182.51	185.49	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	118.82	315.06	0.377	118.94	118.64	0.5	0.4	3.615	A
			2	A227N, SA, A2ON, A227S	143.77	315.06	0.456	143.78	143.34	0.6	0.6	3.921	A
	Exit	1	1		273.77			273.77	280.03	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	213.82	245.40	0.871	216.03	218.85	11.0	7.6	36.342	E
			2	SA, A2ON, A227S	75.49	244.32	0.309	75.32	76.73	0.5	0.5	5.301	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	201.74	282.10	0.715	201.65	204.37	1.6	1.6	7.209	A
			2	A227N, A227S	137.64	281.90	0.488	137.71	139.14	0.8	0.7	5.105	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	339.50			339.38	343.47	0.2	0.3	0.678	A
			1		361.30			361.30	372.17	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	0.00	87.56	0.000	0.00	0.00	0.0	0.0	0.000	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A
A2ON	Exit	1	1		175.18			175.18	176.25	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	90.15	312.37	0.289	90.20	91.27	0.4	0.3	3.315	A
			2	A227N, SA, A2ON, A227S	112.02	313.03	0.358	111.92	113.15	0.6	0.5	3.615	A
	Exit	1	1		277.96			277.96	280.80	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	193.88	264.40	0.733	195.65	204.10	7.6	2.8	17.425	C
			2	SA, A2ON, A227S	77.40	269.82	0.287	77.31	77.18	0.5	0.4	4.763	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

2028 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A227 / A2 EB Slips / Site Access RB	Standard Roundabout		A227N, SA, A2ON, A227S, A2OFF	20.41	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D12	2028 Do Minimum	PM	DIRECT	16:45	18:15	90	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A227N		DIRECT	✓	100.000
SA		DIRECT	✓	100.000
A2ON				
A227S		DIRECT	✓	100.000
A2OFF		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

16:45 - 17:00

		To				
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	153.00	238.00	0.00
	SA	7.00	0.00	11.00	13.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	202.00	12.00	47.00	0.00	0.00
	A2OFF	193.00	19.00	0.00	90.00	0.00

Demand (Veh/TS)

17:00 - 17:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	151.00	216.00	0.00
	SA	7.00	0.00	12.00	11.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	219.00	12.00	43.00	0.00	0.00
	A2OFF	226.00	18.00	0.00	103.00	0.00

Demand (Veh/TS)

17:15 - 17:30

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	133.00	234.00	0.00
	SA	7.00	0.00	12.00	11.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	239.00	12.00	56.00	0.00	0.00
	A2OFF	218.00	18.00	1.00	87.00	0.00

Demand (Veh/TS)

17:30 - 17:45

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	138.00	215.00	0.00
	SA	7.00	0.00	11.00	11.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	201.00	11.00	44.00	0.00	0.00
	A2OFF	217.00	17.00	1.00	83.00	0.00

Demand (Veh/TS)

17:45 - 18:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	137.00	199.00	0.00
	SA	7.00	0.00	11.00	10.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	214.00	11.00	44.00	1.00	0.00
	A2OFF	208.00	17.00	2.00	72.00	0.00

Demand (Veh/TS)

18:00 - 18:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	139.00	202.00	0.00
	SA	6.00	0.00	10.00	9.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	164.00	10.00	36.00	0.00	0.00
	A2OFF	192.00	15.00	0.00	76.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

16:45 - 17:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	2	0
	SA	0	0	1	1	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	1	4	0	0
	A2OFF	2	1	0	0	0

Heavy Vehicle Percentages

17:00 - 17:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	0	0
	SA	0	0	1	1	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	0	1	0	0	0
	A2OFF	2	1	0	0	0

Heavy Vehicle Percentages

17:15 - 17:30

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	2	1	0
	SA	0	0	1	1	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	1	2	0	0
	A2OFF	1	1	0	0	0

