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3 August 2023
Ref 22379

Penrith City Council
PO Box 60
PENRITH NSW 2751

Attn: Ms Wendy Connell
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Dear Wendy,

DA22/1086
NORTH PENRITH (THORNTON ESTATE) PRECINCT
160-172 LORD SHEFFIELD CIRCUIT, PENRITH
CUMULATIVE FUTURE DAILY TRAFFIC ASSESSMENT WITHIN THORNTON PRECINCT

Introduction

As requested, we have undertaken a review of the future traffic activity that could reasonably be expected to occur within the (*Thornton Estate)* Precinct once the surrounding area's redevelopment is complete.

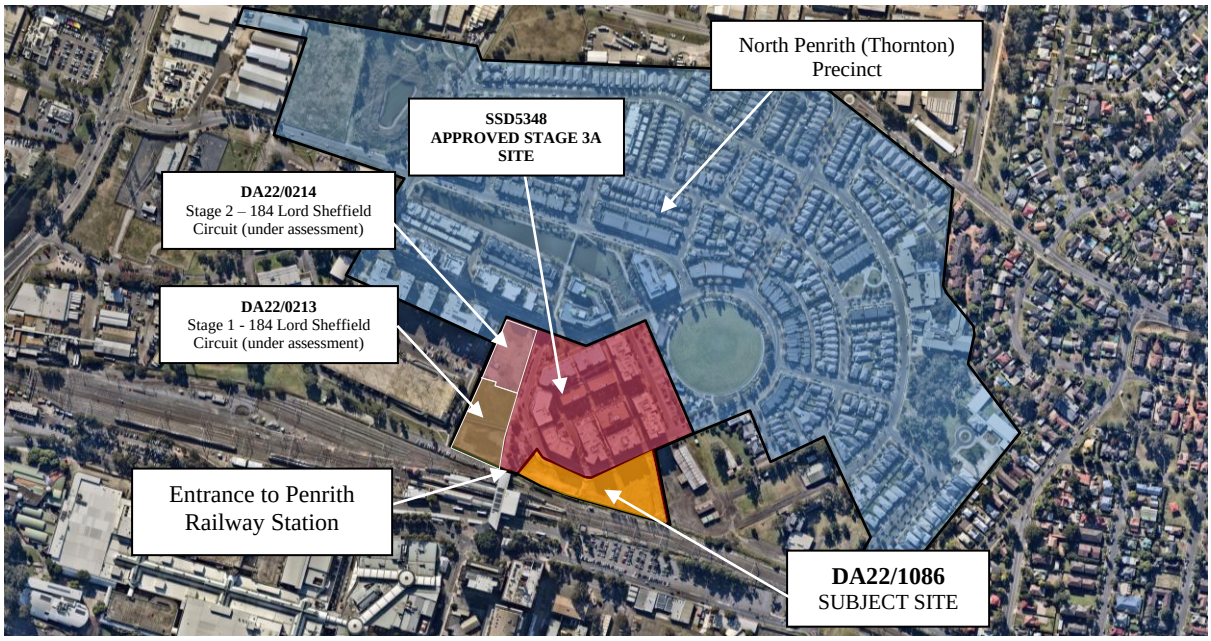
To help inform the assessment, we downloaded and reviewed *all* the developments located within the Precinct, noting all these precinct developments have since been built and occupied, with the *exception* of the subject application site and the adjoining sites located at 184 Lord Sheffield Circuit, which is to be built in 2 stages (Stage 1 – DA22/0213 & Stage 2 – DA22/0214).

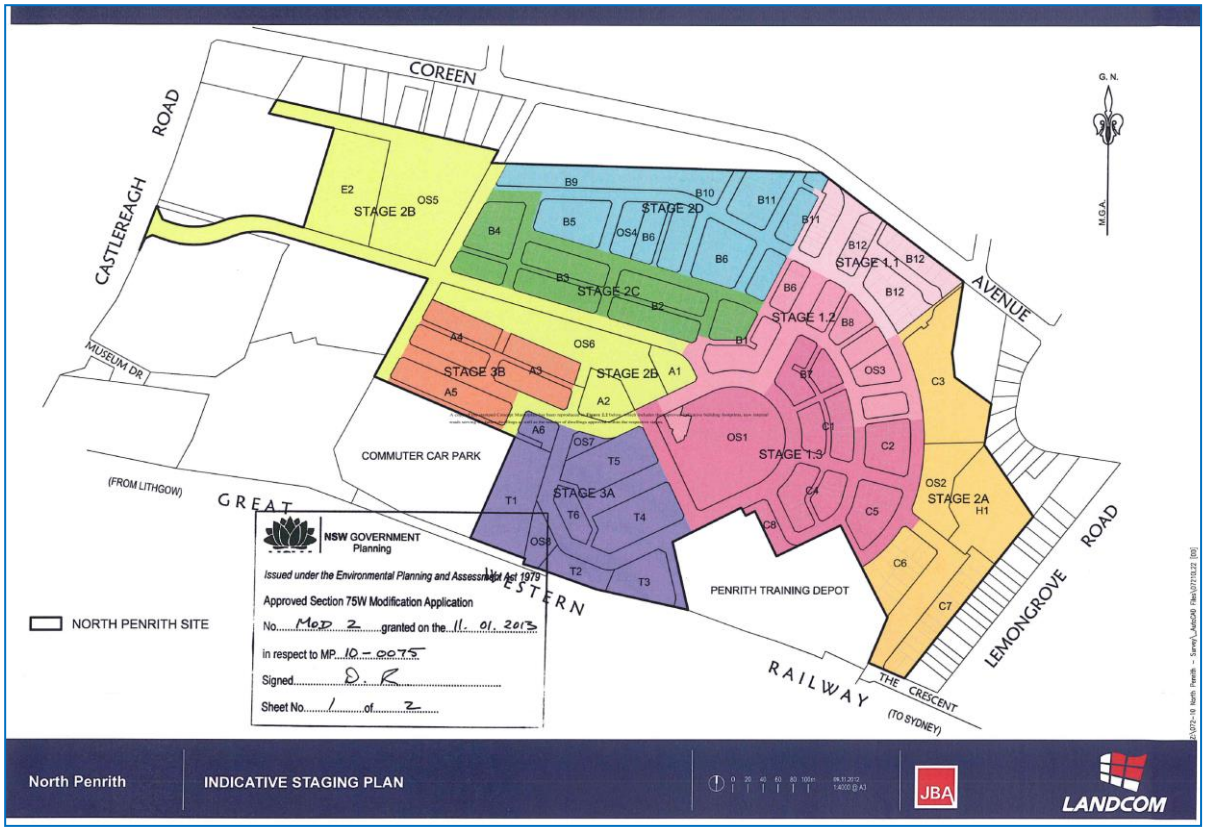
The remaining development sites located within the Thornton Estate Precinct (which are currently under assessment with Council), and its associated yields/traffic studies include:

- 160-172 Lord Sheffield Circuit – i.e. subject site (Varga Traffic Planning – November 2022)
  - 287 apartments across 2 x 8-storey tower buildings
  - ~5,353m^2 of commercial office space
  - ~1,793m^2 of retail space
  - basement car park, accessed via Lord Sheffield Circuit
- 184 Lord Sheffield Circuit – Stage 1 (Stantec Australia – November 2021)
  - 333 apartments
  - ~1,479m^2 of commercial/childcare/medical space
  - ~1,627m^2 of supermarket space
  - ~1,116m^2 of retail space
  - above ground & basement car park accessed via southern end of Dunshea Street (left-in/left-out)
- 184 Lord Sheffield Circuit – Stage 2 (Stantec Australia – November 2021)
  - 256 apartments
  - ~489m^2 of commercial office space
  - ~637m^2 of supermarket space
  - above ground & basement car park accessed via northern end of Dunshea Street.

These remaining development sites (which are yet to be developed) are located within the southern and western boundaries of the Stage 3A *approved* Concept Masterplan (MP10-0075), which are in direct proximity of the Penrith railway station entrance.

A recent aerial image of the above sites and its surroundings as well as the stamped *approved* indicative staging of the precinct are reproduced below.





Public Transport

Penrith railway station is a major station located on the T1 North Shore & Western Line operating between Berowra to the City and Emu Plains to Chatswood via the City. Train services typically arrive/depart the station at 5-10 minute intervals during the commuter peak periods and 15 minute intervals during the day.

Furthermore, the *'Greater Sydney Region Plan: A Metropolis of Three Cities"* document envisages Penrith as a future CBD centre. The goal of the NSW Government is ultimately to allow residents to live within 30 minutes commute of their jobs, education and health facilities, services and other key places, including jobs within the Penrith City Centre.

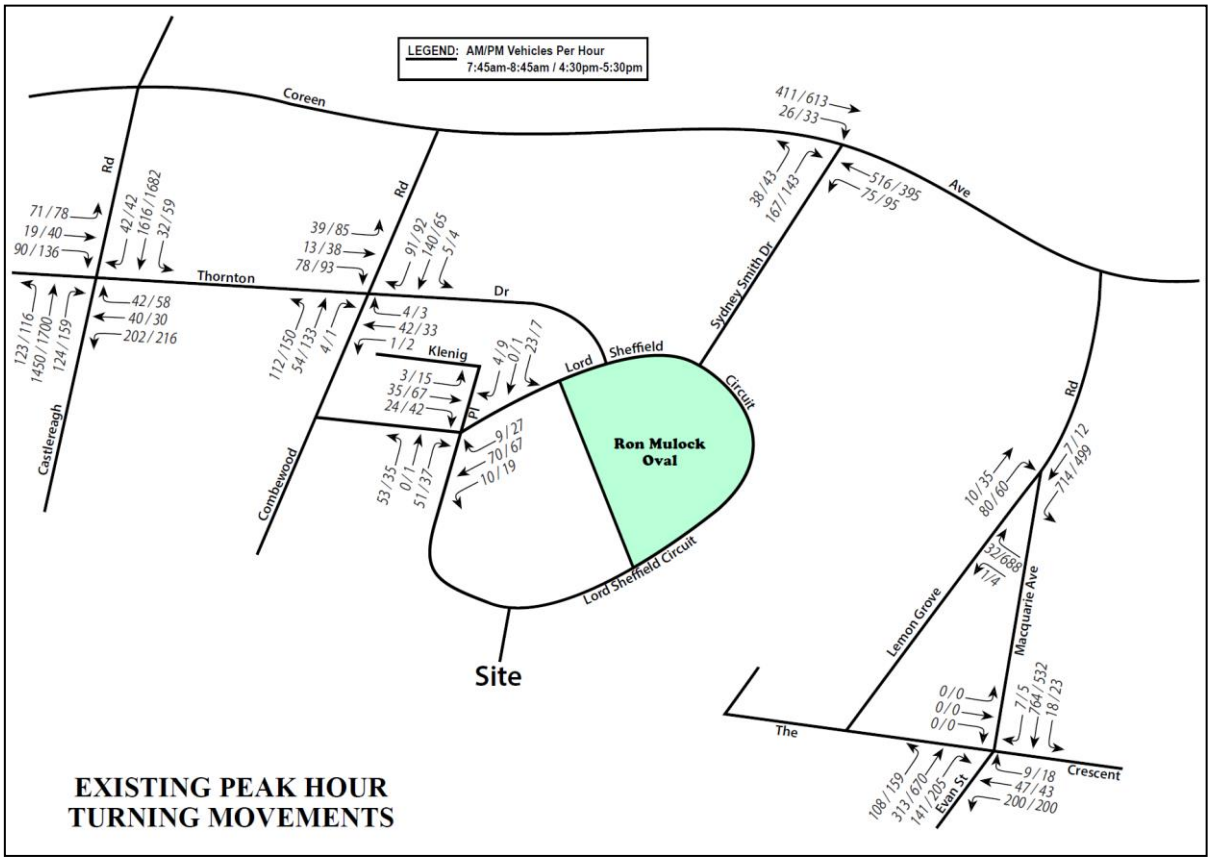
Existing Traffic Conditions

An indication of the existing traffic conditions on the road network in the vicinity of the site is provided by peak period traffic surveys undertaken as part of this traffic study, as requested by Council in their letter addressed to the Applicant dated 5th May 2023.

The traffic surveys were undertaken at the 6 surrounding intersections, as recommended by Council located around the perimeter of the site, on Thursday 11th May 2023, as follows:

- Thornton Drive-Combewood Avenue
- Castlereagh Road-Thornton Drive (Peachtree Road)
- Coreen Avenue-Sydney Smith Drive
- Lord Sheffield Circuit-Kleinig Place
- Evan Street-The Crescent-Macquarie Avenue
- Lemongrove Road-Macquarie Avenue

The weekday AM peak period occurred between 7:45am-8:45am whilst the PM peak period occurred between 4:30pm-5:30pm. The results of the traffic surveys are reproduced in full in **Appendix A** and are summarised in the diagram below.



Traffic Assessment

An indication of the cumulative traffic generation potential of the subject site *and* the surrounding undeveloped sites is provided by reference to the Roads and Maritime Services publication *Guide to Traffic Generating Developments, Section 3 - Landuse Traffic Generation (October 2002)* and the updated traffic generation rates in the RMS *Technical Direction* (TDT 2013/04a) document.

The RMS *Guidelines* and the updated TDT 2013/04a are based on extensive surveys of a wide range of land uses and nominate the following traffic generation rates which are applicable to the various developments:

Office Blocks
AM: 1.6 peak hour vehicle trips per 100m^2 GFA
PM: 1.2 peak hour vehicle trips per 100m^2 GFA

High Density Residential Flat Dwellings
AM: 0.19 peak hour vehicle trips unit
PM: 0.15 peak hour vehicle trips unit

Despite the above traffic generation rates nominated in the RMS *Guidelines* and the TDT 2013/04a, Council has requested the traffic generation rates to be assessed in accordance with the Penrith CBD Transport Model, which are as follows:

Traffic Generation Rates (peak hour vehicle trips)				
Land Use	**RMS Sydney Average Rate**		**Council Recommended Rate**	
	AM	**PM**	**AM**	**PM**
Residential	0.19 peak trips per dwelling	0.15 peak trips per dwelling	0.33 peak trips per dwelling	0.33 peak trips per dwelling
Retail (Shops)	1.6 peak trips per 100m² GFA	1.2 peak trips per 100m² GFA	3.1 peak trips per 100m²	3.1 peak trips per 100m²
Office Blocks	1.6 peak trips per 100m² GFA	1.2 peak trips per 100m² GFA	1.6 peak trips per 100m² GFA	1.2 peak trips per 100m² GFA

In our opinion, the above Council recommended rates for both the residential and retail components are *onerous* and highly unrealistic. Whilst the above rates may be applicable for developments not located within easy walking distance of a railway station, it should not be applied to sites located in the immediate walking distance of a railway station – i.e. a blanket LGA-wide traffic generation rate should not be applied.

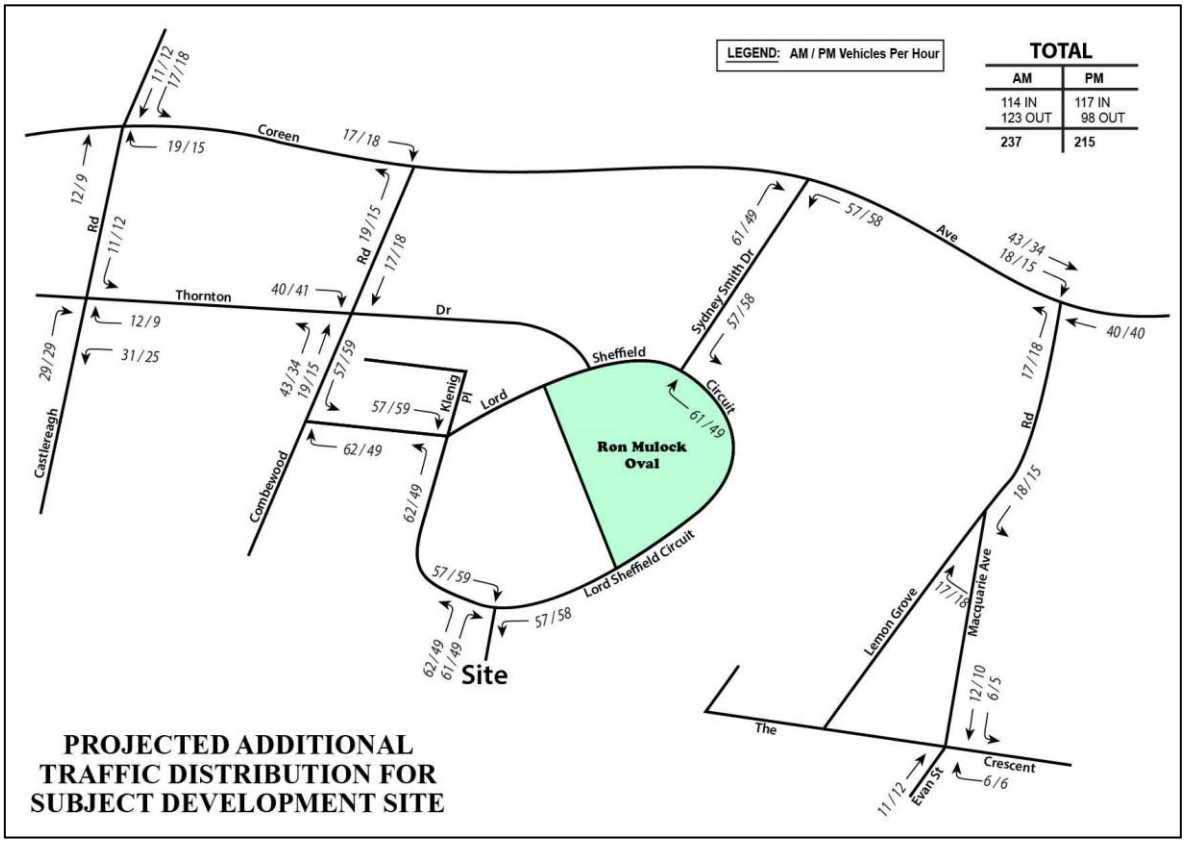
Couple this with the rapid rise in people choosing to work-from-home as a consequence of Covid-19, and it is therefore expected that the *actual* traffic generation potential of the various residential and retail component outlined in the DA will be in line with the current Sydney average rates as noted above, or potentially *even less.*

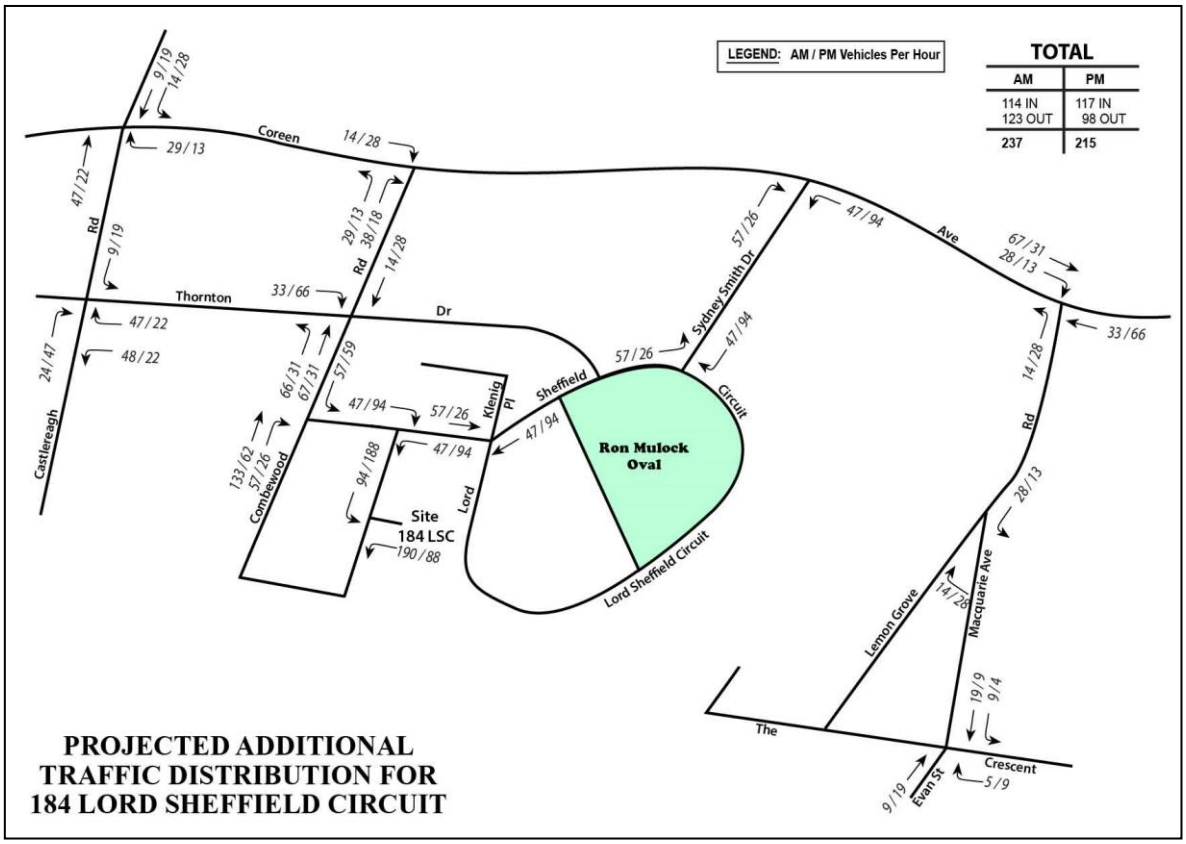
Nevertheless, application of the above 'Council recommended' traffic generation rates to the various components on the remaining development sites (which includes the known approved developments) located within the Precinct yields a traffic generation potential of 518 vph during the AM commuter peak period and 489 vph during the PM commuter peak period, as set out below:

Cumulative Peak Hour Traffic Generation Potential of remaining development sites in the Thornton Estate Precinct					
Site	**Unit/floor space**	**Council Recommended Traffic Generation Rate**		**Projected Future Traffic Generation Potential**	
		AM	**PM**	**AM**	**PM**
160-172 Lord Sheffield Circuit	287 units	0.33/unit	0.33/unit	94.7 vph	94.7 vph
	5,353m^2 commercial	1.6/100m^2	1.2/100m^2	85.6 vph	64.2 vph
	1,793m^2 retail	3.1/100m^2	3.1/100m^2	55.6 vph	55.6 vph
	Sub-Total:			**235.9 vph**	**214.5 vph**
Stage 1 - 184 Lord Sheffield Circuit	333 units	0.33/unit	0.33/unit	109.9 vph	109.9 vph
	1,627m^2 commercial	1.6/100m^2	1.2/100m^2	26.0 vph	19.5 vph
	1,116m^2 retail	3.1/100m^2	3.1/100m^2	34.6 vph	34.6 vph
	Sub-Total:			**170.5 vph**	**164.0 vph**
Stage 2 - 184 Lord Sheffield Circuit	256 units	0.33/unit	0.33/unit	84.5 vph	84.5 vph
	489m^2 commercial	1.6/100m^2	1.2/100m^2	7.8 vph	5.9 vph
	637m^2 retail	3.1/100m^2	3.1/100m^2	19.7 vph	19.7 vph
	Sub-Total:			**112.0 vph**	**110.1 vph**
TOTAL TRAFFIC GENERATION POTENTIAL:				**518.4 vph**	**488.6 vph**

All the projected future traffic flows of 518 vph during the AM commuter peak period and 489 vph during the PM commuter peak period will be new or *additional* to the existing traffic flows currently using the adjacent road network, noting the traffic flows capture *all* approved and constructed developments within the Thornton Estate.

The distribution of those volumes (for the remaining development sites within the Precinct) onto the surrounding road network are summarised on the diagrams below, with the volumes separated for the subject development site and the remaining sites located at 184 Lord Sheffield Circuit.





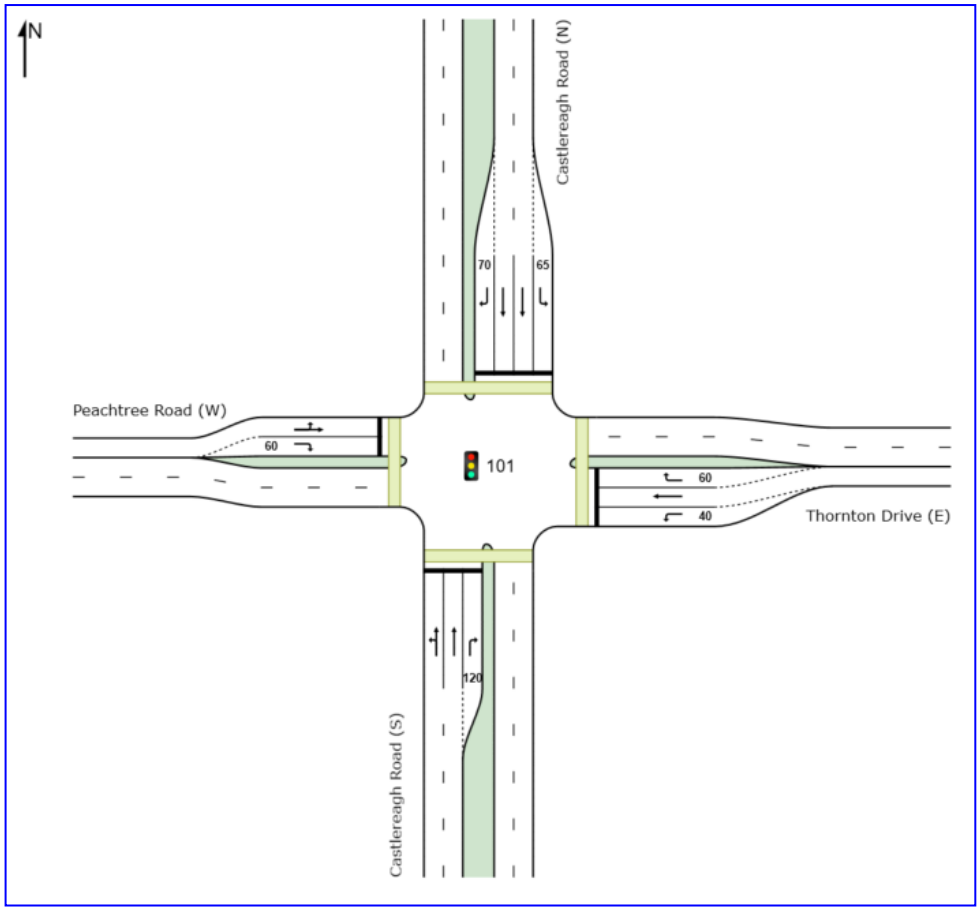
In this regard, it is pertinent to note that the traffic surveys undertaken as part of this assessment *included* the traffic volumes associated with all the completed development sites located within the *Thornton Estate* Precinct, with the completion of the last development since May 2022, and all developments currently being occupied.

That projected increase in the traffic generation potential of the remaining development sites – including the subject site – within the Precinct as a consequence of the development proposals will not have any unacceptable traffic implications in terms of road network capacity, nor will any further road or infrastructure upgrades be required, over and above the already planned TfNSW upgrades, as is demonstrated by the following section of this report.

Intersection Operation

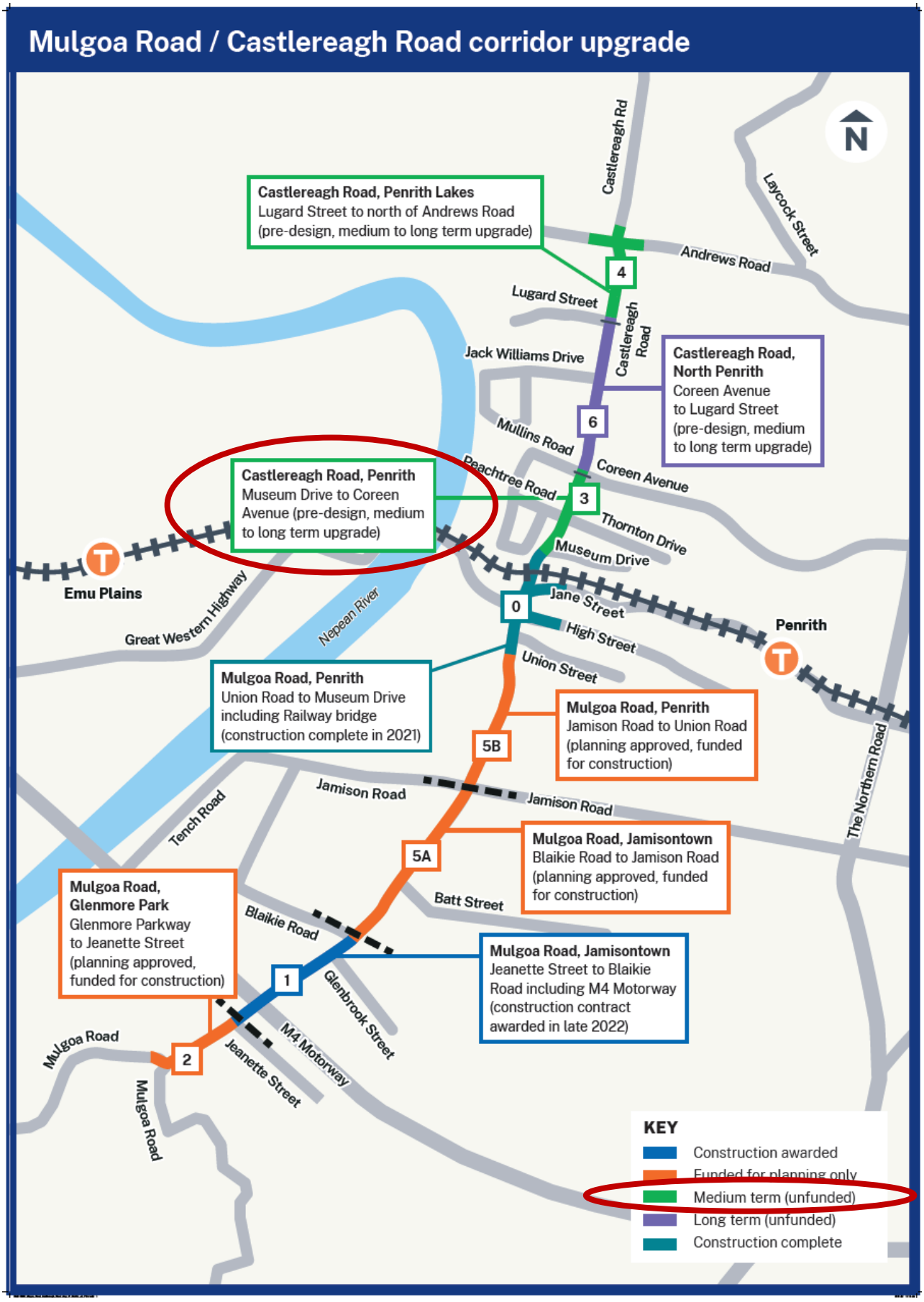
Transport for NSW is upgrading 6.5 kilometres of the Mulgoa Road/Castlereagh Road corridor between Glenmore Parkway, Glenmore Park and Andrews Road, Penrith. Mulgoa Road is a main access route from Penrith to the M4 Motorway and connects the Penrith community, including its central business district, with other parts of greater Sydney. The upgraded road would improve road safety, reduce congestion and improve travel times.

Upgrades between Union Road and Museum Drive have already been completed. Future upgrades would be delivered in stages, subject to available funding and priorities and includes both the intersections along Castlereagh Road, Thornton Drive and Coreen Avenue. The existing intersection layout adopted in the SIDRA analysis for the Castlereagh Road and Thornton Drive intersection is shown in the figure below.



As the existing intersection was typically operating near capacity during the weekday *afternoon* commuter peak period (*even without* the remaining development traffic), TfNSW had already planned future upgrades for this intersection to accommodate three through lanes in each direction on Castlereagh Road along with slip lanes into Peachtree Road and Thornton Drive, while buses along Castlereagh Road will be given priority at the intersection.

This intersection is identified as a ‘medium term’ upgrade, as illustrated on the staging map of the Mulgoa Road / Castlereagh Road corridor upgrade plan reproduced below.



A diagram of the TfNSW planned intersection upgrade to the Castlereagh Road and Thornton Drive/Peachtree Road signalised intersection is also reproduced below.

Source: *https://caportal.com.au/rms/mulgoa#id=undefined&ct=15&pj=24* (accessed on 1st August 2023)

Traffic Implications - Road Network Capacity

The traffic implications of development proposals primarily concern the effects that any *additional* traffic flows may have on the operational performance of the nearby road network.

Those effects can be assessed using the SIDRA program which is widely used by TfNSW and many LGA's for this purpose. Criteria for evaluating the results of the analysis are reproduced in the following pages.

The results of the SIDRA capacity analysis of the 6 intersections surrounding the developments, *plus* the subject site's proposed access driveway off Lord Sheffield Road, are summarised on the table on the following pages. The individual movement summaries of these intersections are reproduced in **Appendix B.**

The tables have been separated for a 'Base Case', a 'without development' and a 'with development' scenario, with the future years applying a background traffic growth rate of 2% to the assessments, in accordance with Council's requirements.

This will allow us to better understand and to distinguish the potential traffic implications as a result of the background traffic growth, and consideration of the subsequent cumulative impacts of the remaining developments to be developed within the Precinct.

In essence, the capacity analysis has found that majority of the intersections will continue to operate at the same *Levels of Service* as the existing scenarios and/or operating within satisfactory LoS, with *negligible* increases in average vehicle delays, in accordance with the RMS *Guidelines*, with the *exception* of the Castlereagh Road / Thornton Drive signalised intersection and the Evan Street / The Crescent / Macquarie Avenue round-a-bout.

