

SLR Consulting Limited

Redrow Homes

Great Milton Park

SLR Project No.: 407.065092.00001

22 April 2026

Revision: V2

RE: TECHNICAL NOTE 2 – DEVELOPMENT VEHICULAR ACCESS

1.0 Introduction

- 1.1 SLR is retained by Redrow Homes Ltd to provide transport and highways advice in relation to the main vehicular site access to the Llanwern Village development (Great Milton Park) from the A48 South Distributor Road (SDR).
- 1.2 The site benefits from outline planning permission (Ref: 06/0845) for the development of up to 1,100 residential dwellings, together with the provision of a village centre and a primary school. The application was supported by a Transport Assessment (TA) prepared by Halcrow dated in May 2006. The planning permission was granted in October 2009.
- 1.3 The original Halcrow TA sets out the proposed improvements to the local highway network, predominantly the main access to the site via Cot Hill and trigger points, thereafter, based on a specific density / unit number on site, whereby a signal-controlled junction with pedestrian crossings may be required.
- 1.4 Since the outline planning permission was approved, there have been significant changes to the surrounding highway network. The A4810 Queen's Way link road, connecting to the A48 to Magor, has been constructed and is now fully operational. Junction 23A of the M4 has also been delivered and is operational.
- 1.5 In addition, travel behaviour and movement patterns have changed in the post-Covid period, including shifts in working practices and trip generation characteristics compared with those assumed at the time the outline permission was determined.
- 1.6 Technical Notes (Ref: 184108/N01 and 184108A/N01) were prepared by Vectos (now SLR) in July 2018 and March 2023, respectively. Copies of both notes are included in **Appendix A** for reference. These notes assessed whether the newly constructed road link had reduced traffic demand on the northern section of the A48 near the site. The analysis concluded that, due to this observed traffic relief, the previously approved signal-controlled junction at Cot

Hill could be simplified thereby retaining the existing left-in/left-out (LILO) arrangement with the A48.

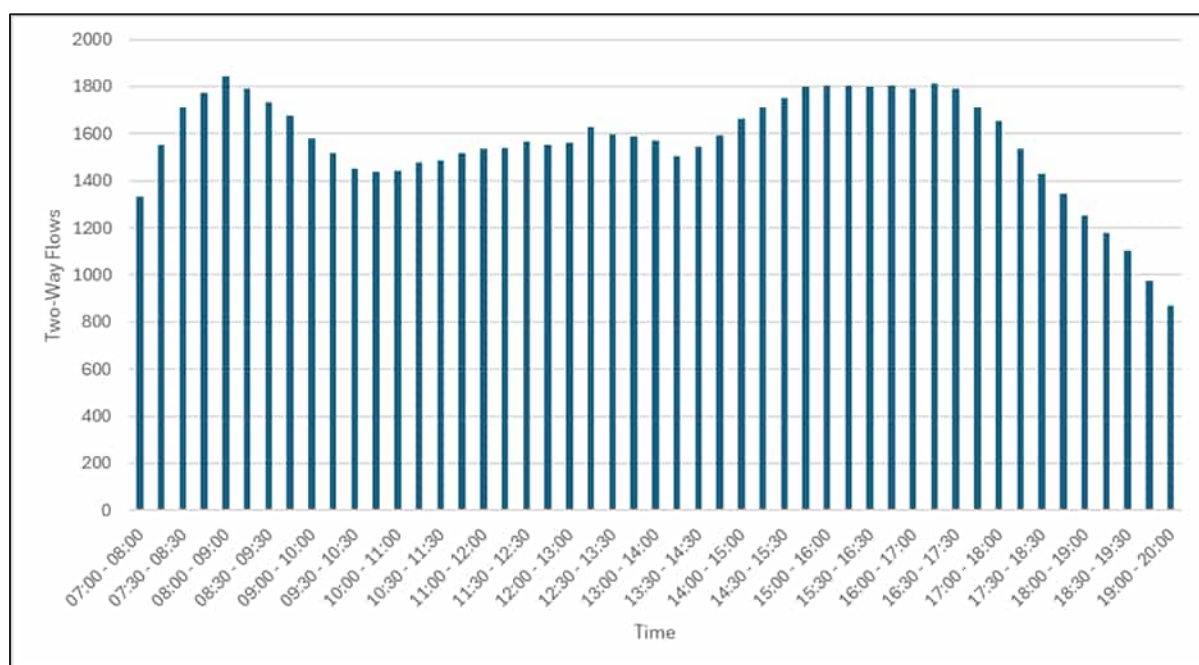
- 1.7 Capita, acting on behalf of Newport City Council (NCC), issued comments in August 2018 in response to the 2018 Technical Note; these are provided in **Appendix B**. More recently, an email summarising NCC's comments on the 2023 Technical Note was received in January 2026 and is included in **Appendix C**.
- 1.8 This Technical Note revisits the conclusions of the 2018 and 2023 assessments, taking into account updated traffic flow data and the feedback provided by Capita (2018) and NCC (2026) to determine whether the existing left-in/left-out (LILO) junction arrangement remains appropriate for the development.
- 1.9 It is also worth noting that as of 2 April 2026 the final Reserve Matters application has been granted for this site with the total number of residential units being 838. This means that the quantum of development actually tested within this analysis is some 25% higher than will actually be delivered on this site.
- 1.10 This report is structured as follows:
 - **Section 2 – Traffic Surveys** – provides a description of the 2026 surveys, as requested by NCC, and a comparison with the previous traffic data and original forecasts
 - **Section 3 – Highway Network Analysis** – describes the updated modelling of the current LILO arrangement and the roundabouts to the north and south.
 - **Section 4 – Highway Safety & Design – A48 / Cot Hill** – reviews the collision statistics and design standards of the existing LILO arrangement.
 - **Section 5 – Active Travel Audit** – Reviews the existing active travel along the A48, as requested by NCC.
 - **Section 6 – Summary and Conclusion**

2.0 Traffic Surveys

- 2.1 To inform this assessment, further traffic surveys were undertaken, including Manual Classified Counts (MCC), Automatic Traffic Counts (ATC), and queue length surveys.
- 2.2 The study area for this assessment comprises the following junctions:
 - A48 / Cot Hill LILO Junction
 - A48 / Beatty Road Roundabout
 - A48 / Ringland Circular/ Hartridge Farm Road Roundabout
- 2.3 Copies of the traffic survey results are included in **Appendix D**.

- 2.4 The MCC and queue length surveys were conducted on Tuesday 3rd February 2026, during the AM peak period (07:00–10:00) and PM peak period (15:00–19:00).
- 2.5 The link count surveys undertaken to confirm the peak periods, were undertaken over a seven-day period from 3rd February (Tue) to 9th February 2026 (Mon) on the A48.
- 2.6 **Figure 2.1** illustrates the average weekday two-way traffic flows by rolling hour on the A48. The data confirms that the peak periods fall within the MCC survey windows, and specifically between 08:00–09:00 in the AM and 16:15–17:15 in the PM.

Figure 2.1: Average Weekday Traffic Flow (Two Way) – A48



- 2.7 The Halcrow TA of 2006 and the traffic modelling therein used to underpin the planning permission was based on traffic flows derived from the Newport SATURN model (used for the EEA transport strategy). At the time, the base flows abstracted for the model were for a baseline year of 2011 and were derived from traffic data preceding 2011. These baseline 2011 flows then applied growth to a 2026 design year using NRTF forecasts of 24% for both AM and PM peaks.
- 2.8 **Table 2.1** compares traffic flows from the Halcrow Traffic Assessment (TA) with observed data from 2026 and historic counts from 2023 and 2018 across the three study junctions.
- 2.9 For reference, historic traffic surveys were undertaken on 12 July 2018 (Thursday) and 14 March 2023 (Tuesday) during the AM (07:00–10:00) and PM (15:30–18:30) peak periods at the same junctions.
- 2.10 The peak hours identified from the 2026 observed data correspond with those recorded in the ATC surveys, namely 08:00–09:00 in the AM peak and 16:15–17:15 in the PM peak.

Table 2.1: Traffic Flow Comparison – PCUs

	A48/ Cot Hill Junction		A48/ Beatty Roundabout		A48/ Beatty Roundabout	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
2011 Halcrow TA (no development)	1823	1721	1887	1911	2559	2504
2026 Halcrow TA (no development)	2192	2092	2343	2366	3172	3111
2018 Observed	1702	1784	1845	1915	2491	2216
2023 Observed	1710	1642	1805	1734	2438	1969
2026 Observed	2064	2006	2100	2104	2937	2359
% Change (2026 Halcrow TA to 2026 Observed)	- 6%	- 4%	- 10%	- 11%	- 7%	- 24%

- 2.11 As shown in **Table 2.1**, the 2026 forecasts presented in the Halcrow TA are consistently higher than the observed 2026 survey data across both peak periods.
- 2.12 It should also be noted that, at the time of the 2026 surveys, 357 units (32.5%) of the 1,100 consented residential units were occupied.
- 2.13 It can therefore be concluded that the level of traffic growth forecast within the Halcrow assessment for the year 2026 has not materialised and hence the previous forecasts were hugely pessimistic. Observed traffic flows remain lower than those forecast, notwithstanding that 357 units of the consented development were already occupied at the time of the surveys and hence would have contributed to traffic observed during the surveys.
- 2.14 In light of this, the following section evaluates the hypothesis of whether it is possible to retain access to the site from the A48 / Cot Hill as a LILO arrangement. It also considers the knock-on effects of maintaining the LILO arrangement and subsequent U-turning movements (i.e. the right turners wishing to enter and leave the site) from the existing roundabout junctions immediately to the north and south.

3.0 Highway Network Analysis

- 3.1 To evaluate the effect of the development on the existing LILO junction arrangement with the A48 and the roundabout junctions north and south of the Cot Hill junction, the traffic forecasts from the development have been abstracted from the Halcrow TA (dated 2006).
- 3.2 Despite a change in contemporary transport policy between 2006-2026, the original trip generations and traffic forecasts have been retained for robustness; however, it is highly likely, that given the focus on sustainable transport, active travel and general trends in mobility post-covid, that the levels of traffic arising from the development may be significantly lower than the previously forecast.

- 3.3 The original trip distribution at the A48 / Cot Hill junction within the Halcrow TA which assumed an all-movement signal-controlled junction, has been revised to account for the development traffic using the existing LILO arrangement. As such, the right turning movements in/out of the site have been redistributed to the roundabout junctions to the north and south respectively.
- 3.4 As previously mentioned, 357 units were occupied out of the 1,100 units at the time of the surveys. Therefore, the development forecasts within the Halcrow TA have been factored at 67.5%.
- 3.5 As highlighted by Capita (2018) in their comments, "There is a minor inconsistency within the capacity analysis flows, as the 'Halcrow TA AM + Halcrow Development Trips' scenario should include the 10 PCUs in the Halcrow Base undertaking the SDR to SDR South 'U' turning movement."
- 3.6 Following a review of the Halcrow TA, it was identified that the discrepancy relates to the traffic distribution, with the total arrivals in the PM peak being understated by 10 PCUs, rather than in the AM peak as referenced by Capita.
- 3.7 Accordingly, the Halcrow trip distribution has been amended to incorporate the additional 10 PCUs within the PM peak arrivals. The updated development trip distributions for both the AM and PM peak periods are provided in **Appendix E**.
- 3.8 The junction analysis have been assessed under the following scenarios:
- 2026 Halcrow TA + Development
 - 2026 SLR Survey
 - 2026 SLR Survey + Development
 - 2036 Forecast
 - 2036 Forecast + Development
- 3.9 For the future year assessment, 2036 has been adopted as the forecast year i.e. 10 years beyond 2026. TEMPRO data has been used to derive growth factors, which have been applied to the 2026 observed traffic flows to estimate background traffic volumes for 2036. The growth factor from 2026 to 2036 is +12% for MSOA Newport 010 for A-roads.
- 3.10 As shown in **Table 2.2**, the 2026 observed flows are considerably lower than the 2026 forecasted flows by Halcrow, which were based on TEMPRO growth factors. It follows that based on past trends and contemporary transport policy seeking to minimise car use during peak times that it is likely that the 2036 forecasts from TEMPRO flows will not materialise and hence this assessment represents a worst-case scenario.

A48 / Cot Hill LILO Junction

- 3.11 The A48 / Cot Hill junction has been modelled in accordance with its existing left-in, left-out (LILO) arrangement.

- 3.12 In light of the comments received by Capita (2018) and NCC (2026) on the geometry parameters applied within the model, visibility is reduced to 160m keeping the lane width on minor arm as 5m and width of the lane on major road at 7.3m. The PICADY geometries are shown in **Appendix F**.
- 3.13 The full modelling outputs for the capacity assessment of this junction are provided in **Appendix G**, with a summary of the modelling results presented in **Table 3.1**.

Table 3.1: A48 / Cot Hill LILO Junction – PICADY Results

Turning Movement	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2026 (Halcrow TA) + Development						
Left Turn Out from Cot Hill	130	739	1.39	1.5	15	0.61
2026 Observed						
Left Turn Out from Cot Hill	1	10	0.33	1	7	0.22
2026 (Observed) + Development (One Hour Profile)						
Left Turn Out from Cot Hill	7	47	0.88	1	11	0.48
2026 (Observed) + Development (Flat Profile)						
Left Turn Out from Cot Hill	4	26	0.77	1	10	0.43
2036 Forecast						
Left Turn Out from Cot Hill	1	11	0.38	1	8	0.25
2036 (Forecast) + Development (One Hour Profile)						
Left Turn Out from Cot Hill	13	85	0.96	2	13	0.53
2036 (Forecast) + Development (Flat Profile)						
Left Turn Out from Cot Hill	6	39	0.84	1	11	0.47

- 3.14 The results in **Table 3.1** show that the existing junction will continue to operate within capacity to 2036 (and likely beyond) and hence the proposals for a signal controlled junction put forward in 2006 by Halcrow are not required.
- 3.15 Modelling using 2026 Observed + Development traffic data shows that the existing LILO junction operates within capacity for all consented, with a maximum queue of 7 PCUs and an RFC of 0.88. For the 2036 + Development scenario, the maximum queue is forecast at 13 PCUs with an RFC of 0.96.
- 3.16 In addition to the conventional “One-Hour” traffic profile, the assessment has also been undertaken using a “Flat” profile. This approach provides both a robust assessment (one-hour profile) and a peak-spreading assessment (flat profile), reflecting the likelihood that drivers may adjust their travel times to avoid short-term (15–30 minute) spikes within the peak periods. Under the flat profile, the 2026 Observed + Development scenario results in a

maximum queue of 4 PCUs and an RFC of 0.77, while the 2036 + Development scenario results in a maximum queue of 6 PCUs and an RFC of 0.84.

- 3.17 In any event, the junction would continue to operate within acceptable limits of capacity using either profile.
- 3.18 Capita also recognised that the capacity assessment will be inherently conservative by stating in their response “the layout should operate with greater capacity, with traffic merging rather than giving way.”
- 3.19 Therefore, the results are considered acceptable.

A48 / Beatty Road Roundabout

- 3.20 In their response, Capita has raised concerns over the unequal lane usage on A48 (S) arm.
- 3.21 However, there is little evidence of unequal lane usage as shown in the queue data, as summarised in **Table 3.2** below.

Table 3.2: A48 / Beatty Road Roundabout – Observed Queuing

Arm		AM Peak		PM Peak	
		Average	Max.	Average	Max.
A48 (N)	Lane 1 (nearside)	0.2	2	0.3	2
	Lane 2	0.1	1	0.0	0
Work Access	Lane 1 (nearside)	0.0	0	0.0	0
	Lane 2	0.0	0	0.1	1
A48 (S)	Lane 1 (nearside)	0.0	0	0.0	0
	Lane 2	0.0	0	0.0	0
	Lane 3	0.0	0	0.0	0
Beatty Road	Lane 1 (nearside)	0.1	1	0.4	2
	Lane 2	0.1	1	0.4	2

- 3.22 In any event, should the junction experience congestion, the nearside and middle lanes function as two northbound through-lanes, enabling traffic to distribute evenly and minimising any potential imbalance in lane utilisation. The offside lane is a short auxiliary lane of approximately 12m (around 2 PCUs) off the middle lane, and the approaching traffic is effectively dictated by two lanes; as such, uneven usage of the far side lane would have negligible influence on the overall performance of the junction. Accordingly, it is the nearside and middle lanes that will govern capacity, and these would naturally balance under congested conditions.
- 3.23 The results of the junction modelling undertaken for the A48 / Beatty Road Roundabout, located to the north of the site, are summarised in **Table 3.3**. The assessment accounts for

U-turn movements associated with Llanwern development traffic travelling northbound (inbound) from the south and subsequently turning at the roundabout.

- 3.24 The full modelling outputs for the capacity assessment of this junction are provided in **Appendix H**.

Table 3.3: A48 / Beatty Road Roundabout – ARCADY Results

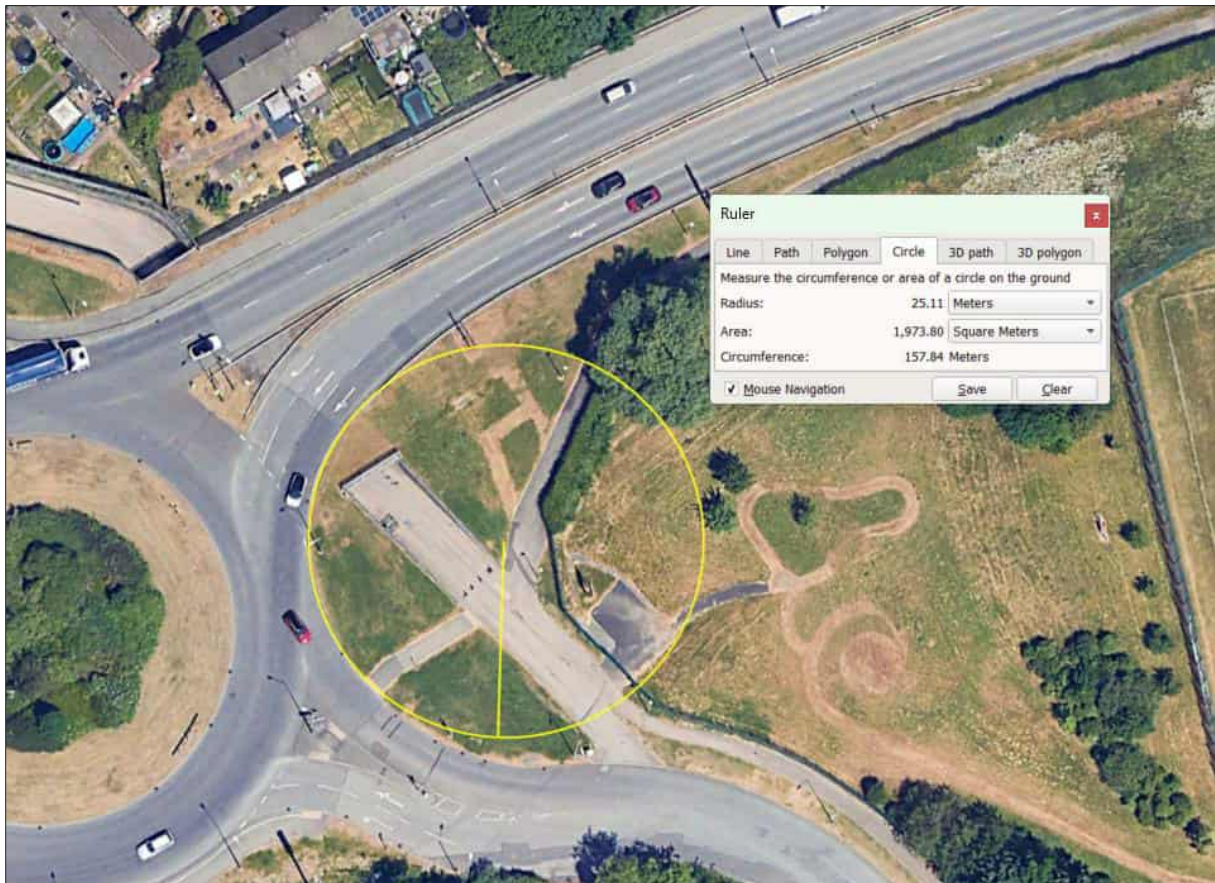
Arm	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2026 (Halcrow TA) + Development						
Beatty Road	1	5	0.21	1	10	0.35
A48 North	3	6	0.71	2	4	0.57
Work Access	1	4	0.12	1	4	0.13
A48 South	1	3	0.38	2	4	0.61
2026 Observed						
Beatty Road	1	5	0.28	1	6	0.29
A48 North	2	4	0.49	1	3	0.36
Work Access	0	5	0.00	0	3	0.03
A48 South	1	3	0.32	1	3	0.43
2026 Observed + Development						
Beatty Road	1	6	0.32	1	8	0.34
A48 North	2	4	0.51	1	4	0.45
Work Access	0	5	0.01	0	3	0.04
A48 South	1	3	0.39	2	4	0.53
2036 Forecast						
Beatty Road	1	6	0.33	1	7	0.35
A48 North	2	4	0.55	1	3	0.41
Work Access	0	5	0.01	0	3	0.04
A48 South	1	3	0.35	1	3	0.49
2036 Forecast + Development						
Beatty Road	1	7	0.38	1	10	0.42
A48 North	2	5	0.58	2	4	0.50
Work Access	0	6	0.01	0	4	0.05
A48 South	1	3	0.43	2	4	0.59

- 3.25 The results summarised in **Table 3.3** show that there is sufficient capacity within existing roundabout with Beatty Road to accommodate traffic from the Llanwern development including the associated U- turning movements at this junction linked to the existing LILO arrangement into the site from the A48.

A48 / Ringland Circular / Hartridge Farm Road Roundabout

- 3.26 It is noted that the geometric parameters for the model were derived from the Halcrow TA that were previously agreed. However, Capita commented that “The entry radius on the SDR North approach at 50m is excessive.”
- 3.27 In response to this, the entry radius has been remeasured and reduced to 25m within the model. The revised measurement is illustrated in **Figure 3.1**.

Figure 3.1: Entry Radius Measurement of the A48 (N)



- 3.28 In addition, Capita raised concerns regarding potential unequal lane usage on the A48 (N) and Ringland Circular. However, the queue data presented in **Table 3.4** provides no substantive evidence of imbalance on the A48 (N). In particular, Lane 2 is notably under-utilised, indicating that the junction is operating well within capacity and that drivers are not required to use the middle lane to balance flows. By contrast, some imbalance is observed on Ringland Circular, where drivers have limited lane choice due to the lane allocations.

Table 3.4: A48 / Ringland Circular / Hartridge Farm Road Roundabout – Observed Queuing

Arm		AM Peak		PM Peak	
		Average	Max.	Average	Max.
Ringland Circular	Lane 1 (nearside)	0.2	1	0.0	0
	Lane 2	1.8	8	0.8	5
SDR (N)	Lane 1 (nearside)	1.1	5	0.2	1
	Lane 2	0.1	1	0.0	0
	Lane 3	0.0	0	0.0	0
Hartridge Farm Road	Lane 1 (nearside)	1.1	6	0.1	1
	Lane 2	0.7	5	0.3	1
SDR (S)	Lane 1 (nearside)	0.1	1	0.0	0
	Lane 2	0.3	3	0.1	1

- 3.29 As noted above, the Ringland Circular does experience uneven lane usage, with the majority of traffic favouring the far-side lane. To account for this imbalance, a corrective intercept is applied, following Barbara Chard's method for addressing unequal lane utilisation.
- 3.30 The results of the junction modelling for the SDR/ Ringland Circular/ Hartridge Farm Roundabout, are presented in **Table 3.5**. The assessment incorporates the impact of development traffic emerging from the SDR/ Cot Hill LILO junction with destinations to the north, which would undertake a U-turn manoeuvre at this roundabout.
- 3.31 The full modelling outputs for the capacity assessment of this junction are provided in **Appendix I**.

Table 3.5: A48 / Ringland Circular / Hartridge Farm Road Roundabout – ARCADY Results

Arm	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2026 (Halcrow TA) + Development						
SDR North	16	27	0.95	2	3	0.52
Hartridge Farm Road	1	7	0.26	1	5	0.27
SDR South	2	4	0.56	3	6	0.74
Ringland Circle	1	6	0.55	37	296	1.17
2026 Observed						
SDR North	2	4	0.55	1	3	0.34
Hartridge Farm Road	1	5	0.37	1	3	0.07
SDR South	1	3	0.41	1	3	0.48

Arm	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Ringland Circle	2	16	0.65	1	10	0.42
2026 Observed + Development						
SDR North	3	6	0.69	1	3	0.41
Hartridge Farm Road	1	7	0.44	1	4	0.08
SDR South	1	4	0.44	2	4	0.54
Ringland Circle	4	29	0.78	2	17	0.59
2036 Forecast						
SDR North	2	5	0.62	1	3	0.39
Hartridge Farm Road	1	6	0.45	1	4	0.08
SDR South	1	4	0.46	2	4	0.54
Ringland Circle	4	30	0.80	2	14	0.53
2036 (Forecast) + Development (One Hour Profile)						
SDR North	4	8	0.76	1	3	0.45
Hartridge Farm Road	2	9	0.54	1	4	0.09
SDR South	2	4	0.50	2	4	0.61
Ringland Circle	14	101	0.98	3	30	0.75
2036 (Forecast) + Development (Flat Profile)						
SDR North	3	6	0.68	1	3	0.41
Hartridge Farm Road	1	7	0.45	1	4	0.08
SDR South	1	4	0.45	2	4	0.55
Ringland Circle	4	32	0.80	2	17	0.60

- 3.32 The results summarised in **Table 3.5** demonstrate that the proposal to use the existing LILO arrangement at A48 / Cot Hill will not have an adverse effect on traffic movements at the A48 / Ringland Circular / Hartridge roundabout junction. There is sufficient capacity to accommodate the development and associated U-turning movements from the existing LILO junction providing access from the SDR to the development at Llanwern, as per 2026 observed scenarios.
- 3.33 Under the 2036 + Development scenario, using the one-hour profile, the Ringland Circle arm is forecast to operate with an RFC of 0.98 and a maximum queue of 14 PCUs.
- 3.34 In addition to the conventional one-hour traffic profile, a “flat” profile was also assessed. This provides both a robust one-hour assessment and a peak-spreading assessment, reflecting

the likelihood that drivers may adjust travel times to avoid short-term (15–30 minute) spikes within peak periods. Under the flat profile, the 2036 + Development scenario results in a maximum queue of 4 PCUs and an RFC of 0.80.

- 3.35 As previously noted, the 2036 forecast represents a worst-case scenario and is unlikely to materialise in reality.
- 3.36 In any event, the results are considered acceptable.

Summary

- 3.37 The revised analysis of the effect of the Llanwern development (1,100 homes) on the immediate highway network i.e. the A48 and associated junctions using 2026 traffic data demonstrates that the existing LILO arrangement with Cot Hill is suitable in highway capacity terms for accommodating all of the traffic forecasts from the consented development at Llanwern comprising 1100 homes, primary school and village centre.
- 3.38 Therefore, there is no requirement for a signal controlled junction at this location as per the original (2006) Halcrow forecasts.

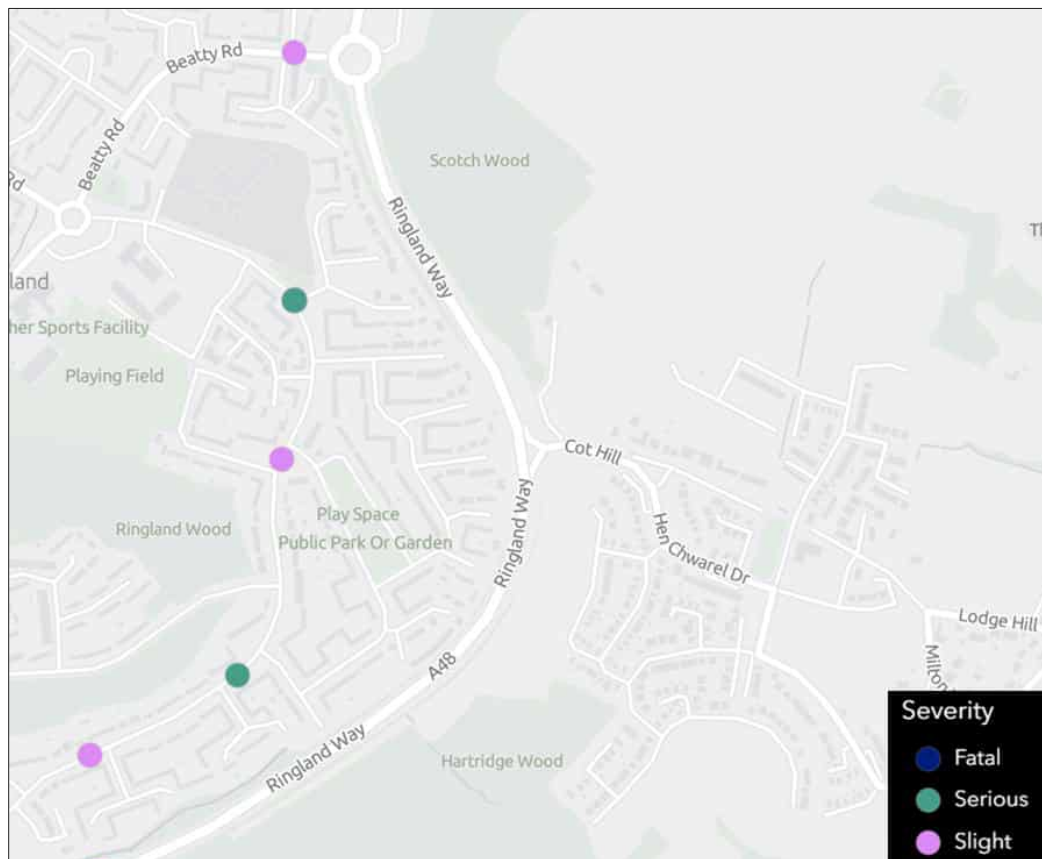
4.0 Highway Safety & Design – A48 / Cot Hill

- 4.1 This section summarises the highway safety and design standards of the existing A48 / Cot Hill LILO arrangement.

Highway Safety – Collision Review

- 4.2 A review of Personal Injury Collision (PIC) data at this junction has been undertaken using the Department for Transport's Mapping Application for Visualising Road Injury Casualties (MAVRIC) tool. The analysis covers the latest available five-year period (January 2020 to December 2024). The site location is shown in the MAVRIC extract (Road Safety Statistics Data Tools – GOV.UK) presented in **Figure 4.1**.

Figure 4.1: Collision Statistics – A48 / Cot Hill



- 4.3 As shown in **Figure 4.1**, no accidents have been recorded at the A48 / Cot Hill junction over the five-year period. Accordingly, it is considered that there are no significant road safety concerns associated with design and configuration of the existing LILO arrangement.

Design Standards

- 4.4 A full review of the A48 / Cot Hill LILO arrangement has been undertaken and included in full in **Appendix J**. However, the non-compliant features are summarised in **Table 4.1**, with SLR's response.
- 4.5 It is worth noting however that prior to this junction being constructed, a full and detailed S278 process would have occurred with numerous road safety audits based on as built designs. It can therefore be concluded that the as built junction is constructed to a standard at which the highway authority and its consultant considered to be appropriate and safe. The accident analysis supports this. As such there is no highway safety reason to change the form of the existing junction.

Table 4.1: Non-Compliant Design Features – A48 / Cot Hill

Non-Compliant Feature	Reason	SLR justification
No auxiliary lane on left turn diverge.	Requirement of CD123 (5.18.1) for major road flow exceeding 7,000 AADT.	This requirement primarily relates to situations where right-turn movements into the minor arm are present, as the auxiliary lane assists vehicles in diverging safely. As no right-turn movement is permitted at this location, the need for an auxiliary lane is significantly reduced. This is also acknowledged in Capita's response (Appendix B). Furthermore, signage on the diverge (Figure 4.2 below) advises that the route is unsuitable for heavy goods vehicles, reducing the functional need for an auxiliary lane. The existing arrangement is therefore considered acceptable.
Minimum length of 80m taper not achieved on diverge.	Requirement of CD123 (5.22) for design speeds of 85kph.	SLR has measured the existing taper at 78.2m, which is 1.8m below the standard requirement. However, the collision data indicates no associated highway safety concerns arising from this minor deviation. Again, signage on the diverge suggesting it unsuitable for heavy goods vehicles, also reduces the need for a longer taper. On this basis, the existing taper length is considered acceptable.
Minimum lane width of 6.2m not achieved on the merge and diverge lanes.	Requirement of CD123 (5.10) for curves with a radius of 20m.	SLR has measured the existing widths to be between 5-5.3m, which is up to 1.2m below the standard requirement. Similar to the taper length above, the collision data does not indicate any highway safety concerns related to the reduced lane widths, and the signage advises that this route is unsuitable for heavy goods vehicles, further reducing the functional requirement for wider lanes. On this basis, the widths are considered acceptable.
Traffic island not set back 1m from running carriageway	Requirement of CD123 (5.16) for traffic islands.	SLR have measured the set back to 0.9m, which falls short by 10cm. The collision data indicates no associated highway safety concerns arising from this minor deviation. On this basis, the set back of 0.9m is considered acceptable.

Figure 4.2: A48 / Cot Hill – Unsuitable for Heavy Good Vehicles Signage



5.0 Active Travel Audit

- 5.1 SLR undertook a site visit on the morning of Thursday 26th February 2026.
- 5.2 The visit covered the first 150m of Cot Hill from the A48, as well as the A48 corridor between Beatty Road and Ringland Circular. This also included inspections of the two underpasses: the first located between Cot Hill and Dawson Close, and the second between Hartridge Farm Road and Ringland Circular.
- 5.3 The entire route consists of a well-maintained 3m shared-use path on both sides of the carriageway, with a minimum 1m (often greater) verge along the eastern side, making this the more attractive walking and cycling route than the west side of the carriageway. The route is generally flat throughout, improving accessibility for all users, including those with mobility impairments. No noticeable overgrowth or other maintenance issues were observed during the audit. The route is assumed to benefit from adequate illumination provided by the highway lighting within the central reserve, supporting safe use during hours of darkness.
- 5.4 The only minor constraint along the route occurs on the southern side of Cot Hill on the approach to the A48, where the shared-use path narrows to approximately 2m over a short 20m section and includes the presence of a poorly positioned road sign. This is shown in **Figure 5.1**. This is not a major inconvenience, however, this could be improved.

Figure 5.1: Cot Hill approach to A48



- 5.5 The underpass at Dawson Close is subject to a time restriction, closing overnight between 19:00 and 07:30 presumably due to anti-social behaviour, and features a narrow gate on each side that would require cyclists to dismount for its short duration. However, this does not affect any key pedestrian or cycle movements, as both the GP surgery and Milton Primary School are closed during these hours; therefore, associated trips will not be impeded. There are also no reasonable desire lines that would require pedestrians to walk north and cross the A48 into Beatty Road during the restricted period.
- 5.6 The underpass at Ringland Circular has no restrictions on opening hours and provides continuous access for walking and cycling throughout the day. This enables users travelling from Cot Hill to move south and cross to the western side of the carriageway via the underpass. There is no immediate desire line / amenity that would require pedestrians or cyclists to cross the A48 at an earlier point.

6.0 Conclusion

- 6.1 The previous technical work (Halcrow Transport Assessment 2006) underpinning the original consent at Llanwern had forecast that a signal-controlled junction was required at the A48 / Cot Hill junction in order to accommodate all (1,100 homes) of the development at Llanwern. This historic assessment was based on pessimistic traffic forecasts from a computer model which did not account for the beneficial effect of the Queen's Way link to Magor and also future trends in hybrid working / car use / traffic levels pre and post covid.

- 6.2 Traffic surveys were undertaken in February 2026 confirming as per previous counts (2018 & 2023) that the previous forecasts significantly overestimated traffic on this section of the A48.
- 6.3 As such, this Technical Note has demonstrated that the consented development of 1,100 homes, primary school and village centre at Llanwern can be safely accessed from the existing Left in Left out (LILO) arrangement with Cot Hill. It is important to note that at the time of the 2026 traffic surveys, 357 units were occupied at the Llanwern Redrow site. This has been factored into the modelled analysis with the Halcrow TA development flows being factored at 67.5%.
- 6.4 Moreover, it is also worth noting that as of 2 April 2026 the final Reserve Matters application for this site has been granted bringing the total number of residential units being 834. This means that the quantum of development actually tested within this analysis is some 24% higher than will actually be delivered on this site.
- 6.5 The analysis has demonstrated that future additional U-turning movements associated with retaining the existing LILO junction arrangement as the remainder of the development is built out will not give rise to any highway capacity issues at the immediate north and south on the A48.
- 6.6 The existing design parameters indicate minor non-compliant features, however, none of these raise any concerns considering the collision statistics and is therefore considered acceptable. In addition, this existing junction has been previously considered appropriate and safe by NCC following detailed design and Road Safety Audits at the time /after construction.
- 6.7 There is no reason to suggest that this junction configuration is unsafe or appropriate for development of this magnitude.
- 6.8 Maintaining the existing LILO junction configuration with Cot Hill will also have substantial beneficial effects in terms of negating the need for any future large-scale highways works and associated disruption to traffic flows on the A48 which would have arisen with a traffic signal arrangement at this location.
- 6.9 Whilst the existing LILO arrangement does not provide any at grade crossing facilities there are existing underpasses to the north and south of the north of the junction leading to Dawson Close and Ringland Circular on the western side of the A48.
- 6.10 In addition, there are no desire lines between the locations of the underpasses with the A48 whereby an at grade pedestrian/cycle crossing would be essential.
- 6.11 The existing active travel route on either side of the A48 comprise well-maintained and generally flat 3m shared-use paths on both sides of the carriageway, with the eastern side offering a wider verge and more attractive environment. Only a minor constraint was noted where the path narrows to around 2m with a poorly positioned sign on the Cot Hill approach to the A48. This is only a minor inconvenience and could be improved if required

- 6.12 In order to improve the environment for pedestrians and cyclists at the Dawson Close underpass and to ensure that this link is suitable for use throughout the day for vulnerable road users, it is proposed the development at Llanwern will contribute to improved surveillance e.g., CCTV at this location.
- 6.13 The exact details, specification and cost along with the appropriate mechanism for securing the contribution will need to be agreed between the Highway Authority (or relevant Local Authority Dept.) and Redrow.

Appendix A Technical Notes (Ref: 184108/N01 and 184108A/N01)

Llanwern Revised Access

Technical Note – SDR / Cot Hill

July 2018

184108/N01

Introduction

1. Vectos is retained by Redrow Homes Ltd to provide transport and highways advice in relation to the main site access to the 'Llanwern Village' development from the Southern Distributor Road (SDR) – A48.
2. The site benefits from an outline planning permission for 1,100 dwellings, a local village centre and a primary school. At present there is no development on the Redrow Llanwern site.
3. The Halcrow Transport Assessment (TA) in 2006 prepared in support of the outline permission set out the proposed improvements to the local highway network, predominantly the main access to the site via Cot Hill. This access comprised modifications to the existing left in / left out (LILO) junction with the SDR to a signal controlled junction with pedestrian crossings.
4. Since the outline permission, the A4810 Queen's Way link from the SDR to the south of the former Llanwern Steel works to Magor and junction 23A of the M4 has been constructed and is fully operational.
5. The hypothesis tested in this Technical Note is that this new link has provided traffic relief to the northern section of the SDR in the vicinity of the site and as such, the form of access into the site from Cot Hill and via the SDR could be simplified from the consented traffic signal arrangement reverting back the existing LILO arrangement.
6. In the following sections, this Technical Note tests this hypothesis using current traffic and accident data in the vicinity of the SDR / Cot Hill junction.

Survey Comparison

7. The Halcrow TA of 2006 and its traffic modelling used to underpin the planning permission was based on traffic flows derived from the Newport SATURN model (used for the EEA transport strategy). At the time, the base flows abstracted for the model were for an opening year of 2011 and were derived from traffic data preceding 2011. These forecast base 2011 flows were then growthed to a 2026 design year using NRTF forecasts of 24% for both AM and PM peaks.
8. In order to test the accuracy of the 2026 modelling traffic forecasts on background traffic levels (both NRTFT forecasts and the effect of the Queen's Way link road), traffic surveys

were undertaken on 12th July 2018 during the AM (0700-1000) and PM (1530-1830) peaks at the following junctions:

- SDR / Cot Hill Junction (Left In / Left Out only);
 - SDR / Beatty Road Roundabout; and
 - SDR / Ringland Circular / Hartridge Farm Road Roundabout.
9. The observed July 2018 traffic surveys are shown in **Appendix A** together with the Halcrow 2026 traffic forecasts. The peak hours derived from the 2018 surveys are 0815-0915 and 1700-1800 hrs respectively.
10. In order to compare the 2018 observed traffic data with the 2026 Halcrow without development forecasts, the 2018 traffic surveys have been growthed to 2026 using TEMPro growth factors as shown in **Table 1**.

Table 1 – TEMPro Growth Factors (2018 – 2026)

Peak Period	Growth Factor
AM	1.107
PM	1.108

11. Whilst growth factors have been used to compare the recent survey data to the future year of 2026 from the Halcrow TA, this the level of growth (c 10%) on the local network is unlikely to materialise because:
- Observed traffic trends across the UK are generally less than DfT forecasts as attitudes to mobility and commuting are changing with decreasing levels of single occupied car use; and
 - It is likely that the alignment of the new M4 relief road will provide further traffic relief through reassignment on the northern section of the SDR.
12. As a comparison, the background flows excluding development traffic for a 2026 forecast year have been shown by junction in **Table 2**. The observed July 2018 data has also been converted from vehicles to PCU's to provide a direct comparison with the Halcrow forecasts which were given in PCUs'.

Table 2 – Junction Movements Comparison (Future Year 2026 without development)

Junction - Total Movements (PCU's)	Halcrow TA - 2026	Vectos – 2026	% Change
AM			
SDR / Cot Hill Junction	1566	1126	-28%
SDR / Beatty Road Roundabout	2343	2041	-13%
SDR / Ringland Circular / Hartridge Farm Road Roundabout	3172	2757	-13%
PM			

SDR / Cot Hill Junction	1010	1059	5%
SDR / Beatty Road Roundabout	2366	2123	-10%
SDR / Ringland Circular / Hartridge Farm Road Roundabout	3111	2456	-21%

13. The data summarised in Table 2 demonstrates that the Vectos forecast 2026 (without development) traffic flows are considerably lower at these junctions than predicted within the original 2026 Halcrow forecasts except for one instance.
14. The data shows that there is a small percentage increase of 5% (+41 PCU) at the SDR / Cot Hill junction during the PM peak. However, it is likely that the 'Parental Engagement Day' at Llanwern High School some 1.2km to the south of the junction, may have contributed to this anomaly in the traffic forecasts, particularly as there was a 28% overall reduction in traffic at this junction during the AM peak. **Figure 1** shows the signage at the school confirming the Parental Engagement Day.

Figure 1 – Parents Engagement Day signage at Llanwern High School 12th July 2018.



15. Given that the observed traffic flows on this part of the SDR are significantly lower than previously forecast, the following section tests the hypothesis of whether it is possible to simplify access to the site from the SDR / Cot Hill, thus retaining the existing LILLO arrangement. It also considers the knock-on effects of u-turning movements (i.e. the right turners wishing to enter and leave the site) from the existing junction arrangement on the junctions immediately to the north and south.

Highway Network Analysis

16. In order to test the effect of the development on the existing LILO junction arrangement with the SDR and the roundabout junctions north and south of the Cot Hill junction, the traffic forecasts from the development have been abstracted from the Halcrow 2006 TA. Despite a change in contemporary transport policy between 2006-2018 the original trip generation has been retained for robustness, however it is highly likely, that given the focus on sustainable transport, active travel and general trends in mobility, that the levels of traffic arising from the development may be lower than previously forecast.
17. In addition, the original trip distribution at the SDR / Cot Hill junction within the Halcrow TA which assumed an all movement signal controlled junction, has been revised to account for the development traffic using the existing LILO arrangement. As such, the right turning movements in/out of the site have been redistributed to the roundabout junctions to the north and south respectively.
18. The updated development distribution for the AM and PM peaks are included in **Appendix B**.
19. Tables 3- 5 summarise the results of the revised modelling based on the information presented in the foregoing. The detailed outputs from the modelling are shown in **Appendix C**.

SDR / Cot Hill LILO modelling

Table 3 – SDR / Cot Hill Junction existing LILO configuration - PICADY Results

Turning Movement	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2026 (Halcrow TA) + Development						
Left Turn Out from Cot Hill	95	491	1.28	2	12	0.56
2026 Vectos flows + Development						
Left Turn Out from Cot Hill	5	31	0.83	1	11	0.51

20. The results summarised in **Table 3** compare the forecast Halcrow 2026 with development scenario with the Vectos 2026 with development scenario at the existing SDR / Cot Hill LILO junction. The data shows that the existing LILO junction arrangement is suitable to accommodate traffic from the consented development at Llanwern.

SDR / Beatty Road Roundabout Modelling

21. The results of the junction modelling undertaken for the SDR / Beatty Road Roundabout to the north of the site and accounting for U turning movements from the Llanwern development related to inbound traffic from the south are shown in **Table 4**.

Table 4 – SDR / Beatty Road Roundabout – existing configuration - ARCADY Results

Arm	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2026 (Halcrow TA) + Development						
Beatty Road	1	5	0.21	1	9	0.35
SDR North	3	5	0.71	2	4	0.56
Work Access	1	4	0.12	1	4	0.13
SDR South	1	2	0.38	2	4	0.61
2026 Vectos flows + Development						
Beatty Road	1	5	0.14	1	7	0.24
SDR North	2	3	0.56	2	4	0.59
Work Access	0	0	0.00	0	3	0.05
SDR South	1	2	0.43	2	3	0.53

22. The results summarised in **Table 4** show that there is sufficient capacity within existing roundabout with Beatty Road to accommodate traffic from the Llanwern development including the associated U turn movements at this junction associated with the LILO arrangement into the site from the SDR.

SDR / Ringland Circular / Hartridge Farm Road Roundabout

23. The results of the junction modelling for the SDR / Ringland Circular / Hartridge Farm Roundabout to the south of the site are shown in **Table 5**. The results include the effect of traffic from the LILO junction arrangement at SDR / Cot Hill with destinations to the north, U turning at this roundabout junction.

Table 5 - SDR / Ringland Circular / Hartridge Farm Roundabout existing configuration - ARCADY Results

Arm	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2026 (Halcrow TA) + Development						
SDR North	13	21	0.93	2	3	0.52
Hartridge Farm Road	1	7	0.26	1	5	0.28
SDR South	2	3	0.56	3	5	0.74
Ringland Circle	1	5	0.26	1	8	0.49
2026 Vectos flows + Development						
SDR North	2	4	0.67	1	3	0.48
Hartridge Farm Road	1	6	0.34	1	3	0.05
SDR South	1	3	0.45	2	3	0.57
Ringland Circle	1	6	0.47	1	5	0.33

24. The results summarised in **Table 5** demonstrate that the proposal to utilise the existing LILO arrangement at SDR / Cot Hill will not have an adverse effect on traffic movements at the SDR / Ringland Circular / Hartridge roundabout junction. There is sufficient forecast capacity to accommodate the development and associated U turning movements.

Highway Network Analysis Summary

25. The revised analysis of the effect of the Llanwern development on the immediate highway network i.e. The SDR and associated junctions, shows that the existing LILO arrangement with Cot Hill is suitable in highway capacity terms for accommodating the consented development at Llanwern comprising 1100 homes, primary school and village centre.

Highway Safety - SDR / Cot Hill

26. An initial appraisal of the design of the existing LILO junction arrangement at SDR / Cot Hill confirms that the junction has been designed to the engineering standards as set out in DMRB TD 42/95.
27. In addition, a review of the Personal Injury Accident data as this junction has been undertaken. Accident data has been obtained from Welsh Government covering the most recent 5-year accident data available, from January 2012 to September 2017.
28. The data shows that in total, there were 2 accidents near the SDR / Cot Hill junction, both of which were 'slight' and in 2013. The location of these accidents is shown in **Figure 2**.

Figure 2 – Location of Accidents (Yellow)



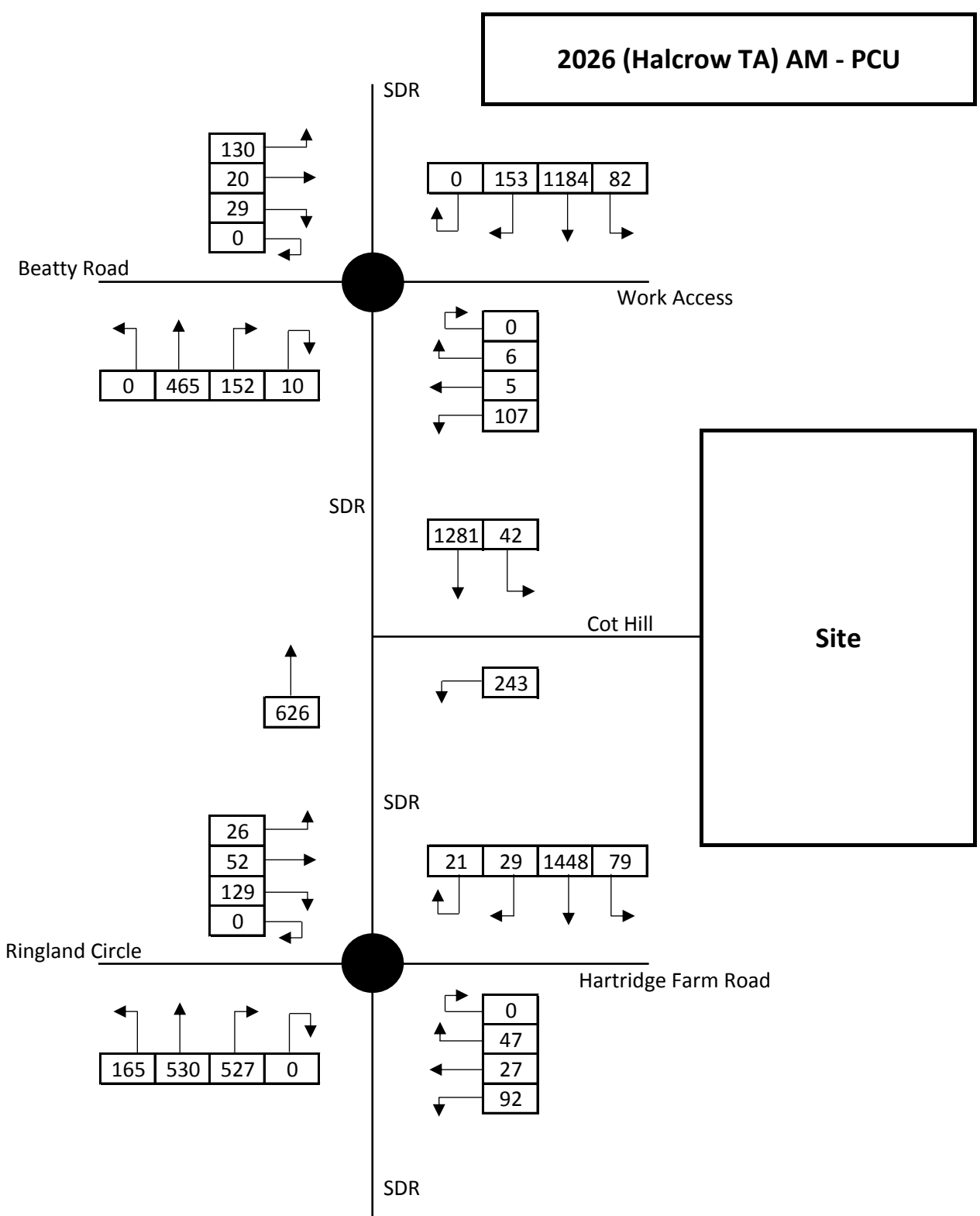
29. The northbound accident on the SDR involved 3 cars, of which there was 1 casualty, although the cause was unknown.
30. The southbound accident on the SDR involved 1 motorcycle and resulted in 1 casualty, caused by skidding in icy conditions.
31. The accident data confirms that there are no issues of highway safety at this junction operating under the existing LILO arrangement.

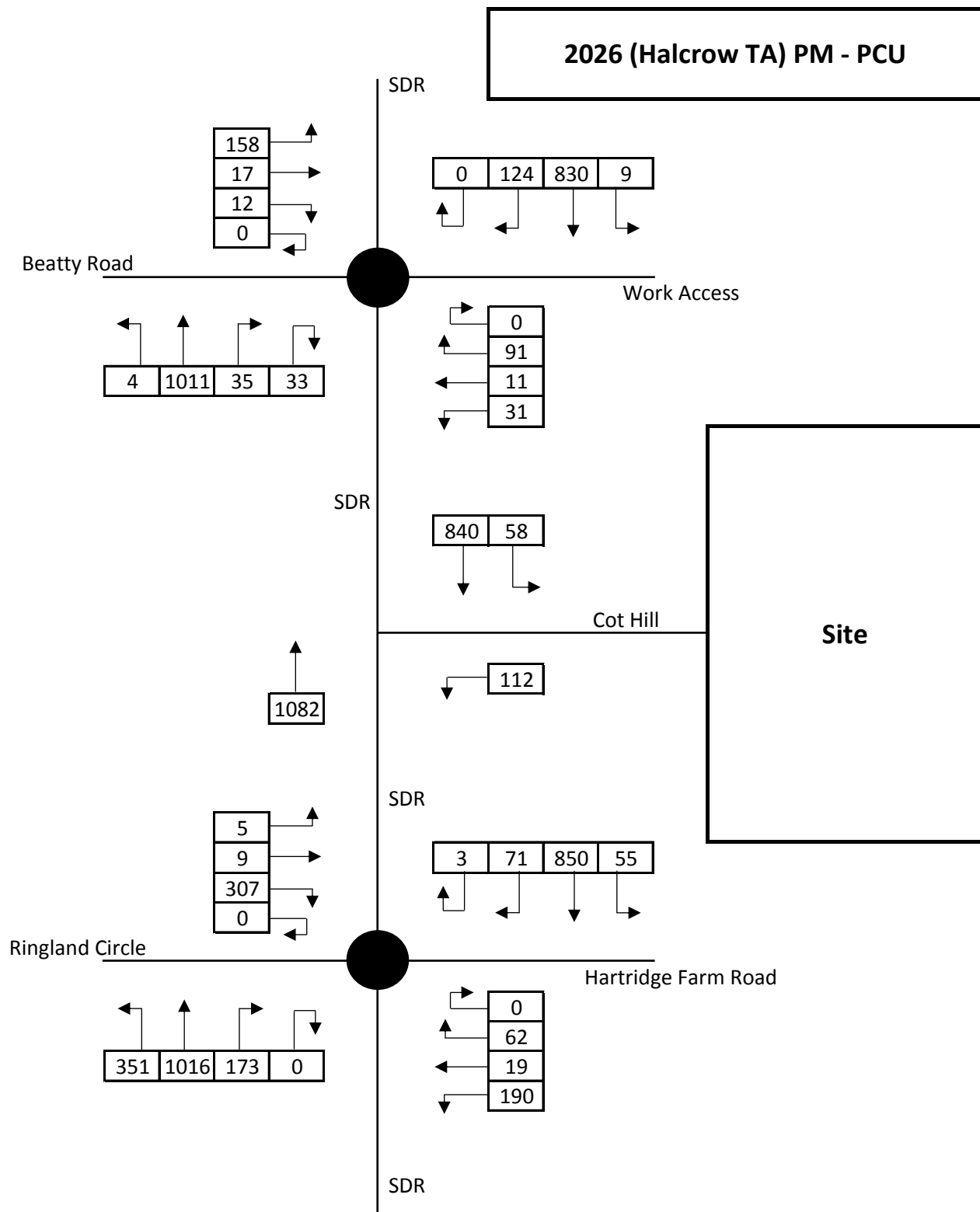
Summary and Conclusion

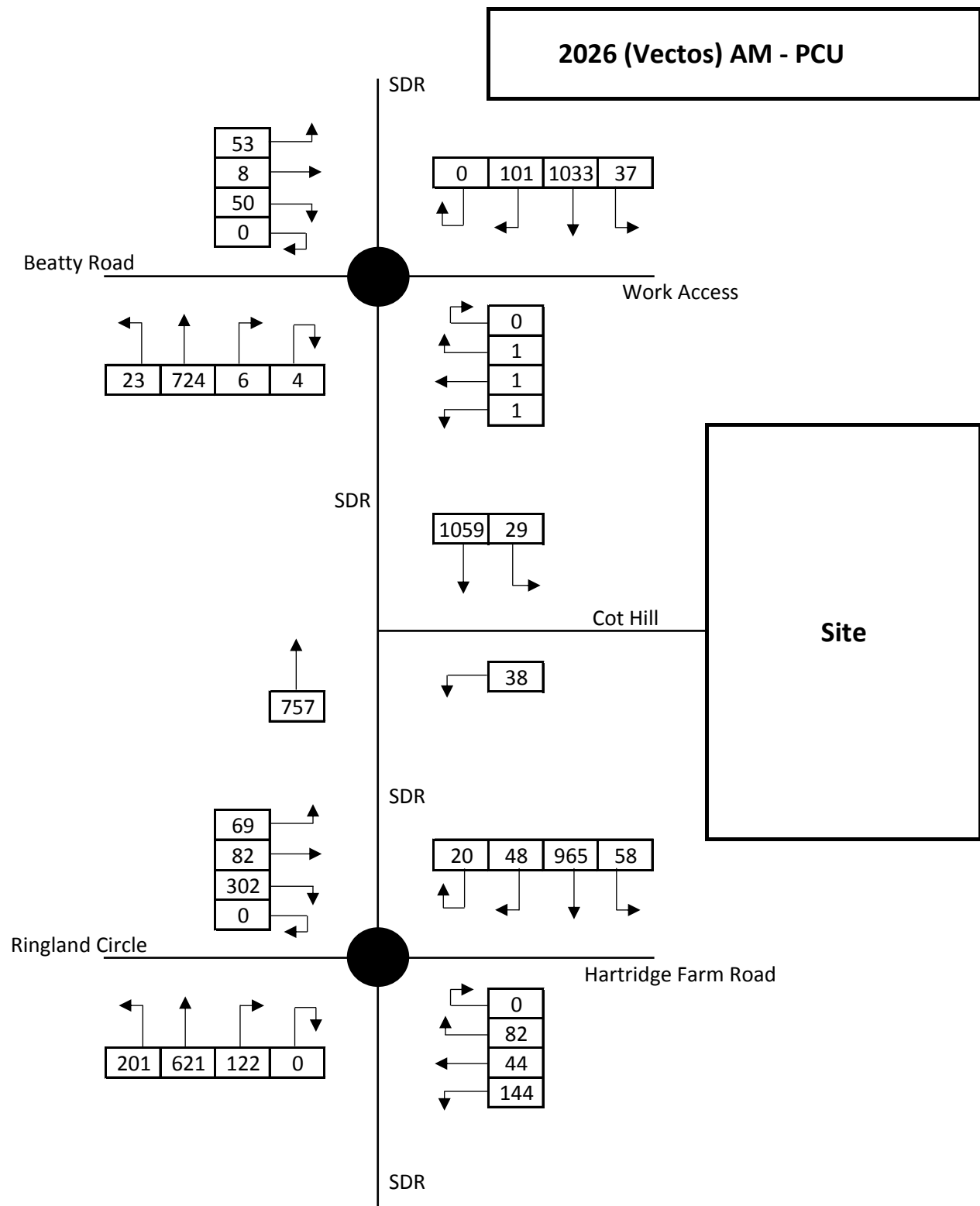
32. Whilst the previous technical work (Halcrow Transport Assessment 2006) underpinning the consent at Llanwern had forecast that a signal controlled junction was required at the SDR / Cot Hill junction, to accommodate development, this was based on traffic forecasts which did not account for the beneficial effect of the Queen's Way link to Magor and also future trends in car use / traffic levels. Traffic surveys undertaken in July 2018 and indicative background traffic growth from 2018-2026 confirm that this i.e. that the previous forecasts overestimated traffic in this part of the SDR.
33. As such, this Technical Note has demonstrated that the consented development of 1100 homes, primary school and village centre at Llanwern can be safely accessed from the existing Left In Left out (LILO) arrangement with Cot Hill. In addition, the additional u turning movements associated with retaining the existing LILO junction arrangement will not give rise to any highway capacity issues at the immediate north and south on the SDR.
34. Maintaining the existing LILO junction configuration with Cot Hill will also have substantial beneficial effects in terms of negating the need for any future large-scale highways works and associated disruption to traffic flows on the SDR which would have arisen with a traffic signal arrangement at this location.
35. Notwithstanding the beneficial effect of not undertaking any highway works on the SDR, the traffic signals originally proposed for this development in relation to highway capacity also provided dedicated pedestrian linkages across the SDR. The existing LILO arrangement does not provide this at grade crossing facility however there is an existing underpass to the north of the junction leading to Dawson Close on the western side of the SDR.
36. It is likely that the proposed development at Llanwern will give rise to considerably greater proportion of walking and cycling trips between either side of the SDR compared to existing situation in order to access local facilities both within the development and also those existing within Ringland. Whilst it provides a traffic free, safe link across the SDR, the character of the existing underpass lends itself to anti-social behaviour and subsequently gated and closed between 1900-0730.
37. In order, to improve this environment for pedestrians and cyclists and to ensure that this link is suitable for use throughout the day for vulnerable road users, the development at Llanwern will contribute to improved surveillance e.g. CCTV at this location. The exact details, specification and cost of this along with the appropriate mechanism for securing the contribution will need to be agreed between the Highway Authority (or relevant Local Authority Dept.) and Redrow.

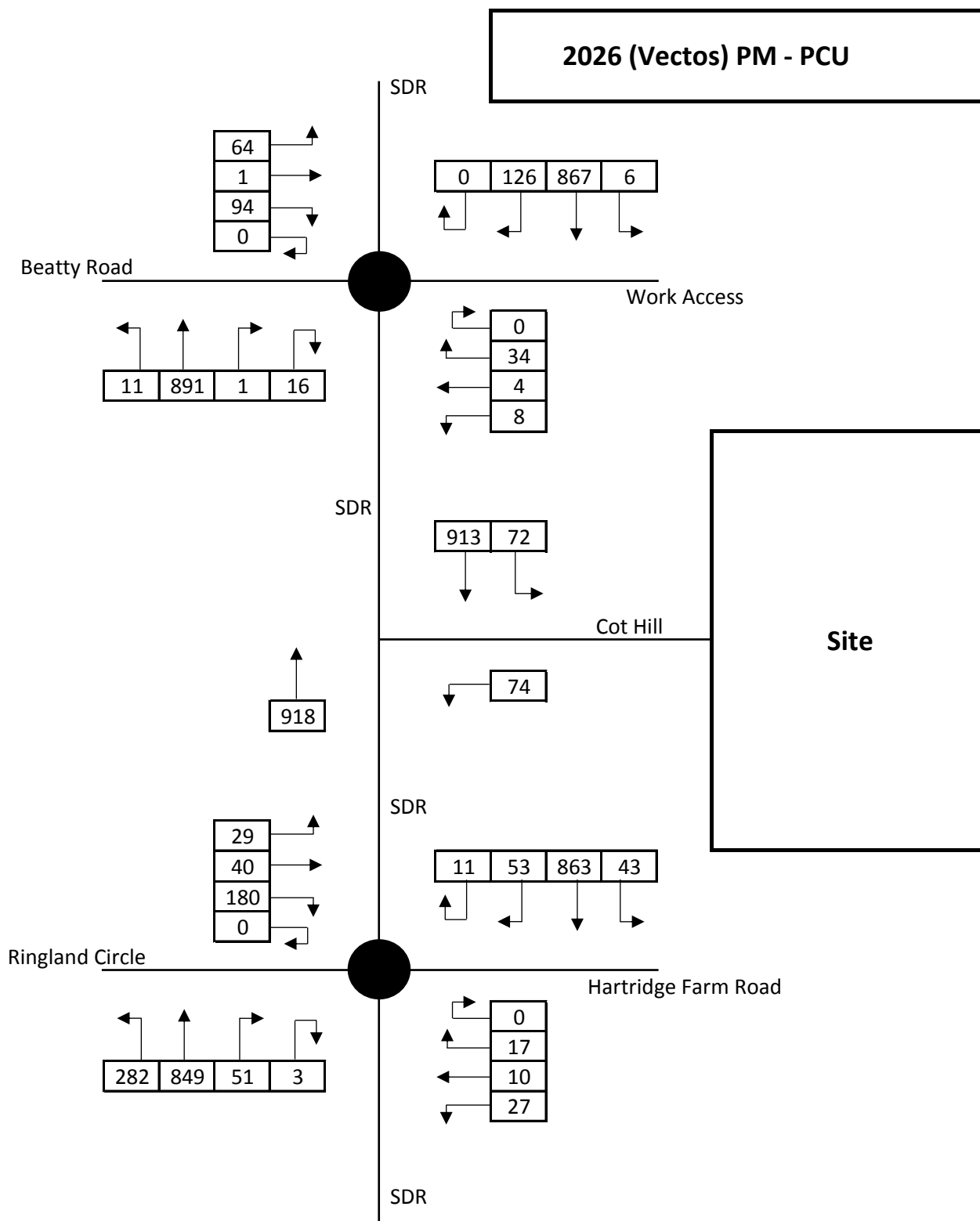
APPENDIX A

2026 (Halcrow TA) AM - PCU



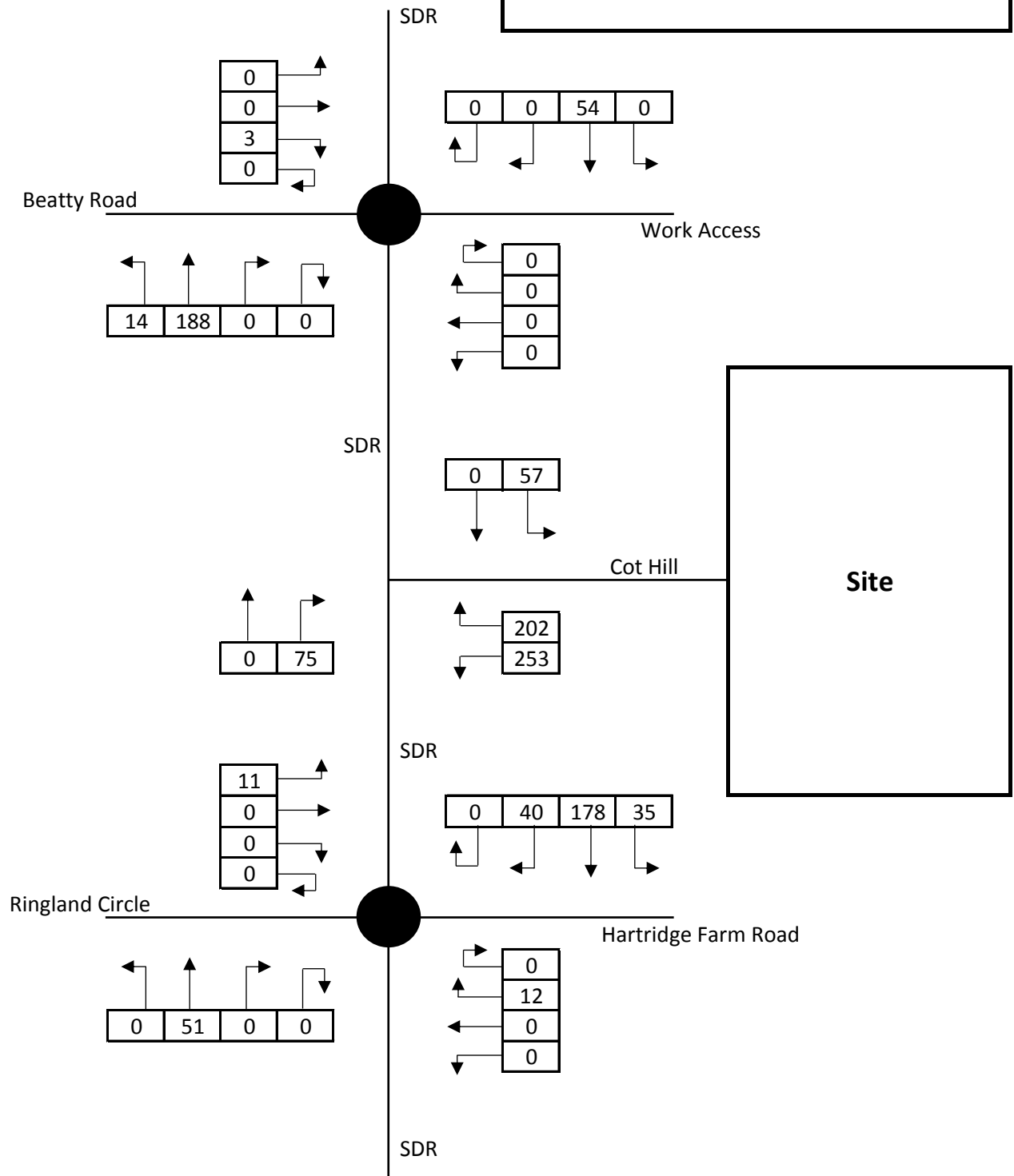


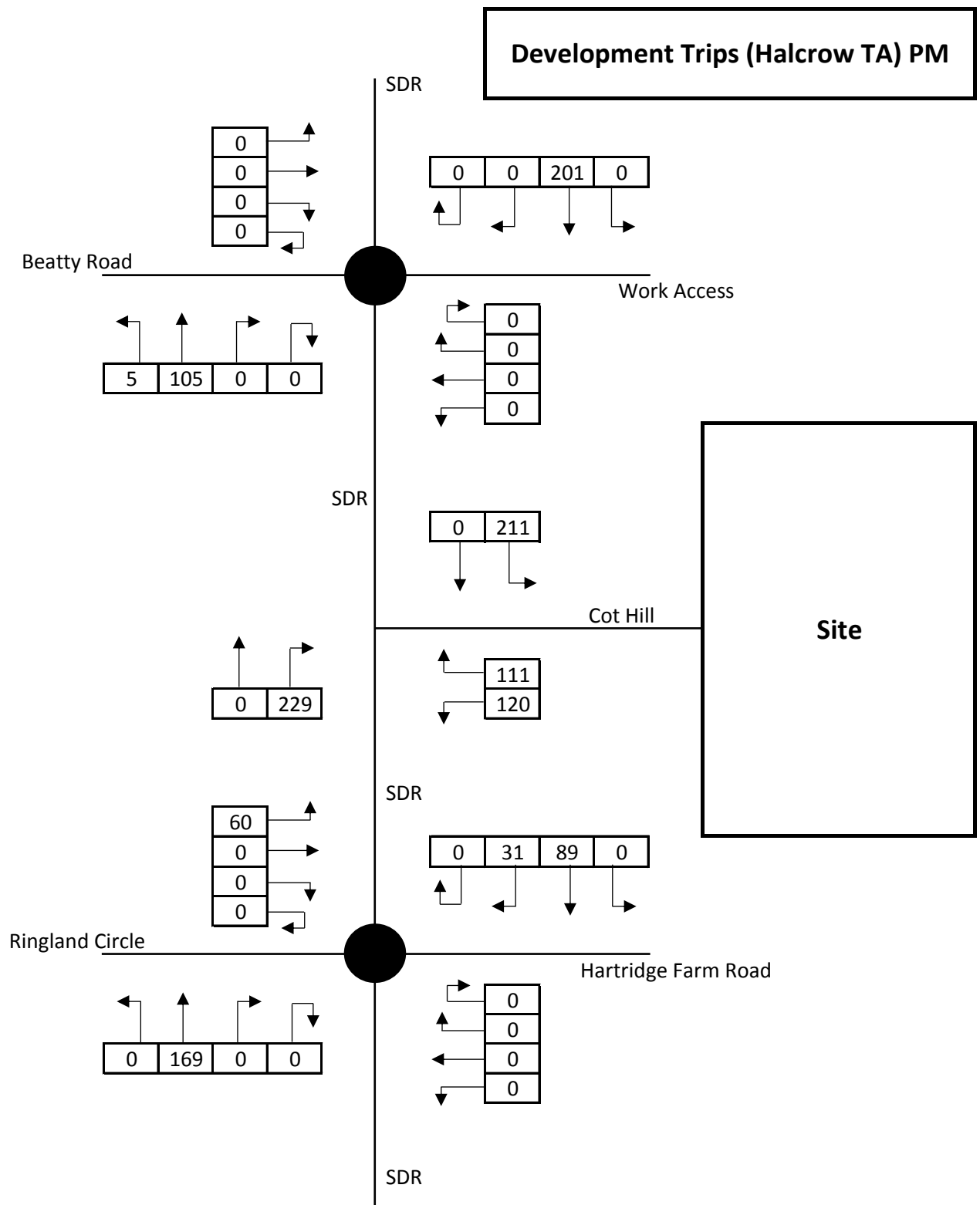


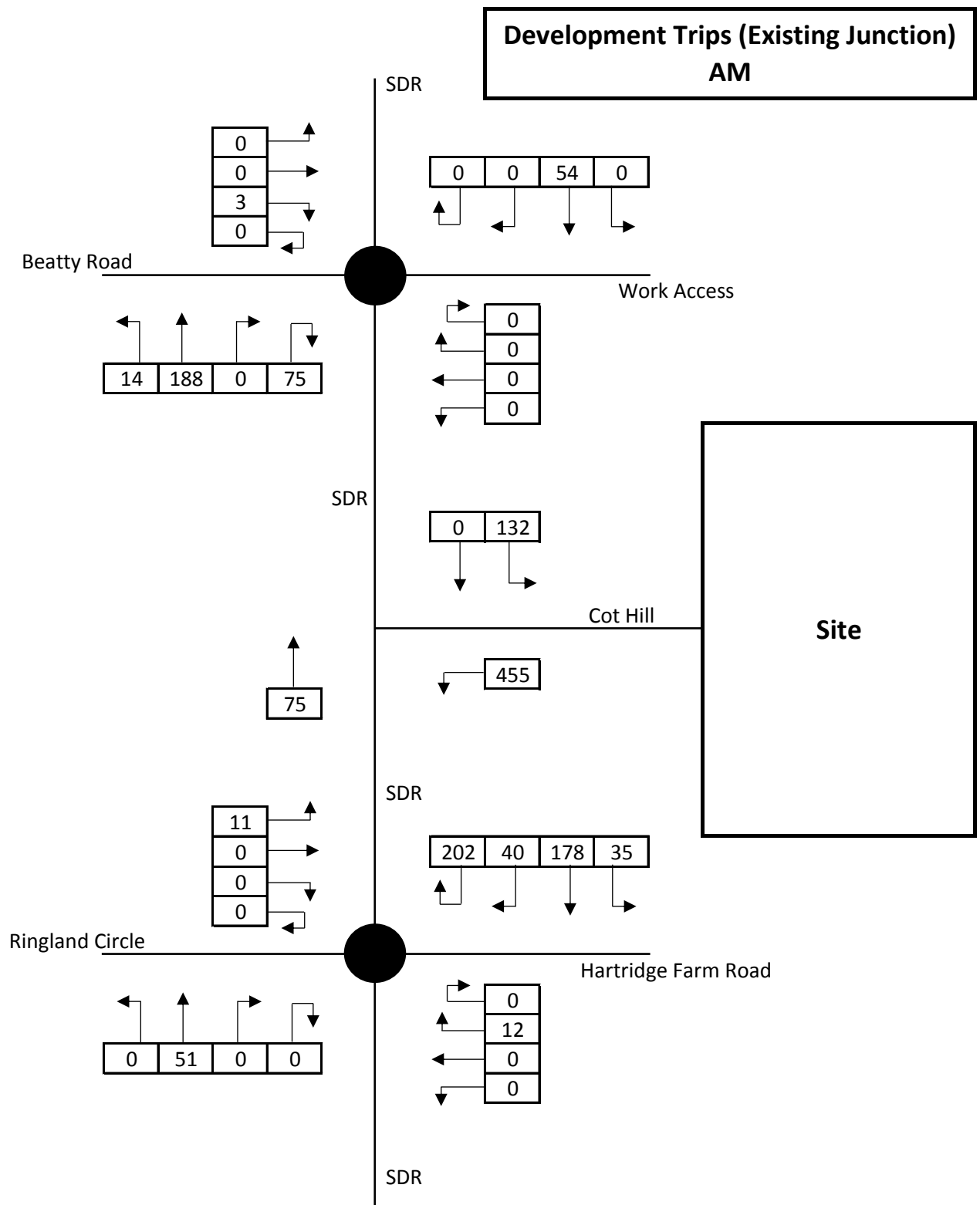


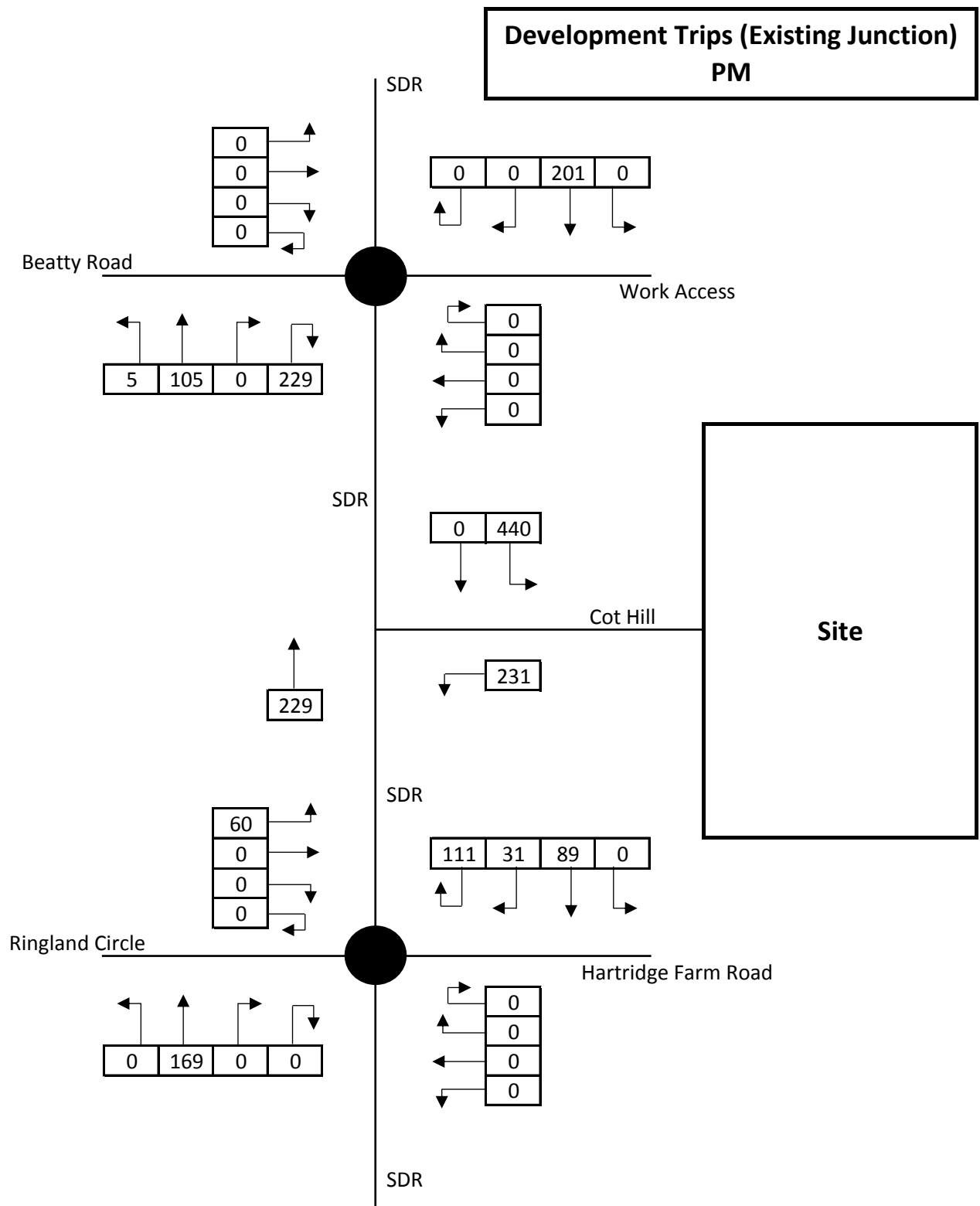
APPENDIX B

Development Trips (Halcrow TA) AM









APPENDIX C

Junctions 9
ARCADY 9 - Roundabout Module
Version: 9.0.0.4211 [] © Copyright TRL Limited, 2018
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Filename: Beatty Road.SDR Roundabout.j9

Path: H:\Projects\W180000\184108 - Llanwern Revised Access\Modelling

Report generation date: 24/07/2018 13:48:25

»2026 (Halcrow TA), AM
 »2026 (Halcrow TA), PM
 »2026 (Halcrow TA) + Development, AM
 »2026 (Halcrow TA) + Development, PM
 »2026 (2018 Survey), AM
 »2026 (2018 Survey), PM
 »2026 (2018 Survey) + Development, AM
 »2026 (2018 Survey) + Development, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2026 (Halcrow TA)								
1 - Beatty Road	0.2	4.06	0.18	A	0.4	6.26	0.26	A
2 - SDR North	2.0	4.53	0.66	A	0.8	2.60	0.43	A
3 - Work Access	0.1	3.35	0.11	A	0.1	2.73	0.10	A
4 - SDR South	0.4	1.87	0.26	A	0.9	2.63	0.47	A
2026 (Halcrow TA) + Development								
1 - Beatty Road	0.3	4.90	0.21	A	0.5	9.29	0.35	A
2 - SDR North	2.4	5.33	0.71	A	1.3	3.65	0.56	A
3 - Work Access	0.1	3.66	0.12	A	0.1	3.53	0.13	A
4 - SDR South	0.6	2.23	0.38	A	1.6	3.62	0.61	A
2026 (2018 Survey)								
1 - Beatty Road	0.1	3.98	0.12	A	0.2	4.90	0.19	A
2 - SDR North	1.1	3.06	0.52	A	0.8	2.70	0.45	A
3 - Work Access	0.0	0.00	0.00	A	0.0	2.68	0.04	A
4 - SDR South	0.5	1.97	0.31	A	0.6	2.25	0.39	A

	2026 (2018 Survey) + Development							
1 - Beatty Road	0.2	4.78	0.14	A	0.3	6.59	0.24	A
2 - SDR North	1.3	3.40	0.56	A	1.4	3.84	0.59	A
3 - Work Access	0.0	0.00	0.00	A	0.0	3.45	0.05	A
4 - SDR South	0.7	2.37	0.43	A	1.1	2.94	0.53	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	(untitled)
Location	
Site number	
Date	28/06/2018
Version	
Status	[no status]
Identifier	
Client	
Jobnumber	
Enumerator	VECTOS"ellen.axon
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

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

Demand Set Summary

Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
2026 (Halcrow TA)	AM	ONE HOUR	07:45	09:15	15	✓
2026 (Halcrow TA)	PM	ONE HOUR	16:45	18:15	15	✓
2026 (Halcrow TA) + Development	AM	ONE HOUR	07:45	09:15	15	✓
2026 (Halcrow TA) +	PM	ONE	16:45	18:15	15	✓

Development		HOUR				
2026 (2018 Survey)	AM	ONE HOUR	07:45	09:15	15	✓
2026 (2018 Survey)	PM	ONE HOUR	16:45	18:15	15	✓
2026 (2018 Survey) + Development	AM	ONE HOUR	07:45	09:15	15	✓
2026 (2018 Survey) + Development	PM	ONE HOUR	16:45	18:15	15	✓

2026 (Halcrow TA), AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

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

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1 - Beatty Road/SDR	Beatty Road/SDR	Standard Roundabout	1,2,3,4	3.73	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Beatty Road	
2	SDR North	
3	Work Access	

4	SDR South	
---	-----------	--

Capacity Options

Arm	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Assume flat start profile	Initial queue (PCU)
1 - Beatty Road	0.00	99999.00		0.00
2 - SDR North	0.00	99999.00		0.00
3 - Work Access	0.00	99999.00		0.00
4 - SDR South	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - Beatty Road	3.10	7.00	7.0	45.0	63.0	22.0	
2 - SDR North	7.00	8.80	5.8	30.0	63.0	20.0	
3 - Work Access	4.50	7.80	23.5	25.0	63.0	18.0	
4 - SDR South	7.50	10.50	6.5	40.0	63.0	26.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Beatty Road	0.511	1438.852
2 - SDR North	0.691	2516.770
3 - Work Access	0.631	2158.975
4 - SDR South	0.725	2740.659

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	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2026 (Halcrow TA)	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Beatty Road		ONE HOUR	✓	179.00	100.000
2 - SDR North		ONE HOUR	✓	1419.00	100.000
3 - Work Access		ONE HOUR	✓	118.00	100.000
4 - SDR South		ONE HOUR	✓	627.00	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
From	1 - Beatty Road	0.000	130.000	20.000	29.000
	2 - SDR North	153.000	0.000	82.000	1184.000
	3 - Work Access	5.000	6.000	0.000	107.000
	4 - SDR South	0.000	465.000	152.000	10.000

