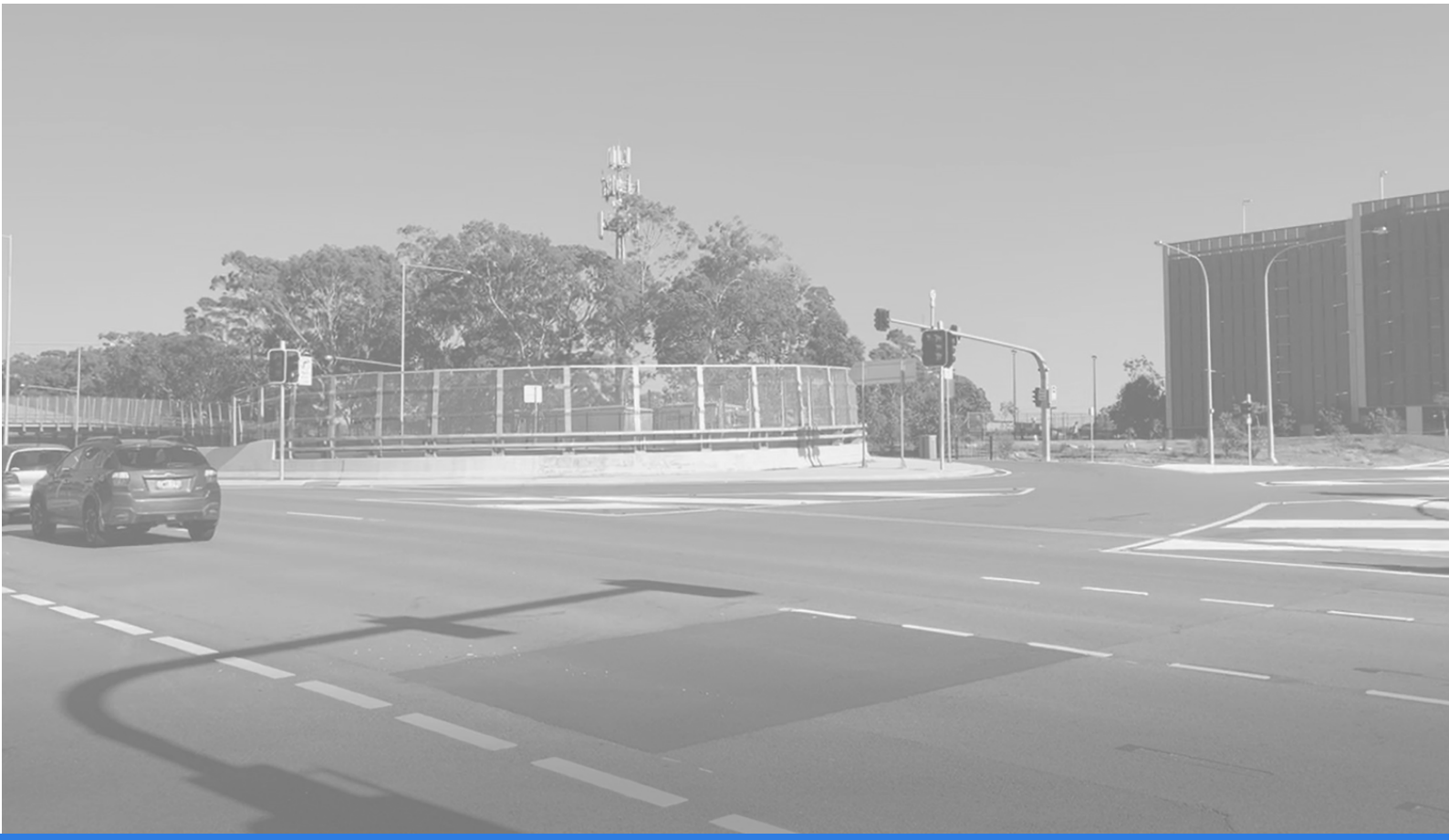

Northern Beaches Hospital – Connectivity and Network Enhancement Project

Operational Traffic Performance Review

Prepared for:

Ferrovial Agoman Joint Venture

24 May 2021

The Transport Planning Partnership

Northern Beaches Hospital – Connectivity and Network Enhancement Project

Operational Traffic Performance Review

Client: Ferrovial Agoman Joint Venture

Version: Final

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APPENDICES

1 Introduction

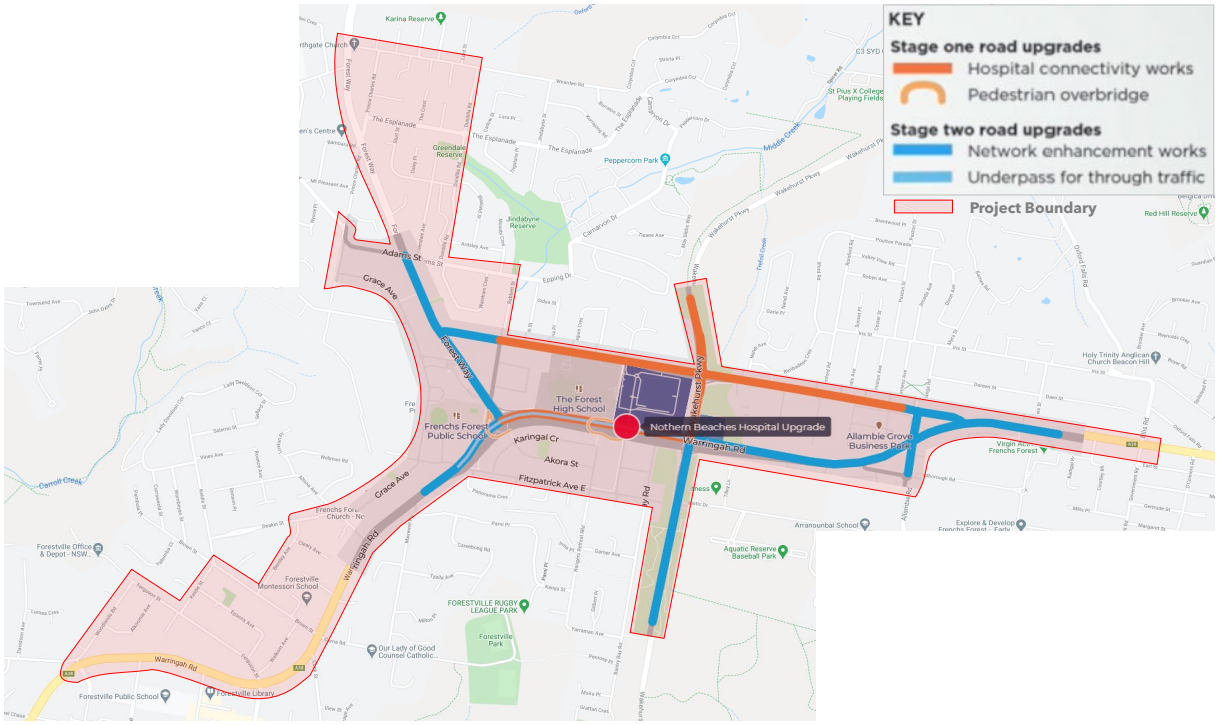
1.1 Project Overview

The NSW Government has completed the upgrade of the roads around the new Northern Beaches Hospital with improved capacity along Warringah Road. The upgrades provide motorists with a better travel experience, increased capacity on the road network and improved access through the area.

Ferrovial Agoman Joint Venture (JV) has delivered the Northern Beaches Hospital Connectivity and Network Enhancement project (the Project) in the following stages as depicted in Figure 1.1:

- **Stage 1 Hospital Connectivity** – Key changes include the upgrade of Frenchs Forest Road East and West and Naree Road from a single to dual carriageway, improving pedestrian access as well as bus stop upgrades servicing Northern Beaches Hospital. Stage 1 was completed and opened to traffic in time for the opening of Northern Beaches Hospital on 30 October 2018.
- **Stage 2 Network Enhancement** – Key changes include the upgrade of Warringah Road to improve the performance of the road network to reduce congestion around the hospital, and construction of a 1.3 kilometre long underpass and bridges at the Forest Way, Hilmer Street and Wakehurst Parkway intersections. It also includes key intersection improvements, bus stop upgrades, new shared paths and new pedestrian bridges. Stage 2 was completed and opened to traffic in March 2020.

Figure 1.1: Northern Beaches Hospital Road Upgrades and Project Boundary



Basemap source: https://www.rms.nsw.gov.au/projects/northern-beaches-hospital/index.html

Transport for NSW (TfNSW, formerly Roads and Maritime Services) requires a review of the operational network performance, following the opening of the Stage 1 and Stage 2 works of this State Significant Infrastructure (SSI) project.

The Transport Planning Partnership (TTPP) was commissioned to prepare an Operational Traffic Performance Review (OTPR) to review whether the road upgrades appropriately accommodate traffic generation of Northern Beaches Hospital with reference be made to the following documents:

- Traffic modelling forecasts for 2018 and 2028 documented in the following EIS documents:
  - Stage 1 EIS, Specialist Traffic Report by GTA Consultants, 2014
  - Stage 2 EIS, Specialist Traffic Report by GTA Consultants, 2015
- Recommendations made in the following Planning Department's assessments:
  - Planning Secretary's Stage 1 Environmental Assessment Report 2015
  - Planning Secretary's Stage 2 Environmental Assessment Report 2016.

Stage 1 OTPR was initially required to be undertaken within six months of the commencement of operation of Stage 1, and six months following operation of the Northern Beach Hospital development to identify further mitigation measures are implemented to manage residual impacts. However, Stage 1 OTPR was deferred to be completed at the end of construction of both Stage 1 and Stage 2.

Stage 2 OTPR is required to be undertaken within six months of the commencement of operation of Stage 2 (i.e. inclusive of Stage 1 and Stage 2), and six months following operation of the Northern Beach Hospital development.