Current Intersection Performance in 2023 (Base Case)					
Intersection	**Approach**	**Existing Traffic Volumes**			
		Delay (s)	**No. of Vehicles**	**Degree of Saturation**	**Level of Service**
2023 AM PEAK (EXISTING TRAFFIC DEMAND)					
Thornton Drive / Combewood Avenue	Combewood Avenue (S)	3.2	173	0.093	A
	Thornton Drive (E)	9.8	49	0.067	A
	Combewood Avenue (N)	2.4	241	0.140	A
	Thornton Drive (W)	9.5	134	0.175	A
	Intersection	**4.8**	**597**	**0.175**	**A**
Castlereagh Road / Thornton Drive	Castlereagh Road (S)	29.1	1697	0.819	C
	Thornton Drive (E)	49.9	284	0.437	D
	Castlereagh Road (N)	25.7	1690	0.826	B
	Peachtree Road (W)	53.8	180	0.560	D
	Intersection	**30.3**	**3851**	**0.826**	**C**
Coreen Avenue / Sydney Smith Drive	Sydney Smith Drive (S)	9.9	206	0.249	A
	Coreen Avenue (E)	4.0	609	0.409	A
	Coreen Avenue (W)	5.2	441	0.394	A
	Intersection	**5.4**	**1256**	**0.409**	**A**
Lord Sheffield Circuit / Kleinig Place	Lord Sheffield Circuit (S)	5.1	105	0.090	A
	Lord Sheffield Circuit (E)	1.0	89	0.048	A
	Kleinig Place (N)	4.8	28	0.020	A
	Lord Sheffield Circuit (W)	2.2	62	0.034	A
	Intersection	**3.1**	**284**	**0.090**	**A**
Evan Street/The Crescent/Macquarie Avenue	Evan Street (S)	5.1	577	0.436	A
	The Crescent (E)	12.9	264	0.470	A
	Macquarie Avenue (N)	5.3	805	0.660	A
	Intersection	**6.5**	**1646**	**0.660**	**A**
Lemongrove Road / Macquarie Avenue	Macquarie Avenue (S)	0.1	322	0.165	A
	Macquarie Avenue (N)	0.1	734	0.383	A
	Lemongrove Road (W)	13.0	82	0.227	A
	Intersection	**1.0**	**1138**	**0.383**	**A**
Lord Sheffield Circuit / Proposed Site Access Driveway	Site Access Driveway (S)	-	-	-	-
	Lord Sheffield Circuit (E)	-	-	-	-
	Lord Sheffield Circuit (W)	-	-	-	-
	Intersection	-	-	-	-
2023 PM PEAK (EXISTING TRAFFIC DEMAND)					
Thornton Drive / Combewood Avenue	Combewood Avenue (S)	2.4	287	0.152	A
	Thornton Drive (E)	9.6	38	0.052	A
	Combewood Avenue (N)	3.7	162	0.104	A
	Thornton Drive (W)	9.4	219	0.266	A
	Intersection	**5.3**	**706**	**0.266**	**A**
Castlereagh Road / Thornton Drive	Castlereagh Road (S)	31.3	1975	0.867	C
	Thornton Drive (E)	47.9	304	0.421	D
	Castlereagh Road (N)	31.8	1783	0.867	C
	Peachtree Road (W)	60.9	254	0.815	E
	Intersection	**34.4**	**4316**	**0.867**	**C**
Coreen Avenue / Sydney Smith Drive	Sydney Smith Drive (S)	8.9	187	0.209	A
	Coreen Avenue (E)	4.3	511	0.373	A
	Coreen Avenue (W)	5.4	678	0.564	A
	Intersection	**5.5**	**1376**	**0.564**	**A**
Lord Sheffield Circuit / Kleinig Place	Lord Sheffield Circuit (S)	5.2	73	0.065	A
	Lord Sheffield Circuit (E)	2.0	113	0.061	A
	Kleinig Place (N)	5.2	17	0.016	A
	Lord Sheffield Circuit (W)	2.3	124	0.069	A
	Intersection	**3.0**	**327**	**0.069**	**A**
Evan Street/The Crescent/Macquarie Avenue	Evan Street (S)	5.4	1049	0.756	A
	The Crescent (E)	8.4	266	0.358	A
	Macquarie Avenue (N)	5.6	572	0.525	A
	Intersection	**5.9**	**1887**	**0.756**	**A**
Lemongrove Road / Macquarie Avenue	Macquarie Avenue (S)	0.2	705	0.366	A
	Macquarie Avenue (N)	0.5	521	0.281	A
	Lemongrove Road (W)	15.6	61	0.212	B
	Intersection	**1.1**	**1287**	**0.366**	**B**
Lord Sheffield Circuit / Proposed Site Access Driveway	Site Access Driveway (S)	-	-	-	-
	Lord Sheffield Circuit (E)	-	-	-	-
	Lord Sheffield Circuit (W)	-	-	-	-
	Intersection	-	-	-	-

Intersection Performance in 2026 under Modelled Scenarios (Opening Year)

Intersection	Approach	Background Growth Traffic Volumes Only				Background Growth + Development			
		Delay (s)	No. of Vehicles	Degree of Saturation	Level of Service	Delay (s)	No. of Vehicles	Degree of Saturation	Level of Service
2026 AM PEAK (FUTURE OPENING YEAR TRAFFIC DEMAND)									
Thornton Drive / Combewood Avenue	Combewood Avenue (S)	3.2	184	0.099	A	2.8	391	0.208	A
	Thornton Drive (E)	10.0	52	0.073	A	12.3	52	0.100	A
	Combewood Avenue (N)	2.4	256	0.150	A	3.0	289	0.183	A
	Thornton Drive (W)	9.7	142	0.191	A	13.2	220	0.397	A
	Intersection	**4.9**	**634**	**0.191**	**A**	**5.8**	**951**	**0.397**	**A**
Castlereagh Road / Thornton Drive	Castlereagh Road (S)	38.0	1801	0.881	C	31.1	1857	0.947	C
	Thornton Drive (E)	50.0	301	0.471	D	48.7	448	0.579	D
	Castlereagh Road (N)	35.7	1793	0.889	C	50.3	1815	0.937	D
	Peachtree Road (W)	52.9	191	0.573	D	56.0	191	0.789	D
	Intersection	**38.6**	**4087**	**0.889**	**C**	**42.1**	**4311**	**0.947**	**C**
Coreen Avenue / Sydney Smith Drive	Sydney Smith Drive (S)	10.2	219	0.272	A	11.1	344	0.427	A
	Coreen Avenue (E)	4.0	646	0.435	A	4.1	757	0.505	A
	Coreen Avenue (W)	5.3	468	0.424	A	6.5	468	0.494	A
	Intersection	**5.5**	**1333**	**0.435**	**A**	**6.3**	**1568**	**0.505**	**A**
Lord Sheffield Circuit / Kleinig Place	Lord Sheffield Circuit (S)	5.1	111	0.096	A	5.5	177	0.154	A
	Lord Sheffield Circuit (E)	1.0	94	0.051	A	0.7	144	0.077	A
	Kleinig Place (N)	4.8	30	0.021	A	5.2	30	0.024	A
	Lord Sheffield Circuit (W)	2.2	66	0.037	A	5.0	187	0.107	A
	Intersection	**3.2**	**301**	**0.096**	**A**	**3.2**	**538**	**0.154**	**A**
Evan Street/The Crescent/Macquarie Avenue	Evan Street (S)	5.2	612	0.465	A	5.2	632	0.490	A
	The Crescent (E)	15.5	280	0.542	B	18.2	291	0.601	B
	Macquarie Avenue (N)	5.6	854	0.707	A	5.7	900	0.744	A
	Intersection	**7.0**	**1747**	**0.707**	**B**	**7.5**	**1824**	**0.744**	**B**
Lemongrove Road / Macquarie Avenue	Macquarie Avenue (S)	0.1	342	0.175	A	0.1	375	0.192	A
	Macquarie Avenue (N)	0.1	779	0.406	A	0.1	828	0.431	A
	Lemongrove Road (W)	14.8	87	0.270	B	17.4	87	0.313	B
	Intersection	**1.2**	**1208**	**0.406**	**B**	**1.3**	**1289**	**0.431**	**B**
Lord Sheffield Circuit / Proposed Site Access Driveway	Site Access Driveway (S)					8.0	133	0.123	A
	Lord Sheffield Circuit (E)					1.7	172	0.090	A
	Lord Sheffield Circuit (W)					3.4	98	0.059	A
	Intersection					**4.2**	**402**	**0.123**	**A**
2026 PM PEAK (FUTURE OPENING YEAR TRAFFIC DEMAND)									
Thornton Drive / Combewood Avenue	Combewood Avenue (S)	2.4	305	0.162	A	2.7	422	0.224	A
	Thornton Drive (E)	9.9	40	0.057	A	11.4	40	0.071	A
	Combewood Avenue (N)	3.7	172	0.112	A	3.6	221	0.147	A
	Thornton Drive (W)	9.6	232	0.290	A	14.1	346	0.556	A
	Intersection	**5.4**	**749**	**0.290**	**A**	**7.1**	**1029**	**0.556**	**A**
Castlereagh Road / Thornton Drive	Castlereagh Road (S)	47.2	2096	0.931	D	57.9	2181	0.986	E
	Thornton Drive (E)	47.3	323	0.438	D	46.9	410	0.507	D
	Castlereagh Road (N)	48.5	1892	0.935	D	95.6	1927	1.023	F
	Peachtree Road (W)	61.9	270	0.854	E	62.4	270	0.920	E
	Intersection	**48.6**	**4580**	**0.935**	**D**	**72.4**	**4787**	**1.023**	**F**
Coreen Avenue / Sydney Smith Drive	Sydney Smith Drive (S)	9.1	198	0.228	A	9.5	278	0.320	A
	Coreen Avenue (E)	4.3	542	0.397	A	4.4	704	0.508	A
	Coreen Avenue (W)	5.6	719	0.604	A	7.2	719	0.667	A
	Intersection	**5.6**	**1460**	**0.604**	**A**	**6.4**	**1701**	**0.667**	**A**
Lord Sheffield Circuit / Kleinig Place	Lord Sheffield Circuit (S)	5.3	77	0.069	A	5.7	129	0.119	A
	Lord Sheffield Circuit (E)	2.0	120	0.065	A	1.1	220	0.117	A
	Kleinig Place (N)	5.3	18	0.017	A	6.2	18	0.021	A
	Lord Sheffield Circuit (W)	2.3	132	0.073	A	3.1	222	0.132	A
	Intersection	**3.0**	**347**	**0.073**	**A**	**3.1**	**589**	**0.132**	**A**
Evan Street/The Crescent/Macquarie Avenue	Evan Street (S)	5.6	1113	0.807	A	6.0	1144	0.851	A
	The Crescent (E)	8.8	282	0.396	A	9.5	297	0.428	A
	Macquarie Avenue (N)	5.8	607	0.567	A	5.9	635	0.596	A
	Intersection	**6.1**	**2002**	**0.807**	**A**	**6.5**	**2076**	**0.851**	**A**
Lemongrove Road / Macquarie Avenue	Macquarie Avenue (S)	0.2	748	0.388	A	0.2	797	0.413	A
	Macquarie Avenue (N)	0.6	553	0.300	A	0.7	583	0.317	A
	Lemongrove Road (W)	18.2	65	0.257	B	21.4	65	0.299	B
	Intersection	**1.2**	**1366**	**0.388**	**B**	**1.4**	**1444**	**0.413**	**B**
Lord Sheffield Circuit / Proposed Site Access Driveway	Site Access Driveway (S)					7.9	106	0.097	A
	Lord Sheffield Circuit (E)					2.1	140	0.073	A
	Lord Sheffield Circuit (W)					2.6	128	0.074	A
	Intersection					**3.9**	**375**	**0.097**	**A**

Intersection Performance in 2036 under Modelled Scenarios (10 Year Post)

Intersection	Approach	Background Growth Traffic Volumes Only				Background Growth + Development			
		Delay (s)	No. of Vehicles	Degree of Saturation	Level of Service	Delay (s)	No. of Vehicles	Degree of Saturation	Level of Service
2036 AM PEAK (FUTURE OPENING YEAR TRAFFIC DEMAND)									
Thornton Drive / Combewood Avenue	Combewood Avenue (S)	3.2	224	0.121	A	2.9	476	0.254	A
	Thornton Drive (E)	10.9	63	0.101	A	14.6	63	0.153	B
	Combewood Avenue (N)	2.6	312	0.186	A	3.5	352	0.235	A
	Thornton Drive (W)	10.6	173	0.260	A	17.6	268	0.580	A
	Intersection	**5.2**	**772**	**0.260**	**A**	**7.1**	**1159**	**0.580**	**A**
Castlereagh Road / Thornton Drive	Castlereagh Road (S)	145.5	2195	1.088	F	115.4	2264	1.154	F
	Thornton Drive (E)	48.5	367	0.541	D	49.8	546	0.699	D
	Castlereagh Road (N)	145.4	2186	1.095	F	190.8	2212	1.154	F
	Peachtree Road (W)	57.8	233	0.816	E	60.0	233	0.876	E
	Intersection	**134.2**	**4982**	**1.095**	**F**	**137.9**	**5255**	**1.154**	**F**
Coreen Avenue / Sydney Smith Drive	Sydney Smith Drive (S)	11.7	266	0.374	A	15.8	419	0.593	B
	Coreen Avenue (E)	4.1	788	0.535	A	4.2	922	0.621	A
	Coreen Avenue (W)	5.9	570	0.541	A	9.4	570	0.653	A
	Intersection	**6.0**	**1625**	**0.541**	**A**	**8.3**	**1912**	**0.653**	**B**
Lord Sheffield Circuit / Kleinig Place	Lord Sheffield Circuit (S)	5.3	136	0.121	A	5.8	216	0.199	A
	Lord Sheffield Circuit (E)	1.0	115	0.062	A	0.7	176	0.094	A
	Kleinig Place (N)	4.8	36	0.026	A	5.3	36	0.030	A
	Lord Sheffield Circuit (W)	2.2	80	0.045	A	2.7	228	0.132	A
	Intersection	**3.2**	**367**	**0.121**	**A**	**3.3**	**656**	**0.199**	**A**
Evan Street/The Crescent/Macquarie Avenue	Evan Street (S)	5.4	746	0.577	A	5.4	766	0.595	A
	The Crescent (E)	121.2	342	1.045	F	196.7	353	1.150	F
	Macquarie Avenue (N)	11.5	1041	0.894	A	14.8	1087	0.932	B
	Intersection	**27.0**	**2129**	**1.045**	**F**	**40.6**	**2206**	**1.150**	**F**
Lemongrove Road / Macquarie Avenue	Macquarie Avenue (S)	0.1	417	0.214	A	0.1	457	0.234	A
	Macquarie Avenue (N)	0.1	950	0.496	A	0.2	1009	0.527	A
	Lemongrove Road (W)	28.0	106	0.536	B	39.7	106	0.667	C
	Intersection	**2.1**	**1472**	**0.536**	**B**	**2.8**	**1572**	**0.667**	**C**
Lord Sheffield Circuit / Proposed Site Access Driveway	Site Access Driveway (S)					8.2	162	0.156	A
	Lord Sheffield Circuit (E)					1.7	210	0.109	A
	Lord Sheffield Circuit (W)					3.5	119	0.074	A
	Intersection					**4.3**	**490**	**0.156**	**A**
2036 PM PEAK (FUTURE OPENING YEAR TRAFFIC DEMAND)									
Thornton Drive / Combewood Avenue	Combewood Avenue (S)	2.4	371	0.197	A	2.7	515	0.273	A
	Thornton Drive (E)	10.8	49	0.079	A	13.2	49	0.106	A
	Combewood Avenue (N)	4.1	210	0.143	A	4.2	269	0.191	A
	Thornton Drive (W)	11.2	283	0.391	A	21.8	422	0.795	B
	Intersection	**6.0**	**913**	**0.391**	**A**	**9.8**	**1255**	**0.795**	**B**
Castlereagh Road / Thornton Drive	Castlereagh Road (S)	249.9	2555	1.213	F	250.0	2658	1.273	F
	Thornton Drive (E)	47.2	393	0.545	D	46.6	499	0.610	D
	Castlereagh Road (N)	231.8	2307	1.206	F	288.8	2349	1.281	F
	Peachtree Road (W)	56.7	329	0.857	E	65.2	329	0.945	E
	Intersection	**216.7**	**5583**	**1.213**	**F**	**237.8**	**5835**	**1.281**	**F**
Coreen Avenue / Sydney Smith Drive	Sydney Smith Drive (S)	10.1	242	0.307	A	11.0	339	0.436	A
	Coreen Avenue (E)	4.5	661	0.495	A	4.7	858	0.634	A
	Coreen Avenue (W)	7.9	877	0.766	A	14.0	877	0.862	A
	Intersection	**6.9**	**1780**	**0.766**	**A**	**9.6**	**2074**	**0.862**	**A**
Lord Sheffield Circuit / Kleinig Place	Lord Sheffield Circuit (S)	5.5	94	0.088	A	6.1	158	0.156	A
	Lord Sheffield Circuit (E)	2.1	146	0.080	A	1.2	268	0.143	A
	Kleinig Place (N)	5.5	22	0.022	A	6.8	22	0.028	A
	Lord Sheffield Circuit (W)	2.4	160	0.090	A	3.3	270	0.164	A
	Intersection	**3.1**	**423**	**0.090**	**A**	**3.2**	**718**	**0.164**	**A**
Evan Street/The Crescent/Macquarie Avenue	Evan Street (S)	20.5	1357	1.006	B	61.1	1388	1.055	E
	The Crescent (E)	14.3	344	0.601	A	16.1	359	0.646	B
	Macquarie Avenue (N)	8.8	740	0.742	A	8.8	768	0.756	A
	Intersection	**16.0**	**2441**	**1.006**	**B**	**38.7**	**2515**	**1.055**	**C**
Lemongrove Road / Macquarie Avenue	Macquarie Avenue (S)	0.2	912	0.473	A	0.3	971	0.504	A
	Macquarie Avenue (N)	1.1	674	0.374	A	1.4	710	0.398	A
	Lemongrove Road (W)	39.2	79	0.562	C	58.3	79	0.706	E
	Intersection	**2.5**	**1665**	**0.562**	**C**	**3.3**	**1761**	**0.706**	**E**
Lord Sheffield Circuit / Proposed Site Access Driveway	Site Access Driveway (S)					8.2	129	0.126	A
	Lord Sheffield Circuit (E)					1.7	211	0.110	A
	Lord Sheffield Circuit (W)					3.6	122	0.075	A
	Intersection					**4.0**	**462**	**0.126**	**A**

The results of the Castlereagh Road and Thornton Drive signalised intersection, *without* development traffic, are summarised below, revealing that:

- the *existing* Castlereagh Road and Thornton Drive intersection currently operates at *Level of Service "C"* under the existing traffic demands, with a total average vehicle delay in the order of 30.3 seconds/vehicle and 34.4 seconds/vehicle, respectively for the AM and PM peak periods

- under the projected 'Future Year 2026', the *existing* intersection layout is expected to operate at *Level of Service "C",* with increases in average vehicle delays in the order of 8.3 seconds/vehicle, and at a *Level of Service "D"* during the PM peak period, with increases in average vehicle delays in the order of 14.2 seconds/vehicle

- under the projected 'Future Year 2036', the *existing* intersection layout is expected to operate at *Level of Service "F",* with increases in average vehicle delays in the order of 103.9 seconds/vehicle and 182.3 seconds/vehicle, respectively, for both the AM and PM peak periods.

The results of the Evan Street and The Crescent/Macquarie Avenue roundabout intersection, *without* development traffic, are also summarised below, revealing that:

- the *existing* Evan Street and The Crescent/Macquarie Avenue intersection currently operates at *Level of Service "A"* under the existing traffic demands, with a total average vehicle delay in the order of 6.5 seconds/vehicle and 5.9 seconds/vehicle, respectively for the AM and PM peak periods

- under the projected 'Future Year 2026', the *existing* intersection layout is expected to operate at *Level of Service "B",* with increases in average vehicle delays in the order of 0.5 seconds/vehicle, and at a *Level of Service "A"* during the PM peak period, with increases in average vehicle delays in the order of 0.2 seconds/vehicle

- under the projected 'Future Year 2036', the *existing* intersection layout is expected to operate at *Level of Service "F",* with increases in average vehicle delays in the order of 20.5 seconds/vehicle, and at a *Level of Service "B"* during the PM peak period, with increases in average vehicle delays in the order of 10.1 seconds/vehicle.

It is also pertinent to note that whilst the Average Vehicle Delay (AVD) provides a measure of the operational performance of an intersection and in turn determines the LoS when applying the Roads and Maritime method, the target Degree of Saturation (DoS) is another measure to consider when assessing the operational performance of intersections.

In practice, the target degrees of saturation of 0.90 for signals, 0.85 for roundabouts and 0.80 for unsignalised intersections are generally agreed to, as specified in Section 4.2.4 of the Austroads publication, *Guide to Traffic Management Part 3: Transport Study and Analysis Methods*.

The result of the signalised intersection is observed to reach a *Degree of Saturation* of 0.889 and 0.935 for the AM and PM peak periods, respectively. Whilst the roundabout is observed to reach a *Degree of Saturation* of 0.707 and 0.807 for the AM and PM peak periods, respectively.

On the above basis, it is clear that both the above intersections are expected to reach capacity in the Year 2026 *even without* the proposed development, particularly during the weekday PM commuter peak period.

As mentioned in the foregoing, TfNSW has planned upgrades for the Castlereagh Road / Thornton Drive (Peachtree Road) signalised intersection, which is identified as a 'medium term' upgrade.

However, it is also noted that TfNSW (formerly RMS) have not provided an 'Agreement in Principle' concept TCS design for this signalised intersection at Castlereagh Road / Thornton Drive (Peachtree Road).

Nevertheless, by completion of the envisaged upgrade works along the Mulgoa Road/Castlereagh Road Corridor (including at the Castlereagh Road / Thornton Drive signalised intersection), in accordance with the TfNSW's planned road upgrades traffic and transport study[1], the average vehicle delay in both the AM and PM peak hour can be expected to be reduced by more than half when compared with the existing intersection performance/layout.

Results extracted from the Arcadis report, commissioned by RMS indicates, for *'the medium term development scenario'* at the modelling year of 2026, the *upgraded* intersection would continue to operate at *Level of Service "C"* during *both* the AM and PM peak periods, with decreases in average vehicle delays in the order of 31 seconds/vehicle and 32 seconds/vehicle, respectively.

Table 6-31 Intersection Level of Service for Improvement Case in 2020, 2026 and 2036

Intersection	Control Type	Short Term Improvement 2020		Medium Term Improvement 2026		Ultimate Strategic Concept 2036	
		AM	PM	AM	PM	AM	PM
Andrews Road / Castlereagh Road	Roundabout	33 (C)	34 (C)	37 (C)	39 (C)	38 (C)	41 (C)
Jack William Drive / Castlereagh Road	Signal	13 (A)	16 (B)	26 (B)	19 (B)	20 (B)	17 (B)
Coreen Avenue / Castlereagh Road	Roundabout	37 (C)	33 (C)	43 (D)	36 (C)	52 (D)	35 (C)
Peachtree Road / Castlereagh Road	Signal	25 (B)	30 (C)	31 (C)	32 (C)	41 (C)	31 (C)
Museum Drive / Castlereagh Road	Signal	3 (A)	4 (A)	8 (A)	7 (A)	17 (B)	15 (B)
Jane Street / Castlereagh Road	Signal	23 (B)	27 (B)	24 (B)	29 (C)	32 (C)	49 (D)
High Street / GWH / Mulgoa Road	Signal	42 (C)	50 (D)	41 (C)	51 (D)	49 (D)	47 (D)
Union Road / Mulgoa Road	Priority (sign)	6 (A)	7 (A)	9 (A)	5 (A)	12 (A)	6 (A)
Ransley Street / Mulgoa Road	Signal	20 (B)	28 (B)	20 (B)	25 (B)	21 (B)	28 (B)
Panther Place / Mulgoa Road	Signal	8 (A)	9 (A)	6 (A)	8 (A)	8 (A)	9 (A)
Jamison Road / Mulgoa Road	Signal	39 (C)	37 (C)	34 (C)	32 (C)	44 (D)	33 (C)
Batt Street / Mulgoa Road	Signal	21 (B)	41 (C)	13 (A)	26 (B)	17 (B)	35 (C)
Blaikie Street / Mulgoa Road	Signal	15 (B)	18 (B)	10 (A)	20 (B)	11 (A)	44 (D)
Wolseley Street / Mulgoa Road	Signal	10 (A)	11 (A)	11 (A)	11 (A)	13 (A)	10 (A)
M4 ramps / Mulgoa Road	Signal	33 (C)	28 (B)	35 (C)	30 (C)	39 (C)	39 (C)
Glenmore Parkway / Mulgoa Road	Roundabout	25 (B)	23 (B)	25 (B)	27 (B)	28 (B)	40 (C)

Furthermore, whilst it is noted that the Evan Street and The Crescent/Macquarie Avenue roundabout is suggested to operate at a *Level of Service "F"*, in the Year 2036 (*even without* the development traffic), the average vehicle delay for both the AM and PM peak periods are still expected to operate within a satisfactory level.

On the above basis, it is clear that the surrounding road network will operate at satisfactory *Levels of Service* in all three scenarios – i.e. 2023, 2026 & 2036 – and that the remaining proposed developments within the Precinct will not result in any unacceptable traffic implications in terms of road network capacity.

[1] *Arcadis, Roads and Maritime 'Mulgoa Road / Castlereagh Road Corridor Upgrade between Glenmore Parkway and Andrews Road' – Traffic and Transport Assessment Study (17 Jan 2017)*

Criteria for Interpreting Results of Sidra Analysis

The subject intersections have been assessed using the SIDRA INTERSECTION 9 program which is widely used by TfNSW and many LGA's. The key indicator of intersection performance is typically the *Level of Service* (LoS), where results are ranked on a scale from 'A' to 'F', as outlined on the table below**.**

Level of Service (LOS)

LOS	Traffic Signals and Roundabouts	Give Way and Stop Signs
'A'	Good operation.	Good operation.
'B'	Good with acceptable delays and spare capacity.	Acceptable delays and spare capacity.
'C'	Satisfactory.	Satisfactory but accident study required.
'D'	Operating near capacity.	Near capacity and accident study required.
'E'	At capacity; at signals incidents will cause excessive delays. Roundabouts require other control mode.	At capacity and requires other control mode.
'F'	Unsatisfactory and requires additional capacity.	Unsatisfactory and requires other control mode.

Average Vehicle Delay (AVD)

The AVD provides a measure of the operational performance of an intersection as indicated on the table below which relates AVD to LOS. The AVD's listed in the table should be taken as a guide only as longer delays could be tolerated in some locations (ie inner city conditions) and on some roads (ie minor side street intersecting with a major arterial route).

Level of Service	Average Delay per Vehicle (secs/veh)	Traffic Signals, Roundabout	Give Way and Stop Signs
A	less than 14	Good operation.	Good operation.
B	15 to 28	Good with acceptable delays and spare capacity.	Acceptable delays and spare capacity.
C	29 to 42	Satisfactory.	Satisfactory but accident study required.
D	43 to 56	Operating near capacity.	Near capacity and accident study required.
E	57 to 70	At capacity; at signals incidents will cause excessive delays. Roundabouts require other control mode.	At capacity and requires other control mode.

Degree of Saturation (DS)

The DS is another measure of the operational performance of individual intersections.

For intersections controlled by traffic signals[2] both queue length and delay increase rapidly as DS approaches 1, and it is usual to attempt to keep DS to less than 0.9. Values of DS in the order of 0.7 generally represent satisfactory intersection operation. When DS exceeds 0.9 queues can be anticipated.

For intersections controlled by a roundabout or GIVE WAY or STOP signs, satisfactory intersection operation is indicated by a DS of 0.8 or less.

2 *The values of DS for intersections under traffic signal control are only valid for cycle length of 120 secs.*

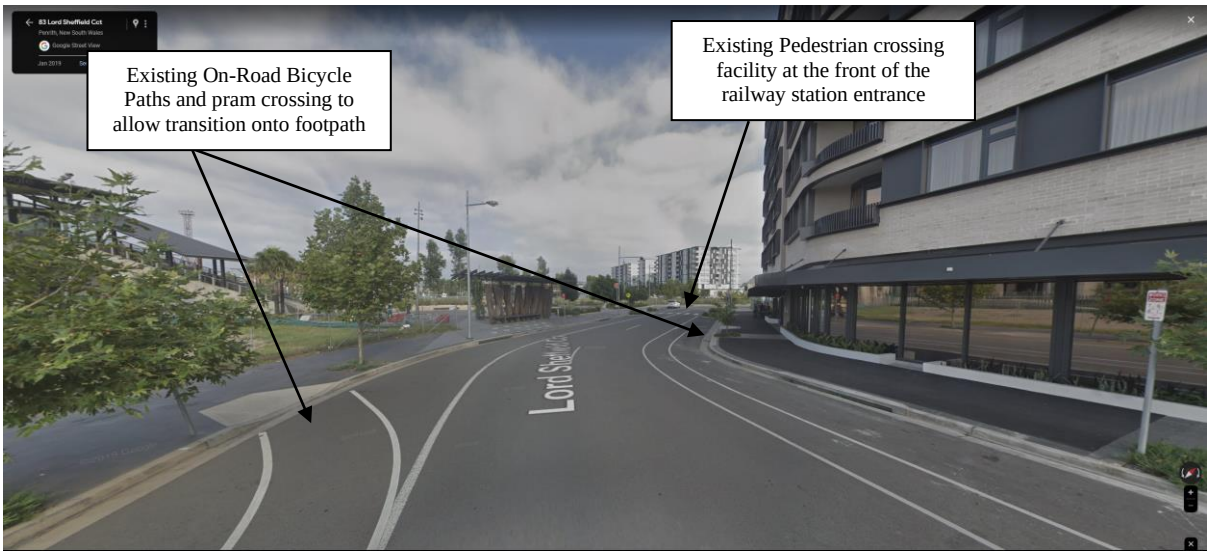
In particular, the rigorous capacity analysis confirms that the traffic generation potential of the remaining developments within the Precinct, which includes the proposed development on the subject site, will not result in any appreciable effect on the performance of nearby intersections (with minimal delays on all approaches), and that no *additional* upgrades will be required.

In the circumstances, it is clear that the proposed development scheme will not have any unacceptable traffic implications in terms of road network capacity, noting that the latest update on the TfNSW website (Reviewed 4 Apr 2023) indicate the proposed upgrade of the Castlereagh Road/Thornton Drive signalised intersection is identified as a *medium term* improvement.

Site Access Driveway – Pedestrian/Cyclist Facility Treatment

Existing pedestrian footpath networks are provided on both sides of all local streets within the Thornton Estate Precinct, these footpaths provide suitable links for pedestrians accessing local facilities and connects to the Penrith railway station entrance, along the western boundary of the site.

In particular, *existing* On-Road Bicycle Paths also extends along both sides of Lord Sheffield Circuit, including along the site frontage, which terminates in the vicinity of the railway station entrance, with pram ramps provided to allow transition onto the existing public footpath as illustrated in the *Streetview* image below.



Site viewed at the western end of the Lord Sheffield Cct site frontage, facing the Penrith railway station

Given these on-road bicycle paths span across the proposed future site access driveway, the safety and convenience of cyclists and pedestrians would be significant, with the main goal to provide safe and attractive facilities for riders.

In accordance with the Austroads publication *"Guide to Traffic Management – Part 8: Local Street Management"*, it is appropriate to use bicycle lanes, advisory treatments and bypasses in the following nominated surroundings, as follows:

- where there is a significant difference in the speed of vehicular and bicycle traffic (i.e. > 20 km/h)
- where it is desirable to separate cyclists from other traffic (e.g. for reasons of safety)
- anywhere cycling needs to be encouraged, e.g. along major routes near town or city centres.

Notwithstanding the above, the criteria also state that it is inappropriate to use bicycle lanes, treatments, and bypasses where it will restrict the movements of buses or significantly reduce the safety of other road users.

Taking the above criteria/measures into consideration, bicycle bypass facilities is to be considered in the vicinity of the proposed site access driveway, as illustrated in the example bicycle facility treatments extracted from *Austroads* and is reproduced below.

City of Gold Coast, Queensland

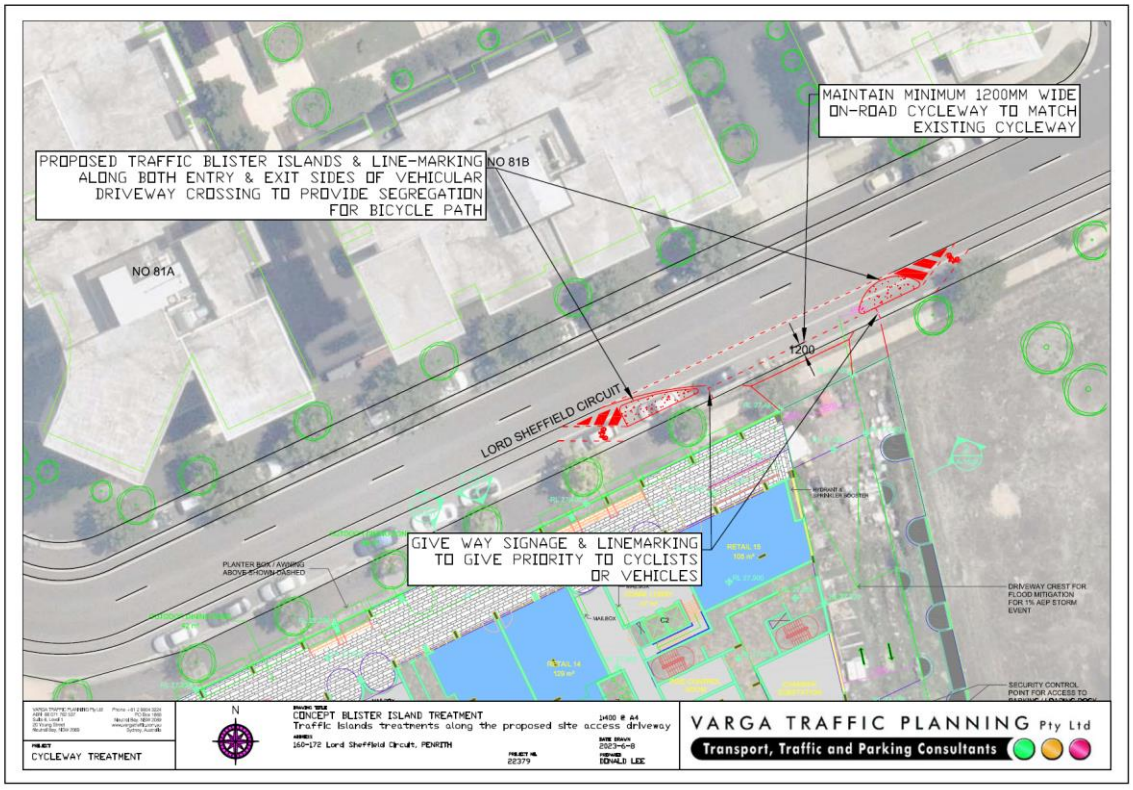
City of Unley, South Australia

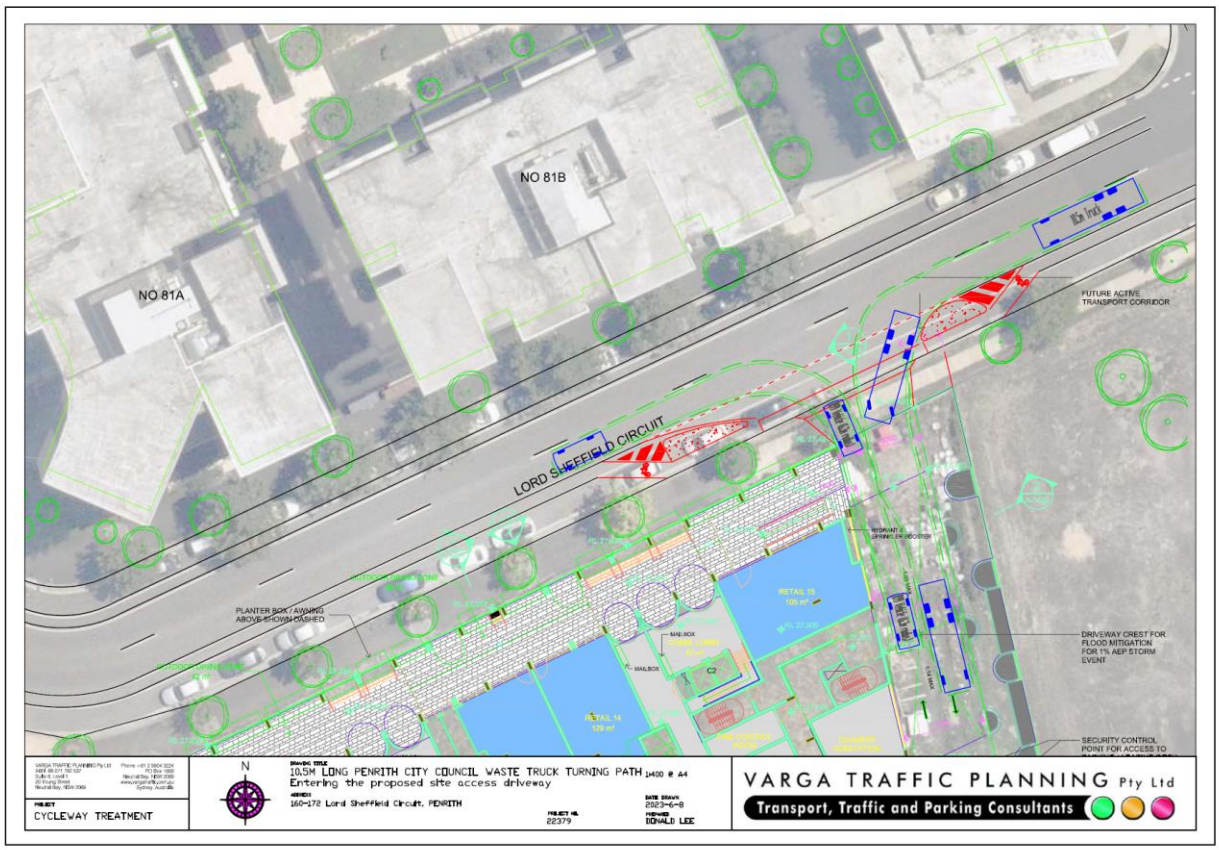
In this regard, it is noted that confirmation has since been received from TfNSW for the easement, which runs alongside the eastern property boundary of the site, and that the future bus-link will not be required. In lieu of the bus-link, the Applicant was to allow a potential dedicated cycleway.

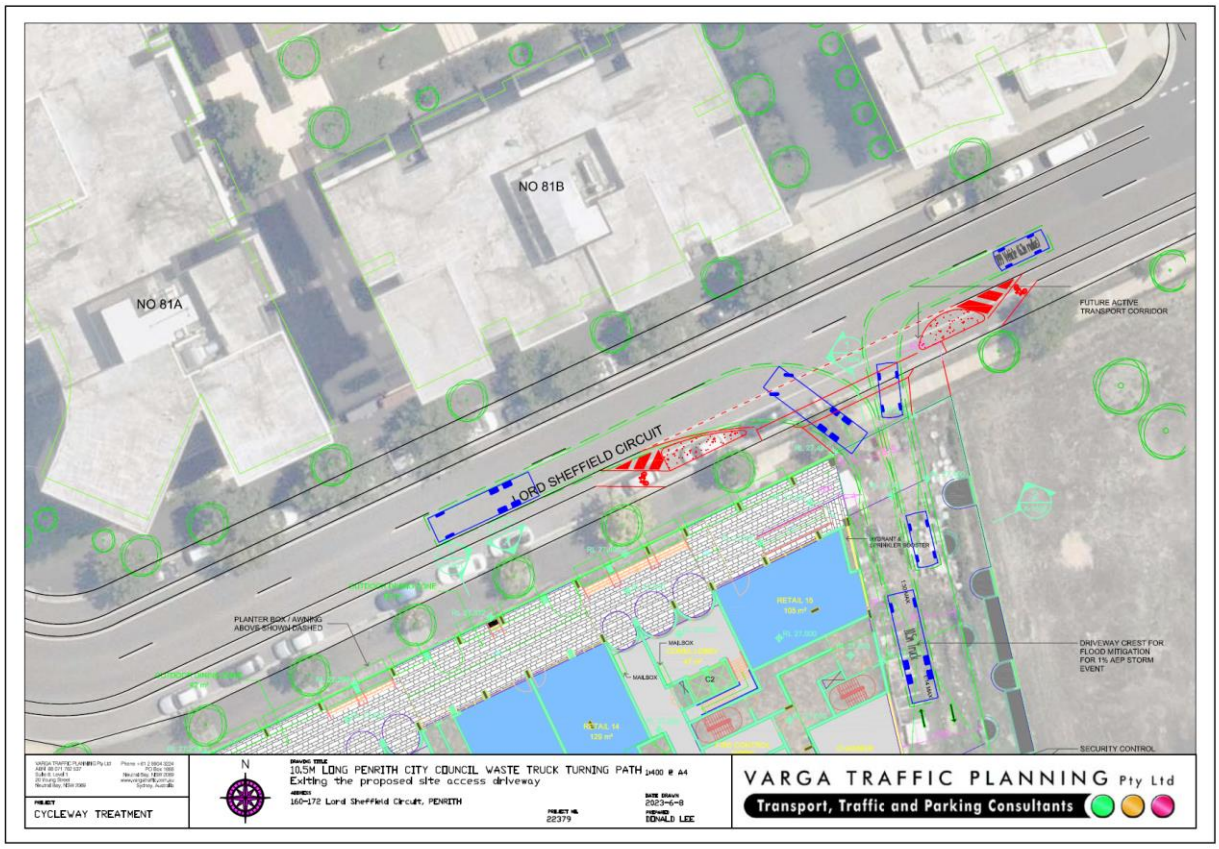
As such, the above (left) treatment, will allow a raised traffic blister island to be installed at the entry and exit sides of the future vehicular driveway crossing, to allow increased segregation from motor traffic.

A concept plan of the traffic blister island treatments has been prepared in accordance with the Austroads *"Guide to Road Design – Part 6A: Pedestrian and Cyclist Paths"* document, for the treatments to be adopted in the vicinity of the proposed site access driveway reproduced below and in **Appendix C**.

In addition, *swept turning path* diagrams have been prepared using the *Autodesk Vehicle Tracking 2022* program in accordance with the requirements of *AS2890*, which confirms that Council's 10.5m long waste collection truck can enter and exit the site *simultaneously* as a B99 passenger vehicle is entering or exiting the site.