Proportions

	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
From	1 - Beatty Road	0.00	0.73	0.11	0.16
	2 - SDR North	0.11	0.00	0.06	0.83
	3 - Work Access	0.04	0.05	0.00	0.91
	4 - SDR South	0.00	0.74	0.24	0.02

Vehicle Mix

Heavy Vehicle proportion

	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
From	1 - Beatty Road	0	0	0	0
	2 - SDR North	0	0	0	0
	3 - Work Access	0	0	0	0
	4 - SDR South	0	0	0	0

Average PCU Per Veh

	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
From	1 - Beatty Road	1.00 0	1.00 0	1.000	1.00 0
	2 - SDR North	1.00 0	1.00 0	1.000	1.00 0
	3 - Work Access	1.00 0	1.00 0	1.000	1.00 0
	4 - SDR South	1.00 0	1.00 0	1.000	1.00 0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Beatty Road	0.18	4.06	0.2	A	164.25	246.38
2 - SDR North	0.66	4.53	2.0	A	1302.10	1953.15
3 - Work Access	0.11	3.35	0.1	A	108.28	162.42
4 - SDR South	0.26	1.87	0.4	A	575.35	863.02

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	134.76	33.69	475.68	1195.99	0.113	134.25	118.60	0.0	0.1	3.388	A
2 - SDR North	1068.30	267.07	158.49	2407.29	0.444	1065.12	451.44	0.0	0.8	2.674	A
3 - Work Access	88.84	22.21	1032.84	1507.54	0.059	88.59	190.78	0.0	0.1	2.537	A
4 - SDR South	472.04	118.01	123.10	2651.39	0.178	471.17	998.32	0.0	0.2	1.651	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	160.92	40.23	568.83	1148.44	0.140	160.77	141.89	0.1	0.2	3.644	A
2 - SDR North	1275.65	318.91	189.59	2385.81	0.535	1274.26	540.01	0.8	1.1	3.234	A
3 - Work Access	106.08	26.52	1235.66	1379.62	0.077	106.00	228.19	0.1	0.1	2.826	A
4 - SDR South	563.66	140.92	147.28	2633.86	0.214	563.44	1194.38	0.2	0.3	1.738	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	197.08	49.27	696.59	1083.21	0.182	196.85	173.61	0.2	0.2	4.060	A
2 - SDR North	1562.35	390.59	232.16	2356.40	0.663	1559.15	661.28	1.1	1.9	4.497	A

3 - Work Access	129.92	32.48	1511.9 5	1205.3 6	0.10 8	129.77	279.36	0.1	0.1	3.34 6	A
4 - SDR South	690.34	172.5 8	180.21	2609.9 8	0.26 5	689.99	1461.5 1	0.3	0.4	1.87 4	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	197.08	49.27	696.94	1083.0 3	0.18 2	197.08	173.96	0.2	0.2	4.06 3	A
2 - SDR North	1562.3 5	390.5 9	232.31	2356.3 0	0.66 3	1562.2 9	661.71	1.9	2.0	4.53 3	A
3 - Work Access	129.92	32.48	1514.9 5	1203.4 7	0.10 8	129.92	279.66	0.1	0.1	3.35 2	A
4 - SDR South	690.34	172.5 8	180.56	2609.7 2	0.26 5	690.34	1464.3 1	0.4	0.4	1.87 4	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	160.92	40.23	569.41	1148.1 4	0.14 0	161.15	142.39	0.2	0.2	3.65 0	A
2 - SDR North	1275.6 5	318.9 1	189.84	2385.6 4	0.53 5	1278.8 3	540.72	2.0	1.2	3.26 3	A
3 - Work Access	106.08	26.52	1240.0 4	1376.8 6	0.07 7	106.23	228.63	0.1	0.1	2.83 2	A
4 - SDR South	563.66	140.9 2	147.79	2633.4 9	0.21 4	564.00	1198.4 7	0.4	0.3	1.73 9	A

Main results: (09:00-09:15)

Arm	Total	Junction	Circulating	Capacity	RFC	Throughput	Throughput	Start	End	Delay	LO
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	Demand (PCU/hr)	Arrivals (PCU)	flow (PCU/hr)	(PCU/hr)		t (PCU/hr)	t (exit side) (PCU/hr)	queu e (PCU)	queu e (PCU)	(s)	S
1 - Beatty Road	134.76	33.69	476.78	1195.4 3	0.11 3	134.91	119.11	0.2	0.1	3.39 6	A
2 - SDR North	1068.3 0	267.0 7	158.95	2406.9 7	0.44 4	1069.7 2	452.74	1.2	0.8	2.69 4	A
3 - Work Acces s	88.84	22.21	1037.2 9	1504.7 3	0.05 9	88.92	191.38	0.1	0.1	2.54 4	A
4 - SDR South	472.04	118.0 1	123.63	2651.0 1	0.17 8	472.26	1002.5 8	0.3	0.2	1.65 4	A

2026 (Halcrow TA), PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

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

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1 - Beatty Road/SDR	Beatty Road/SDR	Standard Roundabout	1,2,3,4	2.91	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2026 (Halcrow TA)	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Beatty Road		ONE HOUR	✓	187.00	100.000
2 - SDR North		ONE HOUR	✓	963.00	100.000
3 - Work Access		ONE HOUR	✓	133.00	100.000
4 - SDR South		ONE HOUR	✓	1083.00	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
From	1 - Beatty Road	0.000	158.000	17.000	12.000
	2 - SDR North	124.000	0.000	9.000	830.000
	3 - Work Access	11.000	91.000	0.000	31.000
	4 - SDR South	4.000	1011.000	35.000	33.000

Proportions

		To			
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
From	1 - Beatty Road	0.00	0.84	0.09	0.06
	2 - SDR North	0.13	0.00	0.01	0.86
	3 - Work Access	0.08	0.68	0.00	0.23
	4 - SDR South	0.00	0.93	0.03	0.03

Vehicle Mix

Heavy Vehicle proportion

	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
From	1 - Beatty Road	0	0	0	0
	2 - SDR North	0	0	0	0
	3 - Work Access	0	0	0	0
	4 - SDR South	0	0	0	0

Average PCU Per Veh

	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
From	1 - Beatty Road	1.00 0	1.00 0	1.000	1.00 0
	2 - SDR North	1.00 0	1.00 0	1.000	1.00 0
	3 - Work Access	1.00 0	1.00 0	1.000	1.00 0
	4 - SDR South	1.00 0	1.00 0	1.000	1.00 0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Beatty Road	0.26	6.26	0.4	A	171.59	257.39
2 - SDR North	0.43	2.60	0.8	A	883.67	1325.50
3 - Work Access	0.10	2.73	0.1	A	122.04	183.06
4 - SDR South	0.47	2.63	0.9	A	993.78	1490.67

Main Results for each time segment

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	140.78	35.20	878.87	990.15	0.142	140.12	104.41	0.0	0.2	4.233	A
2 - SDR North	725.00	181.25	72.81	2466.48	0.294	723.34	946.18	0.0	0.4	2.063	A
3 - Work Access	100.13	25.03	750.36	1685.71	0.059	99.88	45.79	0.0	0.1	2.270	A
4 - SDR South	815.34	203.83	169.74	2617.57	0.311	813.54	680.50	0.0	0.5	1.994	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	168.11	42.03	1051.17	902.18	0.186	167.86	124.88	0.2	0.2	4.901	A
2 - SDR North	865.72	216.43	87.13	2456.59	0.352	865.21	1131.90	0.4	0.5	2.262	A
3 - Work Access	119.56	29.89	897.54	1592.88	0.075	119.49	54.79	0.1	0.1	2.443	A
4 - SDR South	973.59	243.40	203.05	2593.41	0.375	973.00	813.99	0.5	0.6	2.222	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	205.89	51.47	1287.04	781.75	0.263	205.38	152.91	0.2	0.4	6.241	A
2 - SDR North	1060.28	265.07	106.65	2443.10	0.434	1059.40	1385.77	0.5	0.8	2.600	A
3 - Work Acces	146.44	36.61	1098.98	1465.83	0.100	146.32	67.07	0.1	0.1	2.727	A

s											
4 - SDR South	1192.41	298.10	248.63	2560.36	0.466	1191.33	996.67	0.6	0.9	2.627	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	205.89	51.47	1288.18	781.17	0.264	205.88	153.04	0.4	0.4	6.257	A
2 - SDR North	1060.28	265.07	106.80	2443.00	0.434	1060.27	1387.27	0.8	0.8	2.603	A
3 - Work Access	146.44	36.61	1099.91	1465.24	0.100	146.43	67.16	0.1	0.1	2.729	A
4 - SDR South	1192.41	298.10	248.83	2560.22	0.466	1192.40	997.52	0.9	0.9	2.631	A

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	168.11	42.03	1052.95	901.27	0.187	168.61	125.08	0.4	0.2	4.918	A
2 - SDR North	865.72	216.43	87.35	2456.44	0.352	866.59	1134.21	0.8	0.5	2.267	A
3 - Work Access	119.56	29.89	899.01	1591.95	0.075	119.68	54.93	0.1	0.1	2.444	A
4 - SDR South	973.59	243.40	203.37	2593.18	0.375	974.66	815.32	0.9	0.6	2.225	A

Main results: (18:00-18:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	140.78	35.20	881.48	988.81	0.142	141.04	104.72	0.2	0.2	4.247	A

2 - SDR North	725.00	181.25	73.10	2466.27	0.294	725.51	949.42	0.5	0.4	2.068	A
3 - Work Access	100.13	25.03	752.64	1684.27	0.059	100.20	45.97	0.1	0.1	2.272	A
4 - SDR South	815.34	203.83	170.27	2617.19	0.312	815.94	682.58	0.6	0.5	1.999	A

2026 (Halcrow TA) + Development, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

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

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1 - Beatty Road/SDR	Beatty Road/SDR	Standard Roundabout	1,2,3,4	4.18	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2026 (Halcrow TA) + Development	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Beatty Road		ONE HOUR	✓	182.00	100.000
2 - SDR North		ONE HOUR	✓	1473.00	100.000
3 - Work Access		ONE HOUR	✓	118.00	100.000
4 - SDR South		ONE HOUR	✓	904.00	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Beatt y Road	2 - SDR Nort h	3 - Work Acce ss	4 - SDR South
Fro m	1 - Beatt y Road	0.000	130.0 00	20.00 0	32.00 0
	2 - SDR North	153.0 00	0.000	82.00 0	1238. 000
	3 - Work Acce ss	5.000	6.000	0.000	107.0 00
	4 - SDR Sout h	14.00 0	653.0 00	152.0 00	85.00 0

Proportions

	To				
		1 - Beat ty Roa d	2 - SDR Nort h	3 - Work Acce ss	4 - SDR Sout h
Fro m	1 - Beatt y Road	0.00	0.71	0.11	0.18
	2 - SDR North	0.10	0.00	0.06	0.84
	3 - Work Acce ss	0.04	0.05	0.00	0.91
	4 - SDR Sout h	0.02	0.72	0.17	0.09

Vehicle Mix

Heavy Vehicle proportion

	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
From	1 - Beatty Road	0	0	0	0
	2 - SDR North	0	0	0	0
	3 - Work Access	0	0	0	0
	4 - SDR South	0	0	0	0

Average PCU Per Veh

	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
From	1 - Beatty Road	1.00 0	1.00 0	1.000	1.00 0
	2 - SDR North	1.00 0	1.00 0	1.000	1.00 0
	3 - Work Access	1.00 0	1.00 0	1.000	1.00 0
	4 - SDR South	1.00 0	1.00 0	1.000	1.00 0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Beatty Road	0.21	4.90	0.3	A	167.01	250.51
2 - SDR North	0.71	5.33	2.4	A	1351.65	2027.48
3 - Work Access	0.12	3.66	0.1	A	108.28	162.42
4 - SDR South	0.38	2.23	0.6	A	829.53	1244.29

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	137.02	34.25	673.19	1095.16	0.125	136.45	129.09	0.0	0.1	3.753	A
2 - SDR North	1108.95	277.24	217.05	2366.84	0.469	1105.45	592.59	0.0	0.9	2.845	A
3 - Work Access	88.84	22.21	1131.76	1445.15	0.061	88.58	190.74	0.0	0.1	2.653	A
4 - SDR South	680.58	170.14	123.08	2651.41	0.257	679.20	1097.26	0.0	0.3	1.825	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	163.61	40.90	805.09	1027.82	0.159	163.43	154.44	0.1	0.2	4.163	A
2 - SDR North	1324.20	331.05	259.65	2337.42	0.567	1322.52	708.87	0.9	1.3	3.541	A
3 - Work Access	106.08	26.52	1354.01	1304.98	0.081	105.99	228.16	0.1	0.1	3.002	A
4 - SDR South	812.68	203.17	147.25	2633.88	0.309	812.28	1312.75	0.3	0.4	1.976	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	200.39	50.10	985.84	935.53	0.214	200.06	188.92	0.2	0.3	4.892	A
2 - SDR North	1621.80	405.45	317.92	2297.16	0.706	1617.56	867.97	1.3	2.4	5.265	A

3 - Work Access	129.92	32.48	1656.2 1	1114.3 7	0.11 7	129.75	279.27	0.1	0.1	3.65 5	A
4 - SDR South	995.32	248.8 3	180.11	2610.0 5	0.38 1	994.65	1605.8 5	0.4	0.6	2.22 7	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	200.39	50.10	986.51	935.19	0.21 4	200.38	189.37	0.3	0.3	4.89 8	A
2 - SDR North	1621.8 0	405.4 5	318.19	2296.9 8	0.70 6	1621.7 1	868.70	2.4	2.4	5.32 9	A
3 - Work Access	129.92	32.48	1660.2 5	1111.8 2	0.11 7	129.92	279.65	0.1	0.1	3.66 5	A
4 - SDR South	995.32	248.8 3	180.56	2609.7 2	0.38 1	995.32	1609.6 1	0.6	0.6	2.22 9	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	163.61	40.90	806.15	1027.2 7	0.15 9	163.94	155.08	0.3	0.2	4.17 1	A
2 - SDR North	1324.2 0	331.0 5	260.07	2337.1 2	0.56 7	1328.4 3	710.02	2.4	1.3	3.58 2	A
3 - Work Access	106.08	26.52	1359.7 8	1301.3 3	0.08 2	106.25	228.73	0.1	0.1	3.01 4	A
4 - SDR South	812.68	203.1 7	147.89	2633.4 1	0.30 9	813.35	1318.1 4	0.6	0.4	1.97 8	A

Main results: (09:00-09:15)

Arm	Total	Junction	Circulating	Capacity	RFC	Throughput	Throughput	Start	End	Delay	LO
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	Demand (PCU/hr)	Arrivals (PCU)	flow (PCU/hr)	(PCU/hr)		t (PCU/hr)	t (exit side) (PCU/hr)	queu e (PCU)	queu e (PCU)	(s)	S
1 - Beatty Road	137.02	34.25	674.96	1094.2 5	0.12 5	137.21	129.68	0.2	0.1	3.76 1	A
2 - SDR North	1108.9 5	277.2 4	217.73	2366.3 7	0.46 9	1110.6 8	594.43	1.3	0.9	2.87 2	A
3 - Work Acces s	88.84	22.21	1137.0 0	1441.8 4	0.06 2	88.93	191.41	0.1	0.1	2.66 2	A
4 - SDR South	680.58	170.1 4	123.66	2650.9 9	0.25 7	680.98	1102.2 8	0.4	0.3	1.82 6	A

2026 (Halcrow TA) + Development, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

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

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1 - Beatty Road/SDR	Beatty Road/SDR	Standard Roundabout	1,2,3,4	3.99	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2026 (Halcrow TA) + Development	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Beatty Road		ONE HOUR	✓	187.00	100.000
2 - SDR North		ONE HOUR	✓	1164.00	100.000
3 - Work Access		ONE HOUR	✓	133.00	100.000
4 - SDR South		ONE HOUR	✓	1422.00	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
From	1 - Beatty Road	0.000	158.000	17.000	12.000
	2 - SDR North	124.000	0.000	9.000	1031.000
	3 - Work Access	11.000	91.000	0.000	31.000
	4 - SDR South	9.000	1116.000	35.000	262.000

Proportions

		To			
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
From	1 - Beatty Road	0.00	0.84	0.09	0.06
	2 - SDR North	0.11	0.00	0.01	0.89
	3 - Work Access	0.08	0.68	0.00	0.23
	4 - SDR South	0.01	0.78	0.02	0.18

Vehicle Mix

Heavy Vehicle proportion

	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	0	0	0
	2 - SDR North	0	0	0	0
	3 - Work Access	0	0	0	0
	4 - SDR South	0	0	0	0

Average PCU Per Veh

	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	1.00 0	1.00 0	1.000	1.00 0
	2 - SDR North	1.00 0	1.00 0	1.000	1.00 0
	3 - Work Access	1.00 0	1.00 0	1.000	1.00 0
	4 - SDR South	1.00 0	1.00 0	1.000	1.00 0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Beatty Road	0.35	9.29	0.5	A	171.59	257.39
2 - SDR North	0.56	3.65	1.3	A	1068.11	1602.16
3 - Work Access	0.13	3.53	0.1	A	122.04	183.06
4 - SDR South	0.61	3.62	1.6	A	1304.85	1957.28

Main Results for each time segment

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	140.78	35.20	1129.35	862.26	0.163	140.01	108.12	0.0	0.2	4.979	A
2 - SDR North	876.32	219.08	244.73	2347.72	0.373	873.95	1024.63	0.0	0.6	2.438	A
3 - Work Access	100.13	25.03	1072.91	1482.27	0.068	99.84	45.77	0.0	0.1	2.604	A
4 - SDR South	1070.56	267.64	169.67	2617.62	0.409	1067.80	1003.09	0.0	0.7	2.319	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	168.11	42.03	1350.90	749.15	0.224	167.74	129.34	0.2	0.3	6.187	A
2 - SDR North	1046.41	261.60	292.78	2314.53	0.452	1045.50	1225.85	0.6	0.8	2.836	A
3 - Work Access	119.56	29.89	1283.51	1349.44	0.089	119.47	54.77	0.1	0.1	2.926	A
4 - SDR South	1278.35	319.59	203.00	2593.45	0.493	1277.24	1199.98	0.7	1.0	2.732	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	205.89	51.47	1653.46	594.68	0.346	204.95	158.32	0.3	0.5	9.215	A
2 - SDR North	1281.59	320.40	358.29	2269.28	0.565	1279.73	1500.12	0.8	1.3	3.632	A

3 - Work Access	146.44	36.61	1571.0 2	1168.1 0	0.12 5	146.25	67.00	0.1	0.1	3.52 2	A
4 - SDR South	1565.6 5	391.4 1	248.49	2560.4 6	0.61 1	1563.2 8	1468.7 8	1.0	1.6	3.60 0	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	205.89	51.47	1655.9 0	593.43	0.34 7	205.87	158.54	0.5	0.5	9.28 8	A
2 - SDR North	1281.5 9	320.4 0	358.92	2268.8 4	0.56 5	1281.5 6	1502.8 5	1.3	1.3	3.64 5	A
3 - Work Access	146.44	36.61	1573.3 3	1166.6 5	0.12 6	146.43	67.16	0.1	0.1	3.52 7	A
4 - SDR South	1565.6 5	391.4 1	248.83	2560.2 2	0.61 2	1565.6 2	1470.9 3	1.6	1.6	3.61 8	A

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	168.11	42.03	1354.5 3	747.30	0.22 5	169.05	129.68	0.5	0.3	6.23 4	A
2 - SDR North	1046.4 1	261.6 0	293.70	2313.8 9	0.45 2	1048.2 6	1229.8 7	1.3	0.8	2.84 7	A
3 - Work Access	119.56	29.89	1286.9 7	1347.2 6	0.08 9	119.75	55.00	0.1	0.1	2.93 2	A
4 - SDR South	1278.3 5	319.5 9	203.51	2593.0 8	0.49 3	1280.7 0	1203.2 1	1.6	1.0	2.74 9	A

Main results: (18:00-18:15)

Arm	Total	Junction	Circulating	Capacity	RFC	Throughput	Throughput	Start	End	Delay	LO
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	Demand (PCU/hr)	Arrivals (PCU)	flow (PCU/hr)	(PCU/hr)		t (PCU/hr)	t (exit side) (PCU/hr)	queue (PCU)	queue (PCU)	(s)	S
1 - Beatty Road	140.78	35.20	1133.4 8	860.15	0.16 4	141.17	108.52	0.3	0.2	5.01 1	A
2 - SDR North	876.32	219.0 8	245.73	2347.0 3	0.37 3	877.25	1028.9 2	0.8	0.6	2.45 0	A
3 - Work Access s	100.13	25.03	1076.9 8	1479.7 0	0.06 8	100.23	45.99	0.1	0.1	2.61 1	A
4 - SDR South	1070.5 6	267.6 4	170.32	2617.1 5	0.40 9	1071.6 9	1006.8 9	1.0	0.7	2.33 0	A

2026 (2018 Survey), AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

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

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1 - Beatty Road/SDR	Beatty Road/SDR	Standard Roundabout	1,2,3,4	2.71	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2026 (2018 Survey)	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Beatty Road		ONE HOUR	✓	111.00	100.000
2 - SDR North		ONE HOUR	✓	1171.00	100.000
3 - Work Access		ONE HOUR	✓	3.00	100.000
4 - SDR South		ONE HOUR	✓	757.00	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Beatt y Road	2 - SDR Nort h	3 - Work Acce ss	4 - SDR South
Fro m	1 - Beatt y Road	0.000	53.00 0	8.000	50.00 0
	2 - SDR North	101.0 00	0.000	37.00 0	1033. 000
	3 - Work Acce ss	1.000	1.000	0.000	1.000
	4 - SDR Sout h	23.00 0	724.0 00	6.000	4.000

Proportions

		To			
		1 - Beat ty Roa d	2 - SDR Nort h	3 - Work Acce ss	4 - SDR Sout h
Fro m	1 - Beatt y Road	0.00	0.48	0.07	0.45
	2 - SDR North	0.09	0.00	0.03	0.88
	3 - Work Acce ss	0.33	0.33	0.00	0.33
	4 - SDR Sout h	0.03	0.96	0.01	0.01

Vehicle Mix

Heavy Vehicle proportion

	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
From	1 - Beatty Road	0	0	0	0
	2 - SDR North	0	0	0	0
	3 - Work Access	0	0	0	0
	4 - SDR South	0	0	0	0

Average PCU Per Veh

	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
From	1 - Beatty Road	1.00 0	1.00 0	1.000	1.00 0
	2 - SDR North	1.00 0	1.00 0	1.000	1.00 0
	3 - Work Access	1.00 0	1.00 0	1.000	1.00 0
	4 - SDR South	1.00 0	1.00 0	1.000	1.00 0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Beatty Road	0.12	3.98	0.1	A	101.86	152.78
2 - SDR North	0.52	3.06	1.1	A	1074.53	1611.80
3 - Work Access	0.00	0.00	0.0	A	0.00	0.00
4 - SDR South	0.31	1.97	0.5	A	694.64	1041.95

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	83.57	20.89	551.55	1157.26	0.072	83.26	93.13	0.0	0.1	3.352	A
2 - SDR North	881.59	220.40	51.02	2481.53	0.355	879.39	583.79	0.0	0.5	2.244	A
3 - Work Access	0.00	0.00	892.12	1596.30	0.000	0.00	38.30	0.0	0.0	0.000	A
4 - SDR South	569.91	142.48	75.85	2685.66	0.212	568.83	816.27	0.0	0.3	1.700	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	99.79	24.95	659.57	1102.11	0.091	99.70	111.40	0.1	0.1	3.590	A
2 - SDR North	1052.70	263.18	61.08	2474.58	0.425	1051.95	698.19	0.5	0.7	2.529	A
3 - Work Accesses	0.00	0.00	1067.22	1485.86	0.000	0.00	45.82	0.0	0.0	0.000	A
4 - SDR South	680.53	170.13	90.73	2674.86	0.254	680.24	976.49	0.3	0.3	1.804	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	122.21	30.55	807.70	1026.48	0.119	122.07	136.39	0.1	0.1	3.980	A
2 - SDR North	1289.30	322.32	74.79	2465.11	0.523	1287.89	854.99	0.7	1.1	3.053	A
3 -	0.00	0.00	1306.5	1334.8	0.00	0.00	56.09	0.0	0.0	0.00	A

Work Acces s			8	9	0					0	
4 - SDR South	833.47	208.3 7	111.08	2660.1 1	0.31 3	833.01	1195.5 0	0.3	0.5	1.97 0	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	122.21	30.55	808.15	1026.2 5	0.11 9	122.21	136.53	0.1	0.1	3.98 1	A
2 - SDR North	1289.3 0	322.3 2	74.87	2465.0 5	0.52 3	1289.2 8	855.49	1.1	1.1	3.06 1	A
3 - Work Acces s	0.00	0.00	1308.0 0	1334.0 0	0.00 0	0.00	56.15	0.0	0.0	0.00 0	A
4 - SDR South	833.47	208.3 7	111.20	2660.0 2	0.31 3	833.47	1196.8 0	0.5	0.5	1.97 0	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	99.79	24.95	660.29	1101.7 4	0.09 1	99.93	111.61	0.1	0.1	3.59 3	A
2 - SDR North	1052.7 0	263.1 8	61.21	2474.4 9	0.42 5	1054.1 0	699.01	1.1	0.7	2.53 6	A
3 - Work Acces s	0.00	0.00	1069.4 0	1484.4 8	0.00 0	0.00	45.91	0.0	0.0	0.00 0	A
4 - SDR South	680.53	170.1 3	90.92	2674.7 3	0.25 4	680.98	978.49	0.5	0.3	1.80 5	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
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1 - Beatty Road	83.57	20.89	552.87	1156.58	0.072	83.65	93.43	0.1	0.1	3.354	A
2 - SDR North	881.59	220.40	51.24	2481.37	0.355	882.35	585.28	0.7	0.6	2.252	A
3 - Work Access	0.00	0.00	895.17	1594.37	0.000	0.00	38.43	0.0	0.0	0.000	A
4 - SDR South	569.91	142.48	76.10	2685.47	0.212	570.20	819.06	0.3	0.3	1.703	A

2026 (2018 Survey), PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

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

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1 - Beatty Road/SDR	Beatty Road/SDR	Standard Roundabout	1,2,3,4	2.67	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2026 (2018 Survey)	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Beatty Road		ONE HOUR	✓	159.00	100.000
2 - SDR North		ONE HOUR	✓	999.00	100.000
3 - Work Access		ONE HOUR	✓	46.00	100.000
4 - SDR South		ONE HOUR	✓	919.00	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0.000	64.00 0	1.000	94.00 0
	2 - SDR North	126.0 00	0.000	6.000	867.0 00
	3 - Work Access	4.000	34.00 0	0.000	8.000
	4 - SDR South	11.00 0	891.0 00	1.000	16.00 0

Proportions

From	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0.00	0.40	0.01	0.59
	2 - SDR North	0.13	0.00	0.01	0.87
	3 - Work Access	0.09	0.74	0.00	0.17
	4 - SDR South	0.01	0.97	0.00	0.02

Vehicle Mix

Heavy Vehicle proportion

	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
From	1 - Beatty Road	0	0	0	0
	2 - SDR North	0	0	0	0
	3 - Work Access	0	0	0	0
	4 - SDR South	0	0	0	0

Average PCU Per Veh

	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
From	1 - Beatty Road	1.00 0	1.00 0	1.000	1.00 0
	2 - SDR North	1.00 0	1.00 0	1.000	1.00 0
	3 - Work Access	1.00 0	1.00 0	1.000	1.00 0
	4 - SDR South	1.00 0	1.00 0	1.000	1.00 0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Beatty Road	0.19	4.90	0.2	A	145.90	218.85
2 - SDR North	0.45	2.70	0.8	A	916.70	1375.05
3 - Work Access	0.04	2.68	0.0	A	42.21	63.32
4 - SDR South	0.39	2.25	0.6	A	843.29	1264.94

Main Results for each time segment

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	119.70	29.93	707.73	1077.52	0.111	119.21	105.91	0.0	0.1	3.754	A
2 - SDR North	752.10	188.02	84.00	2458.75	0.306	750.34	742.94	0.0	0.4	2.105	A
3 - Work Access	34.63	8.66	828.33	1636.53	0.021	34.54	6.01	0.0	0.0	2.246	A
4 - SDR South	691.87	172.97	123.17	2651.34	0.261	690.46	739.70	0.0	0.4	1.836	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	142.94	35.73	846.41	1006.72	0.142	142.78	126.68	0.1	0.2	4.167	A
2 - SDR North	898.08	224.52	100.58	2447.29	0.367	897.53	888.61	0.4	0.6	2.323	A
3 - Work Access	41.35	10.34	990.92	1533.98	0.027	41.33	7.19	0.0	0.0	2.411	A
4 - SDR South	826.16	206.54	147.34	2633.81	0.314	825.75	884.91	0.4	0.5	1.991	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	175.06	43.77	1036.44	909.70	0.192	174.77	155.11	0.2	0.2	4.895	A
2 - SDR North	1099.92	274.98	123.13	2431.72	0.452	1098.94	1088.08	0.6	0.8	2.700	A
3 - Work Acces	50.65	12.66	1213.27	1393.74	0.036	50.61	8.80	0.0	0.0	2.679	A

s											
4 - SDR South	1011.8 4	252.9 6	180.41	2609.8 3	0.38 8	1011.1 4	1083.4 7	0.5	0.6	2.25 0	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	175.06	43.77	1037.1 6	909.33	0.19 3	175.06	155.24	0.2	0.2	4.90 2	A
2 - SDR North	1099.9 2	274.9 8	123.31	2431.5 9	0.45 2	1099.9 1	1088.9 0	0.8	0.8	2.70 2	A
3 - Work Access	50.65	12.66	1214.4 1	1393.0 2	0.03 6	50.65	8.81	0.0	0.0	2.68 1	A
4 - SDR South	1011.8 4	252.9 6	180.57	2609.7 2	0.38 8	1011.8 3	1084.5 0	0.6	0.6	2.25 2	A

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	142.94	35.73	847.55	1006.13	0.142	143.22	126.89	0.2	0.2	4.174	A
2 - SDR North	898.08	224.52	100.87	2447.09	0.367	899.05	889.91	0.8	0.6	2.326	A
3 - Work Access	41.35	10.34	992.72	1532.85	0.027	41.39	7.20	0.0	0.0	2.415	A
4 - SDR South	826.16	206.54	147.59	2633.63	0.314	826.86	886.52	0.6	0.5	1.992	A

Main results: (18:00-18:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	119.70	29.93	709.62	1076.56	0.111	119.87	106.23	0.2	0.1	3.762	A

2 - SDR North	752.10	188.02	84.42	2458.45	0.306	752.66	745.06	0.6	0.4	2.110	A
3 - Work Access	34.63	8.66	831.06	1634.81	0.021	34.66	6.03	0.0	0.0	2.249	A
4 - SDR South	691.87	172.97	123.56	2651.06	0.261	692.29	742.15	0.5	0.4	1.837	A

2026 (2018 Survey) + Development, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

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

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1 - Beatty Road/SDR	Beatty Road/SDR	Standard Roundabout	1,2,3,4	3.02	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2026 (2018 Survey) + Development	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Beatty Road		ONE HOUR	✓	114.00	100.000
2 - SDR North		ONE HOUR	✓	1225.00	100.000
3 - Work Access		ONE HOUR	✓	3.00	100.000
4 - SDR South		ONE HOUR	✓	1034.00	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Beatt y Road	2 - SDR Nort h	3 - Work Acce ss	4 - SDR South
Fro m	1 - Beatt y Road	0.000	53.00 0	8.000	53.00 0
	2 - SDR North	101.0 00	0.000	37.00 0	1087. 000
	3 - Work Acce ss	1.000	1.000	0.000	1.000
	4 - SDR Sout h	37.00 0	912.0 00	6.000	79.00 0

Proportions

		To			
		1 - Beat ty Roa d	2 - SDR Nort h	3 - Work Acce ss	4 - SDR Sout h
Fro m	1 - Beatt y Road	0.00	0.46	0.07	0.46
	2 - SDR North	0.08	0.00	0.03	0.89
	3 - Work Acce ss	0.33	0.33	0.00	0.33
	4 - SDR Sout h	0.04	0.88	0.01	0.08

Vehicle Mix

Heavy Vehicle proportion

	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
From	1 - Beatty Road	0	0	0	0
	2 - SDR North	0	0	0	0
	3 - Work Access	0	0	0	0
	4 - SDR South	0	0	0	0

Average PCU Per Veh

	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
From	1 - Beatty Road	1.00 0	1.00 0	1.000	1.00 0
	2 - SDR North	1.00 0	1.00 0	1.000	1.00 0
	3 - Work Access	1.00 0	1.00 0	1.000	1.00 0
	4 - SDR South	1.00 0	1.00 0	1.000	1.00 0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Beatty Road	0.14	4.78	0.2	A	104.61	156.91
2 - SDR North	0.56	3.40	1.3	A	1124.08	1686.12
3 - Work Access	0.00	0.00	0.0	A	0.00	0.00
4 - SDR South	0.43	2.37	0.7	A	948.82	1423.22

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	85.83	21.46	749.02	1056.44	0.081	85.47	103.64	0.0	0.1	3.708	A
2 - SDR North	922.24	230.56	109.59	2441.07	0.378	919.83	724.90	0.0	0.6	2.362	A
3 - Work Access	0.00	0.00	991.13	1533.85	0.000	0.00	38.29	0.0	0.0	0.000	A
4 - SDR South	778.45	194.61	75.84	2685.66	0.290	776.82	915.29	0.0	0.4	1.883	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	102.48	25.62	895.81	981.50	0.104	102.37	123.97	0.1	0.1	4.095	A
2 - SDR North	1101.25	275.31	131.15	2426.18	0.454	1100.36	867.03	0.6	0.8	2.714	A
3 - Work Access	0.00	0.00	1185.70	1411.13	0.000	0.00	45.81	0.0	0.0	0.000	A
4 - SDR South	929.54	232.39	90.72	2674.87	0.348	929.05	1094.98	0.4	0.5	2.062	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	125.52	31.38	1096.89	878.83	0.143	125.32	151.77	0.1	0.2	4.776	A
2 - SDR North	1348.75	337.19	160.57	2405.85	0.561	1347.00	1061.64	0.8	1.3	3.394	A
3 -	0.00	0.00	1451.4	1243.4	0.00	0.00	56.08	0.0	0.0	0.00	A

Work Access			9	9	0					0	
4 - SDR South	1138.4 6	284.6 1	111.06	2660.1 2	0.42 8	1137.6 0	1340.4 3	0.5	0.7	2.36 3	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	125.52	31.38	1097.7 1	878.42	0.14 3	125.51	151.94	0.2	0.2	4.78 1	A
2 - SDR North	1348.7 5	337.1 9	160.75	2405.7 3	0.56 1	1348.7 3	1062.4 8	1.3	1.3	3.40 5	A
3 - Work Access	0.00	0.00	1453.3 2	1242.3 3	0.00 0	0.00	56.15	0.0	0.0	0.00 0	A
4 - SDR South	1138.4 6	284.6 1	111.20	2660.0 2	0.42 8	1138.4 5	1342.1 2	0.7	0.7	2.36 5	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	102.48	25.62	897.10	980.84	0.10 4	102.68	124.23	0.2	0.1	4.10 0	A
2 - SDR North	1101.2 5	275.3 1	131.43	2425.9 9	0.45 4	1102.9 9	868.35	1.3	0.8	2.72 6	A
3 - Work Access	0.00	0.00	1188.5 0	1409.3 7	0.00 0	0.00	45.92	0.0	0.0	0.00 0	A
4 - SDR South	929.54	232.3 9	90.94	2674.7 1	0.34 8	930.39	1097.5 5	0.7	0.5	2.06 4	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
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1 - Beatty Road	85.83	21.46	751.08	1055.39	0.081	85.94	103.99	0.1	0.1	3.712	A
2 - SDR North	922.24	230.56	110.02	2440.77	0.378	923.15	727.00	0.8	0.6	2.373	A
3 - Work Access	0.00	0.00	994.73	1531.58	0.000	0.00	38.43	0.0	0.0	0.000	A
4 - SDR South	778.45	194.61	76.11	2685.46	0.290	778.95	918.62	0.5	0.4	1.887	A

2026 (2018 Survey) + Development, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

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

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1 - Beatty Road/SDR	Beatty Road/SDR	Standard Roundabout	1,2,3,4	3.57	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2026 (2018 Survey) + Development	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Beatty Road		ONE HOUR	✓	159.00	100.000
2 - SDR North		ONE HOUR	✓	1200.00	100.000
3 - Work Access		ONE HOUR	✓	46.00	100.000
4 - SDR South		ONE HOUR	✓	1258.00	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Beatt y Road	2 - SDR Nort h	3 - Work Acce ss	4 - SDR South
Fro m	1 - Beatt y Road	0.000	64.00 0	1.000	94.00 0
	2 - SDR North	126.0 00	0.000	6.000	1068. 000
	3 - Work Acce ss	4.000	34.00 0	0.000	8.000
	4 - SDR Sout h	16.00 0	996.0 00	1.000	245.0 00

Proportions

		To			
		1 - Beat ty Roa d	2 - SDR Nort h	3 - Work Acce ss	4 - SDR Sout h
Fro m	1 - Beatt y Road	0.00	0.40	0.01	0.59
	2 - SDR North	0.11	0.00	0.01	0.89
	3 - Work Acce ss	0.09	0.74	0.00	0.17
	4 - SDR Sout h	0.01	0.79	0.00	0.19

Vehicle Mix

Heavy Vehicle proportion

	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	0	0	0
	2 - SDR North	0	0	0	0
	3 - Work Access	0	0	0	0
	4 - SDR South	0	0	0	0

Average PCU Per Veh

	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	1.00 0	1.00 0	1.000	1.00 0
	2 - SDR North	1.00 0	1.00 0	1.000	1.00 0
	3 - Work Access	1.00 0	1.00 0	1.000	1.00 0
	4 - SDR South	1.00 0	1.00 0	1.000	1.00 0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Beatty Road	0.24	6.59	0.3	A	145.90	218.85
2 - SDR North	0.59	3.84	1.4	A	1101.14	1651.71
3 - Work Access	0.05	3.45	0.0	A	42.21	63.32
4 - SDR South	0.53	2.94	1.1	A	1154.36	1731.54

Main Results for each time segment

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	119.70	29.93	958.38	949.55	0.126	119.13	109.62	0.0	0.1	4.332	A
2 - SDR North	903.42	225.86	255.95	2339.97	0.386	900.92	821.56	0.0	0.6	2.497	A
3 - Work Access	34.63	8.66	1150.86	1433.10	0.024	34.53	6.00	0.0	0.0	2.573	A
4 - SDR South	947.09	236.77	123.12	2651.37	0.357	944.87	1062.27	0.0	0.6	2.107	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	142.94	35.73	1146.30	853.61	0.167	142.71	131.13	0.1	0.2	5.063	A
2 - SDR North	1078.78	269.69	306.26	2305.22	0.468	1077.78	982.75	0.6	0.9	2.930	A
3 - Work Access	41.35	10.34	1376.86	1290.56	0.032	41.32	7.18	0.0	0.0	2.881	A
4 - SDR South	1130.92	282.73	147.30	2633.84	0.429	1130.13	1270.88	0.6	0.7	2.393	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	175.06	43.77	1403.38	722.36	0.242	174.59	160.51	0.2	0.3	6.566	A
2 - SDR North	1321.22	330.31	374.88	2257.82	0.585	1319.14	1203.10	0.9	1.4	3.826	A
3 -	50.65	12.66	1685.2	1096.0	0.04	50.59	8.79	0.0	0.0	3.44	A

Work Acces s			2	7	6					2	
4 - SDR South	1385.0 8	346.2 7	180.30	2609.9 1	0.53 1	1383.5 9	1555.5 1	0.7	1.1	2.93 1	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	175.06	43.77	1404.8 9	721.59	0.24 3	175.05	160.75	0.3	0.3	6.58 6	A
2 - SDR North	1321.2 2	330.3 1	375.44	2257.4 3	0.58 5	1321.2 0	1204.5 0	1.4	1.4	3.84 5	A
3 - Work Acces s	50.65	12.66	1687.8 3	1094.4 3	0.04 6	50.65	8.81	0.0	0.0	3.44 8	A
4 - SDR South	1385.0 8	346.2 7	180.56	2609.7 2	0.53 1	1385.0 7	1557.9 1	1.1	1.1	2.93 9	A

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - Beatty Road	142.94	35.73	1148.6 1	852.43	0.16 8	143.40	131.49	0.3	0.2	5.08 2	A
2 - SDR North	1078.7 8	269.6 9	307.12	2304.6 2	0.46 8	1080.8 5	984.89	1.4	0.9	2.94 8	A
3 - Work Acces s	41.35	10.34	1380.7 6	1288.1 0	0.03 2	41.41	7.21	0.0	0.0	2.88 9	A
4 - SDR South	1130.9 2	282.7 3	147.70	2633.5 5	0.42 9	1132.4 0	1274.4 8	1.1	0.8	2.40 1	A

Main results: (18:00-18:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
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1 - Beatty Road	119.70	29.93	961.45	947.98	0.126	119.93	110.04	0.2	0.1	4.348	A
2 - SDR North	903.42	225.86	257.02	2339.23	0.386	904.44	824.37	0.9	0.6	2.510	A
3 - Work Access	34.63	8.66	1155.42	1430.23	0.024	34.66	6.03	0.0	0.0	2.579	A
4 - SDR South	947.09	236.77	123.60	2651.03	0.357	947.88	1066.48	0.8	0.6	2.116	A

Junctions 9
ARCADY 9 - Roundabout Module
Version: 9.0.0.4211 [] © Copyright TRL Limited, 2018
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Filename: Ringland Cirlce.SDR Roundabout.j9

Path: H:\Projects\W180000\184108 - Llanwern Revised Access\Modelling

Report generation date: 24/07/2018 13:45:24

»2026 (Halcrow TA), AM
 »2026 (Halcrow TA), PM
 »2026 (Halcrow TA) + Development, AM
 »2026 (Halcrow TA) + Development, PM
 »2026 (2018 Survey), AM
 »2026 (2018 Survey), PM
 »2026 (2018 Survey) + Development, AM
 »2026 (2018 Survey) + Development, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2026 (Halcrow TA)							
1 - SDR North	2.6	5.46	0.72	A	0.7	2.42	0.42	A
2 - Hartridge Farm Road	0.2	4.48	0.19	A	0.3	3.91	0.24	A
3 - SDR South	1.0	2.69	0.50	A	1.8	3.74	0.64	A
4 - Ringland Circle	0.3	4.25	0.21	A	0.5	5.52	0.35	A
	2026 (Halcrow TA) + Development							
1 - SDR North	12.1	20.74	0.93	C	1.1	2.92	0.52	A
2 - Hartridge Farm Road	0.4	6.58	0.26	A	0.4	4.58	0.28	A
3 - SDR South	1.3	3.31	0.56	A	2.8	5.38	0.74	A
4 - Ringland Circle	0.3	5.19	0.26	A	1.0	8.24	0.49	A
	2026 (2018 Survey)							
1 - SDR North	0.9	2.66	0.47	A	0.6	2.16	0.39	A
2 - Hartridge Farm Road	0.3	4.18	0.26	A	0.0	2.92	0.05	A
3 - SDR South	0.7	2.26	0.40	A	0.9	2.57	0.48	A
4 - Ringland Circle	0.7	4.96	0.41	A	0.3	3.98	0.23	A

	2026 (2018 Survey) + Development							
1 - SDR North	2.0	4.23	0.67	A	0.9	2.55	0.48	A
2 - Hartridge Farm Road	0.5	5.99	0.34	A	0.1	3.28	0.05	A
3 - SDR South	0.8	2.69	0.45	A	1.3	3.25	0.57	A
4 - Ringland Circle	0.9	6.29	0.47	A	0.5	5.23	0.33	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	(untitled)
Location	
Site number	
Date	28/06/2018
Version	
Status	[no status]
Identifier	
Client	
Jobnumber	
Enumerator	VECTOS"ellen.axon
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

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

Demand Set Summary

Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
2026 (Halcrow TA)	AM	ONE HOUR	07:45	09:15	15	✓
2026 (Halcrow TA)	PM	ONE HOUR	16:45	18:15	15	✓
2026 (Halcrow TA) + Development	AM	ONE HOUR	07:45	09:15	15	✓
2026 (Halcrow TA) +	PM	ONE	16:45	18:15	15	✓

Development		HOUR				
2026 (2018 Survey)	AM	ONE HOUR	07:45	09:15	15	✓
2026 (2018 Survey)	PM	ONE HOUR	16:45	18:15	15	✓
2026 (2018 Survey) + Development	AM	ONE HOUR	07:45	09:15	15	✓
2026 (2018 Survey) + Development	PM	ONE HOUR	16:45	18:15	15	✓

2026 (Halcrow TA), AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

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

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1 - Ringland Circle/A48	Ringland Circle/A48	Standard Roundabout	1,2,3,4	4.26	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	SDR North	
2	Hartridge Farm Road	
3	SDR South	

4	Ringland Circle	
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Capacity Options

Arm	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Assume flat start profile	Initial queue (PCU)
1 - SDR North	0.00	99999.00		0.00
2 - Hartridge Farm Road	0.00	99999.00		0.00
3 - SDR South	0.00	99999.00		0.00
4 - Ringland Circle	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - SDR North	7.30	10.00	21.8	50.0	71.0	23.0	
2 - Hartridge Farm Road	6.30	6.80	1.8	15.0	71.0	32.0	
3 - SDR South	7.20	10.60	6.0	45.0	71.0	12.0	
4 - Ringland Circle	4.00	7.00	15.0	15.0	71.0	40.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - SDR North	0.709	2947.839
2 - Hartridge Farm Road	0.534	1942.879
3 - SDR South	0.690	2776.134
4 - Ringland Circle	0.486	1676.189

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	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2026 (Halcrow TA)	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - SDR North		ONE HOUR	✓	1577.00	100.000
2 - Hartridge Farm Road		ONE HOUR	✓	166.00	100.000
3 - SDR South		ONE HOUR	✓	1222.00	100.000
4 - Ringland Circle		ONE HOUR	✓	207.00	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To				
		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	21.000	79.000	1448.000	29.000
	2 - Hartridge Farm Road	47.000	0.000	92.000	27.000
	3 - SDR South	530.000	527.000	0.000	165.000
	4 - Ringland Circle	26.000	52.000	129.000	0.000

Proportions

From	To				
		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	0.01	0.05	0.92	0.02
	2 - Hartridge Farm Road	0.28	0.00	0.55	0.16
	3 - SDR South	0.43	0.43	0.00	0.14
	4 - Ringland Circle	0.13	0.25	0.62	0.00

Vehicle Mix

Heavy Vehicle proportion

From	To				
		1 - SD R Nor th	2 - Hartri dge Farm Road	3 - SD R Sou th	4 - Ringl and Circle
	1 - SDR North	0	0	0	0
	2 - Hartri dge Farm Road	0	0	0	0
	3 - SDR South	0	0	0	0
	4 - Ringl and Circle	0	0	0	0

Average PCU Per Veh

From	To				
		1 - SD R Nor th	2 - Hartri dge Farm Road	3 - SD R Sou th	4 - Ringl and Circle
	1 - SDR North	1.00 0	1.000	1.00 0	1.000
	2 - Hartri dge Farm Road	1.00 0	1.000	1.00 0	1.000
	3 - SDR South	1.00 0	1.000	1.00 0	1.000
	4 - Ringl and Circle	1.00 0	1.000	1.00 0	1.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - SDR North	0.72	5.46	2.6	A	1447.08	2170.62
2 - Hartridge Farm Road	0.19	4.48	0.2	A	152.32	228.49
3 - SDR South	0.50	2.69	1.0	A	1121.33	1681.99
4 - Ringland Circle	0.21	4.25	0.3	A	189.95	284.92

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	1187.25	296.81	531.65	2571.15	0.462	1183.83	468.66	0.0	0.9	2.588	A
2 - Hartridge Farm Road	124.97	31.24	1221.30	1291.11	0.097	124.55	494.18	0.0	0.1	3.086	A
3 - SDR South	919.99	230.00	93.06	2711.90	0.339	917.94	1252.79	0.0	0.5	2.005	A
4 - Ringland Circle	155.84	38.96	845.02	1265.90	0.123	155.28	165.97	0.0	0.1	3.239	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	1417.69	354.42	636.02	2497.20	0.568	1415.89	560.57	0.9	1.3	3.323	A
2 - Hartridge Farm Road	149.23	37.31	1460.82	1163.28	0.128	149.07	591.10	0.1	0.1	3.549	A
3 - SDR South	1098.55	274.64	111.35	2699.28	0.407	1097.87	1498.55	0.5	0.7	2.246	A
4 - Ringland Circle	186.09	46.52	1010.69	1185.47	0.157	185.91	198.52	0.1	0.2	3.601	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	1736.31	434.08	778.69	2396.11	0.725	1731.21	686.29	1.3	2.6	5.374	A
2 - Hartridge Farm Road	182.77	45.69	1786.31	989.58	0.185	182.45	723.59	0.1	0.2	4.457	A
3 - SDR South	1345.45	336.36	136.22	2682.10	0.502	1344.18	1832.54	0.7	1.0	2.688	A

4 - Ringland Circle	227.91	56.98	1237.3 9	1075.4 0	0.21 2	227.58	243.01	0.2	0.3	4.24 6	A
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Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	1736.31	434.08	779.51	2395.53	0.725	1736.20	687.03	2.6	2.6	5.458	A
2 - Hartridge Farm Road	182.77	45.69	1791.25	986.94	0.185	182.76	724.46	0.2	0.2	4.476	A
3 - SDR South	1345.45	336.36	136.52	2681.90	0.502	1345.43	1837.49	1.0	1.0	2.693	A
4 - Ringland Circle	227.91	56.98	1238.63	1074.79	0.212	227.91	243.32	0.3	0.3	4.250	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	1417.69	354.42	637.30	2496.29	0.568	1422.81	561.71	2.6	1.3	3.368	A
2 - Hartridge Farm Road	149.23	37.31	1467.70	1159.61	0.129	149.54	592.41	0.2	0.1	3.567	A
3 - SDR South	1098.55	274.64	111.77	2698.98	0.407	1099.81	1505.47	1.0	0.7	2.252	A
4 - Ringland Circle	186.09	46.52	1012.60	1184.54	0.157	186.41	198.99	0.3	0.2	3.609	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	1187.25	296.81	533.48	2569.85	0.462	1189.10	470.18	1.3	0.9	2.610	A
2 - Hartridge Farm Road	124.97	31.24	1226.76	1288.19	0.097	125.14	495.82	0.1	0.1	3.097	A

3 - SDR South	919.99	230.00	93.48	2711.61	0.339	920.68	1258.41	0.7	0.5	2.012	A
4 - Ringland Circle	155.84	38.96	847.63	1264.64	0.123	156.02	166.53	0.2	0.1	3.247	A

2026 (Halcrow TA), PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

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

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1 - Ringland Circle/A48	Ringland Circle/A48	Standard Roundabout	1,2,3,4	3.52	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2026 (Halcrow TA)	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - SDR North		ONE HOUR	✓	979.00	100.000
2 - Hartridge Farm Road		ONE HOUR	✓	271.00	100.000
3 - SDR South		ONE HOUR	✓	1540.00	100.000
4 - Ringland Circle		ONE HOUR	✓	321.00	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - SDR North	2 - Hartri dge Farm Road	3 - SDR Sout h	4 - Ringl and Circl e
From	1 - SDR North	3.000	55.00 0	850. 000	71.00 0
	2 - Hartri dge Farm Road	62.00 0	0.000	190. 000	19.00 0
	3 - SDR South	1016. 000	173.0 00	0.00 0	351.0 00
	4 - Ringl and Circle	5.000	9.000	307. 000	0.000

Proportions

	To				
		1 - SD R Nor th	2 - Hartri dge Farm Road	3 - SD R Sou th	4 - Ringl and Circl e
From	1 - SDR North	0.0 0	0.06	0.87	0.07
	2 - Hartri dge Farm Road	0.2 3	0.00	0.70	0.07
	3 - SDR South	0.6 6	0.11	0.00	0.23
	4 - Ringl and Circle	0.0 2	0.03	0.96	0.00

Vehicle Mix

Heavy Vehicle proportion

From	To				
		1 - SD R Nor th	2 - Hartri dge Farm Road	3 - SD R Sou th	4 - Ringl and Circle
	1 - SDR North	0	0	0	0
	2 - Hartri dge Farm Road	0	0	0	0
	3 - SDR South	0	0	0	0
	4 - Ringl and Circle	0	0	0	0

Average PCU Per Veh

From	To				
		1 - SD R Nor th	2 - Hartri dge Farm Road	3 - SD R Sou th	4 - Ringl and Circle
	1 - SDR North	1.00 0	1.000	1.00 0	1.000
	2 - Hartri dge Farm Road	1.00 0	1.000	1.00 0	1.000
	3 - SDR South	1.00 0	1.000	1.00 0	1.000
	4 - Ringl and Circle	1.00 0	1.000	1.00 0	1.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - SDR North	0.42	2.42	0.7	A	898.35	1347.52
2 - Hartridge Farm Road	0.24	3.91	0.3	A	248.67	373.01
3 - SDR South	0.64	3.74	1.8	A	1413.13	2119.70
4 - Ringland Circle	0.35	5.52	0.5	A	294.56	441.83

Main Results for each time segment

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	737.04	184.26	366.84	2687.92	0.274	735.54	815.45	0.0	0.4	1.844	A
2 - Hartridge Farm Road	204.02	51.01	924.40	1449.56	0.141	203.37	177.98	0.0	0.2	2.887	A
3 - SDR South	1159.39	289.85	116.38	2695.80	0.430	1156.39	1011.39	0.0	0.8	2.335	A
4 - Ringland Circle	241.67	60.42	941.60	1219.01	0.198	240.68	331.17	0.0	0.2	3.676	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	880.10	220.03	439.09	2636.73	0.334	879.61	975.41	0.4	0.5	2.049	A
2 - Hartridge Farm Road	243.62	60.91	1105.82	1352.74	0.180	243.40	212.88	0.2	0.2	3.245	A
3 - SDR South	1384.43	346.11	139.24	2680.02	0.517	1383.19	1209.98	0.8	1.1	2.773	A
4 - Ringland Circle	288.57	72.14	1126.31	1129.33	0.256	288.19	396.12	0.2	0.3	4.278	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	1077.90	269.47	537.33	2567.13	0.420	1077.01	1193.81	0.5	0.7	2.415	A
2 - Hartridge Farm Road	298.38	74.59	1353.78	1220.41	0.244	297.96	260.57	0.2	0.3	3.901	A
3 - SDR South	1695.57	423.89	170.47	2658.47	0.638	1692.85	1481.27	1.1	1.7	3.717	A

4 - Ringland Circle	353.43	88.36	1378.4 8	1006.8 9	0.35 1	352.65	484.84	0.3	0.5	5.49 5	A
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Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	1077.9 0	269.4 7	538.38	2566.3 8	0.42 0	1077.8 9	1195.6 8	0.7	0.7	2.41 8	A
2 - Hartridge Farm Road	298.38	74.59	1355.3 4	1219.5 8	0.24 5	298.37	260.94	0.3	0.3	3.90 7	A
3 - SDR South	1695.5 7	423.8 9	170.66	2658.3 4	0.63 8	1695.5 3	1483.0 5	1.7	1.8	3.73 8	A
4 - Ringland Circle	353.43	88.36	1380.6 5	1005.8 4	0.35 1	353.42	485.54	0.5	0.5	5.51 7	A

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	880.10	220.0 3	440.66	2635.6 1	0.33 4	880.98	978.18	0.7	0.5	2.05 2	A
2 - Hartridge Farm Road	243.62	60.91	1108.2 1	1351.4 6	0.18 0	244.03	213.43	0.3	0.2	3.25 1	A
3 - SDR South	1384.4 3	346.1 1	139.53	2679.8 2	0.51 7	1387.1 3	1212.7 1	1.8	1.1	2.79 2	A
4 - Ringland Circle	288.57	72.14	1129.5 0	1127.7 8	0.25 6	289.34	397.16	0.5	0.3	4.29 8	A

Main results: (18:00-18:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	737.04	184.2 6	368.67	2686.6 2	0.27 4	737.54	818.49	0.5	0.4	1.84 6	A
2 - Hartridge Farm Road	204.02	51.01	927.60	1447.8 5	0.14 1	204.25	178.61	0.2	0.2	2.89 6	A

3 - SDR South	1159.39	289.85	116.80	2695.51	0.430	1160.66	1015.05	1.1	0.8	2.347	A
4 - Ringland Circle	241.67	60.42	945.11	1217.31	0.199	242.05	332.35	0.3	0.2	3.691	A

2026 (Halcrow TA) + Development, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

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

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1 - Ringland Circle/A48	Ringland Circle/A48	Standard Roundabout	1,2,3,4	13.15	B

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2026 (Halcrow TA) + Development	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - SDR North		ONE HOUR	✓	2032.00	100.000
2 - Hartridge Farm Road		ONE HOUR	✓	178.00	100.000
3 - SDR South		ONE HOUR	✓	1273.00	100.000
4 - Ringland Circle		ONE HOUR	✓	218.00	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - SDR North	2 - Hartri dge Farm Road	3 - SDR South	4 - Ringl and Circl e
From	1 - SDR North	223.000	114.000	1626.000	69.000
	2 - Hartri dge Farm Road	59.000	0.000	92.000	27.000
	3 - SDR South	581.000	527.000	0.000	165.000
	4 - Ringl and Circle	37.000	52.000	129.000	0.000

Proportions

	To				
		1 - SD R North	2 - Hartri dge Farm Road	3 - SD R South	4 - Ringl and Circl e
From	1 - SDR North	0.11	0.06	0.80	0.03
	2 - Hartri dge Farm Road	0.33	0.00	0.52	0.15
	3 - SDR South	0.46	0.41	0.00	0.13
	4 - Ringl and Circle	0.17	0.24	0.59	0.00

Vehicle Mix

Heavy Vehicle proportion

From	To				
		1 - SD R Nor th	2 - Hartri dge Farm Road	3 - SD R Sou th	4 - Ringl and Circle
	1 - SDR North	0	0	0	0
	2 - Hartri dge Farm Road	0	0	0	0
	3 - SDR South	0	0	0	0
	4 - Ringl and Circle	0	0	0	0

Average PCU Per Veh

From	To				
		1 - SD R Nor th	2 - Hartri dge Farm Road	3 - SD R Sou th	4 - Ringl and Circle
	1 - SDR North	1.00 0	1.000	1.00 0	1.000
	2 - Hartri dge Farm Road	1.00 0	1.000	1.00 0	1.000
	3 - SDR South	1.00 0	1.000	1.00 0	1.000
	4 - Ringl and Circle	1.00 0	1.000	1.00 0	1.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - SDR North	0.93	20.74	12.1	C	1864.60	2796.90
2 - Hartridge Farm Road	0.26	6.58	0.4	A	163.34	245.00
3 - SDR South	0.56	3.31	1.3	A	1168.13	1752.19
4 - Ringland Circle	0.26	5.19	0.3	A	200.04	300.06

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	1529.80	382.45	531.51	2571.25	0.595	1523.98	675.56	0.0	1.5	3.418	A
2 - Hartridge Farm Road	134.01	33.50	1535.21	1123.58	0.119	133.47	520.27	0.0	0.1	3.634	A
3 - SDR South	958.38	239.60	283.48	2580.46	0.371	956.03	1385.20	0.0	0.6	2.213	A
4 - Ringland Circle	164.12	41.03	1043.60	1169.49	0.140	163.47	195.91	0.0	0.2	3.577	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	1826.73	456.68	635.90	2497.28	0.731	1821.88	808.01	1.5	2.7	5.292	A
2 - Hartridge Farm Road	160.02	40.00	1835.49	963.33	0.166	159.77	622.29	0.1	0.2	4.479	A
3 - SDR South	1144.40	286.10	339.00	2542.14	0.450	1143.50	1656.26	0.6	0.8	2.573	A
4 - Ringland Circle	195.98	48.99	1248.18	1070.16	0.183	195.74	234.31	0.2	0.2	4.116	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	2237.27	559.32	778.36	2396.34	0.934	2204.41	986.20	2.7	10.9	16.530	C
2 - Hartridge Farm Road	195.98	49.00	2222.49	756.80	0.259	195.39	760.29	0.2	0.3	6.405	A
3 - SDR	1401.6	350.4	411.18	2492.3	0.56	1399.7	2006.7	0.8	1.3	3.289	A

South	0	0		2	2	6	0				
4 - Ringland Circle	240.02	60.01	1525.01	935.75	0.257	239.54	285.92	0.2	0.3	5.167	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	2237.27	559.32	779.50	2395.54	0.934	2232.29	990.34	10.9	12.1	20.738	C
2 - Hartridge Farm Road	195.98	49.00	2249.08	742.61	0.264	195.94	762.71	0.3	0.4	6.585	A
3 - SDR South	1401.60	350.40	415.45	2489.37	0.563	1401.57	2029.57	1.3	1.3	3.308	A
4 - Ringland Circle	240.02	60.01	1529.83	933.41	0.257	240.01	287.19	0.3	0.3	5.191	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	1826.73	456.68	637.63	2496.06	0.732	1864.08	814.29	12.1	2.8	6.022	A
2 - Hartridge Farm Road	160.02	40.00	1875.74	941.85	0.170	160.62	625.96	0.4	0.2	4.613	A
3 - SDR South	1144.40	286.10	345.47	2537.67	0.451	1146.23	1690.89	1.3	0.8	2.592	A
4 - Ringland Circle	195.98	48.99	1255.47	1066.62	0.184	196.45	236.23	0.3	0.2	4.140	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	1529.80	382.45	533.61	2569.76	0.595	1535.02	678.70	2.8	1.5	3.498	A
2 - Hartridge	134.01	33.50	1546.17	1117.74	0.120	134.28	522.46	0.2	0.1	3.660	A

e Farm Road											
3 - SDR South	958.38	239.60	285.46	2579.09	0.372	959.31	1394.99	0.8	0.6	2.225	A
4 - Ringland Circle	164.12	41.03	1047.94	1167.38	0.141	164.37	196.83	0.2	0.2	3.589	A

2026 (Halcrow TA) + Development, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

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

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1 - Ringland Circle/A48	Ringland Circle/A48	Standard Roundabout	1,2,3,4	4.79	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2026 (Halcrow TA) + Development	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - SDR North		ONE HOUR	✓	1210.00	100.000
2 - Hartridge Farm Road		ONE HOUR	✓	271.00	100.000
3 - SDR South		ONE HOUR	✓	1709.00	100.000
4 - Ringland Circle		ONE HOUR	✓	381.00	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringl and Circle
From	1 - SDR North	114.000	55.000	939.000	102.000
	2 - Hartridge Farm Road	62.000	0.000	190.000	19.000
	3 - SDR South	1185.000	173.000	0.000	351.000
	4 - Ringl and Circle	65.000	9.000	307.000	0.000

Proportions

		To			
		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringl and Circle
From	1 - SDR North	0.09	0.05	0.78	0.08
	2 - Hartridge Farm Road	0.23	0.00	0.70	0.07
	3 - SDR South	0.69	0.10	0.00	0.21
	4 - Ringl and Circle	0.17	0.02	0.81	0.00

Vehicle Mix

Heavy Vehicle proportion

From	To				
		1 - SD R Nor th	2 - Hartri dge Farm Road	3 - SD R Sou th	4 - Ringl and Circle
	1 - SDR North	0	0	0	0
	2 - Hartri dge Farm Road	0	0	0	0
	3 - SDR South	0	0	0	0
	4 - Ringl and Circle	0	0	0	0

Average PCU Per Veh

From	To				
		1 - SD R Nor th	2 - Hartri dge Farm Road	3 - SD R Sou th	4 - Ringl and Circle
	1 - SDR North	1.00 0	1.000	1.00 0	1.000
	2 - Hartri dge Farm Road	1.00 0	1.000	1.00 0	1.000
	3 - SDR South	1.00 0	1.000	1.00 0	1.000
	4 - Ringl and Circle	1.00 0	1.000	1.00 0	1.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - SDR North	0.52	2.92	1.1	A	1110.32	1665.48
2 - Hartridge Farm Road	0.28	4.58	0.4	A	248.67	373.01
3 - SDR South	0.74	5.38	2.8	A	1568.21	2352.31
4 - Ringland Circle	0.49	8.24	1.0	A	349.61	524.42

Main Results for each time segment

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	910.95	227.74	366.62	2688.08	0.339	908.91	1070.32	0.0	0.5	2.022	A
2 - Hartridge Farm Road	204.02	51.01	1097.61	1357.12	0.150	203.32	177.91	0.0	0.2	3.118	A
3 - SDR South	1286.62	321.66	223.02	2622.19	0.491	1282.79	1077.91	0.0	1.0	2.680	A
4 - Ringland Circle	286.84	71.71	1151.48	1117.11	0.257	285.46	354.34	0.0	0.3	4.322	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	1087.77	271.94	438.85	2636.90	0.413	1087.01	1280.35	0.5	0.7	2.321	A
2 - Hartridge Farm Road	243.62	60.91	1313.05	1242.14	0.196	243.36	212.81	0.2	0.2	3.604	A
3 - SDR South	1536.36	384.09	266.78	2591.98	0.593	1534.42	1289.62	1.0	1.4	3.398	A
4 - Ringland Circle	342.51	85.63	1377.36	1007.44	0.340	341.84	423.84	0.3	0.5	5.403	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	1332.23	333.06	536.45	2567.75	0.519	1330.75	1565.87	0.7	1.1	2.906	A
2 - Hartridge Farm Road	298.38	74.59	1606.89	1085.33	0.275	297.84	260.30	0.2	0.4	4.568	A
3 - SDR South	1881.64	470.41	326.58	2550.71	0.738	1876.41	1578.15	1.4	2.8	5.298	A

4 - Ringland Circle	419.49	104.87	1684.54	858.29	0.489	417.77	518.44	0.5	0.9	8.141	A
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Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	1332.23	333.06	538.35	2566.40	0.519	1332.22	1569.96	1.1	1.1	2.916	A
2 - Hartridge Farm Road	298.38	74.59	1609.64	1083.86	0.275	298.37	260.93	0.4	0.4	4.582	A
3 - SDR South	1881.64	470.41	327.00	2550.42	0.738	1881.52	1581.01	2.8	2.8	5.380	A
4 - Ringland Circle	419.49	104.87	1688.87	856.19	0.490	419.44	519.65	0.9	1.0	8.241	A

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	1087.77	271.94	441.56	2634.98	0.413	1089.24	1286.14	1.1	0.7	2.332	A
2 - Hartridge Farm Road	243.62	60.91	1317.10	1239.98	0.196	244.15	213.70	0.4	0.2	3.618	A
3 - SDR South	1536.36	384.09	267.42	2591.55	0.593	1541.61	1293.84	2.8	1.5	3.447	A
4 - Ringland Circle	342.51	85.63	1383.47	1004.47	0.341	344.23	425.56	1.0	0.5	5.465	A

Main results: (18:00-18:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	910.95	227.74	368.92	2686.45	0.339	911.72	1075.21	0.7	0.5	2.030	A
2 - Hartridge Farm Road	204.02	51.01	1101.96	1354.80	0.151	204.29	178.68	0.2	0.2	3.129	A

3 - SDR South	1286.6 2	321.6 6	223.81	2621.6 4	0.49 1	1288.6 2	1082.4 4	1.5	1.0	2.70 4	A
4 - Ringland Circle	286.84	71.71	1156.6 0	1114.6 3	0.25 7	287.53	355.84	0.5	0.3	4.35 7	A

2026 (2018 Survey), AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

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

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1 - Ringland Circle/A48	Ringland Circle/A48	Standard Roundabout	1,2,3,4	3.05	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2026 (2018 Survey)	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - SDR North		ONE HOUR	✓	1091.00	100.000
2 - Hartridge Farm Road		ONE HOUR	✓	270.00	100.000
3 - SDR South		ONE HOUR	✓	944.00	100.000
4 - Ringland Circle		ONE HOUR	✓	453.00	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - SDR North	2 - Hartri dge Farm Road	3 - SDR Sout h	4 - Ringl and Circle
From	1 - SDR North	20.0 00	58.00 0	965. 000	48.00 0
	2 - Hartri dge Farm Road	82.0 00	0.000	144. 000	44.00 0
	3 - SDR South	621. 000	122.0 00	0.00 0	201.0 00
	4 - Ringl and Circle	69.0 00	82.00 0	302. 000	0.000

Proportions

		To			
		1 - SD R North	2 - Hartri dge Farm Road	3 - SD R Sou th	4 - Ringl and Circle
From	1 - SDR North	0.0 2	0.05	0.88	0.04
	2 - Hartri dge Farm Road	0.3 0	0.00	0.53	0.16
	3 - SDR South	0.6 6	0.13	0.00	0.21
	4 - Ringl and Circle	0.1 5	0.18	0.67	0.00

Vehicle Mix

Heavy Vehicle proportion

From	To				
		1 - SD R Nor th	2 - Hartri dge Farm Road	3 - SD R Sou th	4 - Ringl and Circle
	1 - SDR North	0	0	0	0
	2 - Hartri dge Farm Road	0	0	0	0
	3 - SDR South	0	0	0	0
	4 - Ringl and Circle	0	0	0	0

Average PCU Per Veh

From	To				
		1 - SD R Nor th	2 - Hartri dge Farm Road	3 - SD R Sou th	4 - Ringl and Circle
	1 - SDR North	1.00 0	1.000	1.00 0	1.000
	2 - Hartri dge Farm Road	1.00 0	1.000	1.00 0	1.000
	3 - SDR South	1.00 0	1.000	1.00 0	1.000
	4 - Ringl and Circle	1.00 0	1.000	1.00 0	1.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - SDR North	0.47	2.66	0.9	A	1001.12	1501.68
2 - Hartridge Farm Road	0.26	4.18	0.3	A	247.76	371.64
3 - SDR South	0.40	2.26	0.7	A	866.23	1299.35
4 - Ringland Circle	0.41	4.96	0.7	A	415.68	623.52

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	821.36	205.34	379.64	2678.85	0.307	819.60	594.87	0.0	0.4	1.934	A
2 - Hartridge Farm Road	203.27	50.82	1002.51	1407.87	0.144	202.60	196.73	0.0	0.2	2.985	A
3 - SDR South	710.69	177.67	145.63	2675.61	0.266	709.25	1059.48	0.0	0.4	1.831	A
4 - Ringland Circle	341.04	85.26	634.79	1367.98	0.249	339.72	220.09	0.0	0.3	3.496	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	980.79	245.20	454.42	2625.87	0.374	980.17	711.55	0.4	0.6	2.187	A
2 - Hartridge Farm Road	242.72	60.68	1199.24	1302.88	0.186	242.49	235.36	0.2	0.2	3.394	A
3 - SDR South	848.64	212.16	174.25	2655.85	0.320	848.21	1267.47	0.4	0.5	1.991	A
4 - Ringland Circle	407.24	101.81	759.22	1307.57	0.311	406.76	263.24	0.3	0.4	3.995	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	1201.21	300.30	556.24	2553.73	0.470	1200.06	871.22	0.6	0.9	2.657	A
2 - Hartridge Farm Road	297.28	74.32	1468.15	1159.37	0.256	296.82	288.14	0.2	0.3	4.172	A
3 - SDR South	1039.36	259.84	213.31	2628.89	0.395	1038.63	1551.65	0.5	0.7	2.262	A

4 - Ringland Circle	498.76	124.69	929.63	1224.83	0.407	497.84	322.32	0.4	0.7	4.946	A
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Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	1201.21	300.30	557.10	2553.11	0.470	1201.20	872.00	0.9	0.9	2.662	A
2 - Hartridge Farm Road	297.28	74.32	1469.84	1158.47	0.257	297.27	288.46	0.3	0.3	4.179	A
3 - SDR South	1039.36	259.84	213.59	2628.70	0.395	1039.36	1553.52	0.7	0.7	2.264	A
4 - Ringland Circle	498.76	124.69	930.36	1224.47	0.407	498.75	322.60	0.7	0.7	4.960	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	980.79	245.20	455.75	2624.92	0.374	981.94	712.77	0.9	0.6	2.194	A
2 - Hartridge Farm Road	242.72	60.68	1201.83	1301.50	0.187	243.18	235.85	0.3	0.2	3.404	A
3 - SDR South	848.64	212.16	174.69	2655.56	0.320	849.36	1270.33	0.7	0.5	1.995	A
4 - Ringland Circle	407.24	101.81	760.37	1307.01	0.312	408.15	263.68	0.7	0.5	4.008	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	821.36	205.34	381.41	2677.60	0.307	821.98	596.70	0.6	0.4	1.941	A
2 - Hartridge Farm Road	203.27	50.82	1005.97	1406.02	0.145	203.51	197.42	0.2	0.2	2.993	A

3 - SDR South	710.6 9	177.6 7	146.21	2675.2 1	0.26 6	711.13	1063.2 8	0.5	0.4	1.83 5	A
4 - Ringland Circle	341.0 4	85.26	636.59	1367.1 1	0.24 9	341.53	220.74	0.5	0.3	3.51 3	A

2026 (2018 Survey), PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

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

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1 - Ringland Circle/A48	Ringland Circle/A48	Standard Roundabout	1,2,3,4	2.56	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2026 (2018 Survey)	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - SDR North		ONE HOUR	✓	970.00	100.000
2 - Hartridge Farm Road		ONE HOUR	✓	54.00	100.000
3 - SDR South		ONE HOUR	✓	1185.00	100.000
4 - Ringland Circle		ONE HOUR	✓	249.00	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - SDR North	2 - Hartri dge Farm Road	3 - SDR Sout h	4 - Ringl and Circle
From	1 - SDR North	11.0 00	43.00 0	863. 000	53.00 0
	2 - Hartri dge Farm Road	17.0 00	0.000	27.0 00	10.00 0
	3 - SDR South	849. 000	51.00 0	3.00 0	282.0 00
	4 - Ringl and Circle	29.0 00	40.00 0	180. 000	0.000

Proportions

		To			
		1 - SD R North	2 - Hartri dge Farm Road	3 - SD R Sou th	4 - Ringl and Circle
From	1 - SDR North	0.0 1	0.04	0.89	0.05
	2 - Hartri dge Farm Road	0.3 1	0.00	0.50	0.19
	3 - SDR South	0.7 2	0.04	0.00	0.24
	4 - Ringl and Circle	0.1 2	0.16	0.72	0.00

Vehicle Mix

Heavy Vehicle proportion

From	To				
		1 - SD R Nor th	2 - Hartri dge Farm Road	3 - SD R Sou th	4 - Ringl and Circle
	1 - SDR North	0	0	0	0
	2 - Hartri dge Farm Road	0	0	0	0
	3 - SDR South	0	0	0	0
	4 - Ringl and Circle	0	0	0	0

Average PCU Per Veh

From	To				
		1 - SD R Nor th	2 - Hartri dge Farm Road	3 - SD R Sou th	4 - Ringl and Circle
	1 - SDR North	1.00 0	1.000	1.00 0	1.000
	2 - Hartri dge Farm Road	1.00 0	1.000	1.00 0	1.000
	3 - SDR South	1.00 0	1.000	1.00 0	1.000
	4 - Ringl and Circle	1.00 0	1.000	1.00 0	1.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - SDR North	0.39	2.16	0.6	A	890.09	1335.13
2 - Hartridge Farm Road	0.05	2.92	0.0	A	49.55	74.33
3 - SDR South	0.48	2.57	0.9	A	1087.38	1631.07
4 - Ringland Circle	0.23	3.98	0.3	A	228.49	342.73

Main Results for each time segment

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	730.27	182.57	205.62	2802.15	0.261	728.86	680.57	0.0	0.4	1.736	A
2 - Hartridge Farm Road	40.65	10.16	833.85	1497.88	0.027	40.54	100.63	0.0	0.0	2.469	A
3 - SDR South	892.13	223.03	68.36	2728.95	0.327	890.19	806.03	0.0	0.5	1.956	A
4 - Ringland Circle	187.46	46.87	699.38	1336.62	0.140	186.81	259.18	0.0	0.2	3.129	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	872.01	218.00	246.11	2773.46	0.314	871.59	813.99	0.4	0.5	1.892	A
2 - Hartridge Farm Road	48.54	12.14	997.32	1410.64	0.034	48.51	120.38	0.0	0.0	2.642	A
3 - SDR South	1065.29	266.32	81.76	2719.70	0.392	1064.66	964.07	0.5	0.6	2.175	A
4 - Ringland Circle	223.85	55.96	836.46	1270.06	0.176	223.64	309.97	0.2	0.2	3.440	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	1067.99	267.00	301.32	2734.35	0.391	1067.27	996.65	0.5	0.6	2.158	A
2 - Hartridge Farm Road	59.46	14.86	1221.18	1291.17	0.046	59.40	147.40	0.0	0.0	2.922	A
3 - SDR South	1304.71	326.18	100.12	2707.03	0.482	1303.57	1180.47	0.6	0.9	2.562	A

4 - Ringland Circle	274.15	68.54	1024.16	1178.93	0.233	273.80	379.53	0.2	0.3	3.974	A
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Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	1067.99	267.00	301.68	2734.09	0.391	1067.98	997.52	0.6	0.6	2.160	A
2 - Hartridge Farm Road	59.46	14.86	1222.12	1290.67	0.046	59.45	147.54	0.0	0.0	2.923	A
3 - SDR South	1304.71	326.18	100.19	2706.98	0.482	1304.70	1181.39	0.9	0.9	2.566	A
4 - Ringland Circle	274.15	68.54	1025.04	1178.50	0.233	274.15	379.85	0.3	0.3	3.980	A

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	872.01	218.00	246.68	2773.06	0.314	872.73	815.35	0.6	0.5	1.894	A
2 - Hartridge Farm Road	48.54	12.14	998.81	1409.84	0.034	48.59	120.60	0.0	0.0	2.646	A
3 - SDR South	1065.29	266.32	81.88	2719.62	0.392	1066.42	965.52	0.9	0.6	2.178	A
4 - Ringland Circle	223.85	55.96	837.83	1269.40	0.176	224.19	310.46	0.3	0.2	3.444	A

Main results: (18:00-18:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	730.27	182.57	206.49	2801.53	0.261	730.69	682.58	0.5	0.4	1.740	A
2 - Hartridge Farm Road	40.65	10.16	836.22	1496.61	0.027	40.69	100.96	0.0	0.0	2.474	A

3 - SDR South	892.13	223.03	68.55	2728.81	0.327	892.77	808.36	0.6	0.5	1.961	A
4 - Ringland Circle	187.46	46.87	701.41	1335.64	0.140	187.66	259.91	0.2	0.2	3.138	A

2026 (2018 Survey) + Development, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

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

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1 - Ringland Circle/A48	Ringland Circle/A48	Standard Roundabout	1,2,3,4	4.20	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2026 (2018 Survey) + Development	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - SDR North		ONE HOUR	✓	1546.00	100.000
2 - Hartridge Farm Road		ONE HOUR	✓	282.00	100.000
3 - SDR South		ONE HOUR	✓	995.00	100.000
4 - Ringland Circle		ONE HOUR	✓	464.00	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringl and Circle
From	1 - SDR North	222.000	93.000	1143.000	88.000
	2 - Hartridge Farm Road	94.000	0.000	144.000	44.000
	3 - SDR South	672.000	122.000	0.000	201.000
	4 - Ringl and Circle	80.000	82.000	302.000	0.000

Proportions

	To				
		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringl and Circle
From	1 - SDR North	0.14	0.06	0.74	0.06
	2 - Hartridge Farm Road	0.33	0.00	0.51	0.16
	3 - SDR South	0.68	0.12	0.00	0.20
	4 - Ringl and Circle	0.17	0.18	0.65	0.00

Vehicle Mix

Heavy Vehicle proportion

From	To				
		1 - SD R Nor th	2 - Hartri dge Farm Road	3 - SD R Sou th	4 - Ringl and Circle
	1 - SDR North	0	0	0	0
	2 - Hartri dge Farm Road	0	0	0	0
	3 - SDR South	0	0	0	0
	4 - Ringl and Circle	0	0	0	0

Average PCU Per Veh

From	To				
		1 - SD R Nor th	2 - Hartri dge Farm Road	3 - SD R Sou th	4 - Ringl and Circle
	1 - SDR North	1.00 0	1.000	1.00 0	1.000
	2 - Hartri dge Farm Road	1.00 0	1.000	1.00 0	1.000
	3 - SDR South	1.00 0	1.000	1.00 0	1.000
	4 - Ringl and Circle	1.00 0	1.000	1.00 0	1.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - SDR North	0.67	4.23	2.0	A	1418.64	2127.95
2 - Hartridge Farm Road	0.34	5.99	0.5	A	258.77	388.15
3 - SDR South	0.45	2.69	0.8	A	913.03	1369.54
4 - Ringland Circle	0.47	6.29	0.9	A	425.77	638.66

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	1163.91	290.98	379.49	2678.96	0.434	1160.85	801.95	0.0	0.8	2.366	A
2 - Hartridge Farm Road	212.30	53.08	1317.40	1239.82	0.171	211.48	222.94	0.0	0.2	3.497	A
3 - SDR South	749.09	187.27	336.26	2544.03	0.294	747.42	1192.62	0.0	0.4	2.002	A
4 - Ringland Circle	349.32	87.33	833.62	1271.44	0.275	347.82	250.06	0.0	0.4	3.891	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	1389.82	347.46	454.29	2625.96	0.529	1388.41	959.30	0.8	1.1	2.907	A
2 - Hartridge Farm Road	253.51	63.38	1575.98	1101.83	0.230	253.15	266.73	0.2	0.3	4.240	A
3 - SDR South	894.48	223.62	402.28	2498.46	0.358	893.93	1426.84	0.4	0.6	2.244	A
4 - Ringland Circle	417.13	104.28	997.10	1192.07	0.350	416.50	299.11	0.4	0.5	4.637	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	1702.18	425.54	555.84	2554.01	0.666	1698.76	1174.18	1.1	2.0	4.192	A
2 - Hartridge Farm Road	310.49	77.62	1928.18	913.87	0.340	309.64	326.43	0.3	0.5	5.949	A
3 - SDR South	1095.52	273.88	492.16	2436.42	0.450	1094.49	1745.66	0.6	0.8	2.682	A

4 - Ringland Circle	510.87	127.7 2	1220.5 4	1083.5 8	0.47 1	509.49	366.10	0.5	0.9	6.25 5	A
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Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	1702.18	425.54	557.09	2553.12	0.667	1702.12	1175.86	2.0	2.0	4.230	A
2 - Hartridge Farm Road	310.49	77.62	1932.22	911.71	0.341	310.47	326.99	0.5	0.5	5.987	A
3 - SDR South	1095.52	273.88	493.24	2435.67	0.450	1095.51	1749.45	0.8	0.8	2.685	A
4 - Ringland Circle	510.87	127.72	1222.11	1082.82	0.472	510.85	366.63	0.9	0.9	6.293	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	1389.82	347.46	456.15	2624.64	0.530	1393.23	961.81	2.0	1.1	2.930	A
2 - Hartridge Farm Road	253.51	63.38	1581.81	1098.71	0.231	254.36	267.57	0.5	0.3	4.267	A
3 - SDR South	894.48	223.62	403.84	2497.38	0.358	895.50	1432.33	0.8	0.6	2.248	A
4 - Ringland Circle	417.13	104.28	999.45	1190.92	0.350	418.50	299.89	0.9	0.5	4.668	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	1163.91	290.98	381.55	2677.50	0.435	1165.35	804.87	1.1	0.8	2.384	A
2 - Hartridge Farm Road	212.30	53.08	1323.03	1236.82	0.172	212.68	223.87	0.3	0.2	3.515	A

3 - SDR South	749.09	187.27	337.75	2543.00	0.295	749.65	1197.96	0.6	0.4	2.009	A
4 - Ringland Circle	349.32	87.33	836.45	1270.07	0.275	349.97	250.95	0.5	0.4	3.916	A

2026 (2018 Survey) + Development, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

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

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1 - Ringland Circle/A48	Ringland Circle/A48	Standard Roundabout	1,2,3,4	3.17	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Capacity Options

[same as above]

Roundabout Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2026 (2018 Survey) + Development	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - SDR North		ONE HOUR	✓	1201.00	100.000
2 - Hartridge Farm Road		ONE HOUR	✓	54.00	100.000
3 - SDR South		ONE HOUR	✓	1354.00	100.000
4 - Ringland Circle		ONE HOUR	✓	309.00	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - SDR North	2 - Hartri dge Farm Road	3 - SDR Sout h	4 - Ringl and Circl e
From	1 - SDR North	122.0 00	43.00 0	952. 000	84.00 0
	2 - Hartri dge Farm Road	17.00 0	0.000	27.0 00	10.00 0
	3 - SDR South	1018. 000	51.00 0	3.00 0	282.0 00
	4 - Ringl and Circle	89.00 0	40.00 0	180. 000	0.000