This OTPR has been prepared to review the traffic performance of the operation of Stage 1 and Stage 2 inclusively. Traffic surveys were undertaken in November 2020 which is eight months following the opening of the Stage 2 works in March 2020.

It is also acknowledged that the EIS assumed Stage 2 was operational in 2018, but the Project was completed in 2020. Therefore, intersection performance is compared between EIS 2018 results and TTPP's 2020 modelling results for the opening year. The comparison would also be made for a 10-year planning horizon between EIS 2028 results and TTPP's 2030 results which is a conservative approach.

Further details on the modelling software and comparison of intersection performance are presented in Section 3.1 and Section 3.2. Reference is made to the recommendations documented in the Planning Department's 2015 and 2016 assessments.

1.2 Ministers Conditions of Approval and Submission Report Requirements

This OPTR has been prepared to address Ministers Conditions of Approval (MCoA) for each stage as shown in Table 1.1 and the Submission Report requirements as shown in Table 1.2.

Table 1.1: MCoA Requirements

Stage	Condition	Environmental management measures	Refer to OTPR Section
Stage 1	D6	d) details on average daily traffic volumes across the SSI area, including but not limited to, traffic volumes along Frenchs Forest Road East, Frenchs Forest Road West, Naree Road, Forest Way, and the upgraded sections of Wakehurst Parkway during the daytime and night-time periods during the daytime and night-time periods based on recorded observations.	Section 2.4
	D7	a) traffic and road network performance of the SSI against expected performance, including consideration of NBH traffic generation (if operational at the time of review)	Section 3.1
		(b) local street and property access (such as ingress and egress from local roads onto Frenchs Forest Road and property during morning and afternoon peak periods)	Section 3.7
		(c) broader downstream impacts (such as the Adam Street I Forest Way intersection and traffic restrictions on Patanga Road)	Section 3.2.5
		(d) 'rat running' in streets that are likely to exhibit increases in traffic as a result of the SSI, including pre construction baseline data	Section 3.4
		(e) bus priority measures implemented to mitigate detrimental impacts on bus performance;	Section 3.3
		(f) the performance (for road users and pedestrians) of alternative parking arrangements as well as kiss and ride facilities for The Forest High School;	Section 3.5

Stage	Condition	Environmental management measures	Refer to OTPR Section
		(g) pedestrian movements, including in the vicinity of the NBH and the Skyline Shops (particularly in relation to accessing replacement parking)	Section 3.6
		(h) details of any complaints received relating to traffic, transport and access impacts, and how they have been addressed in the Review.	Section 4
Stage 2	E5	(d) details on average daily traffic volumes across the SSI area during the daytime and night-time periods based on recorded observations, including but not limited to traffic volumes along Warringah Road and the intersections with Wakehurst Parkway, Hilmer Street and Forest Way	Section 2.4
	E6	(a) traffic and road network performance of the SSI against expected performance, including consideration of NBH traffic generation	Section 3.2.5
		(b) local street and property access (such as ingress and egress from local roads onto Warringah Road and property during morning and afternoon peak periods)	Section 3.7
		(c) broader downstream impacts	Section 3.2.5
		(d) any parking impacts, including on-street parking to the south of Warringah Road in the vicinity of the proposed new shared pedestrian/ bicycle overbridge	Section 3.5.3
		(e) 'rat running' in streets that are likely to exhibit increases in traffic as a result of the SSI, including pre construction baseline data	Section 3.4
		(f) bus priority measures implemented to mitigate detrimental impacts on bus performance	Section 3.3
		(g) the performance (for road users and pedestrians) of any alternative parking arrangements	Section 3.5
		(h) pedestrian and cycle facilities and use, including connectivity at the project area fringes with other proposed non-project facilities	Section 3.6
		(i) details of any complaints received relating to traffic, transport and access impacts, and how they have been addressed in the Review.	Section 4

Table 1.2: Submission Report Requirements

Stage/Report	Page	Environmental management measures	Refer to OTPR Section
Stage 1 Submission Report	8-6	• The performance of the intersection of Forest Way and Adam Street would be monitored following completion of construction for the project. • Should this identify a continued performance issues, further investigation would be carried out with regard to work that could be implemented (as a separate project) that would improve traffic flow.	Section 3.2.5
	8-6	• Patanga Road traffic would be monitored post completion of the project and any additional traffic management required along Patanga Road would be considered in consultation with the Council.	Section 3.2.5
	8-8	• An operational traffic review would be undertaken within 12 months of opening of the Stage 1 Project to confirm the operational traffic impacts of the project on Forest Way, Naree	Section 3.2.5

Stage/Report	Page	Environmental management measures	Refer to OTPR Section
		Road, Frenchs Forest Road, Warringah Road and Wakehurst Parkway in close proximity to the hospital. The assessment would be based on actual traffic counts and will assess the level of service at major intersections within the assessed road network. Where necessary, the outcomes of the operational traffic review would be used to identify any additional feasible and reasonable measures to be implemented where it is determined that the level of service has significantly deteriorated as a result of the Stage 1 Project, compared to the levels described in Section 7.	
Stage 2 Submissions Report	6-4	• An operational traffic review would be carried out within 12 months of opening of the Stage 2 Project to confirm the operational traffic impacts of the project on Warringah Road, Forest Way and Wakehurst Parkway in close proximity to the hospital. The assessment would be based on actual traffic counts and will assess the level of service at major intersections within the assessed road network. Where necessary, the outcomes of the operational traffic review would be used to identify any additional feasible and reasonable measures to be implemented where it is determined that the level of service has significantly deteriorated as a result of the Stage 2 Project, compared to the levels described in Section 8.3 of the Stage 2 Project EIS.	Section 3.2.5

1.3 Purpose of the OTPR

This OTPR addresses the Stage 1 and Stage 2 MCoA requirements and documents key findings from the before and after comparison of the traffic volumes and modelling results. In addition, the OPTR develops measures to mitigate the identified transport, parking, pedestrian/cyclist and access issues on the arterial and local road networks.

1.4 Traffic Surveys

Traffic surveys were not conducted in 2018 to capture traffic conditions following the Stage 1 opening. Therefore, traffic surveys undertaken in November 2020 would be under the combined effects of the Stage 1 and Stage 2 road network. On this basis, a direct comparison with the EIS Stage 1 modelling results would not be made for a like-for-like comparison to solely account for the Stage 1 works.

In light of the above, TfNSW confirmed that one single OTPR was required to account for the overall project area, given traffic surveys undertaken in late November 2020 could only capture the combined Stage 1 and 2 conditions.

The following traffic surveys were undertaken during the fourth week of November 2020 in response to MCoA requirements:

- Classified intersection movement counts and queue length surveys
- Tube count survey for a period of seven days on local roads.

1.4.1 Classified Intersection Movement Counts and Queue Length Surveys

Stage 1 MCoA D7(a), Stage 1 MCoA D7(c), Stage 1 MCoA D7(h), Stage 2 MCoA D6(a), Stage 2 MCoA D6(f) and Stage 2 MCoA D6(i) require a review of intersection performance at 13 intersections.

Classified intersection counts and queue length surveys were undertaken on Thursday 26 November 2020 7am-9am and 4pm-6pm at 13 intersections approved by TfNSW as shown in Figure 1.2:

1. Warringah Road/ Forest Way

2. Warringah Road/ Hilmer Street

3. Warringah Road/ Wakehurst Parkway

4. Warringah Road/ Allambie Road

5. Warringah Road/ Ellis Road/ Government Road

6. Forest Way/ Adams Street

7. Forest Way/ Naree Road

8. Frenchs Forest Road West/ Rabbett Street

9. Frenchs Forest Road West/ Hospital Entrance/ Gladys Avenue

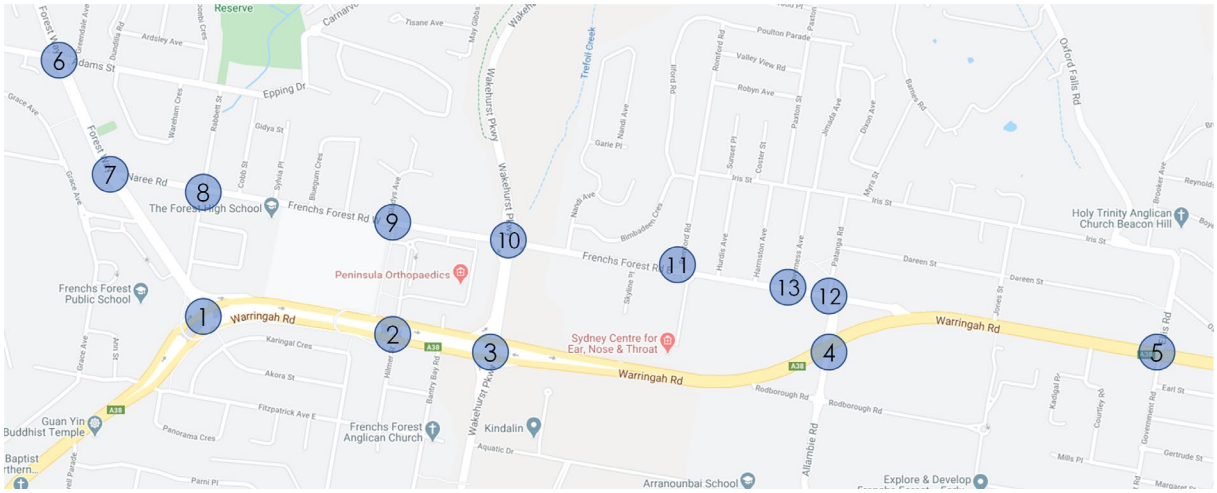
10. Frenchs Forest Road/ Wakehurst Parkway

11. Frenchs Forest Road East/ Romford Road

12. Frenchs Forest Road East/ Patanga Road/ Allambie Road

13. Frenchs Forest Road East/ Inverness Avenue.

Figure 1.2: Intersection Counts and Queue Length Surveys



1.4.2 14-Day Tube Count Survey on Arterial Roads

Stage 1 MCoA D6(d) and Stage 2 MCoA E5(d) require the tube count survey to be undertaken on Frenchs Forest Road East, Frenchs Forest Road West, Naree Road, Forest Way, and the upgraded sections of Wakehurst Parkway over a period of 14 days for noise monitoring. The survey was commissioned by a noise consultant with the data provided to TTPP for traffic analysis.