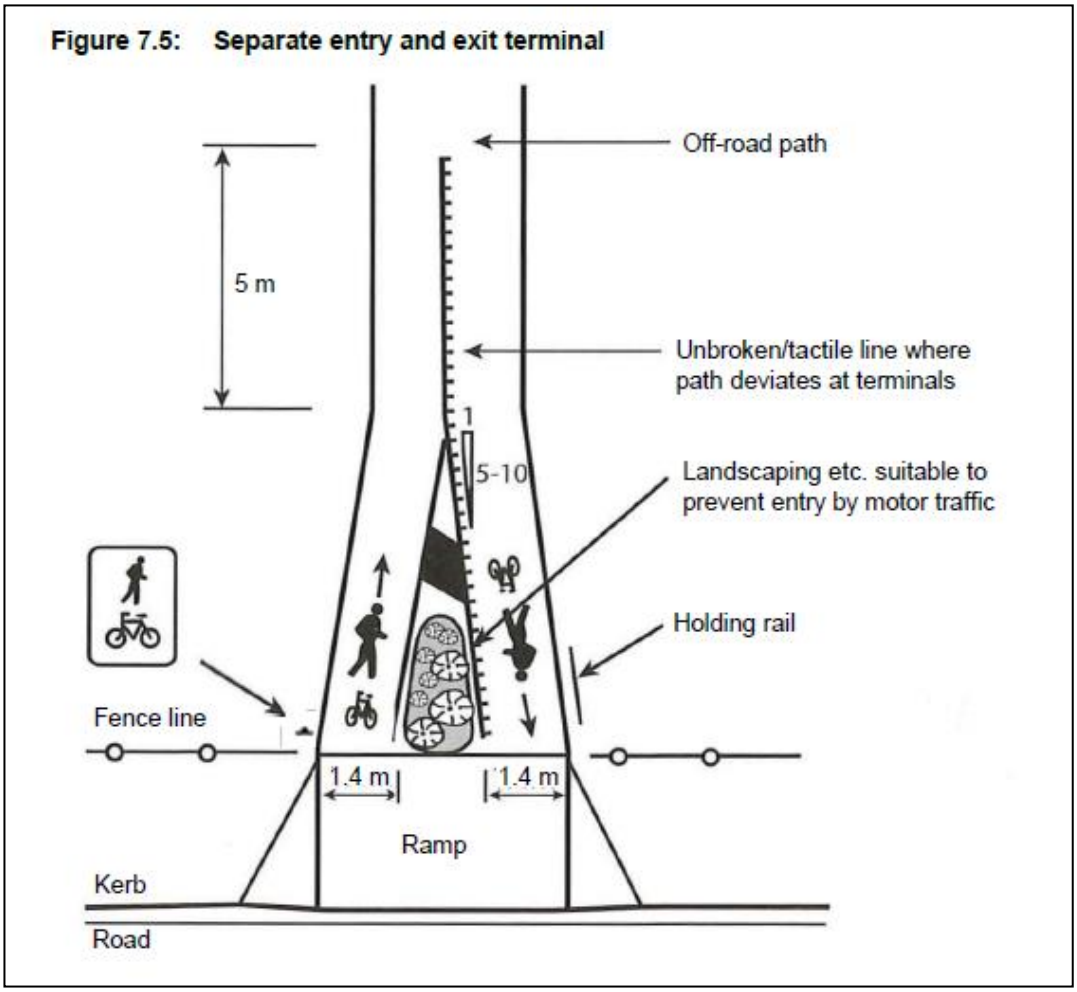






The terminal treatments which would restrict unauthorised access for motor traffic and warn cyclist to slow down for access into the dedicated TfNSW cycleway link is the equivalent of providing a median island at a road intersection with similar benefits with respect to warning cyclists and channelising traffic movement, as illustrated in the image extracted from the Austroads document.

Source: Austroads, *Guide to Road Design – Part 6A: Paths for Walking and Cycling*



In this instance, given the future projected traffic flows along the site access driveway and its intersection with Lord Sheffield Circuit are typically in the order of *less than* 100-120 vph during the weekday *commuter* peak periods, *lesser* at other times. The potential exists to allow road crossings where the path has *priority* over the road, which will include the entrance of the dedicated cycleway, as illustrated in the example image below.

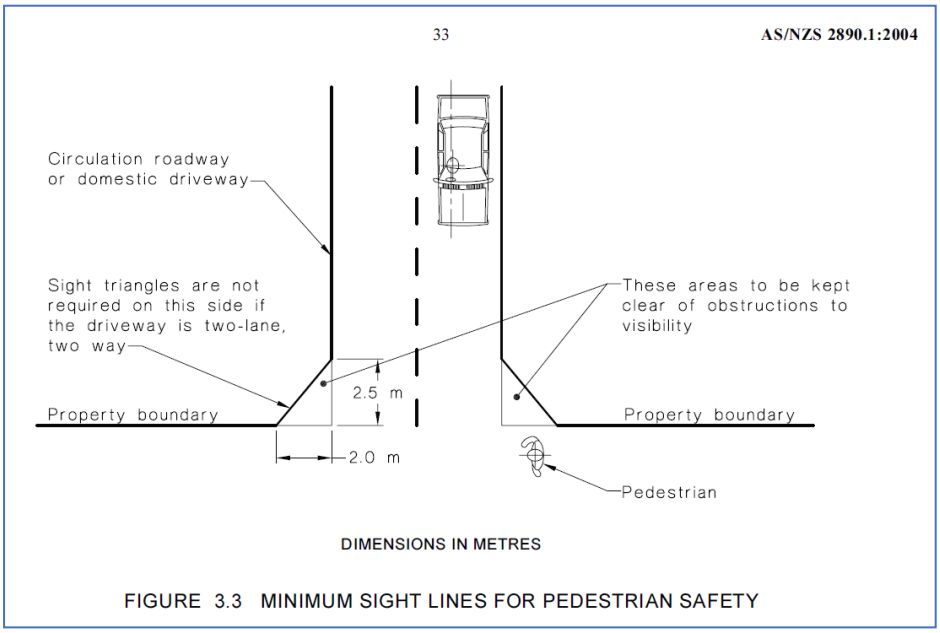
In this regard, a detailed design of the driveway vehicular crossing in accordance with Council's standard drawings will be required *prior* to the issue of a Construction Certificate and can be conditioned as part of the DA consent conditions. This can also include the design of the TfNSW cycleway link, noting the provision of this cycleway is still yet to be finalised by TfNSW.

Furthermore, the above treatments are to be provided in conjunction with advisory signages to advice road users of the potential presence of cyclists/vehicles and of the location where cyclists may be expected to ride on the street and will be required *prior* to the issue of an Occupation Certificate.

These signages will consist of pavement markings and warning and guide signs. Examples of these signages are included, but not limited to below.

External Access and Manoeuvring – Sight Triangle

Pedestrian sight triangles have been added to the architectural plans, in accordance with Figure 3.3 of *AS2890.1:2004* reproduced below.



The intent of the "sight triangles" at exit driveways is to allow a driver exiting a property across the public footpath and onto the frontage road the ability to see pedestrians along that public footpath.

In this regard, the driveway design incorporates a *significantly* widened splay along the exit side of the access driveway, with the intention to provide an enlarged *unobstructed* sight triangle of 5.0m by 3.5m, *excluding* a proposed column obstruction area.

Whilst a proposed structural column, with a dimension of 0.9m x 0.9m, is located within the sight triangle, the column is *not* considered large enough to restrict driver visibility to an unacceptable level. Furthermore, the proposed walls/landscaping areas within the sight triangle have also been designed to be *low level,* to ensure the remaining sight triangle is *unobstructed.*

In this instance, it has been considered that the intent of Figure 3.3 of *AS2890.1:2004* is still satisfied.

Notwithstanding the above, consideration could be given to implementing warning sign/s to alert drivers exiting the proposed driveway intersection off the Lord Sheffield Circuit site frontage, compelling drivers to "Stop" and "Give Way to Pedestrians" before crossing the footway, which is in line with the aforementioned pedestrian/cyclist treatments along the site access driveway.

Conclusion

The foregoing assessment has found that the proposed (approved) TfNSW upgrade of the nearby intersection at Castlereagh Road and Thornton Drive will improve the capacity of the intersection, overall *Level of Service* and average vehicle delays, even with the cumulative impacts of the remaining developments (including the subject site) to be developed within the Precinct.

This signalised intersection upgrade will need to be completed by the Year 2026, *prior* to the completion of the remaining developments located within the Precinct.

In addition, it is also recommended that the mid-block road closure located at the western leg of the Evan Street and The Crescent/Macquarie Avenue roundabout, which currently caters for a 'one way exit movement only', is to be *removed*, prior to the Year 2036.

The removal of the mid-block closure will reduce the Average Vehicle Delay for the approach movements from the eastern leg of The Crescent, attributed to the *increased* north-south background traffic growth using the intersection. These traffic movements along the northern and southern legs are observed to be operating as 'free-flow' north-south traffic flow.

Notwithstanding the above, based on the analysis and discussions presented within this report, it has been concluded that the proposed development will not have any unacceptable traffic implications in terms of road network capacity. It has been observed that the 2 intersections above reach capacity *even without* our development traffic.

Furthermore, it is noted that the proposed new driveway will provide access to the site, including service vehicles servicing the site, with the above treatments provided *prior* to the issue of a Construction/Occupational Certificate, (subject to Council recommendations/approval) for the proposed pedestrian/cyclist facility treatment. The proposed development also satisfies Council's off-street parking and loading requirements and complies with Australian Standards.

I trust the above addresses the outstanding comments received to date and is sufficient for reassessment. Please do not hesitate to contact me on telephone 9904 3224 should you have any enquiries.

Yours sincerely

Donald Lee
Senior Engineer B.Eng (Civil)
Varga Traffic Planning Pty Ltd

TRAFFIC SURVEY DATA

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

trafficsurvey.com.au

Intersection of Thornton Dr and Combewood Ave, Penrith

GPS -33.746317, 150.695259

Date:	Thu 11/05/23
Weather:	Fine
Suburban:	Penrith
Customer:	Varga

North:	Combewood Ave
East:	Thornton Dr
South:	Combewood Ave
West:	Thornton Dr

Survey Period	AM:	6:30 AM-9:30 AM
	PM:	3:30 PM-7:00 PM
Traffic Peak	AM:	7:00 AM-8:00 AM
	PM:	5:30 PM-6:30 PM

All Vehicles

Time		North Approach Combewood Ave				East Approach Thornton Dr				South Approach Combewood Ave				West Approach Thornton Dr				Hourly Total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
6:30	6:45	0	14	47	1	0	1	3	0	0	0	11	25	0	13	1	13	613	
6:45	7:00	0	12	48	2	0	0	10	0	0	1	13	28	0	23	4	9	651	
7:00	7:15	0	13	62	3	0	0	4	0	0	0	8	22	0	31	4	13	665	Peak
7:15	7:30	0	15	64	1	0	0	7	0	0	1	16	37	0	18	7	8	640	
7:30	7:45	0	17	64	1	0	1	12	0	0	0	15	29	0	21	3	4	614	
7:45	8:00	0	24	47	3	0	1	14	0	0	0	15	19	0	27	1	13	584	
8:00	8:15	0	22	38	0	0	1	11	0	0	0	14	24	0	14	1	10	531	
8:15	8:30	1	24	33	0	0	2	7	1	0	2	14	32	0	20	6	6	514	
8:30	8:45	0	21	22	2	0	0	10	0	0	2	11	37	0	17	5	10	468	
8:45	9:00	0	21	19	1	0	2	11	1	0	0	6	21	0	11	5	13		
9:00	9:15	0	24	13	1	0	3	3	0	0	1	16	26	0	16	7	8		
9:15	9:30	0	11	18	1	0	1	7	0	0	2	6	20	0	18	7	11		
15:30	15:45	0	21	14	4	0	2	13	0	0	1	28	36	0	19	11	24	590	
15:45	16:00	0	14	13	0	0	0	7	1	0	2	11	28	0	10	6	20	571	
16:00	16:15	0	21	13	0	0	0	0	7	0	0	25	37	0	12	11	23	636	
16:15	16:30	0	18	14	3	0	1	6	0	0	0	29	35	0	15	11	24	687	
16:30	16:45	0	23	12	1	0	1	7	0	0	0	29	33	1	20	11	16	701	
16:45	17:00	0	24	17	2	0	0	9	0	0	1	33	36	0	27	9	19	765	
17:00	17:15	1	29	20	0	0	1	8	1	0	0	35	45	0	24	10	26	817	
17:15	17:30	0	16	16	1	0	1	9	1	0	0	36	36	0	22	8	24	824	
17:30	17:45	0	20	12	1	0	1	16	1	0	1	43	58	0	21	13	31	849	Peak
17:45	18:00	0	23	25	1	0	0	8	1	0	1	59	66	0	14	15	16	811	
18:00	18:15	0	22	14	2	0	0	11	0	0	0	43	55	0	26	13	21	721	
18:15	18:30	0	14	12	1	0	0	10	0	0	1	41	58	0	24	11	23		
18:30	18:45	0	19	10	2	0	0	13	0	0	0	23	49	0	30	10	24		
18:45	19:00	0	15	5	2	0	0	11	0	0	0	25	29	0	27	10	15		

Peak Time		North Approach Combewood Ave				East Approach Thornton Dr				South Approach Combewood Ave				West Approach Thornton Dr				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
7:00	8:00	0	69	237	8	0	2	37	0	0	1	54	107	0	97	15	38	665
17:30	18:30	0	79	63	5	0	1	45	2	0	3	186	237	0	85	52	91	849

Pedestrians Crossing

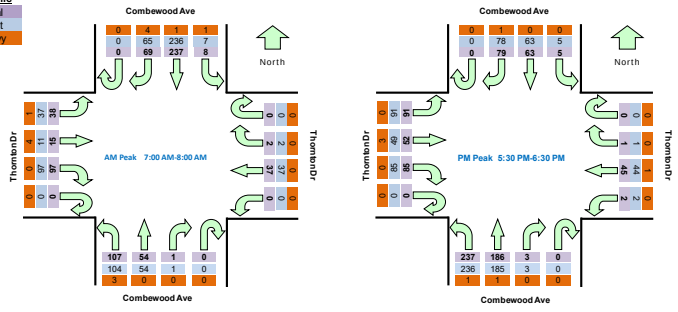
Time		North Approach Combewood Av		East Approach Thornton Dr		South Approach Combewood Av		West Approach Thornton Dr		Hourly Total
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	
6:30	6:45	3	1	0	1	3	0	0	2	26
6:45	7:00	0	0	0	0	0	1	0	1	23
7:00	7:15	2	0	1	3	0	0	0	0	34
7:15	7:30	2	2	1	2	1	0	0	0	30
7:30	7:45	3	0	1	1	1	0	0	1	28
7:45	8:00	0	3	2	2	3	0	0	3	28
8:00	8:15	1	0	0	1	0	0	0	0	24
8:15	8:30	1	1	1	1	1	0	0	1	34
8:30	8:45	2	1	1	0	1	1	0	1	33
8:45	9:00	3	1	1	2	1	0	0	1	
9:00	9:15	3	4	3	1	0	0	0	1	
9:15	9:30	1	2	2	0	0	0	0	0	
15:30	15:45	0	2	0	2	0	2	4	0	50
15:45	16:00	3	4	4	4	4	0	0	3	43
16:00	16:15	1	2	4	1	0	1	1	0	31
16:15	16:30	2	1	0	4	0	0	1	0	37
16:30	16:45	1	0	1	1	0	0	0	0	47
16:45	17:00	0	2	1	0	3		1	3	52
17:00	17:15	3	3	1	5	0	2	1	1	52
17:15	17:30	1	8	4	1	2	0	0	2	45
17:30	17:45	3	1	1	0	1	1	1	0	30
17:45	18:00	0	1	6	2	0	0	1	0	24
18:00	18:15	2	2	3	1	0	0	0	1	26
18:15	18:30	0	1	2	0	0	0	0	0	
18:30	18:45	1	0	0	1	0	0	0	0	
18:45	19:00	1	3	3	1	1	1	1	1	

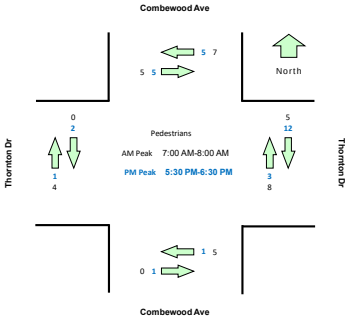
Peak Time		North Approach Combewood Av		East Approach Thornton Dr		South Approach Combewood Av		West Approach Thornton Dr		Peak hour
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	total
7:00	8:00	7	5	5	8	5	0	0	4	34
17:30	18:30	5	5	12	3	1	1	2	1	30

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.

Graphic

Total
Light
Heavy





Light Vehicles

Time		North Approach Combewood Ave				East Approach Thornton Dr				South Approach Combewood Ave				West Approach Thornton Dr			
Period Start	**Period End**	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
6:30	6:45	0	14	47	1	0	0	3	0	0	0	11	24	0	12	0	11
6:45	7:00	0	12	47	1	0	0	10	0	0	1	12	26	0	23	4	9
7:00	7:15	0	12	61	2	0	0	4	0	0	0	8	21	0	31	2	12
7:15	7:30	0	13	64	1	0	0	7	0	0	1	16	35	0	18	6	8
7:30	7:45	0	16	64	1	0	1	12	0	0	0	15	29	0	21	3	4
7:45	8:00	0	24	47	3	0	1	14	0	0	0	15	19	0	27	0	13
8:00	8:15	0	19	37	0	0	1	9	0	0	0	14	24	0	14	1	10
8:15	8:30	0	23	33	0	0	2	7	1	0	2	14	31	0	19	5	6
8:30	8:45	0	21	22	2	0	0	10	0	0	2	10	35	0	16	5	10
8:45	9:00	0	20	18	1	0	2	11	1	0	0	6	20	0	10	5	13
9:00	9:15	0	22	13	1	0	3	3	0	0	1	16	25	0	16	7	8
9:15	9:30	0	11	18	1	0	1	7	0	0	1	6	20	0	18	6	10
15:30	15:45	0	21	14	4	0	2	13	0	0	1	28	36	0	19	9	24
15:45	16:00	0	13	13	0	0	0	7	1	0	2	11	28	0	10	6	19
16:00	16:15	0	21	13	0	0	0	0	7	0	0	25	36	0	12	11	23
16:15	16:30	0	18	14	3	0	1	5	0	0	0	28	35	0	15	11	24
16:30	16:45	0	23	12	1	0	1	7	0	0	0	29	32	1	19	11	16
16:45	17:00	0	24	17	2	0	0	9	0	0	1	32	36	0	26	9	18
17:00	17:15	1	29	19	0	0	1	8	1	0	0	35	45	0	24	10	26
17:15	17:30	0	16	16	1	0	1	9	1	0	0	36	35	0	22	8	24
17:30	17:45	0	19	12	1	0	1	16	1	0	1	43	58	0	21	13	31
17:45	18:00	0	23	25	1	0	0	8	1	0	1	59	65	0	14	14	16
18:00	18:15	0	22	14	2	0	0	11	0	0	0	43	55	0	26	13	21
18:15	18:30	0	14	12	1	0	0	9	0	0	1	40	58	0	24	9	23
18:30	18:45	0	19	10	2	0	0	13	0	0	0	23	48	0	30	10	24
18:45	19:00	0	14	5	2	0	0	11	0	0	0	25	29	0	27	9	15

Peak Time		North Approach Combewood Ave				East Approach Thornton Dr				South Approach Combewood Ave				West Approach Thornton Dr				Peak
Period Start	**Period End**	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	**total**
7:00	8:00	0	65	236	7	0	2	37	0	0	1	54	104	0	97	11	37	651
17:30	18:30	0	78	63	5	0	1	44	2	0	3	185	236	0	85	49	91	842

Heavy Vehicles

Time		North Approach Combewood Ave				East Approach Thornton Dr				South Approach Combewood Ave				West Approach Thornton Dr			
Period Start	**Period End**	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
6:30	6:45	0	0	0	0	0	1	0	0	0	0	0	1	0	1	1	2
6:45	7:00	0	0	1	1	0	0	0	0	0	0	1	2	0	0	0	0
7:00	7:15	0	1	1	1	0	0	0	0	0	0	0	1	0	0	2	1
7:15	7:30	0	2	0	0	0	0	0	0	0	0	0	2	0	0	1	0
7:30	7:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
8:00	8:15	0	3	1	0	0	0	2	0	0	0	0	0	0	0	0	0
8:15	8:30	1	1	0	0	0	0	0	0	0	0	0	1	0	1	1	0
8:30	8:45	0	0	0	0	0	0	0	0	0	0	1	2	0	1	0	0
8:45	9:00	0	1	1	0	0	0	0	0	0	0	0	1	0	1	0	0
9:00	9:15	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0
9:15	9:30	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
15:30	15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
15:45	16:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
16:00	16:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
16:15	16:30	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
16:30	16:45	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0
16:45	17:00	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1
17:00	17:15	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	17:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
17:30	17:45	0	1	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	1	0	0	1	0
18:00	18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	18:30	0	0	0	0	0	0	1	0	0	0	1	0	0	0	2	0
18:30	18:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
18:45	19:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0

Peak Time		North Approach Combewood Ave				East Approach Thornton Dr				South Approach Combewood Ave				West Approach Thornton Dr				Peak
Period Start	**Period End**	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	**total**
7:00	8:00	0	4	1	1	0	0	0	0	0	0	0	3	0	0	4	1	14
17:30	18:30	0	1	0	0	0	0	1	0	0	0	1	1	0	0	3	0	7

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

trafficsurvey.com.au

Intersection of Thornton Dr and Castlereagh Rd, Penrith

GPS -33.745594, 150.691023

Date:	Thu 11/05/23
Weather:	Fine
Suburban:	Penrith
Customer:	Varga

North:	Castlereagh Rd
East:	Thornton Dr
South:	Castlereagh Rd
West:	Peachtree Rd

Survey Period	AM:	6:30 AM-9:30 AM
	PM:	3:30 PM-7:00 PM
Traffic Peak	AM:	7:45 AM-8:45 AM
	PM:	4:30 PM-5:30 PM

All Vehicles

Time		North Approach Castlereagh Rd				East Approach Thornton Dr				South Approach Castlereagh Rd				West Approach Peachtree Rd				Hourly Total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
6:30	6:45	0	13	244	10	0	9	3	36	0	26	255	41	0	18	6	14	2865	
6:45	7:00	0	9	270	11	0	2	10	43	0	25	314	36	0	19	6	15	3116	
7:00	7:15	0	11	251	11	0	4	6	35	0	41	277	36	0	23	4	23	3318	
7:15	7:30	0	12	221	7	0	9	2	53	0	33	309	40	0	10	3	9	3520	
7:30	7:45	0	12	347	11	0	8	2	45	0	24	392	45	0	21	3	16	3802	
7:45	8:00	0	14	365	8	0	11	12	45	1	31	400	29	0	22	4	20	3852	Peak
8:00	8:15	0	8	397	7	0	10	7	42	0	26	351	28	0	29	3	16	3739	
8:15	8:30	0	9	426	6	0	11	5	55	0	36	371	29	0	22	6	14	3752	
8:30	8:45	0	11	428	11	0	10	16	60	0	31	328	37	0	17	6	21	3539	
8:45	9:00	0	14	357	16	0	9	14	51	0	29	292	22	0	22	2	21		
9:00	9:15	0	21	384	11	0	14	6	51	0	33	341	31	0	21	7	17		
9:15	9:30	0	7	347	10	0	7	7	36	0	29	265	27	0	24	8	10		
15:30	15:45	0	16	427	8	0	11	4	55	0	34	412	30	0	35	10	28	4212	
15:45	16:00	0	11	445	6	0	7	6	55	0	26	431	33	0	26	9	28	4179	
16:00	16:15	0	10	409	9	0	11	2	43	0	34	431	36	0	32	12	14	4127	
16:15	16:30	0	11	384	7	0	10	5	70	0	42	391	20	0	44	11	21	4228	
16:30	16:45	0	10	431	13	0	10	7	38	0	33	415	26	0	34	5	15	4316	Peak
16:45	17:00	0	11	397	13	0	20	5	53	0	47	396	31	0	37	10	11	4220	
17:00	17:15	0	15	435	19	0	12	9	67	0	42	453	29	0	28	9	26	4092	
17:15	17:30	0	6	419	14	0	16	9	58	0	37	436	30	0	37	16	26	3924	
17:30	17:45	0	10	310	15	0	15	5	80	0	45	389	24	0	23	13	12	3653	
17:45	18:00	0	20	342	10	0	15	9	70	0	37	334	25	0	29	6	6	3597	
18:00	18:15	0	27	369	14	0	14	11	67	0	44	346	37	0	24	8	15	3485	
18:15	18:30	0	18	280	16	0	13	11	60	0	42	309	33	0	20	7	24		
18:30	18:45	0	16	259	13	0	13	12	76	0	65	323	47	0	22	9	30		
18:45	19:00	0	18	271	18	0	18	5	54	0	60	245	36	0	29	11	26		

Peak Time		North Approach Castlereagh Rd				East Approach Thornton Dr				South Approach Castlereagh Rd				West Approach Peachtree Rd				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
7:45	8:45	0	42	1616	32	0	42	40	202	1	124	1450	123	0	90	19	71	3852
16:30	17:30	0	42	1682	59	0	58	30	216	0	159	1700	116	0	136	40	78	4316

Pedestrians Crossing

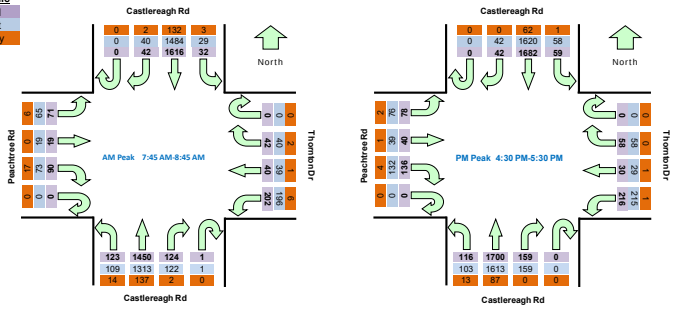
Time		North Approach Castlereagh Rd		East Approach Thornton Dr		South Approach Castlereagh Rd		West Approach Peachtree Rd		Hourly Total
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	
6:30	6:45	0	0	0	0	0	0	0	0	5
6:45	7:00	2	0	0	1	0	0	0	0	7
7:00	7:15	0	0	0	0	0	0	0	1	13
7:15	7:30	1	0	0	0	0	0	0	0	15
7:30	7:45	2	0	0	0	0	0	0	0	19
7:45	8:00	2	1	2	1	0	1	2	0	17
8:00	8:15	1	0	1	1	0	0	0	0	9
8:15	8:30	2	0	0	1	0	1	1	0	11
8:30	8:45	0	0	0	0	0	0	0	0	10
8:45	9:00	1	0	0	0	0	0	0	0	
9:00	9:15	0	0	0	1	1	1	0	2	
9:15	9:30	1	1	2	0	0	0	0	0	
15:30	15:45	0	1	1	0	0	1	2	0	16
15:45	16:00	3	1	1	0	0	0	2	0	12
16:00	16:15	0	2	1	0	0	0	0	0	5
16:15	16:30	0	0	0	0	0	0	1	0	6
16:30	16:45	1	0	0	0	0	0	0	0	8
16:45	17:00	0	0	0	0	0	0	0	0	11
17:00	17:15	1	0	0	1	0	1	1	0	15
17:15	17:30	1	1	1	0	0	0	0	0	12
17:30	17:45	2	0	0	0	2	0	0	0	13
17:45	18:00	1	1	1	0	0	0	0	1	11
18:00	18:15	1	0	0	0	0	0	0	0	11
18:15	18:30	0	0	1	1	1	1	0	0	
18:30	18:45	0	1	1	0	0	0	0	0	
18:45	19:00	0	2	0	0	1	1	0	0	

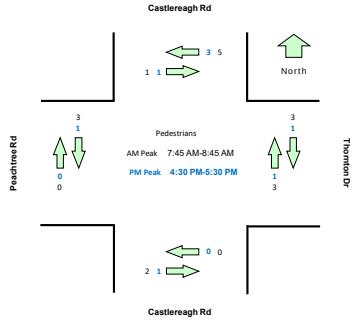
Peak Time		North Approach Castlereagh Rd		East Approach Thornton Dr		South Approach Castlereagh Rd		West Approach Peachtree Rd		Peak hour total
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	
7:45	8:45	5	1	3	3	0	2	3	0	17
16:30	17:30	3	1	1	1	0	1	1	0	8

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.

Graphic

Total
Light
Heavy





Light Vehicles

Time		North Approach Castlereagh Rd				East Approach Thornton Dr				South Approach Castlereagh Rd				West Approach Peachtree Rd			
Period Start	**Period End**	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
6:30	6:45	0	13	194	6	0	8	3	35	0	24	212	39	0	15	6	12
6:45	7:00	0	8	211	11	0	2	10	40	0	25	289	35	0	16	6	14
7:00	7:15	0	10	208	10	0	4	6	34	0	38	250	32	0	18	4	22
7:15	7:30	0	11	190	6	0	7	2	49	0	33	282	37	0	8	3	8
7:30	7:45	0	12	314	11	0	8	2	44	0	24	356	39	0	15	3	15
7:45	8:00	0	14	330	7	0	11	12	45	1	31	374	26	0	17	4	19
8:00	8:15	0	7	361	7	0	10	6	37	0	26	314	25	0	23	3	13
8:15	8:30	0	9	398	5	0	9	5	55	0	35	334	26	0	18	6	12
8:30	8:45	0	10	395	10	0	10	16	59	0	30	291	32	0	15	6	21
8:45	9:00	0	11	319	16	0	9	14	48	0	28	245	20	0	20	2	15
9:00	9:15	0	21	341	11	0	14	5	50	0	33	297	29	0	16	7	16
9:15	9:30	0	7	310	10	0	7	7	35	0	27	223	25	0	19	8	10
15:30	15:45	0	16	397	7	0	11	4	55	0	33	385	26	0	32	10	27
15:45	16:00	0	10	426	6	0	7	6	54	0	25	403	30	0	25	9	27
16:00	16:15	0	9	384	9	0	11	2	42	0	34	395	36	0	29	12	13
16:15	16:30	0	11	355	7	0	9	5	70	0	41	364	18	0	42	11	21
16:30	16:45	0	10	403	13	0	10	7	37	0	33	390	21	0	33	5	15
16:45	17:00	0	11	385	12	0	20	5	53	0	47	369	27	0	35	9	11
17:00	17:15	0	15	424	19	0	12	9	67	0	42	432	27	0	28	9	25
17:15	17:30	0	6	408	14	0	16	8	58	0	37	422	28	0	36	16	25
17:30	17:45	0	10	305	15	0	15	5	79	0	45	372	20	0	23	13	12
17:45	18:00	0	19	330	10	0	15	9	69	0	36	323	25	0	29	6	6
18:00	18:15	0	27	356	14	0	14	11	67	0	44	326	37	0	23	8	14
18:15	18:30	0	18	273	15	0	13	11	59	0	41	299	32	0	20	7	23
18:30	18:45	0	16	252	13	0	13	12	75	0	65	312	47	0	22	9	30
18:45	19:00	0	18	265	17	0	18	5	53	0	60	232	36	0	29	11	26

Peak Time		North Approach Castlereagh Rd				East Approach Thornton Dr				South Approach Castlereagh Rd				West Approach Peachtree Rd				Peak
Period Start	**Period End**	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	**total**
7:45	8:45	0	40	1484	29	0	40	39	196	1	122	1313	109	0	73	19	65	3530
16:30	17:30	0	42	1620	58	0	58	29	215	0	159	1613	103	0	132	39	76	4144

Heavy Vehicles

Time		North Approach Castlereagh Rd				East Approach Thornton Dr				South Approach Castlereagh Rd				West Approach Peachtree Rd			
Period Start	**Period End**	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
6:30	6:45	0	0	50	4	0	1	0	1	0	2	43	2	0	3	0	2
6:45	7:00	0	1	59	0	0	0	0	3	0	0	25	1	0	3	0	1
7:00	7:15	0	1	43	1	0	0	0	1	0	3	27	4	0	5	0	1
7:15	7:30	0	1	31	1	0	2	0	4	0	0	27	3	0	2	0	1
7:30	7:45	0	0	33	0	0	0	0	1	0	0	36	6	0	6	0	1
7:45	8:00	0	0	35	1	0	0	0	0	0	0	26	3	0	5	0	1
8:00	8:15	0	1	36	0	0	0	1	5	0	0	37	3	0	6	0	3
8:15	8:30	0	0	28	1	0	2	0	0	0	1	37	3	0	4	0	2
8:30	8:45	0	1	33	1	0	0	0	1	0	1	37	5	0	2	0	0
8:45	9:00	0	3	38	0	0	0	0	3	0	1	47	2	0	2	0	6
9:00	9:15	0	0	43	0	0	0	1	1	0	0	44	2	0	5	0	1
9:15	9:30	0	0	37	0	0	0	0	1	0	2	42	2	0	5	0	0
15:30	15:45	0	0	30	1	0	0	0	0	0	1	27	4	0	3	0	1
15:45	16:00	0	1	19	0	0	0	0	1	0	1	28	3	0	1	0	1
16:00	16:15	0	1	25	0	0	0	0	1	0	0	36	0	0	3	0	1
16:15	16:30	0	0	29	0	0	1	0	0	0	1	27	2	0	2	0	0
16:30	16:45	0	0	28	0	0	0	0	1	0	0	25	5	0	1	0	0
16:45	17:00	0	0	12	1	0	0	0	0	0	0	27	4	0	2	1	0
17:00	17:15	0	0	11	0	0	0	0	0	0	0	21	2	0	0	0	1
17:15	17:30	0	0	11	0	0	0	1	0	0	0	14	2	0	1	0	1
17:30	17:45	0	0	5	0	0	0	0	1	0	0	17	4	0	0	0	0
17:45	18:00	0	1	12	0	0	0	0	1	0	1	11	0	0	0	0	0
18:00	18:15	0	0	13	0	0	0	0	0	0	0	20	0	0	1	0	1
18:15	18:30	0	0	7	1	0	0	0	1	0	1	10	1	0	0	0	1
18:30	18:45	0	0	7	0	0	0	0	1	0	0	11	0	0	0	0	0
18:45	19:00	0	0	6	1	0	0	0	1	0	0	13	0	0	0	0	0

Peak Time		North Approach Castlereagh Rd				East Approach Thornton Dr				South Approach Castlereagh Rd				West Approach Peachtree Rd				Peak
Period Start	**Period End**	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	**total**
7:45	8:45	0	2	132	3	0	2	1	6	0	2	137	14	0	17	0	6	322
16:30	17:30	0	0	62	1	0	0	1	1	0	0	87	13	0	4	1	2	172

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

trafficsurvey.com.au

Intersection of Coreen Ave and Sydney Smith Dr, Penrith

GPS *-33.745472, 150.701324*

Date:	Thu 11/05/23
Weather:	Fine
Suburban:	Penrith
Customer:	Varga

North:	N/A
East:	Coreen Ave
South:	Sydney Smith Dr
West:	Coreen Ave

Survey Period	AM:	6:30 AM-9:30 AM
	PM:	3:30 PM-7:00 PM
Traffic Peak	AM:	8:00 AM-9:00 AM
	PM:	4:45 PM-5:45 PM

All Vehicles

Time		East Approach Coreen Ave			South Approach Sydney Smith Dr			West Approach Coreen Ave			Hourly Total	
Period Start	Period End	U	WB	L	U	R	L	U	R	EB	Hour	Peak
6:30	6:45	1	91	20	0	31	5	0	3	44	926	
6:45	7:00	0	108	13	0	39	5	0	4	66	1052	
7:00	7:15	0	108	23	0	38	2	3	9	55	1114	
7:15	7:30	1	104	24	0	46	2	1	5	75	1179	
7:30	7:45	1	125	28	0	42	11	1	11	102	1247	
7:45	8:00	3	142	18	0	34	8	0	5	87	1256	
8:00	8:15	4	111	20	0	46	13	1	3	105	1278	Peak
8:15	8:30	4	138	18	1	38	8	2	9	108	1245	
8:30	8:45	7	125	19	0	49	9	1	9	111	1164	
8:45	9:00	1	136	18	0	21	5	2	11	125		
9:00	9:15	4	107	8	0	21	7	3	7	113		
9:15	9:30	6	105	11	0	22	5	4	4	88		
15:30	15:45	11	90	28	0	29	6	10	11	144	1286	
15:45	16:00	1	109	20	0	22	4	2	8	126	1290	
16:00	16:15	4	100	21	1	30	9	2	10	157	1342	
16:15	16:30	3	102	15	1	33	10	6	4	157	1346	
16:30	16:45	10	111	21	0	37	5	7	7	135	1376	
16:45	17:00	4	105	30	0	35	14	8	11	137	1423	Peak
17:00	17:15	2	83	21	0	33	12	9	6	172	1403	
17:15	17:30	5	96	23	1	38	12	8	9	169	1349	
17:30	17:45	1	117	29	0	44	5	4	15	165	1258	
17:45	18:00	3	91	30	0	38	12	3	11	136	1138	
18:00	18:15	4	88	21	0	29	3	5	1	133	1050	
18:15	18:30	3	78	25	1	33	3	3	8	116		
18:30	18:45	1	88	23	0	30	9	2	11	96		
18:45	19:00	3	77	27	1	30	3	0	3	92		

Peak Time		East Approach Coreen Ave			South Approach Sydney Smith Dr			West Approach Coreen Ave			Peak total
Period Start	Period End	U	WB	L	U	R	L	U	R	EB	
8:00	9:00	16	510	75	1	154	35	6	32	449	1278
16:45	17:45	12	401	103	1	150	43	29	41	643	1423

Pedestrians Crossing

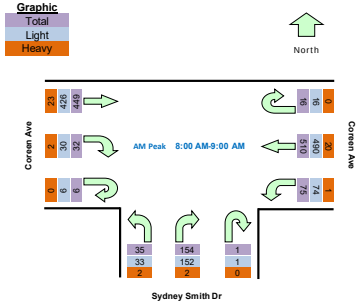
Time		East Approach Coreen Ave		South Approach Sydney Smith Dr		West Approach Coreen Ave		Hourly Total
Period Start	Period End	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	
6:30	6:45	0	0	0	0	0	0	1
6:45	7:00	0	0	0	0	0	0	2
7:00	7:15	0	0	1	0	0	0	2
7:15	7:30	0	0	0	0	0	0	1
7:30	7:45	0	0	0	1	0	0	1
7:45	8:00	0	0	0	0	0	0	0
8:00	8:15	0	0	0	0	0	0	1
8:15	8:30	0	0	0	0	0	0	1
8:30	8:45	0	0	0	0	0	0	2
8:45	9:00	0	0	1	0	0	0	
9:00	9:15	0	0	0	0	0	0	
9:15	9:30	0	0	1	0	0	0	
15:30	15:45	0	0	0	0	0	0	1
15:45	16:00	0	0	0	0	0	0	1
16:00	16:15	0	0	0	1	0	0	1
16:15	16:30	0	0	0	0	0	0	0
16:30	16:45	0	0	0	0	0	0	0
16:45	17:00	0	0	0	0	0	0	0
17:00	17:15	0	0	0	0	0	0	0
17:15	17:30	0	0	0	0	0	0	1
17:30	17:45	0	0	0	0	0	0	2
17:45	18:00	0	0	0	0	0	0	2
18:00	18:15	0	0	1	0	0	0	2
18:15	18:30	0	0	1	0	0	0	
18:30	18:45	0	0	0	0	0	0	
18:45	19:00	0	0	0	0	0	0	

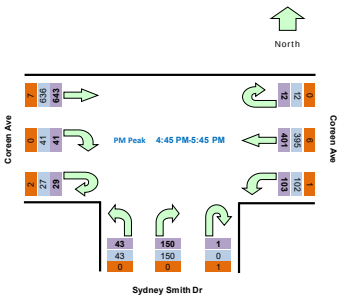
Peak Time		East Approach Coreen Ave		South Approach Sydney Smith Dr		West Approach Coreen Ave		Peak total
Period Start	Period End	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	
8:00	9:00	0	0	1	0	0	0	1
16:45	17:45	0	0	0	0	0	0	0

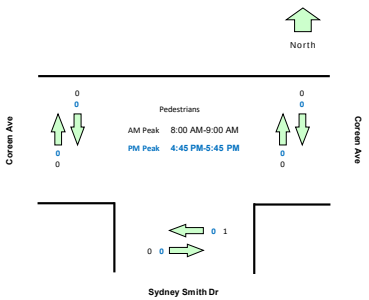
Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.