Proportions

		To			
		1 - SD R Nor th	2 - Hartri dge Farm Road	3 - SD R Sou th	4 - Ringl and Circl e
From	1 - SDR North	0.1 0	0.04	0.79	0.07
	2 - Hartri dge Farm Road	0.3 1	0.00	0.50	0.19
	3 - SDR South	0.7 5	0.04	0.00	0.21
	4 - Ringl and Circle	0.2 9	0.13	0.58	0.00

Vehicle Mix

Heavy Vehicle proportion

From	To				
		1 - SD R Nor th	2 - Hartri dge Farm Road	3 - SD R Sou th	4 - Ringl and Circle
	1 - SDR North	0	0	0	0
	2 - Hartri dge Farm Road	0	0	0	0
	3 - SDR South	0	0	0	0
	4 - Ringl and Circle	0	0	0	0

Average PCU Per Veh

From	To				
		1 - SD R Nor th	2 - Hartri dge Farm Road	3 - SD R Sou th	4 - Ringl and Circle
	1 - SDR North	1.00 0	1.000	1.00 0	1.000
	2 - Hartri dge Farm Road	1.00 0	1.000	1.00 0	1.000
	3 - SDR South	1.00 0	1.000	1.00 0	1.000
	4 - Ringl and Circle	1.00 0	1.000	1.00 0	1.000

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - SDR North	0.48	2.55	0.9	A	1102.06	1653.09
2 - Hartridge Farm Road	0.05	3.28	0.1	A	49.55	74.33
3 - SDR South	0.57	3.25	1.3	A	1242.45	1863.68
4 - Ringland Circle	0.33	5.23	0.5	A	283.54	425.32

Main Results for each time segment

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	904.18	226.04	205.52	2802.22	0.323	902.28	935.69	0.0	0.5	1.892	A
2 - Hartridge Farm Road	40.65	10.16	1007.20	1405.37	0.029	40.54	100.60	0.0	0.0	2.637	A
3 - SDR South	1019.36	254.84	175.03	2655.32	0.384	1016.88	872.71	0.0	0.6	2.195	A
4 - Ringland Circle	232.63	58.16	909.51	1234.59	0.188	231.71	282.40	0.0	0.2	3.586	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	1079.67	269.92	246.04	2773.51	0.389	1079.03	1119.24	0.5	0.6	2.125	A
2 - Hartridge Farm Road	48.54	12.14	1204.71	1299.96	0.037	48.51	120.36	0.0	0.0	2.876	A
3 - SDR South	1217.22	304.30	209.33	2631.64	0.463	1216.28	1043.89	0.6	0.9	2.542	A
4 - Ringland Circle	277.78	69.45	1087.84	1148.01	0.242	277.44	337.77	0.2	0.3	4.133	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	1322.33	330.58	301.11	2734.49	0.484	1321.14	1370.10	0.6	0.9	2.544	A
2 - Hartridge Farm Road	59.46	14.86	1474.92	1155.76	0.051	59.39	147.33	0.0	0.1	3.282	A
3 - SDR South	1490.78	372.70	256.30	2599.22	0.574	1488.87	1278.01	0.9	1.3	3.236	A

4 - Ringland Circle	340.22	85.05	1331.68	1029.62	0.330	339.53	413.49	0.3	0.5	5.211	A
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Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	1322.33	330.58	301.67	2734.10	0.484	1322.31	1371.85	0.9	0.9	2.549	A
2 - Hartridge Farm Road	59.46	14.86	1476.45	1154.94	0.051	59.45	147.53	0.1	0.1	3.285	A
3 - SDR South	1490.78	372.70	256.54	2599.06	0.574	1490.76	1279.37	1.3	1.3	3.247	A
4 - Ringland Circle	340.22	85.05	1333.32	1028.82	0.331	340.21	413.98	0.5	0.5	5.227	A

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	1079.67	269.92	246.88	2772.92	0.389	1080.85	1121.89	0.9	0.6	2.130	A
2 - Hartridge Farm Road	48.54	12.14	1207.07	1298.70	0.037	48.61	120.66	0.1	0.0	2.879	A
3 - SDR South	1217.22	304.30	209.69	2631.39	0.463	1219.12	1045.98	1.3	0.9	2.552	A
4 - Ringland Circle	277.78	69.45	1090.30	1146.81	0.242	278.47	338.50	0.5	0.3	4.148	A

Main results: (18:00-18:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - SDR North	904.18	226.04	206.57	2801.48	0.323	904.82	938.95	0.6	0.5	1.900	A
2 - Hartridge Farm Road	40.65	10.16	1010.41	1403.66	0.029	40.69	100.99	0.0	0.0	2.640	A

3 - SDR South	1019.3 6	254.8 4	175.54	2654.9 6	0.38 4	1020.3 2	875.55	0.9	0.6	2.20 4	A
4 - Ringlan d Circle	232.63	58.16	912.54	1233.1 2	0.18 9	232.98	283.32	0.3	0.2	3.59 9	A

Junctions 9			
PICADY 9 - Priority Intersection Module			
Version: 9.0.0.4211 []			
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Filename: SDR.Cot Hill Junction.j9

Path: H:\Projects\W180000\184108 - Llanwern Revised Access\Modelling

Report generation date: 24/07/2018 13:50:26

»2026 (Halcrow TA), AM
 »2026 (Halcrow TA), PM
 »2026 (Halcrow TA) + Development, AM
 »2026 (Halcrow TA) + Development, PM
 »2026 (2018 Survey), AM
 »2026 (2018 Survey), PM
 »2026 (2018 Survey) + Development, AM
 »2026 (2018 Survey) + Development, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2026 (Halcrow TA)								
Stream B-AC	0.8	10.42	0.44	B	0.2	6.01	0.17	A
Stream C-AB	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-A								
Stream A-B								
Stream A-C								
2026 (Halcrow TA) + Development								
Stream B-AC	94.2	491.15	1.28	F	1.2	11.97	0.56	B
Stream C-AB	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-A								
Stream A-B								
Stream A-C								
2026 (2018 Survey)								
Stream B-AC	0.1	5.73	0.06	A	0.1	5.80	0.12	A
Stream C-AB	0.0	0.00	0.00	A	0.0	0.00	0.00	A

Stream C-A								
Stream A-B								
Stream A-C								
2026 (2018 Survey) + Development								
Stream B-AC	4.4	30.54	0.83	D	1.0	11.15	0.51	B
Stream C-AB	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-A								
Stream A-B								
Stream A-C								

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	(untitled)
Location	
Site number	
Date	02/07/2018
Version	
Status	[no status]
Identifier	
Client	
Jobnumber	
Enumerator	VECTOS"ellen.axon
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

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

Demand Set Summary

Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
2026 (Halcrow TA)	AM	ONE HOUR	07:45	09:15	15	✓
2026 (Halcrow TA)	PM	ONE HOUR	16:45	18:15	15	✓

2026 (Halcrow TA) + Development	AM	ONE HOUR	07:45	09:15	15	✓
2026 (Halcrow TA) + Development	PM	ONE HOUR	16:45	18:15	15	✓
2026 (2018 Survey)	AM	ONE HOUR	07:45	09:15	15	✓
2026 (2018 Survey)	PM	ONE HOUR	16:45	18:15	15	✓
2026 (2018 Survey) + Development	AM	ONE HOUR	07:45	09:15	15	✓
2026 (2018 Survey) + Development	PM	ONE HOUR	16:45	18:15	15	✓

2026 (Halcrow TA), AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

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

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1 - SDR/Cot Hill	SDR/Cot Hill	T-Junction	One-way from A to C	1.62	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	SDR (N)		Major
B	Cot Hill		Minor

C	SDR (S)		Major
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Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - SDR (S)	7.30				✓	

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Cot Hill	One lane	5.00	0	250

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	718.203	0.082	0.207	0.130	0.296
1	B-C	937.767	0.090	0.227	-	-
1	C-B	573.963	0.139	0.139	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2026 (Halcrow TA)	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		ONE HOUR	✓	1323.00	100.000
B - Cot Hill		ONE HOUR	✓	243.00	100.000
C - SDR (S)		ONE HOUR	✓	0.00	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
From	A - SDR (N)	0.000	42.000	1281.000
	B - Cot Hill	0.000	0.000	243.000
	C - SDR (S)	0.000	0.000	0.000

Proportions

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
From	A - SDR (N)	0.00	0.03	0.97
	B - Cot Hill	0.00	0.00	1.00
	C - SDR (S)	0.33	0.33	0.33

Vehicle Mix

Heavy Vehicle proportion

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
From	A - SDR (N)	0	0	0
	B - Cot Hill	0	0	0
	C - SDR (S)	0	0	0

Average PCU Per Veh

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
From	A - SDR (N)	1.000	1.000	1.000
	B - Cot Hill	1.000	1.000	1.000
	C - SDR (S)	1.000	1.000	1.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.44	10.42	0.8	B	222.98	334.47
C-AB	0.00	0.00	0.0	A	0.00	0.00
C-A					0.00	0.00
A-B					38.54	57.81
A-C					1175.47	1763.20

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	182.94	182.94	45.74	0.00	715.62	0.256	181.58	0.0	0.3	6.725	A
C-AB	0.00	0.00	0.00	0.00	435.34	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	31.62	31.62	7.90	0.00			31.62				
A-C	964.40	964.40	241.10	0.00			964.40				

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	218.45	218.45	54.61	0.00	672.50	0.325	217.91	0.3	0.5	7.909	A
C-AB	0.00	0.00	0.00	0.00	408.43	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	37.76	37.76	9.44	0.00			37.76				
A-C	1151.59	1151.59	287.90	0.00			1151.59				

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	267.55	267.55	66.89	0.00	612.88	0.437	266.41	0.5	0.8	10.356	B
C-AB	0.00	0.00	0.00	0.00	371.23	0.000	0.00	0.0	0.0	0.000	A

C-A	0.00	0.00	0.00	0.00			0.00				
A-B	46.24	46.24	11.56	0.00			46.24				
A-C	1410.41	1410.41	352.60	0.00			1410.41				

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	267.55	267.55	66.89	0.00	612.88	0.437	267.52	0.8	0.8	10.422	B
C-AB	0.00	0.00	0.00	0.00	371.23	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	46.24	46.24	11.56	0.00			46.24				
A-C	1410.41	1410.41	352.60	0.00			1410.41				

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	218.45	218.45	54.61	0.00	672.50	0.325	219.57	0.8	0.5	7.967	A
C-AB	0.00	0.00	0.00	0.00	408.43	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	37.76	37.76	9.44	0.00			37.76				
A-C	1151.59	1151.59	287.90	0.00			1151.59				

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	182.94	182.94	45.74	0.00	715.62	0.256	183.50	0.5	0.3	6.774	A
C-AB	0.00	0.00	0.00	0.00	435.34	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	31.62	31.62	7.90	0.00			31.62				
A-C	964.40	964.40	241.10	0.00			964.40				

2026 (Halcrow TA), PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

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

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1 - SDR/Cot Hill	SDR/Cot Hill	T-Junction	One-way from A to C	0.67	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2026 (Halcrow TA)	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		ONE HOUR	✓	898.00	100.000

B - Cot Hill		ONE HOUR	✓	112.00	100.000
C - SDR (S)		ONE HOUR	✓	0.00	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
From	A - SDR (N)	0.000	58.000	840.000
	B - Cot Hill	0.000	0.000	112.000
	C - SDR (S)	0.000	0.000	0.000

Proportions

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
From	A - SDR (N)	0.00	0.06	0.94
	B - Cot Hill	0.00	0.00	1.00
	C - SDR (S)	0.33	0.33	0.33

Vehicle Mix

Heavy Vehicle proportion

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
From	A - SDR (N)	0	0	0
	B - Cot Hill	0	0	0
	C - SDR (S)	0	0	0

Average PCU Per Veh

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
From	A - SDR (N)	1.000	1.000	1.000
	B - Cot Hill	1.000	1.000	1.000
	C - SDR (S)	1.000	1.000	1.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.17	6.01	0.2	A	102.77	154.16
C-AB	0.00	0.00	0.0	A	0.00	0.00
C-A					0.00	0.00
A-B					53.22	79.83
A-C					770.80	1156.20

Main Results for each time segment

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	84.32	84.32	21.08	0.00	790.03	0.107	83.84	0.0	0.1	5.094	A
C-AB	0.00	0.00	0.00	0.00	479.87	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	43.67	43.67	10.92	0.00			43.67				
A-C	632.40	632.40	158.10	0.00			632.40				

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	100.69	100.69	25.17	0.00	761.36	0.132	100.56	0.1	0.2	5.446	A
C-AB	0.00	0.00	0.00	0.00	461.61	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	52.14	52.14	13.04	0.00			52.14				
A-C	755.14	755.14	188.79	0.00			755.14				

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-	123.31	123.31	30.83	0.00	721.71	0.171	123.10	0.2	0.2	6.013	A

AC											
C-AB	0.00	0.00	0.00	0.00	436.35	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	63.86	63.86	15.96	0.00			63.86				
A-C	924.86	924.86	231.21	0.00			924.86				

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	123.31	123.31	30.83	0.00	721.71	0.171	123.31	0.2	0.2	6.015	A
C-AB	0.00	0.00	0.00	0.00	436.35	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	63.86	63.86	15.96	0.00			63.86				
A-C	924.86	924.86	231.21	0.00			924.86				

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	100.69	100.69	25.17	0.00	761.36	0.132	100.89	0.2	0.2	5.451	A
C-AB	0.00	0.00	0.00	0.00	461.61	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	52.14	52.14	13.04	0.00			52.14				
A-C	755.14	755.14	188.79	0.00			755.14				

Main results: (18:00-18:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	84.32	84.32	21.08	0.00	790.03	0.107	84.45	0.2	0.1	5.102	A
C-AB	0.00	0.00	0.00	0.00	479.87	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	43.67	43.67	10.92	0.00			43.67				
A-C	632.40	632.40	158.10	0.00			632.40				

2026 (Halcrow TA) + Development, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

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

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1 - SDR/Cot Hill	SDR/Cot Hill	T-Junction	One-way from A to C	159.23	F

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2026 (Halcrow TA) + Development	AM	ONE HOUR	07:45	09:15	15	✓

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

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		ONE HOUR	✓	1455.00	100.000
B - Cot Hill		ONE HOUR	✓	698.00	100.000
C - SDR (S)		ONE HOUR	✓	0.00	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0.000	174.000	1281.000
	B - Cot Hill	0.000	0.000	698.000
	C - SDR (S)	0.000	0.000	0.000

Proportions

From	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0.00	0.12	0.88
	B - Cot Hill	0.00	0.00	1.00
	C - SDR (S)	0.33	0.33	0.33

Vehicle Mix

Heavy Vehicle proportion

From	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	0	0
	B - Cot Hill	0	0	0
	C - SDR (S)	0	0	0

Average PCU Per Veh

From	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	1.000	1.000	1.000
	B - Cot Hill	1.000	1.000	1.000
	C - SDR (S)	1.000	1.000	1.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	1.28	491.15	94.2	F	640.50	960.75
C-AB	0.00	0.00	0.0	A	0.00	0.00
C-A					0.00	0.00
A-B					159.67	239.50
A-C					1175.47	1763.20

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	525.49	525.49	131.37	0.00	706.68	0.744	514.76	0.0	2.7	17.888	C
C-AB	0.00	0.00	0.00	0.00	421.51	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				

A-B	131.00	131.00	32.75	0.00			131.00				
A-C	964.40	964.40	241.10	0.00			964.40				

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	627.49	627.49	156.87	0.00	661.83	0.948	602.86	2.7	8.8	47.843	E
C-AB	0.00	0.00	0.00	0.00	391.92	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	156.42	156.42	39.11	0.00			156.42				
A-C	1151.59	1151.59	287.90	0.00			1151.59				

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	768.51	768.51	192.13	0.00	599.81	1.281	596.12	8.8	51.9	199.180	F
C-AB	0.00	0.00	0.00	0.00	351.00	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	191.58	191.58	47.89	0.00			191.58				
A-C	1410.41	1410.41	352.60	0.00			1410.41				

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	768.51	768.51	192.13	0.00	599.81	1.281	599.32	51.9	94.2	436.799	F
C-AB	0.00	0.00	0.00	0.00	351.00	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	191.58	191.58	47.89	0.00			191.58				
A-C	1410.41	1410.41	352.60	0.00			1410.41				

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	627.49	627.49	156.87	0.00	661.83	0.948	654.88	94.2	87.4	491.151	F
C-	0.00	0.00	0.00	0.00	391.92	0.000	0.00	0.0	0.0	0.000	A

AB											
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	156.42	156.42	39.11	0.00			156.42				
A-C	1151.59	1151.59	287.90	0.00			1151.59				

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	525.49	525.49	131.37	0.00	706.68	0.744	698.68	87.4	44.1	341.601	F
C-AB	0.00	0.00	0.00	0.00	421.51	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	131.00	131.00	32.75	0.00			131.00				
A-C	964.40	964.40	241.10	0.00			964.40				

2026 (Halcrow TA) + Development, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

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

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1 - SDR/Cot Hill	SDR/Cot Hill	T-Junction	One-way from A to C	2.44	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2026 (Halcrow TA) + Development	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		ONE HOUR	✓	1338.00	100.000
B - Cot Hill		ONE HOUR	✓	343.00	100.000
C - SDR (S)		ONE HOUR	✓	0.00	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0.000	498.000	840.000
	B - Cot Hill	0.000	0.000	343.000
	C - SDR (S)	0.000	0.000	0.000

Proportions

From	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0.00	0.37	0.63
	B - Cot Hill	0.00	0.00	1.00
	C - SDR (S)	0.33	0.33	0.33

Vehicle Mix

Heavy Vehicle proportion

From	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	0	0
	B - Cot Hill	0	0	0
	C - SDR (S)	0	0	0

Average PCU Per Veh

From	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	1.000	1.000	1.000
	B - Cot Hill	1.000	1.000	1.000
	C - SDR (S)	1.000	1.000	1.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
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B-AC	0.56	11.97	1.2	B	314.74	472.11
C-AB	0.00	0.00	0.0	A	0.00	0.00
C-A					0.00	0.00
A-B					456.97	685.46
A-C					770.80	1156.20

Main Results for each time segment

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	258.23	258.23	64.56	0.00	760.23	0.340	256.20	0.0	0.5	7.114	A
C-AB	0.00	0.00	0.00	0.00	433.77	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	374.92	374.92	93.73	0.00			374.92				
A-C	632.40	632.40	158.10	0.00			632.40				

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	308.35	308.35	77.09	0.00	725.78	0.425	307.47	0.5	0.7	8.588	A
C-AB	0.00	0.00	0.00	0.00	406.55	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	447.69	447.69	111.92	0.00			447.69				
A-C	755.14	755.14	188.79	0.00			755.14				

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	377.65	377.65	94.41	0.00	678.13	0.557	375.67	0.7	1.2	11.823	B
C-AB	0.00	0.00	0.00	0.00	368.93	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				

A-B	548.31	548.31	137.08	0.00			548.31				
A-C	924.86	924.86	231.21	0.00			924.86				

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	377.65	377.65	94.41	0.00	678.13	0.557	377.58	1.2	1.2	11.970	B
C-AB	0.00	0.00	0.00	0.00	368.93	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	548.31	548.31	137.08	0.00			548.31				
A-C	924.86	924.86	231.21	0.00			924.86				

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	308.35	308.35	77.09	0.00	725.78	0.425	310.30	1.2	0.8	8.704	A
C-AB	0.00	0.00	0.00	0.00	406.55	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	447.69	447.69	111.92	0.00			447.69				
A-C	755.14	755.14	188.79	0.00			755.14				

Main results: (18:00-18:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	258.23	258.23	64.56	0.00	760.23	0.340	259.15	0.8	0.5	7.199	A
C-AB	0.00	0.00	0.00	0.00	433.77	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	374.92	374.92	93.73	0.00			374.92				
A-C	632.40	632.40	158.10	0.00			632.40				

2026 (2018 Survey), AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

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

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1 - SDR/Cot Hill	SDR/Cot Hill	T-Junction	One-way from A to C	0.19	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2026 (2018 Survey)	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		ONE HOUR	✓	1088.00	100.000

B - Cot Hill		ONE HOUR	✓	38.00	100.000
C - SDR (S)		ONE HOUR	✓	0.00	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0.000	29.000	1059.000
	B - Cot Hill	0.000	0.000	38.000
	C - SDR (S)	0.000	0.000	0.000

Proportions

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0.00	0.03	0.97
	B - Cot Hill	0.00	0.00	1.00
	C - SDR (S)	0.33	0.33	0.33

Vehicle Mix

Heavy Vehicle proportion

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	0	0
	B - Cot Hill	0	0	0
	C - SDR (S)	0	0	0

Average PCU Per Veh

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	1.000	1.000	1.000
	B - Cot Hill	1.000	1.000	1.000
	C - SDR (S)	1.000	1.000	1.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.06	5.73	0.1	A	34.87	52.30
C-AB	0.00	0.00	0.0	A	0.00	0.00
C-A					0.00	0.00
A-B					26.61	39.92
A-C					971.76	1457.64

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	28.61	28.61	7.15	0.00	754.51	0.038	28.45	0.0	0.0	4.956	A
C-AB	0.00	0.00	0.00	0.00	459.96	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	21.83	21.83	5.46	0.00			21.83				
A-C	797.27	797.27	199.32	0.00			797.27				

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	34.16	34.16	8.54	0.00	718.94	0.048	34.12	0.0	0.0	5.256	A
C-AB	0.00	0.00	0.00	0.00	437.83	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	26.07	26.07	6.52	0.00			26.07				
A-C	952.02	952.02	238.00	0.00			952.02				

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-	41.84	41.84	10.46	0.00	669.75	0.062	41.77	0.0	0.1	5.732	A

AC											
C-AB	0.00	0.00	0.00	0.00	407.24	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	31.93	31.93	7.98	0.00			31.93				
A-C	1165.98	1165.98	291.50	0.00			1165.98				

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	41.84	41.84	10.46	0.00	669.75	0.062	41.84	0.1	0.1	5.732	A
C-AB	0.00	0.00	0.00	0.00	407.24	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	31.93	31.93	7.98	0.00			31.93				
A-C	1165.98	1165.98	291.50	0.00			1165.98				

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	34.16	34.16	8.54	0.00	718.94	0.048	34.23	0.1	0.1	5.257	A
C-AB	0.00	0.00	0.00	0.00	437.83	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	26.07	26.07	6.52	0.00			26.07				
A-C	952.02	952.02	238.00	0.00			952.02				

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	28.61	28.61	7.15	0.00	754.51	0.038	28.65	0.1	0.0	4.961	A
C-AB	0.00	0.00	0.00	0.00	459.96	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	21.83	21.83	5.46	0.00			21.83				
A-C	797.27	797.27	199.32	0.00			797.27				

2026 (2018 Survey), PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

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

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1 - SDR/Cot Hill	SDR/Cot Hill	T-Junction	One-way from A to C	0.41	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2026 (2018 Survey)	PM	ONE HOUR	16:45	18:15	15	✓

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

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		ONE HOUR	✓	985.00	100.000
B - Cot Hill		ONE HOUR	✓	74.00	100.000
C - SDR (S)		ONE HOUR	✓	0.00	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0.000	72.000	913.000
	B - Cot Hill	0.000	0.000	74.000
	C - SDR (S)	0.000	0.000	0.000

Proportions

From	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0.00	0.07	0.93
	B - Cot Hill	0.00	0.00	1.00
	C - SDR (S)	0.33	0.33	0.33

Vehicle Mix

Heavy Vehicle proportion

From	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	0	0
	B - Cot Hill	0	0	0
	C - SDR (S)	0	0	0

Average PCU Per Veh

From	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	1.000	1.000	1.000
	B - Cot Hill	1.000	1.000	1.000
	C - SDR (S)	1.000	1.000	1.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.12	5.80	0.1	A	67.90	101.86
C-AB	0.00	0.00	0.0	A	0.00	0.00
C-A					0.00	0.00
A-B					66.07	99.10
A-C					837.78	1256.68

Main Results for each time segment

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	55.71	55.71	13.93	0.00	776.59	0.072	55.40	0.0	0.1	4.989	A
C-AB	0.00	0.00	0.00	0.00	470.75	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				

A-B	54.21	54.21	13.55	0.00			54.21				
A-C	687.35	687.35	171.84	0.00			687.35				

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	66.52	66.52	16.63	0.00	745.30	0.089	66.44	0.1	0.1	5.303	A
C-AB	0.00	0.00	0.00	0.00	450.72	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	64.73	64.73	16.18	0.00			64.73				
A-C	820.77	820.77	205.19	0.00			820.77				

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	81.48	81.48	20.37	0.00	702.05	0.116	81.34	0.1	0.1	5.798	A
C-AB	0.00	0.00	0.00	0.00	423.02	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	79.27	79.27	19.82	0.00			79.27				
A-C	1005.23	1005.23	251.31	0.00			1005.23				

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	81.48	81.48	20.37	0.00	702.05	0.116	81.47	0.1	0.1	5.800	A
C-AB	0.00	0.00	0.00	0.00	423.02	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	79.27	79.27	19.82	0.00			79.27				
A-C	1005.23	1005.23	251.31	0.00			1005.23				

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	66.52	66.52	16.63	0.00	745.30	0.089	66.65	0.1	0.1	5.307	A
C-	0.00	0.00	0.00	0.00	450.72	0.000	0.00	0.0	0.0	0.000	A

AB											
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	64.73	64.73	16.18	0.00			64.73				
A-C	820.77	820.77	205.19	0.00			820.77				

Main results: (18:00-18:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	55.71	55.71	13.93	0.00	776.59	0.072	55.79	0.1	0.1	4.996	A
C-AB	0.00	0.00	0.00	0.00	470.75	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	54.21	54.21	13.55	0.00			54.21				
A-C	687.35	687.35	171.84	0.00			687.35				

2026 (2018 Survey) + Development, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

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

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1 - SDR/Cot Hill	SDR/Cot Hill	T-Junction	One-way from A to C	8.79	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2026 (2018 Survey) + Development	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		ONE HOUR	✓	1220.00	100.000
B - Cot Hill		ONE HOUR	✓	493.00	100.000
C - SDR (S)		ONE HOUR	✓	0.00	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0.000	161.000	1059.000
	B - Cot Hill	0.000	0.000	493.000
	C - SDR (S)	0.000	0.000	0.000

Proportions

From	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0.00	0.13	0.87
	B - Cot Hill	0.00	0.00	1.00
	C - SDR (S)	0.33	0.33	0.33

Vehicle Mix

Heavy Vehicle proportion

From	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	0	0
	B - Cot Hill	0	0	0
	C - SDR (S)	0	0	0

Average PCU Per Veh

From	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	1.000	1.000	1.000
	B - Cot Hill	1.000	1.000	1.000
	C - SDR (S)	1.000	1.000	1.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
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B-AC	0.83	30.54	4.4	D	452.39	678.58
C-AB	0.00	0.00	0.0	A	0.00	0.00
C-A					0.00	0.00
A-B					147.74	221.60
A-C					971.76	1457.64

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	371.16	371.16	92.79	0.00	745.57	0.498	367.27	0.0	1.0	9.422	A
C-AB	0.00	0.00	0.00	0.00	446.13	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	121.21	121.21	30.30	0.00			121.21				
A-C	797.27	797.27	199.32	0.00			797.27				

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	443.20	443.20	110.80	0.00	708.26	0.626	440.64	1.0	1.6	13.320	B
C-AB	0.00	0.00	0.00	0.00	421.32	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	144.74	144.74	36.18	0.00			144.74				
A-C	952.02	952.02	238.00	0.00			952.02				

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	542.80	542.80	135.70	0.00	656.68	0.827	532.95	1.6	4.1	27.148	D
C-AB	0.00	0.00	0.00	0.00	387.01	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				

A-B	177.26	177.26	44.32	0.00			177.26				
A-C	1165.98	1165.98	291.50	0.00			1165.98				

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	542.80	542.80	135.70	0.00	656.68	0.827	541.64	4.1	4.4	30.544	D
C-AB	0.00	0.00	0.00	0.00	387.01	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	177.26	177.26	44.32	0.00			177.26				
A-C	1165.98	1165.98	291.50	0.00			1165.98				

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	443.20	443.20	110.80	0.00	708.26	0.626	453.71	4.4	1.7	14.680	B
C-AB	0.00	0.00	0.00	0.00	421.32	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	144.74	144.74	36.18	0.00			144.74				
A-C	952.02	952.02	238.00	0.00			952.02				

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	371.16	371.16	92.79	0.00	745.57	0.498	374.06	1.7	1.0	9.765	A
C-AB	0.00	0.00	0.00	0.00	446.13	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	121.21	121.21	30.30	0.00			121.21				
A-C	797.27	797.27	199.32	0.00			797.27				

2026 (2018 Survey) + Development, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

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

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1 - SDR/Cot Hill	SDR/Cot Hill	T-Junction	One-way from A to C	1.97	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2026 (2018 Survey) + Development	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
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A - SDR (N)		ONE HOUR	✓	1425.00	100.000
B - Cot Hill		ONE HOUR	✓	305.00	100.000
C - SDR (S)		ONE HOUR	✓	0.00	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
From	A - SDR (N)	0.000	512.000	913.000
	B - Cot Hill	0.000	0.000	305.000
	C - SDR (S)	0.000	0.000	0.000

Proportions

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
From	A - SDR (N)	0.00	0.36	0.64
	B - Cot Hill	0.00	0.00	1.00
	C - SDR (S)	0.33	0.33	0.33

Vehicle Mix

Heavy Vehicle proportion

From	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	0	0
	B - Cot Hill	0	0	0
	C - SDR (S)	0	0	0

Average PCU Per Veh

From	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	1.000	1.000	1.000
	B - Cot Hill	1.000	1.000	1.000
	C - SDR (S)	1.000	1.000	1.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.51	11.15	1.0	B	279.87	419.81
C-AB	0.00	0.00	0.0	A	0.00	0.00
C-A					0.00	0.00
A-B					469.82	704.73
A-C					837.78	1256.68

Main Results for each time segment

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	229.62	229.62	57.41	0.00	746.79	0.307	227.86	0.0	0.4	6.913	A
C-AB	0.00	0.00	0.00	0.00	424.65	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				

A-B	385.46	385.46	96.37	0.00			385.46				
A-C	687.35	687.35	171.84	0.00			687.35				

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	274.19	274.19	68.55	0.00	709.72	0.386	273.46	0.4	0.6	8.238	A
C-AB	0.00	0.00	0.00	0.00	395.67	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	460.28	460.28	115.07	0.00			460.28				
A-C	820.77	820.77	205.19	0.00			820.77				

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	335.81	335.81	83.95	0.00	658.47	0.510	334.23	0.6	1.0	11.047	B
C-AB	0.00	0.00	0.00	0.00	355.60	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	563.72	563.72	140.93	0.00			563.72				
A-C	1005.23	1005.23	251.31	0.00			1005.23				

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	335.81	335.81	83.95	0.00	658.47	0.510	335.76	1.0	1.0	11.152	B
C-AB	0.00	0.00	0.00	0.00	355.60	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	563.72	563.72	140.93	0.00			563.72				
A-C	1005.23	1005.23	251.31	0.00			1005.23				

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	274.19	274.19	68.55	0.00	709.72	0.386	275.75	1.0	0.6	8.326	A
C-	0.00	0.00	0.00	0.00	395.67	0.000	0.00	0.0	0.0	0.000	A

AB											
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	460.28	460.28	115.07	0.00			460.28				
A-C	820.77	820.77	205.19	0.00			820.77				

Main results: (18:00-18:15)

Stream	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	229.62	229.62	57.41	0.00	746.79	0.307	230.38	0.6	0.4	6.983	A
C-AB	0.00	0.00	0.00	0.00	424.65	0.000	0.00	0.0	0.0	0.000	A
C-A	0.00	0.00	0.00	0.00			0.00				
A-B	385.46	385.46	96.37	0.00			385.46				
A-C	687.35	687.35	171.84	0.00			687.35				

Llanwern Access Technical Note

184108A/N01
March 2023

Introduction

1. Vectos is retained by Redrow Homes Ltd to provide transport and highways advice in relation to the main site access to the 'Llanwern Village' development from the Southern Distributor Road (SDR) – A48.
2. The site benefits from an outline planning permission for 1,100 dwellings, a local village centre and a primary school.
3. The Halcrow Transport Assessment (TA) in 2006 prepared in support of the outline permission set out the proposed improvements to the local highway network, predominantly the main access to the site via Cot Hill. This access comprised modifications to the existing Left in / Left out (LILO) junction with the SDR to a signal-controlled junction with pedestrian crossings.
4. Since the outline permission, the A4810 Queen's Way link from the SDR to the south of the former Llanwern Steel works to Magor and junction 23A of the M4 has been constructed and is fully operational.
5. The hypothesis tested in this Technical Note is that this new link has provided traffic relief to the northern section of the SDR in the vicinity of the site and as such, the form of access into the site from Cot Hill and via the SDR could be simplified from the consented traffic signal arrangement reverting back the existing LILO arrangement.
6. In the following sections, this Technical Note tests this hypothesis using current traffic and accident data in the vicinity of the SDR / Cot Hill junction.

Survey Comparison

7. The Halcrow TA of 2006 and its traffic modelling used to underpin the planning permission was based on traffic flows derived from the Newport SATURN model (used for the EEA transport strategy). At the time, the base flows abstracted for the model were for a baseline year of 2011 and were derived from traffic data preceding 2011. These baseline 2011 flows then applied growth to a 2026 design year using NRTF forecasts of 24% for both AM and PM peaks.
8. In order to test the accuracy of the 2026 modelling traffic forecasts on background traffic levels (NRTFT forecasts, the Queen's Way link road, and flexible working), traffic surveys were undertaken

on 12th July 2018 and the 14th of March 2023 during the AM (0700-1000) and PM (1530-1830) peaks and at the following junctions:

- SDR / Cot Hill Junction (Left In / Left Out only);
- SDR / Beatty Road Roundabout; and
- SDR / Ringland Circular / Hartridge Farm Road Roundabout.

- The observed July 2018 and March 2023 traffic surveys are included in **Appendix A**. The peak hours derived from the 2018 surveys are 0815-0915 and 1700-1800 hrs, while the peak hours derived from the 2023 surveys are 0800-0900 and 1630-1730 hrs, respectively.
- At the time of the 2023 surveys, there were 168 units occupied out of the 1,100 units to be built on the Llanwern Redrow site. As a result, the original forecast development flows from the Halcrow TA have been factored at 85% to reflect the existing unit count.
- As a comparison, the 2011 baseline flows included in the Halcrow TA have been compared against the July 2018 and March 2023 survey data, which has also been converted from vehicles to PCU's to provide a direct comparison with the Halcrow forecasts which were given in PCUs'. This is summarised in **Table 1**.

Table 1 – Junction Total Comparison (PCUs)

Junction - Total Movements (PCU's)	Halcrow TA (2011 Baseline)	Vectos (2018 Survey)	Vectos (2023 Survey)	% Change (between Halcrow 2011 and 2023)
AM				
SDR / Cot Hill Junction	1887	1845	1805	-4%
SDR / Beatty Road Roundabout	1823	1702	1710	-6%
SDR / Ringland Circular Roundabout	2559	2491	2438	-5%
PM				
SDR / Cot Hill Junction	1911	1915	1734	-9%
SDR / Beatty Road Roundabout	1721	1784	1642	-5%
SDR / Ringland Circular Roundabout	2504	2216	1969	-21%

12. The data summarised in **Table 1** demonstrates that that even before Covid-19, background traffic growth did not occur between 2011 and 2018 as previously forecast within the Halcrow study.
13. The 2023 surveys illustrate that traffic volumes have decreased from both the 2011 baseline and 2018 surveys. This trend is most likely due to pessimistic growth trends within the original traffic model to 2011 forecasts (base) and compared to 2018, the effects of CV19 and hybrid working with people choosing less to travel within the peak periods and more so during the shoulder of the peak periods.
14. Given that the recently observed traffic flows on this part of the SDR are significantly lower than previous forecasts, the following section tests the hypothesis of whether it is possible to retain access to the site from the SDR / Cot Hill as a LILO arrangement. It also considers the knock-on effects of maintaining the LILO arrangement and subsequent U-turning movements (i.e. the right turners wishing to enter and leave the site) from the existing roundabout junctions immediately to the north and south.

Highway Network Analysis

15. To test the effect of the development on the existing LILO junction arrangement with the SDR and the roundabout junctions north and south of the Cot Hill junction, the traffic forecasts from the development have been abstracted from the Halcrow 2006 TA. Despite a change in contemporary transport policy between 2006-2023 the original trip generations and traffic forecasts have been retained for robustness; however, it is highly likely, that given the focus on sustainable transport, active travel and general trends in mobility post CV19, that the levels of traffic arising from the development may be significantly lower than previously forecast.
16. The original trip distribution at the SDR / Cot Hill junction within the Halcrow TA which assumed an all-movement signal-controlled junction, has been revised to account for the development traffic using the existing LILO arrangement. As such, the right turning movements in/out of the site have been redistributed to the roundabout junctions to the north and south respectively.
17. In addition to this, 168 units were occupied out of the 1,100 units at the time of the 2023 surveys. As a result, the development forecasts within the Halcrow TA have been factored at 85% to reflect the existing unit count.
18. The updated development distribution for the AM and PM peaks are included in **Appendix B**.
19. The detailed outputs from the modelling are shown in **Appendix C** and summarised in the following.

SDR / Cot Hill LILO modelling

20. The results of the existing LILO junction are shown in **Table 2**.

Table 2 – SDR / Cot Hill Junction existing LILO configuration - PICADY Results

Turning Movement	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2026 (Halcrow TA) + Development						
Left Turn Out from Cot Hill	95	492	1.28	2	12	0.56
2023 + Development						
Left Turn Out from Cot Hill	5	29	0.82	1	10	0.48

21. The results in **Table 2** show that the existing LILO junction arrangement was previously forecast to be overcapacity using the forecasts within the Halcrow TA. However, these forecast flows have not materialised, and the modelling demonstrates that by using 2023 traffic data that the existing LILO junction cooperates within capacity with all consented development at Llanwern, with a maximum queue of 5 PCUs and RFC of 0.82.

SDR / Beatty Road Roundabout Modelling

22. The results of the junction modelling undertaken for the SDR / Beatty Road Roundabout to the north of the site and accounting for U-turning movements from the Llanwern development related to inbound traffic from the south are shown in **Table 3**.

Table 3 – SDR / Beatty Road Roundabout – existing configuration - ARCADY Results

Arm	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2026 (Halcrow TA) + Development						
Beatty Road	1	5	0.21	1	10	0.35
SDR North	3	6	0.71	2	4	0.56
Work Access	1	4	0.12	1	4	0.13
SDR South	1	3	0.38	2	4	0.61
2023 + Development						
Beatty Road	1	5	0.25	1	7	0.25
SDR North	1	4	0.49	1	3	0.42
Work Access	0	3	0.01	1	3	0.06
SDR South	1	3	0.34	1	3	0.47

23. The results summarised in **Table 3** show that there is sufficient capacity within existing roundabout with Beatty Road to accommodate traffic from the Llanwern development including the associated U-

turning movements at this junction linked to the existing LILO arrangement into the site from the SDR.

SDR / Ringland Circular / Hartridge Farm Road Roundabout

24. The results of the junction modelling for the SDR / Ringland Circular / Hartridge Farm Roundabout to the south of the site are shown in **Table 4**. The results include the effect of traffic from the LILO junction arrangement at SDR / Cot Hill with destinations to the north, U-turning at this roundabout junction.

Table 4 - SDR / Ringland Circular / Hartridge Farm Roundabout existing configuration - ARCADY Results

Arm	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2026 (Halcrow TA) + Development						
SDR North	13	21	0.93	2	3	0.52
Hartridge Farm Road	1	7	0.26	1	5	0.28
SDR South	2	4	0.56	3	6	0.74
Ringland Circle	1	6	0.26	1	9	0.49
2023 + Development						
SDR North	2	4	0.60	1	3	0.37
Hartridge Farm Road	1	6	0.31	0	3	0.04
SDR South	1	3	0.35	1	3	0.46
Ringland Circle	1	5	0.37	1	5	0.27

25. The results summarised in **Table 4** demonstrate that the proposal to utilise the existing LILO arrangement at SDR / Cot Hill will not have an adverse effect on traffic movements at the SDR / Ringland Circular / Hartridge roundabout junction. There is sufficient capacity to accommodate the development and associated U-turning movements from the existing LILO junction providing access from the SDR to the development at Llanwern.

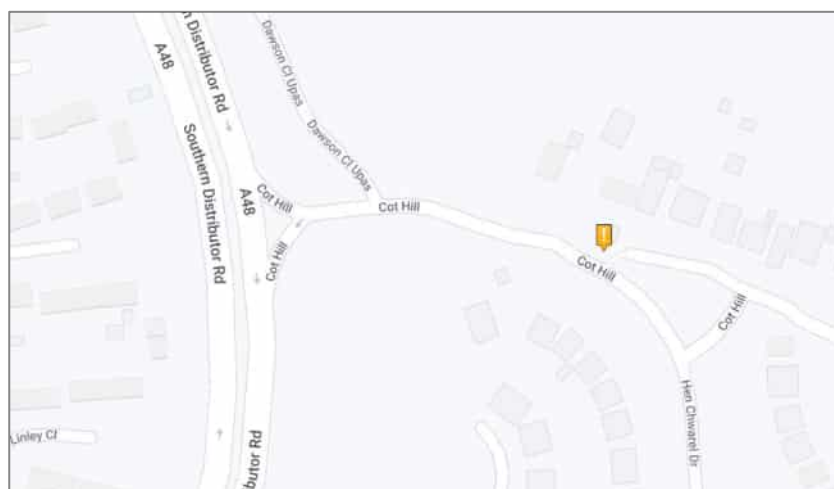
Summary

26. The revised analysis of the effect of the Llanwern development on the immediate highway network i.e. The SDR and associated junctions using 2023 traffic data demonstrates that the existing LILO arrangement with Cot Hill is suitable in highway capacity terms for accommodating all of the traffic forecasts from the consented development at Llanwern comprising 1100 homes, primary school and village centre.

Highway Safety - SDR / Cot Hill

27. An initial desktop review of the existing LILO junction of A48 (SDR)/ Cot Hill shows that the junction is designed to the relevant DMRB standards (CD 123). The review also demonstrates that that existing merge and diverge lanes are not strictly required, and hence the existing junction is considered to be overdesigned in terms of recent standards.
28. In addition, a review of the Personal Injury Collision data as this junction has been undertaken using Crashmap for the most recent 5-year period available (2017-2021)
29. The data shows that in total there was 1 'slight' collision. This is located approx. 120m east of the SDR / Cot Hill junction on Cot Hill itself and hence the data review does not demonstrate any highway safety issues with the existing LILO. The location of this collision is shown in **Figure 2**.

Figure 2 – Crashmap – Location of Collisions (2017-2021)



Summary and Conclusion

30. Whilst the previous technical work (Halcrow Transport Assessment 2006) underpinning the original consent at Llanwern had forecast that a signal-controlled junction was required at the SDR / Cot Hill junction, to accommodate all of the development at Llanwern, this assessment was based on pessimistic traffic forecasts from a computer model which did not account for the beneficial effect of the Queen's Way link to Magor and also future trends in hybrid working / car use / traffic levels pre and post Cv19. Traffic surveys were undertaken in July 2018 and March 2023 which confirms that the previous forecasts overestimated traffic in this part of the SDR.
31. As such, this Technical Note has demonstrated that the consented development of 1100 homes, primary school and village centre at Llanwern can be safely accessed from the existing Left in Left out (LILO) arrangement with Cot Hill. It is important to note that at the time of the 2023 traffic

surveys, 168 units were occupied at the Llanwern Redrow site. This has been factored into the modelled analysis with the Halcrow TA development flows being factored at 85%.

32. In addition, the future additional U-turning movements associated with retaining the existing LILO junction arrangement as the remainder of the development gets built out will not give rise to any highway capacity issues at the immediate north and south on the SDR.
33. Maintaining the existing LILO junction configuration with Cot Hill will also have substantial beneficial effects in terms of negating the need for any future large-scale highways works and associated disruption to traffic flows on the SDR which would have arisen with a traffic signal arrangement at this location.
34. Notwithstanding the beneficial effect of not undertaking any highway works on the SDR, the traffic signals originally proposed for this development in relation to highway capacity also provided dedicated pedestrian linkages across the SDR. The existing LILO arrangement does not provide this at grade crossing facility however there is an existing underpass to the north of the junction leading to Dawson Close on the western side of the SDR.
35. It is likely that the proposed development at Llanwern will give rise to a considerably greater proportion of walking and cycling trips between either side of the SDR compared to the existing situation, in order to access local facilities in the development and the existing facilities within Ringland. Whilst it provides a traffic free, safe link across the SDR, the character of the existing underpass lends itself to anti-social behaviour and is subsequently gated and closed between 1900-0730.
36. In order to improve this environment for pedestrians and cyclists and to ensure that this link is suitable for use throughout the day for vulnerable road users, the development at Llanwern will contribute to improved surveillance e.g., CCTV at this location. The exact details, specification and cost along with the appropriate mechanism for securing the contribution will need to be agreed between the Highway Authority (or relevant Local Authority Dept.) and Redrow.

Appendix A

July 2018 and March 2023 Traffic Surveys

Llanwern - Thursday 12th July 2018

Junction: A48/Beatty Road/SPTS

Queues Measured as Stationary Vehicles (Maximum Observed in Period)

Approach: A48 NB

	Left Turn				Northbound				Right Turn				U Turns		Queue Lengths (Vehicles)	
TIME	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL		TIME	Stationary	
0700 - 0715	3	0	0	3	63	12	1	76	0	0	0	0	1	700	0	
0715 - 0730	5	0	0	5	68	12	0	80	0	0	0	0	0	705	0	
0730 - 0745	6	0	1	7	72	15	0	87	0	0	0	0	2	710	0	
0745 - 0800	5	0	0	5	81	14	1	96	0	0	0	0	3	715	0	
Hourly Total	19	0	1	20	284	53	2	339	0	0	0	0	6	720	3	
0800 - 0815	4	1	0	5	103	13	2	118	2	0	0	2	3	725	0	
0815 - 0830	5	0	0	5	108	17	2	127	2	0	0	2	2	730	2	
0830 - 0845	7	0	0	7	130	15	1	146	1	0	0	1	0	735	0	
0845 - 0900	5	0	0	5	132	16	2	150	2	0	0	2	1	740	0	
Hourly Total	21	1	0	22	473	61	7	541	7	0	0	7	6	745	0	
0900 - 0915	4	0	0	4	123	17	1	141	0	0	0	0	1	750	0	
0915 - 0930	6	0	0	6	111	15	1	127	0	0	0	0	0	755	4	
0930 - 0945	4	0	0	4	95	16	1	112	1	0	0	1	1	800	2	
0945 - 1000	3	0	0	3	86	17	1	104	0	0	0	0	0	805	0	
Hourly Total	17	0	0	17	415	65	4	484	1	0	0	1	2	810	2	
	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	TOTAL	815	3	
TOTAL	57	1	1	59	1172	179	13	1364	8	0	0	8	14	820	2	
														825	2	
														830	4	
														835	3	
TIME	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL		840	0	
1530 - 1545	4	0	0	4	171	10	2	183	0	0	0	0	4	845	3	
1545 - 1600	2	0	0	2	168	8	2	178	0	0	0	0	3	850	4	
Hourly Total	6	0	0	6	339	18	4	361	0	0	0	0	7	855	2	
1600 - 1615	3	0	0	3	160	8	1	169	0	0	0	0	5	860	0	
1615 - 1630	3	0	0	3	164	11	0	175	0	0	0	0	6	900	2	
1630 - 1645	5	0	0	5	173	9	0	182	1	0	0	1	4	905	0	
1645 - 1700	4	0	0	4	174	13	1	188	0	0	0	0	4	910	2	
Hourly Total	15	0	0	15	671	41	2	714	1	0	0	1	19	915	0	
1700 - 1715	1	0	0	1	172	13	1	186	0	0	0	0	2	920	0	
1715 - 1730	4	0	0	4	175	14	1	190	1	0	0	1	4	925	2	
1730 - 1745	2	0	0	2	166	12	1	179	0	0	0	0	5	930	3	
1745 - 1800	3	0	0	3	165	13	0	178	0	0	0	0	3	935	0	
Hourly Total	10	0	0	10	678	52	3	733	1	0	0	1	14	950	0	
1800 - 1815	4	0	0	4	143	9	0	152	0	0	0	0	2	955	0	
1815 - 1830	2	0	0	2	135	8	0	143	0	0	0	0	2	1000	0	
Hourly Total	6	0	0	6	278	17	0	295	0	0	0	0	4			
	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	TOTAL			
TOTAL	37	0	0	37	1966	128	9	2103	2	0	0	2	33			

Queue Lengths (Vehicles)	
TIME	Stationary
1530	3
1535	2
1540	0
1545	3
1550	3
1555	4
1600	5
1605	4
1610	2
1615	3
1620	3
1625	5
1630	4
1635	4
1640	2
1645	4
1650	4
1655	3
1700	5
1705	3
1710	3
1715	4
1720	4
1725	4
1730	2
1735	3
1740	3
1745	2
1750	4
1755	4
1800	0
1805	3
1810	2
1815	0
1820	2
1825	2
1830	0

Llanwern - Thursday 12th July 2018

Junction: A48/Beatty Road/SPTS

Approach: Beatty Road

TIME	Left Turn				Eastbound				Right Turn			
	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL
0700 - 0715	14	0	0	14	1	0	0	1	6	0	0	6
0715 - 0730	19	0	0	19	0	0	0	0	8	0	0	8
0730 - 0745	28	0	0	28	2	0	0	2	10	0	0	10
0745 - 0800	18	2	0	20	4	0	0	4	14	0	0	14
Hourly Total	79	2	0	81	7	0	0	7	38	0	0	38
0800 - 0815	22	1	0	23	2	0	0	2	12	0	0	12
0815 - 0830	14	0	0	14	2	0	0	2	12	0	0	12
0830 - 0845	17	0	0	17	2	0	0	2	9	0	0	9
0845 - 0900	11	0	0	11	2	0	0	2	13	0	0	13
Hourly Total	64	1	0	65	8	0	0	8	46	0	0	46
0900 - 0915	6	0	0	6	1	0	0	1	11	0	0	11
0915 - 0930	9	1	0	10	0	0	0	0	5	0	0	5
0930 - 0945	8	0	0	8	1	0	0	1	8	0	0	8
0945 - 1000	7	0	0	7	0	0	0	0	7	0	0	7
Hourly Total	30	1	0	31	2	0	0	2	31	0	0	31
	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL
TOTAL	173	4	0	177	17	0	0	17	115	0	0	115

TIME	Left Turn				Eastbound				Right Turn			
	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL
1530 - 1545	17	0	0	17	0	0	0	0	17	0	0	17
1545 - 1600	19	0	0	19	0	0	0	0	15	0	0	15
Hourly Total	36	0	0	36	0	0	0	0	32	0	0	32
1600 - 1615	20	1	0	21	0	0	0	0	15	0	0	15
1615 - 1630	28	0	0	28	0	0	0	0	22	0	0	22
1630 - 1645	20	0	0	20	0	0	0	0	12	0	0	12
1645 - 1700	18	0	0	18	0	0	0	0	26	0	0	26
Hourly Total	86	1	0	87	0	0	0	0	75	0	0	75
1700 - 1715	20	0	0	20	0	0	0	0	15	0	0	15
1715 - 1730	10	0	0	10	1	0	0	1	20	0	0	20
1730 - 1745	16	0	0	16	0	0	0	0	21	0	0	21
1745 - 1800	12	0	0	12	0	0	0	0	29	0	0	29
Hourly Total	58	0	0	58	1	0	0	1	85	0	0	85
1800 - 1815	14	0	0	14	0	0	0	0	21	0	0	21
1815 - 1830	9	0	0	9	0	0	0	0	17	0	0	17
Hourly Total	23	0	0	23	0	0	0	0	38	0	0	38
	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL
TOTAL	203	1	0	204	1	0	0	1	230	0	0	230

Queues Measured as Stationary Vehicles (Maximum Observed in Period)

Queue Lengths (Vehicles)	
TIME	Stationary
700	0
705	0
710	0
715	0
720	0
725	0
730	2
735	3
740	2
745	0
750	2
755	0
800	2
805	2
810	3
815	2
820	0
825	2
830	0
835	0
840	0
845	0
850	0
855	0
900	0
905	0
910	0
915	0
920	0
925	0
930	0
935	0
950	0
955	0
1000	0

Queue Lengths (Vehicles)	
TIME	Stationary
1530	0
1535	2
1540	0
1545	0
1550	2
1555	0
1600	2
1605	0
1610	2
1615	2
1620	4
1625	3
1630	0
1635	3
1640	3
1645	3
1650	4
1655	3
1700	3
1705	3
1710	3
1715	2
1720	2
1725	2
1730	0
1735	2
1740	2
1745	4
1750	3
1755	2
1800	0
1805	0
1810	0
1815	2
1820	2
1825	0
1830	2

Llanwern - Thursday 12th July 2018

Junction: A48/Beatty Road/SPTS

Approach: A48 SB

TIME	Left Turn				Southbound				Right Turn			
	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL
0700 - 0715	9	0	0	9	132	17	1	150	6	0	0	6
0715 - 0730	13	0	0	13	141	15	0	156	6	1	0	7
0730 - 0745	15	0	0	15	146	17	1	164	7	0	0	7
0745 - 0800	20	0	0	20	155	16	1	172	15	0	0	15
Hourly Total	57	0	0	57	574	65	3	642	34	1	0	35
0800 - 0815	17	0	0	17	175	17	2	194	22	0	0	22
0815 - 0830	13	0	0	13	183	15	3	201	23	0	0	23
0830 - 0845	8	0	0	8	202	15	3	220	30	0	0	30
0845 - 0900	6	0	0	6	186	20	3	209	20	0	0	20
Hourly Total	44	0	0	44	746	67	11	824	95	0	0	95
0900 - 0915	6	0	0	6	186	17	2	205	18	0	0	18
0915 - 0930	4	0	0	4	176	15	1	192	17	0	0	17
0930 - 0945	6	0	0	6	159	18	1	178	12	0	0	12
0945 - 1000	5	0	0	5	160	16	0	176	9	0	0	9
Hourly Total	21	0	0	21	681	66	4	751	56	0	0	56
	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL
TOTAL	122	0	0	122	2001	198	18	2217	185	1	0	186

TIME	Left Turn				Southbound				Right Turn			
	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL
1530 - 1545	1	0	0	1	153	10	1	164	18	0	0	18
1545 - 1600	2	0	0	2	151	10	1	162	19	0	0	19
Hourly Total	3	0	0	3	304	20	2	326	37	0	0	37
1600 - 1615	1	0	0	1	166	14	1	181	24	0	0	24
1615 - 1630	1	0	0	1	163	11	0	174	25	0	0	25
1630 - 1645	0	0	0	0	169	14	1	184	31	0	0	31
1645 - 1700	0	0	0	0	165	10	2	177	38	0	0	38
Hourly Total	2	0	0	2	663	49	4	716	118	0	0	118
1700 - 1715	0	0	0	0	170	10	1	181	30	1	0	31
1715 - 1730	1	0	0	1	161	8	0	169	27	0	0	27
1730 - 1745	1	0	0	1	178	9	1	188	28	0	0	28
1745 - 1800	3	0	0	3	182	11	0	193	26	0	0	26
Hourly Total	5	0	0	5	691	38	2	731	111	1	0	112
1800 - 1815	0	0	0	0	164	7	1	172	22	0	0	22
1815 - 1830	0	0	0	0	157	7	0	164	17	0	0	17
Hourly Total	0	0	0	0	321	14	1	336	39	0	0	39
	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL
TOTAL	10	0	0	10	1979	121	9	2109	305	1	0	306

Queues Measured as Stationary Vehicles (Maximum Observed in Period)

Queue Lengths (Vehicles)	
TIME	Stationary
700	0
705	0
710	0
715	2
720	0
725	0
730	2
735	2
740	2
745	3
750	0
755	3
800	3
805	2
810	2
815	2
820	3
825	3
830	4
835	0
840	4
845	5
850	5
855	2
900	3
905	0
910	4
915	0
920	3
925	0
930	3
935	0
950	0
955	2
1000	0

Queue Lengths (Vehicles)	
TIME	Stationary
1530	2
1535	0
1540	3
1545	3
1550	3
1555	0
1600	2
1605	0
1610	2
1615	2
1620	5
1625	3
1630	3
1635	3
1640	0
1645	4
1650	0
1655	3
1700	3
1705	0
1710	3
1715	3
1720	0
1725	3
1730	2
1735	0
1740	2
1745	2
1750	0
1755	3
1800	2
1805	0
1810	0
1815	2
1820	0
1825	0
1830	0

Llanwern - Thursday 12th July 2018

Junction: A48/Beatty Road/SPTS

Approach: SPTS Technologies

TIME	Left Turn				Westbound				Right Turn			
	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0	0
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0	0
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0	0
0745 - 0800	0	0	0	0	0	0	0	0	1	0	0	1
Hourly Total	0	0	0	0	0	0	0	0	1	0	0	1
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0	0
0815 - 0830	1	0	0	1	1	0	0	1	0	0	0	0
0830 - 0845	0	0	0	0	0	0	0	0	0	0	0	0
0845 - 0900	0	0	0	0	0	0	0	0	1	0	0	1
Hourly Total	1	0	0	1	1	0	0	1	1	0	0	1
0900 - 0915	0	0	0	0	0	0	0	0	0	0	0	0
0915 - 0930	0	0	0	0	0	0	0	0	1	0	0	1
0930 - 0945	0	0	0	0	0	0	0	0	0	0	0	0
0945 - 1000	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	1	0	0	1
TOTAL	1	0	0	1	1	0	0	1	3	0	0	3

TIME	Left Turn				Westbound				Right Turn			
	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL
1530 - 1545	0	0	0	0	0	0	0	0	1	0	0	1
1545 - 1600	0	0	0	0	0	0	0	0	1	0	0	1
Hourly Total	0	0	0	0	0	0	0	0	2	0	0	2
1600 - 1615	2	0	0	2	1	0	0	1	2	0	0	2
1615 - 1630	0	0	0	0	1	0	0	1	5	0	0	5
1630 - 1645	1	0	0	1	6	0	0	6	13	0	0	13
1645 - 1700	0	0	0	0	0	0	0	0	3	0	0	3
Hourly Total	3	0	0	3	8	0	0	8	23	0	0	23
1700 - 1715	2	0	0	2	3	0	0	3	13	0	0	13
1715 - 1730	2	0	0	2	0	0	0	0	9	0	0	9
1730 - 1745	2	0	0	2	1	0	0	1	6	0	0	6
1745 - 1800	1	0	0	1	0	0	0	0	3	0	0	3
Hourly Total	7	0	0	7	4	0	0	4	31	0	0	31
1800 - 1815	1	0	0	1	0	0	0	0	3	0	0	3
1815 - 1830	2	0	0	2	0	0	0	0	1	0	0	1
Hourly Total	3	0	0	3	0	0	0	0	4	0	0	4
TOTAL	13	0	0	13	12	0	0	12	60	0	0	60

Queues Measured as Stationary Vehicles (Maximum Observed in Period)

TIME	Queue Lengths (Vehicles)
700	0
705	0
710	0
715	0
720	0
725	0
730	0
735	0
740	0
745	0
750	0
755	0
800	0
805	0
810	0
815	0
820	0
825	0
830	0
835	0
840	0
845	0
850	0
855	0
900	0
905	0
910	0
915	0
920	0
925	0
930	0
935	0
950	0
955	0
1000	0

TIME	Queue Lengths (Vehicles)
1530	0
1535	0
1540	0
1545	0
1550	0
1555	0
1600	0
1605	0
1610	0
1615	0
1620	0
1625	2
1630	3
1635	2
1640	0
1645	0
1650	0
1655	0
1700	0
1705	2
1710	4
1715	3
1720	0
1725	2
1730	0
1735	0
1740	0
1745	0
1750	0
1755	0
1800	0
1805	0
1810	0
1815	0
1820	0
1825	0
1830	0

Llanwern - Thursday 12th July 2018

Junction: A48/Cot Hill

Approach: Cot Hill

TIME	Left Turn In				Left Turn Out			
	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL
0700 - 0715	7	0	0	7	3	0	0	3
0715 - 0730	6	0	0	6	4	0	0	4
0730 - 0745	9	0	1	10	16	0	0	16
0745 - 0800	7	0	0	7	15	0	1	16
Hourly Total	29	0	1	30	38	0	1	39
0800 - 0815	10	0	0	10	14	0	0	14
0815 - 0830	9	0	0	9	11	0	0	11
0830 - 0845	4	0	0	4	6	0	0	6
0845 - 0900	6	0	0	6	10	0	0	10
Hourly Total	29	0	0	29	41	0	0	41
0900 - 0915	7	0	0	7	7	0	0	7
0915 - 0930	6	0	0	6	5	0	0	5
0930 - 0945	4	0	0	4	7	0	0	7
0945 - 1000	5	0	0	5	4	0	0	4
Hourly Total	22	0	0	22	23	0	0	23
TOTAL	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL
	80	0	1	81	102	0	1	103

TIME	Left Turn In				Left Turn Out			
	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL
1530 - 1545	12	0	1	13	9	0	1	10
1545 - 1600	9	0	0	9	7	0	0	7
Hourly Total	21	0	1	22	16	0	1	17
1600 - 1615	13	0	0	13	16	0	0	16
1615 - 1630	19	0	0	19	12	0	0	12
1630 - 1645	17	0	0	17	8	0	0	8
1645 - 1700	16	0	0	16	10	0	0	10
Hourly Total	65	0	0	65	46	0	0	46
1700 - 1715	12	0	0	12	11	0	0	11
1715 - 1730	16	0	0	16	18	0	0	18
1730 - 1745	20	0	0	20	21	0	0	21
1745 - 1800	17	0	0	17	17	0	0	17
Hourly Total	65	0	0	65	67	0	0	67
1800 - 1815	14	0	0	14	10	0	0	10
1815 - 1830	9	0	0	9	6	0	0	6
Hourly Total	23	0	0	23	16	0	0	16
TOTAL	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL
	174	0	1	175	145	0	1	146

Queues Measured as Stationary Vehicles (Maximum Observed in Period)

TIME	Queue Lengths (Vehicles)
	Stationary
700	0
705	0
710	0
715	0
720	0
725	0
730	0
735	0
740	0
745	0
750	0
755	0
800	0
805	0
810	0
815	0
820	0
825	0
830	0
835	0
840	0
845	0
850	0
855	0
900	0
905	0
910	0
915	0
920	0
925	0
930	0
935	0
950	0
955	0
1000	0

TIME	Queue Lengths (Vehicles)
	Stationary
1530	0
1535	0
1540	0
1545	0
1550	0
1555	0
1600	0
1605	0
1610	0
1615	0
1620	0
1625	0
1630	0
1635	0
1640	0
1645	0
1650	0
1655	0
1700	0
1705	0
1710	0
1715	0
1720	0
1725	0
1730	0
1735	0
1740	0
1745	0
1750	0
1755	0
1800	0
1805	0
1810	0
1815	0
1820	0
1825	0
1830	0

Llanwern - Thursday 12th July 2018

Junction: A48/Ringland/Llanwern School

Queues Measured as Stationary Vehicles (Maximum Observed in Period)

Approach: A48 NB

	Left Turn				Northbound				Right Turn				U Turns		Queue Lengths (Vehicles)	
TIME	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL		TIME	Stationary	
0700 - 0715	17	0	0	17	60	12	1	73	3	0	0	3	0	700	0	
0715 - 0730	20	0	0	20	65	11	0	76	5	0	0	5	0	705	0	
0730 - 0745	25	0	1	26	75	16	1	92	9	0	0	9	0	710	0	
0745 - 0800	29	0	0	29	77	14	1	92	17	0	0	17	1	715	0	
Hourly Total	91	0	1	92	277	53	3	333	34	0	0	34	1	720	0	
0800 - 0815	28	0	1	29	76	14	1	91	21	0	0	21	0	725	0	
0815 - 0830	41	0	0	41	86	17	1	104	28	0	0	28	0	730	0	
0830 - 0845	50	0	1	51	106	15	1	122	30	0	0	30	0	735	0	
0845 - 0900	43	0	0	43	101	16	2	119	31	0	0	31	0	740	2	
Hourly Total	162	0	2	164	369	62	5	436	110	0	0	110	0	745	0	
0900 - 0915	46	0	0	46	104	18	2	124	21	0	0	21	0	750	0	
0915 - 0930	37	0	1	38	92	14	0	106	11	0	0	11	0	755	0	
0930 - 0945	31	0	0	31	87	16	1	104	4	0	0	4	0	800	3	
0945 - 1000	32	0	0	32	81	17	1	99	4	0	0	4	1	805	3	
Hourly Total	146	0	1	147	364	65	4	433	40	0	0	40	1	810	0	
	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	TOTAL	815	3	
TOTAL	399	0	4	403	1010	180	12	1202	184	0	0	184	2	820	4	
														825	0	
														830	4	
														835	4	
TIME	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL		840	3	
1530 - 1545	31	0	0	31	134	11	1	146	8	0	0	8	0	840	3	
1545 - 1600	44	1	0	45	151	7	1	159	3	0	0	3	1	845	0	
Hourly Total	75	1	0	76	285	18	2	305	11	0	0	11	1	850	3	
1600 - 1615	48	0	0	48	144	8	1	153	3	0	0	3	0	855	0	
1615 - 1630	57	0	1	58	156	12	0	168	4	0	0	4	0	900	3	
1630 - 1645	61	0	0	61	165	8	0	173	5	0	0	5	1	905	2	
1645 - 1700	62	0	0	62	162	13	1	176	6	0	0	6	0	910	0	
Hourly Total	228	0	1	229	627	41	2	670	18	0	0	18	1	915	3	
1700 - 1715	62	0	0	62	171	13	1	185	7	0	0	7	0	920	0	
1715 - 1730	67	0	0	67	166	14	1	181	5	0	0	5	2	925	2	
1730 - 1745	60	0	0	60	157	12	1	170	6	0	0	6	1	930	0	
1745 - 1800	65	0	0	65	146	13	0	159	28	0	0	28	0	935	2	
Hourly Total	254	0	0	254	640	52	3	695	46	0	0	46	3	950	0	
1800 - 1815	57	0	0	57	137	9	0	146	11	0	0	11	0	955	0	
1815 - 1830	46	0	0	46	130	8	0	138	4	0	0	4	0	1000	0	
Hourly Total	103	0	0	103	267	17	0	284	15	0	0	15	0			
	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	TOTAL			
TOTAL	660	1	1	662	1819	128	7	1954	90	0	0	90	5			

Queue Lengths (Vehicles)	
TIME	Stationary
1530	3
1535	0
1540	4
1545	4
1550	4
1555	4
1600	3
1605	4
1610	4
1615	7
1620	5
1625	5
1630	5
1635	4
1640	4
1645	7
1650	4
1655	5
1700	7
1705	5
1710	3
1715	3
1720	4
1725	4
1730	6
1735	4
1740	3
1745	2
1750	6
1755	3
1800	2
1805	0
1810	3
1815	2
1820	2
1825	0
1830	0

Llanwern - Thursday 12th July 2018

Junction: A48/Ringland/Llanwern School

Approach: Ringland

TIME	Left Turn				Eastbound				Right Turn			
	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL
0700 - 0715	3	0	0	3	6	0	0	6	31	0	0	31
0715 - 0730	2	0	0	2	8	0	0	8	40	0	0	40
0730 - 0745	5	0	0	5	15	0	0	15	48	0	0	48
0745 - 0800	10	0	0	10	14	0	0	14	44	0	0	44
Hourly Total	20	0	0	20	43	0	0	43	163	0	0	163
0800 - 0815	17	0	1	18	17	0	0	17	54	0	0	54
0815 - 0830	21	0	0	21	19	0	0	19	61	0	0	61
0830 - 0845	15	0	0	15	25	0	0	25	65	1	1	67
0845 - 0900	16	0	0	16	22	0	0	22	73	0	0	73
Hourly Total	69	0	1	70	83	0	0	83	253	1	1	255
0900 - 0915	10	0	0	10	8	0	0	8	70	0	0	70
0915 - 0930	6	0	0	6	4	0	0	4	61	0	0	61
0930 - 0945	4	0	0	4	2	0	0	2	57	0	0	57
0945 - 1000	5	0	0	5	2	0	0	2	48	1	0	49
Hourly Total	25	0	0	25	16	0	0	16	236	1	0	237
TOTAL	114	0	1	115	142	0	0	142	652	2	1	655

TIME	Left Turn				Eastbound				Right Turn			
	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL
1530 - 1545	6	0	0	6	2	0	0	2	31	0	0	31
1545 - 1600	5	0	0	5	0	0	0	0	38	0	0	38
Hourly Total	11	0	0	11	2	0	0	2	69	0	0	69
1600 - 1615	10	0	0	10	1	0	0	1	42	0	0	42
1615 - 1630	9	0	0	9	3	0	0	3	33	0	0	33
1630 - 1645	5	0	0	5	1	0	0	1	44	0	0	44
1645 - 1700	4	0	0	4	1	0	0	1	40	0	0	40
Hourly Total	28	0	0	28	6	0	0	6	159	0	0	159
1700 - 1715	3	0	0	3	1	0	0	1	42	0	0	42
1715 - 1730	8	0	0	8	3	0	0	3	57	0	0	57
1730 - 1745	7	0	0	7	5	0	0	5	32	0	0	32
1745 - 1800	8	0	0	8	27	0	0	27	31	0	0	31
Hourly Total	26	0	0	26	36	0	0	36	162	0	0	162
1800 - 1815	4	0	0	4	6	0	0	6	27	0	0	27
1815 - 1830	4	0	0	4	2	0	0	2	20	0	0	20
Hourly Total	8	0	0	8	8	0	0	8	47	0	0	47
TOTAL	73	0	0	73	52	0	0	52	437	0	0	437

Queues Measured as Stationary Vehicles (Maximum Observed in Period)

Queue Lengths (Vehicles)	
TIME	Stationary
700	2
705	3
710	0
715	3
720	4
725	4
730	4
735	5
740	7
745	5
750	3
755	4
800	8
805	4
810	6
815	5
820	5
825	5
830	4
835	4
840	4
845	7
850	8
855	5
900	8
905	4
910	3
915	5
920	4
925	6
930	5
935	3
950	5
955	2
1000	2

Queue Lengths (Vehicles)	
TIME	Stationary
1530	2
1535	2
1540	2
1545	3
1550	0
1555	3
1600	3
1605	3
1610	2
1615	2
1620	2
1625	3
1630	0
1635	3
1640	3
1645	3
1650	4
1655	0
1700	4
1705	4
1710	2
1715	3
1720	3
1725	0
1730	3
1735	2
1740	3
1745	3
1750	4
1755	0
1800	2
1805	0
1810	3
1815	3
1820	2
1825	0
1830	0

Llanwern - Thursday 12th July 2018

Junction: A48/Ringland/Llanwern School

Queues Measured as Stationary Vehicles (Maximum Observed in Period)

Approach: A48 SB

	Left Turn				Southbound				Right Turn				U Turns	Queue Lengths (Vehicles)	
TIME	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL		TIME	Stationary
0700 - 0715	1	0	0	1	124	17	1	142	5	0	0	5	2	700	0
0715 - 0730	3	0	0	3	136	14	0	150	7	0	0	7	1	705	0
0730 - 0745	3	0	0	3	148	18	1	167	9	0	0	9	3	710	0
0745 - 0800	9	0	0	9	155	16	1	172	11	0	0	11	5	715	0
Hourly Total	16	0	0	16	563	65	3	631	32	0	0	32	11	720	0
0800 - 0815	15	0	0	15	163	17	2	182	6	0	0	6	7	725	0
0815 - 0830	13	0	1	14	171	16	2	189	9	0	0	9	5	730	0
0830 - 0845	14	0	0	14	185	14	3	202	12	0	0	12	6	735	3
0845 - 0900	13	0	1	14	171	20	2	193	9	0	0	9	4	740	0
Hourly Total	55	0	2	57	690	67	9	766	36	0	0	36	22	745	0
0900 - 0915	8	0	0	8	173	17	2	192	13	0	0	13	3	750	3
0915 - 0930	3	0	0	3	168	15	1	184	6	0	0	6	3	755	3
0930 - 0945	1	0	0	1	157	18	1	176	8	0	0	8	4	800	0
0945 - 1000	2	0	0	2	160	16	0	176	6	0	0	6	2	805	0
Hourly Total	14	0	0	14	658	66	4	728	33	0	0	33	12	810	2
	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	TOTAL	815	2
TOTAL	85	0	2	87	1911	198	16	2125	101	0	0	101	45	820	3

	Left Turn				Southbound				Right Turn						825	0
TIME	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL			830	3
1530 - 1545	9	0	0	9	154	11	1	166	6	0	0	6	3		835	4
1545 - 1600	2	0	0	2	149	9	1	159	8	0	0	8	1		840	5
Hourly Total	11	0	0	11	303	20	2	325	14	0	0	14	4		845	4
1600 - 1615	3	0	0	3	168	14	1	183	11	0	0	11	1		850	0
1615 - 1630	5	0	0	5	164	11	0	175	7	0	0	7	2		855	4
1630 - 1645	5	0	0	5	156	15	1	172	12	0	0	12	2		900	2
1645 - 1700	4	0	0	4	161	9	2	172	16	0	0	16	4		905	3
Hourly Total	17	0	0	17	649	49	4	702	46	0	0	46	9		910	0
1700 - 1715	2	0	0	2	174	10	1	185	11	0	0	11	3		915	3
1715 - 1730	3	0	0	3	165	8	0	173	8	0	0	8	2		920	3
1730 - 1745	4	0	0	4	178	9	1	188	14	0	0	14	2		925	0
1745 - 1800	30	0	0	30	170	11	0	181	15	0	0	15	3		930	2
Hourly Total	39	0	0	39	687	38	2	727	48	0	0	48	10		935	0
1800 - 1815	11	0	0	11	164	7	1	172	7	0	0	7	2		950	0
1815 - 1830	4	0	0	4	158	7	0	165	6	0	0	6	0		955	0
Hourly Total	15	0	0	15	322	14	1	337	13	0	0	13	2		1000	2
TOTAL	82	0	0	82	1961	121	9	2091	121	0	0	121	TOTAL	TOTAL		

Queue Lengths (Vehicles)	
TIME	Stationary
1530	3
1535	0
1540	2
1545	2
1550	2
1555	3
1600	0
1605	3
1610	3
1615	3
1620	0
1625	3
1630	4
1635	4
1640	4
1645	3
1650	6
1655	3
1700	3
1705	4
1710	4
1715	4
1720	5
1725	5
1730	3
1735	6
1740	4
1745	4
1750	3
1755	3
1800	2
1805	3
1810	0
1815	2
1820	2
1825	0
1830	0

Llanwern - Thursday 12th July 2018

Junction: A48/Ringland/Llanwern School

Approach: Llanwern School

TIME	Left Turn				Westbound				Right Turn			
	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL
0700 - 0715	1	0	0	1	0	0	0	0	0	0	0	0
0715 - 0730	1	0	0	1	0	0	0	0	0	0	0	0
0730 - 0745	2	0	0	2	1	0	0	1	1	0	0	1
0745 - 0800	7	0	0	7	2	0	0	2	1	0	0	1
Hourly Total	11	0	0	11	3	0	0	3	2	0	0	2
0800 - 0815	22	0	0	22	5	0	0	5	9	0	0	9
0815 - 0830	25	0	0	25	6	0	0	6	13	0	1	14
0830 - 0845	31	0	1	32	11	0	0	11	22	0	0	22
0845 - 0900	30	0	1	31	13	0	0	13	20	0	0	20
Hourly Total	108	0	2	110	35	0	0	35	64	0	1	65
0900 - 0915	38	0	1	39	10	0	0	10	17	0	0	17
0915 - 0930	15	0	0	15	4	0	0	4	10	0	0	10
0930 - 0945	8	0	0	8	2	0	0	2	4	0	0	4
0945 - 1000	7	0	0	7	0	0	0	0	2	0	0	2
Hourly Total	68	0	1	69	16	0	0	16	33	0	0	33
	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL
TOTAL	187	0	3	190	54	0	0	54	99	0	1	100

TIME	Left Turn				Westbound				Right Turn			
	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL
1530 - 1545	71	0	3	74	13	0	0	13	38	0	2	40
1545 - 1600	11	0	0	11	2	0	0	2	13	0	0	13
Hourly Total	82	0	3	85	15	0	0	15	51	0	2	53
1600 - 1615	6	0	0	6	1	0	0	1	4	0	0	4
1615 - 1630	10	0	0	10	2	0	0	2	7	0	0	7
1630 - 1645	3	0	0	3	1	0	0	1	11	0	0	11
1645 - 1700	4	0	0	4	2	0	0	2	5	0	0	5
Hourly Total	23	0	0	23	6	0	0	6	27	0	0	27
1700 - 1715	3	0	0	3	1	0	0	1	3	0	0	3
1715 - 1730	6	0	0	6	1	0	0	1	5	0	0	5
1730 - 1745	8	0	0	8	1	0	0	1	4	0	0	4
1745 - 1800	7	0	0	7	6	0	0	6	3	0	0	3
Hourly Total	24	0	0	24	9	0	0	9	15	0	0	15
1800 - 1815	4	0	0	4	3	0	0	3	4	0	0	4
1815 - 1830	5	0	0	5	2	0	0	2	3	0	0	3
Hourly Total	9	0	0	9	5	0	0	5	7	0	0	7
	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL	Lights	HGV	Bus/Coach	TOTAL
TOTAL	138	0	3	141	35	0	0	35	100	0	2	102

Queues Measured as Stationary Vehicles (Maximum Observed in Period)

Queue Lengths (Vehicles)	
TIME	Stationary
700	0
705	0
710	0
715	0
720	0
725	0
730	0
735	0
740	0
745	0
750	0
755	2
800	4
805	3
810	4
815	5
820	5
825	5
830	4
835	6
840	5
845	4
850	5
855	4
900	2
905	3
910	2
915	2
920	2
925	2
930	0
935	0
950	0
955	0
1000	0

Queue Lengths (Vehicles)	
TIME	Stationary
1530	9
1535	5
1540	7
1545	6
1550	4
1555	3
1600	2
1605	0
1610	0
1615	3
1620	0
1625	0
1630	0
1635	2
1640	0
1645	0
1650	0
1655	0
1700	0
1705	0
1710	0
1715	2
1720	0
1725	0
1730	0
1735	0
1740	0
1745	0
1750	0
1755	0
1800	2
1805	0
1810	0
1815	0
1820	0
1825	0
1830	0

Llanwern, Tuesday 14th March 2023

Junction: 1
Approach: A48 North



TIME	Left to Factory Access					Ahead to A48 (South)					Right to Beatty Road					U-Turn				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	12	0	0	12	12.0	77	9	0	86	97.7	13	0	0	13	13.0	0	0	0	0	0.0
07:15 - 07:30	20	0	0	20	20.0	116	14	0	130	148.2	6	0	0	6	6.0	0	0	0	0	0.0
07:30 - 07:45	23	0	0	23	23.0	141	9	0	150	161.7	6	1	0	7	8.3	0	1	0	1	2.3
07:45 - 08:00	19	0	0	19	19.0	172	17	0	189	211.1	11	0	0	11	11.0	0	0	0	0	0.0
Hourly Total	74	0	0	74	74.0	506	49	0	555	618.7	36	1	0	37	38.3	0	1	0	1	2.3
08:00 - 08:15	19	0	0	19	19.0	179	15	0	194	213.5	11	0	0	11	11.0	0	0	0	0	0.0
08:15 - 08:30	16	0	0	16	16.0	212	20	1	233	260.0	15	2	0	17	19.6	0	0	0	0	0.0
08:30 - 08:45	11	0	0	11	11.0	161	15	0	176	195.5	13	1	0	14	15.3	0	0	0	0	0.0
08:45 - 09:00	10	0	0	10	10.0	174	13	0	187	203.9	10	0	0	10	10.0	0	0	0	0	0.0
Hourly Total	56	0	0	56	56.0	726	63	1	790	872.9	49	3	0	52	55.9	0	0	0	0	0.0
09:00 - 09:15	7	1	0	8	9.3	183	13	0	196	212.9	11	2	0	13	15.6	0	0	0	0	0.0
09:15 - 09:30	5	0	0	5	5.0	156	15	1	172	192.5	6	0	0	6	6.0	0	0	0	0	0.0
09:30 - 09:45	5	0	0	5	5.0	122	18	1	141	165.4	15	0	0	15	15.0	0	0	0	0	0.0
09:45 - 10:00	7	0	0	7	7.0	139	18	0	157	180.4	10	0	0	10	10.0	0	0	1	1	2.0
Hourly Total	24	1	0	25	26.3	600	64	2	666	751.2	42	2	0	44	46.6	0	0	1	1	2.0
TOTAL	154	1	0	155	156.3	1832	176	3	2011	2242.8	127	6	0	133	140.8	0	1	1	2	4.3
15:30 - 15:45	1	0	0	1	1.0	129	9	1	139	151.7	9	0	0	9	9.0	0	0	0	0	0.0
15:45 - 16:00	1	0	0	1	1.0	133	6	2	141	150.8	11	0	0	11	11.0	0	0	0	0	0.0
Hourly Total	2	0	0	2	2.0	262	15	3	280	302.5	20	0	0	20	20.0	0	0	0	0	0.0
16:00 - 16:15	3	0	0	3	3.0	136	11	0	147	161.3	6	0	0	6	6.0	0	0	0	0	0.0
16:15 - 16:30	0	0	0	0	0.0	121	11	0	132	146.3	15	0	0	15	15.0	0	0	0	0	0.0
16:30 - 16:45	0	0	0	0	0.0	145	7	0	152	161.1	14	0	0	14	14.0	0	0	0	0	0.0
16:45 - 17:00	2	0	0	2	2.0	131	9	1	141	153.7	16	0	0	16	16.0	0	0	0	0	0.0
Hourly Total	5	0	0	5	5.0	533	38	1	572	622.4	51	0	0	51	51.0	0	0	0	0	0.0
17:00 - 17:15	0	0	0	0	0.0	102	7	0	109	118.1	12	0	0	12	12.0	0	0	0	0	0.0
17:15 - 17:30	0	0	0	0	0.0	140	15	0	155	174.5	14	1	0	15	16.3	0	0	0	0	0.0
17:30 - 17:45	0	0	0	0	0.0	140	10	0	150	163.0	10	0	0	10	10.0	0	0	0	0	0.0
17:45 - 18:00	0	0	0	0	0.0	119	9	0	128	139.7	18	0	0	18	18.0	0	0	0	0	0.0
Hourly Total	0	0	0	0	0.0	501	41	0	542	595.3	54	1	0	55	56.3	0	0	0	0	0.0
18:00 - 18:15	1	0	0	1	1.0	101	8	0	109	119.4	10	0	0	10	10.0	0	0	0	0	0.0
18:15 - 18:30	0	0	0	0	0.0	102	5	0	107	113.5	12	0	0	12	12.0	0	0	0	0	0.0
Hourly Total	1	0	0	1	1.0	203	13	0	216	232.9	22	0	0	22	22.0	0	0	0	0	0.0
TOTAL	8	0	0	8	8.0	1499	107	4	1610	1753.1	147	1	0	148	149.3	0	0	0	0	0.0

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Llanwern, Tuesday 14th March 2023

Junction: 1
Approach: Factory Access



	Left to A48 (South)					Ahead to Beatty Road					Right to A48 (North)				
TIME	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	0	0	0	0	0.0	0	0	0	0	0.0	0	0	0	0	0.0
07:15 - 07:30	0	0	0	0	0.0	1	0	0	1	1.0	0	1	0	1	2.3
07:30 - 07:45	1	0	0	1	1.0	0	0	0	0	0.0	1	0	0	1	1.0
07:45 - 08:00	0	0	0	0	0.0	0	0	0	0	0.0	1	1	0	2	3.3
Hourly Total	1	0	0	1	1.0	1	0	0	1	1.0	2	2	0	4	6.6
08:00 - 08:15	2	0	0	2	2.0	1	0	0	1	1.0	0	0	0	0	0.0
08:15 - 08:30	0	0	0	0	0.0	0	0	0	0	0.0	0	0	0	0	0.0
08:30 - 08:45	1	0	0	1	1.0	0	0	0	0	0.0	1	0	0	1	1.0
08:45 - 09:00	1	0	0	1	1.0	0	0	0	0	0.0	1	0	0	1	1.0
Hourly Total	4	0	0	4	4.0	1	0	0	1	1.0	2	0	0	2	2.0
09:00 - 09:15	0	0	0	0	0.0	0	0	0	0	0.0	5	0	0	5	5.0
09:15 - 09:30	0	0	0	0	0.0	0	0	0	0	0.0	0	0	0	0	0.0
09:30 - 09:45	2	0	0	2	2.0	0	0	0	0	0.0	7	0	0	7	7.0
09:45 - 10:00	1	0	0	1	1.0	0	0	0	0	0.0	1	1	0	2	3.3
Hourly Total	3	0	0	3	3.0	0	0	0	0	0.0	13	1	0	14	15.3
TOTAL	8	0	0	8	8.0	2	0	0	2	2.0	17	3	0	20	23.9
15:30 - 15:45	3	0	0	3	3.0	0	0	0	0	0.0	2	0	0	2	2.0
15:45 - 16:00	5	0	0	5	5.0	1	0	0	1	1.0	6	0	0	6	6.0
Hourly Total	8	0	0	8	8.0	1	0	0	1	1.0	8	0	0	8	8.0
16:00 - 16:15	9	0	0	9	9.0	2	0	0	2	2.0	7	0	0	7	7.0
16:15 - 16:30	1	0	0	1	1.0	1	0	0	1	1.0	20	0	0	20	20.0
16:30 - 16:45	5	0	0	5	5.0	1	0	0	1	1.0	25	0	0	25	25.0
16:45 - 17:00	4	0	0	4	4.0	0	0	0	0	0.0	12	0	0	12	12.0
Hourly Total	19	0	0	19	19.0	4	0	0	4	4.0	64	0	0	64	64.0
17:00 - 17:15	1	0	0	1	1.0	3	0	0	3	3.0	10	0	0	10	10.0
17:15 - 17:30	2	0	0	2	2.0	0	0	0	0	0.0	6	0	0	6	6.0
17:30 - 17:45	1	0	0	1	1.0	1	0	0	1	1.0	8	0	0	8	8.0
17:45 - 18:00	1	0	0	1	1.0	0	0	0	0	0.0	1	0	0	1	1.0
Hourly Total	5	0	0	5	5.0	4	0	0	4	4.0	25	0	0	25	25.0
18:00 - 18:15	3	0	0	3	3.0	1	0	0	1	1.0	8	0	0	8	8.0
18:15 - 18:30	1	0	0	1	1.0	0	0	0	0	0.0	3	0	0	3	3.0
Hourly Total	4	0	0	4	4.0	1	0	0	1	1.0	11	0	0	11	11.0
TOTAL	36	0	0	36	36.0	10	0	0	10	10.0	108	0	0	108	108.0