- T1 Warringah Road (northbound), between Altona Avenue and Maxwell Parade
- T2 Warringah Road (southbound), between Altona Avenue and Maxwell Parade
- T3 Warringah Road (eastbound), between Forest Way and Hilmer Street
- T4 Warringah Road (westbound), between Forest Way and Hilmer Street
- T5 Warringah Road (eastbound), between Jones Street and Courtley Road
- T6 Warringah Road (westbound), between Jones Street and Courtley Road
- T7 Forest Way (northbound), between Adams Street and Naree Road
- T8 Forest Way (southbound), between Adams Street and Naree Road
- T9 Frenchs Forest Road (both directions), between Bluegum Crescent and hospital main access
- T10 Frenchs Forest Road (both directions), between Harmston Avenue and Inverness Avenue
- T11 Wakehurst Parkway (both directions), 350m north of Frenchs Forest Road

Figure 1.3: Intersection Counts and Queue Length Surveys

Source: AECOM

1.4.3 Seven-Day Tube Count Survey on Local Roads

Stage 1 MCoA D7(d) and Stage 2 MCoA E6(e) require a review of "rat running' in streets that are likely to exhibit increases in traffic as a result of the Project, for comparison with pre-construction baseline data.

TTPP possesses intersection movement count data for a number of intersections (red circles in Figure 1.4) collected in 2016/2017 which was used to form a benchmark for the baseline traffic volumes for rat-running routes. It is noted that the EIS does not document any pre-construction traffic volumes for local roads,

The orange lines in Figure 1.4 and Figure 1.5 depict the following tube count locations as approved by TfNSW along the common rat-running routes identified in the EIS:

- Wearden Road
- Adams Street
- Grace Avenue
- Deakin Street
- Woodlands Road.

Figure 1.4: Rat-Running Routes and Tube Count Locations (Morning Peak Period)

Figure 1.5: Rat-Running Routes and Tube Count Locations (Evening Peak Period)

1.4.4 Observations on Traffic and Parking Conditions

TTPP observed traffic and parking conditions at the following locations on Thursday 26 November 2020:

- Intersection operating conditions for model calibration purposes.
- Bus performance and effectiveness of the bus priority measures.
- Traffic efficiency along the common rat-running routes identified in Figure 1.4 and Figure 1.5.
- Parking conditions along Naree Road and the car parks for The Forest High School and Skyline shops, as well as safety of the kiss-and-ride facilities at The Forest High School.
- Parking conditions along Bantry Bay Road, Hilmer Street and Fitzpatrick Avenue East, and in the vicinity of the new pedestrian bridges and surrounding streets, including Karingal Crescent, Bantry Tree Road and Hilmer Street.
- Pedestrian movements at The Forest High School and the new refuge island outside the Skyline shops.
- Property access along French Forest Road East and West.

2 Traffic Volumes

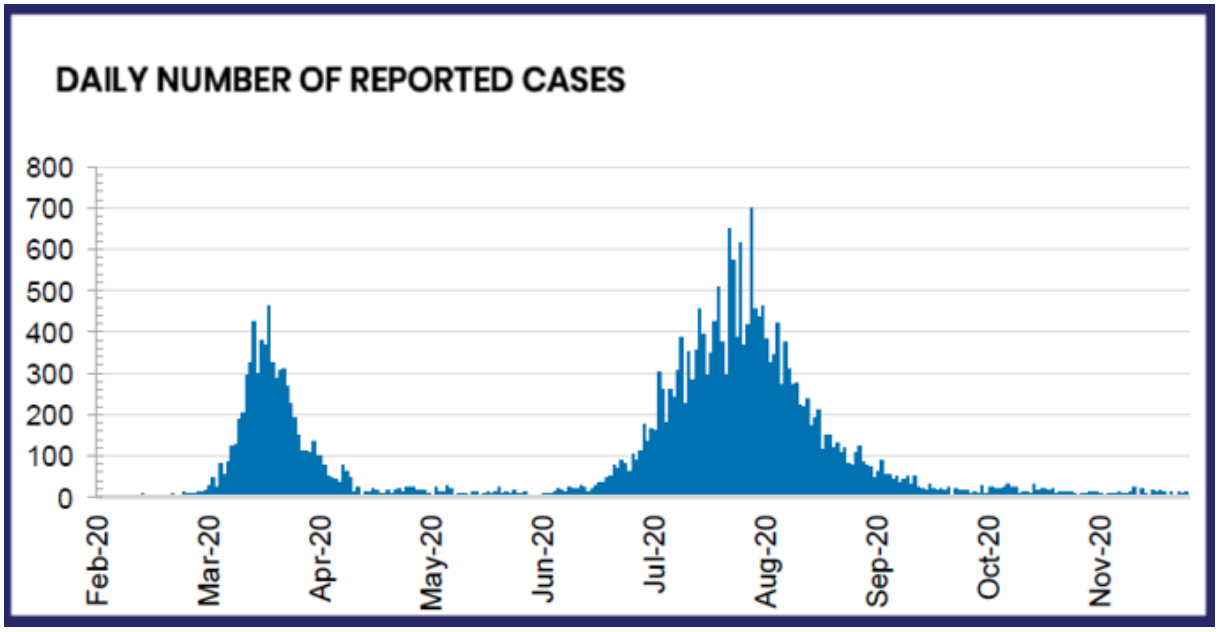
2.1 Covid-19 Situation

During September and October 2020, the Covid-19 situation stabilised across Australia. Due to a whole range of preventative measures implemented by the NSW and other state governments across Australia, the Covid-19 case numbers continued to decline to very low levels.

The Covid-19 situation in Sydney had improved so much so that on 25 September 2020 the Health Minister relaxed many of the restrictions relating to gathering and movement (Reference Public Health Orders relating to Gathering and Movement No 5).

The following graph developed by the Australian Government shows a compilation of the Covid-19 case numbers across Australia. This demonstrates that by October 2020, case numbers were low.

Figure 2.1: Daily Number of Reported Covid-19 Cases

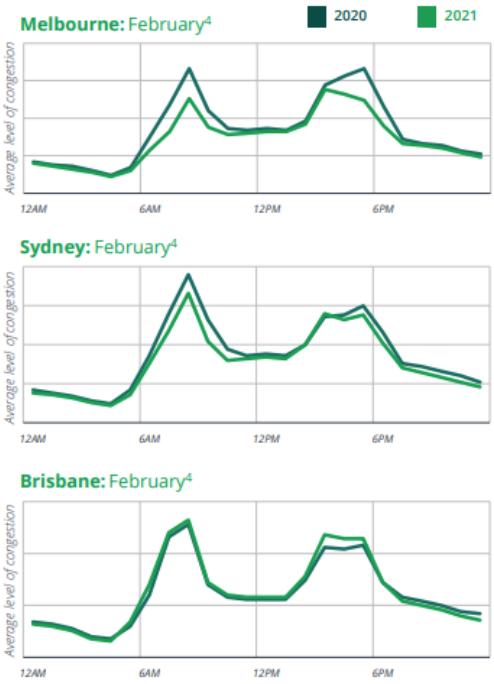


Reference: Department of Health, Australian Government, Covid 19 At A Glance 30 November 2020

2.2 Traffic Recovery Post-Covid

Review into recent research undertaken by Transurban (May 2021) indicates traffic has generally recovered since Covid-19 on toll roads in the major cities in Australia. Figure 2.2 compares the level of congestion in February 2020 (pre-Covid) and February 2021.

Figure 2.2: Traffic Recovery in 2021



- Workday traffic across Transurban's Australian markets has largely reverted to pre-COVID norms, with clear peak periods returning
- This reversion sees pressure applied to transportation systems, with an opportunity for rethinking traditional commuting patterns
- Some jurisdictions are promoting peak-spreading, such as in Melbourne, where discounted off-peak public transport pricing is being offered

Source: Transurban Investor Day (May 2021)

The Transurban research provides the following key findings:

- Working from home prevalence has had neutral impact on workday travel patterns.
- Peak hour traffic patterns are similar to pre-Covid despite increased workplace flexibility.
- Preference for private vehicle travel over public transport.
- Flexible working may result in further diversion from public transport to private vehicles.
- Strong growth in car sales (new and used) and car ownership supports the view that public transport diversion is likely to continue in the medium term.