Graphic

Total
Light
Heavy







Light Vehicles

Time		East Approach Coreen Ave			South Approach Sydney Smith Dr			West Approach Coreen Ave		
Period Start	**Period End**	U	WB	L	U	R	L	U	R	EB
6:30	6:45	1	88	20	0	29	5	0	2	37
6:45	7:00	0	105	13	0	39	5	0	3	60
7:00	7:15	0	101	23	0	36	2	3	9	47
7:15	7:30	1	101	24	0	46	2	1	5	68
7:30	7:45	1	119	28	0	42	11	1	11	96
7:45	8:00	3	138	18	0	34	8	0	4	86
8:00	8:15	4	107	20	0	45	12	1	3	99
8:15	8:30	4	135	17	1	37	8	2	9	103
8:30	8:45	7	117	19	0	49	8	1	8	107
8:45	9:00	1	131	18	0	21	5	2	10	117
9:00	9:15	4	103	8	0	21	7	3	7	108
9:15	9:30	6	97	11	0	22	5	2	4	84
15:30	15:45	11	89	28	0	27	6	9	11	143
15:45	16:00	1	108	20	0	19	3	2	8	123
16:00	16:15	4	96	21	1	29	9	2	10	152
16:15	16:30	3	99	15	1	33	10	6	4	154
16:30	16:45	10	110	21	0	37	5	7	7	134
16:45	17:00	4	104	30	0	35	14	8	11	136
17:00	17:15	2	82	21	0	33	12	9	6	169
17:15	17:30	5	93	23	0	38	12	6	9	168
17:30	17:45	1	116	28	0	44	5	4	15	163
17:45	18:00	3	91	30	0	38	12	3	11	134
18:00	18:15	4	87	21	0	29	3	5	1	129
18:15	18:30	3	77	23	1	33	3	3	8	115
18:30	18:45	1	86	23	0	30	8	2	11	96
18:45	19:00	3	74	27	1	30	3	0	3	91

Peak Time		East Approach Coreen Ave			South Approach Sydney Smith Dr			West Approach Coreen Ave			Peak
Period Start	**Period End**	U	WB	L	U	R	L	U	R	EB	**total**
8:00	9:00	16	490	74	1	152	33	6	30	426	1228
16:45	17:45	12	395	102	0	150	43	27	41	636	1406

Heavy Vehicles

Time		East Approach Coreen Ave			South Approach Sydney Smith Dr			West Approach Coreen Ave		
Period Start	Period End	U	WB	L	U	R	L	U	R	EB
6:30	6:45	0	3	0	0	2	0	0	1	7
6:45	7:00	0	3	0	0	0	0	0	1	6
7:00	7:15	0	7	0	0	2	0	0	0	8
7:15	7:30	0	3	0	0	0	0	0	0	7
7:30	7:45	0	6	0	0	0	0	0	0	6
7:45	8:00	0	4	0	0	0	0	0	1	1
8:00	8:15	0	4	0	0	1	1	0	0	6
8:15	8:30	0	3	1	0	1	0	0	0	5
8:30	8:45	0	8	0	0	0	1	0	1	4
8:45	9:00	0	5	0	0	0	0	0	1	8
9:00	9:15	0	4	0	0	0	0	0	0	5
9:15	9:30	0	8	0	0	0	0	2	0	4
15:30	15:45	0	1	0	0	2	0	1	0	1
15:45	16:00	0	1	0	0	3	1	0	0	3
16:00	16:15	0	4	0	0	1	0	0	0	5
16:15	16:30	0	3	0	0	0	0	0	0	3
16:30	16:45	0	1	0	0	0	0	0	0	1
16:45	17:00	0	1	0	0	0	0	0	0	1
17:00	17:15	0	1	0	0	0	0	0	0	3
17:15	17:30	0	3	0	1	0	0	2	0	1
17:30	17:45	0	1	1	0	0	0	0	0	2
17:45	18:00	0	0	0	0	0	0	0	0	2
18:00	18:15	0	1	0	0	0	0	0	0	4
18:15	18:30	0	1	2	0	0	0	0	0	1
18:30	18:45	0	2	0	0	0	1	0	0	0
18:45	19:00	0	3	0	0	0	0	0	0	1

Peak Time		East Approach Coreen Ave			South Approach Sydney Smith Dr			West Approach Coreen Ave			Peak
Period Start	Period End	U	WB	L	U	R	L	U	R	EB	total
8:00	9:00	0	20	1	0	2	2	0	2	23	50
16:45	17:45	0	6	1	1	0	0	2	0	7	17

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

trafficsurvey.com.au

Intersection of Lord Sheffield Cct and Kleinig Pl, Penrith

GPS *-33.748097, 150.697106*

Date:	Thu 11/05/23
Weather:	Fine
Suburban:	Penrith
Customer:	Varga

North:	Kleinig Pl
East:	Lord Sheffield Cct
South:	Lord Sheffield Cct
West:	Lord Sheffield Cct

Survey Period	AM:	6:30 AM-9:30 AM
	PM:	3:30 PM-7:00 PM
Traffic Peak	AM:	7:15 AM-8:15 AM
	PM:	5:45 PM-6:45 PM

All Vehicles

Time		North Approach Kleinig Pl				East Approach Lord Sheffield Cct				South Approach Lord Sheffield Cct				West Approach Lord Sheffield Cct				Hourly Total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
6:30	6:45	0	7	0	1	0	2	8	3	1	14	0	10	0	5	4	1	266	
6:45	7:00	0	0	0	2	1	0	21	3	0	9	0	13	0	6	4	1	279	
7:00	7:15	0	3	1	2	0	2	20	0	0	14	1	12	0	3	0	7	286	
7:15	7:30	0	5	1	5	0	1	20	2	0	18	0	17	0	6	10	0	296	Peak
7:30	7:45	0	3	0	2	0	1	16	0	1	20	0	16	0	8	2	0	274	
7:45	8:00	0	0	0	4	1	3	17	1	1	13	0	13	0	7	7	0	287	
8:00	8:15	0	1	0	6	0	2	13	6	0	16	0	16	0	5	9	1	268	
8:15	8:30	0	2	0	3	1	1	18	1	0	11	0	10	0	6	10	0	248	
8:30	8:45	0	1	0	10	1	3	22	2	1	11	0	14	0	6	9	2	239	
8:45	9:00	0	1	1	2	0	3	10	3	0	5	0	9	0	3	10	1		
9:00	9:15	0	2	1	3	0	2	10	2	0	9	0	14	0	7	4	1		
9:15	9:30	0	2	0	2	0	2	15	1	0	8	0	12	1	5	4	2		
15:30	15:45	0	1	0	3	0	4	16	5	0	11	0	12	0	9	15	1	263	
15:45	16:00	0	1	0	1	1	7	16	6	0	5	0	13	0	4	7	2	256	
16:00	16:15	0	1	0	1	0	2	15	4	0	9	0	13	0	8	11	2	277	
16:15	16:30	0	2	1	0	0	5	13	5	0	6	0	7	0	6	9	3	299	
16:30	16:45	0	1	0	1	1	6	11	7	0	11	0	5	0	8	15	4	330	
16:45	17:00	0	3	1	1	1	7	18	2	0	7	0	9	0	12	20	3	354	
17:00	17:15	0	3	0	4	0	6	17	4	0	9	1	10	0	15	13	6	361	
17:15	17:30	0	2	0	1	1	8	21	6	0	10	0	11	0	7	19	2	367	
17:30	17:45	0	2	0	4	0	3	17	9	0	16	0	9	0	9	18	7	380	
17:45	18:00	0	0	0	4	0	3	25	4	0	14	0	9	0	11	18	3	381	Peak
18:00	18:15	0	1	0	6	0	7	18	6	1	13	0	16	0	7	18	1	372	
18:15	18:30	0	8	0	1	0	7	19	6	1	10	1	15	1	18	12	2		
18:30	18:45	0	1	0	7	0	6	15	12	0	13	0	11	1	6	16	7		
18:45	19:00	0	3	1	1	3	5	12	3	0	16	1	8	0	13	12	4		

Peak Time		North Approach Kleinig Pl				East Approach Lord Sheffield Cct				South Approach Lord Sheffield Cct				West Approach Lord Sheffield Cct				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
7:15	8:15	0	9	1	17	1	7	66	9	2	67	0	62	0	26	28	1	296
17:45	18:45	0	10	0	18	0	23	77	28	2	50	1	51	2	42	64	13	381

Pedestrians Crossing

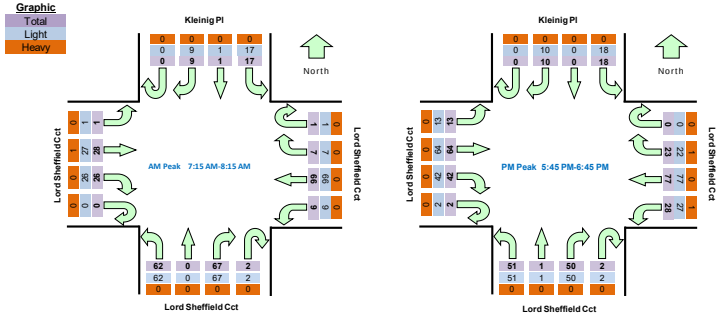
Time		North Approach Kleinig Pl		ast Approach Lord Sheffield C	outh Approach Lord Sheffield C		est Approach Lord Sheffield C			Hourly Total
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	
6:30	6:45	0	0	3	0	0	1	2	0	50
6:45	7:00	0	1	2	0	0	1	3	1	61
7:00	7:15	2	0	3	1	0	0	6	0	75
7:15	7:30	5	2	6	4	1	2	2	2	83
7:30	7:45	1	2	4	4	1	0	5	0	79
7:45	8:00	1	2	7	3	2	3	4	0	77
8:00	8:15	1	2	4	3	0	0	8	2	73
8:15	8:30	1	0	6	3	4	5	1	0	64
8:30	8:45	0	2	3	4	0	1	4	1	60
8:45	9:00	2	1	6	0	1	5	2	1	
9:00	9:15	0	0	6	2	1	0	2	0	
9:15	9:30	2	3	4	1	0	1	3	2	
15:30	15:45	2	1	4	5	0	0	1	3	92
15:45	16:00	4	6	8	1	0	0	1	2	100
16:00	16:15	5	3	0	5	1	1	3	3	103
16:15	16:30	2	9	7	4	0	0	3	8	110
16:30	16:45	0	5	2	6	1	2	2	6	95
16:45	17:00	0	3	3	4	3	5	3	4	87
17:00	17:15	5	6	2	8	0	2	3	2	96
17:15	17:30	1	1	4	3	2	3	2	2	85
17:30	17:45	3	6	2	0	2	0	2	1	82
17:45	18:00	3	3	10	6	1	3	2	6	84
18:00	18:15	1	2	4	5	0	0	1	4	69
18:15	18:30	3	2	2	6	0	0	0	2	
18:30	18:45	3	3	2	3	5	1	1	0	
18:45	19:00	0	0	8	10	0	0	0	1	

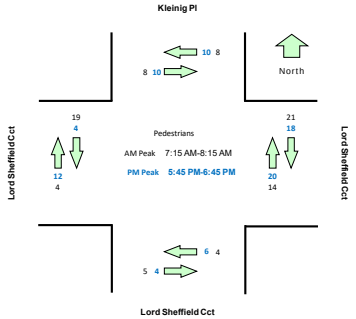
Peak Time		North Approach Kleinig Pl		ast Approach Lord Sheffield C	outh Approach Lord Sheffield C		est Approach Lord Sheffield C			Peak hour total
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	
7:15	8:15	8	8	21	14	4	5	19	4	83
17:45	18:45	10	10	18	20	6	4	4	12	84

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.

Graphic

Total
Light
Heavy





Light Vehicles

Time		North Approach Kleinig Pl				East Approach Lord Sheffield Cct				South Approach Lord Sheffield Cct				West Approach Lord Sheffield Cct			
Period Start	**Period End**	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
6:30	6:45	0	7	0	1	0	2	8	3	1	13	0	10	0	4	4	1
6:45	7:00	0	0	0	2	1	0	21	3	0	9	0	12	0	6	4	1
7:00	7:15	0	3	1	1	0	2	19	0	0	13	1	12	0	3	0	7
7:15	7:30	0	5	1	5	0	1	20	2	0	18	0	17	0	6	9	0
7:30	7:45	0	3	0	2	0	1	16	0	1	20	0	16	0	8	2	0
7:45	8:00	0	0	0	4	1	3	17	1	1	13	0	13	0	7	7	0
8:00	8:15	0	1	0	6	0	2	13	6	0	16	0	16	0	5	9	1
8:15	8:30	0	2	0	3	1	1	17	1	0	11	0	10	0	6	10	0
8:30	8:45	0	1	0	9	1	2	21	2	1	11	0	11	0	6	9	1
8:45	9:00	0	1	1	2	0	3	10	3	0	5	0	9	0	3	9	1
9:00	9:15	0	2	1	3	0	2	10	2	0	9	0	13	0	7	3	1
9:15	9:30	0	2	0	2	0	2	15	1	0	8	0	11	1	5	4	2
15:30	15:45	0	1	0	3	0	4	16	4	0	11	0	12	0	9	15	1
15:45	16:00	0	1	0	1	1	7	15	6	0	4	0	13	0	4	7	2
16:00	16:15	0	1	0	1	0	2	15	4	0	9	0	12	0	8	11	2
16:15	16:30	0	2	1	0	0	5	13	5	0	6	0	6	0	6	8	3
16:30	16:45	0	1	0	1	1	6	11	7	0	11	0	5	0	8	15	4
16:45	17:00	0	3	1	1	1	7	17	2	0	7	0	9	0	12	20	3
17:00	17:15	0	3	0	4	0	6	17	4	0	9	1	10	0	14	12	6
17:15	17:30	0	2	0	1	1	8	21	6	0	10	0	11	0	7	19	2
17:30	17:45	0	2	0	4	0	3	17	9	0	16	0	9	0	9	18	7
17:45	18:00	0	0	0	4	0	3	25	4	0	14	0	9	0	11	18	3
18:00	18:15	0	1	0	6	0	7	18	5	1	13	0	16	0	7	18	1
18:15	18:30	0	8	0	1	0	6	19	6	1	10	1	15	1	18	12	2
18:30	18:45	0	1	0	7	0	6	15	12	0	13	0	11	1	6	16	7
18:45	19:00	0	3	1	1	3	5	12	3	0	16	1	8	0	13	12	4

Peak Time		North Approach Kleinig Pl				East Approach Lord Sheffield Cct				South Approach Lord Sheffield Cct				West Approach Lord Sheffield Cct				Peak
Period Start	**Period End**	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	**total**
7:15	8:15	0	9	1	17	1	7	66	9	2	67	0	62	0	26	27	1	295
17:45	18:45	0	10	0	18	0	22	77	27	2	50	1	51	2	42	64	13	379

Heavy Vehicles

Time		North Approach Kleinig Pl				East Approach Lord Sheffield Cct				South Approach Lord Sheffield Cct				West Approach Lord Sheffield Cct			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
6:30	6:45	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0
6:45	7:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
7:00	7:15	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0
7:15	7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:30	7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	8:30	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
8:30	8:45	0	0	0	1	0	1	1	0	0	0	0	3	0	0	0	1
8:45	9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
9:00	9:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
9:15	9:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
15:30	15:45	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
15:45	16:00	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
16:00	16:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
16:15	16:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
16:30	16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	17:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
17:00	17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
17:15	17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	18:15	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
18:15	18:30	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
18:30	18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	19:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Peak Time		North Approach Kleinig Pl				East Approach Lord Sheffield Cct				South Approach Lord Sheffield Cct				West Approach Lord Sheffield Cct				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
7:15	8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
17:45	18:45	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2

TRANS TRAFFIC SURVEY

traffic survey.com.au

TURNING MOVEMENT SURVEY

Intersection of The Crescent and Macquarie Ave, Penrith

GPS	-33.752022, 150.703420
Date:	Thu 11/05/23
Weather:	Fine
Suburban:	Penrith
Customer:	Varga

North:	Macquarie Ave
East:	The Crescent
South:	Evan St
West:	The Crescent

Survey Period	AM:	6:30 AM-9:30 AM
	PM:	3:30 PM-7:00 PM
Traffic Peak	AM:	8:15 AM-9:15 AM
	PM:	4:30 PM-5:30 PM

All Vehicles

Time		North Approach Macquarie Ave				East Approach The Crescent				South Approach Evan St				West Approach The Crescent				Hourly Total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
6:30	6:45	0	0	53	1	0	4	5	10	0	5	35	12	0	0	0	0	705	
6:45	7:00	0	0	67	2	0	2	6	17	0	8	36	17	0	0	0	0	815	
7:00	7:15	0	0	76	2	1	6	11	28	0	18	51	11	0	0	0	0	1022	
7:15	7:30	0	0	81	4	0	3	13	25	0	19	64	12	0	0	0	0	1190	
7:30	7:45	0	2	105	2	0	1	5	32	0	20	61	7	0	0	0	0	1406	
7:45	8:00	1	0	157	7	0	3	13	48	2	32	70	29	0	0	0	0	1612	
8:00	8:15	0	2	170	1	0	2	13	47	1	38	77	21	0	0	0	0	1639	
8:15	8:30	0	5	215	5	0	2	10	59	0	38	82	21	0	0	0	0	1685	Peak
8:30	8:45	0	0	222	5	1	2	11	46	0	33	84	37	0	0	0	0	1577	
8:45	9:00	1	0	199	2	0	1	2	50	0	31	75	28	0	0	0	0		
9:00	9:15	1	1	185	0	0	1	15	55	0	23	103	34	0	0	0	0		
9:15	9:30	0	0	152	3	0	4	6	27	0	31	81	25	0	0	0	0		
15:30	15:45	3	1	132	7	0	4	14	62	0	49	137	41	0	0	0	0	1724	
15:45	16:00	1	1	124	6	0	2	11	42	0	46	129	53	0	0	0	0	1737	
16:00	16:15	0	0	134	3	0	4	12	55	3	37	156	36	0	0	0	0	1792	
16:15	16:30	0	0	119	3	0	5	16	35	0	50	164	27	0	0	0	0	1822	
16:30	16:45	1	2	144	4	0	5	7	43	0	42	171	44	0	0	0	0	1858	Peak
16:45	17:00	1	1	136	5	0	4	15	51	0	53	161	43	0	0	0	0	1833	
17:00	17:15	0	1	131	8	0	1	16	53	0	52	177	31	0	0	0	0	1761	
17:15	17:30	0	1	121	6	1	8	5	53	0	58	161	41	0	0	0	0	1706	
17:30	17:45	1	3	139	1	0	7	10	43	0	47	157	30	0	0	0	0	1623	
17:45	18:00	0	1	100	5	0	2	12	22	0	47	155	54	0	0	0	0	1521	
18:00	18:15	0	0	123	3	1	3	12	45	1	38	144	45	0	0	0	0	1403	
18:15	18:30	0	1	95	4	0	4	10	32	0	33	147	46	0	0	0	0		
18:30	18:45	1	1	94	2	0	2	8	18	0	38	144	28	0	0	0	0		
18:45	19:00	0	0	93	3	0	4	13	24	0	38	79	26	0	0	0	0		

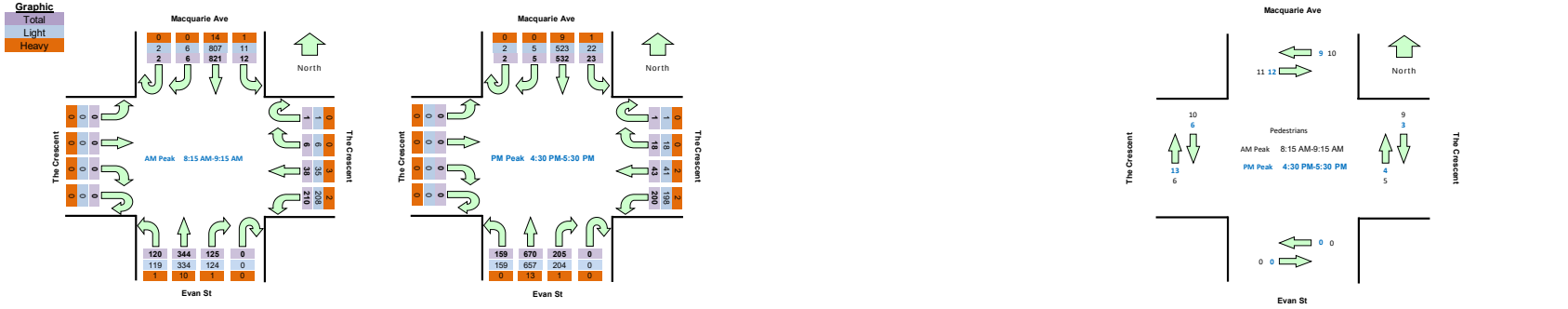
Peak Time		North Approach Macquarie Ave				East Approach The Crescent				South Approach Evan St				West Approach The Crescent				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
8:15	9:15	2	6	821	12	1	6	38	210	0	125	344	120	0	0	0	0	1685
16:30	17:30	2	5	532	23	1	18	43	200	0	205	670	159	0	0	0	0	1858

Pedestrians Crossing

Time		North Approach Macquarie Ave		East Approach The Crescent		South Approach Evan St		West Approach The Crescent		Hourly Total
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	
6:30	6:45	0	1	0	0	0	0	0	0	19
6:45	7:00	2	1	0	0	0	0	0	0	29
7:00	7:15	3	1	0	0	0	0	1	1	34
7:15	7:30	7	1	0	1	0	0	0	0	47
7:30	7:45	4	0	0	0	0	0	5	2	46
7:45	8:00	1	2	0	0	0	0	3	2	41
8:00	8:15	9	0	2	1	0	0	5	2	58
8:15	8:30	2	1	1	3	0	0	0	1	51
8:30	8:45	2	1	0	0	0	0	2	1	65
8:45	9:00	4	6	6	1	0	0	6	2	
9:00	9:15	2	3	2	1	0	0	2	2	
9:15	9:30	5	1	7	1	0	0	4	4	
15:30	15:45	1	1	0	0	0	0	3	5	59
15:45	16:00	8	3	2	0	0	0	7	5	62
16:00	16:15	3	3	0	0	0	0	6	6	44
16:15	16:30	2	0	0	0	0	0	1	3	40
16:30	16:45	0	4	3	0	0	0	0	6	47
16:45	17:00	1	2	0	0	0	0	1	3	56
17:00	17:15	5	4	0	2	0	0	2	1	63
17:15	17:30	3	2	0	2	0	0	3	3	59
17:30	17:45	4	7	0	2	0	0	1	8	50
17:45	18:00	1	6	0	0	0	0	2	5	36
18:00	18:15	1	3	1	2	0	0	1	2	32
18:15	18:30	1	1	0	0	0	0	0	2	
18:30	18:45	0	4	0	0	0	0	0	4	
18:45	19:00	3	1	0	2	0	0	2	2	

Peak Time		North Approach Macquarie Ave		East Approach The Crescent		South Approach Evan St		West Approach The Crescent		Peak hour total
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	
8:15	9:15	10	11	9	5	0	0	10	6	51
16:30	17:30	9	12	3	4	0	0	6	13	47

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.



Light Vehicles

Time		North Approach Macquarie Ave				East Approach The Crescent				South Approach Evan St				West Approach The Crescent			
Period Start	**Period End**	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
6:30	6:45	0	0	49	1	0	4	5	9	0	5	31	12	0	0	0	0
6:45	7:00	0	0	63	1	0	2	6	17	0	7	32	15	0	0	0	0
7:00	7:15	0	0	74	2	1	6	9	25	0	17	45	10	0	0	0	0
7:15	7:30	0	0	77	4	0	3	13	22	0	18	64	12	0	0	0	0
7:30	7:45	0	2	102	2	0	1	5	31	0	20	56	7	0	0	0	0
7:45	8:00	1	0	155	7	0	3	12	48	2	31	69	29	0	0	0	0
8:00	8:15	0	2	164	1	0	2	11	47	1	38	75	21	0	0	0	0
8:15	8:30	0	5	214	5	0	2	9	58	0	38	79	21	0	0	0	0
8:30	8:45	0	0	216	5	1	2	10	45	0	33	80	36	0	0	0	0
8:45	9:00	1	0	193	1	0	1	2	50	0	30	75	28	0	0	0	0
9:00	9:15	1	1	184	0	0	1	14	55	0	23	100	34	0	0	0	0
9:15	9:30	0	0	147	3	0	4	6	25	0	30	78	24	0	0	0	0
15:30	15:45	3	1	129	7	0	4	14	61	0	49	135	40	0	0	0	0
15:45	16:00	1	1	118	6	0	2	10	42	0	45	127	53	0	0	0	0
16:00	16:15	0	0	132	3	0	4	12	55	3	36	153	36	0	0	0	0
16:15	16:30	0	0	117	3	0	5	16	35	0	49	162	27	0	0	0	0
16:30	16:45	1	2	142	4	0	5	7	43	0	42	166	44	0	0	0	0
16:45	17:00	1	1	131	4	0	4	15	50	0	52	159	43	0	0	0	0
17:00	17:15	0	1	131	8	0	1	14	53	0	52	172	31	0	0	0	0
17:15	17:30	0	1	119	6	1	8	5	52	0	58	160	41	0	0	0	0
17:30	17:45	1	3	137	1	0	7	9	43	0	47	153	30	0	0	0	0
17:45	18:00	0	0	98	4	0	2	12	21	0	47	152	54	0	0	0	0
18:00	18:15	0	0	121	3	1	3	12	45	1	38	143	45	0	0	0	0
18:15	18:30	0	1	93	4	0	4	10	32	0	32	144	46	0	0	0	0
18:30	18:45	1	1	94	2	0	2	8	18	0	38	139	28	0	0	0	0
18:45	19:00	0	0	92	3	0	4	13	24	0	38	79	26	0	0	0	0

Peak Time		North Approach Macquarie Ave				East Approach The Crescent				South Approach Evan St				West Approach The Crescent				Peak
Period Start	**Period End**	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	**total**
8:15	9:15	2	6	807	11	1	6	35	208	0	124	334	119	0	0	0	0	1653
16:30	17:30	2	5	523	22	1	18	41	198	0	204	657	159	0	0	0	0	1830

Heavy Vehicles

Time		North Approach Macquarie Ave				East Approach The Crescent				South Approach Evan St				West Approach The Crescent			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
6:30	6:45	0	0	4	0	0	0	0	1	0	0	4	0	0	0	0	0
6:45	7:00	0	0	4	1	0	0	0	0	0	1	4	2	0	0	0	0
7:00	7:15	0	0	2	0	0	0	2	3	0	1	6	1	0	0	0	0
7:15	7:30	0	0	4	0	0	0	0	3	0	1	0	0	0	0	0	0
7:30	7:45	0	0	3	0	0	0	0	1	0	0	5	0	0	0	0	0
7:45	8:00	0	0	2	0	0	0	1	0	0	1	1	0	0	0	0	0
8:00	8:15	0	0	6	0	0	0	2	0	0	0	2	0	0	0	0	0
8:15	8:30	0	0	1	0	0	0	1	1	0	0	3	0	0	0	0	0
8:30	8:45	0	0	6	0	0	0	1	1	0	0	4	1	0	0	0	0
8:45	9:00	0	0	6	1	0	0	0	0	0	1	0	0	0	0	0	0
9:00	9:15	0	0	1	0	0	0	1	0	0	0	3	0	0	0	0	0
9:15	9:30	0	0	5	0	0	0	0	2	0	1	3	1	0	0	0	0
15:30	15:45	0	0	3	0	0	0	0	1	0	0	2	1	0	0	0	0
15:45	16:00	0	0	6	0	0	0	1	0	0	1	2	0	0	0	0	0
16:00	16:15	0	0	2	0	0	0	0	0	0	1	3	0	0	0	0	0
16:15	16:30	0	0	2	0	0	0	0	0	0	1	2	0	0	0	0	0
16:30	16:45	0	0	2	0	0	0	0	0	0	0	5	0	0	0	0	0
16:45	17:00	0	0	5	1	0	0	0	1	0	1	2	0	0	0	0	0
17:00	17:15	0	0	0	0	0	0	2	0	0	0	5	0	0	0	0	0
17:15	17:30	0	0	2	0	0	0	0	1	0	0	1	0	0	0	0	0
17:30	17:45	0	0	2	0	0	0	1	0	0	0	4	0	0	0	0	0
17:45	18:00	0	1	2	1	0	0	0	1	0	0	3	0	0	0	0	0
18:00	18:15	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0
18:15	18:30	0	0	2	0	0	0	0	0	0	1	3	0	0	0	0	0
18:30	18:45	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0
18:45	19:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0

Peak Time		North Approach Macquarie Ave				East Approach The Crescent				South Approach Evan St				West Approach The Crescent				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:15	9:15	0	0	14	1	0	0	3	2	0	1	10	1	0	0	0	0	32
16:30	17:30	0	0	9	1	0	0	2	2	0	1	13	0	0	0	0	0	28

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY

trafficsurvey.com.au

Intersection of Lemongrove Rd and Lemongrove Rd, Penrith

GPS -33.750405, 150.703661

Date:	Thu 11/05/23
Weather:	Fine
Suburban:	Penrith
Customer:	Varga

North:	Lemongrove Rd
East:	N/A
South:	Macquarie Ave
West:	Lemongrove Rd

Survey Period	AM:	6:30 AM-9:30 AM
	PM:	3:30 PM-7:00 PM
Traffic Peak	AM:	8:15 AM-9:15 AM
	PM:	4:30 PM-5:30 PM

All Vehicles

Time		North Approach Lemongrove Rd			South Approach Macquarie Ave			West Approach Lemongrove Rd			Hourly Total	
Period Start	Period End	U	R	SB	U	NB	L	U	R	L	Hour	Peak
6:30	6:45	0	3	47	0	39	0	0	7	4	507	
6:45	7:00	0	1	63	0	39	0	0	6	1	582	
7:00	7:15	0	3	52	0	56	0	0	26	2	712	
7:15	7:30	0	2	73	0	67	1	0	11	4	840	
7:30	7:45	1	3	93	0	61	0	0	16	1	992	
7:45	8:00	0	1	145	0	73	0	0	19	2	1136	
8:00	8:15	3	2	153	0	79	0	0	23	7	1189	
8:15	8:30	0	2	204	0	82	1	0	20	1	1217	Peak
8:30	8:45	0	2	212	0	87	0	0	18	0	1152	
8:45	9:00	0	6	182	0	74	1	0	25	5		
9:00	9:15	0	8	166	0	104	0	1	15	1		
9:15	9:30	0	5	141	0	83	0	0	13	3		
15:30	15:45	0	2	128	0	144	0	0	12	2	1166	
15:45	16:00	0	2	121	0	131	0	0	12	5	1228	
16:00	16:15	1	5	123	0	162	0	0	13	7	1270	
16:15	16:30	1	1	110	0	166	0	0	12	6	1294	
16:30	16:45	0	4	142	0	179	1	0	14	10	1299	Peak
16:45	17:00	0	3	122	0	164	0	0	16	8	1272	
17:00	17:15	1	3	123	0	178	2	0	18	10	1248	
17:15	17:30	0	2	112	0	167	1	0	12	7	1190	
17:30	17:45	1	1	128	0	165	1	0	19	8	1142	
17:45	18:00	1	4	101	0	159	0	0	10	14	1072	
18:00	18:15	1	2	115	0	145	0	0	6	8	967	
18:15	18:30	0	1	83	0	150	0	0	15	4		
18:30	18:45	1	2	80	0	147	1	0	18	4		
18:45	19:00	0	1	88	0	84	0	0	8	3		

Peak Time		North Approach Lemongrove Rd			South Approach Macquarie Ave			West Approach Lemongrove Rd			Peak total
Period Start	Period End	U	R	SB	U	NB	L	U	R	L	
8:15	9:15	0	18	764	0	347	2	1	78	7	1217
16:30	17:30	1	12	499	0	688	4	0	60	35	1299

Pedestrians Crossing

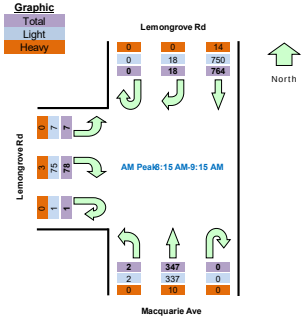
Time		North Approach Lemongrove Rd		South Approach Macquarie Ave		West Approach Lemongrove Rd		Hourly Total
Period Start	Period End	Westbound	Eastbound	Westbound	Eastbound	Southbound	Northbound	
6:30	6:45	0	0	0	0	0	0	2
6:45	7:00	0	0	0	0	0	0	4
7:00	7:15	0	0	0	0	0	1	6
7:15	7:30	0	0	0	0	0	1	7
7:30	7:45	0	0	0	0	1	1	7
7:45	8:00	0	1	0	0	0	1	7
8:00	8:15	0	1	0	0	0	1	7
8:15	8:30	0	0	0	0	0	1	6
8:30	8:45	0	1	0	0	0	1	6
8:45	9:00	0	0	0	0	1	1	
9:00	9:15	0	0	0	0	0	1	
9:15	9:30	0	0	0	0	0	1	
15:30	15:45	0	0	0	1	0	2	5
15:45	16:00	0	0	0	0	0	0	3
16:00	16:15	0	0	0	0	0	2	7
16:15	16:30	0	0	0	0	0	0	5
16:30	16:45	0	0	0	0	1	0	6
16:45	17:00	2	1	0	0	0	1	7
17:00	17:15	0	0	0	0	0	0	3
17:15	17:30	0	0	0	0	0	1	3
17:30	17:45	0	0	0	0	0	2	2
17:45	18:00	0	0	0	0	0	0	2
18:00	18:15	0	0	0	0	0	0	2
18:15	18:30	0	0	0	0	0	0	
18:30	18:45	1	0	0	0	1	0	
18:45	19:00	0	0	0	0	0	0	

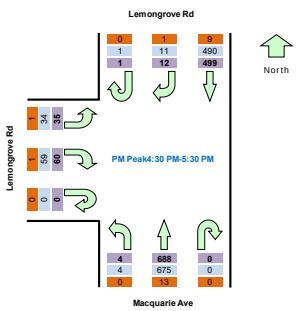
Peak Time		North Approach Lemongrove Rd		South Approach Macquarie Ave		West Approach Lemongrove Rd		Peak total
Period Start	Period End	Westbound	Eastbound	Westbound	Eastbound	Southbound	Northbound	
8:15	9:15	0	1	0	0	1	4	6
16:30	17:30	2	1	0	0	1	2	6

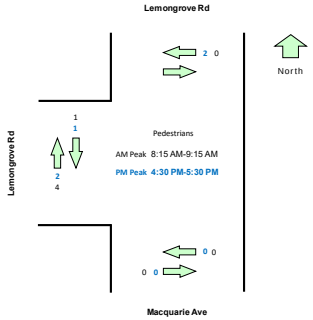
Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.