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Llanwern, Tuesday 14th March 2023

Junction: 1
Approach: A48 South



TIME	Left to Beatty Road					Ahead to A48 (North)					Right to Factory Access					U-Turn				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	1	1	0	2	3.3	74	13	0	87	103.9	2	0	0	2	2.0	3	0	0	3	3.0
07:15 - 07:30	3	0	0	3	3.0	80	15	0	95	114.5	0	1	0	1	2.3	6	0	0	6	6.0
07:30 - 07:45	4	0	0	4	4.0	74	13	0	87	103.9	2	0	0	2	2.0	2	1	0	3	4.3
07:45 - 08:00	8	0	0	8	8.0	66	14	0	80	98.2	1	0	0	1	1.0	2	1	0	3	4.3
Hourly Total	16	1	0	17	18.3	294	55	0	349	420.5	5	1	0	6	7.3	13	2	0	15	17.6
08:00 - 08:15	11	0	0	11	11.0	95	15	0	110	129.5	2	0	0	2	2.0	6	0	0	6	6.0
08:15 - 08:30	11	0	0	11	11.0	84	14	0	98	116.2	0	0	0	0	0.0	5	0	0	5	5.0
08:30 - 08:45	11	0	0	11	11.0	97	17	0	114	136.1	2	0	0	2	2.0	5	0	0	5	5.0
08:45 - 09:00	20	0	0	20	20.0	86	14	2	102	122.2	1	0	0	1	1.0	4	2	0	6	8.6
Hourly Total	53	0	0	53	53.0	362	60	2	424	504.0	5	0	0	5	5.0	20	2	0	22	24.6
09:00 - 09:15	11	0	0	11	11.0	78	11	0	89	103.3	2	0	0	2	2.0	9	1	0	10	11.3
09:15 - 09:30	10	0	0	10	10.0	106	21	1	128	156.3	0	0	0	0	0.0	3	0	0	3	3.0
09:30 - 09:45	18	0	0	18	18.0	94	16	0	110	130.8	4	0	0	4	4.0	4	0	0	4	4.0
09:45 - 10:00	9	0	0	9	9.0	90	10	0	100	113.0	1	0	0	1	1.0	9	1	0	10	11.3
Hourly Total	48	0	0	48	48.0	368	58	1	427	503.4	7	0	0	7	7.0	25	2	0	27	29.6
TOTAL	117	1	0	118	119.3	1024	173	3	1200	1427.9	17	1	0	18	19.3	58	6	0	64	71.8
15:30 - 15:45	18	1	0	19	20.3	96	9	0	105	116.7	0	0	0	0	0.0	6	0	0	6	6.0
15:45 - 16:00	12	0	0	12	12.0	119	6	0	125	132.8	0	0	0	0	0.0	8	0	0	8	8.0
Hourly Total	30	1	0	31	32.3	215	15	0	230	249.5	0	0	0	0	0.0	14	0	0	14	14.0
16:00 - 16:15	14	1	0	15	16.3	130	11	0	141	155.3	0	0	0	0	0.0	2	0	0	2	2.0
16:15 - 16:30	17	0	0	17	17.0	133	7	0	140	149.1	1	0	0	1	1.0	12	0	0	12	12.0
16:30 - 16:45	23	0	0	23	23.0	168	8	0	176	186.4	0	0	0	0	0.0	10	0	0	10	10.0
16:45 - 17:00	23	0	0	23	23.0	164	7	0	171	180.1	0	0	0	0	0.0	3	0	0	3	3.0
Hourly Total	77	1	0	78	79.3	595	33	0	628	670.9	1	0	0	1	1.0	27	0	0	27	27.0
17:00 - 17:15	9	0	0	9	9.0	166	6	0	172	179.8	1	0	0	1	1.0	5	0	0	5	5.0
17:15 - 17:30	22	0	0	22	22.0	143	6	0	149	156.8	1	0	0	1	1.0	12	0	0	12	12.0
17:30 - 17:45	22	0	0	22	22.0	141	4	1	146	152.2	0	0	0	0	0.0	11	0	0	11	11.0
17:45 - 18:00	16	0	0	16	16.0	130	5	0	135	141.5	0	0	0	0	0.0	8	0	0	8	8.0
Hourly Total	69	0	0	69	69.0	580	21	1	602	630.3	2	0	0	2	2.0	36	0	0	36	36.0
18:00 - 18:15	15	0	0	15	15.0	140	7	0	147	156.1	2	0	0	2	2.0	9	0	0	9	9.0
18:15 - 18:30	12	0	0	12	12.0	108	3	0	111	114.9	0	0	0	0	0.0	6	0	0	6	6.0
Hourly Total	27	0	0	27	27.0	248	10	0	258	271.0	2	0	0	2	2.0	15	0	0	15	15.0
TOTAL	203	2	0	205	207.6	1638	79	1	1718	1821.7	5	0	0	5	5.0	92	0	0	92	92.0

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Llanwern, Tuesday 14th March 2023

Junction: 1

Approach: Beatty Road



	Left to A48 (North)					Ahead to Factory Access					Right to A48 (South)				
TIME	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	19	1	0	20	21.3	0	0	0	0	0.0	8	1	0	9	10.3
07:15 - 07:30	13	0	0	13	13.0	0	0	0	0	0.0	9	0	0	9	9.0
07:30 - 07:45	18	1	0	19	20.3	1	0	0	1	1.0	10	1	0	11	12.3
07:45 - 08:00	17	0	0	17	17.0	0	0	0	0	0.0	14	0	0	14	14.0
Hourly Total	67	2	0	69	71.6	1	0	0	1	1.0	41	2	0	43	45.6
08:00 - 08:15	28	0	1	29	30.0	1	0	0	1	1.0	25	0	0	25	25.0
08:15 - 08:30	20	0	0	20	20.0	0	0	0	0	0.0	21	1	0	22	23.3
08:30 - 08:45	30	0	0	30	30.0	0	0	0	0	0.0	24	1	0	25	26.3
08:45 - 09:00	35	1	0	36	37.3	3	0	0	3	3.0	31	0	0	31	31.0
Hourly Total	113	1	1	115	117.3	4	0	0	4	4.0	101	2	0	103	105.6
09:00 - 09:15	29	0	0	29	29.0	2	0	0	2	2.0	32	0	0	32	32.0
09:15 - 09:30	19	0	0	19	19.0	0	0	0	0	0.0	25	0	0	25	25.0
09:30 - 09:45	22	2	0	24	26.6	1	0	0	1	1.0	21	0	0	21	21.0
09:45 - 10:00	15	0	0	15	15.0	0	0	0	0	0.0	21	1	0	22	23.3
Hourly Total	85	2	0	87	89.6	3	0	0	3	3.0	99	1	0	100	101.3
TOTAL	265	5	1	271	278.5	8	0	0	8	8.0	241	5	0	246	252.5
15:30 - 15:45	38	0	0	38	38.0	0	0	0	0	0.0	12	0	0	12	12.0
15:45 - 16:00	31	0	0	31	31.0	1	0	0	1	1.0	15	0	0	15	15.0
Hourly Total	69	0	0	69	69.0	1	0	0	1	1.0	27	0	0	27	27.0
16:00 - 16:15	42	0	0	42	42.0	1	0	0	1	1.0	18	0	0	18	18.0
16:15 - 16:30	31	0	0	31	31.0	0	0	0	0	0.0	13	1	0	14	15.3
16:30 - 16:45	23	1	0	24	25.3	0	0	0	0	0.0	13	0	1	14	15.0
16:45 - 17:00	34	0	0	34	34.0	0	0	0	0	0.0	16	1	0	17	18.3
Hourly Total	130	1	0	131	132.3	1	0	0	1	1.0	60	2	1	63	66.6
17:00 - 17:15	26	1	0	27	28.3	0	0	0	0	0.0	17	0	0	17	17.0
17:15 - 17:30	24	0	0	24	24.0	0	0	0	0	0.0	23	0	0	23	23.0
17:30 - 17:45	32	0	0	32	32.0	1	0	0	1	1.0	8	0	0	8	8.0
17:45 - 18:00	21	0	0	21	21.0	0	0	0	0	0.0	26	0	0	26	26.0
Hourly Total	103	1	0	104	105.3	1	0	0	1	1.0	74	0	0	74	74.0
18:00 - 18:15	18	0	0	18	18.0	1	0	0	1	1.0	18	0	0	18	18.0
18:15 - 18:30	13	0	0	13	13.0	0	0	0	0	0.0	24	0	0	24	24.0
Hourly Total	31	0	0	31	31.0	1	0	0	1	1.0	42	0	0	42	42.0
TOTAL	333	2	0	335	337.6	4	0	0	4	4.0	203	2	1	206	209.6

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Llanwern, Tuesday 14th March 2023

Junction: 2
Approach: A48 North



TIME	Left to Cot Hill					Ahead to A48 (South)				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	10	0	0	10	10.0	78	10	0	88	101.0
07:15 - 07:30	23	0	0	23	23.0	106	15	0	121	140.5
07:30 - 07:45	24	1	0	25	26.3	131	11	0	142	156.3
07:45 - 08:00	21	2	0	23	25.6	166	14	0	180	198.2
Hourly Total	78	3	0	81	84.9	481	50	0	531	596.0
08:00 - 08:15	21	1	0	22	23.3	190	13	0	203	219.9
08:15 - 08:30	25	0	0	25	25.0	210	20	0	230	256.0
08:30 - 08:45	18	1	0	19	20.3	175	16	1	192	213.8
08:45 - 09:00	18	2	0	20	22.6	192	13	0	205	221.9
Hourly Total	82	4	0	86	91.2	767	62	1	830	911.6
09:00 - 09:15	33	1	0	34	35.3	189	13	0	202	218.9
09:15 - 09:30	21	2	1	24	27.6	166	11	0	177	191.3
09:30 - 09:45	16	0	0	16	16.0	130	17	1	148	171.1
09:45 - 10:00	18	1	0	19	20.3	151	19	0	170	194.7
Hourly Total	88	4	1	93	99.2	636	60	1	697	776.0

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

TOTAL	248	11	1	260	275.3	1884	172	2	2058	2283.6
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15:30 - 15:45	19	0	0	19	19.0	130	9	1	140	152.7
15:45 - 16:00	25	0	0	25	25.0	135	6	2	143	152.8
Hourly Total	44	0	0	44	44.0	265	15	3	283	305.5
16:00 - 16:15	22	0	0	22	22.0	140	12	0	152	167.6
16:15 - 16:30	30	0	0	30	30.0	123	11	0	134	148.3
16:30 - 16:45	28	0	1	29	30.0	140	9	0	149	160.7
16:45 - 17:00	20	0	0	20	20.0	133	10	1	144	158.0
Hourly Total	100	0	1	101	102.0	536	42	1	579	634.6
17:00 - 17:15	16	0	0	16	16.0	111	6	0	117	124.8
17:15 - 17:30	32	0	0	32	32.0	140	15	0	155	174.5
17:30 - 17:45	29	0	0	29	29.0	136	11	0	147	161.3
17:45 - 18:00	28	0	0	28	28.0	123	7	0	130	139.1
Hourly Total	105	0	0	105	105.0	510	39	0	549	599.7
18:00 - 18:15	23	0	0	23	23.0	109	9	0	118	129.7
18:15 - 18:30	18	0	0	18	18.0	114	5	0	119	125.5
Hourly Total	41	0	0	41	41.0	223	14	0	237	255.2

TOTAL	290	0	1	291	292.0	1534	110	4	1648	1795.0
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Llanwern, Tuesday 14th March 2023

Junction: 2
Approach: Cot Hill



TIME	Left to A48 (South)					Right to A48 (North)				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	18	0	0	18	18.0	0	0	0	0	0.0
07:15 - 07:30	25	0	0	25	25.0	0	0	0	0	0.0
07:30 - 07:45	28	0	0	28	28.0	0	0	0	0	0.0
07:45 - 08:00	23	1	0	24	25.3	0	0	0	0	0.0
Hourly Total	94	1	0	95	96.3	0	0	0	0	0.0
08:00 - 08:15	40	1	0	41	42.3	0	0	0	0	0.0
08:15 - 08:30	30	0	0	30	30.0	0	0	0	0	0.0
08:30 - 08:45	27	1	0	28	29.3	0	0	0	0	0.0
08:45 - 09:00	22	1	0	23	24.3	0	0	0	0	0.0
Hourly Total	119	3	0	122	125.9	0	0	0	0	0.0
09:00 - 09:15	22	0	0	22	22.0	0	0	0	0	0.0
09:15 - 09:30	11	1	0	12	13.3	0	0	0	0	0.0
09:30 - 09:45	22	1	1	24	26.3	0	0	0	0	0.0
09:45 - 10:00	21	1	0	22	23.3	0	0	0	0	0.0
Hourly Total	76	3	1	80	84.9	0	0	0	0	0.0

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

TOTAL	289	7	1	297	307.1	0	0	0	0	0.0
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15:30 - 15:45	19	0	0	19	19.0	0	0	0	0	0.0
15:45 - 16:00	22	0	0	22	22.0	0	0	0	0	0.0
Hourly Total	41	0	0	41	41.0	0	0	0	0	0.0
16:00 - 16:15	27	0	0	27	27.0	0	0	0	0	0.0
16:15 - 16:30	17	0	0	17	17.0	0	0	0	0	0.0
16:30 - 16:45	41	0	0	41	41.0	0	0	0	0	0.0
16:45 - 17:00	33	0	1	34	35.0	0	0	0	0	0.0
Hourly Total	118	0	1	119	120.0	0	0	0	0	0.0
17:00 - 17:15	21	0	0	21	21.0	0	0	0	0	0.0
17:15 - 17:30	30	0	0	30	30.0	0	0	0	0	0.0
17:30 - 17:45	25	0	0	25	25.0	0	0	0	0	0.0
17:45 - 18:00	15	0	0	15	15.0	0	0	0	0	0.0
Hourly Total	91	0	0	91	91.0	0	0	0	0	0.0
18:00 - 18:15	13	0	0	13	13.0	0	0	0	0	0.0
18:15 - 18:30	19	0	0	19	19.0	0	0	0	0	0.0
Hourly Total	32	0	0	32	32.0	0	0	0	0	0.0

TOTAL	282	0	1	283	284.0	0	0	0	0	0.0
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Llanwern, Tuesday 14th March 2023

Junction: 2
Approach: A48 South



TIME	Ahead to A48 (North)					Right to Cot Hill				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	82	14	0	96	114.2	0	0	0	0	0.0
07:15 - 07:30	88	15	0	103	122.5	0	0	0	0	0.0
07:30 - 07:45	84	16	0	100	120.8	0	0	0	0	0.0
07:45 - 08:00	77	14	0	91	109.2	0	0	0	0	0.0
Hourly Total	331	59	0	390	466.7	0	0	0	0	0.0
08:00 - 08:15	115	15	0	130	149.5	0	0	0	0	0.0
08:15 - 08:30	102	16	0	118	138.8	0	0	0	0	0.0
08:30 - 08:45	109	16	0	125	145.8	0	0	0	0	0.0
08:45 - 09:00	111	14	2	127	147.2	0	0	0	0	0.0
Hourly Total	437	61	2	500	581.3	0	0	0	0	0.0
09:00 - 09:15	102	15	0	117	136.5	0	0	0	0	0.0
09:15 - 09:30	117	22	1	140	169.6	0	0	0	0	0.0
09:30 - 09:45	120	15	0	135	154.5	0	0	0	0	0.0
09:45 - 10:00	105	11	0	116	130.3	0	0	0	0	0.0
Hourly Total	444	63	1	508	590.9	0	0	0	0	0.0

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

TOTAL	1212	183	3	1398	1638.9	0	0	0	0	0.0
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15:30 - 15:45	120	9	0	129	140.7	0	0	0	0	0.0
15:45 - 16:00	133	8	0	141	151.4	0	0	0	0	0.0
Hourly Total	253	17	0	270	292.1	0	0	0	0	0.0
16:00 - 16:15	151	12	0	163	178.6	0	0	0	0	0.0
16:15 - 16:30	166	8	0	174	184.4	0	0	0	0	0.0
16:30 - 16:45	209	7	0	216	225.1	0	0	0	0	0.0
16:45 - 17:00	182	7	0	189	198.1	0	0	0	0	0.0
Hourly Total	708	34	0	742	786.2	0	0	0	0	0.0
17:00 - 17:15	178	6	0	184	191.8	0	0	0	0	0.0
17:15 - 17:30	172	5	0	177	183.5	0	0	0	0	0.0
17:30 - 17:45	182	6	1	189	197.8	0	0	0	0	0.0
17:45 - 18:00	150	5	0	155	161.5	0	0	0	0	0.0
Hourly Total	682	22	1	705	734.6	0	0	0	0	0.0
18:00 - 18:15	160	6	0	166	173.8	0	0	0	0	0.0
18:15 - 18:30	125	3	0	128	131.9	0	0	0	0	0.0
Hourly Total	285	9	0	294	305.7	0	0	0	0	0.0

TOTAL	1928	82	1	2011	2118.6	0	0	0	0	0.0
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Llanwern, Tuesday 14th March 2023

Junction: 3
Approach: Ringland Circle



TIME	Left to A48 (East)					Ahead to Hartridge Farm Road					Right to A48 (West)				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	11	0	0	11	11.0	1	0	0	1	1.0	19	0	0	19	19.0
07:15 - 07:30	5	0	0	5	5.0	0	0	0	0	0.0	38	0	0	38	38.0
07:30 - 07:45	10	0	0	10	10.0	4	0	0	4	4.0	34	0	0	34	34.0
07:45 - 08:00	10	0	0	10	10.0	7	0	0	7	7.0	48	3	0	51	54.9
Hourly Total	36	0	0	36	36.0	12	0	0	12	12.0	139	3	0	142	145.9
08:00 - 08:15	10	0	0	10	10.0	30	0	0	30	30.0	45	1	1	47	49.3
08:15 - 08:30	5	0	0	5	5.0	31	0	0	31	31.0	62	0	0	62	62.0
08:30 - 08:45	12	0	0	12	12.0	30	0	0	30	30.0	54	0	0	54	54.0
08:45 - 09:00	12	0	0	12	12.0	37	0	1	38	39.0	70	0	0	70	70.0
Hourly Total	39	0	0	39	39.0	128	0	1	129	130.0	231	1	1	233	235.3
09:00 - 09:15	11	0	0	11	11.0	21	0	0	21	21.0	75	0	0	75	75.0
09:15 - 09:30	8	0	0	8	8.0	5	0	0	5	5.0	56	2	0	58	60.6
09:30 - 09:45	7	0	0	7	7.0	1	0	0	1	1.0	57	0	0	57	57.0
09:45 - 10:00	8	0	0	8	8.0	3	0	0	3	3.0	47	0	0	47	47.0
Hourly Total	34	0	0	34	34.0	30	0	0	30	30.0	235	2	0	237	239.6

TOTAL	109	0	0	109	109.0	170	0	1	171	172.0	605	6	1	612	620.8
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15:30 - 15:45	8	0	0	8	8.0	5	0	0	5	5.0	41	0	0	41	41.0
15:45 - 16:00	8	0	0	8	8.0	2	0	0	2	2.0	49	0	0	49	49.0
Hourly Total	16	0	0	16	16.0	7	0	0	7	7.0	90	0	0	90	90.0
16:00 - 16:15	7	0	0	7	7.0	1	0	0	1	1.0	55	0	0	55	55.0
16:15 - 16:30	9	0	0	9	9.0	3	0	0	3	3.0	43	0	0	43	43.0
16:30 - 16:45	11	0	0	11	11.0	5	0	0	5	5.0	51	0	0	51	51.0
16:45 - 17:00	5	0	0	5	5.0	2	0	0	2	2.0	53	0	0	53	53.0
Hourly Total	32	0	0	32	32.0	11	0	0	11	11.0	202	0	0	202	202.0
17:00 - 17:15	10	0	0	10	10.0	2	0	0	2	2.0	49	0	0	49	49.0
17:15 - 17:30	6	0	0	6	6.0	1	0	0	1	1.0	32	0	0	32	32.0
17:30 - 17:45	13	0	0	13	13.0	4	0	0	4	4.0	44	0	0	44	44.0
17:45 - 18:00	9	0	0	9	9.0	8	0	0	8	8.0	54	0	0	54	54.0
Hourly Total	38	0	0	38	38.0	15	0	0	15	15.0	179	0	0	179	179.0
18:00 - 18:15	14	0	0	14	14.0	1	0	0	1	1.0	51	0	0	51	51.0
18:15 - 18:30	9	0	0	9	9.0	0	0	0	0	0.0	48	0	0	48	48.0
Hourly Total	23	0	0	23	23.0	1	0	0	1	1.0	99	0	0	99	99.0

TOTAL	109	0	0	109	109.0	34	0	0	34	34.0	570	0	0	570	570.0
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PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Llanwern, Tuesday 14th March 2023

Junction: 3
Approach: A48 East



TIME	Left to Hartridge Farm Road					Ahead to A48 (West)					Right to Ringland Circle					U-Turn				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	1	0	0	1	1.0	84	12	0	96	111.6	3	0	0	3	3.0	7	0	0	7	7.0
07:15 - 07:30	6	0	0	6	6.0	115	12	0	127	142.6	5	0	0	5	5.0	4	0	0	4	4.0
07:30 - 07:45	7	0	0	7	7.0	132	12	0	144	159.6	8	0	0	8	8.0	11	0	0	11	11.0
07:45 - 08:00	15	0	0	15	15.0	169	15	0	184	203.5	5	0	0	5	5.0	2	0	0	2	2.0
Hourly Total	29	0	0	29	29.0	500	51	0	551	617.3	21	0	0	21	21.0	24	0	0	24	24.0
08:00 - 08:15	27	0	0	27	27.0	188	14	0	202	220.2	7	0	0	7	7.0	4	0	0	4	4.0
08:15 - 08:30	28	0	0	28	28.0	192	20	0	212	238.0	12	0	0	12	12.0	8	0	0	8	8.0
08:30 - 08:45	16	0	0	16	16.0	174	16	1	191	212.8	6	0	0	6	6.0	8	1	0	9	10.3
08:45 - 09:00	16	0	0	16	16.0	184	15	0	199	218.5	9	0	0	9	9.0	5	0	0	5	5.0
Hourly Total	87	0	0	87	87.0	738	65	1	804	889.5	34	0	0	34	34.0	25	1	0	26	27.3
09:00 - 09:15	18	0	0	18	18.0	174	13	0	187	203.9	7	0	0	7	7.0	8	0	0	8	8.0
09:15 - 09:30	16	1	0	17	18.3	149	12	0	161	176.6	12	0	0	12	12.0	5	0	0	5	5.0
09:30 - 09:45	14	1	0	15	16.3	122	15	2	139	160.5	13	0	0	13	13.0	4	1	0	5	6.3
09:45 - 10:00	19	0	0	19	19.0	142	20	0	162	188.0	14	0	0	14	14.0	6	1	0	7	8.3
Hourly Total	67	2	0	69	71.6	587	60	2	649	729.0	46	0	0	46	46.0	23	2	0	25	27.6
TOTAL	183	2	0	185	187.6	1825	176	3	2004	2235.8	101	0	0	101	101.0	72	3	0	75	78.9
15:30 - 15:45	4	0	0	4	4.0	125	9	1	135	147.7	12	0	0	12	12.0	6	0	0	6	6.0
15:45 - 16:00	7	0	0	7	7.0	126	6	1	133	141.8	15	0	0	15	15.0	9	0	0	9	9.0
Hourly Total	11	0	0	11	11.0	251	15	2	268	289.5	27	0	0	27	27.0	15	0	0	15	15.0
16:00 - 16:15	7	0	0	7	7.0	144	11	1	156	171.3	8	0	0	8	8.0	15	1	0	16	17.3
16:15 - 16:30	6	0	0	6	6.0	125	11	0	136	150.3	12	0	0	12	12.0	3	0	0	3	3.0
16:30 - 16:45	3	0	0	3	3.0	153	8	0	161	171.4	15	0	0	15	15.0	5	0	0	5	5.0
16:45 - 17:00	2	0	0	2	2.0	143	13	2	158	176.9	10	0	0	10	10.0	9	0	0	9	9.0
Hourly Total	18	0	0	18	18.0	565	43	3	611	669.9	45	0	0	45	45.0	32	1	0	33	34.3
17:00 - 17:15	1	0	0	1	1.0	116	6	0	122	129.8	10	0	0	10	10.0	5	0	0	5	5.0
17:15 - 17:30	2	0	0	2	2.0	151	14	0	165	183.2	12	0	0	12	12.0	3	0	0	3	3.0
17:30 - 17:45	6	0	0	6	6.0	140	10	0	150	163.0	11	0	0	11	11.0	5	0	0	5	5.0
17:45 - 18:00	9	0	0	9	9.0	122	8	0	130	140.4	9	0	0	9	9.0	4	0	0	4	4.0
Hourly Total	18	0	0	18	18.0	529	38	0	567	616.4	42	0	0	42	42.0	17	0	0	17	17.0
18:00 - 18:15	6	0	0	6	6.0	107	11	0	118	132.3	8	0	0	8	8.0	6	0	0	6	6.0
18:15 - 18:30	6	0	0	6	6.0	104	5	0	109	115.5	13	0	0	13	13.0	8	0	0	8	8.0
Hourly Total	12	0	0	12	12.0	211	16	0	227	247.8	21	0	0	21	21.0	14	0	0	14	14.0
TOTAL	59	0	0	59	59.0	1556	112	5	1673	1823.6	135	0	0	135	135.0	78	1	0	79	80.3

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Llanwern, Tuesday 14th March 2023

Junction: 3
Approach: Hartridge Farm Road



	Left to A48 (West)					Ahead to Ringland Circle					Right to A48 (East)				
TIME	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	1	0	0	1	1.0	0	0	0	0	0.0	0	0	0	0	0.0
07:15 - 07:30	1	0	0	1	1.0	2	1	0	3	4.3	1	0	0	1	1.0
07:30 - 07:45	3	0	0	3	3.0	2	0	0	2	2.0	2	0	0	2	2.0
07:45 - 08:00	6	0	0	6	6.0	1	0	0	1	1.0	3	0	0	3	3.0
Hourly Total	11	0	0	11	11.0	5	1	0	6	7.3	6	0	0	6	6.0
08:00 - 08:15	19	0	0	19	19.0	5	0	0	5	5.0	7	0	0	7	7.0
08:15 - 08:30	16	0	1	17	18.0	74	0	0	74	74.0	4	0	0	4	4.0
08:30 - 08:45	18	0	0	18	18.0	32	0	0	32	32.0	7	0	0	7	7.0
08:45 - 09:00	16	0	0	16	16.0	70	0	0	70	70.0	6	0	2	8	10.0
Hourly Total	69	0	1	70	71.0	181	0	0	181	181.0	24	0	2	26	28.0
09:00 - 09:15	12	0	0	12	12.0	45	0	0	45	45.0	4	0	0	4	4.0
09:15 - 09:30	9	0	0	9	9.0	20	0	0	20	20.0	4	1	0	5	6.3
09:30 - 09:45	6	0	0	6	6.0	1	0	0	1	1.0	3	1	0	4	5.3
09:45 - 10:00	5	0	0	5	5.0	1	0	0	1	1.0	1	0	0	1	1.0
Hourly Total	32	0	0	32	32.0	67	0	0	67	67.0	12	2	0	14	16.6
TOTAL	112	0	1	113	114.0	253	1	0	254	255.3	42	2	2	46	50.6
15:30 - 15:45	2	0	0	2	2.0	1	0	0	1	1.0	6	0	0	6	6.0
15:45 - 16:00	5	0	0	5	5.0	0	0	0	0	0.0	4	0	0	4	4.0
Hourly Total	7	0	0	7	7.0	1	0	0	1	1.0	10	0	0	10	10.0
16:00 - 16:15	3	0	0	3	3.0	3	0	0	3	3.0	9	0	0	9	9.0
16:15 - 16:30	2	0	0	2	2.0	0	0	0	0	0.0	5	0	0	5	5.0
16:30 - 16:45	10	0	0	10	10.0	0	0	0	0	0.0	7	0	0	7	7.0
16:45 - 17:00	6	0	0	6	6.0	0	0	0	0	0.0	7	0	0	7	7.0
Hourly Total	21	0	0	21	21.0	3	0	0	3	3.0	28	0	0	28	28.0
17:00 - 17:15	4	0	0	4	4.0	3	0	0	3	3.0	3	0	0	3	3.0
17:15 - 17:30	5	0	0	5	5.0	2	0	0	2	2.0	3	1	0	4	5.3
17:30 - 17:45	4	0	0	4	4.0	1	0	0	1	1.0	2	0	0	2	2.0
17:45 - 18:00	10	0	0	10	10.0	2	0	0	2	2.0	2	0	0	2	2.0
Hourly Total	23	0	0	23	23.0	8	0	0	8	8.0	10	1	0	11	12.3
18:00 - 18:15	9	0	0	9	9.0	0	0	0	0	0.0	8	0	0	8	8.0
18:15 - 18:30	5	0	0	5	5.0	0	0	0	0	0.0	0	0	0	0	0.0
Hourly Total	14	0	0	14	14.0	0	0	0	0	0.0	8	0	0	8	8.0
TOTAL	65	0	0	65	65.0	12	0	0	12	12.0	56	1	0	57	58.3

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Llanwern, Tuesday 14th March 2023

Junction: 3
Approach: A48 West



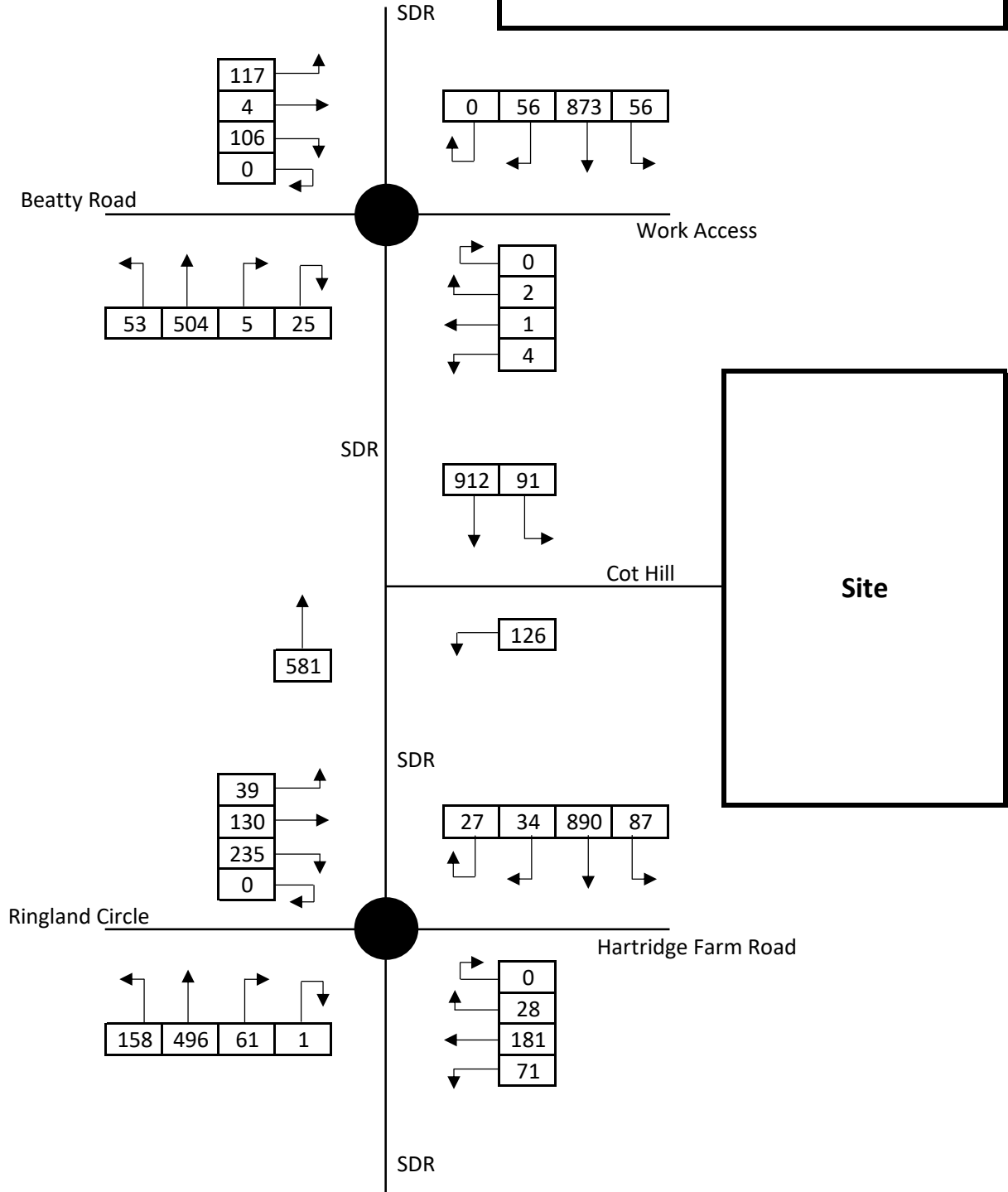
TIME	Left to Ringland Circle					Ahead to A48 (East)					Right to Hartridge Farm Road					U-Turn				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	7	0	0	7	7.0	62	13	0	75	91.9	1	0	0	1	1.0	0	0	0	0	0.0
07:15 - 07:30	16	0	0	16	16.0	72	15	0	87	106.5	2	1	0	3	4.3	0	0	0	0	0.0
07:30 - 07:45	19	0	0	19	19.0	62	16	0	78	98.8	3	0	0	3	3.0	0	0	0	0	0.0
07:45 - 08:00	18	0	1	19	20.0	65	13	0	78	94.9	1	0	0	1	1.0	0	0	0	0	0.0
Hourly Total	60	0	1	61	62.0	261	57	0	318	392.1	7	1	0	8	9.3	0	0	0	0	0.0
08:00 - 08:15	35	0	1	36	37.0	90	16	0	106	126.8	18	0	0	18	18.0	1	0	0	1	1.0
08:15 - 08:30	37	1	0	38	39.3	86	15	0	101	120.5	12	0	0	12	12.0	0	0	0	0	0.0
08:30 - 08:45	40	0	0	40	40.0	86	17	0	103	125.1	16	0	0	16	16.0	0	0	0	0	0.0
08:45 - 09:00	42	0	0	42	42.0	91	14	0	105	123.2	13	0	1	14	15.0	0	0	0	0	0.0
Hourly Total	154	1	1	156	158.3	353	62	0	415	495.6	59	0	1	60	61.0	1	0	0	1	1.0
09:00 - 09:15	22	1	0	23	24.3	80	14	0	94	112.2	14	0	0	14	14.0	0	0	0	0	0.0
09:15 - 09:30	27	0	0	27	27.0	101	20	1	122	149.0	12	0	0	12	12.0	0	0	0	0	0.0
09:30 - 09:45	22	0	0	22	22.0	102	14	0	116	134.2	12	0	0	12	12.0	0	0	0	0	0.0
09:45 - 10:00	20	2	0	22	24.6	90	11	0	101	115.3	10	0	0	10	10.0	0	0	0	0	0.0
Hourly Total	91	3	0	94	97.9	373	59	1	433	510.7	48	0	0	48	48.0	0	0	0	0	0.0
TOTAL	305	4	2	311	318.2	987	178	1	1166	1398.4	114	1	1	116	118.3	1	0	0	1	1.0
15:30 - 15:45	40	0	0	40	40.0	103	5	0	108	114.5	9	0	0	9	9.0	0	0	0	0	0.0
15:45 - 16:00	39	0	0	39	39.0	110	10	0	120	133.0	12	0	0	12	12.0	0	0	0	0	0.0
Hourly Total	79	0	0	79	79.0	213	15	0	228	247.5	21	0	0	21	21.0	0	0	0	0	0.0
16:00 - 16:15	40	0	0	40	40.0	123	9	0	132	143.7	13	0	0	13	13.0	0	0	0	0	0.0
16:15 - 16:30	57	0	0	57	57.0	154	11	0	165	179.3	19	0	0	19	19.0	0	0	0	0	0.0
16:30 - 16:45	53	0	0	53	53.0	187	6	0	193	200.8	21	0	0	21	21.0	0	0	0	0	0.0
16:45 - 17:00	45	0	0	45	45.0	157	6	0	163	170.8	11	0	0	11	11.0	0	0	0	0	0.0
Hourly Total	195	0	0	195	195.0	621	32	0	653	694.6	64	0	0	64	64.0	0	0	0	0	0.0
17:00 - 17:15	43	0	0	43	43.0	160	6	0	166	173.8	10	1	0	11	12.3	0	0	0	0	0.0
17:15 - 17:30	41	0	0	41	41.0	161	4	0	165	170.2	9	0	0	9	9.0	0	0	0	0	0.0
17:30 - 17:45	46	0	0	46	46.0	159	5	1	165	172.5	8	0	0	8	8.0	0	0	0	0	0.0
17:45 - 18:00	42	0	0	42	42.0	143	6	0	149	156.8	4	0	0	4	4.0	0	0	0	0	0.0
Hourly Total	172	0	0	172	172.0	623	21	1	645	673.3	31	1	0	32	33.3	0	0	0	0	0.0
18:00 - 18:15	39	0	0	39	39.0	132	7	0	139	148.1	6	0	0	6	6.0	0	0	0	0	0.0
18:15 - 18:30	32	0	0	32	32.0	108	3	0	111	114.9	5	0	0	5	5.0	0	0	0	0	0.0
Hourly Total	71	0	0	71	71.0	240	10	0	250	263.0	11	0	0	11	11.0	0	0	0	0	0.0
TOTAL	517	0	0	517	517.0	1697	78	1	1776	1878.4	127	1	0	128	129.3	0	0	0	0	0.0

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

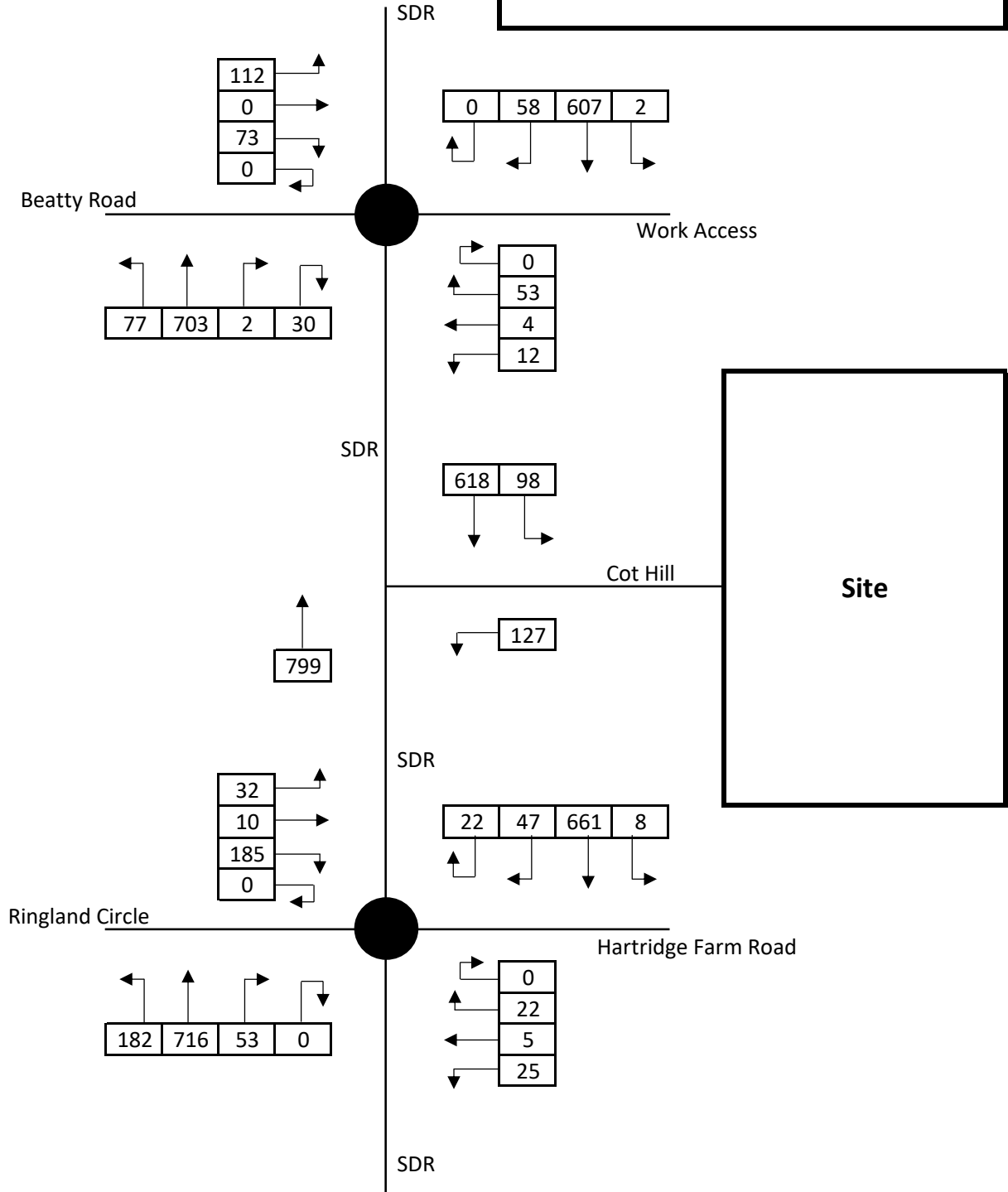
Appendix B

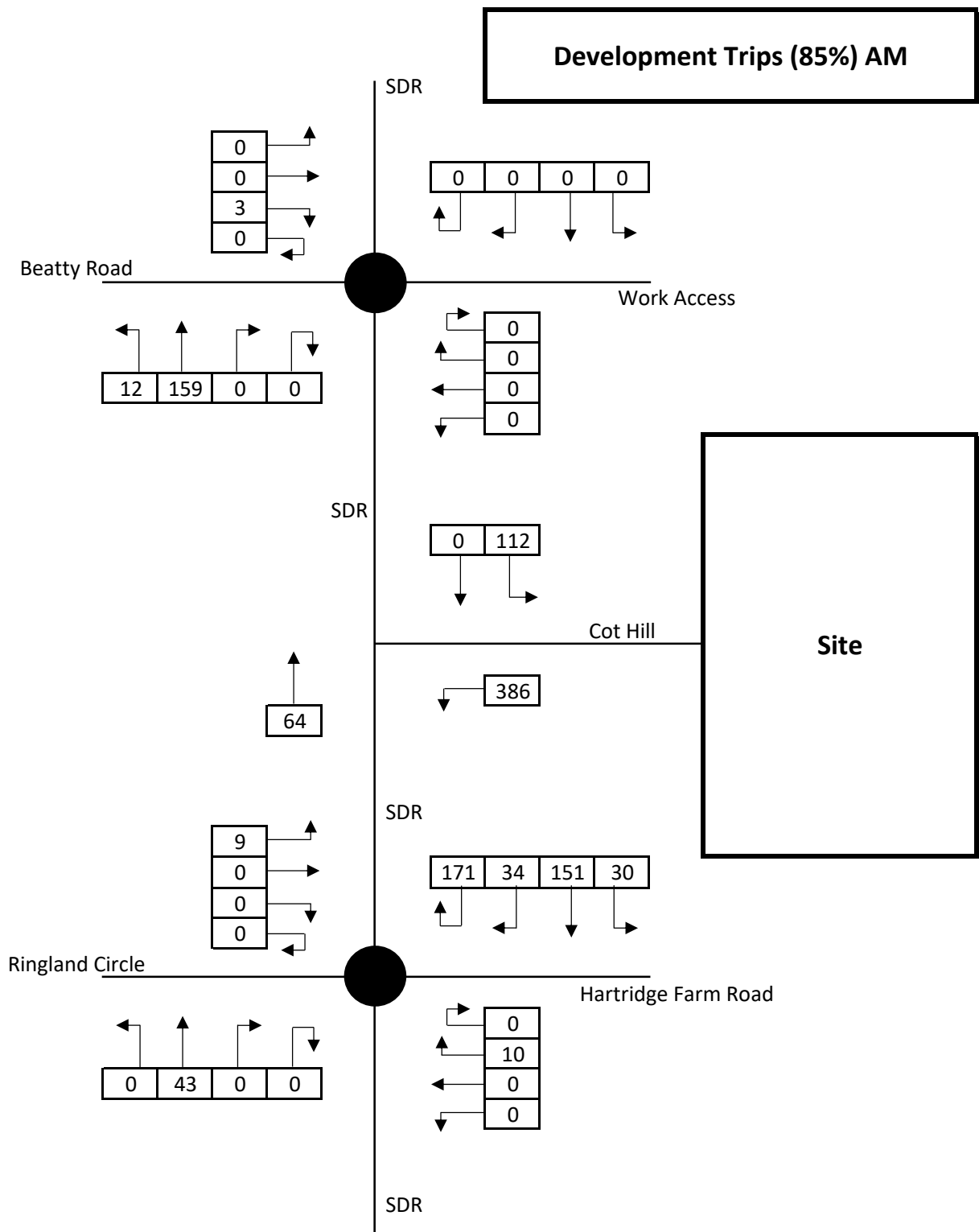
Flow Diagrams

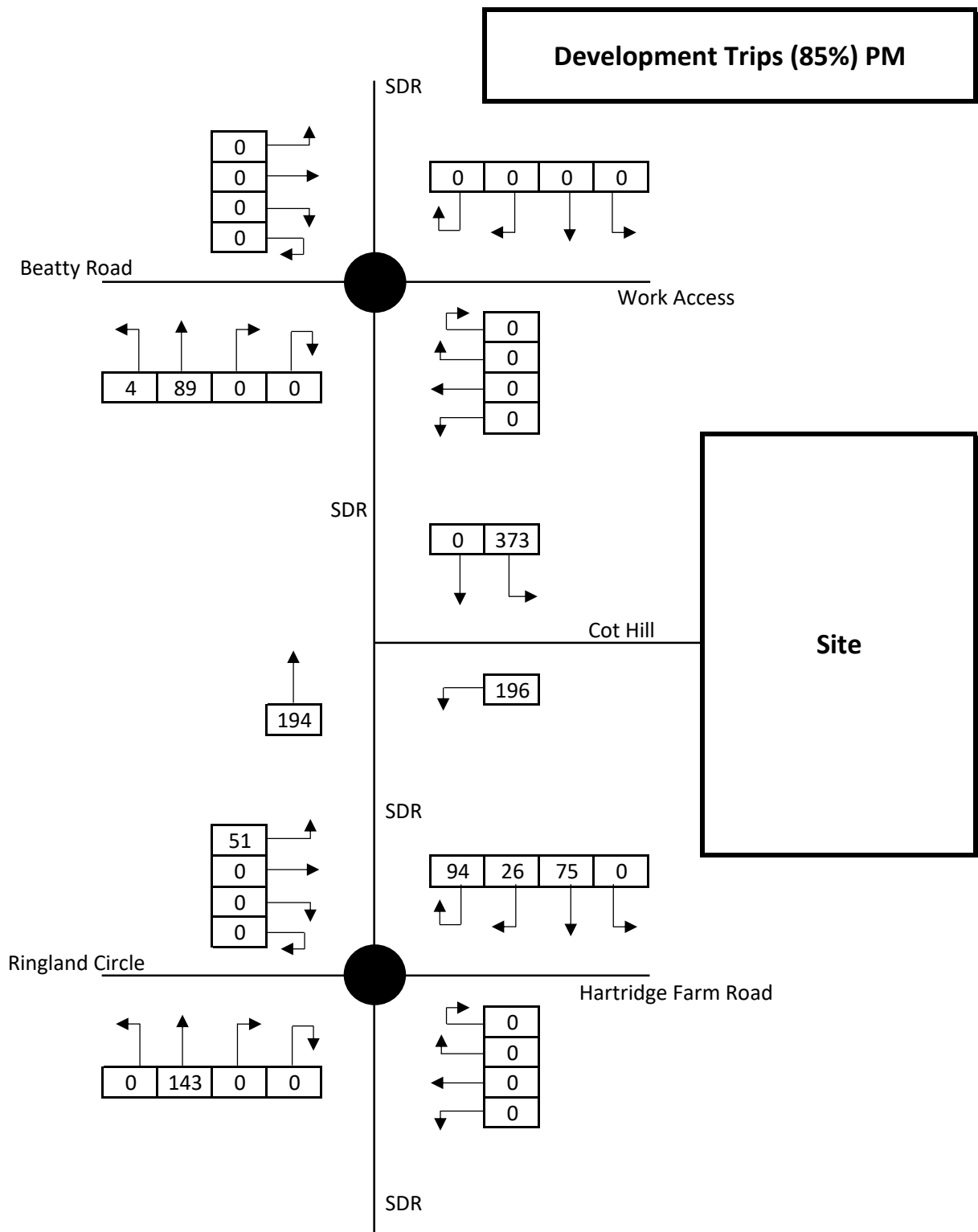
2023 Base AM (08:00-09:00) - PCU

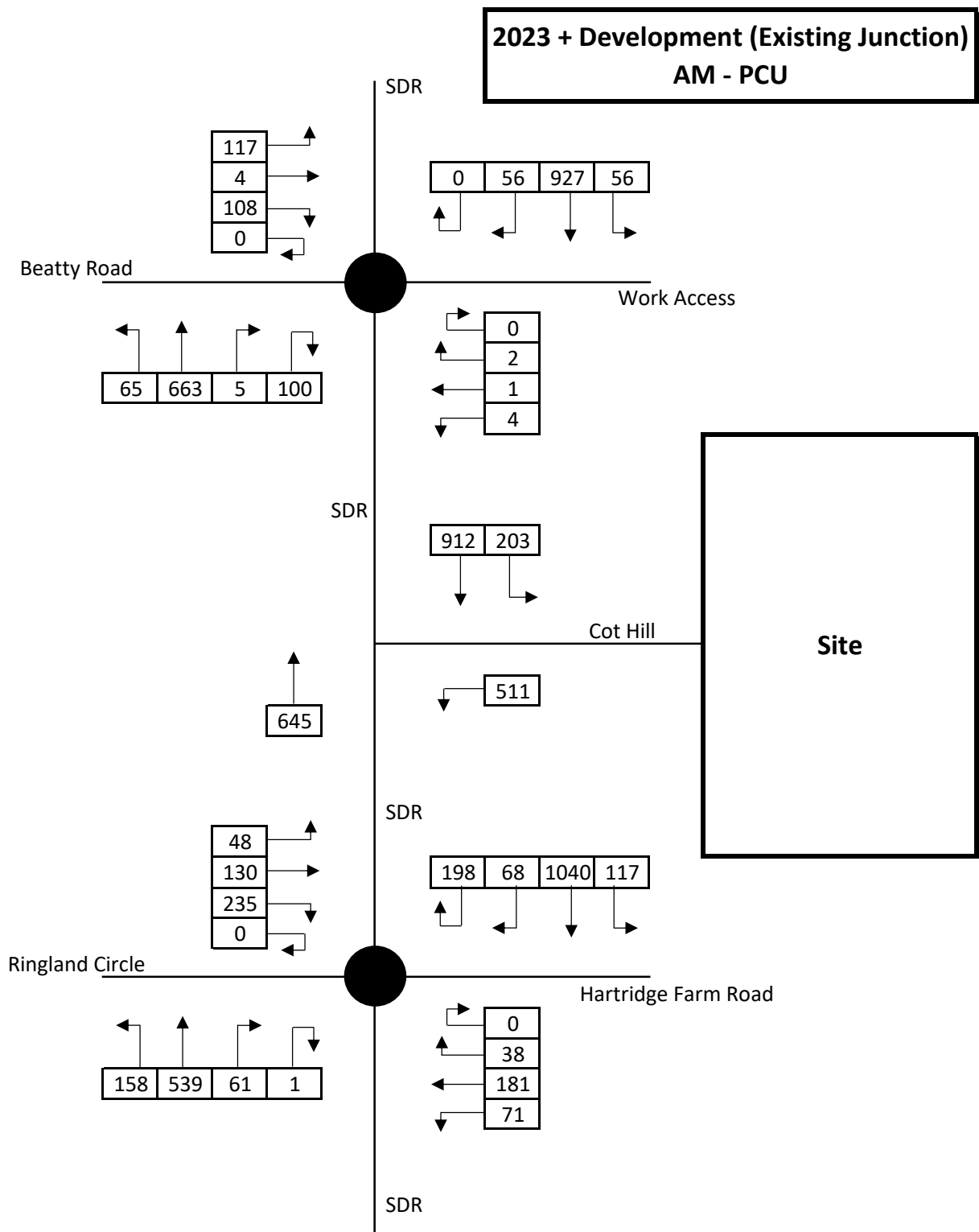


2023 Base PM (16:30-17:30) - PCU









Appendix C

Modelling Output

Junctions 10		
ARCADY 10 - Roundabout Module		
Version: 10.0.4.1693		
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Filename: 184108A-SDR_Beatty Road Junction-V1.j10

Path: H:\Projects\W180000\184108A - Llanwern Revised Access\Technical\A - Technical Note\Modelling\Arcady

Report generation date: 23/03/2023 11:56:07

- »2026 (Halcrow TA), AM
- »2026 (Halcrow TA), PM
- »2026 (Halcrow TA) + Development, AM
- »2026 (Halcrow TA) + Development, PM
- »2023, AM
- »2023, PM
- »2023 + Development, AM
- »2023 + Development, PM

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2026 (Halcrow TA)						
1 - Beatty Road	0.2	4.06	0.18	0.4	6.26	0.26
2 - SDR North	2.0	4.53	0.66	0.8	2.60	0.43
3 - Work Access	0.1	3.35	0.11	0.1	2.73	0.10
4 - SDR South	0.4	1.87	0.26	0.9	2.63	0.47
2026 (Halcrow TA) + Development						
1 - Beatty Road	0.3	4.90	0.21	0.5	9.29	0.35
2 - SDR North	2.4	5.33	0.71	1.3	3.65	0.56
3 - Work Access	0.1	3.66	0.12	0.1	3.53	0.13
4 - SDR South	0.6	2.23	0.38	1.6	3.62	0.61
2023						
1 - Beatty Road	0.3	4.13	0.22	0.3	4.65	0.20
2 - SDR North	0.9	2.92	0.45	0.5	2.25	0.30
3 - Work Access	0.0	2.54	0.01	0.0	2.32	0.05
4 - SDR South	0.4	1.99	0.24	0.5	2.12	0.34
2023 + Development						
1 - Beatty Road	0.3	4.87	0.25	0.3	6.01	0.25
2 - SDR North	1.0	3.20	0.49	0.8	2.94	0.42
3 - Work Access	0.0	2.72	0.01	0.1	2.88	0.06
4 - SDR South	0.6	2.29	0.34	0.9	2.64	0.47

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

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	28/06/2018
Version	
Status	[no status]
Identifier	
Client	
Jobnumber	
Enumerator	VECTOS\ellen.axon
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2026 (Halcrow TA)	AM	ONE HOUR	07:45	09:15	15	✓
D6	2026 (Halcrow TA)	PM	ONE HOUR	16:45	18:15	15	✓
D7	2026 (Halcrow TA) + Development	AM	ONE HOUR	07:45	09:15	15	✓
D8	2026 (Halcrow TA) + Development	PM	ONE HOUR	16:45	18:15	15	✓
D9	2023	AM	ONE HOUR	07:45	09:15	15	✓
D10	2023	PM	ONE HOUR	16:45	18:15	15	✓
D11	2023 + Development	AM	ONE HOUR	07:45	09:15	15	✓
D12	2023 + Development	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2026 (Halcrow TA), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Beatty Road/SDR	Standard Roundabout		1, 2, 3, 4	3.73	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.73	A

Arms

Arms

Arm	Name	Description	No give-way line
1	Beatty Road		
2	SDR North		
3	Work Access		
4	SDR South		

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)	Entry only	Exit only
1 - Beatty Road	3.10	7.00	7.0	45.0	63.0	22.0		
2 - SDR North	7.00	8.80	5.8	30.0	63.0	20.0		
3 - Work Access	4.50	7.80	23.5	25.0	63.0	18.0		
4 - SDR South	7.50	10.50	6.5	40.0	63.0	26.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Beatty Road	0.511	1439
2 - SDR North	0.691	2517
3 - Work Access	0.631	2159
4 - SDR South	0.725	2741

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2026 (Halcrow TA)	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Beatty Road		ONE HOUR	✓	179	100.000
2 - SDR North		ONE HOUR	✓	1419	100.000
3 - Work Access		ONE HOUR	✓	118	100.000
4 - SDR South		ONE HOUR	✓	627	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	130	20	29
	2 - SDR North	153	0	82	1184
	3 - Work Access	5	6	0	107
	4 - SDR South	0	465	152	10

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	0	0	0
	2 - SDR North	0	0	0	0
	3 - Work Access	0	0	0	0
	4 - SDR South	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Beatty Road	0.18	4.06	0.2	A	164	246
2 - SDR North	0.66	4.53	2.0	A	1302	1953
3 - Work Access	0.11	3.35	0.1	A	108	162
4 - SDR South	0.26	1.87	0.4	A	575	863

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	135	34	476	1196	0.113	134	119	0.0	0.1	3.388	A
2 - SDR North	1068	267	158	2407	0.444	1065	451	0.0	0.8	2.674	A
3 - Work Access	89	22	1033	1508	0.059	89	191	0.0	0.1	2.537	A
4 - SDR South	472	118	123	2651	0.178	471	998	0.0	0.2	1.651	A

08:00 - 08:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	161	40	569	1148	0.140	161	142	0.1	0.2	3.644	A
2 - SDR North	1276	319	190	2386	0.535	1274	540	0.8	1.1	3.234	A
3 - Work Access	106	27	1236	1380	0.077	106	228	0.1	0.1	2.826	A
4 - SDR South	564	141	147	2634	0.214	563	1194	0.2	0.3	1.738	A

08:15 - 08:30

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	197	49	697	1083	0.182	197	174	0.2	0.2	4.060	A
2 - SDR North	1562	391	232	2356	0.663	1559	661	1.1	1.9	4.497	A
3 - Work Access	130	32	1512	1205	0.108	130	279	0.1	0.1	3.346	A
4 - SDR South	690	173	180	2610	0.265	690	1462	0.3	0.4	1.874	A

08:30 - 08:45

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	197	49	697	1083	0.182	197	174	0.2	0.2	4.063	A
2 - SDR North	1562	391	232	2356	0.663	1562	662	1.9	2.0	4.533	A
3 - Work Access	130	32	1515	1203	0.108	130	280	0.1	0.1	3.352	A
4 - SDR South	690	173	181	2610	0.265	690	1464	0.4	0.4	1.874	A

08:45 - 09:00

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	161	40	569	1148	0.140	161	142	0.2	0.2	3.650	A
2 - SDR North	1276	319	190	2386	0.535	1279	541	2.0	1.2	3.263	A
3 - Work Access	106	27	1240	1377	0.077	106	229	0.1	0.1	2.832	A
4 - SDR South	564	141	148	2633	0.214	564	1198	0.4	0.3	1.739	A

09:00 - 09:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	135	34	477	1195	0.113	135	119	0.2	0.1	3.396	A
2 - SDR North	1068	267	159	2407	0.444	1070	453	1.2	0.8	2.694	A
3 - Work Access	89	22	1037	1505	0.059	89	191	0.1	0.1	2.544	A
4 - SDR South	472	118	124	2651	0.178	472	1003	0.3	0.2	1.654	A

2026 (Halcrow TA), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Beatty Road/SDR	Standard Roundabout		1, 2, 3, 4	2.91	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.91	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2026 (Halcrow TA)	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Beatty Road		ONE HOUR	✓	187	100.000
2 - SDR North		ONE HOUR	✓	963	100.000
3 - Work Access		ONE HOUR	✓	133	100.000
4 - SDR South		ONE HOUR	✓	1083	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
From	1 - Beatty Road	0	158	17	12
	2 - SDR North	124	0	9	830
	3 - Work Access	11	91	0	31
	4 - SDR South	4	1011	35	33

Vehicle Mix

Heavy Vehicle Percentages

From	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	0	0	0
	2 - SDR North	0	0	0	0
	3 - Work Access	0	0	0	0
	4 - SDR South	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Beatty Road	0.26	6.26	0.4	A	172	257
2 - SDR North	0.43	2.60	0.8	A	884	1325
3 - Work Access	0.10	2.73	0.1	A	122	183
4 - SDR South	0.47	2.63	0.9	A	994	1491

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	141	35	879	990	0.142	140	104	0.0	0.2	4.233	A
2 - SDR North	725	181	73	2466	0.294	723	946	0.0	0.4	2.063	A
3 - Work Access	100	25	750	1686	0.059	100	46	0.0	0.1	2.270	A
4 - SDR South	815	204	170	2618	0.311	814	680	0.0	0.5	1.994	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	168	42	1051	902	0.186	168	125	0.2	0.2	4.901	A
2 - SDR North	866	216	87	2457	0.352	865	1132	0.4	0.5	2.262	A
3 - Work Access	120	30	898	1593	0.075	119	55	0.1	0.1	2.443	A
4 - SDR South	974	243	203	2593	0.375	973	814	0.5	0.6	2.222	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	206	51	1287	782	0.263	205	153	0.2	0.4	6.241	A
2 - SDR North	1060	265	107	2443	0.434	1059	1386	0.5	0.8	2.600	A
3 - Work Access	146	37	1099	1466	0.100	146	67	0.1	0.1	2.727	A
4 - SDR South	1192	298	249	2560	0.466	1191	997	0.6	0.9	2.627	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	206	51	1288	781	0.264	206	153	0.4	0.4	6.257	A
2 - SDR North	1060	265	107	2443	0.434	1060	1387	0.8	0.8	2.603	A
3 - Work Access	146	37	1100	1465	0.100	146	67	0.1	0.1	2.729	A
4 - SDR South	1192	298	249	2560	0.466	1192	998	0.9	0.9	2.631	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	168	42	1053	901	0.187	169	125	0.4	0.2	4.918	A
2 - SDR North	866	216	87	2456	0.352	867	1134	0.8	0.5	2.267	A
3 - Work Access	120	30	899	1592	0.075	120	55	0.1	0.1	2.444	A
4 - SDR South	974	243	203	2593	0.375	975	815	0.9	0.6	2.225	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	141	35	881	989	0.142	141	105	0.2	0.2	4.247	A
2 - SDR North	725	181	73	2466	0.294	726	949	0.5	0.4	2.068	A
3 - Work Access	100	25	753	1684	0.059	100	46	0.1	0.1	2.272	A
4 - SDR South	815	204	170	2617	0.312	816	683	0.6	0.5	1.999	A

2026 (Halcrow TA) + Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Beatty Road/SDR	Standard Roundabout		1, 2, 3, 4	4.18	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.18	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2026 (Halcrow TA) + Development	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Beatty Road		ONE HOUR	✓	182	100.000
2 - SDR North		ONE HOUR	✓	1473	100.000
3 - Work Access		ONE HOUR	✓	118	100.000
4 - SDR South		ONE HOUR	✓	904	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	130	20	32
	2 - SDR North	153	0	82	1238
	3 - Work Access	5	6	0	107
	4 - SDR South	14	653	152	85

Vehicle Mix

Heavy Vehicle Percentages

From	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	0	0	0
	2 - SDR North	0	0	0	0
	3 - Work Access	0	0	0	0
	4 - SDR South	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Beatty Road	0.21	4.90	0.3	A	167	251
2 - SDR North	0.71	5.33	2.4	A	1352	2027
3 - Work Access	0.12	3.66	0.1	A	108	162
4 - SDR South	0.38	2.23	0.6	A	830	1244

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	137	34	673	1095	0.125	136	129	0.0	0.1	3.753	A
2 - SDR North	1109	277	217	2367	0.469	1105	593	0.0	0.9	2.845	A
3 - Work Access	89	22	1132	1445	0.061	89	191	0.0	0.1	2.653	A
4 - SDR South	681	170	123	2651	0.257	679	1097	0.0	0.3	1.825	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	164	41	805	1028	0.159	163	154	0.1	0.2	4.163	A
2 - SDR North	1324	331	260	2337	0.567	1323	709	0.9	1.3	3.541	A
3 - Work Access	106	27	1354	1305	0.081	106	228	0.1	0.1	3.002	A
4 - SDR South	813	203	147	2634	0.309	812	1313	0.3	0.4	1.976	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	200	50	986	936	0.214	200	189	0.2	0.3	4.892	A
2 - SDR North	1622	405	318	2297	0.706	1618	868	1.3	2.4	5.265	A
3 - Work Access	130	32	1656	1114	0.117	130	279	0.1	0.1	3.655	A
4 - SDR South	995	249	180	2610	0.381	995	1606	0.4	0.6	2.227	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	200	50	987	935	0.214	200	189	0.3	0.3	4.898	A
2 - SDR North	1622	405	318	2297	0.706	1622	869	2.4	2.4	5.329	A
3 - Work Access	130	32	1660	1112	0.117	130	280	0.1	0.1	3.665	A
4 - SDR South	995	249	181	2610	0.381	995	1610	0.6	0.6	2.229	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	164	41	806	1027	0.159	164	155	0.3	0.2	4.171	A
2 - SDR North	1324	331	260	2337	0.567	1328	710	2.4	1.3	3.582	A
3 - Work Access	106	27	1360	1301	0.082	106	229	0.1	0.1	3.014	A
4 - SDR South	813	203	148	2633	0.309	813	1318	0.6	0.4	1.978	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	137	34	675	1094	0.125	137	130	0.2	0.1	3.761	A
2 - SDR North	1109	277	218	2366	0.469	1111	594	1.3	0.9	2.872	A
3 - Work Access	89	22	1137	1442	0.062	89	191	0.1	0.1	2.662	A
4 - SDR South	681	170	124	2651	0.257	681	1102	0.4	0.3	1.826	A

2026 (Halcrow TA) + Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Beatty Road/SDR	Standard Roundabout		1, 2, 3, 4	3.99	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.99	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2026 (Halcrow TA) + Development	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Beatty Road		ONE HOUR	✓	187	100.000
2 - SDR North		ONE HOUR	✓	1164	100.000
3 - Work Access		ONE HOUR	✓	133	100.000
4 - SDR South		ONE HOUR	✓	1422	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	158	17	12
	2 - SDR North	124	0	9	1031
	3 - Work Access	11	91	0	31
	4 - SDR South	9	1116	35	262

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	0	0	0
	2 - SDR North	0	0	0	0
	3 - Work Access	0	0	0	0
	4 - SDR South	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Beatty Road	0.35	9.29	0.5	A	172	257
2 - SDR North	0.56	3.65	1.3	A	1068	1602
3 - Work Access	0.13	3.53	0.1	A	122	183
4 - SDR South	0.61	3.62	1.6	A	1305	1957

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	141	35	1129	862	0.163	140	108	0.0	0.2	4.979	A
2 - SDR North	876	219	245	2348	0.373	874	1025	0.0	0.6	2.438	A
3 - Work Access	100	25	1073	1482	0.068	100	46	0.0	0.1	2.604	A
4 - SDR South	1071	268	170	2618	0.409	1068	1003	0.0	0.7	2.319	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	168	42	1351	749	0.224	168	129	0.2	0.3	6.187	A
2 - SDR North	1046	262	293	2315	0.452	1046	1226	0.6	0.8	2.836	A
3 - Work Access	120	30	1284	1349	0.089	119	55	0.1	0.1	2.926	A
4 - SDR South	1278	320	203	2593	0.493	1277	1200	0.7	1.0	2.732	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	206	51	1653	595	0.346	205	158	0.3	0.5	9.215	A
2 - SDR North	1282	320	358	2269	0.565	1280	1500	0.8	1.3	3.632	A
3 - Work Access	146	37	1571	1168	0.125	146	67	0.1	0.1	3.522	A
4 - SDR South	1566	391	248	2560	0.611	1563	1469	1.0	1.6	3.600	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	206	51	1656	593	0.347	206	159	0.5	0.5	9.288	A
2 - SDR North	1282	320	359	2269	0.565	1282	1503	1.3	1.3	3.645	A
3 - Work Access	146	37	1573	1167	0.126	146	67	0.1	0.1	3.527	A
4 - SDR South	1566	391	249	2560	0.612	1566	1471	1.6	1.6	3.618	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	168	42	1355	747	0.225	169	130	0.5	0.3	6.234	A
2 - SDR North	1046	262	294	2314	0.452	1048	1230	1.3	0.8	2.847	A
3 - Work Access	120	30	1287	1347	0.089	120	55	0.1	0.1	2.932	A
4 - SDR South	1278	320	204	2593	0.493	1281	1203	1.6	1.0	2.749	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	141	35	1133	860	0.164	141	109	0.3	0.2	5.011	A
2 - SDR North	876	219	246	2347	0.373	877	1029	0.8	0.6	2.450	A
3 - Work Access	100	25	1077	1480	0.068	100	46	0.1	0.1	2.611	A
4 - SDR South	1071	268	170	2617	0.409	1072	1007	1.0	0.7	2.330	A

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	Beatty Road/SDR	Standard Roundabout		1, 2, 3, 4	2.77	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.77	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2023	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Beatty Road		ONE HOUR	✓	227	100.000
2 - SDR North		ONE HOUR	✓	985	100.000
3 - Work Access		ONE HOUR	✓	7	100.000
4 - SDR South		ONE HOUR	✓	587	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	117	4	106
	2 - SDR North	56	0	56	873
	3 - Work Access	1	2	0	4
	4 - SDR South	53	504	5	25

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	2	0	2
	2 - SDR North	6	0	0	8
	3 - Work Access	0	0	0	0
	4 - SDR South	0	15	0	9

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Beatty Road	0.22	4.13	0.3	A	208	312
2 - SDR North	0.45	2.92	0.9	A	904	1356
3 - Work Access	0.01	2.54	0.0	A	6	10
4 - SDR South	0.24	1.99	0.4	A	539	808

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	171	43	403	1233	0.139	170	83	0.0	0.2	3.451	A
2 - SDR North	742	185	105	2444	0.303	740	468	0.0	0.5	2.266	A
3 - Work Access	5	1	796	1657	0.003	5	49	0.0	0.0	2.179	A
4 - SDR South	442	110	44	2709	0.163	441	757	0.0	0.2	1.794	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	204	51	482	1193	0.171	204	99	0.2	0.2	3.711	A
2 - SDR North	885	221	126	2430	0.364	885	560	0.5	0.6	2.502	A
3 - Work Access	6	2	952	1558	0.004	6	58	0.0	0.0	2.319	A
4 - SDR South	528	132	53	2702	0.195	527	906	0.2	0.3	1.870	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	250	62	590	1138	0.220	250	121	0.2	0.3	4.132	A
2 - SDR North	1085	271	154	2410	0.450	1083	685	0.6	0.9	2.910	A
3 - Work Access	8	2	1166	1424	0.005	8	71	0.0	0.0	2.542	A
4 - SDR South	646	162	65	2694	0.240	646	1109	0.3	0.4	1.987	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	250	62	590	1138	0.220	250	121	0.3	0.3	4.135	A
2 - SDR North	1085	271	154	2410	0.450	1084	686	0.9	0.9	2.915	A
3 - Work Access	8	2	1167	1423	0.005	8	72	0.0	0.0	2.543	A
4 - SDR South	646	162	65	2694	0.240	646	1110	0.4	0.4	1.987	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	204	51	482	1193	0.171	204	99	0.3	0.2	3.714	A
2 - SDR North	885	221	126	2430	0.364	887	560	0.9	0.6	2.506	A
3 - Work Access	6	2	954	1557	0.004	6	59	0.0	0.0	2.320	A
4 - SDR South	528	132	53	2702	0.195	528	907	0.4	0.3	1.871	A

09:00 - 09:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	171	43	404	1233	0.139	171	83	0.2	0.2	3.460	A
2 - SDR North	742	185	106	2444	0.303	742	469	0.6	0.5	2.274	A
3 - Work Access	5	1	799	1655	0.003	5	49	0.0	0.0	2.181	A
4 - SDR South	442	110	44	2708	0.163	442	760	0.3	0.2	1.795	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	Beatty Road/SDR	Standard Roundabout		1, 2, 3, 4	2.45	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.45	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2023	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Beatty Road		ONE HOUR	✓	185	100.000
2 - SDR North		ONE HOUR	✓	667	100.000
3 - Work Access		ONE HOUR	✓	69	100.000
4 - SDR South		ONE HOUR	✓	812	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	112	0	73
	2 - SDR North	58	0	2	607
	3 - Work Access	4	53	0	12
	4 - SDR South	77	703	2	30

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	2	0	3
	2 - SDR North	2	0	0	7
	3 - Work Access	0	0	0	0
	4 - SDR South	0	4	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Beatty Road	0.20	4.65	0.3	A	170	255
2 - SDR North	0.30	2.25	0.5	A	612	918
3 - Work Access	0.05	2.32	0.0	A	63	95
4 - SDR South	0.34	2.12	0.5	A	745	1118

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	139	35	592	1137	0.123	139	104	0.0	0.1	3.692	A
2 - SDR North	502	126	79	2462	0.204	501	652	0.0	0.3	1.954	A
3 - Work Access	52	13	577	1795	0.029	52	3	0.0	0.0	2.064	A
4 - SDR South	611	153	86	2678	0.228	610	542	0.0	0.3	1.801	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	166	42	708	1077	0.154	166	125	0.1	0.2	4.045	A
2 - SDR North	600	150	94	2452	0.245	599	780	0.3	0.3	2.070	A
3 - Work Access	62	16	690	1724	0.036	62	4	0.0	0.0	2.166	A
4 - SDR South	730	182	103	2666	0.274	730	649	0.3	0.4	1.923	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	204	51	867	996	0.204	203	153	0.2	0.3	4.650	A
2 - SDR North	734	184	115	2437	0.301	734	955	0.3	0.5	2.251	A
3 - Work Access	76	19	845	1626	0.047	76	4	0.0	0.0	2.322	A
4 - SDR South	894	224	127	2649	0.338	893	794	0.4	0.5	2.121	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	204	51	868	996	0.205	204	153	0.3	0.3	4.652	A
2 - SDR North	734	184	116	2437	0.301	734	956	0.5	0.5	2.252	A
3 - Work Access	76	19	846	1626	0.047	76	4	0.0	0.0	2.322	A
4 - SDR South	894	224	127	2649	0.338	894	795	0.5	0.5	2.121	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	166	42	709	1077	0.154	167	125	0.3	0.2	4.050	A
2 - SDR North	600	150	95	2451	0.245	600	781	0.5	0.3	2.071	A
3 - Work Access	62	16	691	1723	0.036	62	4	0.0	0.0	2.168	A
4 - SDR South	730	182	103	2666	0.274	731	650	0.5	0.4	1.926	A

18:00 - 18:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	139	35	594	1136	0.123	139	105	0.2	0.1	3.699	A
2 - SDR North	502	126	79	2462	0.204	502	654	0.3	0.3	1.956	A
3 - Work Access	52	13	579	1794	0.029	52	3	0.0	0.0	2.066	A
4 - SDR South	611	153	87	2678	0.228	612	544	0.4	0.3	1.804	A

2023 + Development, 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	Beatty Road/SDR	Standard Roundabout		1, 2, 3, 4	3.02	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.02	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2023 + Development	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Beatty Road		ONE HOUR	✓	229	100.000
2 - SDR North		ONE HOUR	✓	1039	100.000
3 - Work Access		ONE HOUR	✓	7	100.000
4 - SDR South		ONE HOUR	✓	833	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	117	4	108
	2 - SDR North	56	0	56	927
	3 - Work Access	1	2	0	4
	4 - SDR South	65	663	5	100

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	2	0	2
	2 - SDR North	6	0	0	8
	3 - Work Access	0	0	0	0
	4 - SDR South	0	15	0	9

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Beatty Road	0.25	4.87	0.3	A	210	315
2 - SDR North	0.49	3.20	1.0	A	953	1430
3 - Work Access	0.01	2.72	0.0	A	6	10
4 - SDR South	0.34	2.29	0.6	A	764	1147

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	172	43	578	1144	0.151	172	92	0.0	0.2	3.775	A
2 - SDR North	782	196	163	2404	0.325	780	587	0.0	0.5	2.378	A
3 - Work Access	5	1	894	1595	0.003	5	49	0.0	0.0	2.264	A
4 - SDR South	627	157	44	2709	0.232	626	855	0.0	0.3	1.949	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	206	51	692	1086	0.190	206	110	0.2	0.2	4.170	A
2 - SDR North	934	234	195	2382	0.392	933	703	0.5	0.7	2.668	A
3 - Work Access	6	2	1070	1484	0.004	6	58	0.0	0.0	2.435	A
4 - SDR South	749	187	53	2702	0.277	748	1023	0.3	0.4	2.079	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	252	63	847	1006	0.251	252	134	0.2	0.3	4.863	A
2 - SDR North	1144	286	239	2352	0.486	1143	860	0.7	1.0	3.195	A
3 - Work Access	8	2	1310	1333	0.006	8	71	0.0	0.0	2.716	A
4 - SDR South	917	229	65	2694	0.340	917	1253	0.4	0.6	2.286	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	252	63	848	1006	0.251	252	134	0.3	0.3	4.868	A
2 - SDR North	1144	286	239	2352	0.486	1144	861	1.0	1.0	3.201	A
3 - Work Access	8	2	1311	1332	0.006	8	72	0.0	0.0	2.718	A
4 - SDR South	917	229	65	2694	0.341	917	1254	0.6	0.6	2.286	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	206	51	693	1085	0.190	206	110	0.3	0.2	4.179	A
2 - SDR North	934	234	195	2382	0.392	935	704	1.0	0.7	2.675	A
3 - Work Access	6	2	1072	1483	0.004	6	59	0.0	0.0	2.437	A
4 - SDR South	749	187	53	2702	0.277	749	1025	0.6	0.4	2.082	A

09:00 - 09:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	172	43	580	1143	0.151	173	92	0.2	0.2	3.786	A
2 - SDR North	782	196	164	2404	0.325	783	589	0.7	0.5	2.386	A
3 - Work Access	5	1	897	1593	0.003	5	49	0.0	0.0	2.268	A
4 - SDR South	627	157	44	2708	0.232	627	858	0.4	0.3	1.953	A

2023 + Development, 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	Beatty Road/SDR	Standard Roundabout		1, 2, 3, 4	3.04	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.04	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2023 + Development	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Beatty Road		ONE HOUR	✓	185	100.000
2 - SDR North		ONE HOUR	✓	868	100.000
3 - Work Access		ONE HOUR	✓	69	100.000
4 - SDR South		ONE HOUR	✓	1134	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	112	0	73
	2 - SDR North	58	0	2	808
	3 - Work Access	4	53	0	12
	4 - SDR South	81	792	2	259

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	2	0	3
	2 - SDR North	2	0	0	7
	3 - Work Access	0	0	0	0
	4 - SDR South	0	4	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Beatty Road	0.25	6.01	0.3	A	170	255
2 - SDR North	0.42	2.94	0.8	A	796	1195
3 - Work Access	0.06	2.88	0.1	A	63	95
4 - SDR South	0.47	2.64	0.9	A	1041	1561

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	139	35	831	1015	0.137	139	107	0.0	0.2	4.205	A
2 - SDR North	653	163	251	2344	0.279	652	719	0.0	0.4	2.267	A
3 - Work Access	52	13	900	1592	0.033	52	3	0.0	0.0	2.337	A
4 - SDR South	854	213	86	2678	0.319	852	865	0.0	0.5	2.024	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	166	42	994	932	0.179	166	128	0.2	0.2	4.814	A
2 - SDR North	780	195	300	2310	0.338	780	860	0.4	0.5	2.509	A
3 - Work Access	62	16	1076	1480	0.042	62	4	0.0	0.0	2.538	A
4 - SDR South	1019	255	103	2666	0.382	1019	1035	0.5	0.6	2.246	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	204	51	1217	818	0.249	203	157	0.2	0.3	5.995	A
2 - SDR North	956	239	367	2263	0.422	955	1053	0.5	0.8	2.933	A
3 - Work Access	76	19	1318	1328	0.057	76	4	0.0	0.1	2.874	A
4 - SDR South	1249	312	126	2649	0.471	1247	1267	0.6	0.9	2.637	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	204	51	1218	817	0.249	204	157	0.3	0.3	6.008	A
2 - SDR North	956	239	368	2263	0.422	956	1054	0.8	0.8	2.936	A
3 - Work Access	76	19	1319	1327	0.057	76	4	0.1	0.1	2.876	A
4 - SDR South	1249	312	127	2649	0.471	1249	1268	0.9	0.9	2.641	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	166	42	995	931	0.179	167	129	0.3	0.2	4.827	A
2 - SDR North	780	195	301	2309	0.338	781	861	0.8	0.5	2.515	A
3 - Work Access	62	16	1078	1479	0.042	62	4	0.1	0.0	2.542	A
4 - SDR South	1019	255	103	2666	0.382	1021	1037	0.9	0.6	2.251	A

18:00 - 18:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	139	35	833	1013	0.137	140	108	0.2	0.2	4.218	A
2 - SDR North	653	163	252	2343	0.279	654	721	0.5	0.4	2.273	A
3 - Work Access	52	13	903	1590	0.033	52	3	0.0	0.0	2.340	A
4 - SDR South	854	213	87	2678	0.319	854	868	0.6	0.5	2.030	A

Junctions 10		
PICADY 10 - Priority Intersection Module		
Version: 10.0.4.1693 © Copyright TRL Software Limited, 2021		
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Filename: 184108A-SDR_Cot Hill Junction-V1.j10

Path: H:\Projects\W180000\184108A - Llanwern Revised Access\Technical\A - Technical Note\Modelling\Picady

Report generation date: 23/03/2023 11:59:03

- »2026 (Halcrow TA), AM
- »2026 (Halcrow TA), PM
- »2026 (Halcrow TA) + Development, AM
- »2026 (Halcrow TA) + Development, PM
- »2023 , AM
- »2023, PM
- »2023 + Development, AM
- »2023 + Development, PM

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2026 (Halcrow TA)						
Stream B-AC	0.8	10.42	0.44	0.2	6.01	0.17
Stream C-AB	0.0	0.00	0.00	0.0	0.00	0.00
2026 (Halcrow TA) + Development						
Stream B-AC	94.2	491.15	1.28	1.2	11.97	0.56
Stream C-AB	0.0	0.00	0.00	0.0	0.00	0.00
2023						
Stream B-AC	0.3	6.54	0.20	0.2	5.74	0.18
Stream C-AB	0.0	0.00	0.00	0.0	0.00	0.00
2023 + Development						
Stream B-AC	4.2	28.20	0.82	0.9	9.55	0.48
Stream C-AB	0.0	0.00	0.00	0.0	0.00	0.00

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

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	02/07/2018
Version	
Status	[no status]
Identifier	
Client	
Jobnumber	
Enumerator	VECTOS\ellen.axon
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2026 (Halcrow TA)	AM	ONE HOUR	07:45	09:15	15	✓
D6	2026 (Halcrow TA)	PM	ONE HOUR	16:45	18:15	15	✓
D7	2026 (Halcrow TA) + Development	AM	ONE HOUR	07:45	09:15	15	✓
D8	2026 (Halcrow TA) + Development	PM	ONE HOUR	16:45	18:15	15	✓
D9	2023	AM	ONE HOUR	07:45	09:15	15	✓
D10	2023	PM	ONE HOUR	16:45	18:15	15	✓
D11	2023 + Development	AM	ONE HOUR	07:45	09:15	15	✓
D12	2023 + Development	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2026 (Halcrow TA), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SDR/Cot Hill	T-Junction	Entry Only	Two-way	Exit Only		1.62	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.62	A