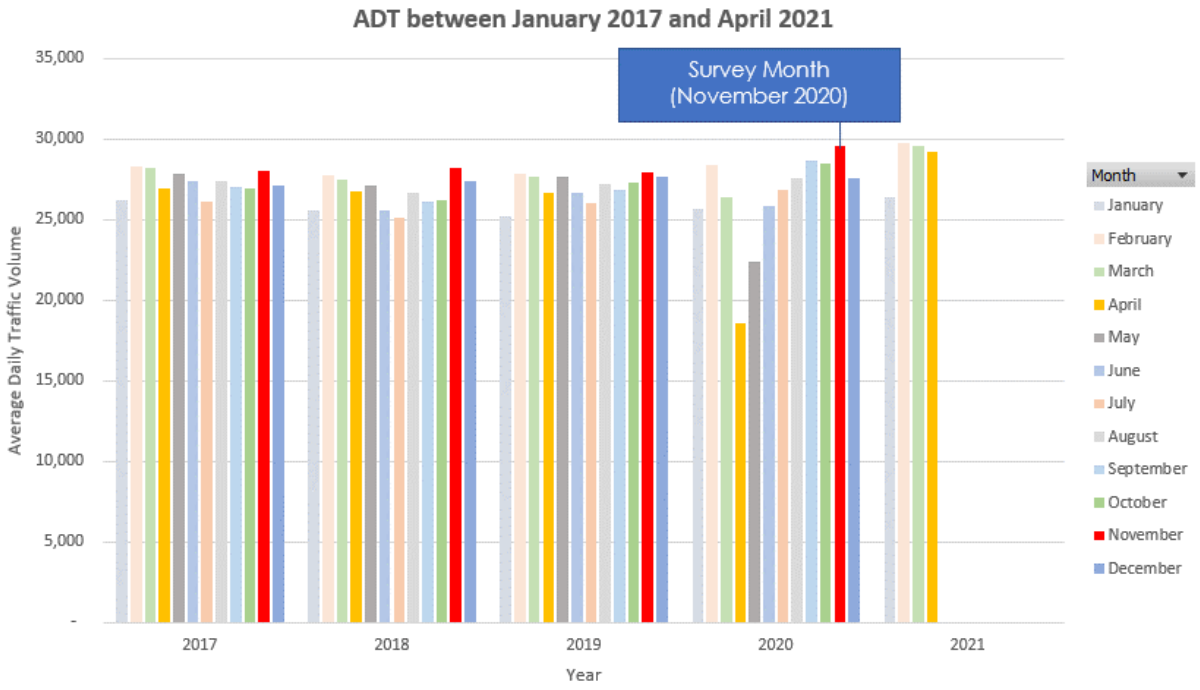
Based on the research results, it is believed that traffic has generally reverted to pre-Covid norms across Sydney metropolitan. Therefore, traffic survey undertaken in November 2020 is considered representative of typical traffic conditions.

2.3 Traffic Trend Since 2017

Annual average daily traffic (AADT) data was available between 2017 and 2021 at a TfNSW count station located on Warringah Road (55036), 60m east of Daines Parade (or 990m from Frenchs Road east), Beacon Hill. It is noted that traffic data was not recorded in 2014 and 2016 and appears to be faulty in 2016.

Figure 2.3 presents the average daily traffic volume between January 2017 and December April 2021. Traffic volume reduced notably between April and June 2020 due to the Covid-19 lockdowns across Sydney metropolitan, and again from mid-December 2020 to early January 2021 for the Northern Beaches LGA lockdown.

Figure 2.3: ADT between January 2017 and December 2020



Source: TfNSW Count Station 55036

Figure 2.3 shows the peak month in 2020 occurred in November and is higher than the same month in the previous years. This indicates the typical pre-Covid traffic volumes resumed when Covid-19 restrictions were being lifted. On this basis, the survey data collected in November 2020 is considered appropriate for analytical purposes in this assessment and represents a busy month of the year.

2.4 Traffic Volumes 2020

2.4.1 Mid-block Traffic Volumes on Arterial Roads

Tube count survey was undertaken for a period of three weeks from 24 November to 14 December 2020.

The summary of the average daily, morning and evening peak traffic volumes in Table 2.1 are based on the first seven days' data with the highest traffic volumes recorded on arterial roads between 24 and 30 November 2020.

Table 2.1: Traffic Volumes on Arterial Roads (November 2020)

ID	Road	Location	Time Period	Northbound/ Eastbound			Southbound/ Westbound			Total			
				Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Heavy %
T1 and T2	Warringah Road	East of Altona Avenue	Daily (24 hours)	39,817	34,937	4,533	39,390	35,373	3,741	79,207	70,310	8,273	10%
			7am-8am	2,709	2,399	287	2,957	2,684	242	5,666	5,083	529	9%
			4pm-5pm	3,179	2,805	338	2,780	2,510	252	5,959	5,315	590	10%
T3 and T4	Warringah Road	West of Hilmer Street	Daily (24 hours)	25,168	22,475	2,570	17,312	15,447	1,793	42,480	37,922	4,363	10%
			7am-9am	1,804	1,605	184	1,313	1,186	121	3,117	2,791	305	10%
			4pm-6pm	2,001	1,813	178	1,312	1,183	125	3,313	2,996	303	9%
T5 and T6	Warringah Road	Between Jones Street & Courtley Road	Daily (24 hours)	27,797	24,499	3,062	28,407	25,104	3,131	56,204	49,603	6,192	11%
			7am-9am	1,887	1,676	192	2,160	1,962	181	4,047	3,638	372	9%
			4pm-6pm	2,256	1,991	238	1,957	1,732	212	4,213	3,723	450	11%
T7 and T8	Forest Way	North of Naree Road	Daily (24 hours)	22,943	20,433	2,380	23,539	21,323	2,081	46,482	41,756	4,461	10%
			7am-9am	1,503	1,343	148	1,878	1,723	142	3,380	3,067	290	9%
			4pm-6pm	1,745	1,572	160	1,646	1,517	121	3,391	3,089	280	8%
T9	Frenchs Forest Road West	Between Bluegum Crescent and Gladys Avenue	Daily (24 hours)	7,161	6,589	520	6,826	5,950	739	13,987	12,540	1,259	9%
			7am-9am	762	708	45	555	474	66	1,317	1,182	111	8%
			4pm-6pm	551	506	39	606	531	61	1,157	1,037	101	9%
T10	Frenchs Forest Road East	Between Harmston Avenue and Inverness Avenue	Daily (24 hours)	6,282	5,657	595	7,676	7,061	563	13,958	12,718	1,158	8%
			7am-9am	543	492	45	653	609	37	1,196	1,101	82	7%
			4pm-6pm	556	500	55	588	538	46	1,143	1,038	101	9%
T11	Wakehurst Parkway	North of Frenchs Forest Road	Daily (24 hours)	10,442	9,579	826	11,733	10,567	1,086	22,175	20,147	1,912	9%
			7am-9am	789	727	57	886	807	73	1,675	1,534	130	8%
			4pm-6pm	904	836	63	744	677	61	1,648	1,513	124	8%

ID	Road	Location	Time Period	Northbound/ Eastbound			Southbound/ Westbound			Total			
				Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Heavy %
T12	Wakehurst Parkway	South of Aquatic Drive	Daily (24 hours)	12,432	10,995	1,434	11,463	10,701	760	23,896	21,696	2,195	9%
			7am-9am	927	843	84	818	761	56	1,745	1,604	140	8%
			4pm-6pm	1,003	880	123	849	810	39	1,851	1,689	162	9%

2.4.2 Mid-block Traffic Volumes on Local Roads

Tube count survey was undertaken from Wednesday 25 November to Tuesday 1 December 2020. Table 2.1 provides a summary of the average daily and peak traffic volumes recorded on local roads typically used for rat-running as suggested in the EIS.

Table 2.2: Traffic Volumes on Local Roads (November 2020)

Road	Location	Time Period	Northbound/ Eastbound			Southbound/ Westbound			Total			
			Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Heavy %
Wearden Road	Outside Property 44	Daily (24 hours)	631	619	12	764	748	16	1,395	1,367	28	2%
		7am-8am	41	41	0	80	79	1	121	120	1	1%
		4pm-5pm	58	57	1	67	66	1	125	123	2	2%
Grace Avenue	Outside Property 40	Daily (24 hours)	4,430	4,323	107	3,642	3,561	81	8,072	7,884	188	2%
		7am-8am	202	195	7	220	217	3	422	412	10	2%
		4pm-5pm	472	460	12	276	269	7	748	729	19	3%
Deakin Street	Outside Property 30	Daily (24 hours)	1,056	1,037	19	1,796	1,764	32	2,852	2,801	51	2%
		7am-8am	70	69	1	60	58	2	130	127	3	2%
		4pm-5pm	99	98	1	160	158	2	259	256	3	1%
Adam Street	Outside Property 18	Daily (24 hours)	2,744	2,683	61	2,518	2,456	62	5,262	5,139	123	2%
		7am-8am	216	211	5	176	170	6	392	381	11	3%
		4pm-5pm	233	228	5	236	232	4	469	460	9	2%
Woodlands Street	Outside Property 18	Daily (24 hours)	509	499	10	1,053	1,030	23	1,562	1,529	33	2%
		7am-8am	29	28	1	71	69	2	100	97	3	3%
		4pm-5pm	54	54	0	82	80	2	136	134	2	1%