Graphic

Total
Light
Heavy







Light Vehicles

Time		North Approach Lemongrove Rd			South Approach Macquarie Ave			West Approach Lemongrove Rd		
Period Start	Period End	U	R	SB	U	NB	L	U	R	L
6:30	6:45	0	3	43	0	35	0	0	7	4
6:45	7:00	0	1	58	0	35	0	0	6	1
7:00	7:15	0	3	51	0	50	0	0	25	2
7:15	7:30	0	2	69	0	67	1	0	11	4
7:30	7:45	1	3	90	0	56	0	0	16	1
7:45	8:00	0	1	143	0	72	0	0	19	2
8:00	8:15	3	2	148	0	77	0	0	22	7
8:15	8:30	0	2	203	0	80	1	0	20	1
8:30	8:45	0	2	207	0	82	0	0	17	0
8:45	9:00	0	6	176	0	74	1	0	24	5
9:00	9:15	0	8	164	0	101	0	1	14	1
9:15	9:30	0	5	137	0	80	0	0	13	3
15:30	15:45	0	2	126	0	142	0	0	12	2
15:45	16:00	0	1	114	0	129	0	0	12	5
16:00	16:15	1	5	122	0	158	0	0	13	7
16:15	16:30	1	1	108	0	164	0	0	12	6
16:30	16:45	0	4	140	0	174	1	0	14	10
16:45	17:00	0	3	117	0	162	0	0	15	8
17:00	17:15	1	3	122	0	173	2	0	18	10
17:15	17:30	0	1	111	0	166	1	0	12	6
17:30	17:45	1	1	126	0	161	1	0	19	8
17:45	18:00	1	4	99	0	156	0	0	8	13
18:00	18:15	1	2	113	0	144	0	0	6	8
18:15	18:30	0	1	81	0	147	0	0	15	4
18:30	18:45	1	2	80	0	142	1	0	18	4
18:45	19:00	0	1	87	0	84	0	0	8	3

Peak Time		North Approach Lemongrove Rd			South Approach Macquarie Ave			West Approach Lemongrove Rd			Peak
Period Start	Period End	U	R	SB	U	NB	L	U	R	L	total
8:15	9:15	0	18	750	0	337	2	1	75	7	1190
16:30	17:30	1	11	490	0	675	4	0	59	34	1274

Heavy Vehicles

Time		North Approach Lemongrove Rd			South Approach Macquarie Ave			West Approach Lemongrove Rd		
Period Start	**Period End**	U	R	SB	U	NB	L	U	R	L
6:30	6:45	0	0	4	0	4	0	0	0	0
6:45	7:00	0	0	5	0	4	0	0	0	0
7:00	7:15	0	0	1	0	6	0	0	1	0
7:15	7:30	0	0	4	0	0	0	0	0	0
7:30	7:45	0	0	3	0	5	0	0	0	0
7:45	8:00	0	0	2	0	1	0	0	0	0
8:00	8:15	0	0	5	0	2	0	0	1	0
8:15	8:30	0	0	1	0	2	0	0	0	0
8:30	8:45	0	0	5	0	5	0	0	1	0
8:45	9:00	0	0	6	0	0	0	0	1	0
9:00	9:15	0	0	2	0	3	0	0	1	0
9:15	9:30	0	0	4	0	3	0	0	0	0
15:30	15:45	0	0	2	0	2	0	0	0	0
15:45	16:00	0	1	7	0	2	0	0	0	0
16:00	16:15	0	0	1	0	4	0	0	0	0
16:15	16:30	0	0	2	0	2	0	0	0	0
16:30	16:45	0	0	2	0	5	0	0	0	0
16:45	17:00	0	0	5	0	2	0	0	1	0
17:00	17:15	0	0	1	0	5	0	0	0	0
17:15	17:30	0	1	1	0	1	0	0	0	1
17:30	17:45	0	0	2	0	4	0	0	0	0
17:45	18:00	0	0	2	0	3	0	0	2	1
18:00	18:15	0	0	2	0	1	0	0	0	0
18:15	18:30	0	0	2	0	3	0	0	0	0
18:30	18:45	0	0	0	0	5	0	0	0	0
18:45	19:00	0	0	1	0	0	0	0	0	0

Peak Time		North Approach Lemongrove Rd			South Approach Macquarie Ave			West Approach Lemongrove Rd			Peak
Period Start	**Period End**	U	R	SB	U	NB	L	U	R	L	**total**
8:15	9:15	0	0	14	0	10	0	0	3	0	27
16:30	17:30	0	1	9	0	13	0	0	1	1	25

SIDRA MOVEMENT SUMMARIES

MOVEMENT SUMMARY

Site: 101 [Thronton Dr-Combewood Ave_AM (Site Folder: General)]

Thronton Dr-Combewood Ave
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Combewood Avenue (S)														
1	L2	114	2	114	1.8	0.093	4.6	LOS A	0.0	0.3	0.02	0.36	0.02	47.2
2	T1	55	1	55	1.8	0.093	0.0	LOS A	0.0	0.3	0.02	0.36	0.02	47.9
3	R2	4	0	4	0.0	0.093	5.0	LOS A	0.0	0.3	0.02	0.36	0.02	47.0
Approach		173	3	173	1.7	0.093	3.2	NA	0.0	0.3	0.02	0.36	0.02	47.4
East: Thornton Drive (E)														
4	L2	1	0	1	0.0	0.067	8.0	LOS A	0.2	1.7	0.44	0.97	0.44	44.4
5	T1	44	2	44	4.5	0.067	9.8	LOS A	0.2	1.7	0.44	0.97	0.44	43.5
6	R2	4	0	4	0.0	0.067	9.3	LOS A	0.2	1.7	0.44	0.97	0.44	44.0
Approach		49	2	49	4.1	0.067	9.8	LOS A	0.2	1.7	0.44	0.97	0.44	43.6
North: Combewood Avenue (N)														
7	L2	5	0	5	0.0	0.140	5.2	LOS A	0.6	4.3	0.24	0.23	0.24	47.7
8	T1	141	1	141	0.7	0.140	0.4	LOS A	0.6	4.3	0.24	0.23	0.24	48.2
9	R2	95	4	95	4.2	0.140	5.2	LOS A	0.6	4.3	0.24	0.23	0.24	46.9
Approach		241	5	241	2.1	0.140	2.4	NA	0.6	4.3	0.24	0.23	0.24	47.7
West: Thornton Drive (W)														
10	L2	39	0	39	0.0	0.175	7.7	LOS A	0.6	4.3	0.22	0.96	0.22	43.6
11	T1	15	2	15	13.3	0.175	10.3	LOS A	0.6	4.3	0.22	0.96	0.22	43.2
12	R2	80	2	80	2.5	0.175	10.2	LOS A	0.6	4.3	0.22	0.96	0.22	43.1
Approach		134	4	134	3.0	0.175	9.5	LOS A	0.6	4.3	0.22	0.96	0.22	43.3
All Vehicles		597	14	597	2.3	0.175	4.8	NA	0.6	4.3	0.19	0.49	0.19	46.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Thronton Dr-Combewood Ave_PM (Site Folder: General)]

Thronton Dr-Combewood Ave
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Combewood Avenue (S)														
1	L2	152	2	152	1.3	0.152	4.6	LOS A	0.0	0.1	0.00	0.29	0.00	47.7
2	T1	134	1	134	0.7	0.152	0.0	LOS A	0.0	0.1	0.00	0.29	0.00	48.4
3	R2	1	0	1	0.0	0.152	4.8	LOS A	0.0	0.1	0.00	0.29	0.00	47.5
Approach		287	3	287	1.0	0.152	2.4	NA	0.0	0.1	0.00	0.29	0.00	48.0
East: Thornton Drive (E)														
4	L2	2	0	2	0.0	0.052	7.7	LOS A	0.2	1.3	0.40	0.96	0.40	44.3
5	T1	33	0	33	0.0	0.052	9.8	LOS A	0.2	1.3	0.40	0.96	0.40	43.5
6	R2	3	0	3	0.0	0.052	9.7	LOS A	0.2	1.3	0.40	0.96	0.40	43.9
Approach		38	0	38	0.0	0.052	9.6	LOS A	0.2	1.3	0.40	0.96	0.40	43.5
North: Combewood Avenue (N)														
7	L2	4	0	4	0.0	0.104	5.6	LOS A	0.5	3.5	0.36	0.35	0.36	46.9
8	T1	66	1	66	1.5	0.104	0.9	LOS A	0.5	3.5	0.36	0.35	0.36	47.3
9	R2	92	0	92	0.0	0.104	5.6	LOS A	0.5	3.5	0.36	0.35	0.36	46.1
Approach		162	1	162	0.6	0.104	3.7	NA	0.5	3.5	0.36	0.35	0.36	46.6
West: Thornton Drive (W)														
10	L2	86	1	86	1.2	0.266	8.1	LOS A	1.0	7.1	0.33	0.94	0.33	43.7
11	T1	38	0	38	0.0	0.266	9.7	LOS A	1.0	7.1	0.33	0.94	0.33	43.5
12	R2	95	2	95	2.1	0.266	10.5	LOS A	1.0	7.1	0.33	0.94	0.33	43.3
Approach		219	3	219	1.4	0.266	9.4	LOS A	1.0	7.1	0.33	0.94	0.33	43.5
All Vehicles		706	7	706	1.0	0.266	5.3	NA	1.0	7.1	0.21	0.54	0.21	46.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Castlereagh Rd-Thornton Dr_AM (Site Folder: General)]

Castlereagh Rd-Thornton Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 130 seconds (Site User-Given Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Castlereagh Road (S)														
1	L2	123	14	123	11.4	0.819	30.8	LOS C	41.7	316.3	0.89	0.83	0.89	35.4
2	T1	1450	137	1450	9.4	0.819	25.1	LOS B	41.7	316.3	0.86	0.80	0.87	31.8
3	R2	124	2	124	1.6	* 0.798	75.1	LOS F	8.4	59.8	1.00	0.89	1.23	20.8
Approach		1697	153	1697	9.0	0.819	29.1	LOS C	41.7	316.3	0.87	0.81	0.89	30.6
East: Thornton Drive (E)														
4	L2	202	6	202	3.0	0.437	48.5	LOS D	10.7	76.5	0.88	0.80	0.88	26.7
5	T1	40	1	40	2.5	0.159	54.7	LOS D	2.3	16.3	0.92	0.69	0.92	31.7
6	R2	42	2	42	4.8	* 0.175	51.8	LOS D	2.3	16.5	0.91	0.72	0.91	28.9
Approach		284	9	284	3.2	0.437	49.9	LOS D	10.7	76.5	0.89	0.77	0.89	27.9
North: Castlereagh Road (N)														
7	L2	32	3	32	9.4	0.029	14.7	LOS B	0.7	5.5	0.39	0.65	0.39	44.7
8	T1	1616	132	1616	8.2	* 0.826	25.9	LOS B	41.6	311.6	0.87	0.81	0.88	31.6
9	R2	42	2	42	4.8	0.175	27.7	LOS B	1.3	9.6	0.82	0.74	0.82	37.4
Approach		1690	137	1690	8.1	0.826	25.7	LOS B	41.6	311.6	0.86	0.80	0.87	32.1
West: Peachtree Road (W)														
10	L2	71	6	71	8.5	0.267	54.2	LOS D	4.9	36.3	0.89	0.76	0.89	28.3
11	T1	19	0	19	0.0	* 0.267	48.5	LOS D	4.9	36.3	0.89	0.76	0.89	32.2
12	R2	90	17	90	18.9	0.560	54.7	LOS D	5.0	41.0	0.99	0.77	0.99	24.8
Approach		180	23	180	12.8	0.560	53.8	LOS D	5.0	41.0	0.94	0.76	0.94	27.1
All Vehicles		3851	322	3851	8.4	0.826	30.3	LOS C	41.7	316.3	0.87	0.80	0.89	30.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Castlereagh Road (S)												
P1	Full	50	50	59.3	LOS E	0.2	0.2	0.96	0.96	228.9	220.5	0.96
East: Thornton Drive (E)												
P2	Full	50	50	59.3	LOS E	0.2	0.2	0.96	0.96	228.9	220.5	0.96

North: Castlereagh Road (N)											
P3	Full	50	50	59.3	LOS E	0.2	0.2	0.96	0.96	231.4	223.8	0.97
West: Peachtree Road (W)											
P4	Full	50	50	59.3	LOS E	0.2	0.2	0.96	0.96	226.3	217.2	0.96
All Pedestrians		200	200	59.3	LOS E	0.2	0.2	0.96	0.96	228.9	220.5	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 101 [Castlereagh Rd-Thornton Dr_PM (Site Folder: General)]

Castlereagh Rd-Thornton Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 130 seconds (Site User-Given Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Castlereagh Road (S)														
1	L2	116	13	116	11.2	0.867	32.6	LOS C	52.5	385.8	0.91	0.88	0.94	34.6
2	T1	1700	87	1700	5.1	* 0.867	26.9	LOS B	52.5	385.8	0.87	0.84	0.91	30.8
3	R2	159	0	159	0.0	0.856	76.9	LOS F	11.1	77.6	1.00	0.94	1.30	20.5
Approach		1975	100	1975	5.1	0.867	31.3	LOS C	52.5	385.8	0.89	0.85	0.95	29.5
East: Thornton Drive (E)														
4	L2	216	1	216	0.5	0.421	46.0	LOS D	11.1	77.8	0.86	0.80	0.86	27.6
5	T1	30	1	30	3.3	0.114	53.2	LOS D	1.7	12.1	0.91	0.67	0.91	32.1
6	R2	58	0	58	0.0	0.266	52.4	LOS D	3.2	22.1	0.93	0.74	0.93	28.8
Approach		304	2	304	0.7	0.421	47.9	LOS D	11.1	77.8	0.88	0.78	0.88	28.4
North: Castlereagh Road (N)														
7	L2	59	1	59	1.7	0.052	15.5	LOS B	1.4	10.0	0.41	0.66	0.41	44.3
8	T1	1682	62	1682	3.7	0.867	32.4	LOS C	48.4	349.2	0.91	0.88	0.97	28.2
9	R2	42	0	42	0.0	* 0.200	30.8	LOS C	1.4	9.8	0.86	0.74	0.86	36.0
Approach		1783	63	1783	3.5	0.867	31.8	LOS C	48.4	349.2	0.89	0.87	0.95	29.1
West: Peachtree Road (W)														
10	L2	78	2	78	2.6	0.385	58.0	LOS E	6.7	48.2	0.93	0.77	0.93	27.5
11	T1	40	1	40	2.5	* 0.385	52.4	LOS D	6.7	48.2	0.93	0.77	0.93	31.3
12	R2	136	4	136	2.9	* 0.815	65.0	LOS E	8.1	58.3	1.00	0.95	1.24	22.7
Approach		254	7	254	2.8	0.815	60.9	LOS E	8.1	58.3	0.97	0.87	1.10	25.6
All Vehicles		4316	172	4316	4.0	0.867	34.4	LOS C	52.5	385.8	0.89	0.86	0.95	28.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Castlereagh Road (S)												
P1	Full	50	50	59.3	LOS E	0.2	0.2	0.96	0.96	228.9	220.5	0.96
East: Thornton Drive (E)												
P2	Full	50	50	59.3	LOS E	0.2	0.2	0.96	0.96	228.9	220.5	0.96

North: Castlereagh Road (N)											
P3	Full	50	50	59.3	LOS E	0.2	0.2	0.96	0.96	231.4	223.8	0.97
West: Peachtree Road (W)											
P4	Full	50	50	59.3	LOS E	0.2	0.2	0.96	0.96	226.3	217.2	0.96
All Pedestrians		200	200	59.3	LOS E	0.2	0.2	0.96	0.96	228.9	220.5	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 101 [Coreen Ave-Sydney Smith Dr_AM (Site Folder: General)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Sydney Smith Drive (S)														
1	L2	38	2	38	5.3	0.249	7.6	LOS A	1.4	10.3	0.65	0.78	0.65	43.5
3	R2	167	2	167	1.2	0.249	10.4	LOS A	1.4	10.3	0.65	0.78	0.65	44.0
3u	U	1	0	1	0.0	0.249	11.8	LOS A	1.4	10.3	0.65	0.78	0.65	44.5
Approach		206	4	206	1.9	0.249	9.9	LOS A	1.4	10.3	0.65	0.78	0.65	43.9
East: Coreen Avenue (E)														
4	L2	75	1	75	1.3	0.409	4.1	LOS A	3.3	23.5	0.20	0.42	0.20	46.3
5	T1	516	19	516	3.7	0.409	3.9	LOS A	3.3	23.5	0.20	0.42	0.20	47.1
6u	U	18	0	18	0.0	0.409	8.4	LOS A	3.3	23.5	0.20	0.42	0.20	47.4
Approach		609	20	609	3.3	0.409	4.0	LOS A	3.3	23.5	0.20	0.42	0.20	47.0
West: Coreen Avenue (W)														
11	T1	411	16	411	3.9	0.394	5.0	LOS A	2.8	20.5	0.50	0.55	0.50	46.2
12	R2	26	2	26	7.7	0.394	8.2	LOS A	2.8	20.5	0.50	0.55	0.50	45.9
12u	U	4	0	4	0.0	0.394	9.5	LOS A	2.8	20.5	0.50	0.55	0.50	46.5
Approach		441	18	441	4.1	0.394	5.2	LOS A	2.8	20.5	0.50	0.55	0.50	46.2
All Vehicles		1256	42	1256	3.3	0.409	5.4	LOS A	3.3	23.5	0.38	0.53	0.38	46.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Coreen Ave-Sydney Smith Dr_PM (Site Folder: General)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Sydney Smith Drive (S)														
1	L2	43	0	43	0.0	0.209	6.6	LOS A	1.2	8.4	0.59	0.73	0.59	44.1
3	R2	143	0	143	0.0	0.209	9.5	LOS A	1.2	8.4	0.59	0.73	0.59	44.6
3u	U	1	1	1	100.0	0.209	14.9	LOS B	1.2	8.4	0.59	0.73	0.59	43.6
Approach		187	1	187	0.5	0.209	8.9	LOS A	1.2	8.4	0.59	0.73	0.59	44.5
East: Coreen Avenue (E)														
4	L2	95	0	95	0.0	0.373	4.3	LOS A	2.8	19.8	0.29	0.45	0.29	46.1
5	T1	395	6	395	1.5	0.373	4.1	LOS A	2.8	19.8	0.29	0.45	0.29	46.8
6u	U	21	0	21	0.0	0.373	8.7	LOS A	2.8	19.8	0.29	0.45	0.29	47.1
Approach		511	6	511	1.2	0.373	4.3	LOS A	2.8	19.8	0.29	0.45	0.29	46.7
West: Coreen Avenue (W)														
11	T1	613	6	613	1.0	0.564	5.0	LOS A	5.0	35.3	0.56	0.56	0.56	46.0
12	R2	33	0	33	0.0	0.564	8.2	LOS A	5.0	35.3	0.56	0.56	0.56	45.8
12u	U	32	2	32	6.3	0.564	9.8	LOS A	5.0	35.3	0.56	0.56	0.56	46.2
Approach		678	8	678	1.2	0.564	5.4	LOS A	5.0	35.3	0.56	0.56	0.56	46.0
All Vehicles		1376	15	1376	1.1	0.564	5.5	LOS A	5.0	35.3	0.47	0.54	0.47	46.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Lord Sheffield Cct-Klenig Pl_AM (Site Folder: General)]

Lord Sheffield Circuit-Klenig Place
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Lord Sheffield Circuit (S)														
1	L2	53	3	53	5.7	0.090	4.8	LOS A	0.3	2.4	0.19	0.53	0.19	46.1
2	T1	1	0	1	0.0	0.090	3.8	LOS A	0.3	2.4	0.19	0.53	0.19	44.1
3	R2	51	0	51	0.0	0.090	5.4	LOS A	0.3	2.4	0.19	0.53	0.19	45.8
Approach		105	3	105	2.9	0.090	5.1	LOS A	0.3	2.4	0.19	0.53	0.19	45.9
East: Lord Sheffield Circuit (E)														
4	L2	10	0	10	0.0	0.048	4.6	LOS A	0.1	0.5	0.03	0.12	0.03	48.8
5	T1	70	2	70	2.9	0.048	0.0	LOS A	0.1	0.5	0.03	0.12	0.03	49.3
6	R2	9	1	9	11.1	0.048	4.8	LOS A	0.1	0.5	0.03	0.12	0.03	46.7
Approach		89	3	89	3.4	0.048	1.0	NA	0.1	0.5	0.03	0.12	0.03	49.0
North: Kleinig Place (N)														
7	L2	23	1	23	4.3	0.020	4.7	LOS A	0.1	0.5	0.09	0.51	0.09	44.3
8	T1	1	0	1	0.0	0.020	3.7	LOS A	0.1	0.5	0.09	0.51	0.09	44.5
9	R2	4	0	4	0.0	0.020	5.5	LOS A	0.1	0.5	0.09	0.51	0.09	43.7
Approach		28	1	28	3.6	0.020	4.8	LOS A	0.1	0.5	0.09	0.51	0.09	44.2
West: Lord Sheffield Circuit (W)														
10	L2	3	1	3	33.3	0.034	5.1	LOS A	0.1	0.9	0.14	0.23	0.14	45.0
11	T1	35	0	35	0.0	0.034	0.1	LOS A	0.1	0.9	0.14	0.23	0.14	48.4
12	R2	24	0	24	0.0	0.034	4.8	LOS A	0.1	0.9	0.14	0.23	0.14	47.4
Approach		62	1	62	1.6	0.034	2.2	NA	0.1	0.9	0.14	0.23	0.14	47.9
All Vehicles		284	8	284	2.8	0.090	3.1	NA	0.3	2.4	0.12	0.33	0.12	47.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Lord Sheffield Cct-Klenig Pl_PM (Site Folder: General)]

Lord Sheffield Circuit-Klenig Place
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Lord Sheffield Circuit (S)														
1	L2	35	0	35	0.0	0.065	4.8	LOS A	0.2	1.6	0.18	0.53	0.18	46.2
2	T1	1	0	1	0.0	0.065	4.1	LOS A	0.2	1.6	0.18	0.53	0.18	44.1
3	R2	37	0	37	0.0	0.065	5.7	LOS A	0.2	1.6	0.18	0.53	0.18	45.8
Approach		73	0	73	0.0	0.065	5.2	LOS A	0.2	1.6	0.18	0.53	0.18	46.0
East: Lord Sheffield Circuit (E)														
4	L2	19	0	19	0.0	0.061	4.7	LOS A	0.2	1.3	0.11	0.21	0.11	48.0
5	T1	67	1	67	1.5	0.061	0.1	LOS A	0.2	1.3	0.11	0.21	0.11	48.5
6	R2	27	0	27	0.0	0.061	4.8	LOS A	0.2	1.3	0.11	0.21	0.11	46.1
Approach		113	1	113	0.9	0.061	2.0	NA	0.2	1.3	0.11	0.21	0.11	48.0
North: Kleinig Place (N)														
7	L2	7	0	7	0.0	0.016	4.7	LOS A	0.1	0.4	0.18	0.53	0.18	44.1
8	T1	1	0	1	0.0	0.016	4.0	LOS A	0.1	0.4	0.18	0.53	0.18	44.1
9	R2	9	0	9	0.0	0.016	5.7	LOS A	0.1	0.4	0.18	0.53	0.18	43.4
Approach		17	0	17	0.0	0.016	5.2	LOS A	0.1	0.4	0.18	0.53	0.18	43.7
West: Lord Sheffield Circuit (W)														
10	L2	15	0	15	0.0	0.069	4.8	LOS A	0.3	1.8	0.14	0.24	0.14	46.4
11	T1	67	1	67	1.5	0.069	0.1	LOS A	0.3	1.8	0.14	0.24	0.14	48.2
12	R2	42	1	42	2.4	0.069	4.8	LOS A	0.3	1.8	0.14	0.24	0.14	47.3
Approach		124	2	124	1.6	0.069	2.3	NA	0.3	1.8	0.14	0.24	0.14	47.8
All Vehicles		327	3	327	0.9	0.069	3.0	NA	0.3	1.8	0.14	0.31	0.14	47.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Evan St-The Crescent-Macquarie Ave_AM (Site Folder: General)]

Evan Street-The Crescent-Macquarie Avenue
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Evan Street (S)														
1	L2	109	1	109	0.9	0.436	4.8	LOS A	3.7	26.7	0.35	0.51	0.35	45.5
2	T1	323	10	323	3.1	0.436	4.3	LOS A	3.7	26.7	0.35	0.51	0.35	46.1
3	R2	142	1	142	0.7	0.436	7.1	LOS A	3.7	26.7	0.35	0.51	0.35	45.9
3u	U	3	0	3	0.0	0.436	8.4	LOS A	3.7	26.7	0.35	0.51	0.35	46.2
Approach		577	12	577	2.1	0.436	5.1	LOS A	3.7	26.7	0.35	0.51	0.35	45.9
East: The Crescent (E)														
4	L2	202	2	202	1.0	0.470	12.8	LOS A	3.7	26.4	0.90	1.01	1.05	41.8
5	T1	52	5	52	9.6	0.470	12.7	LOS A	3.7	26.4	0.90	1.01	1.05	42.3
6	R2	9	0	9	0.0	0.470	15.0	LOS B	3.7	26.4	0.90	1.01	1.05	42.2
6u	U	1	0	1	0.0	0.470	16.4	LOS B	3.7	26.4	0.90	1.01	1.05	42.5
Approach		264	7	264	2.7	0.470	12.9	LOS A	3.7	26.4	0.90	1.01	1.05	41.9
North: Macquarie Avenue (N)														
7	L2	18	0	18	0.0	0.660	5.8	LOS A	6.7	47.4	0.60	0.56	0.60	45.2
8	T1	779	15	779	1.9	0.660	5.3	LOS A	6.7	47.4	0.60	0.56	0.60	45.7
9	R2	7	0	7	0.0	0.660	8.1	LOS A	6.7	47.4	0.60	0.56	0.60	45.5
9u	U	1	0	1	0.0	0.660	9.4	LOS A	6.7	47.4	0.60	0.56	0.60	45.9
Approach		805	15	805	1.9	0.660	5.3	LOS A	6.7	47.4	0.60	0.56	0.60	45.7
All Vehicles		1646	34	1646	2.1	0.660	6.5	LOS A	6.7	47.4	0.56	0.61	0.59	45.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Evan St-The Crescent-Macquarie Ave_PM (Site Folder: General)]

Evan Street-The Crescent-Macquarie Avenue
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Evan Street (S)														
1	L2	159	0	159	0.0	0.756	5.2	LOS A	11.4	80.7	0.59	0.50	0.59	45.0
2	T1	683	13	683	1.9	0.756	4.7	LOS A	11.4	80.7	0.59	0.50	0.59	45.6
3	R2	206	1	206	0.5	0.756	7.5	LOS A	11.4	80.7	0.59	0.50	0.59	45.4
3u	U	1	0	1	0.0	0.756	8.9	LOS A	11.4	80.7	0.59	0.50	0.59	45.8
Approach		1049	14	1049	1.3	0.756	5.4	LOS A	11.4	80.7	0.59	0.50	0.59	45.5
East: The Crescent (E)														
4	L2	202	2	202	1.0	0.358	8.3	LOS A	2.4	16.7	0.75	0.81	0.75	44.1
5	T1	45	2	45	4.4	0.358	8.0	LOS A	2.4	16.7	0.75	0.81	0.75	44.6
6	R2	18	0	18	0.0	0.358	10.6	LOS A	2.4	16.7	0.75	0.81	0.75	44.5
6u	U	1	0	1	0.0	0.358	12.0	LOS A	2.4	16.7	0.75	0.81	0.75	44.8
Approach		266	4	266	1.5	0.358	8.4	LOS A	2.4	16.7	0.75	0.81	0.75	44.2
North: Macquarie Avenue (N)														
7	L2	24	1	24	4.2	0.525	6.1	LOS A	4.3	30.6	0.60	0.61	0.60	45.1
8	T1	541	9	541	1.7	0.525	5.5	LOS A	4.3	30.6	0.60	0.61	0.60	45.7
9	R2	5	0	5	0.0	0.525	8.3	LOS A	4.3	30.6	0.60	0.61	0.60	45.5
9u	U	2	0	2	0.0	0.525	9.7	LOS A	4.3	30.6	0.60	0.61	0.60	45.9
Approach		572	10	572	1.7	0.525	5.6	LOS A	4.3	30.6	0.60	0.61	0.60	45.7
All Vehicles		1887	28	1887	1.5	0.756	5.9	LOS A	11.4	80.7	0.61	0.57	0.61	45.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Lemongrove Rd-Macquarie Ave_AM (Site Folder: General)]

Lemongrove Road-Macquarie Avenue
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Macquarie Avenue (S)														
1	L2	1	0	1	0.0	0.165	4.6	LOS A	0.0	0.0	0.00	0.00	0.00	25.8
2	T1	321	0	321	0.0	0.165	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
Approach		322	0	322	0.0	0.165	0.1	NA	0.0	0.0	0.00	0.00	0.00	49.8
North: Macquarie Avenue (N)														
8	T1	727	13	727	1.8	0.383	0.0	LOS A	0.1	0.6	0.01	0.01	0.01	49.9
9	R2	7	0	7	0.0	0.383	6.4	LOS A	0.1	0.6	0.01	0.01	0.01	25.7
Approach		734	13	734	1.8	0.383	0.1	NA	0.1	0.6	0.01	0.01	0.01	49.7
West: Lemongrove Road (W)														
12	R2	82	2	82	2.4	0.227	13.0	LOS A	0.7	5.3	0.77	0.91	0.83	36.7
Approach		82	2	82	2.4	0.227	13.0	LOS A	0.7	5.3	0.77	0.91	0.83	36.7
All Vehicles		1138	15	1138	1.3	0.383	1.0	NA	0.7	5.3	0.06	0.07	0.07	49.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Lemongrove Rd-Macquarie Ave_PM (Site Folder: General)]

Lemongrove Road-Macquarie Avenue
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Macquarie Avenue (S)														
1	L2	4	0	4	0.0	0.366	4.7	LOS A	0.0	0.0	0.00	0.00	0.00	25.7
2	T1	701	13	701	1.9	0.366	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		705	13	705	1.8	0.366	0.2	NA	0.0	0.0	0.00	0.00	0.00	49.6
North: Macquarie Avenue (N)														
8	T1	508	9	508	1.8	0.281	0.3	LOS A	0.3	2.1	0.06	0.01	0.07	49.6
9	R2	13	1	13	7.7	0.281	10.0	LOS A	0.3	2.1	0.06	0.01	0.07	25.5
Approach		521	10	521	1.9	0.281	0.5	NA	0.3	2.1	0.06	0.01	0.07	49.0
West: Lemongrove Road (W)														
12	R2	61	1	61	1.6	0.212	15.6	LOS B	0.7	4.7	0.81	0.93	0.87	35.1
Approach		61	1	61	1.6	0.212	15.6	LOS B	0.7	4.7	0.81	0.93	0.87	35.1
All Vehicles		1287	24	1287	1.9	0.366	1.1	NA	0.7	4.7	0.06	0.05	0.07	48.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Thronton Dr-Combewood Ave_AM (Site Folder: General)]

Thronton Dr-Combewood Ave
Site Category: (None)
Stop (Two-Way)
Design Life Analysis: Constant Number of Years = 3

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Combewood Avenue (S)														
1	L2	114	2	121	1.8	0.099	4.6	LOS A	0.0	0.3	0.02	0.36	0.02	47.2
2	T1	55	1	58	1.8	0.099	0.0	LOS A	0.0	0.3	0.02	0.36	0.02	47.9
3	R2	4	0	4	0.0	0.099	5.1	LOS A	0.0	0.3	0.02	0.36	0.02	47.0
Approach		173	3	184	1.7	0.099	3.2	NA	0.0	0.3	0.02	0.36	0.02	47.4
East: Thornton Drive (E)														
4	L2	1	0	1	0.0	0.073	8.0	LOS A	0.3	1.9	0.46	0.98	0.46	44.3
5	T1	44	2	47	4.5	0.073	10.1	LOS A	0.3	1.9	0.46	0.98	0.46	43.4
6	R2	4	0	4	0.0	0.073	9.5	LOS A	0.3	1.9	0.46	0.98	0.46	43.9
Approach		49	2	52	4.1	0.073	10.0	LOS A	0.3	1.9	0.46	0.98	0.46	43.4
North: Combewood Avenue (N)														
7	L2	5	0	5	0.0	0.150	5.2	LOS A	0.7	4.6	0.25	0.23	0.25	47.7
8	T1	141	1	150	0.7	0.150	0.4	LOS A	0.7	4.6	0.25	0.23	0.25	48.1
9	R2	95	4	101	4.2	0.150	5.3	LOS A	0.7	4.6	0.25	0.23	0.25	46.9
Approach		241	5	256	2.1	0.150	2.4	NA	0.7	4.6	0.25	0.23	0.25	47.6
West: Thornton Drive (W)														
10	L2	39	0	41	0.0	0.191	7.7	LOS A	0.7	4.7	0.23	0.96	0.23	43.5
11	T1	15	2	16	13.3	0.191	10.6	LOS A	0.7	4.7	0.23	0.96	0.23	43.1
12	R2	80	2	85	2.5	0.191	10.5	LOS A	0.7	4.7	0.23	0.96	0.23	43.0
Approach		134	4	142	3.0	0.191	9.7	LOS A	0.7	4.7	0.23	0.96	0.23	43.2
All Vehicles		597	14	634	2.3	0.191	4.9	NA	0.7	4.7	0.19	0.49	0.19	46.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Thronton Dr-Combewood Ave_PM (Site Folder: General)]

Thronton Dr-Combewood Ave
Site Category: (None)
Stop (Two-Way)
Design Life Analysis: Constant Number of Years = 3

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Combewood Avenue (S)														
1	L2	152	2	161	1.3	0.162	4.6	LOS A	0.0	0.1	0.00	0.29	0.00	47.7
2	T1	134	1	142	0.7	0.162	0.0	LOS A	0.0	0.1	0.00	0.29	0.00	48.4
3	R2	1	0	1	0.0	0.162	4.8	LOS A	0.0	0.1	0.00	0.29	0.00	47.5
Approach		287	3	305	1.0	0.162	2.4	NA	0.0	0.1	0.00	0.29	0.00	48.0
East: Thornton Drive (E)														
4	L2	2	0	2	0.0	0.057	7.7	LOS A	0.2	1.4	0.41	0.97	0.41	44.2
5	T1	33	0	35	0.0	0.057	10.0	LOS A	0.2	1.4	0.41	0.97	0.41	43.4
6	R2	3	0	3	0.0	0.057	9.9	LOS A	0.2	1.4	0.41	0.97	0.41	43.8
Approach		38	0	40	0.0	0.057	9.9	LOS A	0.2	1.4	0.41	0.97	0.41	43.4
North: Combewood Avenue (N)														
7	L2	4	0	4	0.0	0.112	5.7	LOS A	0.5	3.8	0.38	0.35	0.38	46.9
8	T1	66	1	70	1.5	0.112	0.9	LOS A	0.5	3.8	0.38	0.35	0.38	47.3
9	R2	92	0	98	0.0	0.112	5.7	LOS A	0.5	3.8	0.38	0.35	0.38	46.1
Approach		162	1	172	0.6	0.112	3.7	NA	0.5	3.8	0.38	0.35	0.38	46.6
West: Thornton Drive (W)														
10	L2	86	1	91	1.2	0.290	8.2	LOS A	1.1	7.8	0.35	0.95	0.35	43.6
11	T1	38	0	40	0.0	0.290	9.9	LOS A	1.1	7.8	0.35	0.95	0.35	43.4
12	R2	95	2	101	2.1	0.290	10.9	LOS A	1.1	7.8	0.35	0.95	0.35	43.2
Approach		219	3	232	1.4	0.290	9.6	LOS A	1.1	7.8	0.35	0.95	0.35	43.4
All Vehicles		706	7	749	1.0	0.290	5.4	NA	1.1	7.8	0.22	0.54	0.22	46.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Castlereagh Rd-Thornton Dr_AM (Site Folder: General)]

Castlereagh Rd-Thornton Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 130 seconds (Site User-Given Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.
Design Life Analysis: Constant Number of Years = 3

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Castlereagh Road (S)														
1	L2	123	14	131	11.4	0.881	40.1	LOS C	52.6	398.9	0.95	0.94	1.02	31.2
2	T1	1450	137	1539	9.4	0.881	34.5	LOS C	52.6	398.9	0.92	0.91	1.00	27.1
3	R2	124	2	132	1.6	*0.847	77.8	LOS F	9.2	65.1	1.00	0.93	1.31	20.4
Approach		1697	153	1801	9.0	0.881	38.0	LOS C	52.6	398.9	0.93	0.91	1.02	26.6
East: Thornton Drive (E)														
4	L2	202	6	214	3.0	0.471	48.9	LOS D	11.4	81.8	0.89	0.81	0.89	26.6
5	T1	40	1	42	2.5	0.169	54.8	LOS D	2.4	17.3	0.93	0.69	0.93	31.7
6	R2	42	2	45	4.8	*0.181	51.0	LOS D	2.4	17.3	0.90	0.72	0.90	29.1
Approach		284	9	301	3.2	0.471	50.0	LOS D	11.4	81.8	0.90	0.78	0.90	27.9
North: Castlereagh Road (N)														
7	L2	32	3	34	9.4	0.031	15.1	LOS B	0.8	5.9	0.39	0.65	0.39	44.4
8	T1	1616	132	1715	8.2	*0.889	36.2	LOS C	52.8	395.4	0.93	0.93	1.02	26.6
9	R2	42	2	45	4.8	0.197	31.5	LOS C	1.6	11.3	0.87	0.74	0.87	35.6
Approach		1690	137	1793	8.1	0.889	35.7	LOS C	52.8	395.4	0.92	0.92	1.01	27.2
West: Peachtree Road (W)														
10	L2	71	6	75	8.5	0.272	53.3	LOS D	5.2	38.2	0.89	0.76	0.89	28.5
11	T1	19	0	20	0.0	*0.272	47.7	LOS D	5.2	38.2	0.89	0.76	0.89	32.4
12	R2	90	17	96	18.9	0.573	53.7	LOS D	5.3	42.9	1.00	0.78	1.00	25.1
Approach		180	23	191	12.8	0.573	52.9	LOS D	5.3	42.9	0.94	0.77	0.94	27.3
All Vehicles		3851	322	4087	8.4	0.889	38.6	LOS C	52.8	398.9	0.92	0.90	1.00	27.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Castlereagh Road (S)												
P1	Full	50	53	59.3	LOS E	0.2	0.2	0.96	0.96	228.9	220.5	0.96
East: Thornton Drive (E)												
P2	Full	50	53	59.3	LOS E	0.2	0.2	0.96	0.96	228.9	220.5	0.96

North: Castlereagh Road (N)											
P3	Full	50	53	59.3	LOS E	0.2	0.2	0.96	0.96	231.4	223.8	0.97
West: Peachtree Road (W)											
P4	Full	50	53	59.3	LOS E	0.2	0.2	0.96	0.96	226.3	217.2	0.96
All Pedestrians		200	212	59.3	LOS E	0.2	0.2	0.96	0.96	228.9	220.5	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 101 [Castlereagh Rd-Thornton Dr_PM (Site Folder: General)]

Castlereagh Rd-Thornton Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 130 seconds (Site User-Given Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.
Design Life Analysis: Constant Number of Years = 3

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Castlereagh Road (S)														
1	L2	116	13	123	11.2	* 0.931	49.3	LOS D	70.6	518.8	0.99	1.04	1.14	28.0
2	T1	1700	87	1804	5.1	0.931	43.7	LOS D	70.6	518.8	0.95	1.00	1.10	23.7
3	R2	159	0	169	0.0	0.909	82.9	LOS F	12.4	86.7	1.00	0.99	1.42	19.5
Approach		1975	100	2096	5.1	0.931	47.2	LOS D	70.6	518.8	0.95	1.00	1.13	23.5
East: Thornton Drive (E)														
4	L2	216	1	229	0.5	0.438	45.4	LOS D	11.7	82.3	0.86	0.80	0.86	27.7
5	T1	30	1	32	3.3	0.114	52.2	LOS D	1.8	12.7	0.90	0.67	0.90	32.4
6	R2	58	0	62	0.0	0.276	51.7	LOS D	3.3	23.2	0.93	0.74	0.93	29.0
Approach		304	2	323	0.7	0.438	47.3	LOS D	11.7	82.3	0.88	0.78	0.88	28.6
North: Castlereagh Road (N)														
7	L2	59	1	63	1.7	0.055	16.0	LOS B	1.5	10.9	0.42	0.67	0.42	44.0
8	T1	1682	62	1785	3.7	0.935	49.9	LOS D	64.1	462.6	0.97	1.05	1.16	21.9
9	R2	42	0	45	0.0	* 0.260	37.0	LOS C	1.7	12.1	0.94	0.74	0.94	33.5
Approach		1783	63	1892	3.5	0.935	48.5	LOS D	64.1	462.6	0.96	1.03	1.13	22.9
West: Peachtree Road (W)														
10	L2	78	2	83	2.6	0.390	57.1	LOS E	7.1	50.9	0.93	0.78	0.93	27.7
11	T1	40	1	42	2.5	* 0.390	51.6	LOS D	7.1	50.9	0.93	0.78	0.93	31.5
12	R2	136	4	144	2.9	0.854	67.7	LOS E	8.7	62.8	1.00	0.99	1.31	22.2
Approach		254	7	270	2.8	0.854	61.9	LOS E	8.7	62.8	0.97	0.89	1.13	25.4
All Vehicles		4316	172	4580	4.0	0.935	48.6	LOS D	70.6	518.8	0.95	0.99	1.11	23.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Castlereagh Road (S)												
P1	Full	50	53	59.3	LOS E	0.2	0.2	0.96	0.96	228.9	220.5	0.96
East: Thornton Drive (E)												
P2	Full	50	53	59.3	LOS E	0.2	0.2	0.96	0.96	228.9	220.5	0.96

North: Castlereagh Road (N)											
P3	Full	50	53	59.3	LOS E	0.2	0.2	0.96	0.96	231.4	223.8	0.97
West: Peachtree Road (W)											
P4	Full	50	53	59.3	LOS E	0.2	0.2	0.96	0.96	226.3	217.2	0.96
All Pedestrians		200	212	59.3	LOS E	0.2	0.2	0.96	0.96	228.9	220.5	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 101 [Coreen Ave-Sydney Smith Dr_AM (Site Folder: General)]

New Site
Site Category: (None)
Roundabout
Design Life Analysis: Constant Number of Years = 3