Arms

Arms

Arm	Name	Description	Arm type
A	SDR (N)		Major
B	Cot Hill		Minor
C	SDR (S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - SDR (S)	7.30				✓	

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Cot Hill	One lane	5.00	0	250

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	718	0.123	0.312	0.196	0.446
B-C	938	0.090	0.227	-	-
C-B	574	0.174	0.174	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2026 (Halcrow TA)	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		ONE HOUR	✓	1323	100.000
B - Cot Hill		ONE HOUR	✓	243	100.000
C - SDR (S)		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A - SDR (N)	B - Cot Hill	C - SDR (\$)
	A - SDR (N)	0	42	1281
	B - Cot Hill	0	0	243
	C - SDR (\$)	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	0	0
	B - Cot Hill	0	0	0
	C - SDR (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.44	10.42	0.8	B	223	334
C-AB	0.00	0.00	0.0	A	0	0
C-A					0	0
A-B					39	58
A-C					1175	1763

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	183	46	716	0.256	182	0.0	0.3	6.725	A
C-AB	0	0	400	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	32	8			32				
A-C	964	241			964				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	218	55	673	0.325	218	0.3	0.5	7.909	A
C-AB	0	0	366	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	38	9			38				
A-C	1152	288			1152				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	268	67	613	0.437	266	0.5	0.8	10.356	B
C-AB	0	0	320	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	46	12			46				
A-C	1410	353			1410				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	268	67	613	0.437	268	0.8	0.8	10.422	B
C-AB	0	0	320	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	46	12			46				
A-C	1410	353			1410				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	218	55	673	0.325	220	0.8	0.5	7.967	A
C-AB	0	0	366	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	38	9			38				
A-C	1152	288			1152				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	183	46	716	0.256	184	0.5	0.3	6.774	A
C-AB	0	0	400	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	32	8			32				
A-C	964	241			964				

2026 (Halcrow TA), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SDR/Cot Hill	T-Junction	Entry Only	Two-way	Exit Only		0.67	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.67	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2026 (Halcrow TA)	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		ONE HOUR	✓	898	100.000
B - Cot Hill		ONE HOUR	✓	112	100.000
C - SDR (S)		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	58	840
	B - Cot Hill	0	0	112
	C - SDR (S)	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	0	0
	B - Cot Hill	0	0	0
	C - SDR (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.17	6.01	0.2	A	103	154
C-AB	0.00	0.00	0.0	A	0	0
C-A					0	0
A-B					53	80
A-C					771	1156

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	84	21	790	0.107	84	0.0	0.1	5.094	A
C-AB	0	0	456	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	44	11			44				
A-C	632	158			632				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	101	25	761	0.132	101	0.1	0.2	5.446	A
C-AB	0	0	433	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	52	13			52				
A-C	755	189			755				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	123	31	722	0.171	123	0.2	0.2	6.013	A
C-AB	0	0	401	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	64	16			64				
A-C	925	231			925				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	123	31	722	0.171	123	0.2	0.2	6.015	A
C-AB	0	0	401	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	64	16			64				
A-C	925	231			925				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	101	25	761	0.132	101	0.2	0.2	5.451	A
C-AB	0	0	433	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	52	13			52				
A-C	755	189			755				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	84	21	790	0.107	84	0.2	0.1	5.102	A
C-AB	0	0	456	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	44	11			44				
A-C	632	158			632				

2026 (Halcrow TA) + Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SDR/Cot Hill	T-Junction	Entry Only	Two-way	Exit Only		159.23	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	159.23	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2026 (Halcrow TA) + Development	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		ONE HOUR	✓	1455	100.000
B - Cot Hill		ONE HOUR	✓	698	100.000
C - SDR (S)		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
From	A - SDR (N)	0	174	1281
	B - Cot Hill	0	0	698
	C - SDR (S)	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
From	A - SDR (N)	0	0	0
	B - Cot Hill	0	0	0
	C - SDR (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	1.28	491.15	94.2	F	640	961
C-AB	0.00	0.00	0.0	A	0	0
C-A					0	0
A-B					160	239
A-C					1175	1763

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	525	131	707	0.744	515	0.0	2.7	17.888	C
C-AB	0	0	383	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	131	33			131				
A-C	964	241			964				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	627	157	662	0.948	603	2.7	8.8	47.843	E
C-AB	0	0	346	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	156	39			156				
A-C	1152	288			1152				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	769	192	600	1.281	596	8.8	51.9	199.180	F
C-AB	0	0	294	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	192	48			192				
A-C	1410	353			1410				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	769	192	600	1.281	599	51.9	94.2	436.799	F
C-AB	0	0	294	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	192	48			192				
A-C	1410	353			1410				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	627	157	662	0.948	655	94.2	87.4	491.151	F
C-AB	0	0	346	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	156	39			156				
A-C	1152	288			1152				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	525	131	707	0.744	699	87.4	44.1	341.601	F
C-AB	0	0	383	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	131	33			131				
A-C	964	241			964				

2026 (Halcrow TA) + Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SDR/Cot Hill	T-Junction	Entry Only	Two-way	Exit Only		2.44	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.44	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2026 (Halcrow TA) + Development	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		ONE HOUR	✓	1338	100.000
B - Cot Hill		ONE HOUR	✓	343	100.000
C - SDR (S)		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	498	840
	B - Cot Hill	0	0	343
	C - SDR (S)	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	0	0
	B - Cot Hill	0	0	0
	C - SDR (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.56	11.97	1.2	B	315	472
C-AB	0.00	0.00	0.0	A	0	0
C-A					0	0
A-B					457	685
A-C					771	1156

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	258	65	760	0.340	256	0.0	0.5	7.114	A
C-AB	0	0	398	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	375	94			375				
A-C	632	158			632				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	308	77	726	0.425	307	0.5	0.7	8.588	A
C-AB	0	0	364	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	448	112			448				
A-C	755	189			755				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	378	94	678	0.557	376	0.7	1.2	11.823	B
C-AB	0	0	317	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	548	137			548				
A-C	925	231			925				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	378	94	678	0.557	378	1.2	1.2	11.970	B
C-AB	0	0	317	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	548	137			548				
A-C	925	231			925				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	308	77	726	0.425	310	1.2	0.8	8.704	A
C-AB	0	0	364	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	448	112			448				
A-C	755	189			755				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	258	65	760	0.340	259	0.8	0.5	7.199	A
C-AB	0	0	398	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	375	94			375				
A-C	632	158			632				

2023 , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SDR/Cot Hill	T-Junction	Entry Only	Two-way	Exit Only		0.73	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.73	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2023	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		ONE HOUR	✓	1003	100.000
B - Cot Hill		ONE HOUR	✓	126	100.000
C - SDR (S)		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	91	912
	B - Cot Hill	0	0	126
	C - SDR (S)	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	5	8
	B - Cot Hill	0	0	2
	C - SDR (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.20	6.54	0.3	A	116	173
C-AB	0.00	0.00	0.0	A	0	0
C-A					0	0
A-B					84	125
A-C					837	1255

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	95	24	775	0.122	94	0.0	0.1	5.386	A
C-AB	0	0	442	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	69	17			69				
A-C	687	172			687				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	113	28	744	0.152	113	0.1	0.2	5.819	A
C-AB	0	0	417	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	82	20			82				
A-C	820	205			820				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	139	35	700	0.198	138	0.2	0.2	6.531	A
C-AB	0	0	381	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	100	25			100				
A-C	1004	251			1004				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	139	35	700	0.198	139	0.2	0.3	6.536	A
C-AB	0	0	381	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	100	25			100				
A-C	1004	251			1004				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	113	28	744	0.152	114	0.3	0.2	5.828	A
C-AB	0	0	417	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	82	20			82				
A-C	820	205			820				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	95	24	775	0.122	95	0.2	0.1	5.399	A
C-AB	0	0	442	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	69	17			69				
A-C	687	172			687				

2023, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SDR/Cot Hill	T-Junction	Entry Only	Two-way	Exit Only		0.86	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.86	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2023	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		ONE HOUR	✓	716	100.000
B - Cot Hill		ONE HOUR	✓	127	100.000
C - SDR (S)		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
From	A - SDR (N)	0	98	618
	B - Cot Hill	0	0	127
	C - SDR (S)	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
From	A - SDR (N)	0	1	7
	B - Cot Hill	0	0	1
	C - SDR (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.18	5.74	0.2	A	117	175
C-AB	0.00	0.00	0.0	A	0	0
C-A					0	0
A-B					90	135
A-C					567	851

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	96	24	825	0.116	95	0.0	0.1	4.976	A
C-AB	0	0	480	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	74	18			74				
A-C	465	116			465				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	114	29	804	0.142	114	0.1	0.2	5.272	A
C-AB	0	0	462	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	88	22			88				
A-C	556	139			556				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	140	35	773	0.181	140	0.2	0.2	5.736	A
C-AB	0	0	436	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	108	27			108				
A-C	680	170			680				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	140	35	773	0.181	140	0.2	0.2	5.738	A
C-AB	0	0	436	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	108	27			108				
A-C	680	170			680				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	114	29	804	0.142	114	0.2	0.2	5.279	A
C-AB	0	0	462	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	88	22			88				
A-C	556	139			556				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	96	24	825	0.116	96	0.2	0.1	4.986	A
C-AB	0	0	480	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	74	18			74				
A-C	465	116			465				

2023 + Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SDR/Cot Hill	T-Junction	Entry Only	Two-way	Exit Only		8.86	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	8.86	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2023 + Development	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		ONE HOUR	✓	1115	100.000
B - Cot Hill		ONE HOUR	✓	511	100.000
C - SDR (S)		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	203	912
	B - Cot Hill	0	0	511
	C - SDR (S)	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	5	8
	B - Cot Hill	0	0	2
	C - SDR (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.82	28.20	4.2	D	469	703
C-AB	0.00	0.00	0.0	A	0	0
C-A					0	0
A-B					186	279
A-C					837	1255

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	385	96	768	0.501	381	0.0	1.0	9.391	A
C-AB	0	0	427	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	153	38			153				
A-C	687	172			687				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	459	115	735	0.625	457	1.0	1.6	13.081	B
C-AB	0	0	399	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	182	46			182				
A-C	820	205			820				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	563	141	689	0.816	553	1.6	3.9	25.434	D
C-AB	0	0	360	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	224	56			224				
A-C	1004	251			1004				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	563	141	689	0.816	562	3.9	4.2	28.199	D
C-AB	0	0	360	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	224	56			224				
A-C	1004	251			1004				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	459	115	735	0.625	469	4.2	1.8	14.281	B
C-AB	0	0	399	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	182	46			182				
A-C	820	205			820				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	385	96	768	0.501	388	1.8	1.0	9.728	A
C-AB	0	0	427	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	153	38			153				
A-C	687	172			687				

2023 + Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SDR/Cot Hill	T-Junction	Entry Only	Two-way	Exit Only		2.18	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.18	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2023 + Development	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		ONE HOUR	✓	1089	100.000
B - Cot Hill		ONE HOUR	✓	323	100.000
C - SDR (S)		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	471	618
	B - Cot Hill	0	0	323
	C - SDR (S)	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	1	7
	B - Cot Hill	0	0	1
	C - SDR (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.48	9.55	0.9	A	296	445
C-AB	0.00	0.00	0.0	A	0	0
C-A					0	0
A-B					432	648
A-C					567	851

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	243	61	800	0.304	241	0.0	0.4	6.490	A
C-AB	0	0	431	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	355	89			355				
A-C	465	116			465				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	290	73	773	0.375	290	0.4	0.6	7.506	A
C-AB	0	0	403	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	423	106			423				
A-C	556	139			556				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	356	89	736	0.483	354	0.6	0.9	9.483	A
C-AB	0	0	365	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	519	130			519				
A-C	680	170			680				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	356	89	736	0.483	356	0.9	0.9	9.547	A
C-AB	0	0	365	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	519	130			519				
A-C	680	170			680				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	290	73	773	0.375	292	0.9	0.6	7.570	A
C-AB	0	0	403	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	423	106			423				
A-C	556	139			556				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	243	61	800	0.304	244	0.6	0.4	6.546	A
C-AB	0	0	431	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	355	89			355				
A-C	465	116			465				

Junctions 10		
ARCADY 10 - Roundabout Module		
Version: 10.0.4.1693 © Copyright TRL Software Limited, 2021		
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Filename: 184108A-SDR_Ringland Circle-V1.j10

Path: H:\Projects\W180000\184108A - Llanwern Revised Access\Technical\A - Technical Note\Modelling\Arcady

Report generation date: 23/03/2023 11:54:49

- »2026 (Halcrow TA), AM
- »2026 (Halcrow TA), PM
- »2026 (Halcrow TA) + Development, AM
- »2026 (Halcrow TA) + Development, PM
- »2023, AM
- »2023, PM
- »2023 + Development, AM
- »2023 + Development, PM

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2026 (Halcrow TA)						
1 - SDR North	2.6	5.46	0.72	0.7	2.42	0.42
2 - Hartridge Farm Road	0.2	4.48	0.19	0.3	3.91	0.24
3 - SDR South	1.0	2.69	0.50	1.8	3.74	0.64
4 - Ringland Circle	0.3	4.25	0.21	0.5	5.52	0.35
2026 (Halcrow TA) + Development						
1 - SDR North	12.1	20.74	0.93	1.1	2.92	0.52
2 - Hartridge Farm Road	0.4	6.58	0.26	0.4	4.58	0.28
3 - SDR South	1.3	3.31	0.56	2.8	5.38	0.74
4 - Ringland Circle	0.3	5.19	0.26	1.0	8.24	0.49
2023						
1 - SDR North	0.8	2.61	0.44	0.4	1.97	0.30
2 - Hartridge Farm Road	0.3	3.88	0.25	0.0	2.72	0.04
3 - SDR South	0.5	2.23	0.31	0.6	2.22	0.39
4 - Ringland Circle	0.5	4.02	0.33	0.3	3.63	0.20
2023 + Development						
1 - SDR North	1.6	3.65	0.60	0.6	2.20	0.37
2 - Hartridge Farm Road	0.4	5.08	0.31	0.0	2.98	0.04
3 - SDR South	0.6	2.53	0.35	0.9	2.62	0.46
4 - Ringland Circle	0.6	4.69	0.37	0.4	4.45	0.27

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

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	28/06/2018
Version	
Status	[no status]
Identifier	
Client	
Jobnumber	
Enumerator	VECTOS\ellen.axon
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2026 (Halcrow TA)	AM	ONE HOUR	07:45	09:15	15	✓
D6	2026 (Halcrow TA)	PM	ONE HOUR	16:45	18:15	15	✓
D7	2026 (Halcrow TA) + Development	AM	ONE HOUR	07:45	09:15	15	✓
D8	2026 (Halcrow TA) + Development	PM	ONE HOUR	16:45	18:15	15	✓
D9	2023	AM	ONE HOUR	07:45	09:15	15	✓
D10	2023	PM	ONE HOUR	16:45	18:15	15	✓
D11	2023 + Development	AM	ONE HOUR	07:45	09:15	15	✓
D12	2023 + Development	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2026 (Halcrow TA), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Ringland Circle/A48	Standard Roundabout		1, 2, 3, 4	4.26	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.26	A

Arms

Arms

Arm	Name	Description	No give-way line
1	SDR North		
2	Hartridge Farm Road		
3	SDR South		
4	Ringland Circle		

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)	Entry only	Exit only
1 - SDR North	7.30	10.00	21.8	50.0	71.0	23.0		
2 - Hartridge Farm Road	6.30	6.80	1.8	15.0	71.0	32.0		
3 - SDR South	7.20	10.60	6.0	45.0	71.0	12.0		
4 - Ringland Circle	4.00	7.00	15.0	15.0	71.0	40.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - SDR North	0.709	2948
2 - Hartridge Farm Road	0.534	1943
3 - SDR South	0.690	2776
4 - Ringland Circle	0.486	1676

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2026 (Halcrow TA)	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - SDR North		ONE HOUR	✓	1577	100.000
2 - Hartridge Farm Road		ONE HOUR	✓	166	100.000
3 - SDR South		ONE HOUR	✓	1222	100.000
4 - Ringland Circle		ONE HOUR	✓	207	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
From 1 - SDR North	21	79	1448	29
From 2 - Hartridge Farm Road	47	0	92	27
From 3 - SDR South	530	527	0	165
From 4 - Ringland Circle	26	52	129	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
From 1 - SDR North	0	0	0	0
From 2 - Hartridge Farm Road	0	0	0	0
From 3 - SDR South	0	0	0	0
From 4 - Ringland Circle	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - SDR North	0.72	5.46	2.6	A	1447	2171
2 - Hartridge Farm Road	0.19	4.48	0.2	A	152	228
3 - SDR South	0.50	2.69	1.0	A	1121	1682
4 - Ringland Circle	0.21	4.25	0.3	A	190	285

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1187	297	532	2571	0.462	1184	469	0.0	0.9	2.588	A
2 - Hartridge Farm Road	125	31	1221	1291	0.097	125	494	0.0	0.1	3.086	A
3 - SDR South	920	230	93	2712	0.339	918	1253	0.0	0.5	2.005	A
4 - Ringland Circle	156	39	845	1266	0.123	155	166	0.0	0.1	3.239	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1418	354	636	2497	0.568	1416	561	0.9	1.3	3.323	A
2 - Hartridge Farm Road	149	37	1461	1163	0.128	149	591	0.1	0.1	3.549	A
3 - SDR South	1099	275	111	2699	0.407	1098	1499	0.5	0.7	2.246	A
4 - Ringland Circle	186	47	1011	1185	0.157	186	199	0.1	0.2	3.601	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1736	434	779	2396	0.725	1731	686	1.3	2.6	5.374	A
2 - Hartridge Farm Road	183	46	1786	990	0.185	182	724	0.1	0.2	4.457	A
3 - SDR South	1345	336	136	2682	0.502	1344	1833	0.7	1.0	2.688	A
4 - Ringland Circle	228	57	1237	1075	0.212	228	243	0.2	0.3	4.246	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1736	434	780	2396	0.725	1736	687	2.6	2.6	5.458	A
2 - Hartridge Farm Road	183	46	1791	987	0.185	183	724	0.2	0.2	4.476	A
3 - SDR South	1345	336	137	2682	0.502	1345	1837	1.0	1.0	2.693	A
4 - Ringland Circle	228	57	1239	1075	0.212	228	243	0.3	0.3	4.250	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1418	354	637	2496	0.568	1423	562	2.6	1.3	3.368	A
2 - Hartridge Farm Road	149	37	1468	1160	0.129	150	592	0.2	0.1	3.567	A
3 - SDR South	1099	275	112	2699	0.407	1100	1505	1.0	0.7	2.252	A
4 - Ringland Circle	186	47	1013	1185	0.157	186	199	0.3	0.2	3.609	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1187	297	533	2570	0.462	1189	470	1.3	0.9	2.610	A
2 - Hartridge Farm Road	125	31	1227	1288	0.097	125	496	0.1	0.1	3.097	A
3 - SDR South	920	230	93	2712	0.339	921	1258	0.7	0.5	2.012	A
4 - Ringland Circle	156	39	848	1265	0.123	156	167	0.2	0.1	3.247	A

2026 (Halcrow TA), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Ringland Circle/A48	Standard Roundabout		1, 2, 3, 4	3.52	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.52	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2026 (Halcrow TA)	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - SDR North		ONE HOUR	✓	979	100.000
2 - Hartridge Farm Road		ONE HOUR	✓	271	100.000
3 - SDR South		ONE HOUR	✓	1540	100.000
4 - Ringland Circle		ONE HOUR	✓	321	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	3	55	850	71
	2 - Hartridge Farm Road	62	0	190	19
	3 - SDR South	1016	173	0	351
	4 - Ringland Circle	5	9	307	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	0	0	0	0
	2 - Hartridge Farm Road	0	0	0	0
	3 - SDR South	0	0	0	0
	4 - Ringland Circle	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - SDR North	0.42	2.42	0.7	A	898	1348
2 - Hartridge Farm Road	0.24	3.91	0.3	A	249	373
3 - SDR South	0.64	3.74	1.8	A	1413	2120
4 - Ringland Circle	0.35	5.52	0.5	A	295	442

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	737	184	367	2688	0.274	736	815	0.0	0.4	1.844	A
2 - Hartridge Farm Road	204	51	924	1450	0.141	203	178	0.0	0.2	2.887	A
3 - SDR South	1159	290	116	2696	0.430	1156	1011	0.0	0.8	2.335	A
4 - Ringland Circle	242	60	942	1219	0.198	241	331	0.0	0.2	3.676	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	880	220	439	2637	0.334	880	975	0.4	0.5	2.049	A
2 - Hartridge Farm Road	244	61	1106	1353	0.180	243	213	0.2	0.2	3.245	A
3 - SDR South	1384	346	139	2680	0.517	1383	1210	0.8	1.1	2.773	A
4 - Ringland Circle	289	72	1126	1129	0.256	288	396	0.2	0.3	4.278	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1078	269	537	2567	0.420	1077	1194	0.5	0.7	2.415	A
2 - Hartridge Farm Road	298	75	1354	1220	0.244	298	261	0.2	0.3	3.901	A
3 - SDR South	1696	424	170	2658	0.638	1693	1481	1.1	1.7	3.717	A
4 - Ringland Circle	353	88	1378	1007	0.351	353	485	0.3	0.5	5.495	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1078	269	538	2566	0.420	1078	1196	0.7	0.7	2.418	A
2 - Hartridge Farm Road	298	75	1355	1220	0.245	298	261	0.3	0.3	3.907	A
3 - SDR South	1696	424	171	2658	0.638	1696	1483	1.7	1.8	3.738	A
4 - Ringland Circle	353	88	1381	1006	0.351	353	486	0.5	0.5	5.517	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	880	220	441	2636	0.334	881	978	0.7	0.5	2.052	A
2 - Hartridge Farm Road	244	61	1108	1351	0.180	244	213	0.3	0.2	3.251	A
3 - SDR South	1384	346	140	2680	0.517	1387	1213	1.8	1.1	2.792	A
4 - Ringland Circle	289	72	1130	1128	0.256	289	397	0.5	0.3	4.298	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	737	184	369	2687	0.274	738	818	0.5	0.4	1.846	A
2 - Hartridge Farm Road	204	51	928	1448	0.141	204	179	0.2	0.2	2.896	A
3 - SDR South	1159	290	117	2696	0.430	1161	1015	1.1	0.8	2.347	A
4 - Ringland Circle	242	60	945	1217	0.199	242	332	0.3	0.2	3.691	A

2026 (Halcrow TA) + Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Ringland Circle/A48	Standard Roundabout		1, 2, 3, 4	13.15	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	13.15	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2026 (Halcrow TA) + Development	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - SDR North		ONE HOUR	✓	2032	100.000
2 - Hartridge Farm Road		ONE HOUR	✓	178	100.000
3 - SDR South		ONE HOUR	✓	1273	100.000
4 - Ringland Circle		ONE HOUR	✓	218	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	223	114	1626	69
	2 - Hartridge Farm Road	59	0	92	27
	3 - SDR South	581	527	0	165
	4 - Ringland Circle	37	52	129	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	0	0	0	0
	2 - Hartridge Farm Road	0	0	0	0
	3 - SDR South	0	0	0	0
	4 - Ringland Circle	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - SDR North	0.93	20.74	12.1	C	1865	2797
2 - Hartridge Farm Road	0.26	6.58	0.4	A	163	245
3 - SDR South	0.56	3.31	1.3	A	1168	1752
4 - Ringland Circle	0.26	5.19	0.3	A	200	300

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1530	382	532	2571	0.595	1524	676	0.0	1.5	3.418	A
2 - Hartridge Farm Road	134	34	1535	1124	0.119	133	520	0.0	0.1	3.634	A
3 - SDR South	958	240	283	2580	0.371	956	1385	0.0	0.6	2.213	A
4 - Ringland Circle	164	41	1044	1169	0.140	163	196	0.0	0.2	3.577	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1827	457	636	2497	0.731	1822	808	1.5	2.7	5.292	A
2 - Hartridge Farm Road	160	40	1835	963	0.166	160	622	0.1	0.2	4.479	A
3 - SDR South	1144	286	339	2542	0.450	1143	1656	0.6	0.8	2.573	A
4 - Ringland Circle	196	49	1248	1070	0.183	196	234	0.2	0.2	4.116	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	2237	559	778	2396	0.934	2204	986	2.7	10.9	16.530	C
2 - Hartridge Farm Road	196	49	2222	757	0.259	195	760	0.2	0.3	6.405	A
3 - SDR South	1402	350	411	2492	0.562	1400	2007	0.8	1.3	3.289	A
4 - Ringland Circle	240	60	1525	936	0.257	240	286	0.2	0.3	5.167	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	2237	559	780	2396	0.934	2232	990	10.9	12.1	20.738	C
2 - Hartridge Farm Road	196	49	2249	743	0.264	196	763	0.3	0.4	6.585	A
3 - SDR South	1402	350	415	2489	0.563	1402	2030	1.3	1.3	3.308	A
4 - Ringland Circle	240	60	1530	933	0.257	240	287	0.3	0.3	5.191	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1827	457	638	2496	0.732	1864	814	12.1	2.8	6.022	A
2 - Hartridge Farm Road	160	40	1876	942	0.170	161	626	0.4	0.2	4.613	A
3 - SDR South	1144	286	345	2538	0.451	1146	1691	1.3	0.8	2.592	A
4 - Ringland Circle	196	49	1255	1067	0.184	196	236	0.3	0.2	4.140	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1530	382	534	2570	0.595	1535	679	2.8	1.5	3.498	A
2 - Hartridge Farm Road	134	34	1546	1118	0.120	134	522	0.2	0.1	3.660	A
3 - SDR South	958	240	285	2579	0.372	959	1395	0.8	0.6	2.225	A
4 - Ringland Circle	164	41	1048	1167	0.141	164	197	0.2	0.2	3.589	A

2026 (Halcrow TA) + Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Ringland Circle/A48	Standard Roundabout		1, 2, 3, 4	4.79	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.79	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2026 (Halcrow TA) + Development	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - SDR North		ONE HOUR	✓	1210	100.000
2 - Hartridge Farm Road		ONE HOUR	✓	271	100.000
3 - SDR South		ONE HOUR	✓	1709	100.000
4 - Ringland Circle		ONE HOUR	✓	381	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	114	55	939	102
	2 - Hartridge Farm Road	62	0	190	19
	3 - SDR South	1185	173	0	351
	4 - Ringland Circle	65	9	307	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	0	0	0	0
	2 - Hartridge Farm Road	0	0	0	0
	3 - SDR South	0	0	0	0
	4 - Ringland Circle	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - SDR North	0.52	2.92	1.1	A	1110	1665
2 - Hartridge Farm Road	0.28	4.58	0.4	A	249	373
3 - SDR South	0.74	5.38	2.8	A	1568	2352
4 - Ringland Circle	0.49	8.24	1.0	A	350	524

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	911	228	367	2688	0.339	909	1070	0.0	0.5	2.022	A
2 - Hartridge Farm Road	204	51	1098	1357	0.150	203	178	0.0	0.2	3.118	A
3 - SDR South	1287	322	223	2622	0.491	1283	1078	0.0	1.0	2.680	A
4 - Ringland Circle	287	72	1151	1117	0.257	285	354	0.0	0.3	4.322	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1088	272	439	2637	0.413	1087	1280	0.5	0.7	2.321	A
2 - Hartridge Farm Road	244	61	1313	1242	0.196	243	213	0.2	0.2	3.604	A
3 - SDR South	1536	384	267	2592	0.593	1534	1290	1.0	1.4	3.398	A
4 - Ringland Circle	343	86	1377	1007	0.340	342	424	0.3	0.5	5.403	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1332	333	536	2568	0.519	1331	1566	0.7	1.1	2.906	A
2 - Hartridge Farm Road	298	75	1607	1085	0.275	298	260	0.2	0.4	4.568	A
3 - SDR South	1882	470	327	2551	0.738	1876	1578	1.4	2.8	5.298	A
4 - Ringland Circle	419	105	1685	858	0.489	418	518	0.5	0.9	8.141	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1332	333	538	2566	0.519	1332	1570	1.1	1.1	2.916	A
2 - Hartridge Farm Road	298	75	1610	1084	0.275	298	261	0.4	0.4	4.582	A
3 - SDR South	1882	470	327	2550	0.738	1882	1581	2.8	2.8	5.380	A
4 - Ringland Circle	419	105	1689	856	0.490	419	520	0.9	1.0	8.241	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1088	272	442	2635	0.413	1089	1286	1.1	0.7	2.332	A
2 - Hartridge Farm Road	244	61	1317	1240	0.196	244	214	0.4	0.2	3.618	A
3 - SDR South	1536	384	267	2592	0.593	1542	1294	2.8	1.5	3.447	A
4 - Ringland Circle	343	86	1383	1004	0.341	344	426	1.0	0.5	5.465	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	911	228	369	2686	0.339	912	1075	0.7	0.5	2.030	A
2 - Hartridge Farm Road	204	51	1102	1355	0.151	204	179	0.2	0.2	3.129	A
3 - SDR South	1287	322	224	2622	0.491	1289	1082	1.5	1.0	2.704	A
4 - Ringland Circle	287	72	1157	1115	0.257	288	356	0.5	0.3	4.357	A

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	Ringland Circle/A48	Standard Roundabout		1, 2, 3, 4	2.88	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.88	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2023	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - SDR North		ONE HOUR	✓	1038	100.000
2 - Hartridge Farm Road		ONE HOUR	✓	280	100.000
3 - SDR South		ONE HOUR	✓	716	100.000
4 - Ringland Circle		ONE HOUR	✓	404	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	27	87	890	34
	2 - Hartridge Farm Road	28	0	71	181
	3 - SDR South	496	61	1	158
	4 - Ringland Circle	39	130	235	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	4	0	8	0
	2 - Hartridge Farm Road	8	0	1	0
	3 - SDR South	15	2	0	1
	4 - Ringland Circle	0	1	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - SDR North	0.44	2.61	0.8	A	952	1429
2 - Hartridge Farm Road	0.25	3.88	0.3	A	257	385
3 - SDR South	0.31	2.23	0.5	A	657	986
4 - Ringland Circle	0.33	4.02	0.5	A	371	556

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	781	195	320	2721	0.287	780	443	0.0	0.4	1.980	A
2 - Hartridge Farm Road	211	53	891	1467	0.144	210	209	0.0	0.2	2.891	A
3 - SDR South	539	135	203	2636	0.204	538	899	0.0	0.3	1.894	A
4 - Ringland Circle	304	76	461	1453	0.209	303	280	0.0	0.3	3.157	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	933	233	384	2676	0.349	933	530	0.4	0.6	2.207	A
2 - Hartridge Farm Road	252	63	1066	1374	0.183	251	250	0.2	0.2	3.239	A
3 - SDR South	644	161	243	2609	0.247	643	1075	0.3	0.4	2.022	A
4 - Ringland Circle	363	91	551	1409	0.258	363	335	0.3	0.3	3.473	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1143	286	470	2615	0.437	1142	649	0.6	0.8	2.611	A
2 - Hartridge Farm Road	308	77	1306	1246	0.247	308	306	0.2	0.3	3.873	A
3 - SDR South	788	197	297	2571	0.307	788	1317	0.4	0.5	2.228	A
4 - Ringland Circle	445	111	674	1349	0.330	444	410	0.3	0.5	4.013	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1143	286	470	2615	0.437	1143	650	0.8	0.8	2.614	A
2 - Hartridge Farm Road	308	77	1307	1245	0.248	308	306	0.3	0.3	3.879	A
3 - SDR South	788	197	297	2571	0.307	788	1318	0.5	0.5	2.229	A
4 - Ringland Circle	445	111	675	1348	0.330	445	411	0.5	0.5	4.019	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	933	233	384	2675	0.349	934	531	0.8	0.6	2.212	A
2 - Hartridge Farm Road	252	63	1068	1373	0.183	252	250	0.3	0.2	3.247	A
3 - SDR South	644	161	243	2608	0.247	644	1077	0.5	0.4	2.023	A
4 - Ringland Circle	363	91	552	1408	0.258	364	336	0.5	0.4	3.478	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	781	195	322	2720	0.287	782	444	0.6	0.4	1.987	A
2 - Hartridge Farm Road	211	53	894	1466	0.144	211	209	0.2	0.2	2.898	A
3 - SDR South	539	135	203	2636	0.205	539	902	0.4	0.3	1.895	A
4 - Ringland Circle	304	76	462	1452	0.209	304	281	0.4	0.3	3.168	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	Ringland Circle/A48	Standard Roundabout		1, 2, 3, 4	2.30	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.30	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2023	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - SDR North		ONE HOUR	✓	738	100.000
2 - Hartridge Farm Road		ONE HOUR	✓	52	100.000
3 - SDR South		ONE HOUR	✓	951	100.000
4 - Ringland Circle		ONE HOUR	✓	227	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
From	1 - SDR North	22	8	661	47
	2 - Hartridge Farm Road	22	0	25	5
	3 - SDR South	716	53	0	182
	4 - Ringland Circle	32	10	185	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
From	1 - SDR North	0	0	7	0
	2 - Hartridge Farm Road	5	0	0	0
	3 - SDR South	3	2	0	0
	4 - Ringland Circle	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - SDR North	0.30	1.97	0.4	A	677	1016
2 - Hartridge Farm Road	0.04	2.72	0.0	A	48	72
3 - SDR South	0.39	2.22	0.6	A	873	1309
4 - Ringland Circle	0.20	3.63	0.3	A	208	312

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	556	139	186	2816	0.197	555	595	0.0	0.3	1.690	A
2 - Hartridge Farm Road	39	10	687	1576	0.025	39	53	0.0	0.0	2.390	A
3 - SDR South	716	179	72	2726	0.263	715	654	0.0	0.4	1.831	A
4 - Ringland Circle	171	43	611	1380	0.124	170	176	0.0	0.1	2.975	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	663	166	223	2790	0.238	663	712	0.3	0.3	1.797	A
2 - Hartridge Farm Road	47	12	822	1504	0.031	47	64	0.0	0.0	2.520	A
3 - SDR South	855	214	86	2717	0.315	855	783	0.4	0.5	1.979	A
4 - Ringland Circle	204	51	731	1322	0.154	204	210	0.1	0.2	3.220	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	813	203	273	2755	0.295	812	871	0.3	0.4	1.968	A
2 - Hartridge Farm Road	57	14	1007	1406	0.041	57	78	0.0	0.0	2.724	A
3 - SDR South	1047	262	106	2703	0.387	1046	958	0.5	0.6	2.222	A
4 - Ringland Circle	250	62	895	1242	0.201	250	257	0.2	0.3	3.628	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	813	203	273	2754	0.295	813	872	0.4	0.4	1.969	A
2 - Hartridge Farm Road	57	14	1007	1405	0.041	57	78	0.0	0.0	2.724	A
3 - SDR South	1047	262	106	2703	0.387	1047	959	0.6	0.6	2.224	A
4 - Ringland Circle	250	62	895	1242	0.201	250	258	0.3	0.3	3.629	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	663	166	223	2790	0.238	664	713	0.4	0.3	1.801	A
2 - Hartridge Farm Road	47	12	823	1504	0.031	47	64	0.0	0.0	2.523	A
3 - SDR South	855	214	86	2717	0.315	856	784	0.6	0.5	1.980	A
4 - Ringland Circle	204	51	731	1321	0.154	204	211	0.3	0.2	3.223	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	556	139	187	2815	0.197	556	597	0.3	0.3	1.691	A
2 - Hartridge Farm Road	39	10	689	1575	0.025	39	53	0.0	0.0	2.393	A
3 - SDR South	716	179	72	2726	0.263	716	656	0.5	0.4	1.835	A
4 - Ringland Circle	171	43	612	1379	0.124	171	176	0.2	0.1	2.982	A

2023 + Development, 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	Ringland Circle/A48	Standard Roundabout		1, 2, 3, 4	3.65	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.65	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2023 + Development	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - SDR North		ONE HOUR	✓	1423	100.000
2 - Hartridge Farm Road		ONE HOUR	✓	290	100.000
3 - SDR South		ONE HOUR	✓	759	100.000
4 - Ringland Circle		ONE HOUR	✓	413	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	198	117	1040	68
	2 - Hartridge Farm Road	38	0	71	181
	3 - SDR South	539	61	1	158
	4 - Ringland Circle	48	130	235	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	4	0	8	0
	2 - Hartridge Farm Road	8	0	1	0
	3 - SDR South	15	2	0	1
	4 - Ringland Circle	0	1	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - SDR North	0.60	3.65	1.6	A	1306	1959
2 - Hartridge Farm Road	0.31	5.08	0.4	A	266	399
3 - SDR South	0.35	2.53	0.6	A	696	1045
4 - Ringland Circle	0.37	4.69	0.6	A	379	568

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1071	268	320	2721	0.394	1069	618	0.0	0.7	2.312	A
2 - Hartridge Farm Road	218	55	1158	1325	0.165	218	231	0.0	0.2	3.289	A
3 - SDR South	571	143	364	2525	0.226	570	1011	0.0	0.3	2.037	A
4 - Ringland Circle	311	78	629	1371	0.227	310	306	0.0	0.3	3.419	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1279	320	383	2676	0.478	1278	739	0.7	1.0	2.735	A
2 - Hartridge Farm Road	261	65	1385	1204	0.217	260	277	0.2	0.3	3.862	A
3 - SDR South	682	171	436	2475	0.276	682	1210	0.3	0.4	2.221	A
4 - Ringland Circle	371	93	752	1311	0.283	371	366	0.3	0.4	3.861	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1567	392	469	2615	0.599	1564	905	1.0	1.6	3.635	A
2 - Hartridge Farm Road	319	80	1695	1038	0.308	319	339	0.3	0.4	5.060	A
3 - SDR South	836	209	533	2408	0.347	835	1481	0.4	0.6	2.530	A
4 - Ringland Circle	455	114	921	1229	0.370	454	447	0.4	0.6	4.679	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1567	392	470	2615	0.599	1567	906	1.6	1.6	3.651	A
2 - Hartridge Farm Road	319	80	1698	1037	0.308	319	339	0.4	0.4	5.078	A
3 - SDR South	836	209	534	2408	0.347	836	1483	0.6	0.6	2.533	A
4 - Ringland Circle	455	114	922	1229	0.370	455	448	0.6	0.6	4.691	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1279	320	385	2675	0.478	1282	741	1.6	1.0	2.752	A
2 - Hartridge Farm Road	261	65	1389	1202	0.217	261	277	0.4	0.3	3.879	A
3 - SDR South	682	171	437	2475	0.276	683	1213	0.6	0.4	2.223	A
4 - Ringland Circle	371	93	753	1310	0.283	372	367	0.6	0.4	3.873	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1071	268	322	2720	0.394	1072	620	1.0	0.7	2.326	A
2 - Hartridge Farm Road	218	55	1162	1323	0.165	219	232	0.3	0.2	3.301	A
3 - SDR South	571	143	366	2524	0.226	572	1015	0.4	0.3	2.040	A
4 - Ringland Circle	311	78	631	1370	0.227	311	307	0.4	0.3	3.433	A

2023 + Development, 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	Ringland Circle/A48	Standard Roundabout		1, 2, 3, 4	2.68	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.68	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2023 + Development	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - SDR North		ONE HOUR	✓	934	100.000
2 - Hartridge Farm Road		ONE HOUR	✓	52	100.000
3 - SDR South		ONE HOUR	✓	1094	100.000
4 - Ringland Circle		ONE HOUR	✓	278	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	116	8	737	73
	2 - Hartridge Farm Road	22	0	25	5
	3 - SDR South	859	53	0	182
	4 - Ringland Circle	83	10	185	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	0	0	7	0
	2 - Hartridge Farm Road	5	0	0	0
	3 - SDR South	3	2	0	0
	4 - Ringland Circle	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - SDR North	0.37	2.20	0.6	A	857	1286
2 - Hartridge Farm Road	0.04	2.98	0.0	A	48	72
3 - SDR South	0.46	2.62	0.9	A	1004	1506
4 - Ringland Circle	0.27	4.45	0.4	A	255	383

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	703	176	186	2816	0.250	702	811	0.0	0.3	1.795	A
2 - Hartridge Farm Road	39	10	835	1498	0.026	39	53	0.0	0.0	2.518	A
3 - SDR South	824	206	162	2664	0.309	822	711	0.0	0.5	2.000	A
4 - Ringland Circle	209	52	789	1293	0.162	209	195	0.0	0.2	3.317	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	840	210	223	2790	0.301	839	970	0.3	0.5	1.946	A
2 - Hartridge Farm Road	47	12	998	1410	0.033	47	64	0.0	0.0	2.694	A
3 - SDR South	983	246	194	2642	0.372	983	851	0.5	0.6	2.222	A
4 - Ringland Circle	250	62	943	1218	0.205	250	234	0.2	0.3	3.717	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1028	257	273	2755	0.373	1028	1188	0.5	0.6	2.196	A
2 - Hartridge Farm Road	57	14	1222	1291	0.044	57	78	0.0	0.0	2.978	A
3 - SDR South	1205	301	238	2612	0.461	1203	1042	0.6	0.9	2.617	A
4 - Ringland Circle	306	77	1155	1115	0.274	306	286	0.3	0.4	4.442	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1028	257	273	2754	0.373	1028	1189	0.6	0.6	2.198	A
2 - Hartridge Farm Road	57	14	1223	1290	0.044	57	78	0.0	0.0	2.979	A
3 - SDR South	1205	301	238	2612	0.461	1205	1043	0.9	0.9	2.619	A
4 - Ringland Circle	306	77	1156	1115	0.275	306	286	0.4	0.4	4.450	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	840	210	223	2790	0.301	840	972	0.6	0.5	1.949	A
2 - Hartridge Farm Road	47	12	1000	1409	0.033	47	64	0.0	0.0	2.695	A
3 - SDR South	983	246	194	2642	0.372	985	852	0.9	0.6	2.226	A
4 - Ringland Circle	250	62	945	1217	0.205	250	234	0.4	0.3	3.723	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	703	176	187	2815	0.250	704	814	0.5	0.4	1.796	A
2 - Hartridge Farm Road	39	10	837	1496	0.026	39	53	0.0	0.0	2.521	A
3 - SDR South	824	206	163	2664	0.309	824	713	0.6	0.5	2.005	A
4 - Ringland Circle	209	52	791	1292	0.162	210	196	0.3	0.2	3.328	A

Appendix B Capita response to 2018 Tech note on behalf of NCC

Title: Llanwern Revised Access – SDR/Cot Hill

Date: 20th August 2018

Prepared For: Newport City Council

Prepared By: Dave James (Technical Director – Transportation)

Tel: 02920 803574

Email: David.James@capita.co.uk

Ref: CS/093428 / Technical Note

Introduction

The following traffic and transportation comments relate to a review of the '*Llanwern Revised Access Technical Note – SDR/Cot Hill*' (Ref: 184108/N01) dated July 2018 by Vectos. For ease of reference, the comments are set out as per the Technical Note.

Paragraphs 8/14: Copies of the traffic surveys undertaken on the 12th July 2018 have not been provided for review with only summarised flow diagrams in Appendix A submitted. There is concern that the surveys have not been undertaken on a day of typical flow. No automatic traffic counts were undertaken to identify daily variations. In addition to the highlighted Parents Engagement Day commencing at 6pm at the adjacent school, the surveys will not have included children whose exams have been completed nor adults taking summer holidays prior to the schools breaking up. The Parents Engagement Day is stated to have potentially contributed to the growthed observed flows being greater at the SDR/Cot Hill junction than the estimated flows in the 2006 Halcrow Transport Assessment (TA). However, the parent trips would also be observed at the SDR/Ringland Circular/Hartridge Farm Roundabout, which has a predicted flow of 21% less than those within the Halcrow TA.

Paragraphs 10-11: Traffic growth has not taken into account any specific adjacent development. As part of the audit, the impact of the Wales International Conference Centre currently under construction at the Celtic Manor Resort has been reviewed. The '*Wales International Conference Centre – Celtic Manor Resort Transport Assessment*' by Parsons Brinckerhoff dated March 2014 (Ref: 287291-PTC/1/0) indicates an additional 70 pcus southbound on the SDR in the PM peak. Any additional analysis should take these flows into account.

Paragraph 19: SDR / Cot Hill Junction

The SDR / Cot Hill Junction has been modelled as a priority junction utilising PICADY, with a give way line of 5 metres and visibility to the right of 250 metres. The Ratio of Flow to Capacity (RFC) in the AM peak reaches 0.83. Furthermore, the visibility to the right at 250m is excessive which will result in the RFC increasing.

An RFC of 0.85 is the standard threshold used for junction assessment, above which a junction is considered to be operating beyond its capacity and mitigation/improvement would normally be required. However, in reality the layout should operate with greater capacity, with traffic merging rather than giving way and therefore, there should be sufficient capacity.

Paragraph 21: SDR / Beatty Road Roundabout

There is a minor inconsistency within the capacity analysis flows as the 'Halcrow TA AM + Halcrow Development Trips' scenario should include the 10 pcus in the Halcrow Base undertaking the SDR South to SDR South 'U' turning movement. Any additional analysis should take these flows into account.

The analysis does not take into account unequal lane use, which is significant on the SDR approach from the south:

Table 1: SDR / Beatty Road Roundabout - SDR Approach from the South (Vectos Traffic Flows with Development)

	Inside Lane	Middle Lane	Outside Lane
AM Peak	475	474	85
PM Peak	506	506	246

In case of entry starvation, the analysis should be rerun taking these flows per lane into account.

Paragraph 22/24: Retention of the existing left in/ left out arrangement at the Cot Hill junction is predicted to result in the following number of drivers undertaking a 'U' turn at the adjacent roundabouts:

Table 2: Predicted 'U' turn at the adjacent roundabouts

	AM Peak	PM Peak
SDR / Beatty Road Roundabout	75	229
SDR / Ringland Circular / Hartridge Farm Roundabout	202	111

A 'U' turn manoeuvre is not an expected movement at a junction, which may result in a safety issue. However, based on the significant size of both roundabouts, it is acceptable.

Paragraph 23: SDR / Ringland Circle / Hartridge Farm Road Roundabout

The entry radius on SDR North approach at 50m is excessive.

The analysis does not take into account unequal lane use, which is significant on the SDR approach from the north and Ringland Circle:

Table 3: SDR / Ringland Circle / Hartridge Farm Road Roundabout - SDR Approach from the North

	Inside Lane	Middle Lane	Outside Lane
AM Peak	618	618	310
PM Peak	476	476	206

Table 4: SDR / Ringland Circle / Hartridge Farm Road Roundabout - Ringland Circle

	Inside Lane	Outside Lane
AM Peak	80	384
PM Peak	89	220

In case of entry starvation, the analysis should be rerun taking these flows per lane into account. Should RFCs increase significantly, then the details of 'Vehicle Mix' should be entered to represent the percentage of heavy vehicles. Whilst it is noted that traffic flows have been input as PCUs, the user guide recommends that **vehicle mix should still be entered**. This is only likely to have a noticeable difference when the RFC of an arm is close to 1.0.

No analysis of the school PM peak has been undertaken. Is there an existing queuing problem on the school access arm that will be exacerbated by 'U' turning traffic from the development?

Paragraph 34: Whilst it is agreed that there is a beneficial effect in not having to undertake roadworks, no geometric review of the existing left in / left out SDR / Cot Hill Junction layout has been undertaken, even though the proposals will result in a significant increase in traffic utilising the junction:

Table 5: SDR / Cot Hill Junction – 2026 Vectos Traffic Flows (pcus)

	Diverging			Merging		
	Existing	Development	Existing + Development	Existing	Development	Existing + Development
AM Peak	29	132	161	38	455	493
PM Peak	72	440	512	74	231	305

The geometric design of major/minor priority junctions on the trunk road network are set out within the Design Manual for Roads and Bridges Volume 6 TD 42/95. Diverging tapers and lanes and merging tapers are specified within sections 7.49 -7.62.

For locations with major road flows over 7,000 – 8,000 AADT (as per the Southern Distributor Road), TD 42/95 states that consideration should be given to the provision of a nearside auxiliary lane instead of a taper for diverging traffic, allowing turning traffic to move off the mainline prior to any deceleration. However, the design of nearside diverging auxiliary lanes are based on a give way line so that the left turning traffic gives way to the traffic turning right from the major road. As there is no give way to right turning traffic from the major road at the SDR / Cot Hill Junction, the existing taper should be sufficient.

The radius on the merge is 20m, whilst 25m is stated to be preferably. However, overall the existing merge arrangement is also acceptable.

Paragraphs 35-37: The retention of the existing junction arrangement at the SDR/Cot Hill results in the proposed at grade crossing facility to be no longer provided and greater potential use of the Dawson Close subway for which:

'the development at Llanwern will contribute to improved surveillance e.g. CCTV at this location. The exact details, specification and cost of this along with the appropriate mechanism for securing the contribution will need to be agreed between the Highway Authority (or relevant Local Authority Dept.) and Redrow.'

As stated, due to anti-social behaviour, the subway has been gated and is closed between 19:00 – 07:30 hours. Even with CCTV, there has to be mechanisms in place to ensure that maintenance, including that of the CCTV, is kept up to date and that issues of anti-social behaviour can be quickly acted upon.

In addition to the subway works, provision for pedestrians from Cot Hill to the existing shared footway / cycleway adjacent to the westbound carriageway of the SDR should be provided from the proposed development, including relocation of existing signs blocking the footway:

Photographs 1 to 3: Existing Pedestrian Provision



Appendix C 2026 NCC comments summarised

Aalisha Sorathiya

From: Aalisha.Sorathiya@slrconsulting.com
Subject: FW: *EXTERNAL:FW: Great Milton Park - All Movements Junction

From: McEwan, Matthew (Senior Traffic Transport & Development Officer) <Matthew.McEwan@newport.gov.uk>
Sent: 06 January 2026 11:31
To: Jarrett, Stephen (Head of Infrastructure) <Stephen.Jarrett@newport.gov.uk>
Cc: Brooks, Andrew (Service Manager (Highways)) <Andrew.Brooks@newport.gov.uk>; Turner, Joanne (Team Manager - Assets and Planning) <Joanne.Turner@newport.gov.uk>
Subject: RE: Great Milton Park - All Movements Junction

Morning Stephen

Please see the following comments which details what is required.

The original TA, submitted as part of the 2006 application, utilised a growth factor up to 2026 which resulted in the LILO junction being over capacity. Further technical notes were submitted in 2018 and 2023 where it was stated that traffic volumes were less than predicted in the original application which, according to Vectos's assessment, resulted in the LILO junction being within capacity. The roundabouts at Beatty Road and SDR / Ringland Circular / Hartridge Farm were also shown to be within capacity. It was suggested that this may have been due to the construction of the EDR and traffic growth being less than predicted.

An assessment of the 2018 technical advice note was carried out by Capita (attached) which resulted in a number of queries being raised. I have been unable to locate a response to these matters from Vectos/Redrow. A number of the matters relating to when the survey was carried out may have been addressed by the further surveys carried out in 2023. We cannot definitively determine whether there were any factors which may have affected the survey in 2023 due to the time that has passed; however I would suggest that there may have still been some impact on traffic flows as a result of Covid.

For robustness an updated technical note must be provided along with all survey/modelling data for consideration. Whilst it's understood that the original assessment included a growth factor to 2026, it would be beneficial to apply an additional growth factor to demonstrate if the junctions are predicted to be within capacity going forward.

The 2023 technical note makes reference to a desk top review being carried out where it was determined that the LILO junction is designed to the relevant DMRB standards. A further more detailed assessment of the junction, based upon a topographical survey, will need to be carried out to identify any improvements required.

As highlighted within the Technical notes, the absence of the all movements signal controlled junction will also mean that the controlled pedestrian crossing facility will not be provided on the SDR. Pedestrians will therefore have to travel along the SDR to the roundabouts utilising the eastern footway/cycleway, or utilise the subway to Dawson Close to access the Ringland Area and vice versa. Potential active travel improvements will need to be considered and identified.

To summarise:

- Updated traffic surveys will need to be carried out and an updated network analysis will need to be submitted to demonstrate that the junctions are within capacity, taking into consideration the comments made by Capita in 2018.
- A detailed assessment of the existing LILO junction at the SDR/Cot Hill will need to be completed.

- An assessment of the pedestrian/cycling routes will need to be carried out in the area to identify any potential improvements and must include:
 - The SDR
 - Beatty Road Roundabout
 - SDR / Ringland Circular / Hartridge Farm Roundabout
 - The Subway/underpass linking Dawson Close and Cot Hill.

Regards

Matt McEwan

Senior Traffic, Transport & Development Officer/Uwch Swyddog Traffig, Trafnidiaeth a Datblygu
Isadeiledd /Infrastructure
Newport City Council/Cyngor Dinas Casnewydd

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Appendix D Traffic Survey Results

Newport Cot Hill, Tuesday 3rd February 2026

A48 Link Count



TIME	Northbound					Southbound				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
00:00 - 00:15	7	0	0	7	7.0	40	18	0	58	81.4
00:15 - 00:30	8	1	0	9	10.3	34	13	0	47	63.9
00:30 - 00:45	3	1	0	4	5.3	21	13	0	34	50.9
00:45 - 01:00	3	0	0	3	3.0	21	11	0	32	46.3
Hourly Total	21	2	0	23	25.6	116	55	0	171	242.5
01:00 - 01:15	4	0	0	4	4.0	20	10	1	31	45.0
01:15 - 01:30	2	0	0	2	2.0	23	6	0	29	36.8
01:30 - 01:45	3	0	0	3	3.0	19	13	0	32	48.9
01:45 - 02:00	3	1	0	4	5.3	16	21	0	37	64.3
Hourly Total	12	1	0	13	14.3	78	50	1	129	195.0
02:00 - 02:15	3	2	0	5	7.6	21	10	0	31	44.0
02:15 - 02:30	4	2	0	6	8.6	7	16	0	23	43.8
02:30 - 02:45	4	3	0	7	10.9	20	17	0	37	59.1
02:45 - 03:00	6	1	0	7	8.3	15	20	0	35	61.0
Hourly Total	17	8	0	25	35.4	63	63	0	126	207.9
03:00 - 03:15	5	5	0	10	16.5	14	11	1	26	41.3
03:15 - 03:30	7	5	0	12	18.5	8	10	0	18	31.0
03:30 - 03:45	10	2	0	12	14.6	10	14	0	24	42.2
03:45 - 04:00	4	3	0	7	10.9	9	14	0	23	41.2
Hourly Total	26	15	0	41	60.5	41	49	1	91	155.7
04:00 - 04:15	8	7	0	15	24.1	10	6	0	16	23.8
04:15 - 04:30	14	7	0	21	30.1	10	3	0	13	16.9
04:30 - 04:45	12	10	0	22	35.0	12	4	0	16	21.2
04:45 - 05:00	16	13	0	29	45.9	19	5	0	24	30.5
Hourly Total	50	37	0	87	135.1	51	18	0	69	92.4
05:00 - 05:15	31	6	0	37	44.8	18	10	0	28	41.0
05:15 - 05:30	42	8	0	50	60.4	32	6	0	38	45.8
05:30 - 05:45	45	14	0	59	77.2	45	7	0	52	61.1
05:45 - 06:00	25	11	0	36	50.3	54	13	0	67	83.9
Hourly Total	143	39	0	182	232.7	149	36	0	185	231.8
06:00 - 06:15	63	13	0	76	92.9	40	5	0	45	51.5
06:15 - 06:30	65	14	0	79	97.2	55	9	0	64	75.7

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

06:30 - 06:45	74	18	1	93	117.4	78	16	0	94	114.8
06:45 - 07:00	82	10	1	93	107.0	88	13	0	101	117.9
Hourly Total	284	55	2	341	414.5	261	43	0	304	359.9
07:00 - 07:15	95	22	0	117	145.6	90	16	0	106	126.8
07:15 - 07:30	101	8	0	109	119.4	137	6	0	143	150.8
07:30 - 07:45	116	17	1	134	157.1	183	18	0	201	224.4
07:45 - 08:00	117	21	0	138	165.3	228	18	1	247	271.4
Hourly Total	429	68	1	498	587.4	638	58	1	697	773.4
08:00 - 08:15	151	11	0	162	176.3	250	18	0	268	291.4
08:15 - 08:30	159	21	0	180	207.3	270	7	1	278	288.1
08:30 - 08:45	137	20	0	157	183.0	232	19	0	251	275.7
08:45 - 09:00	155	20	1	176	203.0	232	10	0	242	255.0
Hourly Total	602	72	1	675	769.6	984	54	1	1039	1110.2
09:00 - 09:15	122	13	1	136	153.9	239	16	0	255	275.8
09:15 - 09:30	132	18	0	150	173.4	203	15	1	219	239.5
09:30 - 09:45	108	21	1	130	158.3	178	14	1	193	212.2
09:45 - 10:00	108	12	0	120	135.6	161	15	0	176	195.5
Hourly Total	470	64	2	536	621.2	781	60	2	843	923.0
10:00 - 10:15	131	11	0	142	156.3	166	21	0	187	214.3
10:15 - 10:30	108	19	0	127	151.7	131	18	1	150	174.4
10:30 - 10:45	144	13	1	158	175.9	158	15	0	173	192.5
10:45 - 11:00	137	9	0	146	157.7	138	10	1	149	163.0
Hourly Total	520	52	1	573	641.6	593	64	2	659	744.2
11:00 - 11:15	120	16	0	136	156.8	169	18	0	187	210.4
11:15 - 11:30	143	9	1	153	165.7	135	16	0	151	171.8
11:30 - 11:45	140	20	0	160	186.0	157	19	0	176	200.7
11:45 - 12:00	157	17	0	174	196.1	144	15	0	159	178.5
Hourly Total	560	62	1	623	704.6	605	68	0	673	761.4
12:00 - 12:15	151	21	0	172	199.3	157	18	0	175	198.4
12:15 - 12:30	145	8	0	153	163.4	150	16	0	166	186.8
12:30 - 12:45	154	11	0	165	179.3	154	19	1	174	199.7
12:45 - 13:00	133	13	0	146	162.9	145	13	0	158	174.9
Hourly Total	583	53	0	636	704.9	606	66	1	673	759.8
13:00 - 13:15	138	13	0	151	167.9	139	14	0	153	171.2
13:15 - 13:30	156	11	1	168	183.3	140	13	0	153	169.9
13:30 - 13:45	172	11	0	183	197.3	162	10	0	172	185.0
13:45 - 14:00	129	11	0	140	154.3	127	19	0	146	170.7
Hourly Total	595	46	1	642	702.8	568	56	0	624	696.8
14:00 - 14:15	159	19	0	178	202.7	139	20	0	159	185.0
14:15 - 14:30	166	12	1	179	195.6	153	15	0	168	187.5
14:30 - 14:45	204	12	0	216	231.6	161	14	1	176	195.2

14:45 - 15:00	184	15	0	199	218.5	178	17	0	195	217.1
Hourly Total	713	58	1	772	848.4	631	66	1	698	784.8
15:00 - 15:15	194	12	0	206	221.6	154	10	1	165	179.0
15:15 - 15:30	183	9	1	193	205.7	190	14	0	204	222.2
15:30 - 15:45	209	11	0	220	234.3	151	20	1	172	199.0
15:45 - 16:00	187	14	0	201	219.2	193	12	0	205	220.6
Hourly Total	773	46	1	820	880.8	688	56	2	746	820.8
16:00 - 16:15	207	12	0	219	234.6	173	10	0	183	196.0
16:15 - 16:30	241	5	0	246	252.5	178	13	0	191	207.9
16:30 - 16:45	250	9	0	259	270.7	178	10	0	188	201.0
16:45 - 17:00	214	8	0	222	232.4	165	8	1	174	185.4
Hourly Total	912	34	0	946	990.2	694	41	1	736	790.3
17:00 - 17:15	245	11	1	257	272.3	221	11	0	232	246.3
17:15 - 17:30	183	5	0	188	194.5	195	6	0	201	208.8
17:30 - 17:45	158	13	1	172	189.9	210	5	0	215	221.5
17:45 - 18:00	160	6	0	166	173.8	180	5	0	185	191.5
Hourly Total	746	35	2	783	830.5	806	27	0	833	868.1
18:00 - 18:15	161	3	0	164	167.9	175	6	0	181	188.8
18:15 - 18:30	149	6	0	155	162.8	138	8	0	146	156.4
18:30 - 18:45	133	12	0	145	160.6	154	3	0	157	160.9
18:45 - 19:00	111	9	0	120	131.7	119	2	1	122	125.6
Hourly Total	554	30	0	584	623.0	586	19	1	606	631.7
19:00 - 19:15	108	5	0	113	119.5	101	6	1	108	116.8
19:15 - 19:30	107	5	0	112	118.5	119	3	0	122	125.9
19:30 - 19:45	84	2	0	86	88.6	97	4	0	101	106.2
19:45 - 20:00	59	5	0	64	70.5	95	5	1	101	108.5
Hourly Total	358	17	0	375	397.1	412	18	2	432	457.4
20:00 - 20:15	95	2	1	98	101.6	73	3	0	76	79.9
20:15 - 20:30	62	1	1	64	66.3	75	5	0	80	86.5
20:30 - 20:45	70	1	0	71	72.3	74	4	0	78	83.2
20:45 - 21:00	44	1	0	45	46.3	55	0	0	55	55.0
Hourly Total	271	5	2	278	286.5	277	12	0	289	304.6
21:00 - 21:15	66	2	0	68	70.6	76	5	1	82	89.5
21:15 - 21:30	39	0	1	40	41.0	75	7	0	82	91.1
21:30 - 21:45	35	1	0	36	37.3	74	10	0	84	97.0
21:45 - 22:00	56	3	0	59	62.9	72	7	0	79	88.1
Hourly Total	196	6	1	203	211.8	297	29	1	327	365.7
22:00 - 22:15	35	1	0	36	37.3	101	7	0	108	117.1
22:15 - 22:30	40	2	0	42	44.6	90	12	0	102	117.6
22:30 - 22:45	15	1	0	16	17.3	84	8	1	93	104.4
22:45 - 23:00	14	3	0	17	20.9	71	9	0	80	91.7

Hourly Total	104	7	0	111	120.1	346	36	1	383	430.8
23:00 - 23:15	14	1	0	15	16.3	66	13	0	79	95.9
23:15 - 23:30	12	1	0	13	14.3	55	9	0	64	75.7
23:30 - 23:45	8	1	0	9	10.3	46	8	0	54	64.4
23:45 - 00:00	12	0	0	12	12.0	41	10	0	51	64.0
Hourly Total	46	3	0	49	52.9	208	40	0	248	300.0
TOTAL	8985	815	16	9816	10891.5	10479	1084	18	11581	13008.2

Newport Cot Hill, Wednesday 4th February 2026

A48 Link Count



TIME	Northbound					Southbound				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
00:00 - 00:15	4	0	0	4	4.0	26	9	0	35	46.7
00:15 - 00:30	4	1	0	5	6.3	24	12	1	37	53.6
00:30 - 00:45	3	3	0	6	9.9	17	17	0	34	56.1
00:45 - 01:00	10	0	0	10	10.0	39	11	0	50	64.3
Hourly Total	21	4	0	25	30.2	106	49	1	156	220.7
01:00 - 01:15	8	2	0	10	12.6	21	13	0	34	50.9
01:15 - 01:30	4	3	0	7	10.9	14	18	1	33	57.4
01:30 - 01:45	5	1	0	6	7.3	19	11	0	30	44.3
01:45 - 02:00	2	1	0	3	4.3	20	12	0	32	47.6
Hourly Total	19	7	0	26	35.1	74	54	1	129	200.2
02:00 - 02:15	5	2	0	7	9.6	11	15	0	26	45.5
02:15 - 02:30	2	2	0	4	6.6	10	22	0	32	60.6
02:30 - 02:45	2	0	0	2	2.0	20	11	0	31	45.3
02:45 - 03:00	4	1	0	5	6.3	18	20	0	38	64.0
Hourly Total	13	5	0	18	24.5	59	68	0	127	215.4
03:00 - 03:15	7	4	0	11	16.2	15	15	0	30	49.5
03:15 - 03:30	5	5	0	10	16.5	9	18	0	27	50.4
03:30 - 03:45	7	4	0	11	16.2	15	15	0	30	49.5
03:45 - 04:00	6	2	0	8	10.6	6	9	0	15	26.7
Hourly Total	25	15	0	40	59.5	45	57	0	102	176.1
04:00 - 04:15	16	2	0	18	20.6	10	13	0	23	39.9
04:15 - 04:30	12	4	0	16	21.2	8	3	0	11	14.9
04:30 - 04:45	18	5	0	23	29.5	14	3	0	17	20.9
04:45 - 05:00	22	12	0	34	49.6	14	5	0	19	25.5
Hourly Total	68	23	0	91	120.9	46	24	0	70	101.2
05:00 - 05:15	24	2	0	26	28.6	12	5	0	17	23.5
05:15 - 05:30	47	8	0	55	65.4	32	10	0	42	55.0
05:30 - 05:45	33	10	0	43	56.0	41	10	0	51	64.0
05:45 - 06:00	40	13	0	53	69.9	50	9	0	59	70.7
Hourly Total	144	33	0	177	219.9	135	34	0	169	213.2
06:00 - 06:15	58	14	0	72	90.2	37	3	0	40	43.9
06:15 - 06:30	55	17	0	72	94.1	49	9	0	58	69.7

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

06:30 - 06:45	73	15	0	88	107.5	80	10	0	90	103.0
06:45 - 07:00	86	9	0	95	106.7	85	15	0	100	119.5
Hourly Total	272	55	0	327	398.5	251	37	0	288	336.1
07:00 - 07:15	67	15	0	82	101.5	101	11	0	112	126.3
07:15 - 07:30	92	14	0	106	124.2	157	12	0	169	184.6
07:30 - 07:45	112	14	0	126	144.2	178	21	0	199	226.3
07:45 - 08:00	108	10	0	118	131.0	198	12	0	210	225.6
Hourly Total	379	53	0	432	500.9	634	56	0	690	762.8
08:00 - 08:15	159	13	0	172	188.9	229	13	0	242	258.9
08:15 - 08:30	143	17	0	160	182.1	217	15	1	233	253.5
08:30 - 08:45	152	21	0	173	200.3	238	11	0	249	263.3
08:45 - 09:00	138	14	1	153	172.2	235	14	0	249	267.2
Hourly Total	592	65	1	658	743.5	919	53	1	973	1042.9
09:00 - 09:15	140	16	1	157	178.8	212	17	1	230	253.1
09:15 - 09:30	122	28	0	150	186.4	224	18	0	242	265.4
09:30 - 09:45	115	27	0	142	177.1	181	20	0	201	227.0
09:45 - 10:00	106	18	0	124	147.4	182	13	0	195	211.9
Hourly Total	483	89	1	573	689.7	799	68	1	868	957.4
10:00 - 10:15	132	18	0	150	173.4	141	24	0	165	196.2
10:15 - 10:30	138	15	0	153	172.5	167	15	0	182	201.5
10:30 - 10:45	133	10	0	143	156.0	171	15	2	188	209.5
10:45 - 11:00	149	9	0	158	169.7	166	20	1	187	214.0
Hourly Total	552	52	0	604	671.6	645	74	3	722	821.2
11:00 - 11:15	134	17	0	151	173.1	172	27	0	199	234.1
11:15 - 11:30	122	16	1	139	160.8	148	15	0	163	182.5
11:30 - 11:45	207	18	0	225	248.4	153	15	0	168	187.5
11:45 - 12:00	183	17	0	200	222.1	139	9	0	148	159.7
Hourly Total	646	68	1	715	804.4	612	66	0	678	763.8
12:00 - 12:15	152	19	1	172	197.7	154	13	0	167	183.9
12:15 - 12:30	150	20	0	170	196.0	150	17	0	167	189.1
12:30 - 12:45	130	20	0	150	176.0	168	19	0	187	211.7
12:45 - 13:00	148	18	0	166	189.4	157	18	1	176	200.4
Hourly Total	580	77	1	658	759.1	629	67	1	697	785.1
13:00 - 13:15	152	17	0	169	191.1	131	20	0	151	177.0
13:15 - 13:30	155	18	1	174	198.4	132	13	0	145	161.9
13:30 - 13:45	159	20	0	179	205.0	144	22	0	166	194.6
13:45 - 14:00	148	11	0	159	173.3	132	13	0	145	161.9
Hourly Total	614	66	1	681	767.8	539	68	0	607	695.4
14:00 - 14:15	149	15	0	164	183.5	142	22	0	164	192.6
14:15 - 14:30	168	14	0	182	200.2	172	20	0	192	218.0
14:30 - 14:45	201	23	0	224	253.9	153	7	0	160	169.1

14:45 - 15:00	199	12	0	211	226.6	179	26	2	207	242.8
Hourly Total	717	64	0	781	864.2	646	75	2	723	822.5
15:00 - 15:15	223	16	0	239	259.8	156	20	0	176	202.0
15:15 - 15:30	179	9	1	189	201.7	182	11	0	193	207.3
15:30 - 15:45	218	12	1	231	247.6	221	20	1	242	269.0
15:45 - 16:00	190	8	0	198	208.4	202	10	0	212	225.0
Hourly Total	810	45	2	857	917.5	761	61	1	823	903.3
16:00 - 16:15	238	9	0	247	258.7	166	10	0	176	189.0
16:15 - 16:30	195	10	0	205	218.0	202	12	0	214	229.6
16:30 - 16:45	246	12	0	258	273.6	207	11	0	218	232.3
16:45 - 17:00	197	5	1	203	210.5	190	10	1	201	215.0
Hourly Total	876	36	1	913	960.8	765	43	1	809	865.9
17:00 - 17:15	202	7	0	209	218.1	215	7	0	222	231.1
17:15 - 17:30	224	6	0	230	237.8	208	11	0	219	233.3
17:30 - 17:45	208	9	1	218	230.7	228	5	0	233	239.5
17:45 - 18:00	159	5	0	164	170.5	187	6	0	193	200.8
Hourly Total	793	27	1	821	857.1	838	29	0	867	904.7
18:00 - 18:15	161	4	0	165	170.2	173	7	0	180	189.1
18:15 - 18:30	145	5	0	150	156.5	161	4	1	166	172.2
18:30 - 18:45	141	8	0	149	159.4	159	5	1	165	172.5
18:45 - 19:00	119	8	0	127	137.4	147	1	0	148	149.3
Hourly Total	566	25	0	591	623.5	640	17	2	659	683.1
19:00 - 19:15	131	3	0	134	137.9	116	5	1	122	129.5
19:15 - 19:30	116	6	0	122	129.8	106	6	0	112	119.8
19:30 - 19:45	90	2	0	92	94.6	76	6	0	82	89.8
19:45 - 20:00	65	2	0	67	69.6	94	1	0	95	96.3
Hourly Total	402	13	0	415	431.9	392	18	1	411	435.4
20:00 - 20:15	82	2	1	85	88.6	73	1	0	74	75.3
20:15 - 20:30	98	4	1	103	109.2	72	4	0	76	81.2
20:30 - 20:45	59	2	0	61	63.6	65	0	0	65	65.0
20:45 - 21:00	58	1	0	59	60.3	62	5	0	67	73.5
Hourly Total	297	9	2	308	321.7	272	10	0	282	295.0
21:00 - 21:15	72	0	0	72	72.0	62	4	1	67	73.2
21:15 - 21:30	46	3	1	50	54.9	53	7	0	60	69.1
21:30 - 21:45	46	1	0	47	48.3	68	7	0	75	84.1
21:45 - 22:00	45	0	0	45	45.0	63	8	0	71	81.4
Hourly Total	209	4	1	214	220.2	246	26	1	273	307.8
22:00 - 22:15	34	1	0	35	36.3	54	11	0	65	79.3
22:15 - 22:30	39	1	0	40	41.3	78	12	0	90	105.6
22:30 - 22:45	36	0	0	36	36.0	49	4	1	54	60.2
22:45 - 23:00	17	1	0	18	19.3	50	12	0	62	77.6

Hourly Total	126	3	0	129	132.9	231	39	1	271	322.7
23:00 - 23:15	19	0	0	19	19.0	54	9	0	63	74.7
23:15 - 23:30	17	1	0	18	19.3	62	11	0	73	87.3
23:30 - 23:45	12	1	0	13	14.3	44	6	0	50	57.8
23:45 - 00:00	6	1	0	7	8.3	33	9	0	42	53.7
Hourly Total	54	3	0	57	60.9	193	35	0	228	273.5
TOTAL	9258	841	12	10111	11216.3	10477	1128	17	11622	13105.4

Newport Cot Hill, Thursday 5th February 2026

A48 Link Count



TIME	Northbound					Southbound				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
00:00 - 00:15	11	0	0	11	11.0	28	9	0	37	48.7
00:15 - 00:30	11	1	0	12	13.3	29	21	0	50	77.3
00:30 - 00:45	7	0	0	7	7.0	20	14	1	35	54.2
00:45 - 01:00	4	1	0	5	6.3	19	9	0	28	39.7
Hourly Total	33	2	0	35	37.6	96	53	1	150	219.9
01:00 - 01:15	6	2	0	8	10.6	25	9	0	34	45.7
01:15 - 01:30	3	0	0	3	3.0	13	16	0	29	49.8
01:30 - 01:45	3	1	0	4	5.3	18	9	0	27	38.7
01:45 - 02:00	2	0	0	2	2.0	16	12	0	28	43.6
Hourly Total	14	3	0	17	20.9	72	46	0	118	177.8
02:00 - 02:15	4	3	0	7	10.9	11	5	0	16	22.5
02:15 - 02:30	3	1	0	4	5.3	11	11	0	22	36.3
02:30 - 02:45	4	4	0	8	13.2	10	10	0	20	33.0
02:45 - 03:00	2	1	0	3	4.3	9	23	0	32	61.9
Hourly Total	13	9	0	22	33.7	41	49	0	90	153.7
03:00 - 03:15	6	3	0	9	12.9	11	20	0	31	57.0
03:15 - 03:30	7	4	0	11	16.2	18	10	0	28	41.0
03:30 - 03:45	5	4	0	9	14.2	12	13	0	25	41.9
03:45 - 04:00	9	2	0	11	13.6	8	12	0	20	35.6
Hourly Total	27	13	0	40	56.9	49	55	0	104	175.5
04:00 - 04:15	10	4	0	14	19.2	10	8	0	18	28.4
04:15 - 04:30	17	8	0	25	35.4	6	3	0	9	12.9
04:30 - 04:45	16	3	0	19	22.9	11	4	0	15	20.2
04:45 - 05:00	20	5	0	25	31.5	18	10	0	28	41.0
Hourly Total	63	20	0	83	109.0	45	25	0	70	102.5
05:00 - 05:15	27	9	0	36	47.7	19	9	0	28	39.7
05:15 - 05:30	49	4	0	53	58.2	38	7	0	45	54.1
05:30 - 05:45	41	10	0	51	64.0	43	5	0	48	54.5
05:45 - 06:00	33	15	0	48	67.5	43	4	0	47	52.2
Hourly Total	150	38	0	188	237.4	143	25	0	168	200.5
06:00 - 06:15	52	12	0	64	79.6	38	8	0	46	56.4
06:15 - 06:30	71	16	0	87	107.8	36	8	0	44	54.4

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

06:30 - 06:45	70	9	0	79	90.7	74	11	0	85	99.3
06:45 - 07:00	86	23	0	109	138.9	92	10	0	102	115.0
Hourly Total	279	60	0	339	417.0	240	37	0	277	325.1
07:00 - 07:15	91	11	3	105	122.3	99	21	0	120	147.3
07:15 - 07:30	109	14	1	124	143.2	159	20	0	179	205.0
07:30 - 07:45	118	17	0	135	157.1	200	14	0	214	232.2
07:45 - 08:00	116	12	0	128	143.6	226	15	1	242	262.5
Hourly Total	434	54	4	492	566.2	684	70	1	755	847.0
08:00 - 08:15	148	24	0	172	203.2	233	18	1	252	276.4
08:15 - 08:30	174	14	0	188	206.2	268	10	1	279	293.0
08:30 - 08:45	129	15	0	144	163.5	225	11	2	238	254.3
08:45 - 09:00	139	26	0	165	198.8	225	11	0	236	250.3
Hourly Total	590	79	0	669	771.7	951	50	4	1005	1074.0
09:00 - 09:15	122	15	2	139	160.5	115	22	0	137	165.6
09:15 - 09:30	115	14	1	130	149.2	213	27	1	241	277.1
09:30 - 09:45	117	21	1	139	167.3	177	18	0	195	218.4
09:45 - 10:00	116	22	1	139	168.6	182	18	0	200	223.4
Hourly Total	470	72	5	547	645.6	687	85	1	773	884.5
10:00 - 10:15	115	15	0	130	149.5	150	16	0	166	186.8
10:15 - 10:30	112	17	0	129	151.1	155	16	1	172	193.8
10:30 - 10:45	116	12	0	128	143.6	171	18	0	189	212.4
10:45 - 11:00	137	13	0	150	166.9	163	23	2	188	219.9
Hourly Total	480	57	0	537	611.1	639	73	3	715	812.9
11:00 - 11:15	141	17	0	158	180.1	156	23	0	179	208.9
11:15 - 11:30	140	22	1	163	192.6	159	13	0	172	188.9
11:30 - 11:45	142	12	0	154	169.6	132	15	0	147	166.5
11:45 - 12:00	128	20	0	148	174.0	146	12	0	158	173.6
Hourly Total	551	71	1	623	716.3	593	63	0	656	737.9
12:00 - 12:15	160	17	1	178	201.1	164	18	0	182	205.4
12:15 - 12:30	159	21	0	180	207.3	175	20	0	195	221.0
12:30 - 12:45	150	16	0	166	186.8	157	14	1	172	191.2
12:45 - 13:00	166	13	0	179	195.9	173	21	0	194	221.3
Hourly Total	635	67	1	703	791.1	669	73	1	743	838.9
13:00 - 13:15	153	150	0	303	498.0	150	18	0	168	191.4
13:15 - 13:30	18	18	1	37	61.4	185	16	0	201	221.8
13:30 - 13:45	146	15	0	161	180.5	166	26	0	192	225.8
13:45 - 14:00	149	8	0	157	167.4	133	12	0	145	160.6
Hourly Total	466	191	1	658	907.3	634	72	0	706	799.6
14:00 - 14:15	186	15	1	202	222.5	148	12	0	160	175.6
14:15 - 14:30	187	13	0	200	216.9	156	24	0	180	211.2
14:30 - 14:45	197	19	0	216	240.7	161	13	2	176	194.9

14:45 - 15:00	196	11	0	207	221.3	170	18	1	189	213.4
Hourly Total	766	58	1	825	901.4	635	67	3	705	795.1
15:00 - 15:15	203	11	0	214	228.3	155	17	0	172	194.1
15:15 - 15:30	194	10	0	204	217.0	194	14	0	208	226.2
15:30 - 15:45	217	18	1	236	260.4	198	10	1	209	223.0
15:45 - 16:00	201	13	1	215	232.9	209	13	0	222	238.9
Hourly Total	815	52	2	869	938.6	756	54	1	811	882.2
16:00 - 16:15	223	7	0	230	239.1	163	6	0	169	176.8
16:15 - 16:30	220	8	0	228	238.4	154	9	0	163	174.7
16:30 - 16:45	269	6	1	276	284.8	205	7	0	212	221.1
16:45 - 17:00	203	9	0	212	223.7	211	6	0	217	224.8
Hourly Total	915	30	1	946	986.0	733	28	0	761	797.4
17:00 - 17:15	217	6	0	223	230.8	194	7	1	202	212.1
17:15 - 17:30	196	7	0	203	212.1	176	2	1	179	182.6
17:30 - 17:45	170	3	1	174	178.9	217	6	0	223	230.8
17:45 - 18:00	145	7	0	152	161.1	174	6	0	180	187.8
Hourly Total	728	23	1	752	782.9	761	21	2	784	813.3
18:00 - 18:15	149	4	0	153	158.2	164	4	0	168	173.2
18:15 - 18:30	130	8	0	138	148.4	133	7	0	140	149.1
18:30 - 18:45	128	10	0	138	151.0	155	10	1	166	180.0
18:45 - 19:00	120	6	0	126	133.8	141	3	2	146	151.9
Hourly Total	527	28	0	555	591.4	593	24	3	620	654.2
19:00 - 19:15	130	6	0	136	143.8	132	5	1	138	145.5
19:15 - 19:30	129	8	0	137	147.4	124	3	0	127	130.9
19:30 - 19:45	93	1	0	94	95.3	76	4	0	80	85.2
19:45 - 20:00	88	0	0	88	88.0	100	5	0	105	111.5
Hourly Total	440	15	0	455	474.5	432	17	1	450	473.1
20:00 - 20:15	95	4	1	100	106.2	72	1	0	73	74.3
20:15 - 20:30	74	2	1	77	80.6	63	2	0	65	67.6
20:30 - 20:45	46	1	0	47	48.3	56	3	0	59	62.9
20:45 - 21:00	54	1	0	55	56.3	51	6	0	57	64.8
Hourly Total	269	8	2	279	291.4	242	12	0	254	269.6
21:00 - 21:15	80	2	0	82	84.6	54	5	1	60	67.5
21:15 - 21:30	36	1	1	38	40.3	57	10	0	67	80.0
21:30 - 21:45	31	2	0	33	35.6	90	6	0	96	103.8
21:45 - 22:00	38	2	0	40	42.6	84	8	0	92	102.4
Hourly Total	185	7	1	193	203.1	285	29	1	315	353.7
22:00 - 22:15	45	0	0	45	45.0	113	8	0	121	131.4
22:15 - 22:30	37	1	0	38	39.3	106	7	0	113	122.1
22:30 - 22:45	22	1	0	23	24.3	91	7	0	98	107.1
22:45 - 23:00	21	1	0	22	23.3	61	13	0	74	90.9

Hourly Total	125	3	0	128	131.9	371	35	0	406	451.5
23:00 - 23:15	24	1	0	25	26.3	63	10	0	73	86.0
23:15 - 23:30	13	0	0	13	13.0	64	10	0	74	87.0
23:30 - 23:45	9	1	0	10	11.3	51	13	0	64	80.9
23:45 - 00:00	13	1	0	14	15.3	49	10	0	59	72.0
Hourly Total	59	3	0	62	65.9	227	43	0	270	325.9
TOTAL	9034	963	20	10017	11288.9	10578	1106	22	11706	13165.8

Newport Cot Hill, Friday 6th February 2026

A48 Link Count



TIME	Northbound					Southbound				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
00:00 - 00:15	9	0	0	9	9.0	49	9	0	58	69.7
00:15 - 00:30	8	2	0	10	12.6	36	17	0	53	75.1
00:30 - 00:45	7	2	0	9	11.6	25	17	0	42	64.1
00:45 - 01:00	2	0	0	2	2.0	24	14	0	38	56.2
Hourly Total	26	4	0	30	35.2	134	57	0	191	265.1
01:00 - 01:15	3	0	0	3	3.0	16	19	0	35	59.7
01:15 - 01:30	2	3	0	5	8.9	19	13	0	32	48.9
01:30 - 01:45	5	3	0	8	11.9	10	10	0	20	33.0
01:45 - 02:00	2	4	0	6	11.2	8	16	0	24	44.8
Hourly Total	12	10	0	22	35.0	53	58	0	111	186.4
02:00 - 02:15	5	1	0	6	7.3	16	22	0	38	66.6
02:15 - 02:30	1	2	0	3	5.6	15	15	0	30	49.5
02:30 - 02:45	5	2	0	7	9.6	17	19	0	36	60.7
02:45 - 03:00	4	4	0	8	13.2	11	11	0	22	36.3
Hourly Total	15	9	0	24	35.7	59	67	0	126	213.1
03:00 - 03:15	7	4	0	11	16.2	7	4	0	11	16.2
03:15 - 03:30	3	1	0	4	5.3	6	5	0	11	17.5
03:30 - 03:45	10	2	0	12	14.6	6	0	0	6	6.0
03:45 - 04:00	4	3	0	7	10.9	7	2	0	9	11.6
Hourly Total	24	10	0	34	47.0	26	11	0	37	51.3
04:00 - 04:15	14	7	0	21	30.1	3	5	0	8	14.5
04:15 - 04:30	14	9	0	23	34.7	8	5	0	13	19.5
04:30 - 04:45	15	10	0	25	38.0	7	2	0	9	11.6
04:45 - 05:00	23	4	0	27	32.2	15	1	0	16	17.3
Hourly Total	66	30	0	96	135.0	33	13	0	46	62.9
05:00 - 05:15	27	7	0	34	43.1	14	7	0	21	30.1
05:15 - 05:30	44	8	0	52	62.4	32	5	0	37	43.5
05:30 - 05:45	35	7	0	42	51.1	37	8	0	45	55.4
05:45 - 06:00	42	9	0	51	62.7	43	6	0	49	56.8
Hourly Total	148	31	0	179	219.3	126	26	0	152	185.8
06:00 - 06:15	51	11	0	62	76.3	38	2	0	40	42.6
06:15 - 06:30	48	22	0	70	98.6	46	11	0	57	71.3