Heavy Vehicle Percentages

17:30 - 17:45

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	0	1	0
	SA	0	0	1	1	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	1	2	0	0
	A2OFF	1	1	0	0	0

Heavy Vehicle Percentages

17:45 - 18:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	3	0
	SA	0	0	1	1	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	0	1	0	0	0
	A2OFF	1	1	50	0	0

Heavy Vehicle Percentages

18:00 - 18:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	1	0
	SA	0	0	1	1	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	1	0	0	0
	A2OFF	2	1	0	0	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
A227N	11.94	5.6	B	360.07	2160.39
SA	38.82	1.4	E	28.52	171.11
A2ON					
A227S	4.36	1.6	A	262.91	1577.43
A2OFF	41.95	15.4	E	312.91	1877.47

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	394.14	394.14	168.39	393.33	392.77	402.18	0.0	5.5	11.944	B
SA	30.42	30.42	530.03	31.21	30.14	31.69	0.0	1.4	38.823	E
A2ON			0.00			212.41				
A227S	261.28	261.28	7.16	261.48	267.23	341.67	0.0	1.2	4.045	A
A2OFF	304.52	304.52	268.64	301.93	301.04	0.00	0.0	5.8	15.061	C

17:00 - 17:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	365.80	365.80	177.31	363.57	370.03	450.48	5.5	3.9	9.778	A
SA	28.56	28.56	510.70	29.96	31.13	30.18	1.4	0.9	37.335	E
A2ON			0.00			205.91				
A227S	275.54	275.54	6.94	275.68	274.21	327.81	1.2	1.3	4.053	A
A2OFF	349.99	349.99	282.62	345.16	344.39	0.00	5.8	14.6	30.778	D

17:15 - 17:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	363.79	363.79	173.60	363.46	371.72	460.12	3.9	4.2	9.557	A
SA	29.98	29.98	506.69	30.70	29.85	30.37	0.9	0.9	32.189	D
A2ON			0.00			200.78				
A227S	305.15	305.15	7.51	304.72	307.80	329.10	1.3	1.6	4.364	A
A2OFF	321.33	321.33	312.22	321.50	323.45	0.00	14.6	15.5	41.952	E

17:30 - 17:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	356.39	356.39	157.77	356.25	358.71	424.98	4.2	3.1	8.258	A
SA	28.25	28.25	485.49	28.51	29.16	28.53	0.9	0.6	23.292	C
A2ON			0.00			195.97				
A227S	257.82	257.82	7.03	257.76	260.79	310.99	1.6	1.2	3.987	A
A2OFF	316.78	316.78	264.79	317.95	323.85	0.00	15.5	12.4	37.940	E

17:45 - 18:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	338.95	338.95	146.80	338.85	345.33	429.33	3.1	2.9	7.901	A
SA	28.69	28.69	458.65	28.64	28.75	27.02	0.6	0.5	18.044	C
A2ON			0.00			195.74				
A227S	268.86	268.86	7.09	268.53	270.56	284.47	1.2	1.2	4.000	A
A2OFF	298.01	298.01	275.61	300.53	307.15	0.00	12.4	9.1	31.141	D

18:00 - 18:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	341.14	341.14	137.12	341.06	344.77	364.45	2.9	2.8	7.528	A
SA	25.32	25.32	454.73	24.99	25.25	23.45	0.5	0.5	16.242	C
A2ON			0.00			186.99				
A227S	208.60	208.60	5.37	208.99	211.27	287.36	1.2	0.8	3.623	A
A2OFF	286.71	286.71	214.36	287.26	295.12	0.00	9.1	3.8	15.468	C