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Sydney Smith Drive (S)														
1	L2	38	2	40	5.3	0.272	8.0	LOS A	1.6	11.5	0.68	0.80	0.68	43.3
3	R2	167	2	177	1.2	0.272	10.7	LOS A	1.6	11.5	0.68	0.80	0.68	43.9
3u	U	1	0	1	0.0	0.272	12.1	LOS A	1.6	11.5	0.68	0.80	0.68	44.3
Approach		206	4	219	1.9	0.272	10.2	LOS A	1.6	11.5	0.68	0.80	0.68	43.8
East: Coreen Avenue (E)														
4	L2	75	1	80	1.3	0.435	4.1	LOS A	3.6	26.1	0.21	0.42	0.21	46.3
5	T1	516	19	548	3.7	0.435	3.9	LOS A	3.6	26.1	0.21	0.42	0.21	47.0
6u	U	18	0	19	0.0	0.435	8.5	LOS A	3.6	26.1	0.21	0.42	0.21	47.4
Approach		609	20	646	3.3	0.435	4.0	LOS A	3.6	26.1	0.21	0.42	0.21	46.9
West: Coreen Avenue (W)														
11	T1	411	16	436	3.9	0.424	5.1	LOS A	3.1	22.7	0.53	0.57	0.53	46.1
12	R2	26	2	28	7.7	0.424	8.3	LOS A	3.1	22.7	0.53	0.57	0.53	45.8
12u	U	4	0	4	0.0	0.424	9.6	LOS A	3.1	22.7	0.53	0.57	0.53	46.4
Approach		441	18	468	4.1	0.424	5.3	LOS A	3.1	22.7	0.53	0.57	0.53	46.1
All Vehicles		1256	42	1333	3.3	0.435	5.5	LOS A	3.6	26.1	0.40	0.53	0.40	46.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Coreen Ave-Sydney Smith Dr_PM (Site Folder: General)]

New Site
Site Category: (None)
Roundabout
Design Life Analysis: Constant Number of Years = 3

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Sydney Smith Drive (S)														
1	L2	43	0	46	0.0	0.228	6.9	LOS A	1.3	9.3	0.62	0.74	0.62	43.9
3	R2	143	0	152	0.0	0.228	9.7	LOS A	1.3	9.3	0.62	0.74	0.62	44.5
3u	U	1	1	1	100.0	0.228	15.3	LOS B	1.3	9.3	0.62	0.74	0.62	43.4
Approach		187	1	198	0.5	0.228	9.1	LOS A	1.3	9.3	0.62	0.74	0.62	44.3
East: Coreen Avenue (E)														
4	L2	95	0	101	0.0	0.397	4.4	LOS A	3.1	22.0	0.31	0.45	0.31	46.0
5	T1	395	6	419	1.5	0.397	4.1	LOS A	3.1	22.0	0.31	0.45	0.31	46.7
6u	U	21	0	22	0.0	0.397	8.7	LOS A	3.1	22.0	0.31	0.45	0.31	47.1
Approach		511	6	542	1.2	0.397	4.3	LOS A	3.1	22.0	0.31	0.45	0.31	46.6
West: Coreen Avenue (W)														
11	T1	613	6	651	1.0	0.604	5.2	LOS A	5.6	39.9	0.61	0.58	0.61	45.8
12	R2	33	0	35	0.0	0.604	8.3	LOS A	5.6	39.9	0.61	0.58	0.61	45.7
12u	U	32	2	34	6.3	0.604	10.0	LOS A	5.6	39.9	0.61	0.58	0.61	46.0
Approach		678	8	719	1.2	0.604	5.6	LOS A	5.6	39.9	0.61	0.58	0.61	45.8
All Vehicles		1376	15	1460	1.1	0.604	5.6	LOS A	5.6	39.9	0.50	0.56	0.50	45.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Lord Sheffield Cct-Klenig Pl_AM (Site Folder: General)]

Lord Sheffield Circuit-Klenig Place
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis: Constant Number of Years = 3

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Lord Sheffield Circuit (S)														
1	L2	53	3	56	5.7	0.096	4.9	LOS A	0.4	2.6	0.19	0.53	0.19	46.1
2	T1	1	0	1	0.0	0.096	3.8	LOS A	0.4	2.6	0.19	0.53	0.19	44.1
3	R2	51	0	54	0.0	0.096	5.5	LOS A	0.4	2.6	0.19	0.53	0.19	45.8
Approach		105	3	111	2.9	0.096	5.1	LOS A	0.4	2.6	0.19	0.53	0.19	45.9
East: Lord Sheffield Circuit (E)														
4	L2	10	0	11	0.0	0.051	4.6	LOS A	0.1	0.5	0.04	0.12	0.04	48.8
5	T1	70	2	74	2.9	0.051	0.0	LOS A	0.1	0.5	0.04	0.12	0.04	49.3
6	R2	9	1	10	11.1	0.051	4.8	LOS A	0.1	0.5	0.04	0.12	0.04	46.7
Approach		89	3	94	3.4	0.051	1.0	NA	0.1	0.5	0.04	0.12	0.04	49.0
North: Kleinig Place (N)														
7	L2	23	1	24	4.3	0.021	4.7	LOS A	0.1	0.6	0.10	0.51	0.10	44.3
8	T1	1	0	1	0.0	0.021	3.8	LOS A	0.1	0.6	0.10	0.51	0.10	44.5
9	R2	4	0	4	0.0	0.021	5.5	LOS A	0.1	0.6	0.10	0.51	0.10	43.7
Approach		28	1	30	3.6	0.021	4.8	LOS A	0.1	0.6	0.10	0.51	0.10	44.2
West: Lord Sheffield Circuit (W)														
10	L2	3	1	3	33.3	0.037	5.1	LOS A	0.1	1.0	0.14	0.23	0.14	45.0
11	T1	35	0	37	0.0	0.037	0.1	LOS A	0.1	1.0	0.14	0.23	0.14	48.3
12	R2	24	0	25	0.0	0.037	4.8	LOS A	0.1	1.0	0.14	0.23	0.14	47.4
Approach		62	1	66	1.6	0.037	2.2	NA	0.1	1.0	0.14	0.23	0.14	47.9
All Vehicles		284	8	301	2.8	0.096	3.2	NA	0.4	2.6	0.12	0.33	0.12	47.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Lord Sheffield Cct-Klenig Pl_PM (Site Folder: General)]

Lord Sheffield Circuit-Klenig Place
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis: Constant Number of Years = 3

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Lord Sheffield Circuit (S)														
1	L2	35	0	37	0.0	0.069	4.8	LOS A	0.3	1.8	0.19	0.54	0.19	46.2
2	T1	1	0	1	0.0	0.069	4.2	LOS A	0.3	1.8	0.19	0.54	0.19	44.1
3	R2	37	0	39	0.0	0.069	5.7	LOS A	0.3	1.8	0.19	0.54	0.19	45.8
Approach		73	0	77	0.0	0.069	5.3	LOS A	0.3	1.8	0.19	0.54	0.19	46.0
East: Lord Sheffield Circuit (E)														
4	L2	19	0	20	0.0	0.065	4.7	LOS A	0.2	1.4	0.11	0.21	0.11	48.0
5	T1	67	1	71	1.5	0.065	0.1	LOS A	0.2	1.4	0.11	0.21	0.11	48.5
6	R2	27	0	29	0.0	0.065	4.8	LOS A	0.2	1.4	0.11	0.21	0.11	46.1
Approach		113	1	120	0.9	0.065	2.0	NA	0.2	1.4	0.11	0.21	0.11	48.0
North: Kleinig Place (N)														
7	L2	7	0	7	0.0	0.017	4.8	LOS A	0.1	0.4	0.19	0.53	0.19	44.0
8	T1	1	0	1	0.0	0.017	4.1	LOS A	0.1	0.4	0.19	0.53	0.19	44.1
9	R2	9	0	10	0.0	0.017	5.8	LOS A	0.1	0.4	0.19	0.53	0.19	43.4
Approach		17	0	18	0.0	0.017	5.3	LOS A	0.1	0.4	0.19	0.53	0.19	43.7
West: Lord Sheffield Circuit (W)														
10	L2	15	0	16	0.0	0.073	4.8	LOS A	0.3	2.0	0.15	0.24	0.15	46.4
11	T1	67	1	71	1.5	0.073	0.2	LOS A	0.3	2.0	0.15	0.24	0.15	48.2
12	R2	42	1	45	2.4	0.073	4.9	LOS A	0.3	2.0	0.15	0.24	0.15	47.3
Approach		124	2	132	1.6	0.073	2.3	NA	0.3	2.0	0.15	0.24	0.15	47.7
All Vehicles		327	3	347	0.9	0.073	3.0	NA	0.3	2.0	0.15	0.31	0.15	47.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Evan St-The Crescent-Macquarie Ave_AM (Site Folder: General)]

Evan Street-The Crescent-Macquarie Avenue
Site Category: (None)
Roundabout
Design Life Analysis: Constant Number of Years = 3

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Evan Street (S)														
1	L2	109	1	116	0.9	0.465	4.8	LOS A	4.2	29.8	0.38	0.51	0.38	45.4
2	T1	323	10	343	3.1	0.465	4.4	LOS A	4.2	29.8	0.38	0.51	0.38	46.0
3	R2	142	1	151	0.7	0.465	7.1	LOS A	4.2	29.8	0.38	0.51	0.38	45.8
3u	U	3	0	3	0.0	0.465	8.5	LOS A	4.2	29.8	0.38	0.51	0.38	46.2
Approach		577	12	612	2.1	0.465	5.2	LOS A	4.2	29.8	0.38	0.51	0.38	45.8
East: The Crescent (E)														
4	L2	202	2	214	1.0	0.542	15.4	LOS B	4.7	33.9	0.95	1.09	1.20	40.6
5	T1	52	5	55	9.6	0.542	15.4	LOS B	4.7	33.9	0.95	1.09	1.20	41.0
6	R2	9	0	10	0.0	0.542	17.7	LOS B	4.7	33.9	0.95	1.09	1.20	40.9
6u	U	1	0	1	0.0	0.542	19.0	LOS B	4.7	33.9	0.95	1.09	1.20	41.2
Approach		264	7	280	2.7	0.542	15.5	LOS B	4.7	33.9	0.95	1.09	1.20	40.7
North: Macquarie Avenue (N)														
7	L2	18	0	19	0.0	0.707	6.0	LOS A	7.7	54.9	0.67	0.58	0.67	45.0
8	T1	779	15	827	1.9	0.707	5.5	LOS A	7.7	54.9	0.67	0.58	0.67	45.6
9	R2	7	0	7	0.0	0.707	8.3	LOS A	7.7	54.9	0.67	0.58	0.67	45.4
9u	U	1	0	1	0.0	0.707	9.7	LOS A	7.7	54.9	0.67	0.58	0.67	45.8
Approach		805	15	854	1.9	0.707	5.6	LOS A	7.7	54.9	0.67	0.58	0.67	45.6
All Vehicles		1646	34	1747	2.1	0.707	7.0	LOS A	7.7	54.9	0.61	0.64	0.65	44.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Evan St-The Crescent-Macquarie Ave_PM (Site Folder: General)]

Evan Street-The Crescent-Macquarie Avenue
Site Category: (None)
Roundabout
Design Life Analysis: Constant Number of Years = 3

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Evan Street (S)														
1	L2	159	0	169	0.0	0.807	5.4	LOS A	14.0	98.9	0.69	0.50	0.69	44.8
2	T1	683	13	725	1.9	0.807	5.0	LOS A	14.0	98.9	0.69	0.50	0.69	45.4
3	R2	206	1	219	0.5	0.807	7.8	LOS A	14.0	98.9	0.69	0.50	0.69	45.2
3u	U	1	0	1	0.0	0.807	9.1	LOS A	14.0	98.9	0.69	0.50	0.69	45.5
Approach		1049	14	1113	1.3	0.807	5.6	LOS A	14.0	98.9	0.69	0.50	0.69	45.2
East: The Crescent (E)														
4	L2	202	2	214	1.0	0.396	8.7	LOS A	2.7	19.2	0.79	0.84	0.79	43.9
5	T1	45	2	48	4.4	0.396	8.4	LOS A	2.7	19.2	0.79	0.84	0.79	44.4
6	R2	18	0	19	0.0	0.396	11.0	LOS A	2.7	19.2	0.79	0.84	0.79	44.2
6u	U	1	0	1	0.0	0.396	12.4	LOS A	2.7	19.2	0.79	0.84	0.79	44.6
Approach		266	4	282	1.5	0.396	8.8	LOS A	2.7	19.2	0.79	0.84	0.79	44.0
North: Macquarie Avenue (N)														
7	L2	24	1	25	4.2	0.567	6.3	LOS A	4.9	35.1	0.66	0.63	0.66	45.0
8	T1	541	9	574	1.7	0.567	5.7	LOS A	4.9	35.1	0.66	0.63	0.66	45.6
9	R2	5	0	5	0.0	0.567	8.5	LOS A	4.9	35.1	0.66	0.63	0.66	45.4
9u	U	2	0	2	0.0	0.567	9.9	LOS A	4.9	35.1	0.66	0.63	0.66	45.8
Approach		572	10	607	1.7	0.567	5.8	LOS A	4.9	35.1	0.66	0.63	0.66	45.6
All Vehicles		1887	28	2002	1.5	0.807	6.1	LOS A	14.0	98.9	0.70	0.59	0.70	45.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Lemongrove Rd-Macquarie Ave_AM (Site Folder: General)]

Lemongrove Road-Macquarie Avenue
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis: Constant Number of Years = 3

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Macquarie Avenue (S)														
1	L2	1	0	1	0.0	0.175	4.6	LOS A	0.0	0.0	0.00	0.00	0.00	25.8
2	T1	321	0	341	0.0	0.175	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
Approach		322	0	342	0.0	0.175	0.1	NA	0.0	0.0	0.00	0.00	0.00	49.8
North: Macquarie Avenue (N)														
8	T1	727	13	771	1.8	0.406	0.0	LOS A	0.1	0.8	0.01	0.01	0.02	49.9
9	R2	7	0	7	0.0	0.406	6.6	LOS A	0.1	0.8	0.01	0.01	0.02	25.7
Approach		734	13	779	1.8	0.406	0.1	NA	0.1	0.8	0.01	0.01	0.02	49.7
West: Lemongrove Road (W)														
12	R2	82	2	87	2.4	0.270	14.8	LOS B	0.9	6.4	0.80	0.94	0.92	35.6
Approach		82	2	87	2.4	0.270	14.8	LOS B	0.9	6.4	0.80	0.94	0.92	35.6
All Vehicles		1138	15	1208	1.3	0.406	1.2	NA	0.9	6.4	0.07	0.07	0.08	48.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Lemongrove Rd-Macquarie Ave_PM (Site Folder: General)]

Lemongrove Road-Macquarie Avenue
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis: Constant Number of Years = 3

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Macquarie Avenue (S)														
1	L2	4	0	4	0.0	0.388	4.7	LOS A	0.0	0.0	0.00	0.00	0.00	25.7
2	T1	701	13	744	1.9	0.388	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		705	13	748	1.8	0.388	0.2	NA	0.0	0.0	0.00	0.00	0.00	49.6
North: Macquarie Avenue (N)														
8	T1	508	9	539	1.8	0.300	0.4	LOS A	0.4	2.5	0.07	0.01	0.08	49.6
9	R2	13	1	14	7.7	0.300	10.8	LOS A	0.4	2.5	0.07	0.01	0.08	25.5
Approach		521	10	553	1.9	0.300	0.6	NA	0.4	2.5	0.07	0.01	0.08	48.9
West: Lemongrove Road (W)														
12	R2	61	1	65	1.6	0.257	18.2	LOS B	0.8	5.8	0.85	0.96	0.95	33.6
Approach		61	1	65	1.6	0.257	18.2	LOS B	0.8	5.8	0.85	0.96	0.95	33.6
All Vehicles		1287	24	1366	1.9	0.388	1.2	NA	0.8	5.8	0.07	0.05	0.08	48.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Thronton Dr-Combewood Ave_AM (Site Folder: General)]

Thronton Dr-Combewood Ave
Site Category: (None)
Stop (Two-Way)
Design Life Analysis: Constant Number of Years = 13

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Combewood Avenue (S)														
1	L2	114	2	147	1.8	0.121	4.6	LOS A	0.1	0.4	0.02	0.36	0.02	47.2
2	T1	55	1	71	1.8	0.121	0.0	LOS A	0.1	0.4	0.02	0.36	0.02	47.9
3	R2	4	0	5	0.0	0.121	5.2	LOS A	0.1	0.4	0.02	0.36	0.02	47.0
Approach		173	3	224	1.7	0.121	3.2	NA	0.1	0.4	0.02	0.36	0.02	47.4
East: Thornton Drive (E)														
4	L2	1	0	1	0.0	0.101	8.2	LOS A	0.4	2.6	0.51	1.01	0.51	43.8
5	T1	44	2	57	4.5	0.101	11.0	LOS A	0.4	2.6	0.51	1.01	0.51	42.9
6	R2	4	0	5	0.0	0.101	10.3	LOS A	0.4	2.6	0.51	1.01	0.51	43.4
Approach		49	2	63	4.1	0.101	10.9	LOS A	0.4	2.6	0.51	1.01	0.51	43.0
North: Combewood Avenue (N)														
7	L2	5	0	6	0.0	0.186	5.4	LOS A	0.8	6.0	0.29	0.24	0.29	47.6
8	T1	141	1	182	0.7	0.186	0.5	LOS A	0.8	6.0	0.29	0.24	0.29	48.0
9	R2	95	4	123	4.2	0.186	5.5	LOS A	0.8	6.0	0.29	0.24	0.29	46.8
Approach		241	5	312	2.1	0.186	2.6	NA	0.8	6.0	0.29	0.24	0.29	47.5
West: Thornton Drive (W)														
10	L2	39	0	50	0.0	0.260	7.7	LOS A	0.9	6.6	0.28	0.97	0.28	43.0
11	T1	15	2	19	13.3	0.260	11.6	LOS A	0.9	6.6	0.28	0.97	0.28	42.6
12	R2	80	2	103	2.5	0.260	11.8	LOS A	0.9	6.6	0.28	0.97	0.28	42.6
Approach		134	4	173	3.0	0.260	10.6	LOS A	0.9	6.6	0.28	0.97	0.28	42.7
All Vehicles		597	14	772	2.3	0.260	5.2	NA	0.9	6.6	0.23	0.50	0.23	46.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Thronton Dr-Combewood Ave_PM (Site Folder: General)]

Thronton Dr-Combewood Ave
Site Category: (None)
Stop (Two-Way)
Design Life Analysis: Constant Number of Years = 13

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Combewood Avenue (S)														
1	L2	152	2	197	1.3	0.197	4.6	LOS A	0.0	0.1	0.00	0.29	0.00	47.7
2	T1	134	1	173	0.7	0.197	0.0	LOS A	0.0	0.1	0.00	0.29	0.00	48.4
3	R2	1	0	1	0.0	0.197	4.9	LOS A	0.0	0.1	0.00	0.29	0.00	47.5
Approach		287	3	371	1.0	0.197	2.4	NA	0.0	0.1	0.00	0.29	0.00	48.0
East: Thornton Drive (E)														
4	L2	2	0	3	0.0	0.079	7.7	LOS A	0.3	1.9	0.47	1.00	0.47	43.7
5	T1	33	0	43	0.0	0.079	11.0	LOS A	0.3	1.9	0.47	1.00	0.47	42.9
6	R2	3	0	4	0.0	0.079	10.9	LOS A	0.3	1.9	0.47	1.00	0.47	43.3
Approach		38	0	49	0.0	0.079	10.8	LOS A	0.3	1.9	0.47	1.00	0.47	43.0
North: Combewood Avenue (N)														
7	L2	4	0	5	0.0	0.143	6.0	LOS A	0.7	5.1	0.43	0.37	0.43	46.7
8	T1	66	1	85	1.5	0.143	1.2	LOS A	0.7	5.1	0.43	0.37	0.43	47.2
9	R2	92	0	119	0.0	0.143	6.0	LOS A	0.7	5.1	0.43	0.37	0.43	45.9
Approach		162	1	210	0.6	0.143	4.1	NA	0.7	5.1	0.43	0.37	0.43	46.5
West: Thornton Drive (W)														
10	L2	86	1	111	1.2	0.391	9.0	LOS A	1.9	13.4	0.42	0.99	0.52	42.8
11	T1	38	0	49	0.0	0.391	11.6	LOS A	1.9	13.4	0.42	0.99	0.52	42.6
12	R2	95	2	123	2.1	0.391	13.0	LOS A	1.9	13.4	0.42	0.99	0.52	42.4
Approach		219	3	283	1.4	0.391	11.2	LOS A	1.9	13.4	0.42	0.99	0.52	42.6
All Vehicles		706	7	913	1.0	0.391	6.0	NA	1.9	13.4	0.25	0.56	0.29	45.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Castlereagh Rd-Thornton Dr_AM (Site Folder: General)]

Castlereagh Rd-Thornton Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 130 seconds (Site User-Given Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.
Design Life Analysis: Constant Number of Years = 13

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Castlereagh Road (S)														
1	L2	123	14	159	11.4	* 1.088	151.1	LOS F	125.0	947.7	1.00	1.54	1.82	12.7
2	T1	1450	137	1876	9.4	1.088	146.4	LOS F	125.0	947.7	1.00	1.57	1.82	9.7
3	R2	124	2	160	1.6	* 1.033	129.3	LOS F	15.2	107.9	1.00	1.18	1.87	14.1
Approach		1697	153	2195	9.0	1.088	145.5	LOS F	125.0	947.7	1.00	1.54	1.83	10.2
East: Thornton Drive (E)														
4	L2	202	6	261	3.0	0.541	47.4	LOS D	13.8	99.4	0.89	0.82	0.89	27.1
5	T1	40	1	52	2.5	0.175	51.9	LOS D	2.9	20.6	0.91	0.69	0.91	32.5
6	R2	42	2	54	4.8	0.234	50.7	LOS D	2.9	21.1	0.92	0.73	0.92	29.2
Approach		284	9	367	3.2	0.541	48.5	LOS D	13.8	99.4	0.90	0.79	0.90	28.3
North: Castlereagh Road (N)														
7	L2	32	3	41	9.4	0.038	15.5	LOS B	1.0	7.4	0.40	0.66	0.40	44.1
8	T1	1616	132	2090	8.2	1.095	150.8	LOS F	125.7	941.8	1.00	1.61	1.85	9.5
9	R2	42	2	54	4.8	0.256	38.3	LOS C	2.1	15.6	0.95	0.73	0.95	32.9
Approach		1690	137	2186	8.1	1.095	145.4	LOS F	125.7	941.8	0.99	1.57	1.80	10.0
West: Peachtree Road (W)														
10	L2	71	6	92	8.5	0.320	53.0	LOS D	6.3	46.7	0.89	0.77	0.89	28.6
11	T1	19	0	25	0.0	* 0.320	47.4	LOS D	6.3	46.7	0.89	0.77	0.89	32.5
12	R2	90	17	116	18.9	0.816	63.7	LOS E	6.9	56.0	1.00	0.94	1.27	22.8
Approach		180	23	233	12.8	0.816	57.8	LOS E	6.9	56.0	0.95	0.85	1.08	26.1
All Vehicles		3851	322	4982	8.4	1.095	134.2	LOS F	125.7	947.7	0.98	1.46	1.71	11.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Castlereagh Road (S)												
P1	Full	50	65	59.3	LOS E	0.2	0.2	0.96	0.96	228.9	220.5	0.96
East: Thornton Drive (E)												
P2	Full	50	65	59.3	LOS E	0.2	0.2	0.96	0.96	228.9	220.5	0.96

North: Castlereagh Road (N)											
P3	Full	50	65	59.3	LOS E	0.2	0.2	0.96	0.96	231.5	223.8	0.97
West: Peachtree Road (W)											
P4	Full	50	65	59.3	LOS E	0.2	0.2	0.96	0.96	226.4	217.2	0.96
All Pedestrians		200	259	59.3	LOS E	0.2	0.2	0.96	0.96	228.9	220.5	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 101 [Castlereagh Rd-Thornton Dr_PM (Site Folder: General)]

Castlereagh Rd-Thornton Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 130 seconds (Site User-Given Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.
Design Life Analysis: Constant Number of Years = 13

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Castlereagh Road (S)														
1	L2	116	13	150	11.2	* 1.213	254.0	LOS F	186.4	1370.7	1.00	1.99	2.39	8.2
2	T1	1700	87	2199	5.1	1.213	249.1	LOS F	186.4	1370.7	1.00	2.02	2.40	6.1
3	R2	159	0	206	0.0	1.200	255.3	LOS F	29.1	203.6	1.00	1.47	2.52	7.9
Approach		1975	100	2555	5.1	1.213	249.9	LOS F	186.4	1370.7	1.00	1.97	2.41	6.4
East: Thornton Drive (E)														
4	L2	216	1	279	0.5	0.545	46.8	LOS D	14.8	103.7	0.89	0.82	0.89	27.3
5	T1	30	1	39	3.3	0.132	51.5	LOS D	2.1	15.4	0.90	0.67	0.90	32.6
6	R2	58	0	75	0.0	0.277	46.6	LOS D	3.8	26.3	0.91	0.75	0.91	30.5
Approach		304	2	393	0.7	0.545	47.2	LOS D	14.8	103.7	0.89	0.79	0.89	28.6
North: Castlereagh Road (N)														
7	L2	59	1	76	1.7	0.068	16.1	LOS B	1.9	13.4	0.42	0.67	0.42	44.0
8	T1	1682	62	2176	3.7	1.206	244.1	LOS F	165.1	1192.5	1.00	2.02	2.37	6.2
9	R2	42	0	54	0.0	* 0.371	40.9	LOS C	2.2	15.2	0.99	0.73	0.99	32.1
Approach		1783	63	2307	3.5	1.206	231.8	LOS F	165.1	1192.5	0.98	1.94	2.27	6.7
West: Peachtree Road (W)														
10	L2	78	2	101	2.6	0.456	57.0	LOS E	8.7	62.4	0.94	0.79	0.94	27.8
11	T1	40	1	52	2.5	* 0.456	51.4	LOS D	8.7	62.4	0.94	0.79	0.94	31.6
12	R2	136	4	176	2.9	0.857	58.0	LOS E	10.3	74.0	1.00	0.92	1.29	24.3
Approach		254	7	329	2.8	0.857	56.7	LOS E	10.3	74.0	0.97	0.86	1.12	26.7
All Vehicles		4316	172	5583	4.0	1.213	216.7	LOS F	186.4	1370.7	0.98	1.81	2.17	7.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Castlereagh Road (S)												
P1	Full	50	65	59.3	LOS E	0.2	0.2	0.96	0.96	228.9	220.5	0.96
East: Thornton Drive (E)												
P2	Full	50	65	59.3	LOS E	0.2	0.2	0.96	0.96	228.9	220.5	0.96

North: Castlereagh Road (N)											
P3	Full	50	65	59.3	LOS E	0.2	0.2	0.96	0.96	231.5	223.8	0.97
West: Peachtree Road (W)											
P4	Full	50	65	59.3	LOS E	0.2	0.2	0.96	0.96	226.4	217.2	0.96
All Pedestrians		200	259	59.3	LOS E	0.2	0.2	0.96	0.96	228.9	220.5	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 101 [Coreen Ave-Sydney Smith Dr_AM (Site Folder: General)]

New Site
Site Category: (None)
Roundabout
Design Life Analysis: Constant Number of Years = 13

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Sydney Smith Drive (S)														
1	L2	38	2	49	5.3	0.374	9.5	LOS A	2.4	17.3	0.79	0.88	0.79	42.6
3	R2	167	2	216	1.2	0.374	12.2	LOS A	2.4	17.3	0.79	0.88	0.79	43.1
3u	U	1	0	1	0.0	0.374	13.6	LOS A	2.4	17.3	0.79	0.88	0.79	43.5
Approach		206	4	266	1.9	0.374	11.7	LOS A	2.4	17.3	0.79	0.88	0.79	43.0
East: Coreen Avenue (E)														
4	L2	75	1	97	1.3	0.535	4.2	LOS A	5.3	38.5	0.28	0.43	0.28	46.1
5	T1	516	19	668	3.7	0.535	4.0	LOS A	5.3	38.5	0.28	0.43	0.28	46.8
6u	U	18	0	23	0.0	0.535	8.6	LOS A	5.3	38.5	0.28	0.43	0.28	47.2
Approach		609	20	788	3.3	0.535	4.1	LOS A	5.3	38.5	0.28	0.43	0.28	46.7
West: Coreen Avenue (W)														
11	T1	411	16	532	3.9	0.541	5.7	LOS A	4.5	32.8	0.66	0.64	0.66	45.7
12	R2	26	2	34	7.7	0.541	8.9	LOS A	4.5	32.8	0.66	0.64	0.66	45.5
12u	U	4	0	5	0.0	0.541	10.2	LOS A	4.5	32.8	0.66	0.64	0.66	46.1
Approach		441	18	570	4.1	0.541	5.9	LOS A	4.5	32.8	0.66	0.64	0.66	45.7
All Vehicles		1256	42	1625	3.3	0.541	6.0	LOS A	5.3	38.5	0.50	0.57	0.50	45.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Coreen Ave-Sydney Smith Dr_PM (Site Folder: General)]

New Site
Site Category: (None)
Roundabout
Design Life Analysis: Constant Number of Years = 13

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Sydney Smith Drive (S)														
1	L2	43	0	56	0.0	0.307	7.9	LOS A	1.9	13.6	0.72	0.81	0.72	43.4
3	R2	143	0	185	0.0	0.307	10.8	LOS A	1.9	13.6	0.72	0.81	0.72	43.9
3u	U	1	1	1	100.0	0.307	17.2	LOS B	1.9	13.6	0.72	0.81	0.72	42.9
Approach		187	1	242	0.5	0.307	10.1	LOS A	1.9	13.6	0.72	0.81	0.72	43.8
East: Coreen Avenue (E)														
4	L2	95	0	123	0.0	0.495	4.5	LOS A	4.6	32.4	0.41	0.47	0.41	45.7
5	T1	395	6	511	1.5	0.495	4.3	LOS A	4.6	32.4	0.41	0.47	0.41	46.5
6u	U	21	0	27	0.0	0.495	8.9	LOS A	4.6	32.4	0.41	0.47	0.41	46.8
Approach		511	6	661	1.2	0.495	4.5	LOS A	4.6	32.4	0.41	0.47	0.41	46.3
West: Coreen Avenue (W)														
11	T1	613	6	793	1.0	0.766	7.5	LOS A	10.8	76.3	0.84	0.73	0.92	45.1
12	R2	33	0	43	0.0	0.766	10.6	LOS A	10.8	76.3	0.84	0.73	0.92	45.0
12u	U	32	2	41	6.3	0.766	12.3	LOS A	10.8	76.3	0.84	0.73	0.92	45.3
Approach		678	8	877	1.2	0.766	7.9	LOS A	10.8	76.3	0.84	0.73	0.92	45.1
All Vehicles		1376	15	1780	1.1	0.766	6.9	LOS A	10.8	76.3	0.66	0.64	0.71	45.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Lord Sheffield Cct-Klenig Pl_AM (Site Folder: General)]

Lord Sheffield Circuit-Klenig Place
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis: Constant Number of Years = 13

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Lord Sheffield Circuit (S)														
1	L2	53	3	69	5.7	0.121	4.9	LOS A	0.5	3.3	0.22	0.54	0.22	46.0
2	T1	1	0	1	0.0	0.121	4.0	LOS A	0.5	3.3	0.22	0.54	0.22	44.0
3	R2	51	0	66	0.0	0.121	5.7	LOS A	0.5	3.3	0.22	0.54	0.22	45.7
Approach		105	3	136	2.9	0.121	5.3	LOS A	0.5	3.3	0.22	0.54	0.22	45.9
East: Lord Sheffield Circuit (E)														
4	L2	10	0	13	0.0	0.062	4.6	LOS A	0.1	0.7	0.04	0.12	0.04	48.8
5	T1	70	2	91	2.9	0.062	0.0	LOS A	0.1	0.7	0.04	0.12	0.04	49.2
6	R2	9	1	12	11.1	0.062	4.8	LOS A	0.1	0.7	0.04	0.12	0.04	46.7
Approach		89	3	115	3.4	0.062	1.0	NA	0.1	0.7	0.04	0.12	0.04	49.0
North: Kleinig Place (N)														
7	L2	23	1	30	4.3	0.026	4.7	LOS A	0.1	0.7	0.11	0.51	0.11	44.2
8	T1	1	0	1	0.0	0.026	3.9	LOS A	0.1	0.7	0.11	0.51	0.11	44.4
9	R2	4	0	5	0.0	0.026	5.8	LOS A	0.1	0.7	0.11	0.51	0.11	43.7
Approach		28	1	36	3.6	0.026	4.8	LOS A	0.1	0.7	0.11	0.51	0.11	44.2
West: Lord Sheffield Circuit (W)														
10	L2	3	1	4	33.3	0.045	5.1	LOS A	0.2	1.2	0.16	0.23	0.16	44.9
11	T1	35	0	45	0.0	0.045	0.2	LOS A	0.2	1.2	0.16	0.23	0.16	48.3
12	R2	24	0	31	0.0	0.045	4.9	LOS A	0.2	1.2	0.16	0.23	0.16	47.4
Approach		62	1	80	1.6	0.045	2.2	NA	0.2	1.2	0.16	0.23	0.16	47.8
All Vehicles		284	8	367	2.8	0.121	3.2	NA	0.5	3.3	0.14	0.34	0.14	47.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Lord Sheffield Cct-Klenig Pl_PM (Site Folder: General)]

Lord Sheffield Circuit-Klenig Place
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis: Constant Number of Years = 13

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Lord Sheffield Circuit (S)														
1	L2	35	0	45	0.0	0.088	4.8	LOS A	0.3	2.3	0.22	0.55	0.22	46.1
2	T1	1	0	1	0.0	0.088	4.5	LOS A	0.3	2.3	0.22	0.55	0.22	43.9
3	R2	37	0	48	0.0	0.088	6.1	LOS A	0.3	2.3	0.22	0.55	0.22	45.7
Approach		73	0	94	0.0	0.088	5.5	LOS A	0.3	2.3	0.22	0.55	0.22	45.9
East: Lord Sheffield Circuit (E)														
4	L2	19	0	25	0.0	0.080	4.8	LOS A	0.2	1.8	0.13	0.21	0.13	48.0
5	T1	67	1	87	1.5	0.080	0.1	LOS A	0.2	1.8	0.13	0.21	0.13	48.4
6	R2	27	0	35	0.0	0.080	4.9	LOS A	0.2	1.8	0.13	0.21	0.13	46.0
Approach		113	1	146	0.9	0.080	2.1	NA	0.2	1.8	0.13	0.21	0.13	47.9
North: Kleinig Place (N)														
7	L2	7	0	9	0.0	0.022	4.8	LOS A	0.1	0.5	0.22	0.54	0.22	43.8
8	T1	1	0	1	0.0	0.022	4.3	LOS A	0.1	0.5	0.22	0.54	0.22	43.9
9	R2	9	0	12	0.0	0.022	6.1	LOS A	0.1	0.5	0.22	0.54	0.22	43.2
Approach		17	0	22	0.0	0.022	5.5	LOS A	0.1	0.5	0.22	0.54	0.22	43.5
West: Lord Sheffield Circuit (W)														
10	L2	15	0	19	0.0	0.090	4.9	LOS A	0.3	2.5	0.17	0.24	0.17	46.3
11	T1	67	1	87	1.5	0.090	0.2	LOS A	0.3	2.5	0.17	0.24	0.17	48.2
12	R2	42	1	54	2.4	0.090	4.9	LOS A	0.3	2.5	0.17	0.24	0.17	47.2
Approach		124	2	160	1.6	0.090	2.4	NA	0.3	2.5	0.17	0.24	0.17	47.7
All Vehicles		327	3	423	0.9	0.090	3.1	NA	0.3	2.5	0.17	0.31	0.17	47.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Evan St-The Crescent-Macquarie Ave_AM (Site Folder: General)]

Evan Street-The Crescent-Macquarie Avenue
Site Category: (None)
Roundabout
Design Life Analysis: Constant Number of Years = 13

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Evan Street (S)														
1	L2	109	1	141	0.9	0.577	5.1	LOS A	6.1	43.1	0.48	0.53	0.48	45.2
2	T1	323	10	418	3.1	0.577	4.6	LOS A	6.1	43.1	0.48	0.53	0.48	45.8
3	R2	142	1	184	0.7	0.577	7.4	LOS A	6.1	43.1	0.48	0.53	0.48	45.6
3u	U	3	0	4	0.0	0.577	8.7	LOS A	6.1	43.1	0.48	0.53	0.48	45.9
Approach		577	12	746	2.1	0.577	5.4	LOS A	6.1	43.1	0.48	0.53	0.48	45.6
East: The Crescent (E)														
4	L2	202	2	261	1.0	1.045	121.1	LOS F	29.5	211.2	1.00	2.28	4.04	18.6
5	T1	52	5	67	9.6	1.045	121.3	LOS F	29.5	211.2	1.00	2.28	4.04	18.7
6	R2	9	0	12	0.0	1.045	123.3	LOS F	29.5	211.2	1.00	2.28	4.04	18.7
6u	U	1	0	1	0.0	1.045	124.6	LOS F	29.5	211.2	1.00	2.28	4.04	18.7
Approach		264	7	342	2.7	1.045	121.2	LOS F	29.5	211.2	1.00	2.28	4.04	18.6
North: Macquarie Avenue (N)														
7	L2	18	0	23	0.0	0.894	12.0	LOS A	20.8	148.3	1.00	0.83	1.23	42.5
8	T1	779	15	1008	1.9	0.894	11.5	LOS A	20.8	148.3	1.00	0.83	1.23	43.0
9	R2	7	0	9	0.0	0.894	14.3	LOS A	20.8	148.3	1.00	0.83	1.23	42.9
9u	U	1	0	1	0.0	0.894	15.6	LOS B	20.8	148.3	1.00	0.83	1.23	43.2
Approach		805	15	1041	1.9	0.894	11.5	LOS A	20.8	148.3	1.00	0.83	1.23	43.0
All Vehicles		1646	34	2129	2.1	1.045	27.0	LOS B	29.5	211.2	0.82	0.96	1.42	36.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Evan St-The Crescent-Macquarie Ave_PM (Site Folder: General)]

Evan Street-The Crescent-Macquarie Avenue
Site Category: (None)
Roundabout
Design Life Analysis: Constant Number of Years = 13