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

06:30 - 06:45	67	15	0	82	101.5	80	10	0	90	103.0
06:45 - 07:00	64	14	0	78	96.2	87	7	0	94	103.1
Hourly Total	230	62	0	292	372.6	251	30	0	281	320.0
07:00 - 07:15	75	14	1	90	109.2	106	13	0	119	135.9
07:15 - 07:30	105	14	0	119	137.2	152	17	0	169	191.1
07:30 - 07:45	116	12	0	128	143.6	174	19	0	193	217.7
07:45 - 08:00	106	15	0	121	140.5	203	16	0	219	239.8
Hourly Total	402	55	1	458	530.5	635	65	0	700	784.5
08:00 - 08:15	128	19	0	147	171.7	247	18	0	265	288.4
08:15 - 08:30	160	23	0	183	212.9	227	25	1	253	286.5
08:30 - 08:45	153	16	0	169	189.8	202	12	0	214	229.6
08:45 - 09:00	144	25	1	170	203.5	239	17	0	256	278.1
Hourly Total	585	83	1	669	777.9	915	72	1	988	1082.6
09:00 - 09:15	129	15	1	145	165.5	223	18	0	241	264.4
09:15 - 09:30	115	13	0	128	144.9	213	11	2	226	242.3
09:30 - 09:45	118	18	0	136	159.4	192	11	0	203	217.3
09:45 - 10:00	131	14	0	145	163.2	162	16	1	179	200.8
Hourly Total	493	60	1	554	633.0	790	56	3	849	924.8
10:00 - 10:15	115	9	0	124	135.7	192	22	0	214	242.6
10:15 - 10:30	136	12	0	148	163.6	166	15	0	181	200.5
10:30 - 10:45	137	14	0	151	169.2	165	30	1	196	236.0
10:45 - 11:00	149	11	0	160	174.3	164	12	1	177	193.6
Hourly Total	537	46	0	583	642.8	687	79	2	768	872.7
11:00 - 11:15	152	13	0	165	181.9	177	13	0	190	206.9
11:15 - 11:30	150	14	1	165	184.2	182	15	0	197	216.5
11:30 - 11:45	178	18	0	196	219.4	179	16	0	195	215.8
11:45 - 12:00	153	16	0	169	189.8	192	11	0	203	217.3
Hourly Total	633	61	1	695	775.3	730	55	0	785	856.5
12:00 - 12:15	181	7	0	188	197.1	147	20	0	167	193.0
12:15 - 12:30	183	12	0	195	210.6	167	21	0	188	215.3
12:30 - 12:45	177	14	0	191	209.2	156	11	1	168	183.3
12:45 - 13:00	178	12	0	190	205.6	162	15	1	178	198.5
Hourly Total	719	45	0	764	822.5	632	67	2	701	790.1
13:00 - 13:15	186	14	0	200	218.2	180	11	0	191	205.3
13:15 - 13:30	185	17	0	202	224.1	198	13	0	211	227.9
13:30 - 13:45	173	12	1	186	202.6	144	15	0	159	178.5
13:45 - 14:00	183	17	0	200	222.1	150	18	0	168	191.4
Hourly Total	727	60	1	788	867.0	672	57	0	729	803.1
14:00 - 14:15	182	11	0	193	207.3	155	9	0	164	175.7
14:15 - 14:30	182	10	1	193	207.0	173	15	0	188	207.5
14:30 - 14:45	182	5	0	187	193.5	179	13	0	192	208.9

14:45 - 15:00	186	8	0	194	204.4	175	16	1	192	213.8
Hourly Total	732	34	1	767	812.2	682	53	1	736	805.9
15:00 - 15:15	225	8	0	233	243.4	174	16	1	191	212.8
15:15 - 15:30	214	4	0	218	223.2	215	16	0	231	251.8
15:30 - 15:45	228	5	1	234	241.5	221	10	2	233	248.0
15:45 - 16:00	183	4	0	187	192.2	211	10	0	221	234.0
Hourly Total	850	21	1	872	900.3	821	52	3	876	946.6
16:00 - 16:15	210	12	0	222	237.6	204	9	0	213	224.7
16:15 - 16:30	172	1	0	173	174.3	180	8	0	188	198.4
16:30 - 16:45	198	2	0	200	202.6	184	5	1	190	197.5
16:45 - 17:00	168	8	0	176	186.4	175	9	0	184	195.7
Hourly Total	748	23	0	771	800.9	743	31	1	775	816.3
17:00 - 17:15	194	1	0	195	196.3	202	6	1	209	217.8
17:15 - 17:30	188	0	0	188	188.0	193	2	0	195	197.6
17:30 - 17:45	184	2	1	187	190.6	151	9	1	161	173.7
17:45 - 18:00	150	3	0	153	156.9	197	7	0	204	213.1
Hourly Total	716	6	1	723	731.8	743	24	2	769	802.2
18:00 - 18:15	157	4	0	161	166.2	152	2	0	154	156.6
18:15 - 18:30	126	3	0	129	132.9	146	6	0	152	159.8
18:30 - 18:45	149	6	0	155	162.8	156	2	0	158	160.6
18:45 - 19:00	112	5	0	117	123.5	137	4	0	141	146.2
Hourly Total	544	18	0	562	585.4	591	14	0	605	623.2
19:00 - 19:15	122	3	0	125	128.9	130	2	0	132	134.6
19:15 - 19:30	99	4	0	103	108.2	98	4	0	102	107.2
19:30 - 19:45	93	2	0	95	97.6	101	3	0	104	107.9
19:45 - 20:00	67	2	0	69	71.6	83	3	0	86	89.9
Hourly Total	381	11	0	392	406.3	412	12	0	424	439.6
20:00 - 20:15	81	4	0	85	90.2	54	1	0	55	56.3
20:15 - 20:30	74	0	1	75	76.0	77	1	0	78	79.3
20:30 - 20:45	51	0	0	51	51.0	67	5	0	72	78.5
20:45 - 21:00	48	3	0	51	54.9	59	3	0	62	65.9
Hourly Total	254	7	1	262	272.1	257	10	0	267	280.0
21:00 - 21:15	45	2	0	47	49.6	49	2	1	52	55.6
21:15 - 21:30	50	0	1	51	52.0	59	0	0	59	59.0
21:30 - 21:45	37	0	0	37	37.0	47	1	0	48	49.3
21:45 - 22:00	40	1	0	41	42.3	40	2	0	42	44.6
Hourly Total	172	3	1	176	180.9	195	5	1	201	208.5
22:00 - 22:15	40	0	0	40	40.0	40	3	0	43	46.9
22:15 - 22:30	50	3	0	53	56.9	42	1	0	43	44.3
22:30 - 22:45	23	0	0	23	23.0	24	1	1	26	28.3
22:45 - 23:00	28	1	0	29	30.3	39	4	0	43	48.2

Hourly Total	141	4	0	145	150.2	145	9	1	155	167.7
23:00 - 23:15	24	2	0	26	28.6	38	0	0	38	38.0
23:15 - 23:30	21	0	0	21	21.0	30	2	0	32	34.6
23:30 - 23:45	17	0	0	17	17.0	23	1	0	24	25.3
23:45 - 00:00	14	0	0	14	14.0	25	2	0	27	29.6
Hourly Total	76	2	0	78	80.6	116	5	0	121	127.5
TOTAL	9231	695	10	9936	10849.5	10448	928	17	11393	12616.4

Newport Cot Hill, Saturday 6th February 2026

A48 Link Count



TIME	Northbound					Southbound				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
00:00 - 00:15	21	0	0	21	21.0	16	3	0	19	22.9
00:15 - 00:30	10	0	0	10	10.0	23	3	0	26	29.9
00:30 - 00:45	8	1	0	9	10.3	19	0	0	19	19.0
00:45 - 01:00	13	1	0	14	15.3	11	4	0	15	20.2
Hourly Total	52	2	0	54	56.6	69	10	0	79	92.0
01:00 - 01:15	6	2	0	8	10.6	9	3	0	12	15.9
01:15 - 01:30	9	0	0	9	9.0	5	2	0	7	9.6
01:30 - 01:45	5	1	0	6	7.3	10	2	0	12	14.6
01:45 - 02:00	8	1	0	9	10.3	13	3	0	16	19.9
Hourly Total	28	4	0	32	37.2	37	10	0	47	60.0
02:00 - 02:15	5	1	0	6	7.3	8	1	0	9	10.3
02:15 - 02:30	4	2	0	6	8.6	6	1	0	7	8.3
02:30 - 02:45	5	0	0	5	5.0	4	2	0	6	8.6
02:45 - 03:00	5	0	0	5	5.0	3	0	0	3	3.0
Hourly Total	19	3	0	22	25.9	21	4	0	25	30.2
03:00 - 03:15	2	2	0	4	6.6	5	2	0	7	9.6
03:15 - 03:30	4	3	0	7	10.9	10	3	0	13	16.9
03:30 - 03:45	7	1	0	8	9.3	4	3	0	7	10.9
03:45 - 04:00	5	2	0	7	9.6	8	0	0	8	8.0
Hourly Total	18	8	0	26	36.4	27	8	0	35	45.4
04:00 - 04:15	7	3	0	10	13.9	9	0	0	9	9.0
04:15 - 04:30	8	0	0	8	8.0	8	5	0	13	19.5
04:30 - 04:45	11	1	0	12	13.3	8	4	0	12	17.2
04:45 - 05:00	16	1	0	17	18.3	7	4	0	11	16.2
Hourly Total	42	5	0	47	53.5	32	13	0	45	61.9
05:00 - 05:15	14	3	0	17	20.9	7	3	0	10	13.9
05:15 - 05:30	20	3	0	23	26.9	15	3	0	18	21.9
05:30 - 05:45	22	2	0	24	26.6	19	4	0	23	28.2
05:45 - 06:00	14	1	0	15	16.3	25	5	0	30	36.5
Hourly Total	70	9	0	79	90.7	66	15	0	81	100.5
06:00 - 06:15	26	1	0	27	28.3	12	2	0	14	16.6
06:15 - 06:30	28	1	0	29	30.3	27	5	0	32	38.5

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

06:30 - 06:45	32	3	0	35	38.9	31	4	0	35	40.2
06:45 - 07:00	34	2	0	36	38.6	36	3	0	39	42.9
Hourly Total	120	7	0	127	136.1	106	14	0	120	138.2
07:00 - 07:15	37	1	0	38	39.3	27	1	0	28	29.3
07:15 - 07:30	45	2	1	48	51.6	46	0	0	46	46.0
07:30 - 07:45	38	1	0	39	40.3	52	0	0	52	52.0
07:45 - 08:00	48	2	0	50	52.6	78	6	0	84	91.8
Hourly Total	168	6	1	175	183.8	203	7	0	210	219.1
08:00 - 08:15	48	3	0	51	54.9	93	4	0	97	102.2
08:15 - 08:30	62	1	0	63	64.3	95	3	1	99	103.9
08:30 - 08:45	68	1	0	69	70.3	117	2	0	119	121.6
08:45 - 09:00	62	1	0	63	64.3	129	4	0	133	138.2
Hourly Total	240	6	0	246	253.8	434	13	1	448	465.9
09:00 - 09:15	79	6	0	85	92.8	128	2	0	130	132.6
09:15 - 09:30	90	3	1	94	98.9	138	2	0	140	142.6
09:30 - 09:45	89	2	0	91	93.6	161	2	0	163	165.6
09:45 - 10:00	113	2	0	115	117.6	202	1	0	203	204.3
Hourly Total	371	13	1	385	402.9	629	7	0	636	645.1
10:00 - 10:15	123	0	0	123	123.0	179	4	0	183	188.2
10:15 - 10:30	137	2	0	139	141.6	183	1	0	184	185.3
10:30 - 10:45	112	4	0	116	121.2	172	5	1	178	185.5
10:45 - 11:00	140	1	0	141	142.3	182	1	0	183	184.3
Hourly Total	512	7	0	519	528.1	716	11	1	728	743.3
11:00 - 11:15	165	2	0	167	169.6	207	1	0	208	209.3
11:15 - 11:30	171	4	1	176	182.2	217	1	0	218	219.3
11:30 - 11:45	173	2	0	175	177.6	207	1	0	208	209.3
11:45 - 12:00	171	2	0	173	175.6	221	2	0	223	225.6
Hourly Total	680	10	1	691	705.0	852	5	0	857	863.5
12:00 - 12:15	197	3	0	200	203.9	174	1	0	175	176.3
12:15 - 12:30	181	1	0	182	183.3	202	1	0	203	204.3
12:30 - 12:45	202	1	0	203	204.3	219	0	0	219	219.0
12:45 - 13:00	169	0	0	169	169.0	149	1	1	151	153.3
Hourly Total	749	5	0	754	760.5	744	3	1	748	752.9
13:00 - 13:15	187	3	0	190	193.9	204	5	0	209	215.5
13:15 - 13:30	164	0	1	165	166.0	201	0	0	201	201.0
13:30 - 13:45	169	0	0	169	169.0	178	0	0	178	178.0
13:45 - 14:00	144	1	0	145	146.3	174	0	0	174	174.0
Hourly Total	664	4	1	669	675.2	757	5	0	762	768.5
14:00 - 14:15	187	2	0	189	191.6	172	0	0	172	172.0
14:15 - 14:30	167	0	0	167	167.0	156	1	0	157	158.3
14:30 - 14:45	170	1	0	171	172.3	197	2	0	199	201.6

14:45 - 15:00	151	0	0	151	151.0	167	1	1	169	171.3
Hourly Total	675	3	0	678	681.9	692	4	1	697	703.2
15:00 - 15:15	139	2	0	141	143.6	162	1	0	163	164.3
15:15 - 15:30	155	0	1	156	157.0	147	1	0	148	149.3
15:30 - 15:45	169	2	0	171	173.6	153	4	0	157	162.2
15:45 - 16:00	149	1	0	150	151.3	122	5	0	127	133.5
Hourly Total	612	5	1	618	625.5	584	11	0	595	609.3
16:00 - 16:15	165	1	0	166	167.3	135	0	0	135	135.0
16:15 - 16:30	177	0	1	178	179.0	140	0	0	140	140.0
16:30 - 16:45	143	1	0	144	145.3	139	1	0	140	141.3
16:45 - 17:00	139	1	0	140	141.3	146	1	0	147	148.3
Hourly Total	624	3	1	628	632.9	560	2	0	562	564.6
17:00 - 17:15	149	2	0	151	153.6	132	0	0	132	132.0
17:15 - 17:30	139	2	1	142	145.6	125	1	0	126	127.3
17:30 - 17:45	134	1	0	135	136.3	108	2	0	110	112.6
17:45 - 18:00	126	2	0	128	130.6	126	1	0	127	128.3
Hourly Total	548	7	1	556	566.1	491	4	0	495	500.2
18:00 - 18:15	119	1	0	120	121.3	97	0	0	97	97.0
18:15 - 18:30	121	1	0	122	123.3	99	1	0	100	101.3
18:30 - 18:45	121	1	0	122	123.3	73	2	0	75	77.6
18:45 - 19:00	104	2	0	106	108.6	92	1	2	95	98.3
Hourly Total	465	5	0	470	476.5	361	4	2	367	374.2
19:00 - 19:15	108	1	0	109	110.3	104	0	0	104	104.0
19:15 - 19:30	73	1	0	74	75.3	89	0	0	89	89.0
19:30 - 19:45	63	0	0	63	63.0	92	0	0	92	92.0
19:45 - 20:00	57	0	0	57	57.0	71	0	0	71	71.0
Hourly Total	301	2	0	303	305.6	356	0	0	356	356.0
20:00 - 20:15	62	2	0	64	66.6	59	1	0	60	61.3
20:15 - 20:30	49	0	1	50	51.0	56	1	0	57	58.3
20:30 - 20:45	37	0	0	37	37.0	60	0	0	60	60.0
20:45 - 21:00	40	0	0	40	40.0	44	0	0	44	44.0
Hourly Total	188	2	1	191	194.6	219	2	0	221	223.6
21:00 - 21:15	37	0	0	37	37.0	44	2	1	47	50.6
21:15 - 21:30	39	0	1	40	41.0	52	1	0	53	54.3
21:30 - 21:45	39	0	0	39	39.0	49	0	0	49	49.0
21:45 - 22:00	47	1	0	48	49.3	39	0	0	39	39.0
Hourly Total	162	1	1	164	166.3	184	3	1	188	192.9
22:00 - 22:15	37	0	0	37	37.0	43	1	0	44	45.3
22:15 - 22:30	39	0	0	39	39.0	61	0	0	61	61.0
22:30 - 22:45	31	0	0	31	31.0	37	2	1	40	43.6
22:45 - 23:00	28	1	0	29	30.3	35	0	0	35	35.0

Hourly Total	135	1	0	136	137.3	176	3	1	180	184.9
23:00 - 23:15	12	0	0	12	12.0	37	1	0	38	39.3
23:15 - 23:30	28	1	0	29	30.3	36	0	0	36	36.0
23:30 - 23:45	30	0	0	30	30.0	35	0	0	35	35.0
23:45 - 00:00	16	2	0	18	20.6	22	0	0	22	22.0
Hourly Total	86	3	0	89	92.9	130	1	0	131	132.3
TOTAL	7529	121	9	7659	7825.3	8446	159	8	8613	8827.7

Newport Cot Hill, Sunday 8th February 2026

A48 Link Count



TIME	Northbound					Southbound				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
00:00 - 00:15	13	1	0	14	15.3	26	0	0	26	26.0
00:15 - 00:30	17	0	0	17	17.0	24	1	0	25	26.3
00:30 - 00:45	15	0	0	15	15.0	18	0	0	18	18.0
00:45 - 01:00	10	0	0	10	10.0	12	0	0	12	12.0
Hourly Total	55	1	0	56	57.3	80	1	0	81	82.3
01:00 - 01:15	8	0	0	8	8.0	12	2	0	14	16.6
01:15 - 01:30	7	0	0	7	7.0	10	0	0	10	10.0
01:30 - 01:45	7	0	0	7	7.0	12	0	0	12	12.0
01:45 - 02:00	3	0	0	3	3.0	5	1	0	6	7.3
Hourly Total	25	0	0	25	25.0	39	3	0	42	45.9
02:00 - 02:15	6	1	0	7	8.3	9	0	0	9	9.0
02:15 - 02:30	7	0	0	7	7.0	10	0	0	10	10.0
02:30 - 02:45	6	0	0	6	6.0	4	1	0	5	6.3
02:45 - 03:00	7	0	0	7	7.0	5	1	0	6	7.3
Hourly Total	26	1	0	27	28.3	28	2	0	30	32.6
03:00 - 03:15	5	1	0	6	7.3	6	0	0	6	6.0
03:15 - 03:30	6	1	0	7	8.3	2	0	0	2	2.0
03:30 - 03:45	1	0	0	1	1.0	8	1	0	9	10.3
03:45 - 04:00	2	0	0	2	2.0	5	0	0	5	5.0
Hourly Total	14	2	0	16	18.6	21	1	0	22	23.3
04:00 - 04:15	4	1	0	5	6.3	6	1	0	7	8.3
04:15 - 04:30	6	0	0	6	6.0	10	1	0	11	12.3
04:30 - 04:45	9	1	0	10	11.3	4	0	0	4	4.0
04:45 - 05:00	7	0	0	7	7.0	3	1	0	4	5.3
Hourly Total	26	2	0	28	30.6	23	3	0	26	29.9
05:00 - 05:15	7	0	0	7	7.0	4	1	0	5	6.3
05:15 - 05:30	20	0	0	20	20.0	9	1	0	10	11.3
05:30 - 05:45	9	1	0	10	11.3	9	5	0	14	20.5
05:45 - 06:00	12	3	0	15	18.9	18	1	0	19	20.3
Hourly Total	48	4	0	52	57.2	40	8	0	48	58.4
06:00 - 06:15	21	3	0	24	27.9	14	3	0	17	20.9
06:15 - 06:30	18	5	0	23	29.5	11	0	0	11	11.0

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

06:30 - 06:45	23	4	0	27	32.2	9	0	0	9	9.0
06:45 - 07:00	22	2	0	24	26.6	16	1	0	17	18.3
Hourly Total	84	14	0	98	116.2	50	4	0	54	59.2
07:00 - 07:15	23	2	0	25	27.6	16	0	0	16	16.0
07:15 - 07:30	25	1	0	26	27.3	24	2	0	26	28.6
07:30 - 07:45	24	2	0	26	28.6	30	0	0	30	30.0
07:45 - 08:00	31	6	0	37	44.8	54	1	0	55	56.3
Hourly Total	103	11	0	114	128.3	124	3	0	127	130.9
08:00 - 08:15	30	1	0	31	32.3	38	1	0	39	40.3
08:15 - 08:30	24	3	0	27	30.9	58	2	0	60	62.6
08:30 - 08:45	35	1	0	36	37.3	50	2	0	52	54.6
08:45 - 09:00	37	2	0	39	41.6	49	3	0	52	55.9
Hourly Total	126	7	0	133	142.1	195	8	0	203	213.4
09:00 - 09:15	47	2	0	49	51.6	45	2	0	47	49.6
09:15 - 09:30	73	1	0	74	75.3	75	3	0	78	81.9
09:30 - 09:45	69	0	0	69	69.0	103	1	0	104	105.3
09:45 - 10:00	64	1	1	66	68.3	134	2	0	136	138.6
Hourly Total	253	4	1	258	264.2	357	8	0	365	375.4
10:00 - 10:15	81	0	0	81	81.0	134	3	0	137	140.9
10:15 - 10:30	75	2	0	77	79.6	150	1	0	151	152.3
10:30 - 10:45	89	2	0	91	93.6	162	2	0	164	166.6
10:45 - 11:00	123	4	1	128	134.2	197	0	0	197	197.0
Hourly Total	368	8	1	377	388.4	643	6	0	649	656.8
11:00 - 11:15	119	2	0	121	123.6	169	4	1	174	180.2
11:15 - 11:30	126	4	0	130	135.2	191	2	0	193	195.6
11:30 - 11:45	143	5	0	148	154.5	202	2	0	204	206.6
11:45 - 12:00	171	3	1	175	179.9	201	3	0	204	207.9
Hourly Total	559	14	1	574	593.2	763	11	1	775	790.3
12:00 - 12:15	177	3	0	180	183.9	183	2	1	186	189.6
12:15 - 12:30	180	3	1	184	188.9	181	3	0	184	187.9
12:30 - 12:45	186	5	0	191	197.5	193	2	0	195	197.6
12:45 - 13:00	187	0	1	188	189.0	185	2	0	187	189.6
Hourly Total	730	11	2	743	759.3	742	9	1	752	764.7
13:00 - 13:15	145	1	0	146	147.3	182	1	1	184	186.3
13:15 - 13:30	168	4	0	172	177.2	205	1	0	206	207.3
13:30 - 13:45	191	0	0	191	191.0	198	0	0	198	198.0
13:45 - 14:00	180	2	1	183	186.6	205	5	0	210	216.5
Hourly Total	684	7	1	692	702.1	790	7	1	798	808.1
14:00 - 14:15	173	2	0	175	177.6	174	1	0	175	176.3
14:15 - 14:30	181	2	0	183	185.6	170	0	1	171	172.0
14:30 - 14:45	190	6	0	196	203.8	184	2	0	186	188.6

14:45 - 15:00	166	4	1	171	177.2	168	0	0	168	168.0
Hourly Total	710	14	1	725	744.2	696	3	1	700	704.9
15:00 - 15:15	193	4	1	198	204.2	165	1	1	167	169.3
15:15 - 15:30	162	1	0	163	164.3	140	0	0	140	140.0
15:30 - 15:45	159	3	0	162	165.9	124	2	0	126	128.6
15:45 - 16:00	201	6	0	207	214.8	129	1	0	130	131.3
Hourly Total	715	14	1	730	749.2	558	4	1	563	569.2
16:00 - 16:15	174	2	1	177	180.6	125	2	1	128	131.6
16:15 - 16:30	151	1	0	152	153.3	120	2	0	122	124.6
16:30 - 16:45	132	1	0	133	134.3	139	1	0	140	141.3
16:45 - 17:00	114	2	1	117	120.6	109	3	0	112	115.9
Hourly Total	571	6	2	579	588.8	493	8	1	502	513.4
17:00 - 17:15	72	1	0	73	74.3	80	1	0	81	82.3
17:15 - 17:30	92	2	0	94	96.6	111	1	1	113	115.3
17:30 - 17:45	71	2	0	73	75.6	81	2	0	83	85.6
17:45 - 18:00	89	1	0	90	91.3	77	5	0	82	88.5
Hourly Total	324	6	0	330	337.8	349	9	1	359	371.7
18:00 - 18:15	68	1	0	69	70.3	77	1	0	78	79.3
18:15 - 18:30	80	5	0	85	91.5	71	2	0	73	75.6
18:30 - 18:45	68	2	0	70	72.6	80	1	0	81	82.3
18:45 - 19:00	80	2	0	82	84.6	92	1	0	93	94.3
Hourly Total	296	10	0	306	319.0	320	5	0	325	331.5
19:00 - 19:15	50	5	0	55	61.5	59	1	0	60	61.3
19:15 - 19:30	74	4	0	78	83.2	60	1	1	62	64.3
19:30 - 19:45	57	0	0	57	57.0	57	1	0	58	59.3
19:45 - 20:00	37	4	0	41	46.2	61	3	0	64	67.9
Hourly Total	218	13	0	231	247.9	237	6	1	244	252.8
20:00 - 20:15	53	3	0	56	59.9	57	1	0	58	59.3
20:15 - 20:30	53	1	0	54	55.3	54	2	0	56	58.6
20:30 - 20:45	27	3	0	30	33.9	42	1	0	43	44.3
20:45 - 21:00	28	0	0	28	28.0	41	3	0	44	47.9
Hourly Total	161	7	0	168	177.1	194	7	0	201	210.1
21:00 - 21:15	22	2	0	24	26.6	38	1	0	39	40.3
21:15 - 21:30	21	0	0	21	21.0	32	1	0	33	34.3
21:30 - 21:45	26	0	0	26	26.0	42	3	0	45	48.9
21:45 - 22:00	27	0	0	27	27.0	76	2	0	78	80.6
Hourly Total	96	2	0	98	100.6	188	7	0	195	204.1
22:00 - 22:15	27	1	0	28	29.3	95	4	0	99	104.2
22:15 - 22:30	22	0	0	22	22.0	95	2	1	98	101.6
22:30 - 22:45	15	0	0	15	15.0	84	4	1	89	95.2
22:45 - 23:00	11	0	0	11	11.0	78	2	1	81	84.6

Hourly Total	75	1	0	76	77.3	352	12	3	367	385.6
23:00 - 23:15	19	0	0	19	19.0	74	5	1	80	87.5
23:15 - 23:30	12	1	0	13	14.3	87	11	1	99	114.3
23:30 - 23:45	12	1	0	13	14.3	79	9	0	88	99.7
23:45 - 00:00	8	1	0	9	10.3	59	7	0	66	75.1
Hourly Total	51	3	0	54	57.9	299	32	2	333	376.6
TOTAL	6318	162	10	6490	6710.6	7581	167	13	7761	7991.1

Newport Cot Hill, Monday 9th February 2026

A48 Link Count



TIME	Northbound					Southbound				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
00:00 - 00:15	11	1	0	12	13.3	40	8	0	48	58.4
00:15 - 00:30	10	1	0	11	12.3	45	4	0	49	54.2
00:30 - 00:45	3	1	0	4	5.3	34	21	0	55	82.3
00:45 - 01:00	5	0	0	5	5.0	27	11	2	40	56.3
Hourly Total	29	3	0	32	35.9	146	44	2	192	251.2
01:00 - 01:15	8	2	0	10	12.6	29	8	2	39	51.4
01:15 - 01:30	4	0	0	4	4.0	22	9	0	31	42.7
01:30 - 01:45	3	2	0	5	7.6	15	9	0	24	35.7
01:45 - 02:00	5	0	0	5	5.0	19	12	0	31	46.6
Hourly Total	20	4	0	24	29.2	85	38	2	125	176.4
02:00 - 02:15	2	2	0	4	6.6	26	9	0	35	46.7
02:15 - 02:30	5	2	0	7	9.6	19	11	0	30	44.3
02:30 - 02:45	5	1	0	6	7.3	11	11	0	22	36.3
02:45 - 03:00	6	1	0	7	8.3	8	7	0	15	24.1
Hourly Total	18	6	0	24	31.8	64	38	0	102	151.4
03:00 - 03:15	4	3	0	7	10.9	13	7	0	20	29.1
03:15 - 03:30	11	4	0	15	20.2	12	4	0	16	21.2
03:30 - 03:45	5	4	0	9	14.2	16	8	0	24	34.4
03:45 - 04:00	7	8	0	15	25.4	11	5	0	16	22.5
Hourly Total	27	19	0	46	70.7	52	24	0	76	107.2
04:00 - 04:15	19	4	0	23	28.2	6	3	0	9	12.9
04:15 - 04:30	13	14	0	27	45.2	8	2	0	10	12.6
04:30 - 04:45	13	15	0	28	47.5	14	5	0	19	25.5
04:45 - 05:00	26	6	0	32	39.8	22	1	0	23	24.3
Hourly Total	71	39	0	110	160.7	50	11	0	61	75.3
05:00 - 05:15	26	9	0	35	46.7	16	4	0	20	25.2
05:15 - 05:30	47	10	0	57	70.0	34	3	0	37	40.9
05:30 - 05:45	35	13	0	48	64.9	44	5	0	49	55.5
05:45 - 06:00	33	15	0	48	67.5	56	5	0	61	67.5
Hourly Total	141	47	0	188	249.1	150	17	0	167	189.1
06:00 - 06:15	68	13	0	81	97.9	39	4	0	43	48.2
06:15 - 06:30	55	21	0	76	103.3	42	6	1	49	57.8

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

06:30 - 06:45	82	12	0	94	109.6	63	9	0	72	83.7
06:45 - 07:00	71	18	0	89	112.4	75	6	0	81	88.8
Hourly Total	276	64	0	340	423.2	219	25	1	245	278.5
07:00 - 07:15	68	14	0	82	100.2	77	12	0	89	104.6
07:15 - 07:30	118	20	0	138	164.0	162	8	0	170	180.4
07:30 - 07:45	104	21	0	125	152.3	189	12	0	201	216.6
07:45 - 08:00	106	14	0	120	138.2	226	15	0	241	260.5
Hourly Total	396	69	0	465	554.7	654	47	0	701	762.1
08:00 - 08:15	126	12	0	138	153.6	266	13	0	279	295.9
08:15 - 08:30	140	17	0	157	179.1	256	11	1	268	283.3
08:30 - 08:45	159	14	0	173	191.2	214	16	0	230	250.8
08:45 - 09:00	141	24	1	166	198.2	242	19	0	261	285.7
Hourly Total	566	67	1	634	722.1	978	59	1	1038	1115.7
09:00 - 09:15	117	20	1	138	165.0	230	19	0	249	273.7
09:15 - 09:30	131	20	0	151	177.0	221	13	0	234	250.9
09:30 - 09:45	121	17	0	138	160.1	184	15	0	199	218.5
09:45 - 10:00	110	21	0	131	158.3	184	8	1	193	204.4
Hourly Total	479	78	1	558	660.4	819	55	1	875	947.5
10:00 - 10:15	94	16	0	110	130.8	142	16	0	158	178.8
10:15 - 10:30	128	21	0	149	176.3	152	18	0	170	193.4
10:30 - 10:45	144	16	0	160	180.8	141	14	0	155	173.2
10:45 - 11:00	129	16	0	145	165.8	178	10	1	189	203.0
Hourly Total	495	69	0	564	653.7	613	58	1	672	748.4
11:00 - 11:15	148	16	0	164	184.8	160	13	0	173	189.9
11:15 - 11:30	139	11	1	151	166.3	180	13	0	193	209.9
11:30 - 11:45	155	24	0	179	210.2	152	17	0	169	191.1
11:45 - 12:00	151	14	0	165	183.2	181	14	1	196	215.2
Hourly Total	593	65	1	659	744.5	673	57	1	731	806.1
12:00 - 12:15	146	17	0	163	185.1	156	13	0	169	185.9
12:15 - 12:30	130	19	0	149	173.7	162	24	0	186	217.2
12:30 - 12:45	158	18	0	176	199.4	156	17	0	173	195.1
12:45 - 13:00	168	22	0	190	218.6	141	17	1	159	182.1
Hourly Total	602	76	0	678	776.8	615	71	1	687	780.3
13:00 - 13:15	183	21	0	204	231.3	184	14	0	198	216.2
13:15 - 13:30	198	17	1	216	239.1	134	6	0	140	147.8
13:30 - 13:45	133	15	1	149	169.5	130	12	0	142	157.6
13:45 - 14:00	191	18	1	210	234.4	178	16	0	194	214.8
Hourly Total	705	71	3	779	874.3	626	48	0	674	736.4
14:00 - 14:15	170	16	0	186	206.8	160	16	0	176	196.8
14:15 - 14:30	167	15	0	182	201.5	143	20	0	163	189.0
14:30 - 14:45	210	27	0	237	272.1	133	18	1	152	176.4

14:45 - 15:00	175	19	0	194	218.7	180	18	1	199	223.4
Hourly Total	722	77	0	799	899.1	616	72	2	690	785.6
15:00 - 15:15	196	17	0	213	235.1	165	19	0	184	208.7
15:15 - 15:30	201	19	1	221	246.7	198	12	0	210	225.6
15:30 - 15:45	228	13	0	241	257.9	182	12	2	196	213.6
15:45 - 16:00	206	20	0	226	252.0	168	11	0	179	193.3
Hourly Total	831	69	1	901	991.7	713	54	2	769	841.2
16:00 - 16:15	201	13	0	214	230.9	179	8	0	187	197.4
16:15 - 16:30	264	19	0	283	307.7	184	9	0	193	204.7
16:30 - 16:45	251	8	0	259	269.4	222	20	0	242	268.0
16:45 - 17:00	221	9	0	230	241.7	196	10	1	207	221.0
Hourly Total	937	49	0	986	1049.7	781	47	1	829	891.1
17:00 - 17:15	237	13	0	250	266.9	190	10	0	200	213.0
17:15 - 17:30	205	6	1	212	220.8	195	9	0	204	215.7
17:30 - 17:45	170	10	1	181	195.0	153	6	0	159	166.8
17:45 - 18:00	180	11	0	191	205.3	178	4	0	182	187.2
Hourly Total	792	40	2	834	888.0	716	29	0	745	782.7
18:00 - 18:15	154	4	0	158	163.2	169	3	0	172	175.9
18:15 - 18:30	137	3	2	142	147.9	156	10	0	166	179.0
18:30 - 18:45	133	3	0	136	139.9	132	7	0	139	148.1
18:45 - 19:00	121	12	0	133	148.6	139	2	0	141	143.6
Hourly Total	545	22	2	569	599.6	596	22	0	618	646.6
19:00 - 19:15	133	5	0	138	144.5	119	5	1	125	132.5
19:15 - 19:30	93	1	0	94	95.3	105	3	2	110	115.9
19:30 - 19:45	80	2	0	82	84.6	103	3	0	106	109.9
19:45 - 20:00	79	2	0	81	83.6	71	1	0	72	73.3
Hourly Total	385	10	0	395	408.0	398	12	3	413	431.6
20:00 - 20:15	79	3	0	82	85.9	82	0	1	83	84.0
20:15 - 20:30	75	2	1	78	81.6	61	2	0	63	65.6
20:30 - 20:45	58	1	0	59	60.3	54	2	0	56	58.6
20:45 - 21:00	48	1	0	49	50.3	48	5	0	53	59.5
Hourly Total	260	7	1	268	278.1	245	9	1	255	267.7
21:00 - 21:15	56	0	0	56	56.0	72	5	1	78	85.5
21:15 - 21:30	39	1	1	41	43.3	60	13	0	73	89.9
21:30 - 21:45	55	0	0	55	55.0	68	4	0	72	77.2
21:45 - 22:00	38	2	0	40	42.6	47	12	0	59	74.6
Hourly Total	188	3	1	192	196.9	247	34	1	282	327.2
22:00 - 22:15	44	1	0	45	46.3	93	10	2	105	120.0
22:15 - 22:30	22	0	0	22	22.0	92	13	0	105	121.9
22:30 - 22:45	20	0	0	20	20.0	87	8	1	96	107.4
22:45 - 23:00	24	0	0	24	24.0	69	17	1	87	110.1

Hourly Total	110	1	0	111	112.3	341	48	4	393	459.4
23:00 - 23:15	16	1	0	17	18.3	58	14	0	72	90.2
23:15 - 23:30	19	0	0	19	19.0	64	16	1	81	102.8
23:30 - 23:45	11	0	0	11	11.0	51	9	0	60	71.7
23:45 - 00:00	10	0	0	10	10.0	51	10	0	61	74.0
Hourly Total	56	1	0	57	58.3	224	49	1	274	338.7
TOTAL	9244	956	13	10213	11468.8	10621	968	25	11614	12897.4

Newport Cot Hill, Tuesday 3rd February 2026



Junction: 1
Approach: A48 North

	Left to Factory Access					Ahead to A48 (South)					Right to Beatty Road					U-Turn				
TIME	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	6	0	0	6	6.0	73	14	0	87	105.2	2	0	0	2	2.0	0	0	0	0	0.0
07:15 - 07:30	5	0	0	5	5.0	118	7	0	125	134.1	6	0	0	6	6.0	1	0	0	1	1.0
07:30 - 07:45	14	0	0	14	14.0	160	15	0	175	194.5	5	0	0	5	5.0	0	0	0	0	0.0
07:45 - 08:00	18	0	0	18	18.0	208	18	1	227	251.4	10	1	0	11	12.3	0	0	0	0	0.0
Hourly Total	43	0	0	43	43.0	559	54	1	614	685.2	23	1	0	24	25.3	1	0	0	1	1.0
08:00 - 08:15	7	0	0	7	7.0	225	16	0	241	261.8	14	0	0	14	14.0	1	0	0	1	1.0
08:15 - 08:30	12	1	0	13	14.3	222	6	1	229	237.8	25	0	0	25	25.0	2	0	0	2	2.0
08:30 - 08:45	6	1	0	7	8.3	195	18	0	213	236.4	23	0	0	23	23.0	1	0	0	1	1.0
08:45 - 09:00	7	0	0	7	7.0	184	9	0	193	204.7	18	0	0	18	18.0	0	0	0	0	0.0
Hourly Total	32	2	0	34	36.6	826	49	1	876	940.7	80	0	0	80	80.0	4	0	0	4	4.0
09:00 - 09:15	14	0	0	14	14.0	183	15	1	199	219.5	10	0	0	10	10.0	0	0	0	0	0.0
09:15 - 09:30	5	0	0	5	5.0	177	14	0	191	209.2	17	0	0	17	17.0	0	0	0	0	0.0
09:30 - 09:45	2	0	0	2	2.0	154	14	0	168	186.2	17	0	0	17	17.0	0	0	0	0	0.0
09:45 - 10:00	4	0	0	4	4.0	137	13	0	150	166.9	10	0	0	10	10.0	1	0	0	1	1.0
Hourly Total	25	0	0	25	25.0	651	56	1	708	781.8	54	0	0	54	54.0	1	0	0	1	1.0
TOTAL	100	2	0	102	104.6	2036	159	3	2198	2407.7	157	1	0	158	159.3	6	0	0	6	6.0
15:00 - 15:15	0	0	0	0	0.0	129	11	1	141	156.3	12	0	0	12	12.0	0	0	0	0	0.0
15:15 - 15:30	0	0	0	0	0.0	129	14	0	143	161.2	12	0	0	12	12.0	1	0	0	1	1.0
15:30 - 15:45	0	0	0	0	0.0	117	19	0	136	160.7	11	0	0	11	11.0	0	0	0	0	0.0
15:45 - 16:00	1	0	0	1	1.0	163	11	0	174	188.3	25	0	0	25	25.0	2	0	0	2	2.0
Hourly Total	1	0	0	1	1.0	538	55	1	594	666.5	60	0	0	60	60.0	3	0	0	3	3.0
16:00 - 16:15	1	0	0	1	1.0	134	10	0	144	157.0	26	0	0	26	26.0	1	0	0	1	1.0
16:15 - 16:30	0	0	0	0	0.0	148	13	0	161	177.9	28	0	0	28	28.0	0	0	0	0	0.0
16:30 - 16:45	0	0	0	0	0.0	145	10	0	155	168.0	21	0	0	21	21.0	1	0	0	1	1.0
16:45 - 17:00	1	0	0	1	1.0	130	8	1	139	150.4	26	0	0	26	26.0	0	0	0	0	0.0
Hourly Total	2	0	0	2	2.0	557	41	1	599	653.3	101	0	0	101	101.0	2	0	0	2	2.0
17:00 - 17:15	1	0	0	1	1.0	174	11	0	185	199.3	15	0	0	15	15.0	0	0	0	0	0.0
17:15 - 17:30	1	0	0	1	1.0	168	7	0	175	184.1	12	0	0	12	12.0	0	0	0	0	0.0
17:30 - 17:45	0	0	0	0	0.0	166	4	0	170	175.2	4	0	0	4	4.0	0	0	0	0	0.0
17:45 - 18:00	0	0	0	0	0.0	141	6	0	147	154.8	5	0	0	5	5.0	0	0	0	0	0.0
Hourly Total	2	0	0	2	2.0	649	28	0	677	713.4	36	0	0	36	36.0	0	0	0	0	0.0
18:00 - 18:15	1	0	0	1	1.0	143	6	0	149	156.8	8	0	0	8	8.0	0	0	0	0	0.0
18:15 - 18:30	0	0	0	0	0.0	103	7	0	110	119.1	5	0	0	5	5.0	0	0	0	0	0.0
18:30 - 18:45	1	0	0	1	1.0	117	3	0	120	123.9	3	0	0	3	3.0	0	0	0	0	0.0
18:45 - 19:00	0	0	0	0	0.0	89	3	1	93	97.9	4	0	0	4	4.0	0	0	0	0	0.0
Hourly Total	2	0	0	2	2.0	452	19	1	472	497.7	20	0	0	20	20.0	0	0	0	0	0.0
TOTAL	7	0	0	7	7.0	2196	143	3	2342	2530.9	217	0	0	217	217.0	5	0	0	5	5.0

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Newport Cot Hill, Tuesday 3rd February 2026



Junction: 1
Approach: Factory Access

	Left to A48 (South)					Ahead to Beatty Road					Right to A48 (North)					U-Turn				
TIME	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	1	0	0	1	1.0	0	0	0	0	0.0	0	0	0	0	0.0	0	0	0	0	0.0
07:15 - 07:30	0	0	0	0	0.0	0	0	0	0	0.0	2	0	0	2	2.0	0	0	0	0	0.0
07:30 - 07:45	0	0	0	0	0.0	1	0	0	1	1.0	2	0	0	2	2.0	0	0	0	0	0.0
07:45 - 08:00	1	0	0	1	1.0	0	0	0	0	0.0	0	0	0	0	0.0	0	0	0	0	0.0
Hourly Total	2	0	0	2	2.0	1	0	0	1	1.0	4	0	0	4	4.0	0	0	0	0	0.0
08:00 - 08:15	0	0	0	0	0.0	0	0	0	0	0.0	0	0	0	0	0.0	0	0	0	0	0.0
08:15 - 08:30	0	0	0	0	0.0	0	0	0	0	0.0	2	0	0	2	2.0	0	0	0	0	0.0
08:30 - 08:45	0	1	0	1	2.3	0	0	0	0	0.0	0	0	0	0	0.0	0	0	0	0	0.0
08:45 - 09:00	0	0	0	0	0.0	0	0	0	0	0.0	0	1	0	1	2.3	0	0	0	0	0.0
Hourly Total	0	1	0	1	2.3	0	0	0	0	0.0	2	1	0	3	4.3	0	0	0	0	0.0
09:00 - 09:15	0	0	0	0	0.0	1	0	0	1	1.0	3	0	0	3	3.0	1	0	0	1	1.0
09:15 - 09:30	0	0	0	0	0.0	0	0	0	0	0.0	0	0	0	0	0.0	0	0	0	0	0.0
09:30 - 09:45	1	0	0	1	1.0	0	0	0	0	0.0	2	0	0	2	2.0	0	0	0	0	0.0
09:45 - 10:00	0	0	0	0	0.0	0	0	0	0	0.0	2	0	0	2	2.0	0	0	0	0	0.0
Hourly Total	1	0	0	1	1.0	1	0	0	1	1.0	7	0	0	7	7.0	1	0	0	1	1.0
TOTAL	3	1	0	4	5.3	2	0	0	2	2.0	13	1	0	14	15.3	1	0	0	1	1.0
15:00 - 15:15	1	0	0	1	1.0	0	0	0	0	0.0	4	0	0	4	4.0	0	0	0	0	0.0
15:15 - 15:30	1	0	0	1	1.0	0	0	0	0	0.0	4	0	0	4	4.0	0	0	0	0	0.0
15:30 - 15:45	0	0	0	0	0.0	0	0	0	0	0.0	5	0	0	5	5.0	0	0	0	0	0.0
15:45 - 16:00	0	0	0	0	0.0	1	0	0	1	1.0	11	0	0	11	11.0	0	0	0	0	0.0
Hourly Total	2	0	0	2	2.0	1	0	0	1	1.0	24	0	0	24	24.0	0	0	0	0	0.0
16:00 - 16:15	2	0	0	2	2.0	2	0	0	2	2.0	16	0	0	16	16.0	0	0	0	0	0.0
16:15 - 16:30	0	0	0	0	0.0	0	0	0	0	0.0	11	0	0	11	11.0	0	0	0	0	0.0
16:30 - 16:45	0	0	0	0	0.0	0	0	0	0	0.0	13	0	0	13	13.0	0	0	0	0	0.0
16:45 - 17:00	1	0	0	1	1.0	0	0	0	0	0.0	7	0	0	7	7.0	0	0	0	0	0.0
Hourly Total	3	0	0	3	3.0	2	0	0	2	2.0	47	0	0	47	47.0	0	0	0	0	0.0
17:00 - 17:15	1	0	0	1	1.0	0	0	0	0	0.0	13	0	0	13	13.0	0	0	0	0	0.0
17:15 - 17:30	0	0	0	0	0.0	0	0	0	0	0.0	8	0	0	8	8.0	0	0	0	0	0.0
17:30 - 17:45	0	0	0	0	0.0	0	0	0	0	0.0	0	0	0	0	0.0	0	0	0	0	0.0
17:45 - 18:00	0	0	0	0	0.0	0	0	0	0	0.0	3	0	0	3	3.0	0	0	0	0	0.0
Hourly Total	1	0	0	1	1.0	0	0	0	0	0.0	24	0	0	24	24.0	0	0	0	0	0.0
18:00 - 18:15	1	0	0	1	1.0	0	0	0	0	0.0	8	0	0	8	8.0	0	0	0	0	0.0
18:15 - 18:30	0	0	0	0	0.0	0	0	0	0	0.0	5	0	0	5	5.0	0	0	0	0	0.0
18:30 - 18:45	2	0	0	2	2.0	0	0	0	0	0.0	3	0	0	3	3.0	0	0	0	0	0.0
18:45 - 19:00	0	0	0	0	0.0	0	0	0	0	0.0	0	0	0	0	0.0	0	0	0	0	0.0
Hourly Total	3	0	0	3	3.0	0	0	0	0	0.0	16	0	0	16	16.0	0	0	0	0	0.0
TOTAL	9	0	0	9	9.0	3	0	0	3	3.0	111	0	0	111	111.0	0	0	0	0	0.0

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Newport Cot Hill, Tuesday 3rd February 2026



Junction: 1
Approach: A48 South

	Left to Beatty Road					Ahead to A48 (North)					Right to Factory Access					U-Turn				
TIME	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	2	0	0	2	2.0	85	23	0	108	137.9	1	0	0	1	1.0	7	0	0	7	7.0
07:15 - 07:30	2	0	0	2	2.0	95	9	0	104	115.7	0	0	0	0	0.0	5	0	0	5	5.0
07:30 - 07:45	4	0	0	4	4.0	107	14	1	122	141.2	0	0	0	0	0.0	6	2	0	8	10.6
07:45 - 08:00	6	0	0	6	6.0	106	20	0	126	152.0	0	0	0	0	0.0	5	2	0	7	9.6
Hourly Total	14	0	0	14	14.0	393	66	1	460	546.8	1	0	0	1	1.0	23	4	0	27	32.2
08:00 - 08:15	7	0	0	7	7.0	136	12	0	148	163.6	1	0	0	1	1.0	3	0	0	3	3.0
08:15 - 08:30	9	0	0	9	9.0	144	19	0	163	187.7	0	0	0	0	0.0	7	1	0	8	9.3
08:30 - 08:45	15	0	0	15	15.0	118	21	0	139	166.3	0	0	0	0	0.0	9	0	0	9	9.0
08:45 - 09:00	13	0	0	13	13.0	132	18	1	151	175.4	0	0	0	0	0.0	7	0	0	7	7.0
Hourly Total	44	0	0	44	44.0	530	70	1	601	693.0	1	0	0	1	1.0	26	1	0	27	28.3
09:00 - 09:15	12	1	0	13	14.3	101	11	1	113	128.3	0	0	0	0	0.0	13	1	0	14	15.3
09:15 - 09:30	11	0	0	11	11.0	111	17	0	128	150.1	0	0	0	0	0.0	8	0	0	8	8.0
09:30 - 09:45	8	1	0	9	10.3	95	21	0	116	143.3	0	0	0	0	0.0	6	0	1	7	8.0
09:45 - 10:00	8	0	0	8	8.0	94	12	0	106	121.6	0	0	0	0	0.0	6	0	0	6	6.0
Hourly Total	39	2	0	41	43.6	401	61	1	463	543.3	0	0	0	0	0.0	33	1	1	35	37.3
TOTAL	97	2	0	99	101.6	1324	197	3	1524	1783.1	2	0	0	2	2.0	82	6	1	89	97.8
15:00 - 15:15	37	0	0	37	37.0	145	12	0	157	172.6	0	0	0	0	0.0	12	0	0	12	12.0
15:15 - 15:30	18	0	0	18	18.0	156	10	1	167	181.0	1	0	0	1	1.0	10	0	0	10	10.0
15:30 - 15:45	21	0	0	21	21.0	174	11	0	185	199.3	1	0	0	1	1.0	11	0	0	11	11.0
15:45 - 16:00	16	0	0	16	16.0	155	13	0	168	184.9	1	0	0	1	1.0	12	0	0	12	12.0
Hourly Total	92	0	0	92	92.0	630	46	1	677	737.8	3	0	0	3	3.0	45	0	0	45	45.0
16:00 - 16:15	15	0	0	15	15.0	176	11	0	187	201.3	1	0	0	1	1.0	14	0	0	14	14.0
16:15 - 16:30	21	0	0	21	21.0	211	5	0	216	222.5	0	0	0	0	0.0	11	0	0	11	11.0
16:30 - 16:45	17	0	0	17	17.0	227	10	0	237	250.0	0	0	0	0	0.0	7	0	0	7	7.0
16:45 - 17:00	22	0	0	22	22.0	178	8	0	186	196.4	1	0	0	1	1.0	16	0	0	16	16.0
Hourly Total	75	0	0	75	75.0	792	34	0	826	870.2	2	0	0	2	2.0	48	0	0	48	48.0
17:00 - 17:15	18	0	0	18	18.0	204	11	1	216	231.3	3	0	0	3	3.0	21	0	0	21	21.0
17:15 - 17:30	10	0	0	10	10.0	157	5	0	162	168.5	0	0	0	0	0.0	14	0	0	14	14.0
17:30 - 17:45	13	0	0	13	13.0	133	13	1	147	164.9	0	0	0	0	0.0	14	0	0	14	14.0
17:45 - 18:00	17	0	0	17	17.0	128	6	0	134	141.8	0	0	0	0	0.0	17	0	0	17	17.0
Hourly Total	58	0	0	58	58.0	622	35	2	659	706.5	3	0	0	3	3.0	66	0	0	66	66.0
18:00 - 18:15	12	0	0	12	12.0	134	2	0	136	138.6	0	0	0	0	0.0	15	0	0	15	15.0
18:15 - 18:30	17	0	0	17	17.0	113	7	0	120	129.1	1	0	0	1	1.0	20	0	0	20	20.0
18:30 - 18:45	17	0	0	17	17.0	100	12	0	112	127.6	0	0	0	0	0.0	17	0	0	17	17.0
18:45 - 19:00	7	0	0	7	7.0	96	9	0	105	116.7	0	0	0	0	0.0	7	0	0	7	7.0
Hourly Total	53	0	0	53	53.0	443	30	0	473	512.0	1	0	0	1	1.0	59	0	0	59	59.0
TOTAL	278	0	0	278	278.0	2487	145	3	2635	2826.5	9	0	0	9	9.0	218	0	0	218	218.0

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Newport Cot Hill, Tuesday 3rd February 2026

Junction: 1
Approach: Beatty Road



	Left to A48 (North)					Ahead to Factory Access					Right to A48 (South)					U-Turn				
TIME	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	27	1	0	28	29.3	1	0	0	1	1.0	14	1	0	15	16.3	0	0	0	0	0.0
07:15 - 07:30	36	0	0	36	36.0	0	0	0	0	0.0	11	0	0	11	11.0	1	0	0	1	1.0
07:30 - 07:45	35	0	0	35	35.0	0	0	0	0	0.0	17	0	0	17	17.0	0	0	0	0	0.0
07:45 - 08:00	35	2	0	37	39.6	1	0	0	1	1.0	18	0	0	18	18.0	0	0	0	0	0.0
Hourly Total	133	3	0	136	139.9	2	0	0	2	2.0	60	1	0	61	62.3	1	0	0	1	1.0
08:00 - 08:15	30	0	0	30	30.0	1	0	0	1	1.0	20	0	0	20	20.0	0	0	0	0	0.0
08:15 - 08:30	39	0	0	39	39.0	2	0	0	2	2.0	43	0	0	43	43.0	1	0	0	1	1.0
08:30 - 08:45	31	0	0	31	31.0	1	0	0	1	1.0	29	0	0	29	29.0	0	0	0	0	0.0
08:45 - 09:00	26	0	0	26	26.0	1	0	0	1	1.0	41	1	0	42	43.3	0	0	0	0	0.0
Hourly Total	126	0	0	126	126.0	5	0	0	5	5.0	133	1	0	134	135.3	1	0	0	1	1.0
09:00 - 09:15	27	0	0	27	27.0	0	0	0	0	0.0	44	1	0	45	46.3	0	0	0	0	0.0
09:15 - 09:30	28	0	0	28	28.0	2	0	0	2	2.0	20	0	0	20	20.0	0	0	0	0	0.0
09:30 - 09:45	17	1	0	18	19.3	1	0	0	1	1.0	15	0	0	15	15.0	0	0	0	0	0.0
09:45 - 10:00	16	0	0	16	16.0	0	0	0	0	0.0	17	2	0	19	21.6	0	0	0	0	0.0
Hourly Total	88	1	0	89	90.3	3	0	0	3	3.0	96	3	0	99	102.9	0	0	0	0	0.0
TOTAL	347	4	0	351	356.2	10	0	0	10	10.0	289	5	0	294	300.5	2	0	0	2	2.0
15:00 - 15:15	24	0	0	24	24.0	0	0	0	0	0.0	13	0	0	13	13.0	0	0	0	0	0.0
15:15 - 15:30	36	0	0	36	36.0	1	0	0	1	1.0	49	0	0	49	49.0	0	0	0	0	0.0
15:30 - 15:45	27	0	0	27	27.0	0	0	0	0	0.0	21	2	1	24	27.6	0	0	0	0	0.0
15:45 - 16:00	35	1	0	36	37.3	1	0	0	1	1.0	20	0	0	20	20.0	0	0	0	0	0.0
Hourly Total	122	1	0	123	124.3	2	0	0	2	2.0	103	2	1	106	109.6	0	0	0	0	0.0
16:00 - 16:15	20	0	0	20	20.0	0	0	0	0	0.0	22	0	0	22	22.0	0	0	0	0	0.0
16:15 - 16:30	51	0	0	51	51.0	0	0	0	0	0.0	19	0	0	19	19.0	0	0	0	0	0.0
16:30 - 16:45	37	0	0	37	37.0	0	0	0	0	0.0	23	0	0	23	23.0	0	0	0	0	0.0
16:45 - 17:00	33	0	0	33	33.0	0	0	0	0	0.0	22	0	0	22	22.0	0	0	0	0	0.0
Hourly Total	141	0	0	141	141.0	0	0	0	0	0.0	86	0	0	86	86.0	0	0	0	0	0.0
17:00 - 17:15	23	0	0	23	23.0	0	0	0	0	0.0	24	0	0	24	24.0	0	0	0	0	0.0
17:15 - 17:30	29	0	0	29	29.0	0	0	0	0	0.0	20	0	0	20	20.0	0	0	0	0	0.0
17:30 - 17:45	26	0	0	26	26.0	0	0	0	0	0.0	32	0	0	32	32.0	0	0	0	0	0.0
17:45 - 18:00	30	0	0	30	30.0	0	0	0	0	0.0	22	0	0	22	22.0	0	0	0	0	0.0
Hourly Total	108	0	0	108	108.0	0	0	0	0	0.0	98	0	0	98	98.0	0	0	0	0	0.0
18:00 - 18:15	17	0	0	17	17.0	0	0	0	0	0.0	18	0	0	18	18.0	0	0	0	0	0.0
18:15 - 18:30	19	0	0	19	19.0	0	0	0	0	0.0	17	0	0	17	17.0	0	0	0	0	0.0
18:30 - 18:45	19	0	0	19	19.0	0	0	0	0	0.0	16	0	0	16	16.0	0	0	0	0	0.0
18:45 - 19:00	8	0	0	8	8.0	0	0	0	0	0.0	21	0	0	21	21.0	0	0	0	0	0.0
Hourly Total	63	0	0	63	63.0	0	0	0	0	0.0	72	0	0	72	72.0	0	0	0	0	0.0
TOTAL	434	1	0	435	436.3	2	0	0	2	2.0	359	2	1	362	365.6	0	0	0	0	0.0

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Newport Cot Hill, Tuesday 3rd February 2026

Junction: 2
Approach: A48 North



	Left to Cot Hill					Ahead to A48 (South)				
TIME	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	17	1	0	18	19.3	73	15	0	88	107.5
07:15 - 07:30	28	0	0	28	28.0	109	6	0	115	122.8
07:30 - 07:45	29	4	0	33	38.2	154	14	0	168	186.2
07:45 - 08:00	18	3	0	21	24.9	210	15	1	226	246.5
Hourly Total	92	8	0	100	110.4	546	50	1	597	663.0
08:00 - 08:15	12	0	0	12	12.0	238	18	0	256	279.4
08:15 - 08:30	16	2	0	18	20.6	254	5	1	260	267.5
08:30 - 08:45	23	1	0	24	25.3	209	18	0	227	250.4
08:45 - 09:00	24	1	0	25	26.3	208	9	0	217	228.7
Hourly Total	75	4	0	79	84.2	909	50	1	960	1026.0
09:00 - 09:15	28	2	0	30	32.6	211	14	0	225	243.2
09:15 - 09:30	21	4	0	25	30.2	182	11	1	194	209.3
09:30 - 09:45	9	0	1	10	11.0	169	14	0	183	201.2
09:45 - 10:00	16	2	0	18	20.6	145	13	0	158	174.9
Hourly Total	74	8	1	83	94.4	707	52	1	760	828.6

TOTAL	241	20	1	262	289.0	2162	152	3	2317	2517.6
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15:00 - 15:15	24	0	0	24	24.0	130	10	1	141	155.0
15:15 - 15:30	29	1	0	30	31.3	161	13	0	174	190.9
15:30 - 15:45	35	1	0	36	37.3	116	19	1	136	161.7
15:45 - 16:00	29	2	0	31	33.6	164	10	0	174	187.0
Hourly Total	117	4	0	121	126.2	571	52	2	625	694.6
16:00 - 16:15	34	0	0	34	34.0	139	10	0	149	162.0
16:15 - 16:30	20	0	0	20	20.0	158	13	0	171	187.9
16:30 - 16:45	23	0	0	23	23.0	155	10	0	165	178.0
16:45 - 17:00	36	0	0	36	36.0	129	8	1	138	149.4
Hourly Total	113	0	0	113	113.0	581	41	1	623	677.3
17:00 - 17:15	48	1	0	49	50.3	173	10	0	183	196.0
17:15 - 17:30	38	0	0	38	38.0	157	6	0	163	170.8
17:30 - 17:45	44	0	0	44	44.0	166	5	0	171	177.5
17:45 - 18:00	45	0	0	45	45.0	135	5	0	140	146.5
Hourly Total	175	1	0	176	177.3	631	26	0	657	690.8
18:00 - 18:15	36	0	0	36	36.0	139	6	0	145	152.8
18:15 - 18:30	35	0	0	35	35.0	103	8	0	111	121.4
18:30 - 18:45	32	0	0	32	32.0	122	3	0	125	128.9
18:45 - 19:00	23	0	0	23	23.0	96	2	1	99	102.6
Hourly Total	126	0	0	126	126.0	460	19	1	480	505.7

TOTAL	531	5	0	536	542.5	2243	138	4	2385	2568.4
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PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Newport Cot Hill, Tuesday 3rd February 2026

Junction: 2
Approach: Cot Hill



TIME	Left to A48 (South)					Right to A48 (North)				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	23	1	0	24	25.3	0	0	0	0	0.0
07:15 - 07:30	29	1	0	30	31.3	0	0	0	0	0.0
07:30 - 07:45	39	0	0	39	39.0	0	0	0	0	0.0
07:45 - 08:00	47	1	0	48	49.3	0	0	0	0	0.0
Hourly Total	138	3	0	141	144.9	0	0	0	0	0.0
08:00 - 08:15	54	0	0	54	54.0	0	0	0	0	0.0
08:15 - 08:30	36	3	0	39	42.9	0	0	0	0	0.0
08:30 - 08:45	44	1	0	45	46.3	0	0	0	0	0.0
08:45 - 09:00	39	1	0	40	41.3	0	0	0	0	0.0
Hourly Total	173	5	0	178	184.5	0	0	0	0	0.0
09:00 - 09:15	17	0	0	17	17.0	0	0	0	0	0.0
09:15 - 09:30	17	2	0	19	21.6	0	0	0	0	0.0
09:30 - 09:45	25	4	1	30	36.2	0	0	0	0	0.0
09:45 - 10:00	15	2	0	17	19.6	0	0	0	0	0.0
Hourly Total	74	8	1	83	94.4	0	0	0	0	0.0

TOTAL	385	16	1	402	423.8	0	0	0	0	0.0
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15:00 - 15:15	37	3	0	40	43.9	0	0	0	0	0.0
15:15 - 15:30	24	1	0	25	26.3	0	0	0	0	0.0
15:30 - 15:45	21	1	0	22	23.3	0	0	0	0	0.0
15:45 - 16:00	23	3	0	26	29.9	0	0	0	0	0.0
Hourly Total	105	8	0	113	123.4	0	0	0	0	0.0
16:00 - 16:15	29	1	0	30	31.3	0	0	0	0	0.0
16:15 - 16:30	28	0	0	28	28.0	0	0	0	0	0.0
16:30 - 16:45	32	0	0	32	32.0	0	0	0	0	0.0
16:45 - 17:00	34	1	0	35	36.3	0	0	0	0	0.0
Hourly Total	123	2	0	125	127.6	0	0	0	0	0.0
17:00 - 17:15	41	0	0	41	41.0	0	0	0	0	0.0
17:15 - 17:30	30	0	0	30	30.0	0	0	0	0	0.0
17:30 - 17:45	22	0	0	22	22.0	0	0	0	0	0.0
17:45 - 18:00	20	0	1	21	22.0	0	0	0	0	0.0
Hourly Total	113	0	1	114	115.0	0	0	0	0	0.0
18:00 - 18:15	15	0	0	15	15.0	0	0	0	0	0.0
18:15 - 18:30	18	0	0	18	18.0	0	0	0	0	0.0
18:30 - 18:45	21	0	0	21	21.0	0	0	0	0	0.0
18:45 - 19:00	17	0	0	17	17.0	0	0	0	0	0.0
Hourly Total	71	0	0	71	71.0	0	0	0	0	0.0

TOTAL	412	10	1	423	437.0	0	0	0	0	0.0
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PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Newport Cot Hill, Tuesday 3rd February 2026

Junction: 2
Approach: A48 South



TIME	Ahead to A48 (North)					Right to Cot Hill				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	95	22	0	117	145.6	0	0	0	0	0.0
07:15 - 07:30	101	8	0	109	119.4	0	0	0	0	0.0
07:30 - 07:45	116	17	1	134	157.1	0	0	0	0	0.0
07:45 - 08:00	117	21	0	138	165.3	0	0	0	0	0.0
Hourly Total	429	68	1	498	587.4	0	0	0	0	0.0
08:00 - 08:15	151	11	0	162	176.3	0	0	0	0	0.0
08:15 - 08:30	159	21	0	180	207.3	0	0	0	0	0.0
08:30 - 08:45	137	20	0	157	183.0	0	0	0	0	0.0
08:45 - 09:00	155	20	1	176	203.0	0	0	0	0	0.0
Hourly Total	602	72	1	675	769.6	0	0	0	0	0.0
09:00 - 09:15	122	13	1	136	153.9	0	0	0	0	0.0
09:15 - 09:30	132	18	0	150	173.4	0	0	0	0	0.0
09:30 - 09:45	108	21	1	130	158.3	0	0	0	0	0.0
09:45 - 10:00	108	12	0	120	135.6	0	0	0	0	0.0
Hourly Total	470	64	2	536	621.2	0	0	0	0	0.0

TOTAL	1501	204	4	1709	1978.2	0	0	0	0	0.0
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15:00 - 15:15	194	12	0	206	221.6	0	0	0	0	0.0
15:15 - 15:30	183	9	1	193	205.7	0	0	0	0	0.0
15:30 - 15:45	209	11	0	220	234.3	0	0	0	0	0.0
15:45 - 16:00	187	14	0	201	219.2	0	0	0	0	0.0
Hourly Total	773	46	1	820	880.8	0	0	0	0	0.0
16:00 - 16:15	207	12	0	219	234.6	0	0	0	0	0.0
16:15 - 16:30	241	5	0	246	252.5	0	0	0	0	0.0
16:30 - 16:45	250	9	0	259	270.7	0	0	0	0	0.0
16:45 - 17:00	214	8	0	222	232.4	0	0	0	0	0.0
Hourly Total	912	34	0	946	990.2	0	0	0	0	0.0
17:00 - 17:15	245	11	1	257	272.3	0	0	0	0	0.0
17:15 - 17:30	183	5	0	188	194.5	0	0	0	0	0.0
17:30 - 17:45	158	13	1	172	189.9	0	0	0	0	0.0
17:45 - 18:00	160	6	0	166	173.8	0	0	0	0	0.0
Hourly Total	746	35	2	783	830.5	0	0	0	0	0.0
18:00 - 18:15	161	3	0	164	167.9	0	0	0	0	0.0
18:15 - 18:30	149	6	0	155	162.8	0	0	0	0	0.0
18:30 - 18:45	133	12	0	145	160.6	0	0	0	0	0.0
18:45 - 19:00	111	9	0	120	131.7	0	0	0	0	0.0
Hourly Total	554	30	0	584	623.0	0	0	0	0	0.0

TOTAL	2985	145	3	3133	3324.5	0	0	0	0	0.0
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PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Newport Cot Hill, Tuesday 3rd February 2026



Junction: 3
Approach: Ringland Circle

	Left to A48 (East)					Ahead to Hartridge Farm Road					Right to A48 (West)					U-Turn				
TIME	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	6	0	0	6	6.0	1	0	0	1	1.0	23	0	0	23	23.0	0	0	0	0	0.0
07:15 - 07:30	8	0	0	8	8.0	1	0	0	1	1.0	44	0	1	45	46.0	0	0	0	0	0.0
07:30 - 07:45	13	0	0	13	13.0	2	0	0	2	2.0	45	0	0	45	45.0	0	0	0	0	0.0
07:45 - 08:00	8	0	0	8	8.0	5	0	0	5	5.0	48	0	0	48	48.0	0	0	0	0	0.0
Hourly Total	35	0	0	35	35.0	9	0	0	9	9.0	160	0	1	161	162.0	0	0	0	0	0.0
08:00 - 08:15	15	0	0	15	15.0	21	0	0	21	21.0	31	0	1	32	33.0	0	0	0	0	0.0
08:15 - 08:30	15	0	0	15	15.0	27	0	0	27	27.0	74	0	0	74	74.0	0	0	0	0	0.0
08:30 - 08:45	11	0	0	11	11.0	32	0	0	32	32.0	59	0	0	59	59.0	1	0	0	1	1.0
08:45 - 09:00	11	0	0	11	11.0	34	0	0	34	34.0	62	0	0	62	62.0	1	0	0	1	1.0
Hourly Total	52	0	0	52	52.0	114	0	0	114	114.0	226	0	1	227	228.0	2	0	0	2	2.0
09:00 - 09:15	10	0	0	10	10.0	14	0	0	14	14.0	93	0	0	93	93.0	2	0	0	2	2.0
09:15 - 09:30	13	0	0	13	13.0	6	0	0	6	6.0	66	0	0	66	66.0	0	0	0	0	0.0
09:30 - 09:45	9	0	0	9	9.0	4	0	0	4	4.0	50	0	0	50	50.0	1	0	0	1	1.0
09:45 - 10:00	2	0	0	2	2.0	2	0	0	2	2.0	41	0	1	42	43.0	0	0	0	0	0.0
Hourly Total	34	0	0	34	34.0	26	0	0	26	26.0	250	0	1	251	252.0	3	0	0	3	3.0
TOTAL	121	0	0	121	121.0	149	0	0	149	149.0	636	0	3	639	642.0	5	0	0	5	5.0
15:00 - 15:15	13	0	0	13	13.0	13	0	0	13	13.0	55	0	0	55	55.0	1	0	0	1	1.0
15:15 - 15:30	9	0	0	9	9.0	17	0	0	17	17.0	76	1	0	77	78.3	1	0	0	1	1.0
15:30 - 15:45	12	0	0	12	12.0	6	0	0	6	6.0	54	0	0	54	54.0	0	0	0	0	0.0
15:45 - 16:00	6	0	0	6	6.0	1	0	0	1	1.0	38	0	0	38	38.0	0	0	0	0	0.0
Hourly Total	40	0	0	40	40.0	37	0	0	37	37.0	223	1	0	224	225.3	2	0	0	2	2.0
16:00 - 16:15	5	0	0	5	5.0	2	0	0	2	2.0	52	1	0	53	54.3	0	0	0	0	0.0
16:15 - 16:30	19	0	0	19	19.0	3	0	0	3	3.0	49	0	0	49	49.0	0	0	0	0	0.0
16:30 - 16:45	10	0	0	10	10.0	1	0	0	1	1.0	38	0	0	38	38.0	1	0	0	1	1.0
16:45 - 17:00	8	0	0	8	8.0	1	0	0	1	1.0	54	0	0	54	54.0	0	0	0	0	0.0
Hourly Total	42	0	0	42	42.0	7	0	0	7	7.0	193	1	0	194	195.3	1	0	0	1	1.0
17:00 - 17:15	12	0	0	12	12.0	1	0	0	1	1.0	49	0	1	50	51.0	0	0	0	0	0.0
17:15 - 17:30	6	0	0	6	6.0	1	0	0	1	1.0	36	0	0	36	36.0	0	0	0	0	0.0
17:30 - 17:45	13	0	0	13	13.0	0	0	0	0	0.0	41	0	1	42	43.0	0	0	0	0	0.0
17:45 - 18:00	13	0	0	13	13.0	0	0	0	0	0.0	54	1	0	55	56.3	1	0	0	1	1.0
Hourly Total	44	0	0	44	44.0	2	0	0	2	2.0	180	1	2	183	186.3	1	0	0	1	1.0
18:00 - 18:15	7	0	0	7	7.0	1	0	0	1	1.0	44	0	1	45	46.0	0	0	0	0	0.0
18:15 - 18:30	13	0	0	13	13.0	2	0	0	2	2.0	46	0	0	46	46.0	0	0	0	0	0.0
18:30 - 18:45	10	0	0	10	10.0	1	0	0	1	1.0	40	0	0	40	40.0	0	0	0	0	0.0
18:45 - 19:00	4	0	0	4	4.0	1	0	0	1	1.0	34	0	0	34	34.0	0	0	0	0	0.0
Hourly Total	34	0	0	34	34.0	5	0	0	5	5.0	164	0	1	165	166.0	0	0	0	0	0.0
TOTAL	160	0	0	160	160.0	51	0	0	51	51.0	760	3	3	766	772.9	4	0	0	4	4.0

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Newport Cot Hill, Tuesday 3rd February 2026

Junction: 3
Approach: A48 East



	Left to Hartridge Farm Road					Ahead to A48 (West)					Right to Ringland Circle					U-Turn				
TIME	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	2	1	0	3	4.3	88	15	0	103	122.5	5	0	0	5	5.0	0	0	0	0	0.0
07:15 - 07:30	3	1	0	4	5.3	132	6	0	138	145.8	7	0	0	7	7.0	0	0	0	0	0.0
07:30 - 07:45	2	0	0	2	2.0	178	13	0	191	207.9	6	0	0	6	6.0	2	0	0	2	2.0
07:45 - 08:00	18	0	0	18	18.0	226	17	1	244	267.1	11	0	0	11	11.0	3	0	0	3	3.0
Hourly Total	25	2	0	27	29.6	624	51	1	676	743.3	29	0	0	29	29.0	5	0	0	5	5.0
08:00 - 08:15	40	0	0	40	40.0	231	17	0	248	270.1	20	0	0	20	20.0	0	0	0	0	0.0
08:15 - 08:30	42	0	1	43	44.0	221	10	0	231	244.0	26	0	0	26	26.0	1	0	0	1	1.0
08:30 - 08:45	35	0	0	35	35.0	181	17	0	198	220.1	36	0	0	36	36.0	2	0	0	2	2.0
08:45 - 09:00	33	0	0	33	33.0	177	10	0	187	200.0	38	0	0	38	38.0	1	1	0	2	3.3
Hourly Total	150	0	1	151	152.0	810	54	0	864	934.2	120	0	0	120	120.0	4	1	0	5	6.3
09:00 - 09:15	6	0	0	6	6.0	203	13	0	216	232.9	19	0	0	19	19.0	1	0	0	1	1.0
09:15 - 09:30	9	1	0	10	11.3	168	13	1	182	199.9	16	0	0	16	16.0	5	0	0	5	5.0
09:30 - 09:45	2	0	0	2	2.0	178	18	1	197	221.4	16	0	0	16	16.0	0	0	0	0	0.0
09:45 - 10:00	4	0	0	4	4.0	146	14	0	160	178.2	7	0	0	7	7.0	3	1	0	4	5.3
Hourly Total	21	1	0	22	23.3	695	58	2	755	832.4	58	0	0	58	58.0	9	1	0	10	11.3

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

TOTAL	196	3	1	200	204.9	2129	163	3	2295	2509.9	207	0	0	207	207.0	18	2	0	20	22.6
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15:00 - 15:15	10	1	1	12	14.3	125	12	0	137	152.6	33	0	0	33	33.0	2	0	0	2	2.0
15:15 - 15:30	14	0	0	14	14.0	143	13	0	156	172.9	25	0	0	25	25.0	2	0	0	2	2.0
15:30 - 15:45	8	0	0	8	8.0	107	21	1	129	157.3	20	0	0	20	20.0	1	0	0	1	1.0
15:45 - 16:00	1	0	0	1	1.0	165	12	0	177	192.6	18	0	0	18	18.0	6	0	0	6	6.0
Hourly Total	33	1	1	35	37.3	540	58	1	599	675.4	96	0	0	96	96.0	11	0	0	11	11.0
16:00 - 16:15	1	0	0	1	1.0	147	11	0	158	172.3	19	0	0	19	19.0	1	1	0	2	3.3
16:15 - 16:30	5	0	0	5	5.0	163	12	0	175	190.6	13	0	0	13	13.0	1	0	0	1	1.0
16:30 - 16:45	13	1	0	14	15.3	161	10	0	171	184.0	14	0	0	14	14.0	0	0	0	0	0.0
16:45 - 17:00	6	0	0	6	6.0	148	8	1	157	168.4	11	0	0	11	11.0	0	0	0	0	0.0
Hourly Total	25	1	0	26	27.3	619	41	1	661	715.3	57	0	0	57	57.0	2	1	0	3	4.3
17:00 - 17:15	2	0	0	2	2.0	189	11	0	200	214.3	23	0	0	23	23.0	2	0	0	2	2.0
17:15 - 17:30	1	0	0	1	1.0	167	6	0	173	180.8	17	0	0	17	17.0	1	0	0	1	1.0
17:30 - 17:45	4	0	0	4	4.0	172	4	0	176	181.2	12	0	0	12	12.0	3	0	0	3	3.0
17:45 - 18:00	4	0	0	4	4.0	134	6	1	141	149.8	15	0	0	15	15.0	0	0	0	0	0.0
Hourly Total	11	0	0	11	11.0	662	27	1	690	726.1	67	0	0	67	67.0	6	0	0	6	6.0
18:00 - 18:15	7	0	0	7	7.0	136	6	0	142	149.8	12	0	0	12	12.0	0	0	0	0	0.0
18:15 - 18:30	6	0	0	6	6.0	112	8	0	120	130.4	9	0	0	9	9.0	0	0	0	0	0.0
18:30 - 18:45	3	0	0	3	3.0	122	4	0	126	131.2	13	0	0	13	13.0	0	0	0	0	0.0
18:45 - 19:00	2	0	0	2	2.0	100	1	0	101	102.3	13	0	0	13	13.0	0	0	0	0	0.0
Hourly Total	18	0	0	18	18.0	470	19	0	489	513.7	47	0	0	47	47.0	0	0	0	0	0.0

TOTAL	87	2	1	90	93.6	2291	145	3	2439	2630.5	267	0	0	267	267.0	19	1	0	20	21.3
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Newport Cot Hill, Tuesday 3rd February 2026



Junction: 3

Approach: Hartridge Farm Road

	Left to A48 (West)					Ahead to Ringland Circle					Right to A48 (East)					U-Turn				
TIME	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	1	0	0	1	1.0	0	0	0	0	0.0	3	0	0	3	3.0	0	0	0	0	0.0
07:15 - 07:30	1	0	0	1	1.0	0	0	0	0	0.0	4	1	0	5	6.3	0	0	0	0	0.0
07:30 - 07:45	3	0	0	3	3.0	0	0	0	0	0.0	0	0	0	0	0.0	0	0	0	0	0.0
07:45 - 08:00	0	0	0	0	0.0	0	0	0	0	0.0	4	0	0	4	4.0	0	0	0	0	0.0
Hourly Total	5	0	0	5	5.0	0	0	0	0	0.0	11	1	0	12	13.3	0	0	0	0	0.0
08:00 - 08:15	29	0	0	29	29.0	4	0	0	4	4.0	25	0	0	25	25.0	0	0	0	0	0.0
08:15 - 08:30	72	0	1	73	74.0	14	0	0	14	14.0	45	0	0	45	45.0	0	0	0	0	0.0
08:30 - 08:45	41	0	0	41	41.0	15	0	0	15	15.0	40	0	0	40	40.0	0	0	0	0	0.0
08:45 - 09:00	52	0	0	52	52.0	12	0	0	12	12.0	45	0	1	46	47.0	0	0	0	0	0.0
Hourly Total	194	0	1	195	196.0	45	0	0	45	45.0	155	0	1	156	157.0	0	0	0	0	0.0
09:00 - 09:15	37	0	0	37	37.0	5	0	0	5	5.0	23	0	0	23	23.0	0	0	0	0	0.0
09:15 - 09:30	15	0	0	15	15.0	5	0	0	5	5.0	18	0	0	18	18.0	0	0	0	0	0.0
09:30 - 09:45	5	0	0	5	5.0	1	0	0	1	1.0	4	1	0	5	6.3	1	0	0	1	1.0
09:45 - 10:00	9	0	0	9	9.0	0	0	0	0	0.0	3	0	0	3	3.0	0	0	0	0	0.0
Hourly Total	66	0	0	66	66.0	11	0	0	11	11.0	48	1	0	49	50.3	1	0	0	1	1.0

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

TOTAL	265	0	1	266	267.0	56	0	0	56	56.0	214	2	1	217	220.6	1	0	0	1	1.0
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15:00 - 15:15	79	0	0	79	79.0	22	0	0	22	22.0	61	0	0	61	61.0	0	0	0	0	0.0
15:15 - 15:30	31	0	0	31	31.0	7	0	0	7	7.0	29	0	0	29	29.0	0	0	0	0	0.0
15:30 - 15:45	57	0	1	58	59.0	21	0	0	21	21.0	40	0	0	40	40.0	0	0	0	0	0.0
15:45 - 16:00	9	1	0	10	11.3	2	0	0	2	2.0	15	0	0	15	15.0	0	0	0	0	0.0
Hourly Total	176	1	1	178	180.3	52	0	0	52	52.0	145	0	0	145	145.0	0	0	0	0	0.0
16:00 - 16:15	7	0	0	7	7.0	0	0	0	0	0.0	15	0	0	15	15.0	0	0	0	0	0.0
16:15 - 16:30	7	0	0	7	7.0	1	0	0	1	1.0	16	0	0	16	16.0	0	0	0	0	0.0
16:30 - 16:45	17	0	0	17	17.0	2	0	0	2	2.0	24	0	0	24	24.0	0	0	0	0	0.0
16:45 - 17:00	6	0	0	6	6.0	0	0	0	0	0.0	5	0	0	5	5.0	0	0	0	0	0.0
Hourly Total	37	0	0	37	37.0	3	0	0	3	3.0	60	0	0	60	60.0	0	0	0	0	0.0
17:00 - 17:15	3	0	0	3	3.0	0	0	0	0	0.0	5	0	0	5	5.0	0	0	0	0	0.0
17:15 - 17:30	7	0	0	7	7.0	1	0	0	1	1.0	5	0	0	5	5.0	0	0	0	0	0.0
17:30 - 17:45	3	0	0	3	3.0	0	0	0	0	0.0	3	0	0	3	3.0	0	0	0	0	0.0
17:45 - 18:00	2	0	0	2	2.0	0	0	0	0	0.0	0	0	0	0	0.0	0	0	0	0	0.0
Hourly Total	15	0	0	15	15.0	1	0	0	1	1.0	13	0	0	13	13.0	0	0	0	0	0.0
18:00 - 18:15	3	0	0	3	3.0	0	0	0	0	0.0	1	0	0	1	1.0	0	0	0	0	0.0
18:15 - 18:30	3	0	0	3	3.0	0	0	0	0	0.0	0	0	0	0	0.0	0	0	0	0	0.0
18:30 - 18:45	17	0	0	17	17.0	1	0	0	1	1.0	11	0	0	11	11.0	0	0	0	0	0.0
18:45 - 19:00	5	0	0	5	5.0	0	0	0	0	0.0	1	0	0	1	1.0	0	0	0	0	0.0
Hourly Total	28	0	0	28	28.0	1	0	0	1	1.0	13	0	0	13	13.0	0	0	0	0	0.0

TOTAL	256	1	1	258	260.3	57	0	0	57	57.0	231	0	0	231	231.0	0	0	0	0	0.0
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Newport Cot Hill, Tuesday 3rd February 2026

Junction: 3
Approach: A48 West



TIME	Left to Ringland Circle					Ahead to A48 (East)					Right to Hartridge Farm Road					U-Turn				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	13	0	1	14	15.0	84	21	0	105	132.3	4	0	0	4	4.0	1	0	0	1	1.0
07:15 - 07:30	18	0	0	18	18.0	90	9	0	99	110.7	4	0	0	4	4.0	0	0	0	0	0.0
07:30 - 07:45	21	0	0	21	21.0	102	16	1	119	140.8	6	0	0	6	6.0	0	0	0	0	0.0
07:45 - 08:00	23	0	1	24	25.0	101	20	0	121	147.0	20	0	0	20	20.0	0	0	0	0	0.0
Hourly Total	75	0	2	77	79.0	377	66	1	444	530.8	34	0	0	34	34.0	1	0	0	1	1.0
08:00 - 08:15	29	0	0	29	29.0	111	12	0	123	138.6	43	0	0	43	43.0	0	0	0	0	0.0
08:15 - 08:30	33	0	0	33	33.0	96	21	0	117	144.3	86	0	0	86	86.0	0	0	0	0	0.0
08:30 - 08:45	28	0	0	28	28.0	85	20	0	105	131.0	65	0	0	65	65.0	0	0	0	0	0.0
08:45 - 09:00	40	1	0	41	42.3	97	18	0	115	138.4	52	0	0	52	52.0	0	0	0	0	0.0
Hourly Total	130	1	0	131	132.3	389	71	0	460	552.3	246	0	0	246	246.0	0	0	0	0	0.0
09:00 - 09:15	33	0	0	33	33.0	87	13	1	101	118.9	24	0	0	24	24.0	0	0	0	0	0.0
09:15 - 09:30	44	0	0	44	44.0	99	18	0	117	140.4	20	0	0	20	20.0	1	0	0	1	1.0
09:30 - 09:45	35	0	0	35	35.0	94	20	1	115	142.0	11	0	0	11	11.0	0	0	0	0	0.0
09:45 - 10:00	38	0	0	38	38.0	101	11	0	112	126.3	7	0	0	7	7.0	0	0	0	0	0.0
Hourly Total	150	0	0	150	150.0	381	62	2	445	527.6	62	0	0	62	62.0	1	0	0	1	1.0