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment
16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	223.93	264.17	0.848	223.36	223.62	0.0	2.6	9.754	A
			2	A227N, A227S	169.82	262.49	0.647	169.95	169.15	0.0	1.3	6.888	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	394.14			393.75	396.79	0.0	1.6	3.406	A
	Exit	1	1		402.18			402.18	405.23	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	30.42	54.41	0.559	31.21	30.14	0.0	1.4	38.823	E
	Exit	1	1		31.69			31.69	31.61	0.0	0.0	0.000	A
A2ON	Exit	1	1		212.41			212.41	211.78	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	114.78	305.86	0.375	114.53	116.72	0.0	0.5	3.768	A
			2	A227N, SA, A2ON, A227S	146.58	304.12	0.482	146.91	150.52	0.0	0.6	4.262	A
	Exit	1	1		341.67			341.67	342.56	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	195.76	239.23	0.818	193.67	192.32	0.0	5.0	19.883	C
			2	SA, A2ON, A227S	108.75	242.82	0.448	108.26	108.72	0.0	0.8	6.514	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	211.50	263.35	0.803	210.50	215.04	2.6	2.2	9.243	A
			2	A227N, A227S	153.94	265.46	0.580	153.07	154.99	1.3	1.2	6.256	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	365.80			365.43	369.41	1.6	0.6	1.802	A
	Exit	1	1		450.48			450.48	449.99	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	28.56	64.45	0.442	29.96	31.13	1.4	0.9	37.335	E
	Exit	1	1		30.18			30.18	30.93	0.0	0.0	0.000	A
A2ON	Exit	1	1		205.91			205.91	208.52	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	122.39	312.77	0.391	122.61	122.83	0.5	0.5	3.847	A
			2	A227N, SA, A2ON, A227S	153.15	312.50	0.490	153.07	151.38	0.6	0.8	4.220	A
	Exit	1	1		327.81			327.81	330.33	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	228.41	235.40	0.970	223.80	223.49	5.0	13.6	43.171	E
			2	SA, A2ON, A227S	121.58	240.11	0.506	121.36	120.90	0.8	1.0	7.477	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	207.50	261.94	0.792	207.07	210.94	2.2	2.2	8.927	A
			2	A227N, A227S	156.88	263.20	0.596	156.39	160.78	1.2	1.4	6.587	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	363.79			364.38	372.02	0.6	0.6	1.645	A
	Exit	1	1		460.12			460.12	464.15	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	29.98	64.32	0.466	30.70	29.85	0.9	0.9	32.189	D
	Exit	1	1		30.37			30.37	30.33	0.0	0.0	0.000	A
A2ON	Exit	1	1		200.78			200.78	205.21	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	137.12	309.84	0.443	137.26	137.90	0.5	0.6	4.025	A
			2	A227N, SA, A2ON, A227S	168.04	308.34	0.545	167.45	169.90	0.8	1.0	4.640	A
	Exit	1	1		329.10			329.10	333.13	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	214.91	225.95	0.952	214.99	218.13	13.6	14.5	58.690	F
			2	SA, A2ON, A227S	106.42	227.95	0.467	106.51	105.33	1.0	1.0	7.429	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	205.99	270.31	0.762	205.84	207.68	2.2	1.8	8.215	A
			2	A227N, A227S	150.64	269.04	0.560	150.40	151.03	1.4	0.9	5.892	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	356.39			356.63	357.75	0.6	0.4	1.019	A
	Exit	1	1		424.98			424.98	433.93	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	28.25	74.16	0.381	28.51	29.16	0.9	0.6	23.292	C
	Exit	1	1		28.53			28.53	28.51	0.0	0.0	0.000	A
A2ON	Exit	1	1		195.97			195.97	196.53	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	113.45	306.28	0.370	113.47	114.84	0.6	0.5	3.758	A
			2	A227N, SA, A2ON, A227S	144.35	307.42	0.470	144.29	145.95	1.0	0.7	4.167	A
	Exit	1	1		310.99			310.99	313.55	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	215.47	242.81	0.888	216.29	222.26	14.5	11.7	52.661	F
			2	SA, A2ON, A227S	101.26	245.06	0.413	101.65	101.60	1.0	0.7	6.341	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	200.72	270.08	0.743	200.80	203.80	1.8	1.7	7.944	A
			2	A227N, A227S	137.91	266.51	0.517	138.05	141.53	0.9	0.8	5.685	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	338.95			338.63	345.20	0.4	0.4	0.879	A
			1		429.33			429.33	436.31	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	28.69	82.65	0.347	28.64	28.75	0.6	0.5	18.044	C
	Exit	1	1		27.02			27.02	27.55	0.0	0.0	0.000	A
A2ON	Exit	1	1		195.74			195.74	197.91	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	119.08	312.72	0.381	118.71	120.32	0.5	0.5	3.772	A
			2	A227N, SA, A2ON, A227S	149.78	312.64	0.479	149.82	150.25	0.7	0.6	4.183	A
	Exit	1	1		284.47			284.47	290.02	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	207.77	240.85	0.863	210.52	214.89	11.7	8.4	42.024	E
			2	SA, A2ON, A227S	90.25	240.20	0.376	90.02	92.26	0.7	0.7	6.077	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	201.97	274.97	0.734	202.31	203.22	1.7	1.6	7.699	A
			2	A227N, A227S	138.61	275.12	0.504	138.76	141.55	0.8	0.9	5.327	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	341.14			340.58	344.66	0.4	0.3	0.809	A
			1		364.45			364.45	373.94	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	25.32	85.99	0.294	24.99	25.25	0.5	0.5	16.242	C
	Exit	1	1		23.45			23.45	25.41	0.0	0.0	0.000	A
A2ON	Exit	1	1		186.99			186.99	187.28	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	91.67	309.87	0.296	91.90	91.92	0.5	0.3	3.463	A
			2	A227N, SA, A2ON, A227S	116.93	311.40	0.375	117.09	119.35	0.6	0.5	3.746	A
	Exit	1	1		287.36			287.36	289.78	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	195.02	260.47	0.749	195.46	202.96	8.4	3.3	20.299	C
			2	SA, A2ON, A227S	91.69	264.46	0.347	91.75	92.17	0.7	0.5	5.304	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