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Evan Street (S)														
1	L2	159	0	206	0.0	1.006	20.3	LOS B	60.8	430.8	1.00	0.69	1.29	38.5
2	T1	683	13	884	1.9	1.006	19.8	LOS B	60.8	430.8	1.00	0.69	1.29	39.0
3	R2	206	1	266	0.5	1.006	22.6	LOS B	60.8	430.8	1.00	0.69	1.29	38.8
3u	U	1	0	1	0.0	1.006	23.9	LOS B	60.8	430.8	1.00	0.69	1.29	39.1
Approach		1049	14	1357	1.3	1.006	20.5	LOS B	60.8	430.8	1.00	0.69	1.29	38.9
East: The Crescent (E)														
4	L2	202	2	261	1.0	0.601	14.2	LOS A	5.8	40.8	0.97	1.10	1.23	41.2
5	T1	45	2	58	4.4	0.601	13.8	LOS A	5.8	40.8	0.97	1.10	1.23	41.6
6	R2	18	0	23	0.0	0.601	16.4	LOS B	5.8	40.8	0.97	1.10	1.23	41.5
6u	U	1	0	1	0.0	0.601	17.8	LOS B	5.8	40.8	0.97	1.10	1.23	41.8
Approach		266	4	344	1.5	0.601	14.3	LOS A	5.8	40.8	0.97	1.10	1.23	41.3
North: Macquarie Avenue (N)														
7	L2	24	1	31	4.2	0.742	9.3	LOS A	10.1	71.7	0.90	0.82	1.03	43.9
8	T1	541	9	700	1.7	0.742	8.7	LOS A	10.1	71.7	0.90	0.82	1.03	44.5
9	R2	5	0	6	0.0	0.742	11.5	LOS A	10.1	71.7	0.90	0.82	1.03	44.3
9u	U	2	0	3	0.0	0.742	12.8	LOS A	10.1	71.7	0.90	0.82	1.03	44.7
Approach		572	10	740	1.7	0.742	8.8	LOS A	10.1	71.7	0.90	0.82	1.03	44.5
All Vehicles		1887	28	2441	1.5	1.006	16.0	LOS B	60.8	430.8	0.96	0.79	1.20	40.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Lemongrove Rd-Macquarie Ave_AM (Site Folder: General)]

Lemongrove Road-Macquarie Avenue
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis: Constant Number of Years = 13

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Macquarie Avenue (S)														
1	L2	1	0	1	0.0	0.214	4.6	LOS A	0.0	0.0	0.00	0.00	0.00	25.8
2	T1	321	0	415	0.0	0.214	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
Approach		322	0	417	0.0	0.214	0.1	NA	0.0	0.0	0.00	0.00	0.00	49.8
North: Macquarie Avenue (N)														
8	T1	727	13	940	1.8	0.496	0.1	LOS A	0.2	1.3	0.02	0.01	0.02	49.9
9	R2	7	0	9	0.0	0.496	7.7	LOS A	0.2	1.3	0.02	0.01	0.02	25.6
Approach		734	13	950	1.8	0.496	0.1	NA	0.2	1.3	0.02	0.01	0.02	49.7
West: Lemongrove Road (W)														
12	R2	82	2	106	2.4	0.536	28.0	LOS B	1.9	13.7	0.92	1.07	1.30	28.9
Approach		82	2	106	2.4	0.536	28.0	LOS B	1.9	13.7	0.92	1.07	1.30	28.9
All Vehicles		1138	15	1472	1.3	0.536	2.1	NA	1.9	13.7	0.08	0.08	0.11	48.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Lemongrove Rd-Macquarie Ave_PM (Site Folder: General)]

Lemongrove Road-Macquarie Avenue
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis: Constant Number of Years = 13

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Macquarie Avenue (S)														
1	L2	4	0	5	0.0	0.473	4.7	LOS A	0.0	0.0	0.00	0.00	0.00	25.6
2	T1	701	13	907	1.9	0.473	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	49.7
Approach		705	13	912	1.8	0.473	0.2	NA	0.0	0.0	0.00	0.00	0.00	49.5
North: Macquarie Avenue (N)														
8	T1	508	9	657	1.8	0.374	0.8	LOS A	0.7	5.2	0.10	0.02	0.13	49.2
9	R2	13	1	17	7.7	0.374	15.2	LOS B	0.7	5.2	0.10	0.02	0.13	25.3
Approach		521	10	674	1.9	0.374	1.1	NA	0.7	5.2	0.10	0.02	0.13	48.6
West: Lemongrove Road (W)														
12	R2	61	1	79	1.6	0.562	39.2	LOS C	1.9	13.4	0.95	1.07	1.31	24.9
Approach		61	1	79	1.6	0.562	39.2	LOS C	1.9	13.4	0.95	1.07	1.31	24.9
All Vehicles		1287	24	1665	1.9	0.562	2.5	NA	1.9	13.4	0.08	0.06	0.12	47.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Thronton Dr-Combewood Ave_AM (Site Folder: General)]

Thronton Dr-Combewood Ave
Site Category: (None)
Stop (Two-Way)
Design Life Analysis: Constant Number of Years = 3

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Combewood Avenue (S)														
1	L2	223	2	237	0.9	0.208	4.6	LOS A	0.0	0.3	0.01	0.33	0.01	47.4
2	T1	141	1	150	0.7	0.208	0.0	LOS A	0.0	0.3	0.01	0.33	0.01	48.1
3	R2	4	0	4	0.0	0.208	5.3	LOS A	0.0	0.3	0.01	0.33	0.01	47.2
Approach		368	3	391	0.8	0.208	2.8	NA	0.0	0.3	0.01	0.33	0.01	47.7
East: Thornton Drive (E)														
4	L2	1	0	1	0.0	0.100	8.2	LOS A	0.3	2.5	0.57	1.04	0.57	43.2
5	T1	44	2	47	4.5	0.100	12.6	LOS A	0.3	2.5	0.57	1.04	0.57	42.2
6	R2	4	0	4	0.0	0.100	10.7	LOS A	0.3	2.5	0.57	1.04	0.57	42.8
Approach		49	2	52	4.1	0.100	12.3	LOS A	0.3	2.5	0.57	1.04	0.57	42.3
North: Combewood Avenue (N)														
7	L2	5	0	5	0.0	0.183	6.2	LOS A	0.8	6.0	0.37	0.23	0.37	47.5
8	T1	172	1	183	0.6	0.183	1.0	LOS A	0.8	6.0	0.37	0.23	0.37	48.0
9	R2	95	4	101	4.2	0.183	6.3	LOS A	0.8	6.0	0.37	0.23	0.37	46.7
Approach		272	5	289	1.8	0.183	3.0	NA	0.8	6.0	0.37	0.23	0.37	47.5
West: Thornton Drive (W)														
10	L2	39	0	41	0.0	0.397	9.1	LOS A	1.8	12.7	0.51	1.03	0.67	41.8
11	T1	15	2	16	13.3	0.397	14.0	LOS A	1.8	12.7	0.51	1.03	0.67	41.4
12	R2	153	2	162	1.3	0.397	14.2	LOS A	1.8	12.7	0.51	1.03	0.67	41.4
Approach		207	4	220	1.9	0.397	13.2	LOS A	1.8	12.7	0.51	1.03	0.67	41.5
All Vehicles		896	14	951	1.6	0.397	5.8	NA	1.8	12.7	0.26	0.50	0.30	45.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Thronton Dr-Combewood Ave_PM (Site Folder: General)]

Thronton Dr-Combewood Ave
Site Category: (None)
Stop (Two-Way)
Design Life Analysis: Constant Number of Years = 3

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Combewood Avenue (S)														
1	L2	217	2	230	0.9	0.224	4.9	LOS A	0.0	0.1	0.00	0.30	0.00	49.9
2	T1	180	1	191	0.6	0.224	0.0	LOS A	0.0	0.1	0.00	0.30	0.00	50.7
3	R2	1	0	1	0.0	0.224	5.0	LOS A	0.0	0.1	0.00	0.30	0.00	48.6
Approach		398	3	422	0.8	0.224	2.7	NA	0.0	0.1	0.00	0.30	0.00	50.3
East: Thornton Drive (E)														
4	L2	2	0	2	0.0	0.071	7.9	LOS A	0.2	1.7	0.51	1.00	0.51	43.5
5	T1	33	0	35	0.0	0.071	11.7	LOS A	0.2	1.7	0.51	1.00	0.51	42.6
6	R2	3	0	3	0.0	0.071	10.9	LOS A	0.2	1.7	0.51	1.00	0.51	43.1
Approach		38	0	40	0.0	0.071	11.4	LOS A	0.2	1.7	0.51	1.00	0.51	42.7
North: Combewood Avenue (N)														
7	L2	4	0	4	0.0	0.147	6.3	LOS A	0.7	5.1	0.42	0.30	0.42	48.0
8	T1	112	1	119	0.9	0.147	1.3	LOS A	0.7	5.1	0.42	0.30	0.42	50.3
9	R2	92	0	98	0.0	0.147	6.3	LOS A	0.7	5.1	0.42	0.30	0.42	47.3
Approach		208	1	221	0.5	0.147	3.6	NA	0.7	5.1	0.42	0.30	0.42	49.0
West: Thornton Drive (W)														
10	L2	86	1	91	1.2	0.556	10.4	LOS A	3.4	24.1	0.55	1.08	0.87	42.3
11	T1	38	0	40	0.0	0.556	13.9	LOS A	3.4	24.1	0.55	1.08	0.87	42.1
12	R2	202	2	214	1.0	0.556	15.7	LOS B	3.4	24.1	0.55	1.08	0.87	43.5
Approach		326	3	346	0.9	0.556	14.1	LOS A	3.4	24.1	0.55	1.08	0.87	43.0
All Vehicles		970	7	1029	0.7	0.556	7.1	NA	3.4	24.1	0.29	0.59	0.40	47.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Castlereagh Rd-Thornton Dr_AM (Site Folder: General)]

Castlereagh Rd-Thornton Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 130 seconds (Site User-Given Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.
Design Life Analysis: Constant Number of Years = 3

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Castlereagh Road (S)														
1	L2	123	14	131	11.4	0.837	29.7	LOS C	45.4	344.7	0.88	0.84	0.89	36.0
2	T1	1450	137	1539	9.4	0.837	24.0	LOS B	45.4	344.7	0.84	0.80	0.86	32.5
3	R2	177	2	188	1.1	* 0.947	90.7	LOS F	14.6	103.4	1.00	1.04	1.52	18.4
Approach		1750	153	1857	8.7	0.947	31.1	LOS C	45.4	344.7	0.86	0.82	0.93	29.7
East: Thornton Drive (E)														
4	L2	281	6	298	2.1	0.579	46.5	LOS D	15.8	112.6	0.89	0.83	0.89	27.4
5	T1	40	1	42	2.5	0.151	52.6	LOS D	2.4	17.0	0.91	0.68	0.91	32.3
6	R2	101	2	107	2.0	* 0.445	53.5	LOS D	6.0	42.6	0.95	0.77	0.95	28.4
Approach		422	9	448	2.1	0.579	48.7	LOS D	15.8	112.6	0.91	0.80	0.91	28.2
North: Castlereagh Road (N)														
7	L2	52	3	55	5.8	0.051	16.4	LOS B	1.4	10.1	0.43	0.66	0.43	43.6
8	T1	1616	132	1715	8.2	* 0.937	51.9	LOS D	62.3	466.5	0.98	1.06	1.18	21.4
9	R2	42	2	45	4.8	0.200	29.1	LOS C	1.4	10.1	0.84	0.73	0.84	36.7
Approach		1710	137	1815	8.0	0.937	50.3	LOS D	62.3	466.5	0.96	1.04	1.15	22.3
West: Peachtree Road (W)														
10	L2	71	6	75	8.5	0.282	54.3	LOS D	5.2	38.6	0.90	0.76	0.90	28.3
11	T1	19	0	20	0.0	* 0.282	48.7	LOS D	5.2	38.6	0.90	0.76	0.90	32.1
12	R2	90	17	96	18.9	0.789	59.0	LOS E	5.6	45.3	1.00	0.86	1.24	23.8
Approach		180	23	191	12.8	0.789	56.0	LOS D	5.6	45.3	0.95	0.81	1.07	26.5
All Vehicles		4062	322	4311	7.9	0.947	42.1	LOS C	62.3	466.5	0.91	0.91	1.02	26.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Castlereagh Road (S)												
P1	Full	50	53	59.3	LOS E	0.2	0.2	0.96	0.96	228.9	220.5	0.96
East: Thornton Drive (E)												
P2	Full	50	53	59.3	LOS E	0.2	0.2	0.96	0.96	228.9	220.5	0.96

North: Castlereagh Road (N)											
P3	Full	50	53	59.3	LOS E	0.2	0.2	0.96	0.96	231.4	223.8	0.97
West: Peachtree Road (W)											
P4	Full	50	53	59.3	LOS E	0.2	0.2	0.96	0.96	226.3	217.2	0.96
All Pedestrians		200	212	59.3	LOS E	0.2	0.2	0.96	0.96	228.9	220.5	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 101 [Castlereagh Rd-Thornton Dr_PM (Site Folder: General)]

Castlereagh Rd-Thornton Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 130 seconds (Site User-Given Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.
Design Life Analysis: Constant Number of Years = 3

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Castlereagh Road (S)														
1	L2	116	13	123	11.2	0.950	56.9	LOS E	77.7	571.1	1.00	1.08	1.20	25.8
2	T1	1700	87	1804	5.1	0.950	51.4	LOS D	77.7	571.1	0.94	1.04	1.16	21.4
3	R2	235	0	254	0.0	* 0.986	104.4	LOS F	21.7	152.1	1.00	1.09	1.61	16.7
Approach		2051	100	2181	4.9	0.986	57.9	LOS E	77.7	571.1	0.95	1.05	1.21	20.8
East: Thornton Drive (E)														
4	L2	263	1	282	0.4	0.507	44.1	LOS D	14.4	100.9	0.86	0.81	0.86	28.2
5	T1	30	1	32	3.3	* 0.128	54.4	LOS D	1.8	13.0	0.92	0.68	0.92	31.8
6	R2	89	0	96	0.0	0.414	52.9	LOS D	5.3	37.3	0.95	0.76	0.95	28.7
Approach		382	2	410	0.5	0.507	46.9	LOS D	14.4	100.9	0.89	0.79	0.89	28.7
North: Castlereagh Road (N)														
7	L2	90	1	97	1.1	0.091	18.4	LOS B	2.7	19.0	0.47	0.69	0.47	42.5
8	T1	1682	62	1785	3.7	* 1.023	101.2	LOS F	90.3	651.8	1.00	1.34	1.53	13.2
9	R2	42	0	45	0.0	0.275	38.9	LOS C	1.8	12.6	0.96	0.74	0.96	32.8
Approach		1814	63	1927	3.5	1.023	95.6	LOS F	90.3	651.8	0.97	1.29	1.46	14.3
West: Peachtree Road (W)														
10	L2	78	2	83	2.6	0.390	57.1	LOS E	7.1	50.9	0.93	0.78	0.93	27.7
11	T1	40	1	42	2.5	0.390	51.6	LOS D	7.1	50.9	0.93	0.78	0.93	31.5
12	R2	136	4	144	2.9	* 0.920	68.7	LOS E	9.2	65.9	1.00	0.99	1.47	22.0
Approach		254	7	270	2.8	0.920	62.4	LOS E	9.2	65.9	0.97	0.89	1.22	25.3
All Vehicles		4501	172	4787	3.8	1.023	72.4	LOS F	90.3	651.8	0.95	1.12	1.28	18.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Castlereagh Road (S)												
P1	Full	50	53	59.3	LOS E	0.2	0.2	0.96	0.96	228.9	220.5	0.96
East: Thornton Drive (E)												
P2	Full	50	53	59.3	LOS E	0.2	0.2	0.96	0.96	228.9	220.5	0.96

North: Castlereagh Road (N)											
P3	Full	50	53	59.3	LOS E	0.2	0.2	0.96	0.96	231.4	223.8	0.97
West: Peachtree Road (W)											
P4	Full	50	53	59.3	LOS E	0.2	0.2	0.96	0.96	226.3	217.2	0.96
All Pedestrians		200	212	59.3	LOS E	0.2	0.2	0.96	0.96	228.9	220.5	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 101 [Coreen Ave-Sydney Smith Dr_AM (Site Folder: General)]

New Site
Site Category: (None)
Roundabout
Design Life Analysis: Constant Number of Years = 3

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Sydney Smith Drive (S)														
1	L2	38	2	40	5.3	0.427	8.7	LOS A	2.9	20.4	0.75	0.85	0.77	42.9
3	R2	285	2	302	0.7	0.427	11.4	LOS A	2.9	20.4	0.75	0.85	0.77	43.4
3u	U	1	0	1	0.0	0.427	12.8	LOS A	2.9	20.4	0.75	0.85	0.77	43.9
Approach		324	4	344	1.2	0.427	11.1	LOS A	2.9	20.4	0.75	0.85	0.77	43.4
East: Coreen Avenue (E)														
4	L2	179	1	190	0.6	0.505	4.1	LOS A	4.9	35.1	0.24	0.43	0.24	46.2
5	T1	516	19	548	3.7	0.505	3.9	LOS A	4.9	35.1	0.24	0.43	0.24	46.9
6u	U	18	0	19	0.0	0.505	8.5	LOS A	4.9	35.1	0.24	0.43	0.24	47.3
Approach		713	20	757	2.8	0.505	4.1	LOS A	4.9	35.1	0.24	0.43	0.24	46.8
West: Coreen Avenue (W)														
11	T1	411	16	436	3.9	0.494	6.2	LOS A	3.8	27.3	0.70	0.69	0.70	45.6
12	R2	26	2	28	7.7	0.494	9.5	LOS A	3.8	27.3	0.70	0.69	0.70	45.4
12u	U	4	0	4	0.0	0.494	10.7	LOS A	3.8	27.3	0.70	0.69	0.70	45.9
Approach		441	18	468	4.1	0.494	6.5	LOS A	3.8	27.3	0.70	0.69	0.70	45.6
All Vehicles		1478	42	1568	2.8	0.505	6.3	LOS A	4.9	35.1	0.49	0.60	0.49	45.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Coreen Ave-Sydney Smith Dr_PM (Site Folder: General)]

New Site
Site Category: (None)
Roundabout
Design Life Analysis: Constant Number of Years = 3

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Sydney Smith Drive (S)														
1	L2	43	0	46	0.0	0.320	7.1	LOS A	2.0	14.0	0.66	0.77	0.66	43.7
3	R2	218	0	231	0.0	0.320	10.0	LOS A	2.0	14.0	0.66	0.77	0.66	44.2
3u	U	1	1	1	100.0	0.320	15.8	LOS B	2.0	14.0	0.66	0.77	0.66	43.2
Approach		262	1	278	0.4	0.320	9.5	LOS A	2.0	14.0	0.66	0.77	0.66	44.2
East: Coreen Avenue (E)														
4	L2	247	0	262	0.0	0.508	4.4	LOS A	4.8	33.9	0.37	0.47	0.37	45.9
5	T1	395	6	419	1.5	0.508	4.2	LOS A	4.8	33.9	0.37	0.47	0.37	46.6
6u	U	21	0	22	0.0	0.508	8.8	LOS A	4.8	33.9	0.37	0.47	0.37	46.9
Approach		663	6	704	0.9	0.508	4.4	LOS A	4.8	33.9	0.37	0.47	0.37	46.3
West: Coreen Avenue (W)														
11	T1	613	6	651	1.0	0.667	6.8	LOS A	7.2	50.7	0.76	0.71	0.81	45.4
12	R2	33	0	35	0.0	0.667	9.9	LOS A	7.2	50.7	0.76	0.71	0.81	45.2
12u	U	32	2	34	6.3	0.667	11.6	LOS A	7.2	50.7	0.76	0.71	0.81	45.6
Approach		678	8	719	1.2	0.667	7.2	LOS A	7.2	50.7	0.76	0.71	0.81	45.4
All Vehicles		1603	15	1701	0.9	0.667	6.4	LOS A	7.2	50.7	0.58	0.62	0.61	45.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Lord Sheffield Cct-Klenig Pl_AM (Site Folder: General)]

Lord Sheffield Circuit-Klenig Place
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis: Constant Number of Years = 3

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Lord Sheffield Circuit (S)														
1	L2	115	3	122	2.6	0.154	5.0	LOS A	0.6	4.4	0.26	0.55	0.26	46.0
2	T1	1	0	1	0.0	0.154	4.7	LOS A	0.6	4.4	0.26	0.55	0.26	43.9
3	R2	51	0	54	0.0	0.154	6.7	LOS A	0.6	4.4	0.26	0.55	0.26	45.6
Approach		167	3	177	1.8	0.154	5.5	LOS A	0.6	4.4	0.26	0.55	0.26	45.9
East: Lord Sheffield Circuit (E)														
4	L2	10	0	11	0.0	0.077	4.7	LOS A	0.1	0.6	0.04	0.08	0.04	49.0
5	T1	117	2	124	1.7	0.077	0.0	LOS A	0.1	0.6	0.04	0.08	0.04	49.5
6	R2	9	1	10	11.1	0.077	5.0	LOS A	0.1	0.6	0.04	0.08	0.04	47.0
Approach		136	3	144	2.2	0.077	0.7	NA	0.1	0.6	0.04	0.08	0.04	49.3
North: Kleinig Place (N)														
7	L2	23	1	24	4.3	0.024	4.9	LOS A	0.1	0.6	0.19	0.51	0.19	44.0
8	T1	1	0	1	0.0	0.024	4.5	LOS A	0.1	0.6	0.19	0.51	0.19	44.1
9	R2	4	0	4	0.0	0.024	7.0	LOS A	0.1	0.6	0.19	0.51	0.19	43.4
Approach		28	1	30	3.6	0.024	5.2	LOS A	0.1	0.6	0.19	0.51	0.19	43.9
West: Lord Sheffield Circuit (W)														
10	L2	3	1	3	33.3	0.107	5.3	LOS A	0.5	3.3	0.22	0.26	0.22	44.5
11	T1	92	0	98	0.0	0.107	0.3	LOS A	0.5	3.3	0.22	0.26	0.22	48.0
12	R2	81	0	86	0.0	0.107	5.0	LOS A	0.5	3.3	0.22	0.26	0.22	47.1
Approach		176	1	187	0.6	0.107	2.5	NA	0.5	3.3	0.22	0.26	0.22	47.6
All Vehicles		507	8	538	1.6	0.154	3.2	NA	0.6	4.4	0.18	0.32	0.18	47.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Lord Sheffield Cct-Klenig Pl_PM (Site Folder: General)]

Lord Sheffield Circuit-Klenig Place
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis: Constant Number of Years = 3

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Lord Sheffield Circuit (S)														
1	L2	84	0	89	0.0	0.119	5.1	LOS A	0.5	3.2	0.30	0.57	0.30	45.9
2	T1	1	0	1	0.0	0.119	5.3	LOS A	0.5	3.2	0.30	0.57	0.30	43.7
3	R2	37	0	39	0.0	0.119	7.1	LOS A	0.5	3.2	0.30	0.57	0.30	45.5
Approach		122	0	129	0.0	0.119	5.7	LOS A	0.5	3.2	0.30	0.57	0.30	45.8
East: Lord Sheffield Circuit (E)														
4	L2	19	0	20	0.0	0.117	4.8	LOS A	0.2	1.6	0.08	0.12	0.08	48.6
5	T1	161	1	171	0.6	0.117	0.1	LOS A	0.2	1.6	0.08	0.12	0.08	49.1
6	R2	27	0	29	0.0	0.117	4.9	LOS A	0.2	1.6	0.08	0.12	0.08	47.0
Approach		207	1	220	0.5	0.117	1.1	NA	0.2	1.6	0.08	0.12	0.08	48.9
North: Kleinig Place (N)														
7	L2	7	0	7	0.0	0.021	4.8	LOS A	0.1	0.5	0.25	0.56	0.25	43.2
8	T1	1	0	1	0.0	0.021	5.0	LOS A	0.1	0.5	0.25	0.56	0.25	43.3
9	R2	9	0	10	0.0	0.021	7.4	LOS A	0.1	0.5	0.25	0.56	0.25	42.6
Approach		17	0	18	0.0	0.021	6.2	LOS A	0.1	0.5	0.25	0.56	0.25	42.9
West: Lord Sheffield Circuit (W)														
10	L2	15	0	16	0.0	0.132	5.2	LOS A	0.6	4.4	0.28	0.30	0.28	45.5
11	T1	93	1	99	1.1	0.132	0.5	LOS A	0.6	4.4	0.28	0.30	0.28	47.6
12	R2	101	1	107	1.0	0.132	5.2	LOS A	0.6	4.4	0.28	0.30	0.28	46.7
Approach		209	2	222	1.0	0.132	3.1	NA	0.6	4.4	0.28	0.30	0.28	47.1
All Vehicles		555	3	589	0.5	0.132	3.1	NA	0.6	4.4	0.21	0.30	0.21	47.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Evan St-The Crescent-Macquarie Ave_AM (Site Folder: General)]

Evan Street-The Crescent-Macquarie Avenue
Site Category: (None)
Roundabout
Design Life Analysis: Constant Number of Years = 3

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Evan Street (S)														
1	L2	109	1	116	0.9	0.490	5.0	LOS A	4.6	32.5	0.42	0.52	0.42	45.3
2	T1	343	10	363	2.9	0.490	4.5	LOS A	4.6	32.5	0.42	0.52	0.42	45.9
3	R2	142	1	151	0.7	0.490	7.3	LOS A	4.6	32.5	0.42	0.52	0.42	45.7
3u	U	3	0	3	0.0	0.490	8.6	LOS A	4.6	32.5	0.42	0.52	0.42	46.1
Approach		597	12	632	2.0	0.490	5.2	LOS A	4.6	32.5	0.42	0.52	0.42	45.7
East: The Crescent (E)														
4	L2	202	2	214	1.0	0.601	18.0	LOS B	5.7	40.8	0.99	1.14	1.33	39.4
5	T1	52	5	55	9.6	0.601	18.0	LOS B	5.7	40.8	0.99	1.14	1.33	39.8
6	R2	20	0	21	0.0	0.601	20.2	LOS B	5.7	40.8	0.99	1.14	1.33	39.7
6u	U	1	0	1	0.0	0.601	21.6	LOS B	5.7	40.8	0.99	1.14	1.33	40.0
Approach		275	7	291	2.6	0.601	18.2	LOS B	5.7	40.8	0.99	1.14	1.33	39.5
North: Macquarie Avenue (N)														
7	L2	33	0	34	0.0	0.744	6.2	LOS A	8.8	62.6	0.72	0.60	0.72	44.9
8	T1	810	15	858	1.9	0.744	5.7	LOS A	8.8	62.6	0.72	0.60	0.72	45.4
9	R2	7	0	7	0.0	0.744	8.5	LOS A	8.8	62.6	0.72	0.60	0.72	45.2
9u	U	1	0	1	0.0	0.744	9.8	LOS A	8.8	62.6	0.72	0.60	0.72	45.6
Approach		851	15	900	1.8	0.744	5.7	LOS A	8.8	62.6	0.72	0.60	0.72	45.4
All Vehicles		1723	34	1824	2.0	0.744	7.5	LOS A	8.8	62.6	0.66	0.66	0.72	44.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Evan St-The Crescent-Macquarie Ave_PM (Site Folder: General)]

Evan Street-The Crescent-Macquarie Avenue
Site Category: (None)
Roundabout
Design Life Analysis: Constant Number of Years = 3

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Evan Street (S)														
1	L2	159	0	169	0.0	0.851	5.9	LOS A	16.4	116.3	0.85	0.53	0.85	44.4
2	T1	714	13	756	1.8	0.851	5.4	LOS A	16.4	116.3	0.85	0.53	0.85	45.0
3	R2	206	1	219	0.5	0.851	8.2	LOS A	16.4	116.3	0.85	0.53	0.85	44.8
3u	U	1	0	1	0.0	0.851	9.5	LOS A	16.4	116.3	0.85	0.53	0.85	45.2
Approach		1080	14	1144	1.3	0.851	6.0	LOS A	16.4	116.3	0.85	0.53	0.85	44.9
East: The Crescent (E)														
4	L2	202	2	214	1.0	0.428	9.3	LOS A	3.1	22.0	0.82	0.88	0.86	43.5
5	T1	45	2	48	4.4	0.428	9.0	LOS A	3.1	22.0	0.82	0.88	0.86	44.0
6	R2	33	0	34	0.0	0.428	11.6	LOS A	3.1	22.0	0.82	0.88	0.86	43.9
6u	U	1	0	1	0.0	0.428	12.9	LOS A	3.1	22.0	0.82	0.88	0.86	44.2
Approach		281	4	297	1.4	0.428	9.5	LOS A	3.1	22.0	0.82	0.88	0.86	43.6
North: Macquarie Avenue (N)														
7	L2	33	1	34	3.1	0.596	6.4	LOS A	5.5	39.2	0.70	0.64	0.70	44.9
8	T1	560	9	593	1.6	0.596	5.8	LOS A	5.5	39.2	0.70	0.64	0.70	45.5
9	R2	5	0	5	0.0	0.596	8.6	LOS A	5.5	39.2	0.70	0.64	0.70	45.3
9u	U	2	0	2	0.0	0.596	9.9	LOS A	5.5	39.2	0.70	0.64	0.70	45.7
Approach		600	10	635	1.7	0.596	5.9	LOS A	5.5	39.2	0.70	0.64	0.70	45.5
All Vehicles		1961	28	2076	1.4	0.851	6.5	LOS A	16.4	116.3	0.80	0.62	0.80	44.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Lemongrove Rd-Macquarie Ave_AM (Site Folder: General)]

Lemongrove Road-Macquarie Avenue
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis: Constant Number of Years = 3

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Macquarie Avenue (S)														
1	L2	1	0	1	0.0	0.192	4.6	LOS A	0.0	0.0	0.00	0.00	0.00	25.8
2	T1	352	0	374	0.0	0.192	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
Approach		353	0	375	0.0	0.192	0.1	NA	0.0	0.0	0.00	0.00	0.00	49.8
North: Macquarie Avenue (N)														
8	T1	773	13	820	1.7	0.431	0.0	LOS A	0.1	0.9	0.01	0.01	0.02	49.9
9	R2	7	0	7	0.0	0.431	7.0	LOS A	0.1	0.9	0.01	0.01	0.02	25.7
Approach		780	13	828	1.7	0.431	0.1	NA	0.1	0.9	0.01	0.01	0.02	49.7
West: Lemongrove Road (W)														
12	R2	82	2	87	2.4	0.313	17.4	LOS B	1.0	7.5	0.84	0.97	1.00	34.1
Approach		82	2	87	2.4	0.313	17.4	LOS B	1.0	7.5	0.84	0.97	1.00	34.1
All Vehicles		1215	15	1289	1.2	0.431	1.3	NA	1.0	7.5	0.07	0.07	0.08	48.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Lemongrove Rd-Macquarie Ave_PM (Site Folder: General)]

Lemongrove Road-Macquarie Avenue
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis: Constant Number of Years = 3

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Macquarie Avenue (S)														
1	L2	4	0	4	0.0	0.413	4.7	LOS A	0.0	0.0	0.00	0.00	0.00	25.7
2	T1	747	13	793	1.7	0.413	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
Approach		751	13	797	1.7	0.413	0.2	NA	0.0	0.0	0.00	0.00	0.00	49.6
North: Macquarie Avenue (N)														
8	T1	536	9	569	1.7	0.317	0.4	LOS A	0.4	2.9	0.07	0.01	0.09	49.5
9	R2	13	1	14	7.7	0.317	11.9	LOS A	0.4	2.9	0.07	0.01	0.09	25.4
Approach		549	10	583	1.8	0.317	0.7	NA	0.4	2.9	0.07	0.01	0.09	48.9
West: Lemongrove Road (W)														
12	R2	61	1	65	1.6	0.299	21.4	LOS B	0.9	6.7	0.87	0.98	1.01	31.9
Approach		61	1	65	1.6	0.299	21.4	LOS B	0.9	6.7	0.87	0.98	1.01	31.9
All Vehicles		1361	24	1444	1.8	0.413	1.4	NA	0.9	6.7	0.07	0.05	0.08	48.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Lord Sheffield Cct-Proposed Site Access Driveway_AM (Site Folder: General)]

Lord Sheffield Cct-Proposed Site Access Driveway
Site Category: (None)
Stop (Two-Way)
Design Life Analysis: Constant Number of Years = 3

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Site Access Driveway (S)														
1	L2	63	0	67	0.0	0.123	7.9	LOS A	0.5	3.3	0.25	0.90	0.25	44.9
3	R2	62	0	66	0.0	0.123	8.1	LOS A	0.5	3.3	0.25	0.90	0.25	44.5
Approach		125	0	133	0.0	0.123	8.0	LOS A	0.5	3.3	0.25	0.90	0.25	44.7
East: Lord Sheffield Circuit (E)														
4	L2	58	0	62	0.0	0.090	4.6	LOS A	0.0	0.0	0.00	0.19	0.00	48.4
5	T1	104	0	110	0.0	0.090	0.0	LOS A	0.0	0.0	0.00	0.19	0.00	48.9
Approach		162	0	172	0.0	0.090	1.7	NA	0.0	0.0	0.00	0.19	0.00	48.7
West: Lord Sheffield Circuit (W)														
11	T1	34	0	36	0.0	0.059	0.5	LOS A	0.3	1.9	0.27	0.34	0.27	47.5
12	R2	58	0	62	0.0	0.059	5.1	LOS A	0.3	1.9	0.27	0.34	0.27	46.6
Approach		92	0	98	0.0	0.059	3.4	NA	0.3	1.9	0.27	0.34	0.27	46.9
All Vehicles		379	0	402	0.0	0.123	4.2	NA	0.5	3.3	0.15	0.46	0.15	46.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Lord Sheffield Cct-Proposed Site Access Driveway_PM (Site Folder: General)]

Lord Sheffield Cct-Proposed Site Access Driveway
Site Category: (None)
Stop (Two-Way)
Design Life Analysis: Constant Number of Years = 3

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Site Access Driveway (S)														
1	L2	50	0	53	0.0	0.097	7.7	LOS A	0.4	2.5	0.20	0.91	0.20	44.9
3	R2	50	0	53	0.0	0.097	8.1	LOS A	0.4	2.5	0.20	0.91	0.20	44.5
Approach		100	0	106	0.0	0.097	7.9	LOS A	0.4	2.5	0.20	0.91	0.20	44.7
East: Lord Sheffield Circuit (E)														
4	L2	59	0	63	0.0	0.073	4.6	LOS A	0.0	0.0	0.00	0.24	0.00	48.2
5	T1	73	0	77	0.0	0.073	0.0	LOS A	0.0	0.0	0.00	0.24	0.00	48.6
Approach		132	0	140	0.0	0.073	2.1	NA	0.0	0.0	0.00	0.24	0.00	48.4
West: Lord Sheffield Circuit (W)														
11	T1	61	0	65	0.0	0.074	0.3	LOS A	0.3	2.3	0.22	0.27	0.22	47.9
12	R2	60	0	64	0.0	0.074	5.0	LOS A	0.3	2.3	0.22	0.27	0.22	47.1
Approach		121	0	128	0.0	0.074	2.6	NA	0.3	2.3	0.22	0.27	0.22	47.5
All Vehicles		353	0	375	0.0	0.097	3.9	NA	0.4	2.5	0.13	0.44	0.13	47.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Thronton Dr-Combewood Ave_AM (Site Folder: General)]

Thronton Dr-Combewood Ave
Site Category: (None)
Stop (Two-Way)
Design Life Analysis: Constant Number of Years = 13

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Combewood Avenue (S)														
1	L2	223	2	288	0.9	0.254	4.6	LOS A	0.1	0.5	0.01	0.33	0.01	47.4
2	T1	141	1	182	0.7	0.254	0.0	LOS A	0.1	0.5	0.01	0.33	0.01	48.1
3	R2	4	0	5	0.0	0.254	5.5	LOS A	0.1	0.5	0.01	0.33	0.01	47.2
Approach		368	3	476	0.8	0.254	2.9	NA	0.1	0.5	0.01	0.33	0.01	47.7
East: Thornton Drive (E)														
4	L2	1	0	1	0.0	0.153	8.4	LOS A	0.5	3.8	0.67	1.03	0.67	42.2
5	T1	44	2	57	4.5	0.153	14.9	LOS B	0.5	3.8	0.67	1.03	0.67	41.2
6	R2	4	0	5	0.0	0.153	12.0	LOS A	0.5	3.8	0.67	1.03	0.67	41.8
Approach		49	2	63	4.1	0.153	14.6	LOS B	0.5	3.8	0.67	1.03	0.67	41.2
North: Combewood Avenue (N)														
7	L2	5	0	6	0.0	0.235	6.9	LOS A	1.2	8.4	0.43	0.24	0.43	47.3
8	T1	172	1	223	0.6	0.235	1.4	LOS A	1.2	8.4	0.43	0.24	0.43	47.7
9	R2	95	4	123	4.2	0.235	7.0	LOS A	1.2	8.4	0.43	0.24	0.43	46.5
Approach		272	5	352	1.8	0.235	3.5	NA	1.2	8.4	0.43	0.24	0.43	47.3
West: Thornton Drive (W)														
10	L2	39	0	50	0.0	0.580	11.3	LOS A	3.2	22.5	0.65	1.12	1.09	39.7
11	T1	15	2	19	13.3	0.580	18.4	LOS B	3.2	22.5	0.65	1.12	1.09	39.3
12	R2	153	2	198	1.3	0.580	19.1	LOS B	3.2	22.5	0.65	1.12	1.09	39.3
Approach		207	4	268	1.9	0.580	17.6	LOS B	3.2	22.5	0.65	1.12	1.09	39.4
All Vehicles		896	14	1159	1.6	0.580	7.1	NA	3.2	22.5	0.32	0.52	0.42	45.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Thronton Dr-Combewood Ave_PM (Site Folder: General)]

Thronton Dr-Combewood Ave
Site Category: (None)
Stop (Two-Way)
Design Life Analysis: Constant Number of Years = 13

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Combewood Avenue (S)														
1	L2	217	2	281	0.9	0.273	4.9	LOS A	0.0	0.1	0.00	0.30	0.00	49.9
2	T1	180	1	233	0.6	0.273	0.0	LOS A	0.0	0.1	0.00	0.30	0.00	50.7
3	R2	1	0	1	0.0	0.273	5.2	LOS A	0.0	0.1	0.00	0.30	0.00	48.6
Approach		398	3	515	0.8	0.273	2.7	NA	0.0	0.1	0.00	0.30	0.00	50.3
East: Thornton Drive (E)														
4	L2	2	0	3	0.0	0.106	8.0	LOS A	0.4	2.5	0.60	1.02	0.60	42.7
5	T1	33	0	43	0.0	0.106	13.6	LOS A	0.4	2.5	0.60	1.02	0.60	41.7
6	R2	3	0	4	0.0	0.106	12.3	LOS A	0.4	2.5	0.60	1.02	0.60	42.3
Approach		38	0	49	0.0	0.106	13.2	LOS A	0.4	2.5	0.60	1.02	0.60	41.8
North: Combewood Avenue (N)														
7	L2	4	0	5	0.0	0.191	6.9	LOS A	1.0	7.0	0.48	0.32	0.48	47.8
8	T1	112	1	145	0.9	0.191	1.8	LOS A	1.0	7.0	0.48	0.32	0.48	50.0
9	R2	92	0	119	0.0	0.191	7.0	LOS A	1.0	7.0	0.48	0.32	0.48	47.0
Approach		208	1	269	0.5	0.191	4.2	NA	1.0	7.0	0.48	0.32	0.48	48.7
West: Thornton Drive (W)														
10	L2	86	1	111	1.2	0.795	16.0	LOS B	7.4	52.4	0.73	1.35	1.82	38.6
11	T1	38	0	49	0.0	0.795	21.5	LOS B	7.4	52.4	0.73	1.35	1.82	38.5
12	R2	202	2	261	1.0	0.795	24.3	LOS B	7.4	52.4	0.73	1.35	1.82	39.7
Approach		326	3	422	0.9	0.795	21.8	LOS B	7.4	52.4	0.73	1.35	1.82	39.3
All Vehicles		970	7	1255	0.7	0.795	9.8	NA	7.4	52.4	0.37	0.69	0.74	45.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Castlereagh Rd-Thornton Dr_AM (Site Folder: General)]