2.4.1 Intersection Counts 2020

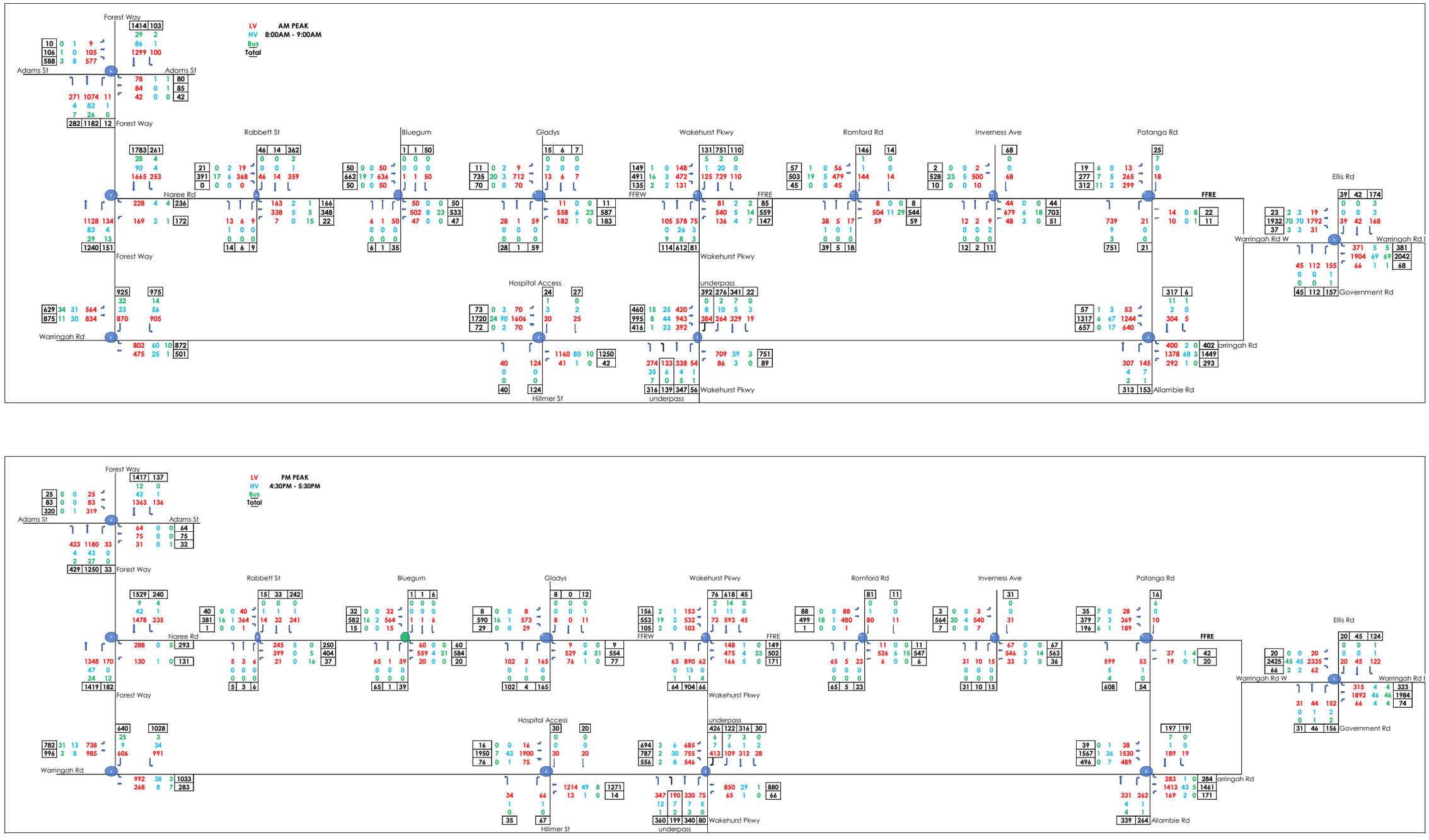
Classified intersection counts were undertaken on Thursday 26 November 2020 during the morning peak period (7am to 9am) and evening peak period (4pm to 6pm).

The network peak hours have been identified across the surveyed intersections as follows:

- Morning peak hour: 8:00am to 9:00am
- Evening peak hour: 4:30pm to 5:30pm

Figure 2.4 presents the classified traffic volumes in the morning and evening peak hours at each surveyed intersection.

Figure 2.4: Existing Morning and Evening Peak Hour Traffic Volumes (November 2020)



2.4.2 Discussion on Existing Traffic Volumes (2020)

The traffic trend as discussed in Section 2.1 indicates that the daily traffic volumes recorded in October 2020 when Covid-19 restrictions were being lifted are in-line with the AADT in preceding years. Subsequently, the traffic survey data collected in November 2020 is considered appropriate for the analytical purposes of this assessment.

2.4.2.1 Traffic Volumes at Warringah Road Underpass and Warringah Road Surface Road

The intersection counts in November 2020 indicate the following peak hour traffic volumes:

- Warringah Road underpass
  - 2,098 vehicles in the morning peak hour (958 vehicles eastbound and 1,140 vehicles westbound)
  - 2,345 vehicles in the evening peak hour (1,205 vehicles eastbound and 1,140 vehicles westbound)
- Warringah Road surface road (between Forest Way and Hilmer Street)
  - 3,179 vehicles in the morning peak hour (1,865 vehicles eastbound and 1,314 vehicles westbound)
  - 3,378 vehicles in the evening peak hour (2,042 vehicles eastbound and 1,336 vehicles westbound)

The EIS did not provide forecasted traffic volumes for the opening year to enable a direct comparison.

2.4.2.2 Hospital Traffic Generation

The data shows Northern Beaches Hospital generated the following traffic volumes, based on the sum of traffic volumes at the Frenchs Forest Road West and Gladys Avenue intersection and the Warringah Road and Hilmer Street intersection, noting no data was collected at the emergency (ambulance vehicles only) access:

- 465 vehicles in the morning peak hour
- 443 vehicles in the evening peak hour

These represent 50% to 52% of EIS's estimated traffic generation (i.e. 887 vehicle trips/ hour during both morning and evening peak hours) associated with Northern Beaches Hospital. As Northern Beaches Hospital has been in operation for over two years, this may represent an overprediction in traffic volumes, unless the operation of the hospital was far from its capacity of 488 beds, 1,300 staff and 1,000 outpatients per day.

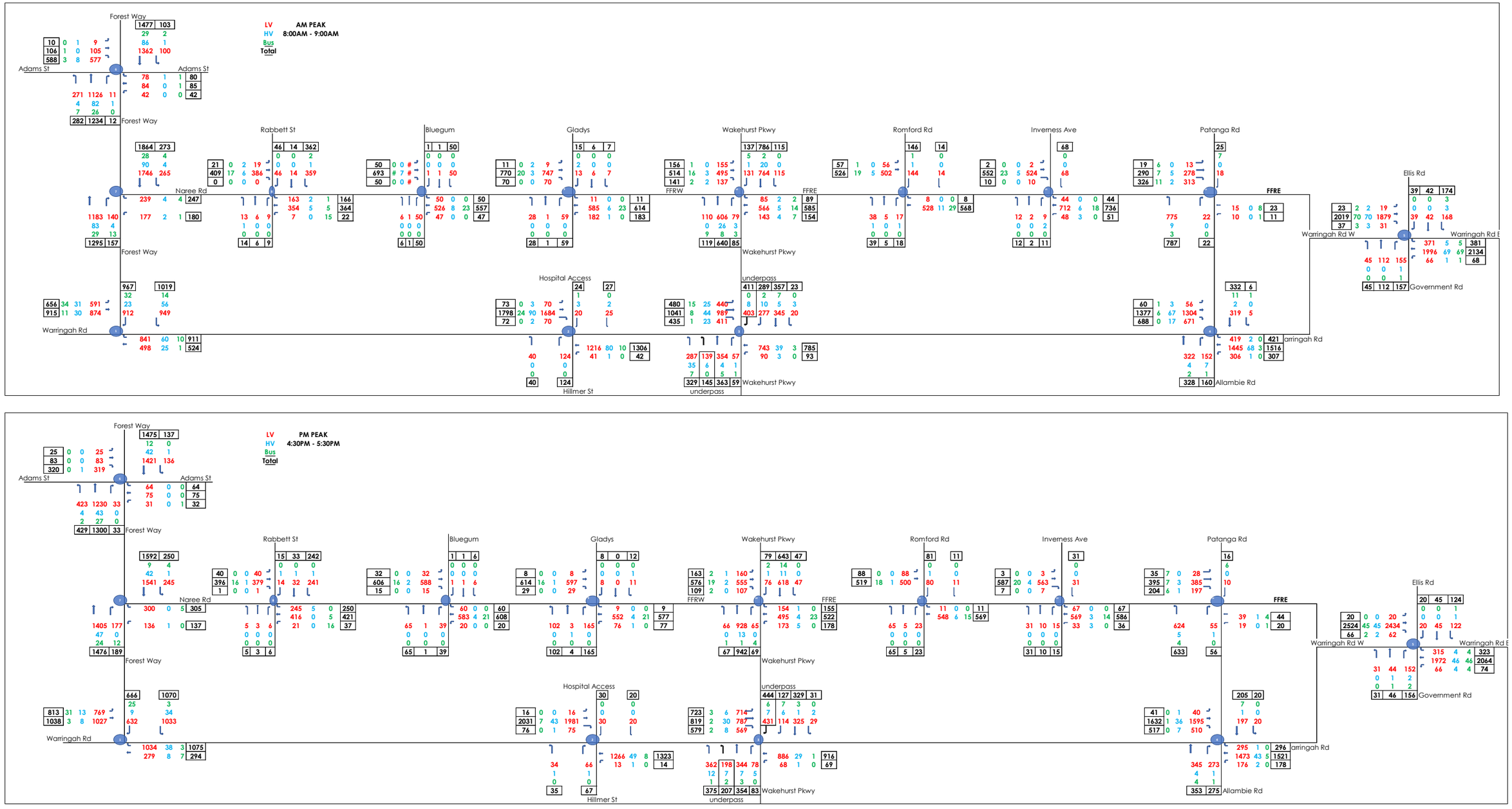
2.5 Traffic Volumes 2030

As consistent with the traffic growth rates adopted in the EIS, the following have been adopted in this assessment to project the surveyed through traffic volumes on Forest Way, Warringah Road and Frenchs Forest Road based on a 10-year horizon for year 2030:

- 0.485% p.a. for morning peak hour
- 0.425% p.a. for evening peak hour

Figure 2.5 presents the projected traffic volumes at the key intersections. It is noted that the EIS did not provide future traffic volumes to enable a direct comparison.

Figure 2.5: Future Morning and Evening Peak Hour Traffic Volumes (2030)



3 Operational Traffic Performance Review

3.1 EIS 2018 and 2018 Do Minimal Conditions

The EIS utilised VISSIM microsimulation software package for transport modelling and predicted poor intersection performance for the opening year (2018) and 10 year planning horizon (2028) under Do Minimal conditions as shown in Table 3.1, if the Project did not proceed.