2028 Do Minimum Residual, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A227 / A2 EB Slips / Site Access RB	Standard Roundabout		A227N, SA, A2ON, A227S, A2OFF	20.44	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D14	2028 Do Minimum Residual	PM	DIRECT	16:45	18:15	90	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A227N		DIRECT	✓	100.000
SA		DIRECT	✓	100.000
A2ON				
A227S		DIRECT	✓	100.000
A2OFF		DIRECT	✓	100.000

Origin-Destination Data

Demand (Veh/TS)

16:45 - 17:00

		To				
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	153.00	237.00	0.00
	SA	7.00	0.00	13.00	10.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	202.00	11.00	47.00	0.00	0.00
	A2OFF	193.00	18.00	0.00	90.00	0.00

Demand (Veh/TS)

17:00 - 17:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	151.00	216.00	0.00
	SA	7.00	0.00	11.00	10.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	219.00	11.00	43.00	0.00	0.00
	A2OFF	226.00	16.00	0.00	103.00	0.00

Demand (Veh/TS)

17:15 - 17:30

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	133.00	234.00	0.00
	SA	7.00	0.00	11.00	10.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	239.00	11.00	56.00	0.00	0.00
	A2OFF	218.00	16.00	1.00	87.00	0.00

Demand (Veh/TS)

17:30 - 17:45

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	138.00	215.00	0.00
	SA	7.00	0.00	10.00	9.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	201.00	10.00	44.00	0.00	0.00
	A2OFF	217.00	15.00	1.00	83.00	0.00

Demand (Veh/TS)

17:45 - 18:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	137.00	199.00	0.00
	SA	7.00	0.00	10.00	9.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	214.00	10.00	44.00	1.00	0.00
	A2OFF	208.00	14.00	2.00	72.00	0.00

Demand (Veh/TS)