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

TOTAL	355	1	2	358	361.3	1147	199	3	1349	1610.7	342	0	0	342	342.0	2	0	0	2	2.0
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15:00 - 15:15	48	1	1	50	52.3	120	12	0	132	147.6	46	0	0	46	46.0	1	0	0	1	1.0
15:15 - 15:30	51	0	1	52	53.0	142	7	1	150	160.1	36	0	0	36	36.0	0	0	0	0	0.0
15:30 - 15:45	39	0	0	39	39.0	160	12	0	172	187.6	19	1	0	20	21.3	0	0	0	0	0.0
15:45 - 16:00	60	0	0	60	60.0	161	15	0	176	195.5	17	0	0	17	17.0	0	0	0	0	0.0
Hourly Total	198	1	2	201	204.3	583	46	1	630	690.8	118	1	0	119	120.3	1	0	0	1	1.0
16:00 - 16:15	51	1	0	52	53.3	185	10	0	195	208.0	12	0	0	12	12.0	0	0	0	0	0.0
16:15 - 16:30	60	0	0	60	60.0	204	5	0	209	215.5	10	0	0	10	10.0	1	0	0	1	1.0
16:30 - 16:45	44	0	0	44	44.0	218	10	0	228	241.0	3	0	0	3	3.0	1	0	0	1	1.0
16:45 - 17:00	56	0	1	57	58.0	201	9	0	210	221.7	5	0	0	5	5.0	0	0	0	0	0.0
Hourly Total	211	1	1	213	215.3	808	34	0	842	886.2	30	0	0	30	30.0	2	0	0	2	2.0
17:00 - 17:15	62	0	0	62	62.0	223	10	1	234	248.0	5	0	0	5	5.0	0	0	0	0	0.0
17:15 - 17:30	51	0	1	52	53.0	172	7	0	179	188.1	2	0	0	2	2.0	0	0	0	0	0.0
17:30 - 17:45	44	0	0	44	44.0	137	11	1	149	164.3	2	0	0	2	2.0	0	0	0	0	0.0
17:45 - 18:00	60	1	1	62	64.3	146	6	0	152	159.8	1	0	0	1	1.0	0	0	0	0	0.0
Hourly Total	217	1	2	220	223.3	678	34	2	714	760.2	10	0	0	10	10.0	0	0	0	0	0.0
18:00 - 18:15	41	0	0	41	41.0	150	3	0	153	156.9	3	0	0	3	3.0	0	0	0	0	0.0
18:15 - 18:30	58	0	1	59	60.0	137	6	0	143	150.8	8	0	0	8	8.0	0	0	0	0	0.0
18:30 - 18:45	47	0	0	47	47.0	111	12	0	123	138.6	3	0	0	3	3.0	0	0	0	0	0.0
18:45 - 19:00	20	0	1	21	22.0	105	9	0	114	125.7	4	0	0	4	4.0	0	0	0	0	0.0
Hourly Total	166	0	2	168	170.0	503	30	0	533	572.0	18	0	0	18	18.0	0	0	0	0	0.0

TOTAL	792	3	7	802	812.9	2572	144	3	2719	2909.2	176	1	0	177	178.3	3	0	0	3	3.0
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Newport Cot Hill, Tuesday 3rd February 2026

Site 2

Queues are stationary vehicles each 5 minutes



TIME	Cot Hill
07:00	0
07:05	0
07:10	0
07:15	0
07:20	0
07:25	0
07:30	0
07:35	0
07:40	0
07:45	0
07:50	0
07:55	0
08:00	0
08:05	2
08:10	1
08:15	0
08:20	2
08:25	10
08:30	0
08:35	0
08:40	0
08:45	0
08:50	0
08:55	0
09:00	0
09:05	0
09:10	0
09:15	0
09:20	0
09:25	0
09:30	0
09:35	0
09:40	0
09:45	0
09:50	0
09:55	0
10:00	0

15:00	0
15:05	0
15:10	0
15:15	0
15:20	0
15:25	1
15:30	0
15:35	0
15:40	0

15:45	0
15:50	0
15:55	0
16:00	0
16:05	0
16:10	0
16:15	0
16:20	0
16:25	0
16:30	0
16:35	0
16:40	0
16:45	0
16:50	1
16:55	0
17:00	0
17:05	0
17:10	0
17:15	0
17:20	0
17:25	0
17:30	0
17:35	0
17:40	0
17:45	0
17:50	0
17:55	0
18:00	0
18:05	0
18:10	0
18:15	0
18:20	0
18:25	0
18:30	0
18:35	0
18:40	0
18:45	0
18:50	0
18:55	0
19:00	0

Newport Cot Hill, Tuesday 3rd February 2026

Site 3

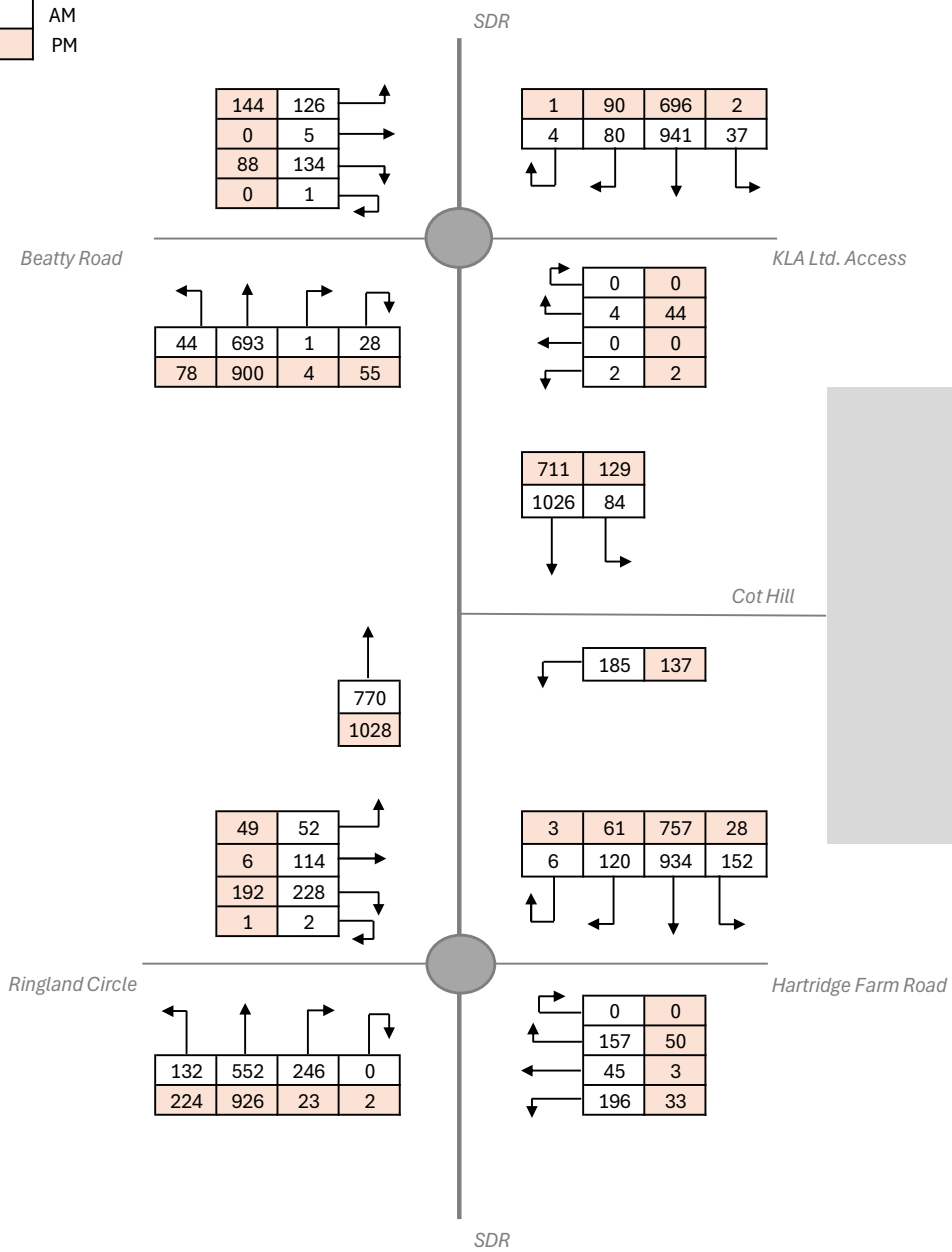
Queues are stationary vehicles each 5 minutes
LANE 1 is nearside lane



	Ringland Circle		A48 (East)			Hartridge Farm Road		A48 (West)	
TIME	LANE 1	LANE 2	LANE 1	LANE 2	LANE 3	LANE 1	LANE 2	LANE 1	LANE 2
07:00	0	0	0	0	0	0	0	0	0
07:05	0	0	0	0	0	0	0	0	0
07:10	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0
07:20	0	0	0	0	0	0	0	0	0
07:25	1	2	0	0	0	0	0	0	0
07:30	0	2	0	0	0	0	0	0	0
07:35	0	0	0	0	0	0	0	0	0
07:40	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0
07:50	0	0	0	0	0	0	0	0	0
07:55	0	0	0	0	0	0	0	0	0
08:00	0	2	0	0	0	0	0	0	0
08:05	0	0	0	0	0	1	1	0	0
08:10	1	3	1	1	0	2	1	0	0
08:15	0	0	0	0	0	0	1	0	0
08:20	1	8	5	0	0	0	0	0	0
08:25	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	1	0	0	0
08:35	0	7	1	0	0	6	5	0	0
08:40	0	0	2	0	0	3	0	1	3
08:45	0	1	0	0	0	0	0	0	0
08:50	0	0	0	0	0	0	0	0	0
08:55	0	0	4	0	0	0	0	0	0
09:00	0	0	0	0	0	1	1	0	0
09:05	0	0	0	0	0	0	0	0	0
09:10	0	5	1	0	0	0	1	0	0
09:15	0	0	0	0	0	0	0	0	0
09:20	0	0	0	0	0	0	0	0	0
09:25	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0
09:35	0	0	0	0	0	0	0	0	0
09:40	0	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0
09:50	0	0	0	0	0	0	0	0	0
09:55	0	0	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	0	0
15:00	0	1	0	0	0	0	0	0	0
15:05	0	0	0	0	0	0	2	2	2
15:10	0	2	0	0	0	0	0	0	0
15:15	0	0	0	1	0	0	1	0	0
15:20	0	0	0	0	0	0	0	0	0
15:25	0	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0	0
15:35	0	7	0	0	0	0	0	1	0
15:40	0	0	0	7	0	0	0	0	0

Appendix E Traffic Flow Diagrams

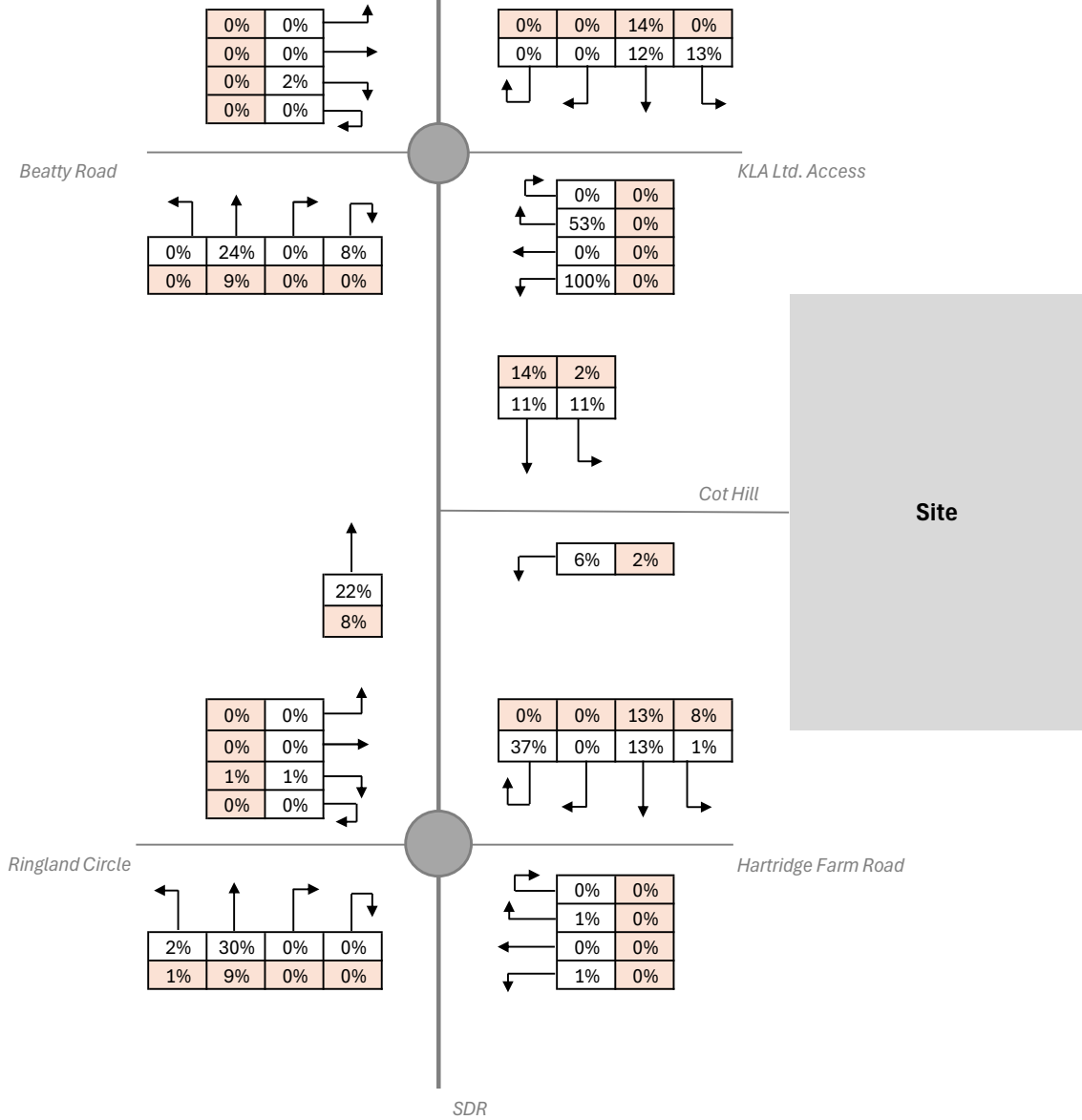
AM
PM



2026 Observed Flows (PCUs)

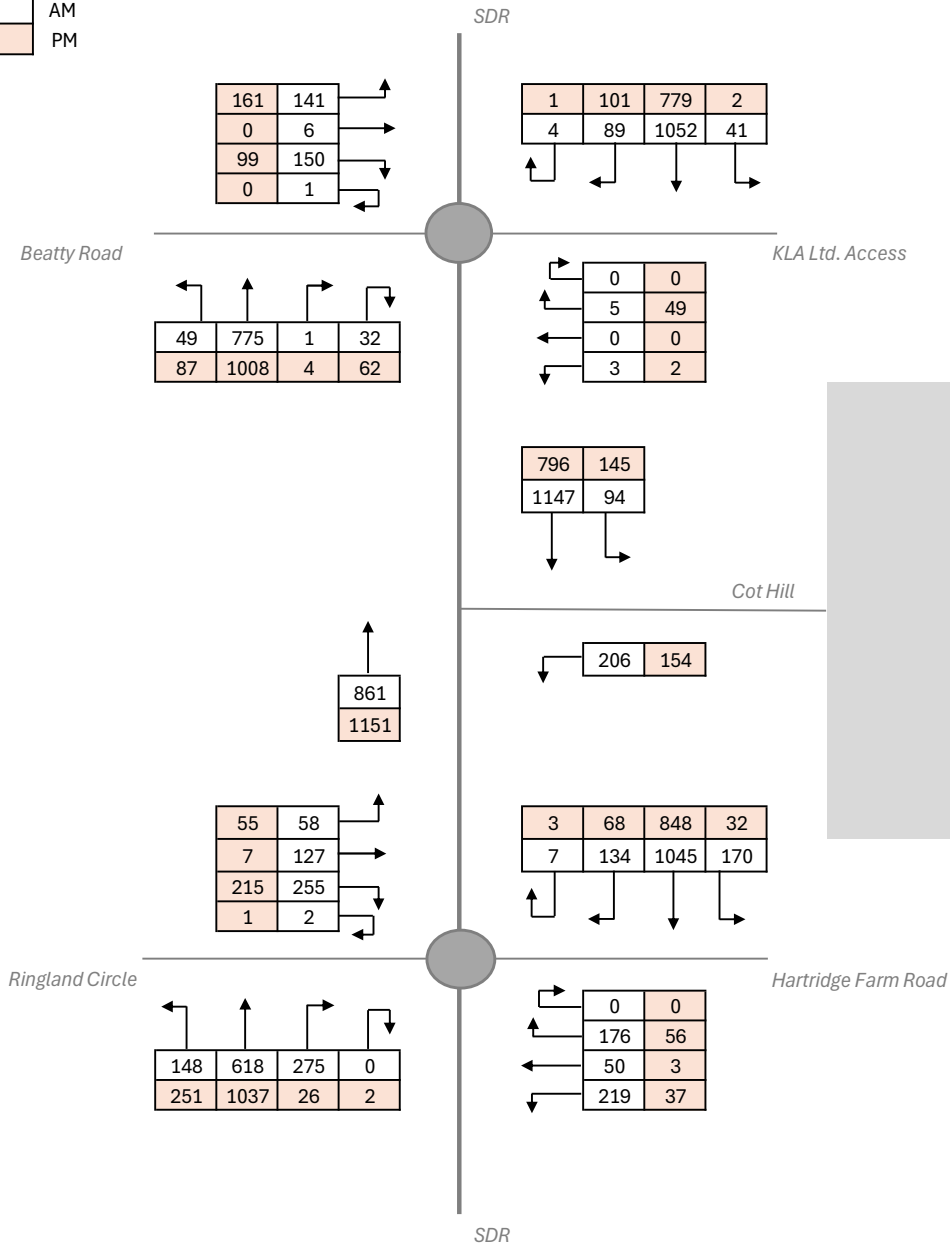


AM
 PM



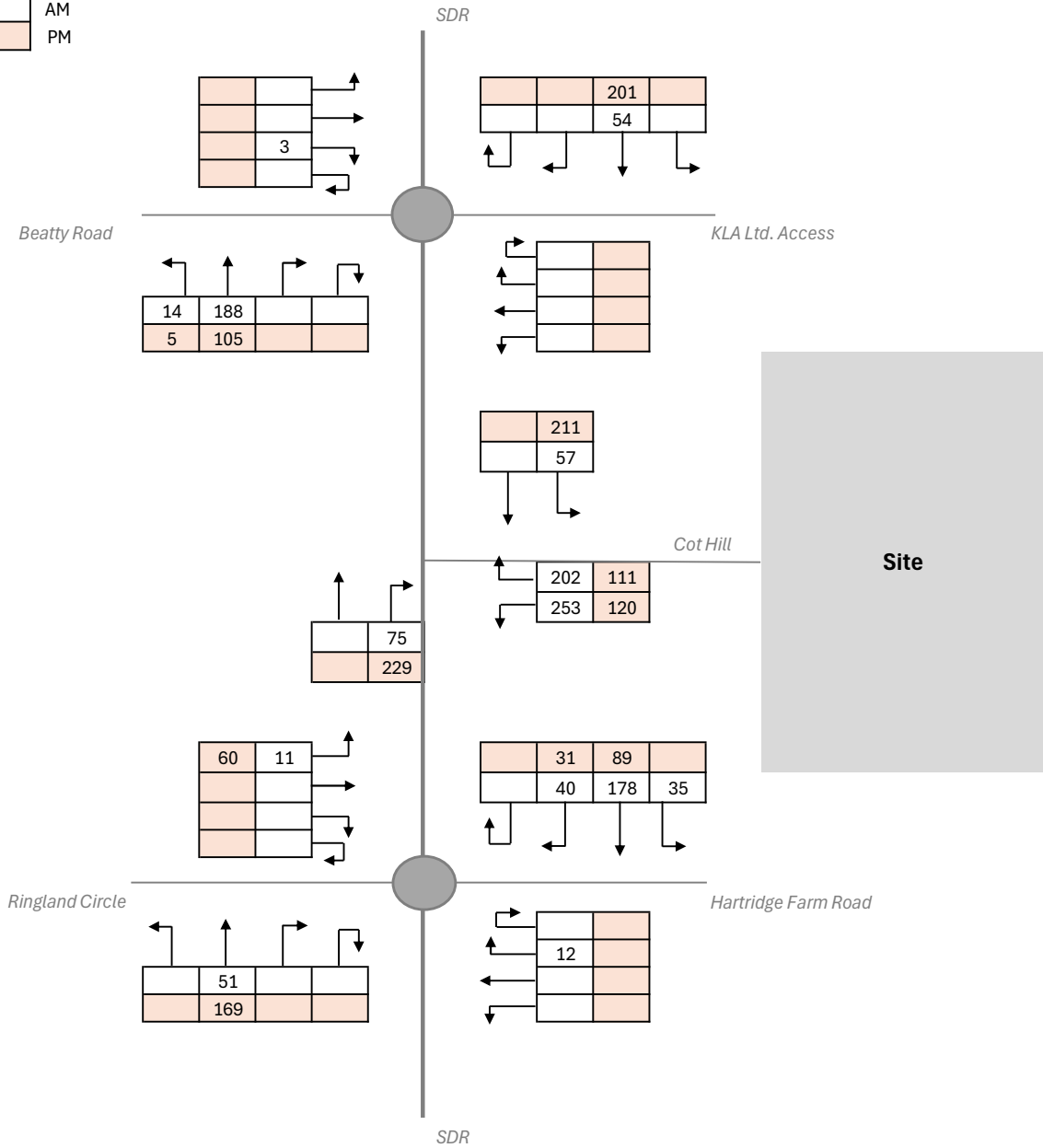
2026 Observed Flows (HGV%)





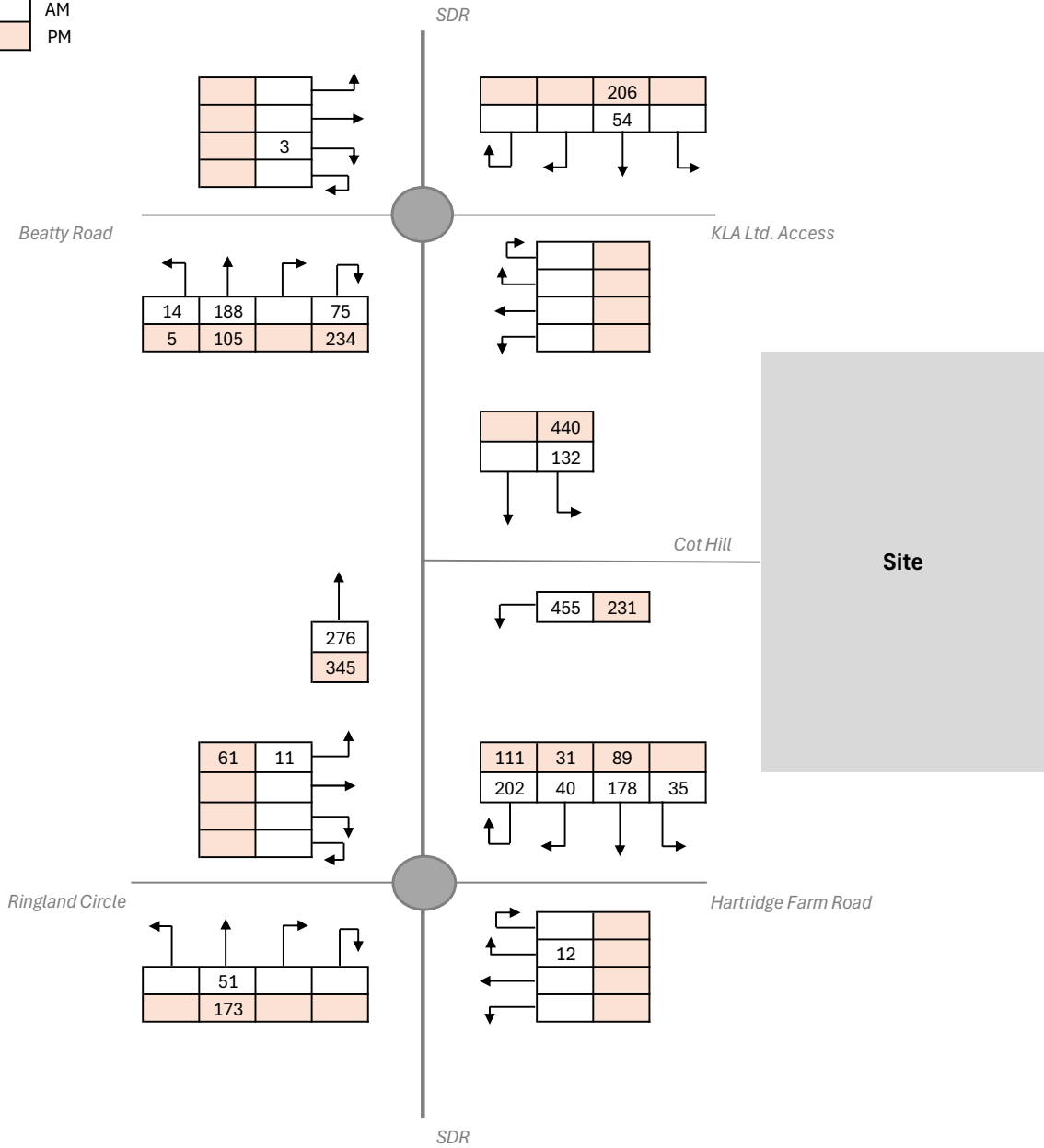
2036 Forecast Year (PCUs)





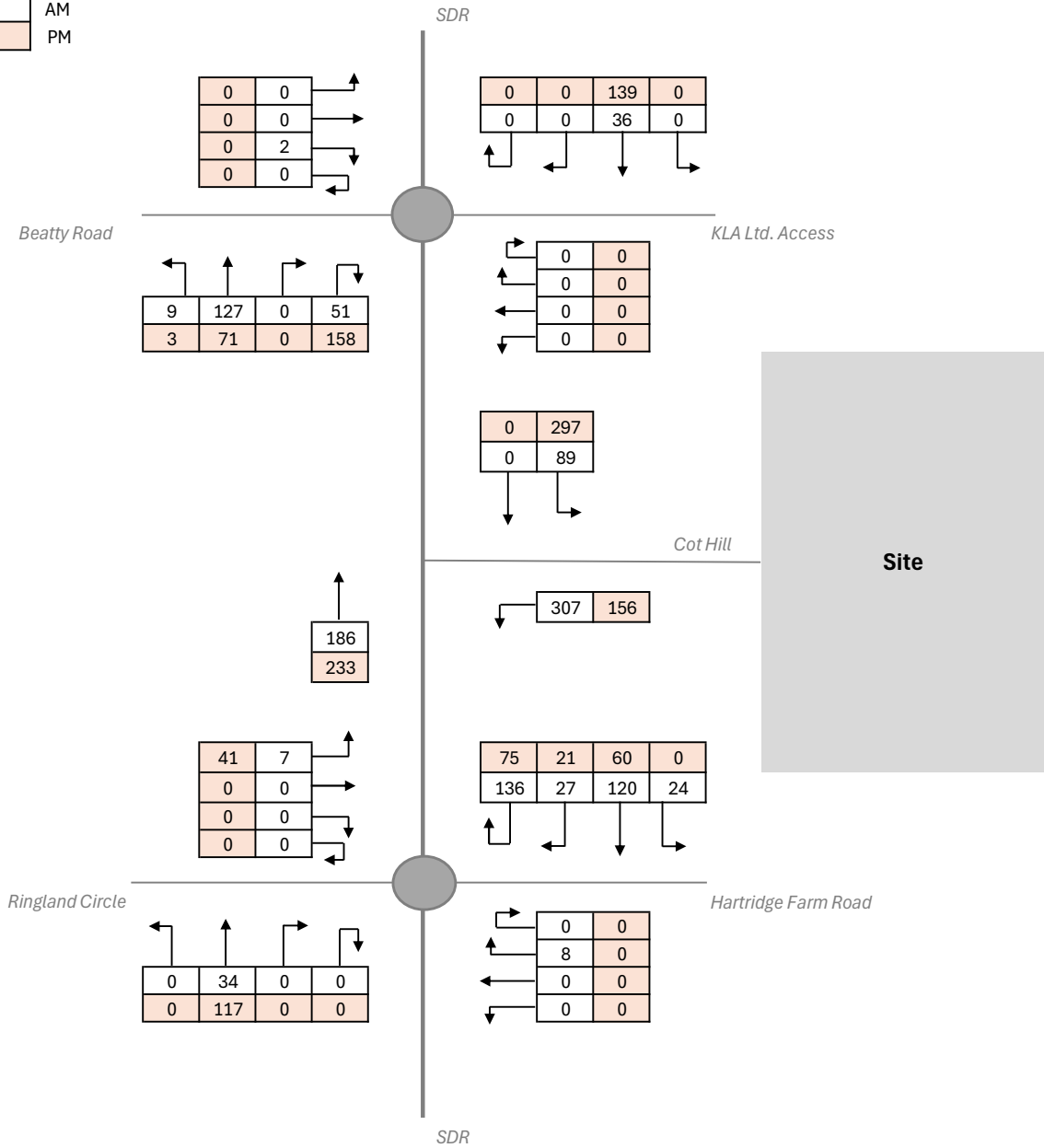
Halcrow Dev Trips





Re-distributed Halcrow Dev Trips

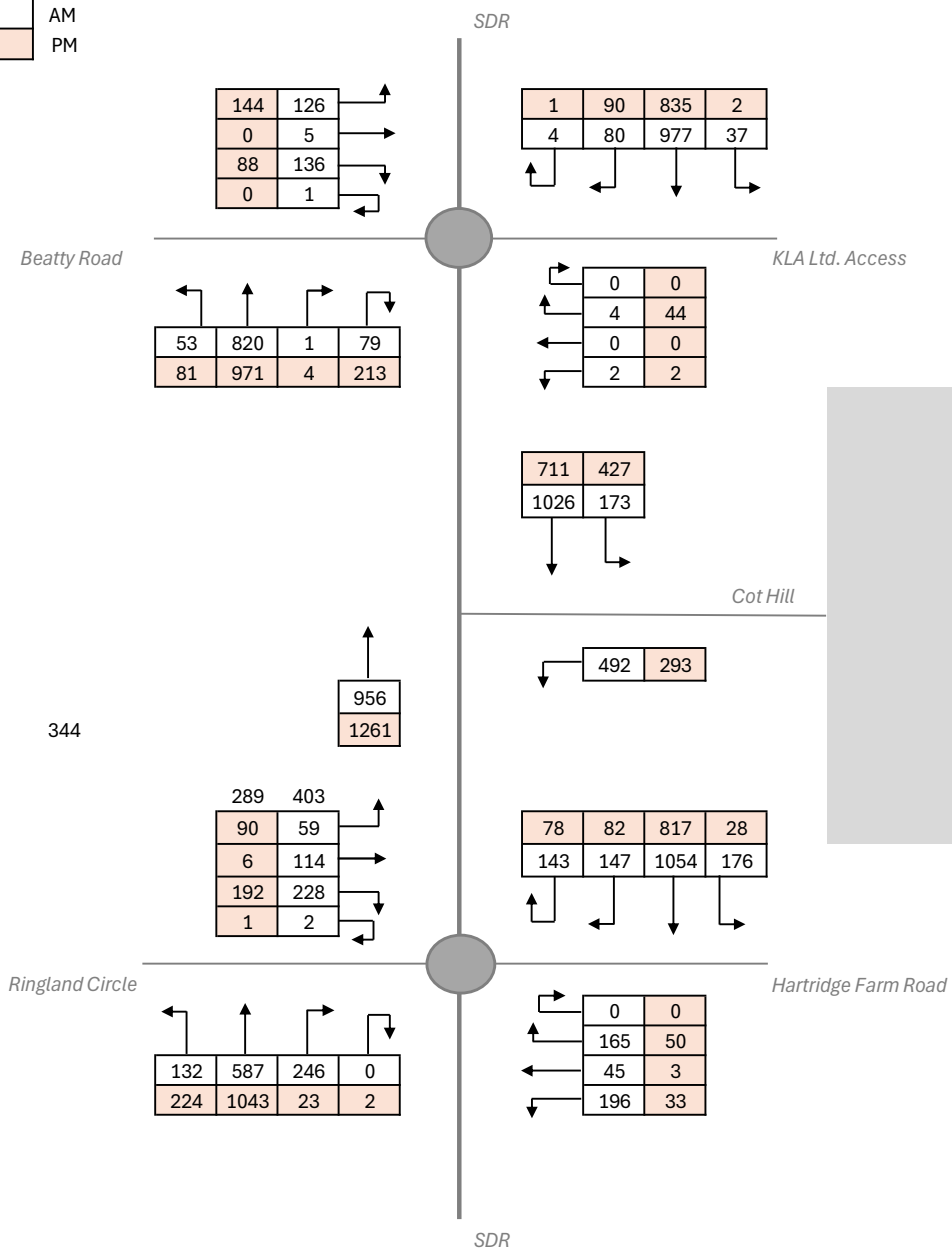




Halcrow Dev Trips (67.5%, to reflect existing occupation)

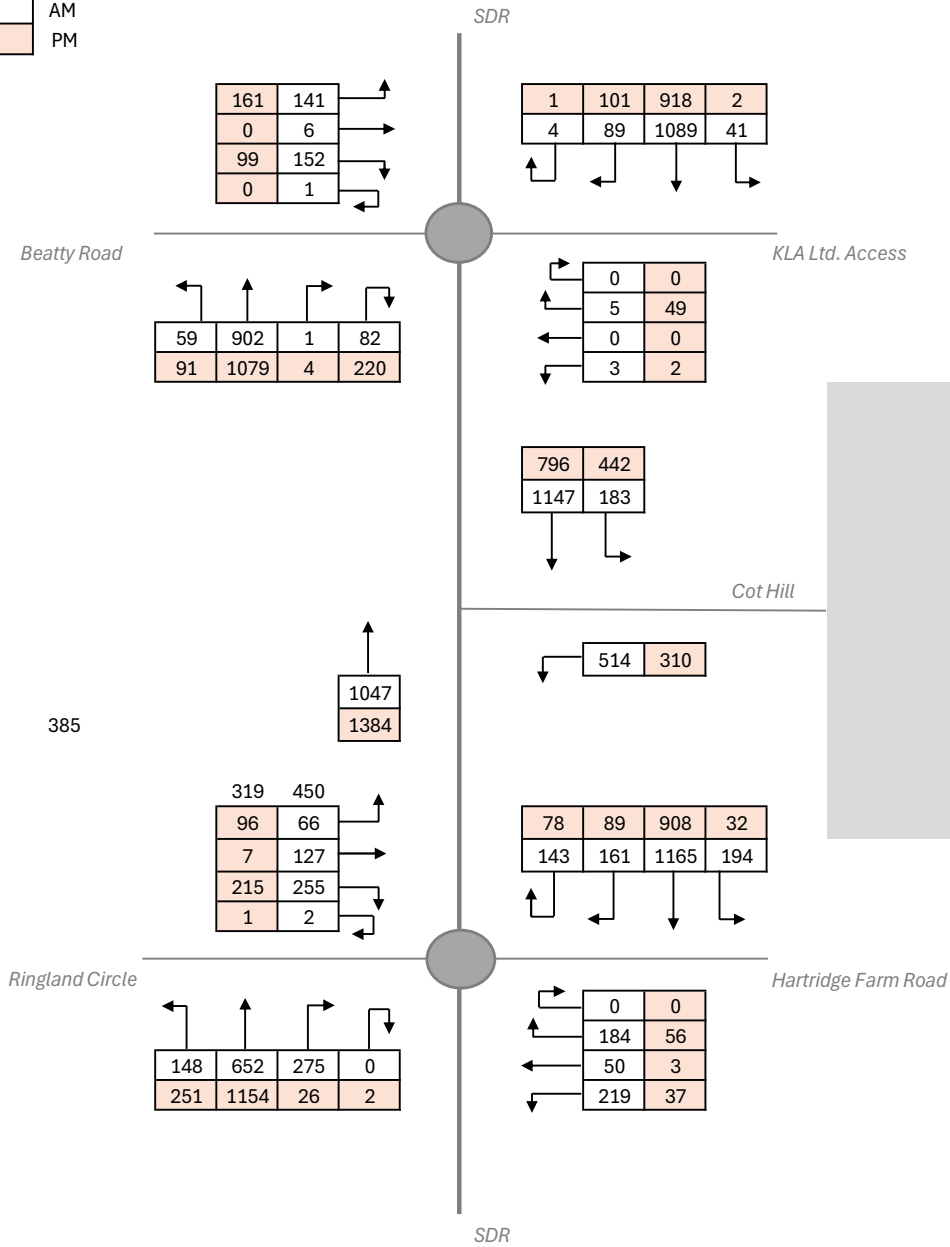


AM
PM



2026 Observed + Dev Trips (67.5%)





2036 Forecast + Dev Trips (67.5%)



Appendix F PICADY Assessment



				Client BDW TRADING LTD												Notes: 1. THIS IS NOT A CONSTRUCTION DRAWING AND IS INTENDED FOR ILLUSTRATIVE PURPOSES ONLY. 2. WHITE LINING IS INDICATIVE ONLY.				Legend:																
www.slrconsulting.com				Project COT HILL (GREAT MILTON PARK)																																
Drawing Status & Suitability Code																																				
Designed	Drawn	Checked	Authorised	Drawing Title PICADY ASSESMENT																																
Date	26.02.26	26.02.26	26.02.26																																	
Drawing Number PIC01				Rev. -	Scale 1:1000 @ A3				SLR Project No. 407.065092.00001				Rev				Amendments				Date				By				Chk				Auth			

Appendix G SDR Cot Hill Junction Junctions 11 Report

Junctions 11	
PICADY 11 - Priority Intersection Module	
Version: 11.0.0.2177	
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Filename: SDR_Cot Hill Junction-V2.j11

Path: \\slr.local\eu\Offices\UK\Cardiff\Vectos\CardiffShare\Projects\W260000\407.065092.00001 - Cot Hill (Great Milton Park)
\\Transport Planning\Technical\Modelling

Report generation date: 26/02/2026 16:15:26

»2026 | (Halcrow TA) | AM
 »2026 | (Halcrow TA) | PM
 »2026 | (Halcrow TA) + Development | AM
 »2026 | (Halcrow TA) + Development | PM
 »2026 | Observed | AM
 »2026 | Observed | PM
 »2026 | Observed + Development | AM
 »2026 | Observed + Development | PM
 »2026 | Observed + Development (Flat) | AM
 »2026 | Observed + Development (Flat) | PM
 »2036 | Forecast | AM
 »2036 | Forecast | PM
 »2036 | Forecast + Development | AM
 »2036 | Forecast + Development | PM
 »2036 | Forecast + Development (Flat) | AM
 »2036 | Forecast + Development (Flat) | PM

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	2026 - (Halcrow TA)					
Stream B-AC	0.9	11.96	0.47	0.2	6.59	0.18
Stream C-AB	0.0	0.00	0.00	0.0	0.00	0.00
	2026 - (Halcrow TA) + Development					
Stream B-AC	124.8	710.87	1.38	1.5	14.30	0.60
Stream C-AB	0.0	0.00	0.00	0.0	0.00	0.00
	2026 - Observed					
Stream B-AC	0.5	9.08	0.33	0.3	6.77	0.22
Stream C-AB	0.0	0.00	0.00	0.0	0.00	0.00
	2026 - Observed + Development					
Stream B-AC	6.5	46.21	0.88	0.9	10.71	0.48
Stream C-AB	0.0	0.00	0.00	0.0	0.00	0.00
	2026 - Observed + Development (Flat)					
Stream B-AC	3.5	25.88	0.77	0.8	9.39	0.43
Stream C-AB	0.0	0.00	0.00	0.0	0.00	0.00
	2036 - Forecast					
Stream B-AC	0.6	10.37	0.38	0.3	7.31	0.25
Stream C-AB	0.0	0.00	0.00	0.0	0.00	0.00
	2036 - Forecast + Development					
Stream B-AC	12.7	84.77	0.96	1.1	12.11	0.53
Stream C-AB	0.0	0.00	0.00	0.0	0.00	0.00
	2036 - Forecast + Development (Flat)					
Stream B-AC	5.3	38.16	0.84	0.9	10.34	0.47
Stream C-AB	0.0	0.00	0.00	0.0	0.00	0.00

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

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

File summary

File Description

Title	SDR_Cot Hill Junction
Location	
Site number	
Date	19/02/2026
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	SLR\Aalisha.Sorathiya
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Demand Set Summary

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D5	2026	(Halcrow TA)	AM	ONE HOUR	07:45	09:15		15	✓
D6	2026	(Halcrow TA)	PM	ONE HOUR	16:00	17:30		15	✓
D7	2026	(Halcrow TA) + Development	AM	ONE HOUR	07:45	09:15		15	✓
D8	2026	(Halcrow TA) + Development	PM	ONE HOUR	16:00	17:30		15	✓
D9	2026	Observed	AM	ONE HOUR	07:45	09:15		15	✓
D10	2026	Observed	PM	ONE HOUR	16:00	17:30		15	✓
D11	2026	Observed + Development	AM	ONE HOUR	07:45	09:15		15	✓
D12	2026	Observed + Development	PM	ONE HOUR	16:00	17:30		15	✓
D13	2026	Observed + Development (Flat)	AM	FLAT	07:45	09:15	90	15	✓
D14	2026	Observed + Development (Flat)	PM	FLAT	16:00	17:30	90	15	✓
D15	2036	Forecast	AM	ONE HOUR	07:45	09:15		15	✓
D16	2036	Forecast	PM	ONE HOUR	16:00	17:30		15	✓
D17	2036	Forecast + Development	AM	ONE HOUR	07:45	09:15		15	✓
D18	2036	Forecast + Development	PM	ONE HOUR	16:00	17:30		15	✓
D19	2036	Forecast + Development (Flat)	AM	FLAT	07:45	09:15	90	15	✓
D20	2036	Forecast + Development (Flat)	PM	FLAT	16:00	17:30	90	15	✓

Analysis Set Details

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

2026 | (Halcrow TA) | AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SDR/Cot Hill	T-Junction	Entry Only	Two-way	Exit Only		1.86	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.86	A

Arms

Arms

Arm	Name	Description	Arm type
A	SDR (N)		Major
B	Cot Hill		Minor
C	SDR (S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - SDR (S)	7.30				✓	

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Cot Hill	One lane	5.00	0	160

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	666	0.114	0.289	0.182	0.413
B-C	870	0.083	0.211	-	-
C-B	574	0.174	0.174	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

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

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

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2026	(Halcrow TA)	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		ONE HOUR	✓	1323	100.000
B - Cot Hill		ONE HOUR	✓	243	100.000
C - SDR (S)		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
From	A - SDR (N)	0	42	1281
	B - Cot Hill	0	0	243
	C - SDR (S)	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
From	A - SDR (N)	0	0	0
	B - Cot Hill	0	0	0
	C - SDR (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.47	11.96	0.9	B	223	334
C-AB	0.00	0.00	0.0	A	0	0
C-A					0	0
A-B					39	58
A-C					1175	1763

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	183	46	0.00	664	0.276	181	0.0	0.4	7.442	A
C-AB	0	0	0.00	400	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	32	8	0.00			32				
A-C	964	241	0.00			964				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	218	55	0.00	624	0.350	218	0.4	0.5	8.856	A
C-AB	0	0	0.00	366	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	38	9	0.00			38				
A-C	1152	288	0.00			1152				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	268	67	0.00	568	0.471	266	0.5	0.9	11.859	B
C-AB	0	0	0.00	320	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	46	12	0.00			46				
A-C	1410	353	0.00			1410				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	268	67	0.00	568	0.471	268	0.9	0.9	11.959	B
C-AB	0	0	0.00	320	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	46	12	0.00			46				
A-C	1410	353	0.00			1410				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	218	55	0.00	624	0.350	220	0.9	0.5	8.942	A
C-AB	0	0	0.00	366	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	38	9	0.00			38				
A-C	1152	288	0.00			1152				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	183	46	0.00	664	0.276	184	0.5	0.4	7.510	A
C-AB	0	0	0.00	400	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	32	8	0.00			32				
A-C	964	241	0.00			964				

2026 | (Halcrow TA) | PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SDR/Cot Hill	T-Junction	Entry Only	Two-way	Exit Only		0.73	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.73	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2026	(Halcrow TA)	PM	ONE HOUR	16:00	17:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		ONE HOUR	✓	898	100.000
B - Cot Hill		ONE HOUR	✓	112	100.000
C - SDR (S)		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
From	A - SDR (N)	0	58	840
	B - Cot Hill	0	0	112
	C - SDR (S)	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
From	A - SDR (N)	0	0	0
	B - Cot Hill	0	0	0
	C - SDR (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.18	6.59	0.2	A	103	154
C-AB	0.00	0.00	0.0	A	0	0
C-A					0	0
A-B					53	80
A-C					771	1156

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	84	21	0.00	733	0.115	84	0.0	0.1	5.539	A
C-AB	0	0	0.00	456	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	44	11	0.00			44				
A-C	632	158	0.00			632				

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	101	25	0.00	706	0.143	101	0.1	0.2	5.942	A
C-AB	0	0	0.00	433	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	52	13	0.00			52				
A-C	755	189	0.00			755				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	123	31	0.00	669	0.184	123	0.2	0.2	6.586	A
C-AB	0	0	0.00	401	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	64	16	0.00			64				
A-C	925	231	0.00			925				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	123	31	0.00	669	0.184	123	0.2	0.2	6.591	A
C-AB	0	0	0.00	401	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	64	16	0.00			64				
A-C	925	231	0.00			925				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	101	25	0.00	706	0.143	101	0.2	0.2	5.949	A
C-AB	0	0	0.00	433	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	52	13	0.00			52				
A-C	755	189	0.00			755				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	84	21	0.00	733	0.115	84	0.2	0.1	5.553	A
C-AB	0	0	0.00	456	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	44	11	0.00			44				
A-C	632	158	0.00			632				

2026 | (Halcrow TA) + Development | AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SDR/Cot Hill	T-Junction	Entry Only	Two-way	Exit Only		230.46	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	230.46	F

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2026	(Halcrow TA) + Development	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		ONE HOUR	✓	1455	100.000
B - Cot Hill		ONE HOUR	✓	698	100.000
C - SDR (S)		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	174	1281
	B - Cot Hill	0	0	698
	C - SDR (S)	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	0	0
	B - Cot Hill	0	0	0
	C - SDR (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	1.38	710.87	124.8	F	640	961
C-AB	0.00	0.00	0.0	A	0	0
C-A					0	0
A-B					160	239
A-C					1175	1763

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	525	131	0.00	655	0.802	511	0.0	3.5	23.131	C
C-AB	0	0	0.00	383	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	131	33	0.00			131				
A-C	964	241	0.00			964				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	627	157	0.00	614	1.022	583	3.5	14.6	73.378	F
C-AB	0	0	0.00	346	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	156	39	0.00			156				
A-C	1152	288	0.00			1152				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	769	192	0.00	556	1.381	555	14.6	68.0	282.578	F
C-AB	0	0	0.00	294	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	192	48	0.00			192				
A-C	1410	353	0.00			1410				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	769	192	0.00	556	1.381	556	68.0	121.1	599.048	F
C-AB	0	0	0.00	294	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	192	48	0.00			192				
A-C	1410	353	0.00			1410				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	627	157	0.00	614	1.022	613	121.1	124.8	710.867	F
C-AB	0	0	0.00	346	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	156	39	0.00			156				
A-C	1152	288	0.00			1152				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	525	131	0.00	655	0.802	650	124.8	93.6	605.690	F
C-AB	0	0	0.00	383	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	131	33	0.00			131				
A-C	964	241	0.00			964				

2026 | (Halcrow TA) + Development | PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SDR/Cot Hill	T-Junction	Entry Only	Two-way	Exit Only		2.92	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.92	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2026	(Halcrow TA) + Development	PM	ONE HOUR	16:00	17:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		ONE HOUR	✓	1338	100.000
B - Cot Hill		ONE HOUR	✓	343	100.000
C - SDR (S)		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
From	A - SDR (N)	0	498	840
	B - Cot Hill	0	0	343
	C - SDR (S)	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
From	A - SDR (N)	0	0	0
	B - Cot Hill	0	0	0
	C - SDR (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.60	14.30	1.5	B	315	472
C-AB	0.00	0.00	0.0	A	0	0
C-A					0	0
A-B					457	685
A-C					771	1156

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	258	65	0.00	705	0.366	256	0.0	0.6	7.975	A
C-AB	0	0	0.00	398	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	375	94	0.00			375				
A-C	632	158	0.00			632				

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	308	77	0.00	673	0.458	307	0.6	0.8	9.812	A
C-AB	0	0	0.00	364	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	448	112	0.00			448				
A-C	755	189	0.00			755				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	378	94	0.00	629	0.600	375	0.8	1.4	14.047	B
C-AB	0	0	0.00	317	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	548	137	0.00			548				
A-C	925	231	0.00			925				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	378	94	0.00	629	0.600	378	1.4	1.5	14.301	B
C-AB	0	0	0.00	317	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	548	137	0.00			548				
A-C	925	231	0.00			925				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	308	77	0.00	673	0.458	311	1.5	0.9	10.002	B
C-AB	0	0	0.00	364	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	448	112	0.00			448				
A-C	755	189	0.00			755				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	258	65	0.00	705	0.366	259	0.9	0.6	8.095	A
C-AB	0	0	0.00	398	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	375	94	0.00			375				
A-C	632	158	0.00			632				

2026 | Observed | AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SDR/Cot Hill	T-Junction	Entry Only	Two-way	Exit Only		1.30	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.30	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2026	Observed	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		ONE HOUR	✓	1110	100.000
B - Cot Hill		ONE HOUR	✓	185	100.000
C - SDR (S)		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	84	1026
	B - Cot Hill	0	0	185
	C - SDR (S)	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
From		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	11	11
	B - Cot Hill	0	0	6
	C - SDR (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.33	9.08	0.5	A	170	255
C-AB	0.00	0.00	0.0	A	0	0
C-A					0	0
A-B					77	116
A-C					941	1412

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	139	35	0.00	702	0.199	138	0.0	0.3	6.761	A
C-AB	0	0	0.00	428	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	63	16	0.00			63				
A-C	772	193	0.00			772				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	166	42	0.00	669	0.249	166	0.3	0.3	7.582	A
C-AB	0	0	0.00	400	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	76	19	0.00			76				
A-C	922	231	0.00			922				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	204	51	0.00	624	0.327	203	0.3	0.5	9.056	A
C-AB	0	0	0.00	361	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	92	23	0.00			92				
A-C	1130	282	0.00			1130				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	204	51	0.00	624	0.327	204	0.5	0.5	9.082	A
C-AB	0	0	0.00	361	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	92	23	0.00			92				
A-C	1130	282	0.00			1130				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	166	42	0.00	669	0.249	167	0.5	0.4	7.610	A
C-AB	0	0	0.00	400	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	76	19	0.00			76				
A-C	922	231	0.00			922				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	139	35	0.00	702	0.199	140	0.4	0.3	6.794	A
C-AB	0	0	0.00	428	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	63	16	0.00			63				
A-C	772	193	0.00			772				

2026 | Observed | PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SDR/Cot Hill	T-Junction	Entry Only	Two-way	Exit Only		0.95	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.95	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2026	Observed	PM	ONE HOUR	16:00	17:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		ONE HOUR	✓	840	100.000
B - Cot Hill		ONE HOUR	✓	137	100.000
C - SDR (S)		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	129	711
	B - Cot Hill	0	0	137
	C - SDR (S)	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
From		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	2	14
	B - Cot Hill	0	0	2
	C - SDR (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.22	6.77	0.3	A	126	189
C-AB	0.00	0.00	0.0	A	0	0
C-A					0	0
A-B					118	178
A-C					652	979

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	103	26	0.00	749	0.138	102	0.0	0.2	5.675	A
C-AB	0	0	0.00	464	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	97	24	0.00			97				
A-C	535	134	0.00			535				

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	123	31	0.00	725	0.170	123	0.2	0.2	6.095	A
C-AB	0	0	0.00	442	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	116	29	0.00			116				
A-C	639	160	0.00			639				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	151	38	0.00	693	0.218	151	0.2	0.3	6.769	A
C-AB	0	0	0.00	413	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	142	36	0.00			142				
A-C	783	196	0.00			783				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	151	38	0.00	693	0.218	151	0.3	0.3	6.774	A
C-AB	0	0	0.00	413	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	142	36	0.00			142				
A-C	783	196	0.00			783				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	123	31	0.00	725	0.170	123	0.3	0.2	6.106	A
C-AB	0	0	0.00	442	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	116	29	0.00			116				
A-C	639	160	0.00			639				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	103	26	0.00	749	0.138	103	0.2	0.2	5.690	A
C-AB	0	0	0.00	464	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	97	24	0.00			97				
A-C	535	134	0.00			535				

2026 | Observed + Development | AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SDR/Cot Hill	T-Junction	Entry Only	Two-way	Exit Only		13.45	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	13.45	B

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2026	Observed + Development	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		ONE HOUR	✓	1199	100.000
B - Cot Hill		ONE HOUR	✓	492	100.000
C - SDR (S)		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	From			
	A - SDR (N)	0	173	1026
	B - Cot Hill	0	0	492
	C - SDR (S)	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	From			
	A - SDR (N)	0	11	11
	B - Cot Hill	0	0	6
	C - SDR (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.88	46.21	6.5	E	451	677
C-AB	0.00	0.00	0.0	A	0	0
C-A					0	0
A-B					159	238
A-C					941	1412

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	370	93	0.00	696	0.532	366	0.0	1.2	11.405	B
C-AB	0	0	0.00	416	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	130	33	0.00			130				
A-C	772	193	0.00			772				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	442	111	0.00	662	0.668	439	1.2	2.0	16.823	C
C-AB	0	0	0.00	386	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	156	39	0.00			156				
A-C	922	231	0.00			922				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	542	135	0.00	616	0.880	527	2.0	5.8	37.797	E
C-AB	0	0	0.00	344	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	190	48	0.00			190				
A-C	1130	282	0.00			1130				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	542	135	0.00	616	0.880	539	5.8	6.5	46.211	E
C-AB	0	0	0.00	344	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	190	48	0.00			190				
A-C	1130	282	0.00			1130				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	442	111	0.00	662	0.668	459	6.5	2.3	20.161	C
C-AB	0	0	0.00	386	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	156	39	0.00			156				
A-C	922	231	0.00			922				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	370	93	0.00	696	0.532	374	2.3	1.2	12.014	B
C-AB	0	0	0.00	416	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	130	33	0.00			130				
A-C	772	193	0.00			772				

2026 | Observed + Development | PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SDR/Cot Hill	T-Junction	Entry Only	Two-way	Exit Only		2.19	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.19	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2026	Observed + Development	PM	ONE HOUR	16:00	17:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		ONE HOUR	✓	1138	100.000
B - Cot Hill		ONE HOUR	✓	293	100.000
C - SDR (S)		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
From	A - SDR (N)	0	427	711
	B - Cot Hill	0	0	293
	C - SDR (S)	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
From	A - SDR (N)	0	2	14
	B - Cot Hill	0	0	2
	C - SDR (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.48	10.71	0.9	B	269	403
C-AB	0.00	0.00	0.0	A	0	0
C-A					0	0
A-B					392	588
A-C					652	979

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	221	55	0.00	730	0.302	219	0.0	0.4	7.158	A
C-AB	0	0	0.00	424	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	321	80	0.00			321				
A-C	535	134	0.00			535				

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	263	66	0.00	703	0.375	263	0.4	0.6	8.329	A
C-AB	0	0	0.00	395	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	384	96	0.00			384				
A-C	639	160	0.00			639				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	323	81	0.00	665	0.485	321	0.6	0.9	10.626	B
C-AB	0	0	0.00	355	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	470	118	0.00			470				
A-C	783	196	0.00			783				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	323	81	0.00	665	0.485	323	0.9	0.9	10.705	B
C-AB	0	0	0.00	355	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	470	118	0.00			470				
A-C	783	196	0.00			783				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	263	66	0.00	703	0.375	265	0.9	0.6	8.404	A
C-AB	0	0	0.00	395	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	384	96	0.00			384				
A-C	639	160	0.00			639				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	221	55	0.00	730	0.302	221	0.6	0.4	7.229	A
C-AB	0	0	0.00	424	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	321	80	0.00			321				
A-C	535	134	0.00			535				

2026 | Observed + Development (Flat) | AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SDR/Cot Hill	T-Junction	Entry Only	Two-way	Exit Only		7.53	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.53	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D13	2026	Observed + Development (Flat)	AM	FLAT	07:45	09:15	90	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		FLAT	✓	1199	100.000
B - Cot Hill		FLAT	✓	492	100.000
C - SDR (S)		FLAT	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	From			
	A - SDR (N)	0	173	1026
	B - Cot Hill	0	0	492
	C - SDR (S)	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	From			
	A - SDR (N)	0	11	11
	B - Cot Hill	0	0	6
	C - SDR (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.77	25.88	3.5	D	492	738
C-AB	0.00	0.00	0.0	A	0	0
C-A					0	0
A-B					173	260
A-C					1026	1539

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	492	123	0.00	639	0.770	479	0.0	3.2	22.410	C
C-AB	0	0	0.00	365	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	173	43	0.00			173				
A-C	1026	257	0.00			1026				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	492	123	0.00	639	0.770	491	3.2	3.3	25.560	D
C-AB	0	0	0.00	365	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	173	43	0.00			173				
A-C	1026	257	0.00			1026				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	492	123	0.00	639	0.770	492	3.3	3.4	25.746	D
C-AB	0	0	0.00	365	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	173	43	0.00			173				
A-C	1026	257	0.00			1026				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	492	123	0.00	639	0.770	492	3.4	3.4	25.814	D
C-AB	0	0	0.00	365	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	173	43	0.00			173				
A-C	1026	257	0.00			1026				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	492	123	0.00	639	0.770	492	3.4	3.5	25.852	D
C-AB	0	0	0.00	365	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	173	43	0.00			173				
A-C	1026	257	0.00			1026				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	492	123	0.00	639	0.770	492	3.5	3.5	25.876	D
C-AB	0	0	0.00	365	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	173	43	0.00			173				
A-C	1026	257	0.00			1026				

2026 | Observed + Development (Flat) | PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SDR/Cot Hill	T-Junction	Entry Only	Two-way	Exit Only		1.92	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.92	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D14	2026	Observed + Development (Flat)	PM	FLAT	16:00	17:30	90	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		FLAT	✓	1138	100.000
B - Cot Hill		FLAT	✓	293	100.000
C - SDR (S)		FLAT	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	From			
	A - SDR (N)	0	427	711
	B - Cot Hill	0	0	293
	C - SDR (S)	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	From			
	A - SDR (N)	0	2	14
	B - Cot Hill	0	0	2
	C - SDR (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.43	9.39	0.8	A	293	440
C-AB	0.00	0.00	0.0	A	0	0
C-A					0	0
A-B					427	641
A-C					711	1067

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	293	73	0.00	684	0.428	290	0.0	0.8	9.247	A
C-AB	0	0	0.00	375	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	427	107	0.00			427				
A-C	711	178	0.00			711				

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	293	73	0.00	684	0.428	293	0.8	0.8	9.384	A
C-AB	0	0	0.00	375	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	427	107	0.00			427				
A-C	711	178	0.00			711				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	293	73	0.00	684	0.428	293	0.8	0.8	9.386	A
C-AB	0	0	0.00	375	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	427	107	0.00			427				
A-C	711	178	0.00			711				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	293	73	0.00	684	0.428	293	0.8	0.8	9.386	A
C-AB	0	0	0.00	375	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	427	107	0.00			427				
A-C	711	178	0.00			711				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	293	73	0.00	684	0.428	293	0.8	0.8	9.386	A
C-AB	0	0	0.00	375	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	427	107	0.00			427				
A-C	711	178	0.00			711				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	293	73	0.00	684	0.428	293	0.8	0.8	9.386	A
C-AB	0	0	0.00	375	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	427	107	0.00			427				
A-C	711	178	0.00			711				

2036 | Forecast | AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SDR/Cot Hill	T-Junction	Entry Only	Two-way	Exit Only		1.48	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.48	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D15	2036	Forecast	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		ONE HOUR	✓	1241	100.000
B - Cot Hill		ONE HOUR	✓	206	100.000
C - SDR (S)		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	94	1147
	B - Cot Hill	0	0	206
	C - SDR (S)	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
From		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	11	11
	B - Cot Hill	0	0	6
	C - SDR (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.38	10.37	0.6	B	189	284
C-AB	0.00	0.00	0.0	A	0	0
C-A					0	0
A-B					86	129
A-C					1053	1579

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	155	39	0.00	682	0.227	154	0.0	0.3	7.213	A
C-AB	0	0	0.00	411	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	71	18	0.00			71				
A-C	864	216	0.00			864				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	185	46	0.00	645	0.287	185	0.3	0.4	8.278	A
C-AB	0	0	0.00	379	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	85	21	0.00			85				
A-C	1031	258	0.00			1031				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	227	57	0.00	595	0.381	226	0.4	0.6	10.321	B
C-AB	0	0	0.00	336	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	103	26	0.00			103				
A-C	1263	316	0.00			1263				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	227	57	0.00	595	0.381	227	0.6	0.6	10.367	B
C-AB	0	0	0.00	336	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	103	26	0.00			103				
A-C	1263	316	0.00			1263				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	185	46	0.00	645	0.287	186	0.6	0.4	8.325	A
C-AB	0	0	0.00	379	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	85	21	0.00			85				
A-C	1031	258	0.00			1031				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	155	39	0.00	682	0.227	156	0.4	0.3	7.260	A
C-AB	0	0	0.00	411	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	71	18	0.00			71				
A-C	864	216	0.00			864				

2036 | Forecast | PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SDR/Cot Hill	T-Junction	Entry Only	Two-way	Exit Only		1.03	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.03	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D16	2036	Forecast	PM	ONE HOUR	16:00	17:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		ONE HOUR	✓	941	100.000
B - Cot Hill		ONE HOUR	✓	154	100.000
C - SDR (S)		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	145	796
	B - Cot Hill	0	0	154
	C - SDR (S)	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
From		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	2	14
	B - Cot Hill	0	0	2
	C - SDR (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.25	7.31	0.3	A	141	212
C-AB	0.00	0.00	0.0	A	0	0
C-A					0	0
A-B					133	200
A-C					730	1096

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	116	29	0.00	734	0.158	115	0.0	0.2	5.924	A
C-AB	0	0	0.00	450	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	109	27	0.00			109				
A-C	599	150	0.00			599				

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	138	35	0.00	708	0.196	138	0.2	0.2	6.441	A
C-AB	0	0	0.00	426	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	130	33	0.00			130				
A-C	716	179	0.00			716				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	170	42	0.00	672	0.252	169	0.2	0.3	7.304	A
C-AB	0	0	0.00	393	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	160	40	0.00			160				
A-C	876	219	0.00			876				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	170	42	0.00	672	0.252	170	0.3	0.3	7.313	A
C-AB	0	0	0.00	393	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	160	40	0.00			160				
A-C	876	219	0.00			876				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	138	35	0.00	708	0.196	139	0.3	0.3	6.455	A
C-AB	0	0	0.00	426	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	130	33	0.00			130				
A-C	716	179	0.00			716				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	116	29	0.00	734	0.158	116	0.3	0.2	5.944	A
C-AB	0	0	0.00	450	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	109	27	0.00			109				
A-C	599	150	0.00			599				

2036 | Forecast + Development | AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SDR/Cot Hill	T-Junction	Entry Only	Two-way	Exit Only		23.63	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	23.63	C

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D17	2036	Forecast + Development	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		ONE HOUR	✓	1330	100.000
B - Cot Hill		ONE HOUR	✓	514	100.000
C - SDR (S)		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
From	A - SDR (N)	0	183	1147
	B - Cot Hill	0	0	514
	C - SDR (S)	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
From	A - SDR (N)	0	11	11
	B - Cot Hill	0	0	6
	C - SDR (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.96	84.77	12.7	F	472	707
C-AB	0.00	0.00	0.0	A	0	0
C-A					0	0
A-B					168	252
A-C					1053	1579

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	387	97	0.00	676	0.572	381	0.0	1.4	12.728	B
C-AB	0	0	0.00	399	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	138	34	0.00			138				
A-C	864	216	0.00			864				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	462	116	0.00	639	0.724	457	1.4	2.6	20.501	C
C-AB	0	0	0.00	365	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	165	41	0.00			165				
A-C	1031	258	0.00			1031				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	566	141	0.00	587	0.965	537	2.6	9.8	57.420	F
C-AB	0	0	0.00	318	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	201	50	0.00			201				
A-C	1263	316	0.00			1263				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	566	141	0.00	587	0.965	554	9.8	12.7	84.770	F
C-AB	0	0	0.00	318	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	201	50	0.00			201				
A-C	1263	316	0.00			1263				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	462	116	0.00	639	0.724	501	12.7	3.0	33.477	D
C-AB	0	0	0.00	365	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	165	41	0.00			165				
A-C	1031	258	0.00			1031				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	387	97	0.00	676	0.572	393	3.0	1.5	13.770	B
C-AB	0	0	0.00	399	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	138	34	0.00			138				
A-C	864	216	0.00			864				

2036 | Forecast + Development | PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SDR/Cot Hill	T-Junction	Entry Only	Two-way	Exit Only		2.43	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.43	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D18	2036	Forecast + Development	PM	ONE HOUR	16:00	17:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		ONE HOUR	✓	1238	100.000
B - Cot Hill		ONE HOUR	✓	310	100.000
C - SDR (S)		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
From	A - SDR (N)	0	442	796
	B - Cot Hill	0	0	310
	C - SDR (S)	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
From	A - SDR (N)	0	2	14
	B - Cot Hill	0	0	2
	C - SDR (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.53	12.11	1.1	B	284	427
C-AB	0.00	0.00	0.0	A	0	0
C-A					0	0
A-B					406	608
A-C					730	1096

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	233	58	0.00	716	0.326	231	0.0	0.5	7.554	A
C-AB	0	0	0.00	411	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	333	83	0.00			333				
A-C	599	150	0.00			599				

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	279	70	0.00	686	0.406	278	0.5	0.7	8.986	A
C-AB	0	0	0.00	380	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	397	99	0.00			397				
A-C	716	179	0.00			716				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	341	85	0.00	644	0.530	340	0.7	1.1	11.980	B
C-AB	0	0	0.00	336	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	487	122	0.00			487				
A-C	876	219	0.00			876				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	341	85	0.00	644	0.530	341	1.1	1.1	12.110	B
C-AB	0	0	0.00	336	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	487	122	0.00			487				
A-C	876	219	0.00			876				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	279	70	0.00	686	0.406	280	1.1	0.7	9.096	A
C-AB	0	0	0.00	380	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	397	99	0.00			397				
A-C	716	179	0.00			716				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	233	58	0.00	716	0.326	234	0.7	0.5	7.643	A
C-AB	0	0	0.00	411	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	333	83	0.00			333				
A-C	599	150	0.00			599				

2036 | Forecast + Development (Flat) | AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SDR/Cot Hill	T-Junction	Entry Only	Two-way	Exit Only		10.64	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	10.64	B

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D19	2036	Forecast + Development (Flat)	AM	FLAT	07:45	09:15	90	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		FLAT	✓	1330	100.000
B - Cot Hill		FLAT	✓	514	100.000
C - SDR (S)		FLAT	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	183	1147
	B - Cot Hill	0	0	514
	C - SDR (S)	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	11	11
	B - Cot Hill	0	0	6
	C - SDR (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.84	38.16	5.3	E	514	771
C-AB	0.00	0.00	0.0	A	0	0
C-A					0	0
A-B					183	275
A-C					1147	1721

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	514	129	0.00	613	0.839	496	0.0	4.5	29.344	D
C-AB	0	0	0.00	342	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	183	46	0.00			183				
A-C	1147	287	0.00			1147				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	514	129	0.00	613	0.839	512	4.5	4.9	36.694	E
C-AB	0	0	0.00	342	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	183	46	0.00			183				
A-C	1147	287	0.00			1147				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	514	129	0.00	613	0.839	513	4.9	5.1	37.507	E
C-AB	0	0	0.00	342	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	183	46	0.00			183				
A-C	1147	287	0.00			1147				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	514	129	0.00	613	0.839	514	5.1	5.2	37.851	E
C-AB	0	0	0.00	342	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	183	46	0.00			183				
A-C	1147	287	0.00			1147				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	514	129	0.00	613	0.839	514	5.2	5.3	38.040	E
C-AB	0	0	0.00	342	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	183	46	0.00			183				
A-C	1147	287	0.00			1147				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	514	129	0.00	613	0.839	514	5.3	5.3	38.161	E
C-AB	0	0	0.00	342	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	183	46	0.00			183				
A-C	1147	287	0.00			1147				

2036 | Forecast + Development (Flat) | PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SDR/Cot Hill	T-Junction	Entry Only	Two-way	Exit Only		2.07	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.07	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D20	2036	Forecast + Development (Flat)	PM	FLAT	16:00	17:30	90	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - SDR (N)		FLAT	✓	1238	100.000
B - Cot Hill		FLAT	✓	310	100.000
C - SDR (S)		FLAT	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	442	796
	B - Cot Hill	0	0	310
	C - SDR (S)	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To			
		A - SDR (N)	B - Cot Hill	C - SDR (S)
	A - SDR (N)	0	2	14
	B - Cot Hill	0	0	2
	C - SDR (S)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.47	10.34	0.9	B	310	465
C-AB	0.00	0.00	0.0	A	0	0
C-A					0	0
A-B					442	663
A-C					796	1194

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	310	78	0.00	665	0.466	307	0.0	0.9	10.149	B
C-AB	0	0	0.00	358	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	442	111	0.00			442				
A-C	796	199	0.00			796				

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	310	78	0.00	665	0.466	310	0.9	0.9	10.339	B
C-AB	0	0	0.00	358	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	442	111	0.00			442				
A-C	796	199	0.00			796				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	310	78	0.00	665	0.466	310	0.9	0.9	10.341	B
C-AB	0	0	0.00	358	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	442	111	0.00			442				
A-C	796	199	0.00			796				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	310	78	0.00	665	0.466	310	0.9	0.9	10.343	B
C-AB	0	0	0.00	358	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	442	111	0.00			442				
A-C	796	199	0.00			796				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	310	78	0.00	665	0.466	310	0.9	0.9	10.343	B
C-AB	0	0	0.00	358	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	442	111	0.00			442				
A-C	796	199	0.00			796				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	310	78	0.00	665	0.466	310	0.9	0.9	10.343	B
C-AB	0	0	0.00	358	0.000	0	0.0	0.0	0.000	A
C-A	0	0	0.00			0				
A-B	442	111	0.00			442				
A-C	796	199	0.00			796				

Appendix H SDR Beatty Road Junction V1 Junctions 11 Report

Junctions 11	
ARCADY 11 - Roundabout Module	
Version: 11.0.0.2177	
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Filename: SDR_Beatty Road Junction-V1.j11

Path: S:\UK\Cardiff\Vectos\CardiffShare\Projects\W260000\407.065092.00001 - Cot Hill (Great Milton Park)\Transport Planning\Technical\Modelling

Report generation date: 26/02/2026 14:41:47

-
- »2026 | (Halcrow TA) | AM
 - »2026 | (Halcrow TA) | PM
 - »2026 | (Halcrow TA) + Development | AM
 - »2026 | (Halcrow TA) + Development | PM
 - »2026 | Observed | AM
 - »2026 | Observed | PM
 - »2026 | Observed + Development | AM
 - »2026 | Observed + Development | PM
 - »2036 | Forecast | AM
 - »2036 | Forecast | PM
 - »2036 | Forecast + Development | AM
 - »2036 | Forecast + Development | PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2026 - (Halcrow TA)									
1 - Beatty Road	D5	0.2	4.06	0.18	A	D6	0.4	6.26	0.26	A
2 - SDR North		2.0	4.53	0.66	A		0.8	2.60	0.43	A
3 - Work Access		0.1	3.35	0.11	A		0.1	2.73	0.10	A
4 - SDR South		0.4	1.87	0.26	A		0.9	2.63	0.47	A
	2026 - (Halcrow TA) + Development									
1 - Beatty Road	D7	0.3	4.90	0.21	A	D8	0.5	9.35	0.35	A
2 - SDR North		2.4	5.33	0.71	A		1.3	3.68	0.57	A
3 - Work Access		0.1	3.66	0.12	A		0.1	3.55	0.13	A
4 - SDR South		0.6	2.23	0.38	A		1.6	3.64	0.61	A
	2026 - Observed									
1 - Beatty Road	D9	0.4	4.94	0.28	A	D10	0.4	5.81	0.29	A
2 - SDR North		1.1	3.28	0.49	A		0.6	2.63	0.36	A
3 - Work Access		0.0	4.50	0.00	A		0.0	2.46	0.03	A
4 - SDR South		0.6	2.40	0.32	A		0.8	2.60	0.43	A
	2026 - Observed + Development									
1 - Beatty Road	D11	0.5	5.74	0.32	A	D12	0.5	7.34	0.34	A
2 - SDR North		1.2	3.51	0.51	A		0.9	3.15	0.45	A
3 - Work Access		0.0	4.72	0.01	A		0.0	2.86	0.04	A
4 - SDR South		0.8	2.68	0.39	A		1.2	3.11	0.53	A
	2036 - Forecast									
1 - Beatty Road	D13	0.5	5.58	0.33	A	D14	0.5	6.91	0.35	A
2 - SDR North		1.4	3.75	0.55	A		0.8	2.84	0.41	A
3 - Work Access		0.0	4.92	0.01	A		0.0	2.61	0.04	A
4 - SDR South		0.7	2.55	0.35	A		1.0	2.89	0.49	A
	2036 - Forecast + Development									
1 - Beatty Road	D15	0.6	6.61	0.38	A	D16	0.7	9.18	0.42	A
2 - SDR North		1.5	4.05	0.58	A		1.1	3.47	0.50	A
3 - Work Access		0.0	5.18	0.01	A		0.0	3.07	0.05	A
4 - SDR South		0.9	2.88	0.43	A		1.5	3.54	0.59	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.