Table 3.1: 2018 and 2018 Do Minimal Conditions – Morning and Evening peak Period Intersection Level of Service

Intersection	2012 Base Year	2018 Do Minimal	2028 Do Minimal
Warringah Road/ Forest Way	F	F	F
Warringah Road/ Hilmer Street	A-D	F	F
Warringah Road/ Wakehurst Parkway	F	F	F
Warringah Road/ Allambie Road	E	F	F
Warringah Road/ Ellis Road/ Government Road	A-D	F	F
Forest Way/ Adams Street	F	F	F
Forest Way/ Naree Road	A-D	F	F
Frenchs Forest Road West/ Naree Road/ Rabbett Street	E	F	F
Frenchs Forest Road West/ Hospital Entrance/ Gladys Avenue	-	A-D	E
Frenchs Forest Road/ Wakehurst Parkway	F	F	F
Frenchs Forest Road East/ Romford Road	A-D	F	F
Frenchs Forest Road East/ Patanga Road/ Allambie Road	A-D	A-D	A-D

Note 1: Warringah Road/ Forest Way intersection predicted to operate at LOS F under system-wide network performance.
Note 2: The number of intersections assessed in the 2012 and future year (2018, 2028) cases is different due to the new intersections that are created to provide access to the hospital.

Source: NBH Roadworks VISSIM Model (GTA, 2014).

The EIS predicted all assessed intersections along Warringah Road, Forest Way and Frenchs Forest Road to operate at a poor LoS F during the morning and evening peak hours (or both), except for two intersections with acceptable LoS D or better at the hospital entrance on Frenchs Forest Road West and the Frenchs Forest Road East-Patanga Road-Allambie Road intersection.

The EIS results indicate that vehicles traversing these intersections would likely encounter congested conditions, with significant delays and long queues. Access to the hospital would be difficult with significant delays in the network. The intersection operating conditions would further deteriorate by year 2028 with the hospital access operating at LoS E, if the Project did not proceed.

3.2 Intersection Performance Assessment

The OTPR has been undertaken using SIDRA Intersection 9 for the key intersections and observations across the project area to identify traffic, transport and access issues during peak periods. TfNSW confirmed SIDRA modelling is appropriate even though the EIS adopted Vissim modelling to assess the network performance.

To address the MCoA requirements, this OTPR has assessed intersection performance based on the November 2020 traffic volumes, and compared against the Stage 2 results documented in the EIS for the Do Minimal and Project Case for 2018 and 2028 (Stage 2 EIS Table 6.5), and develop measures to mitigate the identified capacity issues, if any.

The EIS assumed the Project would be fully operational by 2018, however due to the delay of the Project the opening year was 2020. As such, this OTPR made comparison between the EIS 2018/2028 results with the latest modelling for the 2020/2030 results.

3.2.1 Level of Service Criteria

TfNSW uses level of service as a measure of performance for all intersection types operating under prevailing traffic conditions. The level of service ranges from LoS A to LoS F which is directly related to the average intersection delays experienced by traffic travelling through the intersection. LoS A to LoS D are considered to provide acceptable performance with LoS A providing better performance than LoS D. LoS D is the long-term desirable level of service. LoS E and LoS F are considered to provide unsatisfactory intersection performance.

At signalised intersections, the average delay is the volume weighted average of all movements. For roundabouts and priority (give way and stop sign) controlled intersections, the average delay relates to the worst movement.

Table 3.2 shows the criteria that SIDRA Intersection adopts in assessing the LoS.

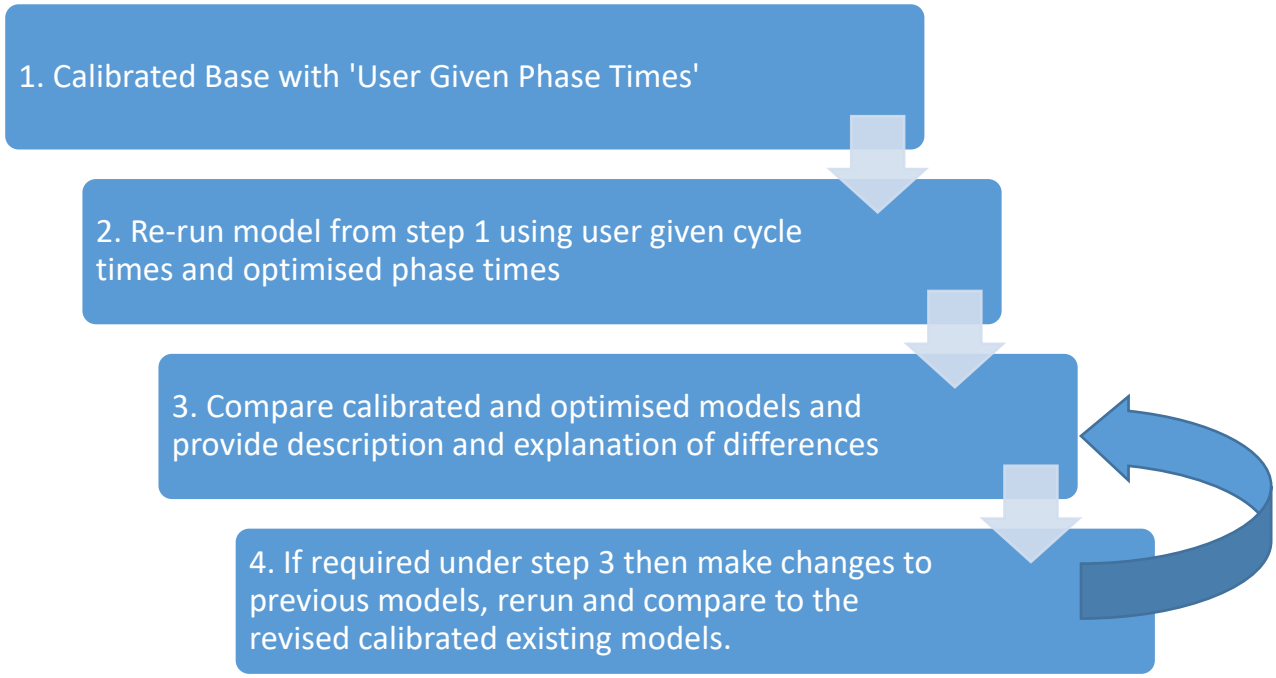
Table 3.2: Transport for NSW LoS Criteria

Level of Service (LoS)	Average Delay per vehicle (secs/veh)	Traffic Signals, Roundabout	Give Way & Stop Sign
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	Near capacity	Near capacity, accident study required
E	57 to 70	At capacity, at signals incidents would cause excessive delays. Roundabouts require other control mode	At capacity, requires other control mode.
F	Greater than 70	Unsatisfactory, requires additional capacity	Unsatisfactory, requires other control mode or major treatment

3.2.2 Base Model Development Overview

The Sidra Network has been developed based on the NSW Modelling Guidelines for Sidra Models. The process for modelling the intersections is shown in Figure 3.1.

Figure 3.1: Base Model Calibration Process

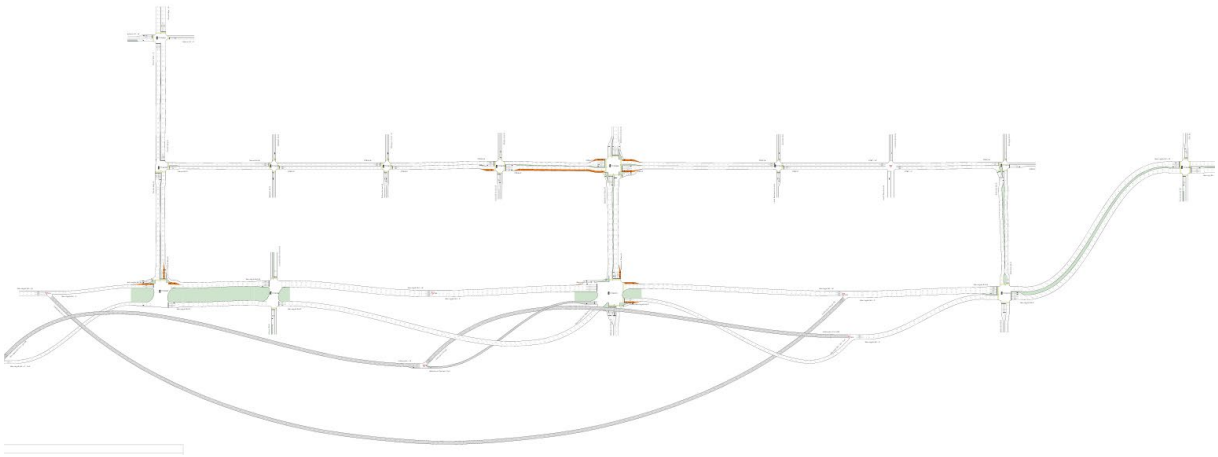


The model has been validated to queue length observations that were recorded during the intersection surveys. The Sidra 50th percentile queues back of queues have been compared to the observed 50th percentile back for queue.

3.2.2.1 Coding of the Network

The geometric coding of the network was based on aerial photography and TCS signal plans of the intersections. 'The slot' was coded as a separate link with access to the slot coded as a separate approach or exit from the junction locations. This resulted in the model having an unusual appearance, however this does not affect the operational performance of the model. The default values for negotiation speeds as a result of turn geometry were overwritten to reflect that the angle of deflection at these intersections is in reality straight. The model was coded in this way to avoid the slot traffic being included in the results for the intersection performance.

Figure 3.2: Model Layout



3.2.2.2 Additional Data Collection

In addition to the turn count data and the queue length data that was recorded we also received:

- SCATS LX files
- SCATS History files
- TCS signal plans
- Site Observations

LX Files

LX files are the data files that are behind the SCATS masterlink system. They provide the offset plans for the peak periods. It was assumed that the intersections were operating under the typical morning and evening peak offset plans. These offsets were applied to the model.