18:00 - 18:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0.00	0.00	139.00	202.00	0.00
	SA	6.00	0.00	9.00	9.00	0.00
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	164.00	9.00	36.00	0.00	0.00
	A2OFF	192.00	13.00	0.00	76.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

16:45 - 17:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	2	0
	SA	0	0	1	1	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	3	1	4	0	0
	A2OFF	2	1	0	0	0

Heavy Vehicle Percentages

17:00 - 17:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	0	0
	SA	0	0	2	1	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	0	1	0	0	0
	A2OFF	2	1	0	0	0

Heavy Vehicle Percentages

17:15 - 17:30

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	2	1	0
	SA	0	0	2	1	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	1	2	0	0
	A2OFF	1	1	0	0	0

Heavy Vehicle Percentages

17:30 - 17:45

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	0	1	0
	SA	0	0	2	1	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	2	1	2	0	0
	A2OFF	1	1	0	0	0

Heavy Vehicle Percentages

17:45 - 18:00

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	3	0
	SA	0	0	2	1	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	0	1	0	0	0
	A2OFF	1	1	50	0	0

Heavy Vehicle Percentages

18:00 - 18:15

	To					
		A227N	SA	A2ON	A227S	A2OFF
From	A227N	0	0	1	1	0
	SA	0	0	2	1	0
	A2ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A227S	1	1	0	0	0
	A2OFF	2	1	0	0	0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/TS)	Total Junction Arrivals (Veh)
A227N	11.37	5.1	B	358.73	2152.37
SA	40.64	1.6	E	27.04	162.26
A2ON					
A227S	4.34	1.5	A	261.74	1570.44
A2OFF	42.78	17.2	E	310.09	1860.52

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	388.81	388.81	166.44	389.03	391.75	401.18	0.0	5.1	11.366	B
SA	29.94	29.94	526.59	29.90	29.35	28.88	0.0	1.6	40.639	E
A2ON			0.00			213.02				
A227S	260.07	260.07	7.03	260.01	267.62	336.44	0.0	1.2	4.076	A
A2OFF	301.03	301.03	267.03	300.58	300.15	0.00	0.0	5.1	14.030	B

17:00 - 17:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	367.10	367.10	173.32	367.47	369.57	445.49	5.1	4.0	10.333	B
SA	27.96	27.96	513.72	27.96	28.89	27.07	1.6	1.0	35.560	E
A2ON			0.00			205.71				
A227S	272.30	272.30	6.82	272.32	272.35	329.14	1.2	1.2	3.950	A
A2OFF	344.65	344.65	279.14	339.66	340.28	0.00	5.1	13.4	28.404	D

17:15 - 17:30

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	366.67	366.67	171.43	367.37	373.23	460.35	4.0	3.8	9.707	A
SA	28.33	28.33	511.57	28.34	28.44	27.23	1.0	1.0	31.543	D
A2ON			0.00			201.80				
A227S	306.09	306.09	7.07	306.21	309.47	331.04	1.2	1.4	4.343	A
A2OFF	323.12	323.12	313.28	318.48	320.84	0.00	13.4	17.2	42.780	E

17:30 - 17:45

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	352.86	352.86	153.97	352.63	355.54	428.57	3.8	3.2	8.186	A
SA	25.92	25.92	481.39	25.95	26.73	25.21	1.0	0.6	22.047	C
A2ON			0.00			193.35				
A227S	255.78	255.78	7.07	255.73	260.20	306.92	1.4	1.2	3.941	A
A2OFF	315.63	315.63	262.80	319.73	323.85	0.00	17.2	11.7	39.089	E

17:45 - 18:00

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	336.26	336.26	143.50	336.54	343.41	432.11	3.2	2.9	7.888	A
SA	26.52	26.52	455.75	26.64	26.97	24.29	0.6	0.5	17.543	C
A2ON			0.00			193.40				
A227S	269.80	269.80	7.16	269.60	269.77	281.83	1.2	1.2	3.939	A
A2OFF	297.33	297.33	276.76	298.85	302.73	0.00	11.7	7.7	26.238	D