Castlereagh Rd-Thornton Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 130 seconds (Site User-Given Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.
Design Life Analysis: Constant Number of Years = 13

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Castlereagh Road (S)														
1	L2	123	14	159	11.4	1.033	107.6	LOS F	110.1	835.0	1.00	1.34	1.54	16.7
2	T1	1450	137	1876	9.4	1.033	103.6	LOS F	110.1	835.0	1.00	1.36	1.55	12.9
3	R2	177	2	229	1.1	* 1.154	218.1	LOS F	29.6	209.4	1.00	1.39	2.32	9.1
Approach		1750	153	2264	8.7	1.154	115.4	LOS F	110.1	835.0	1.00	1.36	1.63	12.5
East: Thornton Drive (E)														
4	L2	281	6	364	2.1	0.699	47.4	LOS D	19.9	141.9	0.92	0.84	0.92	27.1
5	T1	40	1	52	2.5	0.175	51.9	LOS D	2.9	20.6	0.91	0.69	0.91	32.5
6	R2	101	2	131	2.0	* 0.554	55.7	LOS D	7.2	51.6	0.97	0.84	0.97	27.9
Approach		422	9	546	2.1	0.699	49.8	LOS D	19.9	141.9	0.93	0.83	0.93	27.9
North: Castlereagh Road (N)														
7	L2	52	3	67	5.8	0.063	16.9	LOS B	1.7	12.7	0.44	0.67	0.44	43.3
8	T1	1616	132	2090	8.2	* 1.154	200.3	LOS F	144.2	1080.3	1.00	1.84	2.14	7.4
9	R2	42	2	54	4.8	0.380	42.1	LOS C	2.3	16.7	0.99	0.73	0.99	31.6
Approach		1710	137	2212	8.0	1.154	190.8	LOS F	144.2	1080.3	0.98	1.77	2.06	8.0
West: Peachtree Road (W)														
10	L2	71	6	92	8.5	0.330	54.0	LOS D	6.4	47.2	0.90	0.77	0.90	28.3
11	T1	19	0	25	0.0	* 0.330	48.3	LOS D	6.4	47.2	0.90	0.77	0.90	32.2
12	R2	90	17	116	18.9	0.876	67.2	LOS E	7.1	57.4	1.00	0.97	1.40	22.0
Approach		180	23	233	12.8	0.876	60.0	LOS E	7.1	57.4	0.95	0.87	1.15	25.6
All Vehicles		4062	322	5255	7.9	1.154	137.9	LOS F	144.2	1080.3	0.98	1.46	1.72	11.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Castlereagh Road (S)												
P1	Full	50	65	59.3	LOS E	0.2	0.2	0.96	0.96	228.9	220.5	0.96
East: Thornton Drive (E)												
P2	Full	50	65	59.3	LOS E	0.2	0.2	0.96	0.96	228.9	220.5	0.96

North: Castlereagh Road (N)												
P3	Full	50	65	59.3	LOS E	0.2	0.2	0.96	0.96	231.5	223.8	0.97
West: Peachtree Road (W)												
P4	Full	50	65	59.3	LOS E	0.2	0.2	0.96	0.96	226.4	217.2	0.96
All Pedestrians		200	259	59.3	LOS E	0.2	0.2	0.96	0.96	228.9	220.5	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 101 [Castlereagh Rd-Thornton Dr_PM (Site Folder: General)]

Castlereagh Rd-Thornton Dr
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 130 seconds (Site User-Given Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.
Design Life Analysis: Constant Number of Years = 13

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Castlereagh Road (S)														
1	L2	116	13	150	11.2	1.204	245.5	LOS F	187.6	1379.0	1.00	1.96	2.35	8.5
2	T1	1700	87	2199	5.1	1.204	241.0	LOS F	187.6	1379.0	1.00	1.99	2.36	6.3
3	R2	235	0	309	0.0	* 1.273	316.2	LOS F	49.6	347.3	1.00	1.60	2.76	6.6
Approach		2051	100	2658	4.9	1.273	250.0	LOS F	187.6	1379.0	1.00	1.94	2.40	6.4
East: Thornton Drive (E)														
4	L2	263	1	343	0.4	0.610	44.8	LOS D	18.0	126.7	0.89	0.83	0.89	27.9
5	T1	30	1	39	3.3	* 0.139	52.5	LOS D	2.2	15.6	0.91	0.68	0.91	32.3
6	R2	89	0	117	0.0	0.464	50.1	LOS D	6.3	43.8	0.96	0.78	0.96	29.4
Approach		382	2	499	0.5	0.610	46.6	LOS D	18.0	126.7	0.90	0.81	0.90	28.7
North: Castlereagh Road (N)														
7	L2	90	1	119	1.1	0.111	18.6	LOS B	3.3	23.4	0.48	0.69	0.48	42.4
8	T1	1682	62	2176	3.7	* 1.281	309.7	LOS F	187.6	1354.6	1.00	2.27	2.68	5.0
9	R2	42	0	54	0.0	0.371	41.4	LOS C	2.2	15.6	0.99	0.73	0.99	31.9
Approach		1814	63	2349	3.5	1.281	288.8	LOS F	187.6	1354.6	0.97	2.15	2.53	5.6
West: Peachtree Road (W)														
10	L2	78	2	101	2.6	0.456	57.0	LOS E	8.7	62.4	0.94	0.79	0.94	27.8
11	T1	40	1	52	2.5	0.456	51.4	LOS D	8.7	62.4	0.94	0.79	0.94	31.6
12	R2	136	4	176	2.9	* 0.945	74.0	LOS F	11.6	82.9	1.00	1.04	1.52	21.0
Approach		254	7	329	2.8	0.945	65.2	LOS E	11.6	82.9	0.97	0.93	1.25	24.6
All Vehicles		4501	172	5835	3.8	1.281	237.8	LOS F	187.6	1379.0	0.98	1.87	2.26	7.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Castlereagh Road (S)												
P1	Full	50	65	59.3	LOS E	0.2	0.2	0.96	0.96	228.9	220.5	0.96
East: Thornton Drive (E)												
P2	Full	50	65	59.3	LOS E	0.2	0.2	0.96	0.96	228.9	220.5	0.96

North: Castlereagh Road (N)												
P3	Full	50	65	59.3	LOS E	0.2	0.2	0.96	0.96	231.5	223.8	0.97
West: Peachtree Road (W)												
P4	Full	50	65	59.3	LOS E	0.2	0.2	0.96	0.96	226.4	217.2	0.96
All Pedestrians		200	259	59.3	LOS E	0.2	0.2	0.96	0.96	228.9	220.5	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 101 [Coreen Ave-Sydney Smith Dr_AM (Site Folder: General)]

New Site
Site Category: (None)
Roundabout
Design Life Analysis: Constant Number of Years = 13

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Sydney Smith Drive (S)														
1	L2	38	2	49	5.3	0.593	13.4	LOS A	5.6	39.8	0.89	1.07	1.17	40.7
3	R2	285	2	369	0.7	0.593	16.1	LOS B	5.6	39.8	0.89	1.07	1.17	41.2
3u	U	1	0	1	0.0	0.593	17.5	LOS B	5.6	39.8	0.89	1.07	1.17	41.6
Approach		324	4	419	1.2	0.593	15.8	LOS B	5.6	39.8	0.89	1.07	1.17	41.1
East: Coreen Avenue (E)														
4	L2	179	1	232	0.6	0.621	4.3	LOS A	7.7	54.9	0.35	0.43	0.35	46.0
5	T1	516	19	668	3.7	0.621	4.0	LOS A	7.7	54.9	0.35	0.43	0.35	46.7
6u	U	18	0	23	0.0	0.621	8.6	LOS A	7.7	54.9	0.35	0.43	0.35	47.0
Approach		713	20	922	2.8	0.621	4.2	LOS A	7.7	54.9	0.35	0.43	0.35	46.5
West: Coreen Avenue (W)														
11	T1	411	16	532	3.9	0.653	9.2	LOS A	7.0	51.1	0.86	0.90	1.02	44.4
12	R2	26	2	34	7.7	0.653	12.5	LOS A	7.0	51.1	0.86	0.90	1.02	44.2
12u	U	4	0	5	0.0	0.653	13.7	LOS A	7.0	51.1	0.86	0.90	1.02	44.7
Approach		441	18	570	4.1	0.653	9.4	LOS A	7.0	51.1	0.86	0.90	1.02	44.4
All Vehicles		1478	42	1912	2.8	0.653	8.3	LOS A	7.7	54.9	0.62	0.71	0.73	44.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Coreen Ave-Sydney Smith Dr_PM (Site Folder: General)]

New Site
Site Category: (None)
Roundabout
Design Life Analysis: Constant Number of Years = 13

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Sydney Smith Drive (S)														
1	L2	43	0	56	0.0	0.436	8.6	LOS A	3.1	22.0	0.79	0.87	0.82	43.0
3	R2	218	0	282	0.0	0.436	11.4	LOS A	3.1	22.0	0.79	0.87	0.82	43.5
3u	U	1	1	1	100.0	0.436	18.3	LOS B	3.1	22.0	0.79	0.87	0.82	42.5
Approach		262	1	339	0.4	0.436	11.0	LOS A	3.1	22.0	0.79	0.87	0.82	43.4
East: Coreen Avenue (E)														
4	L2	247	0	320	0.0	0.634	4.7	LOS A	7.6	53.7	0.53	0.49	0.53	45.5
5	T1	395	6	511	1.5	0.634	4.5	LOS A	7.6	53.7	0.53	0.49	0.53	46.2
6u	U	21	0	27	0.0	0.634	9.1	LOS A	7.6	53.7	0.53	0.49	0.53	46.5
Approach		663	6	858	0.9	0.634	4.7	LOS A	7.6	53.7	0.53	0.49	0.53	45.9
West: Coreen Avenue (W)														
11	T1	613	6	793	1.0	0.862	13.6	LOS A	17.2	121.4	1.00	1.05	1.40	42.1
12	R2	33	0	43	0.0	0.862	16.7	LOS B	17.2	121.4	1.00	1.05	1.40	42.0
12u	U	32	2	41	6.3	0.862	18.4	LOS B	17.2	121.4	1.00	1.05	1.40	42.3
Approach		678	8	877	1.2	0.862	14.0	LOS A	17.2	121.4	1.00	1.05	1.40	42.1
All Vehicles		1603	15	2074	0.9	0.862	9.6	LOS A	17.2	121.4	0.77	0.79	0.94	43.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Lord Sheffield Cct-Klenig Pl_AM (Site Folder: General)]

Lord Sheffield Circuit-Klenig Place
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis: Constant Number of Years = 13

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Lord Sheffield Circuit (S)														
1	L2	115	3	149	2.6	0.199	5.1	LOS A	0.8	5.8	0.30	0.57	0.30	45.9
2	T1	1	0	1	0.0	0.199	5.3	LOS A	0.8	5.8	0.30	0.57	0.30	43.7
3	R2	51	0	66	0.0	0.199	7.4	LOS A	0.8	5.8	0.30	0.57	0.30	45.5
Approach		167	3	216	1.8	0.199	5.8	LOS A	0.8	5.8	0.30	0.57	0.30	45.7
East: Lord Sheffield Circuit (E)														
4	L2	10	0	13	0.0	0.094	4.8	LOS A	0.1	0.8	0.05	0.08	0.05	49.0
5	T1	117	2	151	1.7	0.094	0.0	LOS A	0.1	0.8	0.05	0.08	0.05	49.4
6	R2	9	1	12	11.1	0.094	5.1	LOS A	0.1	0.8	0.05	0.08	0.05	47.0
Approach		136	3	176	2.2	0.094	0.7	NA	0.1	0.8	0.05	0.08	0.05	49.3
North: Kleinig Place (N)														
7	L2	23	1	30	4.3	0.030	5.0	LOS A	0.1	0.8	0.21	0.52	0.21	43.9
8	T1	1	0	1	0.0	0.030	4.9	LOS A	0.1	0.8	0.21	0.52	0.21	44.0
9	R2	4	0	5	0.0	0.030	7.7	LOS A	0.1	0.8	0.21	0.52	0.21	43.3
Approach		28	1	36	3.6	0.030	5.3	LOS A	0.1	0.8	0.21	0.52	0.21	43.8
West: Lord Sheffield Circuit (W)														
10	L2	3	1	4	33.3	0.132	5.4	LOS A	0.6	4.2	0.25	0.26	0.25	44.4
11	T1	92	0	119	0.0	0.132	0.4	LOS A	0.6	4.2	0.25	0.26	0.25	47.9
12	R2	81	0	105	0.0	0.132	5.1	LOS A	0.6	4.2	0.25	0.26	0.25	47.0
Approach		176	1	228	0.6	0.132	2.7	NA	0.6	4.2	0.25	0.26	0.25	47.5
All Vehicles		507	8	656	1.6	0.199	3.3	NA	0.8	5.8	0.21	0.33	0.21	47.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Lord Sheffield Cct-Klenig Pl_PM (Site Folder: General)]

Lord Sheffield Circuit-Klenig Place
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis: Constant Number of Years = 13

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Lord Sheffield Circuit (S)														
1	L2	84	0	109	0.0	0.156	5.3	LOS A	0.6	4.2	0.35	0.60	0.35	45.7
2	T1	1	0	1	0.0	0.156	6.0	LOS A	0.6	4.2	0.35	0.60	0.35	43.4
3	R2	37	0	48	0.0	0.156	8.0	LOS A	0.6	4.2	0.35	0.60	0.35	45.3
Approach		122	0	158	0.0	0.156	6.1	LOS A	0.6	4.2	0.35	0.60	0.35	45.6
East: Lord Sheffield Circuit (E)														
4	L2	19	0	25	0.0	0.143	4.9	LOS A	0.3	2.0	0.09	0.12	0.09	48.6
5	T1	161	1	208	0.6	0.143	0.1	LOS A	0.3	2.0	0.09	0.12	0.09	49.1
6	R2	27	0	35	0.0	0.143	5.0	LOS A	0.3	2.0	0.09	0.12	0.09	47.0
Approach		207	1	268	0.5	0.143	1.2	NA	0.3	2.0	0.09	0.12	0.09	48.8
North: Kleinig Place (N)														
7	L2	7	0	9	0.0	0.028	4.9	LOS A	0.1	0.7	0.30	0.58	0.30	42.8
8	T1	1	0	1	0.0	0.028	5.6	LOS A	0.1	0.7	0.30	0.58	0.30	42.8
9	R2	9	0	12	0.0	0.028	8.3	LOS A	0.1	0.7	0.30	0.58	0.30	42.2
Approach		17	0	22	0.0	0.028	6.8	LOS A	0.1	0.7	0.30	0.58	0.30	42.4
West: Lord Sheffield Circuit (W)														
10	L2	15	0	19	0.0	0.164	5.4	LOS A	0.8	5.8	0.33	0.31	0.33	45.3
11	T1	93	1	120	1.1	0.164	0.7	LOS A	0.8	5.8	0.33	0.31	0.33	47.5
12	R2	101	1	131	1.0	0.164	5.4	LOS A	0.8	5.8	0.33	0.31	0.33	46.6
Approach		209	2	270	1.0	0.164	3.3	NA	0.8	5.8	0.33	0.31	0.33	47.0
All Vehicles		555	3	718	0.5	0.164	3.2	NA	0.8	5.8	0.24	0.31	0.24	47.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Evan St-The Crescent-Macquarie Ave_AM (Site Folder: General)]

Evan Street-The Crescent-Macquarie Avenue
Site Category: (None)
Roundabout
Design Life Analysis: Constant Number of Years = 13

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Evan Street (S)														
1	L2	109	1	141	0.9	0.595	5.1	LOS A	6.4	45.4	0.50	0.53	0.50	45.1
2	T1	343	10	438	3.0	0.595	4.6	LOS A	6.4	45.4	0.50	0.53	0.50	45.7
3	R2	142	1	184	0.7	0.595	7.4	LOS A	6.4	45.4	0.50	0.53	0.50	45.5
3u	U	3	0	4	0.0	0.595	8.8	LOS A	6.4	45.4	0.50	0.53	0.50	45.9
Approach		597	12	766	2.0	0.595	5.4	LOS A	6.4	45.4	0.50	0.53	0.50	45.6
East: The Crescent (E)														
4	L2	202	2	261	1.0	1.150	196.5	LOS F	45.4	325.1	1.00	2.93	5.59	13.4
5	T1	52	5	67	9.6	1.150	196.6	LOS F	45.4	325.1	1.00	2.93	5.59	13.4
6	R2	20	0	23	0.0	1.150	198.7	LOS F	45.4	325.1	1.00	2.93	5.59	13.4
6u	U	1	0	1	0.0	1.150	200.1	LOS F	45.4	325.1	1.00	2.93	5.59	13.4
Approach		275	7	353	2.6	1.150	196.7	LOS F	45.4	325.1	1.00	2.93	5.59	13.4
North: Macquarie Avenue (N)														
7	L2	33	0	38	0.0	0.932	15.2	LOS B	27.2	193.1	1.00	0.90	1.35	41.0
8	T1	810	15	1039	1.9	0.932	14.7	LOS B	27.2	193.1	1.00	0.90	1.35	41.5
9	R2	7	0	9	0.0	0.932	17.5	LOS B	27.2	193.1	1.00	0.90	1.35	41.3
9u	U	1	0	1	0.0	0.932	18.8	LOS B	27.2	193.1	1.00	0.90	1.35	41.6
Approach		851	15	1087	1.8	0.932	14.8	LOS B	27.2	193.1	1.00	0.90	1.35	41.5
All Vehicles		1723	34	2206	2.0	1.150	40.6	LOS C	45.4	325.1	0.83	1.10	1.73	31.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Evan St-The Crescent-Macquarie Ave_PM (Site Folder: General)]

Evan Street-The Crescent-Macquarie Avenue
Site Category: (None)
Roundabout
Design Life Analysis: Constant Number of Years = 13

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Evan Street (S)														
1	L2	159	0	206	0.0	1.055	60.9	LOS E	93.0	658.0	1.00	1.20	2.22	26.9
2	T1	714	13	915	1.8	1.055	60.5	LOS E	93.0	658.0	1.00	1.20	2.22	27.2
3	R2	206	1	266	0.5	1.055	63.3	LOS E	93.0	658.0	1.00	1.20	2.22	27.1
3u	U	1	0	1	0.0	1.055	64.6	LOS E	93.0	658.0	1.00	1.20	2.22	27.2
Approach		1080	14	1388	1.3	1.055	61.1	LOS E	93.0	658.0	1.00	1.20	2.22	27.1
East: The Crescent (E)														
4	L2	202	2	261	1.0	0.646	15.9	LOS B	6.6	46.7	0.99	1.15	1.33	40.4
5	T1	45	2	58	4.4	0.646	15.5	LOS B	6.6	46.7	0.99	1.15	1.33	40.8
6	R2	33	0	38	0.0	0.646	18.1	LOS B	6.6	46.7	0.99	1.15	1.33	40.7
6u	U	1	0	1	0.0	0.646	19.5	LOS B	6.6	46.7	0.99	1.15	1.33	41.0
Approach		281	4	359	1.4	0.646	16.1	LOS B	6.6	46.7	0.99	1.15	1.33	40.5
North: Macquarie Avenue (N)														
7	L2	33	1	40	3.2	0.756	9.3	LOS A	10.7	76.0	0.90	0.82	1.04	43.9
8	T1	560	9	719	1.6	0.756	8.7	LOS A	10.7	76.0	0.90	0.82	1.04	44.5
9	R2	5	0	6	0.0	0.756	11.5	LOS A	10.7	76.0	0.90	0.82	1.04	44.3
9u	U	2	0	3	0.0	0.756	12.8	LOS A	10.7	76.0	0.90	0.82	1.04	44.7
Approach		600	10	768	1.7	0.756	8.8	LOS A	10.7	76.0	0.90	0.82	1.04	44.5
All Vehicles		1961	28	2515	1.4	1.055	38.7	LOS C	93.0	658.0	0.97	1.07	1.73	32.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Lemongrove Rd-Macquarie Ave_AM (Site Folder: General)]

Lemongrove Road-Macquarie Avenue
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis: Constant Number of Years = 13

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Macquarie Avenue (S)														
1	L2	1	0	1	0.0	0.234	4.6	LOS A	0.0	0.0	0.00	0.00	0.00	25.7
2	T1	352	0	455	0.0	0.234	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
Approach		353	0	457	0.0	0.234	0.1	NA	0.0	0.0	0.00	0.00	0.00	49.8
North: Macquarie Avenue (N)														
8	T1	773	13	1000	1.7	0.527	0.1	LOS A	0.2	1.5	0.02	0.01	0.03	49.9
9	R2	7	0	9	0.0	0.527	8.4	LOS A	0.2	1.5	0.02	0.01	0.03	25.6
Approach		780	13	1009	1.7	0.527	0.2	NA	0.2	1.5	0.02	0.01	0.03	49.7
West: Lemongrove Road (W)														
12	R2	82	2	106	2.4	0.667	39.7	LOS C	2.5	17.8	0.95	1.13	1.52	24.7
Approach		82	2	106	2.4	0.667	39.7	LOS C	2.5	17.8	0.95	1.13	1.52	24.7
All Vehicles		1215	15	1572	1.2	0.667	2.8	NA	2.5	17.8	0.08	0.08	0.12	47.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Lemongrove Rd-Macquarie Ave_PM (Site Folder: General)]

Lemongrove Road-Macquarie Avenue
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis: Constant Number of Years = 13

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Macquarie Avenue (S)														
1	L2	4	0	5	0.0	0.504	4.8	LOS A	0.0	0.0	0.00	0.00	0.00	25.6
2	T1	747	13	966	1.7	0.504	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	49.7
Approach		751	13	971	1.7	0.504	0.3	NA	0.0	0.0	0.00	0.00	0.00	49.5
North: Macquarie Avenue (N)														
8	T1	536	9	693	1.7	0.398	1.0	LOS A	0.9	6.3	0.11	0.01	0.15	49.1
9	R2	13	1	17	7.7	0.398	17.5	LOS B	0.9	6.3	0.11	0.01	0.15	25.2
Approach		549	10	710	1.8	0.398	1.4	NA	0.9	6.3	0.11	0.01	0.15	48.5
West: Lemongrove Road (W)														
12	R2	61	1	79	1.6	0.706	58.3	LOS E	2.5	17.7	0.97	1.13	1.54	20.1
Approach		61	1	79	1.6	0.706	58.3	LOS E	2.5	17.7	0.97	1.13	1.54	20.1
All Vehicles		1361	24	1761	1.8	0.706	3.3	NA	2.5	17.7	0.09	0.06	0.13	47.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Lord Sheffield Cct-Proposed Site Access Driveway_AM (Site Folder: General)]

Lord Sheffield Cct-Proposed Site Access Driveway
Site Category: (None)
Stop (Two-Way)
Design Life Analysis: Constant Number of Years = 13

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Site Access Driveway (S)														
1	L2	63	0	81	0.0	0.156	8.0	LOS A	0.6	4.2	0.29	0.90	0.29	44.8
3	R2	62	0	80	0.0	0.156	8.5	LOS A	0.6	4.2	0.29	0.90	0.29	44.4
Approach		125	0	162	0.0	0.156	8.2	LOS A	0.6	4.2	0.29	0.90	0.29	44.6
East: Lord Sheffield Circuit (E)														
4	L2	58	0	75	0.0	0.109	4.6	LOS A	0.0	0.0	0.00	0.19	0.00	48.4
5	T1	104	0	135	0.0	0.109	0.0	LOS A	0.0	0.0	0.00	0.19	0.00	48.9
Approach		162	0	210	0.0	0.109	1.7	NA	0.0	0.0	0.00	0.19	0.00	48.7
West: Lord Sheffield Circuit (W)														
11	T1	34	0	44	0.0	0.074	0.6	LOS A	0.3	2.4	0.31	0.35	0.31	47.4
12	R2	58	0	75	0.0	0.074	5.2	LOS A	0.3	2.4	0.31	0.35	0.31	46.5
Approach		92	0	119	0.0	0.074	3.5	NA	0.3	2.4	0.31	0.35	0.31	46.8
All Vehicles		379	0	490	0.0	0.156	4.3	NA	0.6	4.2	0.17	0.46	0.17	46.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Lord Sheffield Cct-Proposed Site Access Driveway_PM (Site Folder: General)]

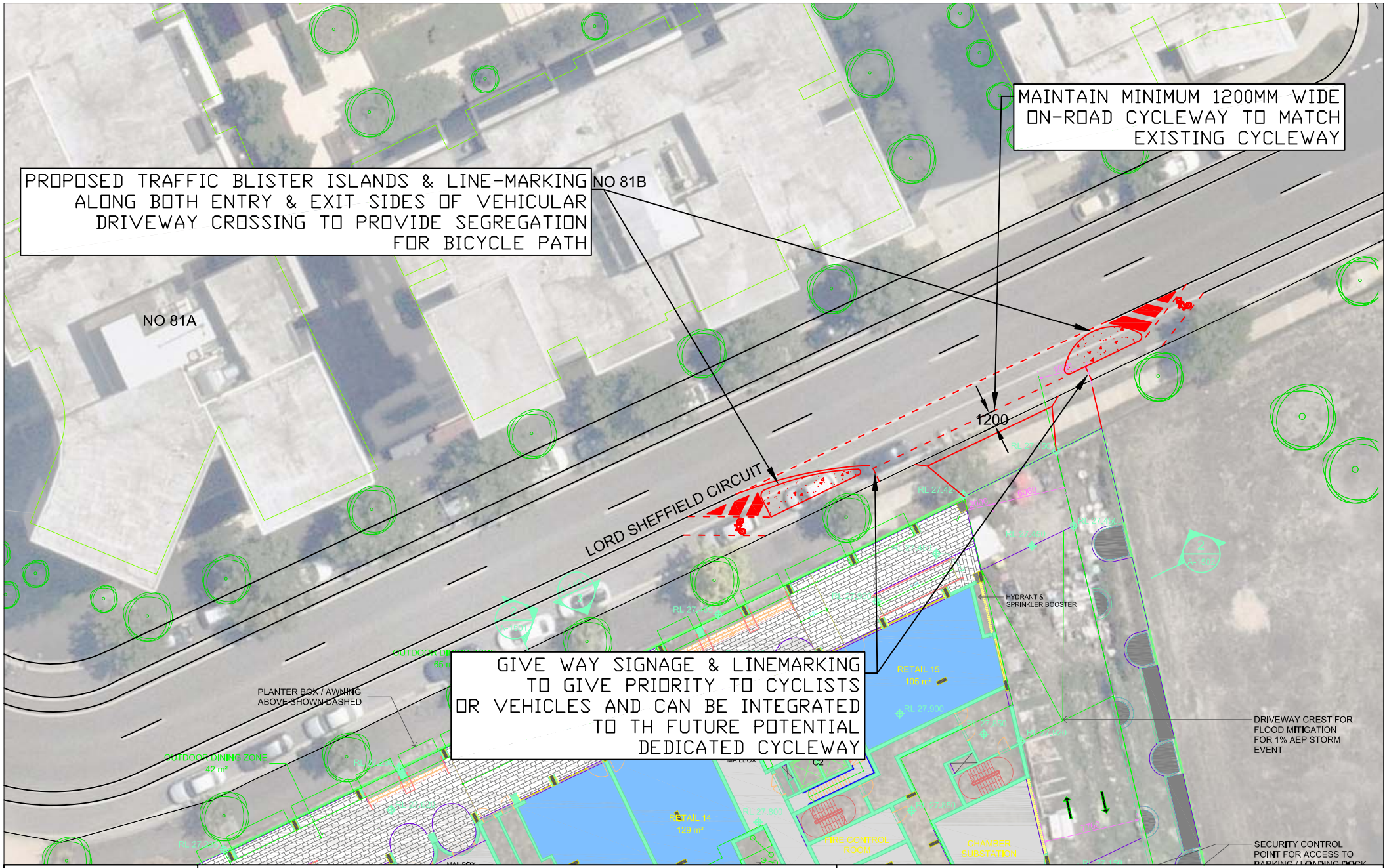
Lord Sheffield Cct-Proposed Site Access Driveway
Site Category: (None)
Stop (Two-Way)
Design Life Analysis: Constant Number of Years = 13

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Site Access Driveway (S)														
1	L2	50	0	65	0.0	0.126	8.0	LOS A	0.5	3.3	0.28	0.90	0.28	44.8
3	R2	50	0	65	0.0	0.126	8.5	LOS A	0.5	3.3	0.28	0.90	0.28	44.4
Approach		100	0	129	0.0	0.126	8.2	LOS A	0.5	3.3	0.28	0.90	0.28	44.6
East: Lord Sheffield Circuit (E)														
4	L2	59	0	76	0.0	0.110	4.6	LOS A	0.0	0.0	0.00	0.20	0.00	48.4
5	T1	104	0	135	0.0	0.110	0.0	LOS A	0.0	0.0	0.00	0.20	0.00	48.9
Approach		163	0	211	0.0	0.110	1.7	NA	0.0	0.0	0.00	0.20	0.00	48.7
West: Lord Sheffield Circuit (W)														
11	T1	34	0	44	0.0	0.075	0.6	LOS A	0.4	2.5	0.31	0.36	0.31	47.4
12	R2	60	0	78	0.0	0.075	5.2	LOS A	0.4	2.5	0.31	0.36	0.31	46.5
Approach		94	0	122	0.0	0.075	3.6	NA	0.4	2.5	0.31	0.36	0.31	46.8
All Vehicles		357	0	462	0.0	0.126	4.0	NA	0.5	3.3	0.16	0.43	0.16	47.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

CONCEPT DESIGN & SWEPT TURN PATHS



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PROJECT
CYCLEWAY TREATMENT

N

DRAWING TITLE
CONCEPT BLISTER ISLAND TREATMENT
Traffic islands treatments along the proposed site access driveway

1:400 @ A4

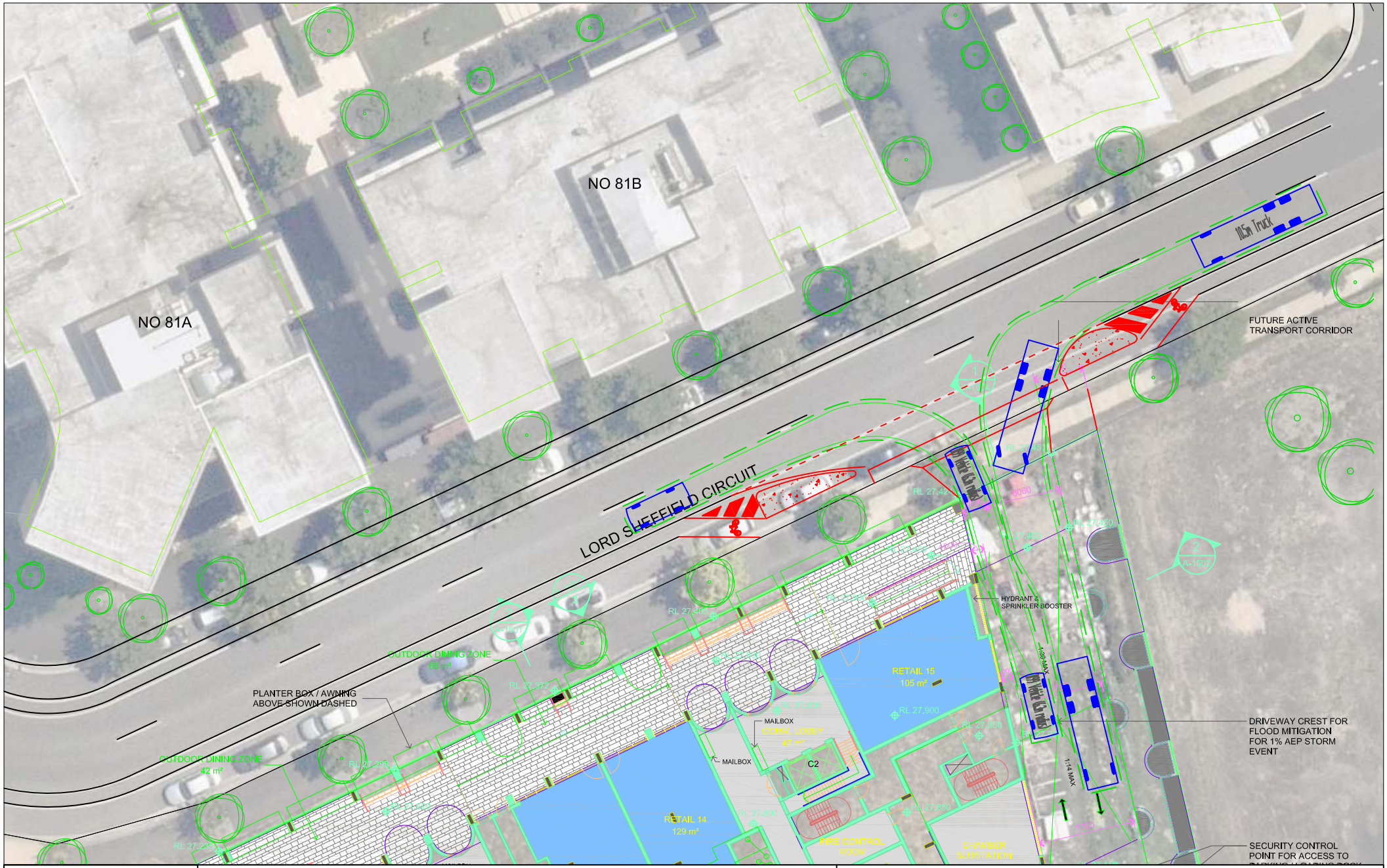
ADDRESS
160-172 Lord Sheffield Circuit, PENRITH

PROJECT NO.
22379

DATE DRAWN
2023-6-8

PREPARED
DONALD LEE

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants



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PROJECT
CYCLEWAY TREATMENT

N

DRAWING TITLE
10.5M LONG PENRITH CITY COUNCIL WASTE TRUCK TURNING PATH 1:400 @ A4
Entering the proposed site access driveway

ADDRESS
160-172 Lord Sheffield Circuit, PENRITH

PROJECT NO.
22379

DATE DRAWN
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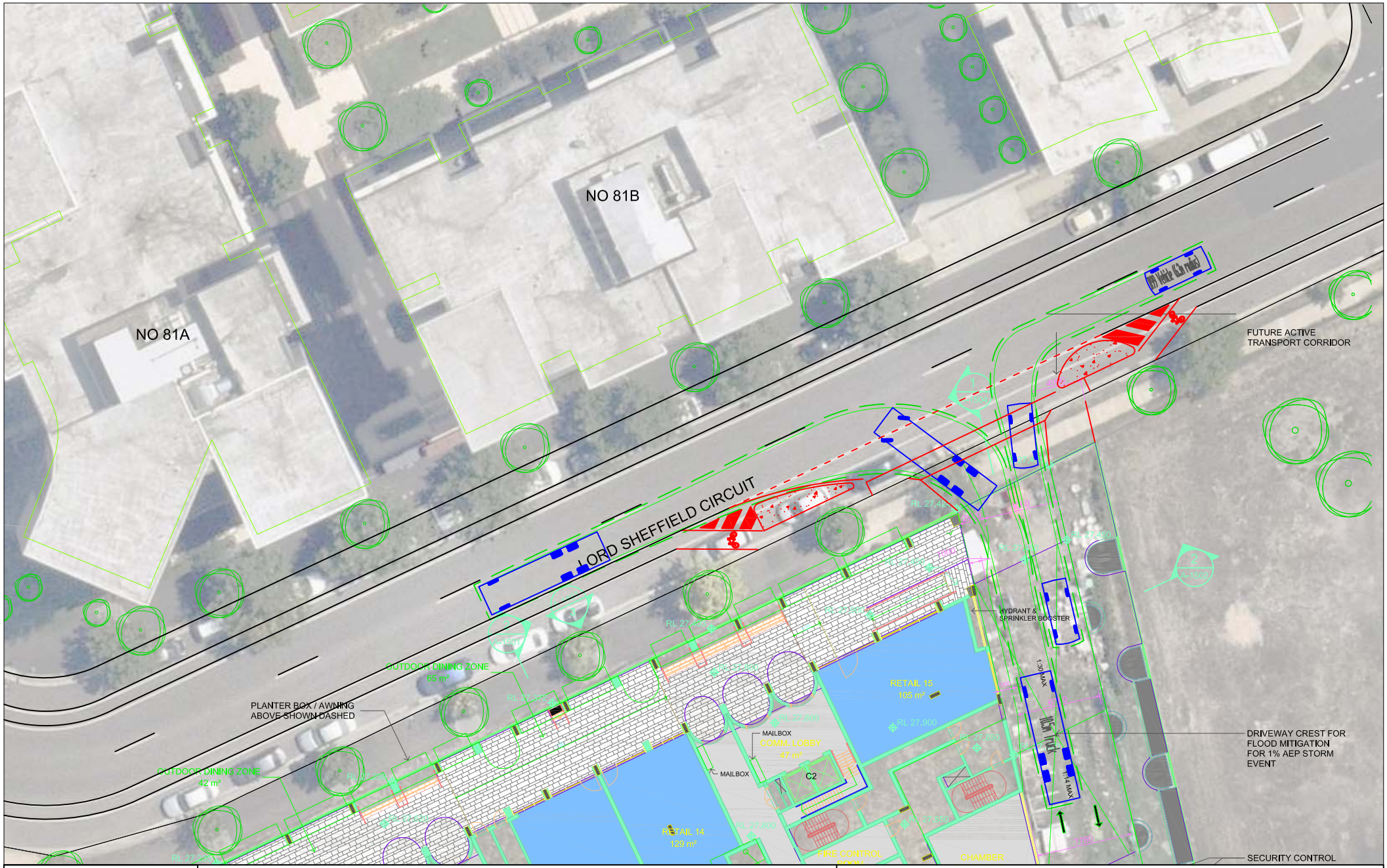

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PROJECT
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DRAWING TITLE
10.5M LONG PENRITH CITY COUNCIL WASTE TRUCK TURNING PATH 1:400 @ A4
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