SCATS History Files

The SCATS history files provide data recorded on the phase times and cycle times that were taken from the same day that the intersection counts were recorded. The hourly averages were used to calibrate the fixed user given phase times in the model.

TCS Signal Plans

These plans provide the geometric details of the intersection including the gradients layout for lanes. They also provide details on the phasing arrangements and additional information about how the intersection operates.

Site Observations

Site observations were undertaken on the same day as the traffic surveys were undertaken. The model area was driven through and site observations at key intersections were made to observe queuing behaviour and congestion locations.

3.2.2.3 Model Coding Methodology

Geometry

The geometry of the model was coded using the TCS plans which provide lane lengths, lane widths and gradients of the approaches. Distances between intersections were measured from Nearmap as well as confirming the geometry of the TCS plans on-site.

Vehicles

Models were coded to include light vehicles, heavy vehicles and buses.

Phasing

Signal phases were coded according to the TCS plans, SCATS History data and on-site observations of the intersection operation. Phases at the intersection of Warringah Road / Wakehurst Parkway were corrected on advice from TfNSW noting that the TCS plans show conflicting turns in the phasing diagrams.

Timing

Signal timing was added as user given phase times. Traffic signals along Warringah Road were assumed to be coordinated with the intersection of Warringah Road / Wakehurst Parkway as the reference intersection. Offsets for the intersections were based on the LX file data and based on the default morning and evening peak offset plans.

The models were run as both user given phase times and optimised with user given cycle times and both models were then compared to the results of the 'calibrated' models.

Timing for pedestrian phases has been updated based on SCATS data provided by TfNSW in their comments on the modelling.

3.2.2.4 Model Calibration and Validation

As described above, the models were calibrated by including the observed user given signal times to the model and then validated by comparing the calibrated model to the optimised volumes. This has been undertaken in terms of level of service and queue lengths.

Level of Service

The base model level of service comparing the user given phase time settings and the optimised settings are provided in Table 3.3.

Table 3.3: 2020 Base Model Level of Service

Site No.	Control	Site	Morning Peak Calibrated		Morning Peak Optimised		Evening Peak Calibrated		Evening Peak Optimised	
			Ave. Delay	LoS	Ave. Delay	LoS	Ave. Delay	LoS	Ave. Delay	LoS
Site 1	Signal	Warringah Rd - Forest Way	37	C	38	C	41	C	44	D
Site 2	Signal	Warringah Rd – Hilmer St	16	B	16	B	13	A	26	B
Site 3	Signal	Warringah Rd - Wakehurst Parkway	39	C	39	C	42	C	41	C
Site 4	Signal	Warringah Rd – Allambie Rd	69	E	66	E	50	D	45	D
Site 5	Signal	Warringah Rd - Ellis Rd- Government Rd	41	C	45	D	48	D	55	D
Site 6	Signal	Forest Way – Adam St	37	C	37	C	27	B	27	B
Site 7	Signal	Forest Way – Naree Rd	27	B	28	B	28	B	29	C
Site 8	Signal	FFR – Rabbet St	26	B	26	B	21	B	21	B
-	Signal	FFR – Bluegum Cres	10	A	10	A	10	A	10	A
Site 9	Signal	FFR - Gladys Ave	34	C	31	C	27	B	27	B
Site 10	Signal	FFR - Wakehurst Parkway	49	D	49	D	48	D	47	D
Site 11	Signal	FFR – Romford Rd	20	B	20	B	17	B	16	B
Site 12	Signal	Allambie Rd – Patanga Rd - FFR	13	A	14	A	15	B	15	B
Site 13	Signal	FFR – Inverness Ave	47	D	54	D	27	B	30	C

The 'calibrated' model generally reflects the results of the optimised model. In the morning peak there were no significant differences in the level of service or delay as a result of the optimisation.

In the afternoon peak the key differences are a slight increase in delay of 7 seconds at the Warringah Road / Ellice Road intersection and a reduction of 5 seconds at the intersection of Warringah Road / Allambie Road.

Generally, the optimised model reflects the results of the 'calibrated' base model. The optimised model is considered valid with only minor differences to the 'calibrated' model.

3.2.2.5 Queue Length Validation

The queue lengths have been validated against the observed queues and the user given or calibrated SCATs timing and the optimised timing. The observed and modelled queue lengths are shown on Figure 3.3 and Figure 3.4 for the morning and evening peaks respectively for key intersections.

Figure 3.3: Queue Length Validation Morning Peak

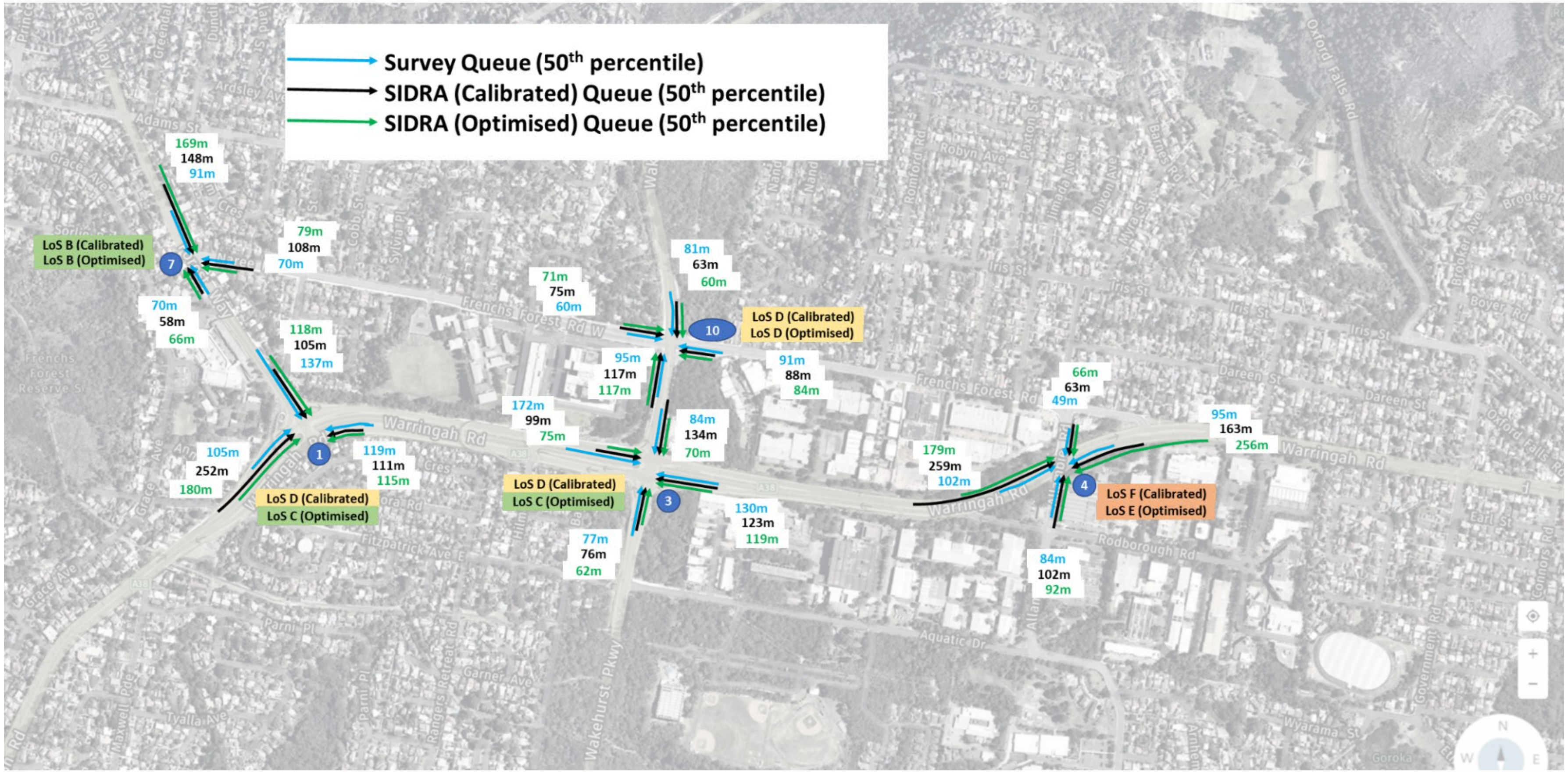
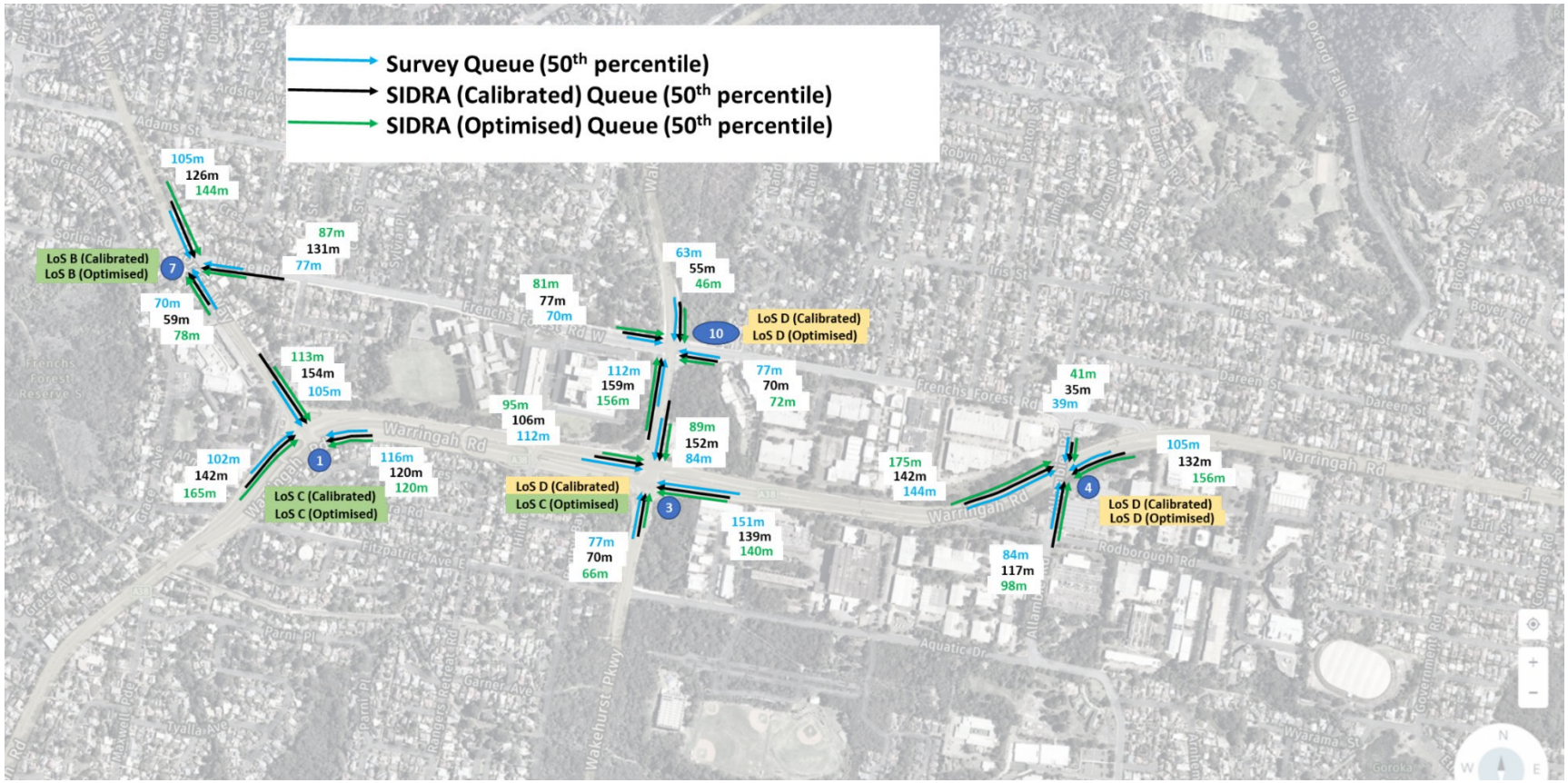