18:00 - 18:15

Arm	Total Demand (Veh/TS)	Junction Arrivals (Veh)	Circulating flow (Veh/TS)	Throughput (Veh/TS)	Average throughput (PCU/TS)	Throughput (exit side) (Veh/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	340.72	340.72	133.06	340.41	344.19	359.72	2.9	2.9	7.375	A
SA	23.57	23.57	451.31	23.57	24.23	22.16	0.5	0.4	15.262	C
A2ON			0.00			182.51				
A227S	206.42	206.42	5.94	206.51	210.75	286.44	1.2	0.7	3.581	A
A2OFF	278.87	278.87	212.45	280.35	289.01	0.00	7.7	3.4	14.099	B

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment
16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	221.88	264.52	0.839	221.77	223.22	0.0	2.4	9.692	A
			2	A227N, A227S	167.39	262.84	0.637	167.26	168.52	0.0	1.2	6.779	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	388.81			389.27	395.46	0.0	1.5	2.908	A
	Exit	1	1		401.18			401.18	406.56	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	29.94	55.57	0.538	29.90	29.35	0.0	1.6	40.639	E
	Exit	1	1		28.88			28.88	29.11	0.0	0.0	0.000	A
A2ON	Exit	1	1		213.02			213.02	214.06	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	115.02	304.07	0.378	115.03	118.07	0.0	0.5	3.764	A
			2	A227N, SA, A2ON, A227S	145.05	302.80	0.479	144.97	149.55	0.0	0.7	4.322	A
	Exit	1	1		336.44			336.44	339.14	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	192.88	238.75	0.808	192.46	192.26	0.0	4.3	18.151	C
			2	SA, A2ON, A227S	108.14	243.08	0.445	108.12	107.89	0.0	0.9	6.715	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	213.27	264.68	0.806	213.22	214.78	2.4	2.2	9.376	A
			2	A227N, A227S	154.32	266.67	0.579	154.25	154.79	1.2	1.0	6.325	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	367.10			367.59	369.12	1.5	0.7	2.248	A
	Exit	1	1		445.49			445.49	446.36	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	27.96	63.09	0.443	27.96	28.89	1.6	1.0	35.560	E
	Exit	1	1		27.07			27.07	27.12	0.0	0.0	0.000	A
A2ON	Exit	1	1		205.71			205.71	207.40	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	121.70	312.80	0.389	121.70	122.06	0.5	0.5	3.715	A
			2	A227N, SA, A2ON, A227S	150.59	312.48	0.482	150.62	150.29	0.7	0.7	4.142	A
	Exit	1	1		329.14			329.14	330.20	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	225.98	237.00	0.953	220.78	221.31	4.3	12.5	39.513	E
			2	SA, A2ON, A227S	118.67	241.50	0.491	118.89	118.97	0.9	0.9	7.364	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	207.84	262.41	0.792	208.10	211.79	2.2	2.0	8.929	A
			2	A227N, A227S	159.34	264.28	0.603	159.27	161.43	1.0	1.2	6.539	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	366.67			367.17	373.20	0.7	0.7	1.818	A
	Exit	1	1		460.35			460.35	464.43	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	28.33	62.27	0.455	28.34	28.44	1.0	1.0	31.543	D
	Exit	1	1		27.23			27.23	27.25	0.0	0.0	0.000	A
A2ON	Exit	1	1		201.80			201.80	205.73	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	137.28	309.54	0.444	137.29	138.76	0.5	0.6	4.025	A
			2	A227N, SA, A2ON, A227S	168.81	308.88	0.547	168.92	170.71	0.7	0.8	4.602	A