File summary

File Description

Title	SDR_Beatty Road Roundabout
Location	
Site number	
Date	19/02/2026
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	SLR\Aalisha.Sorathiya
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Demand Set Summary

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2026	(Halcrow TA)	AM	ONE HOUR	07:45	09:15	15	✓
D6	2026	(Halcrow TA)	PM	ONE HOUR	16:00	17:30	15	✓
D7	2026	(Halcrow TA) + Development	AM	ONE HOUR	07:45	09:15	15	✓
D8	2026	(Halcrow TA) + Development	PM	ONE HOUR	16:00	17:30	15	✓
D9	2026	Observed	AM	ONE HOUR	07:45	09:15	15	✓
D10	2026	Observed	PM	ONE HOUR	16:00	17:30	15	✓
D11	2026	Observed + Development	AM	ONE HOUR	07:45	09:15	15	✓
D12	2026	Observed + Development	PM	ONE HOUR	16:00	17:30	15	✓
D13	2036	Forecast	AM	ONE HOUR	07:45	09:15	15	✓
D14	2036	Forecast	PM	ONE HOUR	16:00	17:30	15	✓
D15	2036	Forecast + Development	AM	ONE HOUR	07:45	09:15	15	✓
D16	2036	Forecast + Development	PM	ONE HOUR	16:00	17:30	15	✓

Analysis Set Details

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

2026 | (Halcrow TA) | AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Beatty Road/SDR	Standard Roundabout		1, 2, 3, 4	3.73	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.73	A

Arms

Arms

Arm	Name	Description	No give-way line
1	Beatty Road		
2	SDR North		
3	Work Access		
4	SDR South		

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)	Entry only	Exit only
1 - Beatty Road	3.10	7.00	7.0	45.0	63.0	22.0		
2 - SDR North	7.00	8.80	5.8	30.0	63.0	20.0		
3 - Work Access	4.50	7.80	23.5	25.0	63.0	18.0		
4 - SDR South	7.50	10.50	6.5	40.0	63.0	26.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Beatty Road	0.511	1439
2 - SDR North	0.691	2517
3 - Work Access	0.631	2159
4 - SDR South	0.725	2741

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

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2026	(Halcrow TA)	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Beatty Road		ONE HOUR	✓	179	100.000
2 - SDR North		ONE HOUR	✓	1419	100.000
3 - Work Access		ONE HOUR	✓	118	100.000
4 - SDR South		ONE HOUR	✓	627	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
From	1 - Beatty Road	0	130	20	29
	2 - SDR North	153	0	82	1184
	3 - Work Access	5	6	0	107
	4 - SDR South	0	465	152	10

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
From	1 - Beatty Road	0	0	0	0
	2 - SDR North	0	0	0	0
	3 - Work Access	0	0	0	0
	4 - SDR South	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Beatty Road	0.18	4.06	0.2	A	164	246
2 - SDR North	0.66	4.53	2.0	A	1302	1953
3 - Work Access	0.11	3.35	0.1	A	108	162
4 - SDR South	0.26	1.87	0.4	A	575	863

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	135	34	476	1196	0.113	134	119	0.0	0.1	3.388	A
2 - SDR North	1068	267	158	2407	0.444	1065	451	0.0	0.8	2.674	A
3 - Work Access	89	22	1033	1508	0.059	89	191	0.0	0.1	2.537	A
4 - SDR South	472	118	123	2651	0.178	471	998	0.0	0.2	1.651	A

08:00 - 08:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	161	40	569	1148	0.140	161	142	0.1	0.2	3.644	A
2 - SDR North	1276	319	190	2386	0.535	1274	540	0.8	1.1	3.234	A
3 - Work Access	106	27	1236	1380	0.077	106	228	0.1	0.1	2.826	A
4 - SDR South	564	141	147	2634	0.214	563	1194	0.2	0.3	1.738	A

08:15 - 08:30

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	197	49	697	1083	0.182	197	174	0.2	0.2	4.060	A
2 - SDR North	1562	391	232	2356	0.663	1559	661	1.1	1.9	4.497	A
3 - Work Access	130	32	1512	1205	0.108	130	279	0.1	0.1	3.346	A
4 - SDR South	690	173	180	2610	0.265	690	1462	0.3	0.4	1.874	A

08:30 - 08:45

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	197	49	697	1083	0.182	197	174	0.2	0.2	4.063	A
2 - SDR North	1562	391	232	2356	0.663	1562	662	1.9	2.0	4.533	A
3 - Work Access	130	32	1515	1203	0.108	130	280	0.1	0.1	3.352	A
4 - SDR South	690	173	181	2610	0.265	690	1464	0.4	0.4	1.874	A

08:45 - 09:00

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	161	40	569	1148	0.140	161	142	0.2	0.2	3.650	A
2 - SDR North	1276	319	190	2386	0.535	1279	541	2.0	1.2	3.263	A
3 - Work Access	106	27	1240	1377	0.077	106	229	0.1	0.1	2.832	A
4 - SDR South	564	141	148	2633	0.214	564	1198	0.4	0.3	1.739	A

09:00 - 09:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	135	34	477	1195	0.113	135	119	0.2	0.1	3.396	A
2 - SDR North	1068	267	159	2407	0.444	1070	453	1.2	0.8	2.694	A
3 - Work Access	89	22	1037	1505	0.059	89	191	0.1	0.1	2.544	A
4 - SDR South	472	118	124	2651	0.178	472	1003	0.3	0.2	1.654	A

2026 | (Halcrow TA) | PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Beatty Road/SDR	Standard Roundabout		1, 2, 3, 4	2.91	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.91	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2026	(Halcrow TA)	PM	ONE HOUR	16:00	17:30	15	✓

Demand overview (Traffic)

Am	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Beatty Road		ONE HOUR	✓	187	100.000
2 - SDR North		ONE HOUR	✓	963	100.000
3 - Work Access		ONE HOUR	✓	133	100.000
4 - SDR South		ONE HOUR	✓	1083	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	158	17	12
	2 - SDR North	124	0	9	830
	3 - Work Access	11	91	0	31
	4 - SDR South	4	1011	35	33

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

From	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	0	0	0
	2 - SDR North	0	0	0	0
	3 - Work Access	0	0	0	0
	4 - SDR South	0	0	0	0

Results

Results Summary for whole modelled period

Am	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Beatty Road	0.26	6.26	0.4	A	172	257
2 - SDR North	0.43	2.60	0.8	A	884	1325
3 - Work Access	0.10	2.73	0.1	A	122	183
4 - SDR South	0.47	2.63	0.9	A	994	1491

Main Results for each time segment

16:00 - 16:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	141	35	879	990	0.142	140	104	0.0	0.2	4.233	A
2 - SDR North	725	181	73	2466	0.294	723	946	0.0	0.4	2.063	A
3 - Work Access	100	25	750	1686	0.059	100	46	0.0	0.1	2.270	A
4 - SDR South	815	204	170	2618	0.311	814	680	0.0	0.5	1.994	A

16:15 - 16:30

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	168	42	1051	902	0.186	168	125	0.2	0.2	4.901	A
2 - SDR North	866	216	87	2457	0.352	865	1132	0.4	0.5	2.262	A
3 - Work Access	120	30	898	1593	0.075	119	55	0.1	0.1	2.443	A
4 - SDR South	974	243	203	2593	0.375	973	814	0.5	0.6	2.222	A

16:30 - 16:45

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	206	51	1287	782	0.263	205	153	0.2	0.4	6.241	A
2 - SDR North	1060	265	107	2443	0.434	1059	1386	0.5	0.8	2.600	A
3 - Work Access	146	37	1099	1466	0.100	146	67	0.1	0.1	2.727	A
4 - SDR South	1192	298	249	2560	0.466	1191	997	0.6	0.9	2.627	A

16:45 - 17:00

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	206	51	1288	781	0.264	206	153	0.4	0.4	6.257	A
2 - SDR North	1060	265	107	2443	0.434	1060	1387	0.8	0.8	2.603	A
3 - Work Access	146	37	1100	1465	0.100	146	67	0.1	0.1	2.729	A
4 - SDR South	1192	298	249	2560	0.466	1192	998	0.9	0.9	2.631	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	168	42	1053	901	0.187	169	125	0.4	0.2	4.918	A
2 - SDR North	866	216	87	2456	0.352	867	1134	0.8	0.5	2.267	A
3 - Work Access	120	30	899	1592	0.075	120	55	0.1	0.1	2.444	A
4 - SDR South	974	243	203	2593	0.375	975	815	0.9	0.6	2.225	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	141	35	881	989	0.142	141	105	0.2	0.2	4.247	A
2 - SDR North	725	181	73	2466	0.294	726	949	0.5	0.4	2.068	A
3 - Work Access	100	25	753	1684	0.059	100	46	0.1	0.1	2.272	A
4 - SDR South	815	204	170	2617	0.312	816	683	0.6	0.5	1.999	A

2026 | (Halcrow TA) + Development | AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Beatty Road/SDR	Standard Roundabout		1, 2, 3, 4	4.18	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.18	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2026	(Halcrow TA) + Development	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Beatty Road		ONE HOUR	✓	182	100.000
2 - SDR North		ONE HOUR	✓	1473	100.000
3 - Work Access		ONE HOUR	✓	118	100.000
4 - SDR South		ONE HOUR	✓	904	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	130	20	32
	2 - SDR North	153	0	82	1238
	3 - Work Access	5	6	0	107
	4 - SDR South	14	653	152	85

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	0	0	0
	2 - SDR North	0	0	0	0
	3 - Work Access	0	0	0	0
	4 - SDR South	0	0	0	0

Results

Results Summary for whole modelled period

Am	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Beatty Road	0.21	4.90	0.3	A	167	251
2 - SDR North	0.71	5.33	2.4	A	1352	2027
3 - Work Access	0.12	3.66	0.1	A	108	162
4 - SDR South	0.38	2.23	0.6	A	830	1244

Main Results for each time segment

07:45 - 08:00

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	137	34	673	1095	0.125	136	129	0.0	0.1	3.753	A
2 - SDR North	1109	277	217	2367	0.469	1105	593	0.0	0.9	2.845	A
3 - Work Access	89	22	1132	1445	0.061	89	191	0.0	0.1	2.653	A
4 - SDR South	681	170	123	2651	0.257	679	1097	0.0	0.3	1.825	A

08:00 - 08:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	164	41	805	1028	0.159	163	154	0.1	0.2	4.163	A
2 - SDR North	1324	331	260	2337	0.567	1323	709	0.9	1.3	3.541	A
3 - Work Access	106	27	1354	1305	0.081	106	228	0.1	0.1	3.002	A
4 - SDR South	813	203	147	2634	0.309	812	1313	0.3	0.4	1.976	A

08:15 - 08:30

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	200	50	986	936	0.214	200	189	0.2	0.3	4.892	A
2 - SDR North	1622	405	318	2297	0.706	1618	868	1.3	2.4	5.265	A
3 - Work Access	130	32	1656	1114	0.117	130	279	0.1	0.1	3.655	A
4 - SDR South	995	249	180	2610	0.381	995	1606	0.4	0.6	2.227	A

08:30 - 08:45

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	200	50	987	935	0.214	200	189	0.3	0.3	4.898	A
2 - SDR North	1622	405	318	2297	0.706	1622	869	2.4	2.4	5.329	A
3 - Work Access	130	32	1660	1112	0.117	130	280	0.1	0.1	3.665	A
4 - SDR South	995	249	181	2610	0.381	995	1610	0.6	0.6	2.229	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	164	41	806	1027	0.159	164	155	0.3	0.2	4.171	A
2 - SDR North	1324	331	260	2337	0.567	1328	710	2.4	1.3	3.582	A
3 - Work Access	106	27	1360	1301	0.082	106	229	0.1	0.1	3.014	A
4 - SDR South	813	203	148	2633	0.309	813	1318	0.6	0.4	1.978	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	137	34	675	1094	0.125	137	130	0.2	0.1	3.761	A
2 - SDR North	1109	277	218	2366	0.469	1111	594	1.3	0.9	2.872	A
3 - Work Access	89	22	1137	1442	0.062	89	191	0.1	0.1	2.662	A
4 - SDR South	681	170	124	2651	0.257	681	1102	0.4	0.3	1.826	A

2026 | (Halcrow TA) + Development | PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Beatty Road/SDR	Standard Roundabout		1, 2, 3, 4	4.02	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.02	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2026	(Halcrow TA) + Development	PM	ONE HOUR	16:00	17:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Beatty Road		ONE HOUR	✓	187	100.000
2 - SDR North		ONE HOUR	✓	1169	100.000
3 - Work Access		ONE HOUR	✓	133	100.000
4 - SDR South		ONE HOUR	✓	1427	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	158	17	12
	2 - SDR North	124	0	9	1036
	3 - Work Access	11	91	0	31
	4 - SDR South	9	1116	35	267

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	0	0	0
	2 - SDR North	0	0	0	0
	3 - Work Access	0	0	0	0
	4 - SDR South	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Beatty Road	0.35	9.35	0.5	A	172	257
2 - SDR North	0.57	3.68	1.3	A	1073	1609
3 - Work Access	0.13	3.55	0.1	A	122	183
4 - SDR South	0.61	3.64	1.6	A	1309	1964

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	141	35	1133	860	0.164	140	108	0.0	0.2	4.992	A
2 - SDR North	880	220	248	2345	0.375	878	1025	0.0	0.6	2.449	A
3 - Work Access	100	25	1080	1478	0.068	100	46	0.0	0.1	2.613	A
4 - SDR South	1074	269	170	2618	0.410	1072	1011	0.0	0.7	2.324	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	168	42	1355	747	0.225	168	129	0.2	0.3	6.212	A
2 - SDR North	1051	263	297	2311	0.455	1050	1226	0.6	0.8	2.853	A
3 - Work Access	120	30	1292	1344	0.089	119	55	0.1	0.1	2.940	A
4 - SDR South	1283	321	203	2593	0.495	1282	1209	0.7	1.0	2.741	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	206	51	1659	592	0.348	205	158	0.3	0.5	9.280	A
2 - SDR North	1287	322	364	2265	0.568	1285	1500	0.8	1.3	3.667	A
3 - Work Access	146	37	1582	1161	0.126	146	67	0.1	0.1	3.546	A
4 - SDR South	1571	393	248	2560	0.614	1569	1480	1.0	1.6	3.620	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	206	51	1661	591	0.349	206	159	0.5	0.5	9.354	A
2 - SDR North	1287	322	364	2265	0.568	1287	1503	1.3	1.3	3.680	A
3 - Work Access	146	37	1584	1160	0.126	146	67	0.1	0.1	3.551	A
4 - SDR South	1571	393	249	2560	0.614	1571	1482	1.6	1.6	3.638	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	168	42	1359	745	0.226	169	130	0.5	0.3	6.260	A
2 - SDR North	1051	263	298	2311	0.455	1053	1230	1.3	0.8	2.867	A
3 - Work Access	120	30	1296	1342	0.089	120	55	0.1	0.1	2.948	A
4 - SDR South	1283	321	204	2593	0.495	1285	1212	1.6	1.0	2.759	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	141	35	1137	858	0.164	141	109	0.3	0.2	5.022	A
2 - SDR North	880	220	249	2344	0.375	881	1029	0.8	0.6	2.463	A
3 - Work Access	100	25	1085	1475	0.068	100	46	0.1	0.1	2.620	A
4 - SDR South	1074	269	170	2617	0.410	1075	1014	1.0	0.7	2.338	A

2026 | Observed | 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	Beatty Road/SDR	Standard Roundabout		1, 2, 3, 4	3.17	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.17	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2026	Observed	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Beatty Road		ONE HOUR	✓	266	100.000
2 - SDR North		ONE HOUR	✓	1062	100.000
3 - Work Access		ONE HOUR	✓	6	100.000
4 - SDR South		ONE HOUR	✓	766	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
From	1 - Beatty Road	1	126	5	134
	2 - SDR North	80	4	37	941
	3 - Work Access	0	4	0	2
	4 - SDR South	44	693	1	28

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
From	1 - Beatty Road	0	0	0	2
	2 - SDR North	0	0	13	12
	3 - Work Access	0	53	0	100
	4 - SDR South	0	24	0	8

Results

Results Summary for whole modelled period

Am	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Beatty Road	0.28	4.94	0.4	A	244	366
2 - SDR North	0.49	3.28	1.1	A	975	1462
3 - Work Access	0.00	4.50	0.0	A	6	8
4 - SDR South	0.32	2.40	0.6	A	703	1054

Main Results for each time segment

07:45 - 08:00

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	200	50	548	1159	0.173	199	94	0.0	0.2	3.785	A
2 - SDR North	800	200	127	2429	0.329	797	621	0.0	0.5	2.445	A
3 - Work Access	5	1	892	1596	0.003	4	32	0.0	0.0	3.752	A
4 - SDR South	577	144	67	2692	0.214	575	830	0.0	0.3	2.067	A

08:00 - 08:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	239	60	656	1104	0.217	239	112	0.2	0.3	4.202	A
2 - SDR North	955	239	152	2412	0.396	954	743	0.5	0.7	2.739	A
3 - Work Access	5	1	1067	1486	0.004	5	39	0.0	0.0	4.036	A
4 - SDR South	689	172	80	2683	0.257	688	993	0.3	0.4	2.195	A

08:15 - 08:30

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	293	73	803	1029	0.285	292	137	0.3	0.4	4.934	A
2 - SDR North	1169	292	186	2388	0.490	1168	910	0.7	1.1	3.271	A
3 - Work Access	7	2	1306	1335	0.005	7	47	0.0	0.0	4.498	A
4 - SDR South	843	211	98	2670	0.316	843	1215	0.4	0.6	2.397	A

08:30 - 08:45

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	293	73	804	1029	0.285	293	138	0.4	0.4	4.942	A
2 - SDR North	1169	292	186	2388	0.490	1169	911	1.1	1.1	3.276	A
3 - Work Access	7	2	1308	1334	0.005	7	47	0.0	0.0	4.501	A
4 - SDR South	843	211	98	2670	0.316	843	1217	0.6	0.6	2.397	A

08:45 - 09:00

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	239	60	657	1104	0.217	240	113	0.4	0.3	4.212	A
2 - SDR North	955	239	152	2412	0.396	956	744	1.1	0.7	2.746	A
3 - Work Access	5	1	1070	1484	0.004	5	39	0.0	0.0	4.040	A
4 - SDR South	689	172	80	2683	0.257	689	995	0.6	0.4	2.196	A

09:00 - 09:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	200	50	550	1158	0.173	201	94	0.3	0.2	3.800	A
2 - SDR North	800	200	127	2429	0.329	800	623	0.7	0.5	2.455	A
3 - Work Access	5	1	895	1594	0.003	5	32	0.0	0.0	3.761	A
4 - SDR South	577	144	67	2692	0.214	577	833	0.4	0.3	2.070	A

2026 | Observed | 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	Beatty Road/SDR	Standard Roundabout		1, 2, 3, 4	2.96	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.96	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2026	Observed	PM	ONE HOUR	16:00	17:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Beatty Road		ONE HOUR	✓	232	100.000
2 - SDR North		ONE HOUR	✓	789	100.000
3 - Work Access		ONE HOUR	✓	46	100.000
4 - SDR South		ONE HOUR	✓	1037	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	144	0	88
	2 - SDR North	90	1	2	696
	3 - Work Access	0	44	0	2
	4 - SDR South	78	900	4	55

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
From		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	0	0	0
	2 - SDR North	0	0	0	14
	3 - Work Access	0	0	0	0
	4 - SDR South	0	9	0	0

Results

Results Summary for whole modelled period

Am	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Beatty Road	0.29	5.81	0.4	A	213	319
2 - SDR North	0.36	2.63	0.6	A	724	1086
3 - Work Access	0.03	2.46	0.0	A	42	63
4 - SDR South	0.43	2.60	0.8	A	952	1427

Main Results for each time segment

16:00 - 16:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	175	44	754	1054	0.166	174	126	0.0	0.2	4.088	A
2 - SDR North	594	149	110	2441	0.243	593	818	0.0	0.4	2.185	A
3 - Work Access	35	9	698	1719	0.020	35	5	0.0	0.0	2.137	A
4 - SDR South	781	195	101	2667	0.293	779	631	0.0	0.4	2.052	A

16:15 - 16:30

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	209	52	902	978	0.213	208	151	0.2	0.3	4.674	A
2 - SDR North	709	177	132	2426	0.292	709	978	0.4	0.5	2.351	A
3 - Work Access	41	10	836	1632	0.025	41	5	0.0	0.0	2.262	A
4 - SDR South	932	233	121	2653	0.351	932	756	0.4	0.6	2.253	A

16:30 - 16:45

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	255	64	1105	875	0.292	255	185	0.3	0.4	5.801	A
2 - SDR North	869	217	162	2405	0.361	868	1198	0.5	0.6	2.625	A
3 - Work Access	51	13	1023	1514	0.033	51	7	0.0	0.0	2.460	A
4 - SDR South	1142	285	149	2633	0.434	1141	925	0.6	0.8	2.597	A

16:45 - 17:00

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	255	64	1105	874	0.292	255	185	0.4	0.4	5.814	A
2 - SDR North	869	217	162	2405	0.361	869	1199	0.6	0.6	2.627	A
3 - Work Access	51	13	1024	1513	0.033	51	7	0.0	0.0	2.461	A
4 - SDR South	1142	285	149	2633	0.434	1142	926	0.8	0.8	2.600	A

17:00 - 17:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	209	52	903	978	0.213	209	151	0.4	0.3	4.687	A
2 - SDR North	709	177	132	2425	0.292	710	980	0.6	0.5	2.354	A
3 - Work Access	41	10	837	1631	0.025	41	5	0.0	0.0	2.264	A
4 - SDR South	932	233	121	2653	0.351	933	757	0.8	0.6	2.256	A

17:15 - 17:30

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	175	44	756	1053	0.166	175	127	0.3	0.2	4.104	A
2 - SDR North	594	149	111	2440	0.243	594	821	0.5	0.4	2.189	A
3 - Work Access	35	9	701	1717	0.020	35	5	0.0	0.0	2.141	A
4 - SDR South	781	195	102	2667	0.293	781	634	0.6	0.4	2.058	A

2026 | Observed + Development | 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	Beatty Road/SDR	Standard Roundabout		1, 2, 3, 4	3.43	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.43	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2026	Observed + Development	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Beatty Road		ONE HOUR	✓	268	100.000
2 - SDR North		ONE HOUR	✓	1098	100.000
3 - Work Access		ONE HOUR	✓	6	100.000
4 - SDR South		ONE HOUR	✓	953	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	1	126	5	136
	2 - SDR North	80	4	37	977
	3 - Work Access	0	4	0	2
	4 - SDR South	53	820	1	79

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	0	0	2
	2 - SDR North	0	0	13	12
	3 - Work Access	0	53	0	100
	4 - SDR South	0	24	0	8

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Beatty Road	0.32	5.74	0.5	A	246	369
2 - SDR North	0.51	3.51	1.2	A	1008	1511
3 - Work Access	0.01	4.72	0.0	A	6	8
4 - SDR South	0.39	2.68	0.8	A	874	1312

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	202	50	682	1091	0.185	201	101	0.0	0.2	4.082	A
2 - SDR North	827	207	167	2402	0.344	824	716	0.0	0.6	2.530	A
3 - Work Access	5	1	959	1554	0.003	4	32	0.0	0.0	3.855	A
4 - SDR South	717	179	67	2692	0.267	716	896	0.0	0.4	2.199	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	241	60	816	1022	0.236	241	120	0.2	0.3	4.649	A
2 - SDR North	987	247	199	2379	0.415	986	857	0.6	0.8	2.868	A
3 - Work Access	5	1	1147	1436	0.004	5	39	0.0	0.0	4.178	A
4 - SDR South	857	214	80	2683	0.319	856	1072	0.4	0.6	2.382	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	295	74	999	929	0.318	294	147	0.3	0.5	5.725	A
2 - SDR North	1209	302	244	2348	0.515	1207	1049	0.8	1.2	3.498	A
3 - Work Access	7	2	1404	1273	0.005	7	47	0.0	0.0	4.717	A
4 - SDR South	1049	262	98	2670	0.393	1048	1313	0.6	0.8	2.682	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	295	74	1000	928	0.318	295	148	0.5	0.5	5.740	A
2 - SDR North	1209	302	244	2348	0.515	1209	1050	1.2	1.2	3.507	A
3 - Work Access	7	2	1406	1272	0.005	7	47	0.0	0.0	4.721	A
4 - SDR South	1049	262	98	2670	0.393	1049	1315	0.8	0.8	2.684	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	241	60	817	1022	0.236	242	121	0.5	0.3	4.664	A
2 - SDR North	987	247	200	2379	0.415	989	859	1.2	0.8	2.879	A
3 - Work Access	5	1	1150	1434	0.004	5	39	0.0	0.0	4.185	A
4 - SDR South	857	214	80	2683	0.319	858	1075	0.8	0.6	2.386	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	202	50	684	1090	0.185	202	101	0.3	0.2	4.098	A
2 - SDR North	827	207	167	2401	0.344	827	719	0.8	0.6	2.542	A
3 - Work Access	5	1	962	1552	0.003	5	32	0.0	0.0	3.863	A
4 - SDR South	717	179	67	2692	0.267	718	900	0.6	0.4	2.206	A

2026 | Observed + Development | 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	Beatty Road/SDR	Standard Roundabout		1, 2, 3, 4	3.52	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.52	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2026	Observed + Development	PM	ONE HOUR	16:00	17:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Beatty Road		ONE HOUR	✓	232	100.000
2 - SDR North		ONE HOUR	✓	928	100.000
3 - Work Access		ONE HOUR	✓	46	100.000
4 - SDR South		ONE HOUR	✓	1269	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	144	0	88
	2 - SDR North	90	1	2	835
	3 - Work Access	0	44	0	2
	4 - SDR South	81	971	4	213

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

From	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	0	0	0
	2 - SDR North	0	0	0	12
	3 - Work Access	0	0	0	0
	4 - SDR South	0	9	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Beatty Road	0.34	7.34	0.5	A	213	319
2 - SDR North	0.45	3.15	0.9	A	852	1277
3 - Work Access	0.04	2.86	0.0	A	42	63
4 - SDR South	0.53	3.11	1.2	A	1164	1747

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	175	44	926	966	0.181	174	128	0.0	0.2	4.539	A
2 - SDR North	699	175	229	2359	0.296	697	871	0.0	0.5	2.395	A
3 - Work Access	35	9	921	1578	0.022	35	5	0.0	0.0	2.332	A
4 - SDR South	955	239	101	2667	0.358	953	854	0.0	0.6	2.239	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	209	52	1108	873	0.239	208	154	0.2	0.3	5.410	A
2 - SDR North	834	209	274	2328	0.358	834	1042	0.5	0.6	2.665	A
3 - Work Access	41	10	1102	1464	0.028	41	5	0.0	0.0	2.530	A
4 - SDR South	1141	285	121	2653	0.430	1140	1022	0.6	0.8	2.539	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	255	64	1356	747	0.342	255	188	0.3	0.5	7.306	A
2 - SDR North	1022	255	335	2285	0.447	1021	1275	0.6	0.9	3.147	A
3 - Work Access	51	13	1349	1308	0.039	51	7	0.0	0.0	2.862	A
4 - SDR South	1397	349	148	2633	0.531	1396	1251	0.8	1.2	3.101	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	255	64	1358	746	0.343	255	188	0.5	0.5	7.341	A
2 - SDR North	1022	255	336	2285	0.447	1022	1277	0.9	0.9	3.153	A
3 - Work Access	51	13	1351	1307	0.039	51	7	0.0	0.0	2.865	A
4 - SDR South	1397	349	149	2633	0.531	1397	1253	1.2	1.2	3.109	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	209	52	1110	872	0.239	209	154	0.5	0.3	5.439	A
2 - SDR North	834	209	275	2327	0.359	835	1045	0.9	0.6	2.672	A
3 - Work Access	41	10	1105	1462	0.028	41	5	0.0	0.0	2.533	A
4 - SDR South	1141	285	122	2653	0.430	1142	1025	1.2	0.8	2.548	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	175	44	929	965	0.181	175	129	0.3	0.2	4.561	A
2 - SDR North	699	175	230	2358	0.296	699	874	0.6	0.5	2.404	A
3 - Work Access	35	9	925	1576	0.022	35	5	0.0	0.0	2.337	A
4 - SDR South	955	239	102	2667	0.358	956	858	0.8	0.6	2.248	A

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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	Beatty Road/SDR	Standard Roundabout		1, 2, 3, 4	3.54	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.54	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2036	Forecast	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Beatty Road		ONE HOUR	✓	298	100.000
2 - SDR North		ONE HOUR	✓	1186	100.000
3 - Work Access		ONE HOUR	✓	8	100.000
4 - SDR South		ONE HOUR	✓	857	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	1	141	6	150
	2 - SDR North	89	4	41	1052
	3 - Work Access	0	5	0	3
	4 - SDR South	49	775	1	32

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
From		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	0	0	2
	2 - SDR North	0	0	13	12
	3 - Work Access	0	53	0	100
	4 - SDR South	0	24	0	8

Results

Results Summary for whole modelled period

Am	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Beatty Road	0.33	5.58	0.5	A	273	410
2 - SDR North	0.55	3.75	1.4	A	1088	1632
3 - Work Access	0.01	4.92	0.0	A	7	11
4 - SDR South	0.35	2.55	0.7	A	786	1180

Main Results for each time segment

07:45 - 08:00

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	224	56	614	1126	0.199	223	104	0.0	0.3	4.026	A
2 - SDR North	893	223	142	2418	0.369	890	695	0.0	0.6	2.610	A
3 - Work Access	6	2	997	1530	0.004	6	36	0.0	0.0	3.962	A
4 - SDR South	645	161	74	2687	0.240	644	928	0.0	0.4	2.142	A

08:00 - 08:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	268	67	734	1064	0.252	268	125	0.3	0.3	4.562	A
2 - SDR North	1066	267	171	2399	0.444	1065	831	0.6	0.9	2.995	A
3 - Work Access	7	2	1193	1407	0.005	7	43	0.0	0.0	4.315	A
4 - SDR South	770	193	89	2676	0.288	770	1111	0.4	0.5	2.297	A

08:15 - 08:30

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	328	82	899	980	0.335	327	153	0.3	0.5	5.566	A
2 - SDR North	1306	326	209	2373	0.550	1304	1017	0.9	1.3	3.733	A
3 - Work Access	9	2	1460	1238	0.007	9	53	0.0	0.0	4.913	A
4 - SDR South	944	236	109	2662	0.355	943	1360	0.5	0.7	2.545	A

08:30 - 08:45

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	328	82	900	980	0.335	328	153	0.5	0.5	5.580	A
2 - SDR North	1306	326	209	2372	0.550	1306	1018	1.3	1.4	3.745	A
3 - Work Access	9	2	1462	1237	0.007	9	53	0.0	0.0	4.918	A
4 - SDR South	944	236	109	2662	0.355	944	1362	0.7	0.7	2.548	A

08:45 - 09:00

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	268	67	735	1064	0.252	269	125	0.5	0.3	4.576	A
2 - SDR North	1066	267	171	2399	0.445	1068	833	1.4	0.9	3.006	A
3 - Work Access	7	2	1196	1405	0.005	7	43	0.0	0.0	4.322	A
4 - SDR South	770	193	89	2676	0.288	771	1114	0.7	0.5	2.298	A

09:00 - 09:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	224	56	615	1125	0.199	225	105	0.3	0.3	4.041	A
2 - SDR North	893	223	143	2418	0.369	894	697	0.9	0.7	2.625	A
3 - Work Access	6	2	1001	1528	0.004	6	36	0.0	0.0	3.969	A
4 - SDR South	645	161	75	2687	0.240	646	932	0.5	0.4	2.147	A

2036 | Forecast | 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	Beatty Road/SDR	Standard Roundabout		1, 2, 3, 4	3.31	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.31	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2036	Forecast	PM	ONE HOUR	16:00	17:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Beatty Road		ONE HOUR	✓	260	100.000
2 - SDR North		ONE HOUR	✓	883	100.000
3 - Work Access		ONE HOUR	✓	51	100.000
4 - SDR South		ONE HOUR	✓	1161	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	161	0	99
	2 - SDR North	101	1	2	779
	3 - Work Access	0	49	0	2
	4 - SDR South	87	1008	4	62

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
From		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	0	0	0
	2 - SDR North	0	0	0	14
	3 - Work Access	0	0	0	0
	4 - SDR South	0	9	0	0

Results

Results Summary for whole modelled period

Am	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Beatty Road	0.35	6.91	0.5	A	239	358
2 - SDR North	0.41	2.84	0.8	A	810	1215
3 - Work Access	0.04	2.61	0.0	A	47	70
4 - SDR South	0.49	2.89	1.0	A	1065	1598

Main Results for each time segment

16:00 - 16:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	196	49	844	1008	0.194	195	141	0.0	0.2	4.424	A
2 - SDR North	665	166	124	2431	0.273	663	915	0.0	0.4	2.281	A
3 - Work Access	38	10	782	1666	0.023	38	5	0.0	0.0	2.212	A
4 - SDR South	874	219	113	2658	0.329	872	707	0.0	0.5	2.169	A

16:15 - 16:30

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	234	58	1010	923	0.253	233	169	0.2	0.3	5.216	A
2 - SDR North	794	198	148	2414	0.329	793	1095	0.4	0.5	2.490	A
3 - Work Access	46	11	936	1569	0.029	46	5	0.0	0.0	2.363	A
4 - SDR South	1044	261	136	2642	0.395	1043	846	0.5	0.7	2.423	A

16:30 - 16:45

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	286	72	1236	808	0.354	285	207	0.3	0.5	6.882	A
2 - SDR North	972	243	181	2392	0.407	971	1340	0.5	0.8	2.841	A
3 - Work Access	56	14	1146	1436	0.039	56	7	0.0	0.0	2.608	A
4 - SDR South	1278	320	166	2620	0.488	1277	1036	0.7	1.0	2.884	A

16:45 - 17:00

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	286	72	1238	807	0.355	286	207	0.5	0.5	6.912	A
2 - SDR North	972	243	182	2391	0.407	972	1342	0.8	0.8	2.844	A
3 - Work Access	56	14	1147	1435	0.039	56	7	0.0	0.0	2.609	A
4 - SDR South	1278	320	166	2620	0.488	1278	1037	1.0	1.0	2.889	A

17:00 - 17:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	234	58	1012	922	0.253	235	169	0.5	0.3	5.239	A
2 - SDR North	794	198	149	2414	0.329	795	1098	0.8	0.6	2.494	A
3 - Work Access	46	11	938	1567	0.029	46	5	0.0	0.0	2.367	A
4 - SDR South	1044	261	136	2642	0.395	1045	848	1.0	0.7	2.429	A

17:15 - 17:30

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	196	49	847	1006	0.194	196	142	0.3	0.2	4.444	A
2 - SDR North	665	166	124	2431	0.273	665	919	0.6	0.4	2.287	A
3 - Work Access	38	10	785	1664	0.023	38	5	0.0	0.0	2.216	A
4 - SDR South	874	219	114	2658	0.329	875	710	0.7	0.5	2.175	A

2036 | Forecast + Development | 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	Beatty Road/SDR	Standard Roundabout		1, 2, 3, 4	3.88	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.88	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D15	2036	Forecast + Development	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Beatty Road		ONE HOUR	✓	300	100.000
2 - SDR North		ONE HOUR	✓	1223	100.000
3 - Work Access		ONE HOUR	✓	8	100.000
4 - SDR South		ONE HOUR	✓	1044	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	1	141	6	152
	2 - SDR North	89	4	41	1089
	3 - Work Access	0	5	0	3
	4 - SDR South	59	902	1	82

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	0	0	2
	2 - SDR North	0	0	13	12
	3 - Work Access	0	53	0	100
	4 - SDR South	0	24	0	8

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Beatty Road	0.38	6.61	0.6	A	275	413
2 - SDR North	0.58	4.05	1.5	A	1122	1683
3 - Work Access	0.01	5.18	0.0	A	7	11
4 - SDR South	0.43	2.88	0.9	A	958	1437

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	226	56	746	1058	0.214	225	112	0.0	0.3	4.360	A
2 - SDR North	921	230	181	2391	0.385	918	790	0.0	0.7	2.708	A
3 - Work Access	6	2	1063	1488	0.004	6	36	0.0	0.0	4.074	A
4 - SDR South	786	196	74	2687	0.293	784	995	0.0	0.5	2.286	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	270	67	893	983	0.274	269	134	0.3	0.4	5.091	A
2 - SDR North	1099	275	217	2367	0.465	1098	945	0.7	1.0	3.148	A
3 - Work Access	7	2	1273	1356	0.005	7	43	0.0	0.0	4.476	A
4 - SDR South	939	235	89	2676	0.351	938	1191	0.5	0.7	2.504	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	330	83	1093	881	0.375	329	164	0.4	0.6	6.585	A
2 - SDR North	1347	337	266	2333	0.577	1344	1157	1.0	1.5	4.033	A
3 - Work Access	9	2	1558	1177	0.007	9	53	0.0	0.0	5.171	A
4 - SDR South	1149	287	109	2662	0.432	1148	1457	0.7	0.9	2.875	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	330	83	1094	880	0.375	330	164	0.6	0.6	6.612	A
2 - SDR North	1347	337	266	2333	0.577	1347	1158	1.5	1.5	4.052	A
3 - Work Access	9	2	1560	1175	0.008	9	53	0.0	0.0	5.179	A
4 - SDR South	1149	287	109	2662	0.432	1149	1460	0.9	0.9	2.878	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	270	67	895	982	0.275	271	134	0.6	0.4	5.115	A
2 - SDR North	1099	275	218	2366	0.465	1102	947	1.5	1.0	3.165	A
3 - Work Access	7	2	1276	1354	0.005	7	43	0.0	0.0	4.485	A
4 - SDR South	939	235	89	2676	0.351	940	1194	0.9	0.7	2.510	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	226	56	749	1056	0.214	226	112	0.4	0.3	4.381	A
2 - SDR North	921	230	182	2391	0.385	922	793	1.0	0.7	2.724	A
3 - Work Access	6	2	1068	1485	0.004	6	36	0.0	0.0	4.084	A
4 - SDR South	786	196	75	2687	0.293	787	1000	0.7	0.5	2.293	A

2036 | Forecast + Development | 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	Beatty Road/SDR	Standard Roundabout		1, 2, 3, 4	4.05	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.05	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D16	2036	Forecast + Development	PM	ONE HOUR	16:00	17:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Beatty Road		ONE HOUR	✓	260	100.000
2 - SDR North		ONE HOUR	✓	1022	100.000
3 - Work Access		ONE HOUR	✓	51	100.000
4 - SDR South		ONE HOUR	✓	1394	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	161	0	99
	2 - SDR North	101	1	2	918
	3 - Work Access	0	49	0	2
	4 - SDR South	91	1079	4	220

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
		1 - Beatty Road	2 - SDR North	3 - Work Access	4 - SDR South
	1 - Beatty Road	0	0	0	0
	2 - SDR North	0	0	0	12
	3 - Work Access	0	0	0	0
	4 - SDR South	0	9	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Beatty Road	0.42	9.18	0.7	A	239	358
2 - SDR North	0.50	3.47	1.1	A	938	1407
3 - Work Access	0.05	3.07	0.0	A	47	70
4 - SDR South	0.59	3.54	1.5	A	1279	1919

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	196	49	1016	920	0.213	195	144	0.0	0.3	4.955	A
2 - SDR North	769	192	242	2349	0.328	767	968	0.0	0.5	2.514	A
3 - Work Access	38	10	1005	1525	0.025	38	5	0.0	0.0	2.421	A
4 - SDR South	1049	262	113	2658	0.395	1047	930	0.0	0.7	2.382	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	234	58	1215	818	0.286	233	172	0.3	0.4	6.147	A
2 - SDR North	919	230	290	2316	0.397	918	1159	0.5	0.7	2.847	A
3 - Work Access	46	11	1203	1400	0.033	46	5	0.0	0.0	2.657	A
4 - SDR South	1253	313	136	2642	0.474	1252	1113	0.7	1.0	2.765	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	286	72	1488	679	0.421	285	211	0.4	0.7	9.098	A
2 - SDR North	1125	281	355	2272	0.495	1124	1418	0.7	1.1	3.465	A
3 - Work Access	56	14	1472	1231	0.046	56	7	0.0	0.0	3.064	A
4 - SDR South	1535	384	166	2620	0.586	1533	1362	1.0	1.5	3.528	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	286	72	1490	678	0.422	286	211	0.7	0.7	9.180	A
2 - SDR North	1125	281	356	2271	0.495	1125	1420	1.1	1.1	3.475	A
3 - Work Access	56	14	1474	1229	0.046	56	7	0.0	0.0	3.068	A
4 - SDR South	1535	384	166	2620	0.586	1535	1364	1.5	1.5	3.542	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	234	58	1218	817	0.286	235	173	0.7	0.4	6.200	A
2 - SDR North	919	230	291	2316	0.397	920	1162	1.1	0.7	2.859	A
3 - Work Access	46	11	1206	1398	0.033	46	5	0.0	0.0	2.661	A
4 - SDR South	1253	313	136	2642	0.474	1255	1116	1.5	1.0	2.779	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Beatty Road	196	49	1020	918	0.213	196	145	0.4	0.3	4.991	A
2 - SDR North	769	192	244	2349	0.328	770	972	0.7	0.5	2.524	A
3 - Work Access	38	10	1009	1522	0.025	38	5	0.0	0.0	2.427	A
4 - SDR South	1049	262	114	2658	0.395	1051	934	1.0	0.7	2.393	A

Appendix I SDR Ringland Circle V3 Junctions 11 Report

Junctions 11		
ARCADY 11 - Roundabout Module		
Version: 11.0.0.2177		
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Filename: SDR_Ringland Circle-V3.j11

Path: S:\UK\Cardiff\Vectos\CardiffShare\Projects\W260000\407.065092.00001 - Cot Hill (Great Milton Park)\Transport Planning\Technical\Modelling

Report generation date: 26/02/2026 14:47:00

»2026 | (Halcrow TA) | AM
 »2026 | (Halcrow TA) | PM
 »2026 | (Halcrow TA) + Development | AM
 »2026 | (Halcrow TA) + Development | PM
 »2026 | Observed | AM
 »2026 | Observed | PM
 »2026 | Observed + Development | AM
 »2026 | Observed + Development | PM
 »2036 | Forecast | AM
 »2036 | Forecast | PM
 »2036 | Forecast + Development | AM
 »2036 | Forecast + Development | PM
 »2036 | Forecast + Development (Flat) | AM
 »2036 | Forecast + Development (Flat) | PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2026 - (Halcrow TA)									
1 - SDR North	D5	2.8	5.85	0.74	A	D6	0.7	2.50	0.43	A
2 - Hartridge Farm Road		0.2	4.48	0.19	A		0.3	3.91	0.24	A
3 - SDR South		1.0	2.69	0.50	A		1.8	3.74	0.64	A
4 - Ringland Circle		0.6	10.26	0.39	B		2.2	22.84	0.69	C
	2026 - (Halcrow TA) + Development									
1 - SDR North	D7	15.3	26.14	0.95	D	D8	1.1	2.94	0.52	A
2 - Hartridge Farm Road		0.4	6.56	0.26	A		0.4	4.43	0.27	A
3 - SDR South		1.3	3.31	0.56	A		2.8	5.42	0.74	A
4 - Ringland Circle		1.2	18.18	0.55	C		36.3	285.58	1.17	F
	2026 - Observed									
1 - SDR North	D9	1.3	3.58	0.55	A	D10	0.6	2.25	0.34	A
2 - Hartridge Farm Road		0.6	4.86	0.37	A		0.1	2.88	0.07	A
3 - SDR South		0.8	2.79	0.41	A		1.0	2.77	0.48	A
4 - Ringland Circle		1.9	15.67	0.65	C		0.7	9.79	0.42	A
	2026 - Observed + Development									
1 - SDR North	D11	2.4	5.24	0.69	A	D12	0.8	2.46	0.41	A
2 - Hartridge Farm Road		0.8	6.36	0.44	A		0.1	3.10	0.08	A
3 - SDR South		0.9	3.15	0.44	A		1.3	3.24	0.54	A
4 - Ringland Circle		3.3	28.04	0.78	D		1.4	16.24	0.59	C
	2036 - Forecast									
1 - SDR North	D13	1.8	4.42	0.62	A	D14	0.7	2.43	0.39	A
2 - Hartridge Farm Road		0.8	6.00	0.45	A		0.1	3.08	0.08	A
3 - SDR South		1.0	3.10	0.46	A		1.3	3.14	0.54	A
4 - Ringland Circle		3.8	29.75	0.80	D		1.1	13.26	0.53	B
	2036 - Forecast + Development									
1 - SDR North	D15	3.5	7.10	0.76	A	D16	0.9	2.69	0.45	A
2 - Hartridge Farm Road		1.1	8.36	0.53	A		0.1	3.34	0.09	A
3 - SDR South		1.2	3.55	0.50	A		1.6	3.76	0.61	A
4 - Ringland Circle		12.2	92.05	0.97	F		2.7	28.45	0.74	D
	2036 - Forecast + Development (Flat)									
1 - SDR North	D17	2.4	5.21	0.68	A	D18	0.8	2.47	0.41	A
2 - Hartridge Farm Road		0.8	6.38	0.44	A		0.1	3.11	0.08	A
3 - SDR South		0.9	3.16	0.45	A		1.3	3.26	0.55	A
4 - Ringland Circle		3.6	29.67	0.79	D		1.4	16.30	0.59	C

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

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

File summary

File Description

Title	SDR_Ringland Circle
Location	
Site number	
Date	19/02/2026
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	SLR\Aalisha.Sorathiya
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Demand Set Summary

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D5	2026	(Halcrow TA)	AM	ONE HOUR	07:45	09:15		15	✓
D6	2026	(Halcrow TA)	PM	ONE HOUR	16:00	17:30		15	✓
D7	2026	(Halcrow TA) + Development	AM	ONE HOUR	07:45	09:15		15	✓
D8	2026	(Halcrow TA) + Development	PM	ONE HOUR	16:00	17:30		15	✓
D9	2026	Observed	AM	ONE HOUR	07:45	09:15		15	✓
D10	2026	Observed	PM	ONE HOUR	16:00	17:30		15	✓
D11	2026	Observed + Development	AM	ONE HOUR	07:45	09:15		15	✓
D12	2026	Observed + Development	PM	ONE HOUR	16:00	17:30		15	✓
D13	2036	Forecast	AM	ONE HOUR	07:45	09:15		15	✓
D14	2036	Forecast	PM	ONE HOUR	16:00	17:30		15	✓
D15	2036	Forecast + Development	AM	ONE HOUR	07:45	09:15		15	✓
D16	2036	Forecast + Development	PM	ONE HOUR	16:00	17:30		15	✓
D17	2036	Forecast + Development (Flat)	AM	FLAT	07:45	09:15	90	15	✓
D18	2036	Forecast + Development (Flat)	PM	FLAT	16:00	17:30	90	15	✓

Analysis Set Details

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

2026 | (Halcrow TA) | AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Ringland Circle/A48	Standard Roundabout		1, 2, 3, 4	4.85	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.85	A

Arms

Arms

Arm	Name	Description	No give-way line
1	SDR North		
2	Hartridge Farm Road		
3	SDR South		
4	Ringland Circle		

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)	Entry only	Exit only
1 - SDR North	7.30	10.00	21.8	25.0	71.0	23.0		
2 - Hartridge Farm Road	6.30	6.80	1.8	15.0	71.0	32.0		
3 - SDR South	7.20	10.60	6.0	45.0	71.0	12.0		
4 - Ringland Circle	4.00	7.00	15.0	15.0	71.0	40.0		

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct intercept adjustment (PCU/hr)
1 - SDR North	None		
2 - Hartridge Farm Road	None		
3 - SDR South	None		
4 - Ringland Circle	Direct	Barbara Chard's unequal lane use approach - in response to the comment received from Captia (2018)	-496

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - SDR North	0.695	2893
2 - Hartridge Farm Road	0.534	1943
3 - SDR South	0.690	2776
4 - Ringland Circle	0.486	1180

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

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2026	(Halcrow TA)	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - SDR North		ONE HOUR	✓	1577	100.000
2 - Hartridge Farm Road		ONE HOUR	✓	166	100.000
3 - SDR South		ONE HOUR	✓	1222	100.000
4 - Ringland Circle		ONE HOUR	✓	207	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	21	79	1448	29
	2 - Hartridge Farm Road	47	0	92	27
	3 - SDR South	530	527	0	165
	4 - Ringland Circle	26	52	129	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	0	0	0	0
	2 - Hartridge Farm Road	0	0	0	0
	3 - SDR South	0	0	0	0
	4 - Ringland Circle	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - SDR North	0.74	5.85	2.8	A	1447	2171
2 - Hartridge Farm Road	0.19	4.48	0.2	A	152	228
3 - SDR South	0.50	2.69	1.0	A	1121	1682
4 - Ringland Circle	0.39	10.26	0.6	B	190	285

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1187	297	531	2524	0.470	1184	469	0.0	0.9	2.680	A
2 - Hartridge Farm Road	125	31	1221	1291	0.097	125	494	0.0	0.1	3.085	A
3 - SDR South	920	230	93	2712	0.339	918	1252	0.0	0.5	2.005	A
4 - Ringland Circle	156	39	845	770	0.202	155	166	0.0	0.3	5.843	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1418	354	636	2451	0.578	1416	561	0.9	1.4	3.472	A
2 - Hartridge Farm Road	149	37	1461	1163	0.128	149	591	0.1	0.1	3.548	A
3 - SDR South	1099	275	111	2699	0.407	1098	1498	0.5	0.7	2.246	A
4 - Ringland Circle	186	47	1011	689	0.270	186	199	0.3	0.4	7.139	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1736	434	778	2352	0.738	1731	686	1.4	2.8	5.742	A
2 - Hartridge Farm Road	183	46	1785	990	0.185	182	723	0.1	0.2	4.454	A
3 - SDR South	1345	336	136	2682	0.502	1344	1832	0.7	1.0	2.688	A
4 - Ringland Circle	228	57	1237	579	0.393	227	243	0.4	0.6	10.179	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1736	434	779	2351	0.739	1736	687	2.8	2.8	5.850	A
2 - Hartridge Farm Road	183	46	1791	987	0.185	183	724	0.2	0.2	4.476	A
3 - SDR South	1345	336	137	2682	0.502	1345	1837	1.0	1.0	2.693	A
4 - Ringland Circle	228	57	1239	579	0.394	228	243	0.6	0.6	10.257	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1418	354	638	2449	0.579	1423	562	2.8	1.4	3.528	A
2 - Hartridge Farm Road	149	37	1469	1159	0.129	150	593	0.2	0.1	3.568	A
3 - SDR South	1099	275	112	2699	0.407	1100	1506	1.0	0.7	2.252	A
4 - Ringland Circle	186	47	1013	689	0.270	187	199	0.6	0.4	7.197	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1187	297	534	2522	0.471	1189	470	1.4	0.9	2.704	A
2 - Hartridge Farm Road	125	31	1227	1288	0.097	125	496	0.1	0.1	3.097	A
3 - SDR South	920	230	93	2712	0.339	921	1259	0.7	0.5	2.010	A
4 - Ringland Circle	156	39	848	769	0.203	156	167	0.4	0.3	5.885	A

2026 | (Halcrow TA) | PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Ringland Circle/A48	Standard Roundabout		1, 2, 3, 4	5.33	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.33	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2026	(Halcrow TA)	PM	ONE HOUR	16:00	17:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - SDR North		ONE HOUR	✓	979	100.000
2 - Hartridge Farm Road		ONE HOUR	✓	271	100.000
3 - SDR South		ONE HOUR	✓	1540	100.000
4 - Ringland Circle		ONE HOUR	✓	321	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	3	55	850	71
	2 - Hartridge Farm Road	62	0	190	19
	3 - SDR South	1016	173	0	351
	4 - Ringland Circle	5	9	307	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	0	0	0	0
	2 - Hartridge Farm Road	0	0	0	0
	3 - SDR South	0	0	0	0
	4 - Ringland Circle	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - SDR North	0.43	2.50	0.7	A	898	1348
2 - Hartridge Farm Road	0.24	3.91	0.3	A	249	373
3 - SDR South	0.64	3.74	1.8	A	1413	2120
4 - Ringland Circle	0.69	22.84	2.2	C	295	442

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	737	184	366	2639	0.279	735	815	0.0	0.4	1.889	A
2 - Hartridge Farm Road	204	51	923	1450	0.141	203	178	0.0	0.2	2.886	A
3 - SDR South	1159	290	116	2696	0.430	1156	1010	0.0	0.8	2.335	A
4 - Ringland Circle	242	60	942	723	0.334	240	331	0.0	0.5	7.419	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	880	220	438	2588	0.340	880	975	0.4	0.5	2.107	A
2 - Hartridge Farm Road	244	61	1105	1353	0.180	243	213	0.2	0.2	3.243	A
3 - SDR South	1384	346	139	2680	0.517	1383	1209	0.8	1.1	2.773	A
4 - Ringland Circle	289	72	1126	633	0.456	287	396	0.5	0.8	10.364	B

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1078	269	533	2522	0.427	1077	1194	0.5	0.7	2.489	A
2 - Hartridge Farm Road	298	75	1350	1223	0.244	298	260	0.2	0.3	3.891	A
3 - SDR South	1696	424	170	2658	0.638	1693	1477	1.1	1.7	3.717	A
4 - Ringland Circle	353	88	1378	511	0.692	348	485	0.8	2.1	21.515	C

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1078	269	538	2519	0.428	1078	1196	0.7	0.7	2.497	A
2 - Hartridge Farm Road	298	75	1355	1220	0.245	298	261	0.3	0.3	3.906	A
3 - SDR South	1696	424	171	2658	0.638	1696	1483	1.7	1.8	3.738	A
4 - Ringland Circle	353	88	1381	510	0.693	353	486	2.1	2.2	22.841	C

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	880	220	445	2584	0.341	881	978	0.7	0.5	2.115	A
2 - Hartridge Farm Road	244	61	1113	1349	0.181	244	214	0.3	0.2	3.257	A
3 - SDR South	1384	346	140	2680	0.517	1387	1217	1.8	1.1	2.792	A
4 - Ringland Circle	289	72	1130	632	0.457	294	397	2.2	0.9	10.811	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	737	184	370	2636	0.280	738	819	0.5	0.4	1.895	A
2 - Hartridge Farm Road	204	51	929	1447	0.141	204	179	0.2	0.2	2.898	A
3 - SDR South	1159	290	117	2696	0.430	1161	1016	1.1	0.8	2.348	A
4 - Ringland Circle	242	60	945	721	0.335	243	332	0.9	0.5	7.551	A

2026 | (Halcrow TA) + Development | AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Ringland Circle/A48	Standard Roundabout		1, 2, 3, 4	16.88	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	16.88	C

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2026	(Halcrow TA) + Development	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - SDR North		ONE HOUR	✓	2032	100.000
2 - Hartridge Farm Road		ONE HOUR	✓	178	100.000
3 - SDR South		ONE HOUR	✓	1273	100.000
4 - Ringland Circle		ONE HOUR	✓	218	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	223	114	1626	69
	2 - Hartridge Farm Road	59	0	92	27
	3 - SDR South	581	527	0	165
	4 - Ringland Circle	37	52	129	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	0	0	0	0
	2 - Hartridge Farm Road	0	0	0	0
	3 - SDR South	0	0	0	0
	4 - Ringland Circle	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - SDR North	0.95	26.14	15.3	D	1865	2797
2 - Hartridge Farm Road	0.26	6.56	0.4	A	163	245
3 - SDR South	0.56	3.31	1.3	A	1168	1752
4 - Ringland Circle	0.55	18.18	1.2	C	200	300

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1530	382	531	2524	0.606	1524	675	0.0	1.5	3.578	A
2 - Hartridge Farm Road	134	34	1535	1124	0.119	133	520	0.0	0.1	3.632	A
3 - SDR South	958	240	283	2580	0.371	956	1385	0.0	0.6	2.213	A
4 - Ringland Circle	164	41	1044	674	0.244	163	196	0.0	0.3	7.033	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1827	457	635	2451	0.745	1821	808	1.5	2.9	5.667	A
2 - Hartridge Farm Road	160	40	1835	964	0.166	160	622	0.1	0.2	4.477	A
3 - SDR South	1144	286	339	2542	0.450	1143	1656	0.6	0.8	2.572	A
4 - Ringland Circle	196	49	1248	574	0.341	195	234	0.3	0.5	9.480	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	2237	559	777	2353	0.951	2196	985	2.9	13.1	19.344	C
2 - Hartridge Farm Road	196	49	2214	762	0.257	195	759	0.2	0.3	6.352	A
3 - SDR South	1402	350	410	2493	0.562	1400	1999	0.8	1.3	3.287	A
4 - Ringland Circle	240	60	1524	440	0.545	237	286	0.5	1.2	17.541	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	2237	559	779	2351	0.952	2229	990	13.1	15.3	26.141	D
2 - Hartridge Farm Road	196	49	2246	745	0.263	196	762	0.3	0.4	6.562	A
3 - SDR South	1402	350	415	2490	0.563	1402	2027	1.3	1.3	3.307	A
4 - Ringland Circle	240	60	1529	438	0.548	240	287	1.2	1.2	18.176	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1827	457	639	2448	0.746	1876	816	15.3	3.0	6.810	A
2 - Hartridge Farm Road	160	40	1888	935	0.171	161	627	0.4	0.2	4.650	A
3 - SDR South	1144	286	347	2537	0.451	1146	1701	1.3	0.8	2.594	A
4 - Ringland Circle	196	49	1257	570	0.344	199	237	1.2	0.5	9.760	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1530	382	534	2522	0.607	1536	679	3.0	1.6	3.671	A
2 - Hartridge Farm Road	134	34	1547	1117	0.120	134	523	0.2	0.1	3.665	A
3 - SDR South	958	240	286	2579	0.372	959	1396	0.8	0.6	2.225	A
4 - Ringland Circle	164	41	1048	671	0.244	165	197	0.5	0.3	7.122	A

2026 | (Halcrow TA) + Development | PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Ringland Circle/A48	Standard Roundabout		1, 2, 3, 4	34.43	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	34.43	D

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2026	(Halcrow TA) + Development	PM	ONE HOUR	16:00	17:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - SDR North		ONE HOUR	✓	1210	100.000
2 - Hartridge Farm Road		ONE HOUR	✓	271	100.000
3 - SDR South		ONE HOUR	✓	1713	100.000
4 - Ringland Circle		ONE HOUR	✓	382	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	114	55	939	102
	2 - Hartridge Farm Road	62	0	190	19
	3 - SDR South	1189	173	0	351
	4 - Ringland Circle	66	9	307	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	0	0	0	0
	2 - Hartridge Farm Road	0	0	0	0
	3 - SDR South	0	0	0	0
	4 - Ringland Circle	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - SDR North	0.52	2.94	1.1	A	1110	1665
2 - Hartridge Farm Road	0.27	4.43	0.4	A	249	373
3 - SDR South	0.74	5.42	2.8	A	1572	2358
4 - Ringland Circle	1.17	285.58	36.3	F	351	526

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	911	228	365	2639	0.345	909	1074	0.0	0.5	2.077	A
2 - Hartridge Farm Road	204	51	1096	1358	0.150	203	178	0.0	0.2	3.116	A
3 - SDR South	1290	322	223	2622	0.492	1286	1076	0.0	1.0	2.686	A
4 - Ringland Circle	288	72	1154	620	0.464	284	354	0.0	0.8	10.628	B

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1088	272	436	2590	0.420	1087	1284	0.5	0.7	2.394	A
2 - Hartridge Farm Road	244	61	1310	1244	0.196	243	213	0.2	0.2	3.598	A
3 - SDR South	1540	385	267	2592	0.594	1538	1287	1.0	1.5	3.410	A
4 - Ringland Circle	343	86	1381	510	0.674	339	424	0.8	1.9	20.591	C

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1332	333	478	2561	0.520	1331	1559	0.7	1.1	2.924	A
2 - Hartridge Farm Road	298	75	1550	1116	0.267	298	259	0.2	0.4	4.398	A
3 - SDR South	1886	472	327	2551	0.739	1881	1521	1.5	2.8	5.331	A
4 - Ringland Circle	421	105	1689	360	1.168	348	518	1.9	20.2	137.639	F

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1332	333	485	2556	0.521	1332	1564	1.1	1.1	2.941	A
2 - Hartridge Farm Road	298	75	1558	1112	0.268	298	259	0.4	0.4	4.426	A
3 - SDR South	1886	472	327	2550	0.740	1886	1529	2.8	2.8	5.415	A
4 - Ringland Circle	421	105	1693	358	1.175	356	520	20.2	36.3	285.577	F

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1088	272	551	2510	0.433	1089	1314	1.1	0.8	2.535	A
2 - Hartridge Farm Road	244	61	1424	1183	0.206	244	217	0.4	0.3	3.837	A
3 - SDR South	1540	385	267	2592	0.594	1545	1400	2.8	1.5	3.459	A
4 - Ringland Circle	343	86	1387	507	0.678	478	426	36.3	2.7	142.686	F

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	911	228	374	2633	0.346	912	1080	0.8	0.5	2.092	A
2 - Hartridge Farm Road	204	51	1107	1352	0.151	204	179	0.3	0.2	3.137	A
3 - SDR South	1290	322	224	2622	0.492	1292	1088	1.5	1.0	2.712	A
4 - Ringland Circle	288	72	1160	617	0.466	295	356	2.7	0.9	11.415	B

2026 | Observed | 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	Ringland Circle/A48	Standard Roundabout		1, 2, 3, 4	5.13	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.13	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2026	Observed	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - SDR North		ONE HOUR	✓	1212	100.000
2 - Hartridge Farm Road		ONE HOUR	✓	398	100.000
3 - SDR South		ONE HOUR	✓	930	100.000
4 - Ringland Circle		ONE HOUR	✓	396	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	6	152	934	120
	2 - Hartridge Farm Road	157	0	196	45
	3 - SDR South	552	246	0	132
	4 - Ringland Circle	52	114	228	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	37	1	13	0
	2 - Hartridge Farm Road	1	0	1	0
	3 - SDR South	30	0	0	2
	4 - Ringland Circle	0	0	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - SDR North	0.55	3.58	1.3	A	1112	1668
2 - Hartridge Farm Road	0.37	4.86	0.6	A	365	548
3 - SDR South	0.41	2.79	0.8	A	853	1280
4 - Ringland Circle	0.65	15.67	1.9	C	363	545

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	912	228	442	2586	0.353	910	576	0.0	0.6	2.361	A
2 - Hartridge Farm Road	300	75	968	1426	0.210	299	384	0.0	0.3	3.217	A
3 - SDR South	700	175	248	2605	0.269	698	1019	0.0	0.4	2.192	A
4 - Ringland Circle	298	75	722	830	0.359	296	224	0.0	0.6	6.752	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1090	272	529	2525	0.431	1089	689	0.6	0.8	2.756	A
2 - Hartridge Farm Road	358	89	1158	1325	0.270	357	460	0.3	0.4	3.751	A
3 - SDR South	836	209	296	2572	0.325	836	1219	0.4	0.6	2.410	A
4 - Ringland Circle	356	89	863	761	0.468	355	269	0.6	0.9	8.884	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1334	334	646	2444	0.546	1333	843	0.8	1.3	3.558	A
2 - Hartridge Farm Road	438	110	1416	1187	0.369	437	562	0.4	0.6	4.840	A
3 - SDR South	1024	256	363	2526	0.405	1023	1491	0.6	0.8	2.783	A
4 - Ringland Circle	436	109	1057	667	0.654	432	329	0.9	1.8	15.180	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1334	334	649	2442	0.547	1334	844	1.3	1.3	3.577	A
2 - Hartridge Farm Road	438	110	1420	1185	0.370	438	564	0.6	0.6	4.863	A
3 - SDR South	1024	256	363	2525	0.405	1024	1495	0.8	0.8	2.786	A
4 - Ringland Circle	436	109	1058	666	0.654	436	329	1.8	1.9	15.665	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1090	272	534	2522	0.432	1091	691	1.3	0.8	2.772	A
2 - Hartridge Farm Road	358	89	1164	1322	0.271	359	462	0.6	0.4	3.775	A
3 - SDR South	836	209	297	2571	0.325	837	1225	0.8	0.6	2.414	A
4 - Ringland Circle	356	89	865	760	0.468	360	269	1.9	0.9	9.128	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	912	228	445	2583	0.353	913	578	0.8	0.6	2.373	A
2 - Hartridge Farm Road	300	75	973	1424	0.210	300	386	0.4	0.3	3.232	A
3 - SDR South	700	175	249	2604	0.269	701	1024	0.6	0.4	2.198	A
4 - Ringland Circle	298	75	724	829	0.360	299	225	0.9	0.6	6.858	A

2026 | Observed | 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	Ringland Circle/A48	Standard Roundabout		1, 2, 3, 4	3.32	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.32	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2026	Observed	PM	ONE HOUR	16:00	17:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - SDR North		ONE HOUR	✓	849	100.000
2 - Hartridge Farm Road		ONE HOUR	✓	86	100.000
3 - SDR South		ONE HOUR	✓	1175	100.000
4 - Ringland Circle		ONE HOUR	✓	248	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	3	28	757	61
	2 - Hartridge Farm Road	50	0	33	3
	3 - SDR South	926	23	2	224
	4 - Ringland Circle	49	6	192	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	0	8	13	0
	2 - Hartridge Farm Road	0	0	0	0
	3 - SDR South	9	0	0	1
	4 - Ringland Circle	0	0	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - SDR North	0.34	2.25	0.6	A	779	1169
2 - Hartridge Farm Road	0.07	2.88	0.1	A	79	118
3 - SDR South	0.48	2.77	1.0	A	1078	1617
4 - Ringland Circle	0.42	9.79	0.7	A	228	341

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	639	160	168	2777	0.230	638	772	0.0	0.3	1.880	A
2 - Hartridge Farm Road	65	16	763	1536	0.042	65	43	0.0	0.0	2.446	A
3 - SDR South	885	221	89	2715	0.326	883	739	0.0	0.5	2.104	A
4 - Ringland Circle	187	47	754	814	0.229	186	217	0.0	0.3	5.761	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	763	191	201	2753	0.277	763	923	0.3	0.4	2.020	A
2 - Hartridge Farm Road	77	19	913	1456	0.053	77	51	0.0	0.1	2.610	A
3 - SDR South	1056	264	106	2703	0.391	1056	884	0.5	0.7	2.340	A
4 - Ringland Circle	223	56	902	742	0.300	222	260	0.3	0.4	6.971	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	935	234	246	2722	0.343	934	1131	0.4	0.6	2.249	A
2 - Hartridge Farm Road	95	24	1117	1347	0.070	95	63	0.1	0.1	2.874	A
3 - SDR South	1294	323	130	2687	0.482	1292	1082	0.7	1.0	2.765	A
4 - Ringland Circle	273	68	1104	644	0.424	272	318	0.4	0.7	9.717	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	935	234	247	2722	0.343	935	1132	0.6	0.6	2.250	A
2 - Hartridge Farm Road	95	24	1119	1346	0.070	95	63	0.1	0.1	2.876	A
3 - SDR South	1294	323	130	2686	0.482	1294	1083	1.0	1.0	2.769	A
4 - Ringland Circle	273	68	1105	643	0.424	273	318	0.7	0.7	9.791	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	763	191	202	2752	0.277	764	925	0.6	0.4	2.023	A
2 - Hartridge Farm Road	77	19	915	1455	0.053	77	51	0.1	0.1	2.615	A
3 - SDR South	1056	264	106	2703	0.391	1058	886	1.0	0.7	2.346	A
4 - Ringland Circle	223	56	904	741	0.301	224	260	0.7	0.4	7.030	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	639	160	169	2776	0.230	640	775	0.4	0.3	1.885	A
2 - Hartridge Farm Road	65	16	766	1534	0.042	65	43	0.1	0.0	2.451	A
3 - SDR South	885	221	89	2715	0.326	885	742	0.7	0.5	2.109	A
4 - Ringland Circle	187	47	756	813	0.230	187	218	0.4	0.3	5.805	A

2026 | Observed + Development | 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	Ringland Circle/A48	Standard Roundabout		1, 2, 3, 4	7.55	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.55	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2026	Observed + Development	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Am	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - SDR North		ONE HOUR	✓	1520	100.000
2 - Hartridge Farm Road		ONE HOUR	✓	406	100.000
3 - SDR South		ONE HOUR	✓	965	100.000
4 - Ringland Circle		ONE HOUR	✓	403	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	143	176	1054	147
	2 - Hartridge Farm Road	165	0	196	45
	3 - SDR South	587	246	0	132
	4 - Ringland Circle	59	114	228	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	37	1	13	0
	2 - Hartridge Farm Road	1	0	1	0
	3 - SDR South	30	0	0	2
	4 - Ringland Circle	0	0	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - SDR North	0.69	5.24	2.4	A	1395	2092
2 - Hartridge Farm Road	0.44	6.36	0.8	A	373	559
3 - SDR South	0.44	3.15	0.9	A	886	1328
4 - Ringland Circle	0.78	28.04	3.3	D	370	555

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1144	286	441	2586	0.442	1141	716	0.0	0.9	2.780	A
2 - Hartridge Farm Road	306	76	1180	1313	0.233	304	402	0.0	0.3	3.596	A
3 - SDR South	727	182	377	2516	0.289	725	1108	0.0	0.5	2.343	A
4 - Ringland Circle	303	76	857	764	0.397	301	245	0.0	0.7	7.768	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1366	342	529	2525	0.541	1365	857	0.9	1.3	3.466	A
2 - Hartridge Farm Road	365	91	1412	1189	0.307	364	481	0.3	0.4	4.401	A
3 - SDR South	868	217	451	2465	0.352	867	1326	0.5	0.6	2.627	A
4 - Ringland Circle	362	91	1025	683	0.531	360	293	0.7	1.1	11.173	B

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1674	418	642	2446	0.684	1669	1048	1.3	2.4	5.155	A
2 - Hartridge Farm Road	447	112	1725	1022	0.437	446	587	0.4	0.8	6.283	A
3 - SDR South	1062	266	551	2396	0.444	1061	1619	0.6	0.9	3.145	A
4 - Ringland Circle	444	111	1254	571	0.777	436	358	1.1	3.1	25.362	D

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1674	418	649	2442	0.685	1673	1050	2.4	2.4	5.240	A
2 - Hartridge Farm Road	447	112	1732	1018	0.439	447	590	0.8	0.8	6.356	A
3 - SDR South	1062	266	553	2395	0.444	1062	1627	0.9	0.9	3.152	A
4 - Ringland Circle	444	111	1256	570	0.778	443	359	3.1	3.3	28.035	D

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1366	342	538	2519	0.542	1371	861	2.4	1.3	3.520	A
2 - Hartridge Farm Road	365	91	1424	1183	0.308	366	485	0.8	0.5	4.453	A
3 - SDR South	868	217	453	2464	0.352	869	1337	0.9	0.6	2.635	A
4 - Ringland Circle	362	91	1028	681	0.532	371	294	3.3	1.2	11.963	B

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1144	286	446	2583	0.443	1146	719	1.3	0.9	2.808	A
2 - Hartridge Farm Road	306	76	1188	1309	0.234	306	404	0.5	0.3	3.622	A
3 - SDR South	727	182	379	2515	0.289	727	1115	0.6	0.5	2.352	A
4 - Ringland Circle	303	76	860	763	0.398	305	246	1.2	0.7	7.951	A

2026 | Observed + Development | 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	Ringland Circle/A48	Standard Roundabout		1, 2, 3, 4	4.35	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.35	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2026	Observed + Development	PM	ONE HOUR	16:00	17:30	15	✓

Demand overview (Traffic)

Am	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - SDR North		ONE HOUR	✓	1005	100.000
2 - Hartridge Farm Road		ONE HOUR	✓	86	100.000
3 - SDR South		ONE HOUR	✓	1292	100.000
4 - Ringland Circle		ONE HOUR	✓	289	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	78	28	817	82
	2 - Hartridge Farm Road	50	0	33	3
	3 - SDR South	1043	23	2	224
	4 - Ringland Circle	90	6	192	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	0	8	13	0
	2 - Hartridge Farm Road	0	0	0	0
	3 - SDR South	9	0	0	1
	4 - Ringland Circle	0	0	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - SDR North	0.41	2.46	0.8	A	922	1383
2 - Hartridge Farm Road	0.08	3.10	0.1	A	79	118
3 - SDR South	0.54	3.24	1.3	A	1186	1778
4 - Ringland Circle	0.59	16.24	1.4	C	265	398

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	757	189	167	2777	0.272	755	947	0.0	0.4	1.967	A
2 - Hartridge Farm Road	65	16	880	1473	0.044	65	43	0.0	0.0	2.555	A
3 - SDR South	973	243	161	2665	0.365	970	783	0.0	0.6	2.277	A
4 - Ringland Circle	218	54	898	744	0.292	216	233	0.0	0.4	6.841	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	903	226	201	2754	0.328	903	1133	0.4	0.5	2.151	A
2 - Hartridge Farm Road	77	19	1052	1381	0.056	77	51	0.0	0.1	2.760	A
3 - SDR South	1161	290	192	2643	0.439	1161	937	0.6	0.8	2.604	A
4 - Ringland Circle	260	65	1074	659	0.395	259	278	0.4	0.6	9.045	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1107	277	245	2723	0.406	1106	1386	0.5	0.8	2.460	A
2 - Hartridge Farm Road	95	24	1288	1256	0.075	95	63	0.1	0.1	3.099	A
3 - SDR South	1423	356	235	2614	0.544	1421	1147	0.8	1.3	3.235	A
4 - Ringland Circle	318	80	1315	542	0.588	315	341	0.6	1.4	15.811	C

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1107	277	247	2722	0.407	1107	1388	0.8	0.8	2.464	A
2 - Hartridge Farm Road	95	24	1290	1254	0.075	95	63	0.1	0.1	3.103	A
3 - SDR South	1423	356	236	2613	0.544	1422	1149	1.3	1.3	3.243	A
4 - Ringland Circle	318	80	1317	541	0.588	318	341	1.4	1.4	16.244	C

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	903	226	203	2752	0.328	904	1136	0.8	0.5	2.157	A
2 - Hartridge Farm Road	77	19	1056	1379	0.056	77	51	0.1	0.1	2.767	A
3 - SDR South	1161	290	193	2643	0.439	1163	941	1.3	0.8	2.615	A
4 - Ringland Circle	260	65	1077	657	0.395	263	279	1.4	0.7	9.250	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	757	189	169	2775	0.273	757	950	0.5	0.4	1.974	A
2 - Hartridge Farm Road	65	16	883	1471	0.044	65	43	0.1	0.0	2.558	A
3 - SDR South	973	243	161	2665	0.365	974	787	0.8	0.6	2.285	A
4 - Ringland Circle	218	54	901	743	0.293	219	234	0.7	0.4	6.927	A

2036 | Forecast | 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	Ringland Circle/A48	Standard Roundabout		1, 2, 3, 4	7.62	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.62	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2036	Forecast	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - SDR North		ONE HOUR	✓	1356	100.000
2 - Hartridge Farm Road		ONE HOUR	✓	445	100.000
3 - SDR South		ONE HOUR	✓	1041	100.000
4 - Ringland Circle		ONE HOUR	✓	442	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	7	170	1045	134
	2 - Hartridge Farm Road	176	0	219	50
	3 - SDR South	618	275	0	148
	4 - Ringland Circle	58	127	255	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	37	1	13	0
	2 - Hartridge Farm Road	1	0	1	0
	3 - SDR South	30	0	0	2
	4 - Ringland Circle	0	0	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - SDR North	0.62	4.42	1.8	A	1244	1866
2 - Hartridge Farm Road	0.45	6.00	0.8	A	408	613
3 - SDR South	0.46	3.10	1.0	A	955	1433
4 - Ringland Circle	0.80	29.75	3.8	D	406	608

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1021	255	493	2550	0.400	1018	645	0.0	0.7	2.581	A
2 - Hartridge Farm Road	335	84	1082	1365	0.245	334	429	0.0	0.3	3.515	A
3 - SDR South	784	196	277	2585	0.303	782	1139	0.0	0.5	2.319	A
4 - Ringland Circle	333	83	808	788	0.422	330	251	0.0	0.7	7.855	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1219	305	590	2483	0.491	1218	771	0.7	1.1	3.129	A
2 - Hartridge Farm Road	400	100	1295	1252	0.320	399	513	0.3	0.5	4.258	A
3 - SDR South	936	234	331	2547	0.367	935	1363	0.5	0.7	2.594	A
4 - Ringland Circle	397	99	966	711	0.559	395	300	0.7	1.2	11.394	B

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1493	373	717	2394	0.624	1490	943	1.1	1.8	4.366	A
2 - Hartridge Farm Road	490	122	1581	1099	0.446	489	626	0.5	0.8	5.934	A
3 - SDR South	1146	287	405	2496	0.459	1145	1664	0.7	1.0	3.093	A
4 - Ringland Circle	487	122	1183	606	0.803	477	367	1.2	3.6	26.473	D

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1493	373	725	2389	0.625	1493	946	1.8	1.8	4.420	A
2 - Hartridge Farm Road	490	122	1588	1095	0.447	490	629	0.8	0.8	5.998	A
3 - SDR South	1146	287	406	2496	0.459	1146	1672	1.0	1.0	3.100	A
4 - Ringland Circle	487	122	1185	605	0.804	486	368	3.6	3.8	29.754	D

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1219	305	601	2475	0.493	1222	775	1.8	1.1	3.168	A
2 - Hartridge Farm Road	400	100	1306	1246	0.321	401	518	0.8	0.5	4.307	A
3 - SDR South	936	234	333	2546	0.368	937	1374	1.0	0.7	2.603	A
4 - Ringland Circle	397	99	969	710	0.560	407	301	3.8	1.3	12.347	B

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1021	255	498	2547	0.401	1022	648	1.1	0.7	2.600	A
2 - Hartridge Farm Road	335	84	1089	1362	0.246	336	432	0.5	0.3	3.540	A
3 - SDR South	784	196	278	2584	0.303	784	1146	0.7	0.5	2.327	A
4 - Ringland Circle	333	83	811	786	0.423	335	252	1.3	0.7	8.059	A

2036 | Forecast | 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	Ringland Circle/A48	Standard Roundabout		1, 2, 3, 4	3.95	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.95	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2036	Forecast	PM	ONE HOUR	16:00	17:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - SDR North		ONE HOUR	✓	951	100.000
2 - Hartridge Farm Road		ONE HOUR	✓	96	100.000
3 - SDR South		ONE HOUR	✓	1316	100.000
4 - Ringland Circle		ONE HOUR	✓	278	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	3	32	848	68
	2 - Hartridge Farm Road	56	0	37	3
	3 - SDR South	1037	26	2	251
	4 - Ringland Circle	55	7	215	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	0	8	13	0
	2 - Hartridge Farm Road	0	0	0	0
	3 - SDR South	9	0	0	1
	4 - Ringland Circle	0	0	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - SDR North	0.39	2.43	0.7	A	873	1309
2 - Hartridge Farm Road	0.08	3.08	0.1	A	88	132
3 - SDR South	0.54	3.14	1.3	A	1208	1811
4 - Ringland Circle	0.53	13.26	1.1	B	255	383

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	716	179	188	2763	0.259	714	864	0.0	0.4	1.963	A
2 - Hartridge Farm Road	72	18	853	1487	0.049	72	49	0.0	0.1	2.543	A
3 - SDR South	991	248	98	2708	0.366	988	827	0.0	0.6	2.240	A
4 - Ringland Circle	209	52	844	770	0.272	208	243	0.0	0.4	6.432	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	855	214	225	2737	0.312	854	1034	0.4	0.5	2.137	A
2 - Hartridge Farm Road	86	22	1021	1398	0.062	86	58	0.1	0.1	2.744	A
3 - SDR South	1183	296	118	2695	0.439	1182	990	0.6	0.8	2.549	A
4 - Ringland Circle	250	62	1010	690	0.362	249	290	0.4	0.6	8.214	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1047	262	275	2702	0.388	1046	1265	0.5	0.7	2.428	A
2 - Hartridge Farm Road	106	26	1249	1276	0.083	106	71	0.1	0.1	3.075	A
3 - SDR South	1449	362	144	2677	0.541	1447	1211	0.8	1.3	3.134	A
4 - Ringland Circle	306	77	1236	580	0.528	304	355	0.6	1.1	13.043	B

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1047	262	276	2701	0.388	1047	1267	0.7	0.7	2.431	A
2 - Hartridge Farm Road	106	26	1252	1275	0.083	106	72	0.1	0.1	3.078	A
3 - SDR South	1449	362	144	2677	0.541	1449	1213	1.3	1.3	3.142	A
4 - Ringland Circle	306	77	1238	579	0.528	306	356	1.1	1.1	13.262	B

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	855	214	227	2735	0.313	856	1037	0.7	0.5	2.141	A
2 - Hartridge Farm Road	86	22	1025	1396	0.062	86	59	0.1	0.1	2.750	A
3 - SDR South	1183	296	118	2695	0.439	1185	993	1.3	0.8	2.559	A
4 - Ringland Circle	250	62	1012	689	0.363	252	291	1.1	0.6	8.344	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	716	179	190	2761	0.259	716	867	0.5	0.4	1.967	A
2 - Hartridge Farm Road	72	18	857	1485	0.049	72	49	0.1	0.1	2.549	A
3 - SDR South	991	248	99	2708	0.366	992	831	0.8	0.6	2.248	A
4 - Ringland Circle	209	52	847	769	0.272	210	243	0.6	0.4	6.499	A

2036 | Forecast + Development | 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	Ringland Circle/A48	Standard Roundabout		1, 2, 3, 4	16.71	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	16.71	C

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D15	2036	Forecast + Development	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Am	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - SDR North		ONE HOUR	✓	1663	100.000
2 - Hartridge Farm Road		ONE HOUR	✓	453	100.000
3 - SDR South		ONE HOUR	✓	1075	100.000
4 - Ringland Circle		ONE HOUR	✓	450	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	143	194	1165	161
	2 - Hartridge Farm Road	184	0	219	50
	3 - SDR South	652	275	0	148
	4 - Ringland Circle	66	127	255	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	37	1	13	0
	2 - Hartridge Farm Road	1	0	1	0
	3 - SDR South	30	0	0	2
	4 - Ringland Circle	0	0	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - SDR North	0.76	7.10	3.5	A	1526	2289
2 - Hartridge Farm Road	0.53	8.36	1.1	A	416	624
3 - SDR South	0.50	3.55	1.2	A	986	1480
4 - Ringland Circle	0.97	92.05	12.2	F	413	619

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1252	313	493	2551	0.491	1248	784	0.0	1.1	3.077	A
2 - Hartridge Farm Road	341	85	1294	1252	0.272	340	447	0.0	0.4	3.972	A
3 - SDR South	809	202	405	2497	0.324	807	1228	0.0	0.6	2.482	A
4 - Ringland Circle	339	85	941	723	0.468	335	271	0.0	0.9	9.253	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1495	374	589	2483	0.602	1493	938	1.1	1.7	4.050	A
2 - Hartridge Farm Road	407	102	1548	1117	0.365	406	534	0.4	0.6	5.106	A
3 - SDR South	966	242	485	2442	0.396	966	1469	0.6	0.8	2.843	A
4 - Ringland Circle	405	101	1126	633	0.639	401	324	0.9	1.7	15.371	C

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1831	458	700	2406	0.761	1824	1144	1.7	3.4	6.822	A
2 - Hartridge Farm Road	499	125	1877	941	0.530	497	647	0.6	1.1	8.132	A
3 - SDR South	1184	296	592	2368	0.500	1182	1782	0.8	1.2	3.537	A
4 - Ringland Circle	495	124	1378	511	0.969	466	396	1.7	9.1	59.101	F

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1831	458	715	2396	0.764	1831	1149	3.4	3.5	7.104	A
2 - Hartridge Farm Road	499	125	1893	933	0.535	499	653	1.1	1.1	8.364	A
3 - SDR South	1184	296	594	2366	0.500	1184	1797	1.2	1.2	3.550	A
4 - Ringland Circle	495	124	1381	510	0.972	483	397	9.1	12.2	92.046	F

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1495	374	628	2456	0.609	1502	948	3.5	1.8	4.247	A
2 - Hartridge Farm Road	407	102	1582	1099	0.371	409	549	1.1	0.6	5.286	A
3 - SDR South	966	242	488	2439	0.396	968	1503	1.2	0.8	2.856	A
4 - Ringland Circle	405	101	1130	631	0.641	446	326	12.2	1.9	23.491	C

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1252	313	500	2546	0.492	1255	788	1.8	1.1	3.123	A
2 - Hartridge Farm Road	341	85	1304	1247	0.274	342	450	0.6	0.4	4.018	A
3 - SDR South	809	202	407	2495	0.324	810	1238	0.8	0.6	2.493	A
4 - Ringland Circle	339	85	945	721	0.470	343	272	1.9	0.9	9.663	A

2036 | Forecast + Development | 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	Ringland Circle/A48	Standard Roundabout		1, 2, 3, 4	6.01	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.01	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D16	2036	Forecast + Development	PM	ONE HOUR	16:00	17:30	15	✓

Demand overview (Traffic)

Am	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - SDR North		ONE HOUR	✓	1107	100.000
2 - Hartridge Farm Road		ONE HOUR	✓	96	100.000
3 - SDR South		ONE HOUR	✓	1433	100.000
4 - Ringland Circle		ONE HOUR	✓	319	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	78	32	908	89
	2 - Hartridge Farm Road	56	0	37	3
	3 - SDR South	1154	26	2	251
	4 - Ringland Circle	96	7	215	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	0	8	13	0
	2 - Hartridge Farm Road	0	0	0	0
	3 - SDR South	9	0	0	1
	4 - Ringland Circle	0	0	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - SDR North	0.45	2.69	0.9	A	1016	1524
2 - Hartridge Farm Road	0.09	3.34	0.1	A	88	132
3 - SDR South	0.61	3.76	1.6	A	1315	1972
4 - Ringland Circle	0.74	28.45	2.7	D	293	439

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	833	208	187	2763	0.302	832	1039	0.0	0.5	2.061	A
2 - Hartridge Farm Road	72	18	970	1425	0.051	72	49	0.0	0.1	2.660	A
3 - SDR South	1079	270	170	2658	0.406	1076	872	0.0	0.7	2.437	A
4 - Ringland Circle	240	60	988	700	0.343	238	258	0.0	0.5	7.804	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	995	249	225	2737	0.364	995	1243	0.5	0.6	2.287	A
2 - Hartridge Farm Road	86	22	1161	1323	0.065	86	58	0.1	0.1	2.909	A
3 - SDR South	1288	322	204	2635	0.489	1287	1043	0.7	1.0	2.862	A
4 - Ringland Circle	287	72	1182	606	0.473	285	309	0.5	0.9	11.240	B

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1219	305	272	2704	0.451	1218	1520	0.6	0.9	2.679	A
2 - Hartridge Farm Road	106	26	1418	1186	0.089	106	71	0.1	0.1	3.331	A
3 - SDR South	1578	394	250	2604	0.606	1575	1274	1.0	1.6	3.746	A
4 - Ringland Circle	351	88	1447	478	0.735	345	378	0.9	2.5	26.061	D

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1219	305	276	2701	0.451	1219	1524	0.9	0.9	2.687	A
2 - Hartridge Farm Road	106	26	1423	1183	0.089	106	72	0.1	0.1	3.339	A
3 - SDR South	1578	394	250	2604	0.606	1578	1279	1.6	1.6	3.765	A
4 - Ringland Circle	351	88	1449	477	0.737	351	379	2.5	2.7	28.451	D

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	995	249	231	2733	0.364	996	1248	0.9	0.6	2.297	A
2 - Hartridge Farm Road	86	22	1168	1319	0.065	86	59	0.1	0.1	2.919	A
3 - SDR South	1288	322	204	2635	0.489	1291	1050	1.6	1.0	2.880	A
4 - Ringland Circle	287	72	1185	605	0.474	294	310	2.7	0.9	11.896	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	833	208	190	2761	0.302	834	1043	0.6	0.5	2.068	A
2 - Hartridge Farm Road	72	18	975	1422	0.051	72	49	0.1	0.1	2.665	A
3 - SDR South	1079	270	171	2658	0.406	1080	876	1.0	0.7	2.451	A
4 - Ringland Circle	240	60	992	699	0.344	242	259	0.9	0.5	7.959	A

2036 | Forecast + Development (Flat) | 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	Ringland Circle/A48	Standard Roundabout		1, 2, 3, 4	7.77	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.77	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D17	2036	Forecast + Development (Flat)	AM	FLAT	07:45	09:15	90	15	✓

Demand overview (Traffic)

Am	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - SDR North		FLAT	✓	1663	100.000
2 - Hartridge Farm Road		FLAT	✓	453	100.000
3 - SDR South		FLAT	✓	1075	100.000
4 - Ringland Circle		FLAT	✓	450	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
From	1 - SDR North	143	194	1165	161
	2 - Hartridge Farm Road	184	0	219	50
	3 - SDR South	652	275	0	148
	4 - Ringland Circle	66	127	255	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	37	1	13	0
	2 - Hartridge Farm Road	1	0	1	0
	3 - SDR South	30	0	0	2
	4 - Ringland Circle	0	0	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - SDR North	0.68	5.21	2.4	A	1663	2495
2 - Hartridge Farm Road	0.44	6.38	0.8	A	453	680
3 - SDR South	0.45	3.16	0.9	A	1075	1613
4 - Ringland Circle	0.79	29.67	3.6	D	450	675

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1663	416	647	2443	0.681	1654	1039	0.0	2.3	5.036	A
2 - Hartridge Farm Road	453	113	1710	1030	0.440	450	590	0.0	0.8	6.226	A
3 - SDR South	1075	269	537	2406	0.447	1071	1624	0.0	0.9	3.137	A
4 - Ringland Circle	450	113	1249	574	0.784	437	359	0.0	3.2	24.591	C

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1663	416	658	2435	0.683	1663	1045	2.3	2.4	5.204	A
2 - Hartridge Farm Road	453	113	1725	1022	0.443	453	596	0.8	0.8	6.380	A
3 - SDR South	1075	269	540	2403	0.447	1075	1638	0.9	0.9	3.160	A
4 - Ringland Circle	450	113	1254	571	0.788	449	361	3.2	3.5	29.076	D

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1663	416	659	2435	0.683	1663	1045	2.4	2.4	5.209	A
2 - Hartridge Farm Road	453	113	1726	1022	0.443	453	596	0.8	0.8	6.383	A
3 - SDR South	1075	269	540	2403	0.447	1075	1639	0.9	0.9	3.160	A
4 - Ringland Circle	450	113	1254	571	0.788	450	361	3.5	3.5	29.433	D

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1663	416	659	2435	0.683	1663	1045	2.4	2.4	5.209	A
2 - Hartridge Farm Road	453	113	1726	1022	0.443	453	596	0.8	0.8	6.384	A
3 - SDR South	1075	269	540	2403	0.447	1075	1639	0.9	0.9	3.160	A
4 - Ringland Circle	450	113	1254	571	0.788	450	361	3.5	3.6	29.562	D

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1663	416	659	2435	0.683	1663	1045	2.4	2.4	5.210	A
2 - Hartridge Farm Road	453	113	1726	1022	0.443	453	596	0.8	0.8	6.384	A
3 - SDR South	1075	269	540	2403	0.447	1075	1639	0.9	0.9	3.160	A
4 - Ringland Circle	450	113	1254	571	0.788	450	361	3.6	3.6	29.616	D

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1663	416	659	2435	0.683	1663	1045	2.4	2.4	5.210	A
2 - Hartridge Farm Road	453	113	1726	1022	0.443	453	596	0.8	0.8	6.384	A
3 - SDR South	1075	269	540	2403	0.447	1075	1639	0.9	0.9	3.160	A
4 - Ringland Circle	450	113	1254	571	0.788	450	361	3.6	3.6	29.667	D

2036 | Forecast + Development (Flat) | 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	Ringland Circle/A48	Standard Roundabout		1, 2, 3, 4	4.37	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.37	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D18	2036	Forecast + Development (Flat)	PM	FLAT	16:00	17:30	90	15	✓

Demand overview (Traffic)

Am	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - SDR North		FLAT	✓	1107	100.000
2 - Hartridge Farm Road		FLAT	✓	96	100.000
3 - SDR South		FLAT	✓	1433	100.000
4 - Ringland Circle		FLAT	✓	319	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
From	1 - SDR North	78	32	908	89
	2 - Hartridge Farm Road	56	0	37	3
	3 - SDR South	1154	26	2	251
	4 - Ringland Circle	96	7	215	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To				
From		1 - SDR North	2 - Hartridge Farm Road	3 - SDR South	4 - Ringland Circle
	1 - SDR North	0	8	13	0
	2 - Hartridge Farm Road	0	0	0	0
	3 - SDR South	9	0	0	1
	4 - Ringland Circle	0	0	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - SDR North	0.41	2.47	0.8	A	1107	1661
2 - Hartridge Farm Road	0.08	3.11	0.1	A	96	144
3 - SDR South	0.55	3.26	1.3	A	1433	2150
4 - Ringland Circle	0.59	16.30	1.4	C	319	479

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1107	277	247	2721	0.407	1104	1378	0.0	0.8	2.460	A
2 - Hartridge Farm Road	96	24	1286	1256	0.076	96	65	0.0	0.1	3.101	A
3 - SDR South	1433	358	226	2620	0.547	1428	1156	0.0	1.3	3.228	A
4 - Ringland Circle	319	80	1311	543	0.587	314	343	0.0	1.4	15.418	C

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1107	277	251	2719	0.407	1107	1384	0.8	0.8	2.471	A
2 - Hartridge Farm Road	96	24	1293	1253	0.077	96	65	0.1	0.1	3.111	A
3 - SDR South	1433	358	227	2619	0.547	1433	1162	1.3	1.3	3.255	A
4 - Ringland Circle	319	80	1316	541	0.589	319	344	1.4	1.4	16.268	C

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1107	277	251	2719	0.407	1107	1384	0.8	0.8	2.471	A
2 - Hartridge Farm Road	96	24	1293	1253	0.077	96	65	0.1	0.1	3.111	A
3 - SDR South	1433	358	227	2619	0.547	1433	1162	1.3	1.3	3.255	A
4 - Ringland Circle	319	80	1316	541	0.589	319	344	1.4	1.4	16.290	C

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1107	277	251	2719	0.407	1107	1384	0.8	0.8	2.471	A
2 - Hartridge Farm Road	96	24	1293	1253	0.077	96	65	0.1	0.1	3.111	A
3 - SDR South	1433	358	227	2619	0.547	1433	1162	1.3	1.3	3.255	A
4 - Ringland Circle	319	80	1316	541	0.589	319	344	1.4	1.4	16.296	C

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1107	277	251	2719	0.407	1107	1384	0.8	0.8	2.471	A
2 - Hartridge Farm Road	96	24	1293	1253	0.077	96	65	0.1	0.1	3.111	A
3 - SDR South	1433	358	227	2619	0.547	1433	1162	1.3	1.3	3.255	A
4 - Ringland Circle	319	80	1316	541	0.589	319	344	1.4	1.4	16.299	C

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - SDR North	1107	277	251	2719	0.407	1107	1384	0.8	0.8	2.471	A
2 - Hartridge Farm Road	96	24	1293	1253	0.077	96	65	0.1	0.1	3.111	A
3 - SDR South	1433	358	227	2619	0.547	1433	1162	1.3	1.3	3.255	A
4 - Ringland Circle	319	80	1316	541	0.589	319	344	1.4	1.4	16.301	C

Appendix J Left in Left Out Compliance Report



Making Sustainability Happen