	Exit	1	1		331.04			331.04	334.57	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	218.99	225.53	0.971	214.09	216.27	12.5	16.4	59.708	F
			2	SA, A2ON, A227S	104.13	227.50	0.458	104.39	104.57	0.9	0.8	7.397	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	205.13	271.38	0.756	205.04	206.45	2.0	1.9	8.183	A
			2	A227N, A227S	147.71	269.64	0.548	147.59	149.09	1.2	1.0	5.805	A
		2	1	(A227N, SA, A2ON, A227S, A2OFF)	352.86			352.84	355.16	0.7	0.4	1.001	A
	Exit	1	1		428.57			428.57	436.30	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	25.92	75.46	0.344	25.95	26.73	1.0	0.6	22.047	C
	Exit	1	1		25.21			25.21	25.24	0.0	0.0	0.000	A
A2ON	Exit	1	1		193.35			193.35	194.91	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	113.34	306.71	0.370	113.32	115.08	0.6	0.5	3.706	A
			2	A227N, SA, A2ON, A227S	142.44	307.08	0.464	142.41	145.12	0.8	0.7	4.127	A
	Exit	1	1		306.92			306.92	309.88	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	215.59	243.75	0.885	219.62	223.71	16.4	11.0	54.236	F
			2	SA, A2ON, A227S	100.04	245.76	0.407	100.11	100.15	0.8	0.7	6.324	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	199.95	271.05	0.738	199.95	202.50	1.9	1.8	7.931	A
			2	A227N, A227S	136.46	267.35	0.510	136.59	140.91	1.0	0.8	5.539	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	336.26			336.41	343.17	0.4	0.4	0.930	A
			1		432.11			432.11	435.22	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	26.52	83.49	0.318	26.64	26.97	0.6	0.5	17.543	C
	Exit	1	1		24.29			24.29	24.46	0.0	0.0	0.000	A
A2ON	Exit	1	1		193.40			193.40	195.64	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	120.81	312.69	0.386	120.68	120.30	0.5	0.5	3.716	A
			2	A227N, SA, A2ON, A227S	148.99	312.50	0.477	148.92	149.46	0.7	0.7	4.118	A
	Exit	1	1		281.83			281.83	287.56	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	208.74	240.38	0.869	210.35	213.54	11.0	7.1	34.835	D
			2	SA, A2ON, A227S	88.59	239.63	0.370	88.50	89.18	0.7	0.6	5.975	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (Veh/TS)	Capacity (Veh/TS)	RFC	Throughput (Veh/TS)	Average throughput (PCU/TS)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A227N	Entry	1	1	SA, A2ON, A227S	201.97	276.14	0.731	201.90	204.09	1.8	1.7	7.569	A
			2	A227N, A227S	138.53	276.15	0.502	138.51	140.10	0.8	0.9	5.300	A
	Exit	1	1	(A227N, SA, A2ON, A227S, A2OFF)	340.72			340.50	344.15	0.4	0.3	0.737	A
			1		359.72			359.72	371.36	0.0	0.0	0.000	A
SA	Entry	1	1	A227N, SA, A2ON, A227S	23.57	87.32	0.270	23.57	24.23	0.5	0.4	15.262	C
	Exit	1	1		22.16			22.16	22.49	0.0	0.0	0.000	A
A2ON	Exit	1	1		182.51			182.51	185.30	0.0	0.0	0.000	A
A227S	Entry	1	1	A227N	89.19	310.06	0.288	89.34	91.31	0.5	0.3	3.382	A
			2	A227N, SA, A2ON, A227S	117.23	311.03	0.377	117.17	119.44	0.7	0.5	3.732	A
	Exit	1	1		286.44			286.44	289.02	0.0	0.0	0.000	A
A2OFF	Entry	1	1	A227N	190.13	260.63	0.729	191.70	199.72	7.1	2.9	18.244	C
			2	SA, A2ON, A227S	88.74	265.53	0.334	88.63	89.29	0.6	0.5	5.219	A
	Exit	1	1		0.00			0.00	0.00	0.0	0.0	0.000	A