Figure 3.4: Queue Length Validation Evening Peak



The comparison of queue lengths shows that the models reflect the observed queue lengths with the model generally reporting slightly longer queues than observed on-site. The optimised models more closely reflect the observed queues than the models run with the observed signal timings.

3.2.3 Phase Times

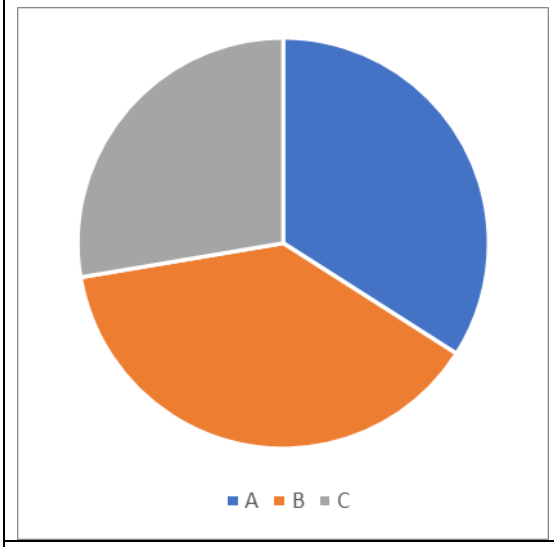
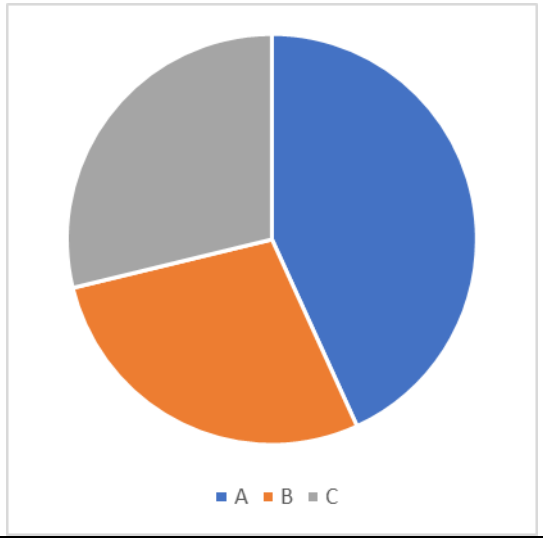
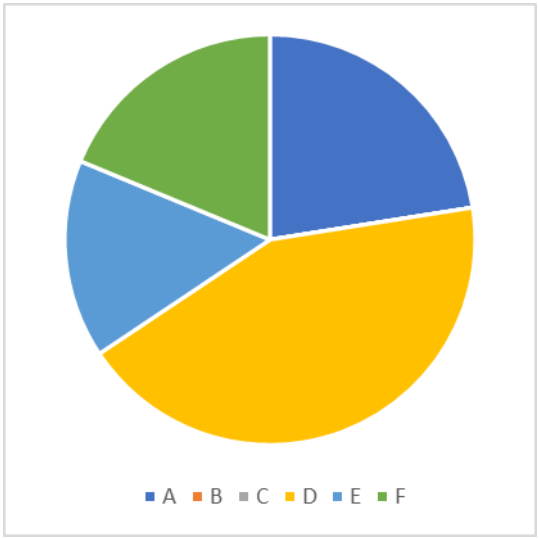
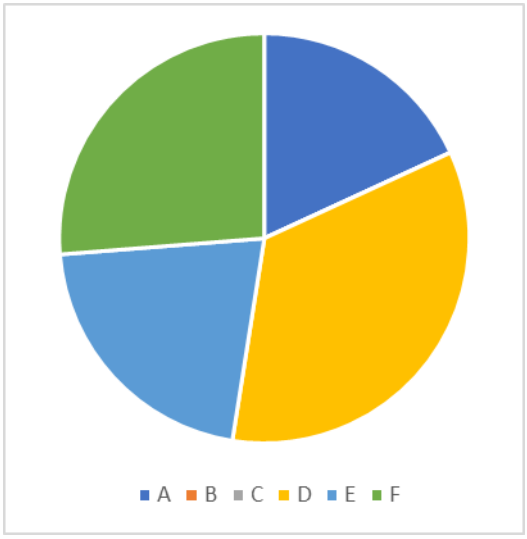
Phase times have been compared between the observed phase times and the optimised models for key intersections. The comparison between the user-given phase times and the optimised signal times. The comparison of phase times in the morning peak is shown in Table 3.4.

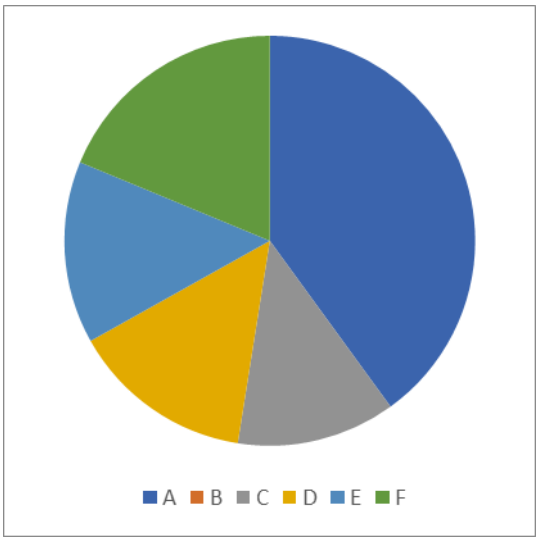
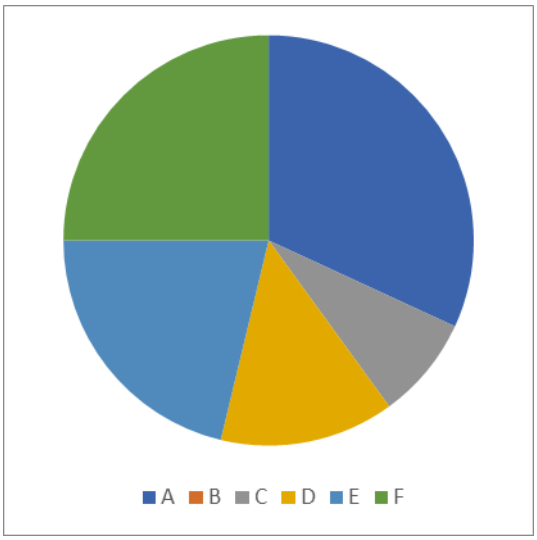
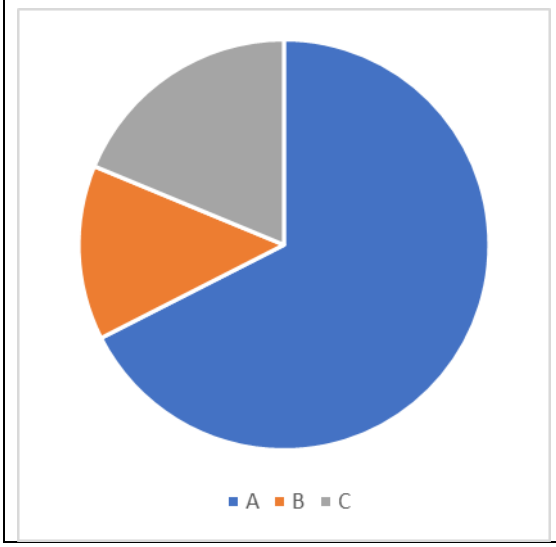
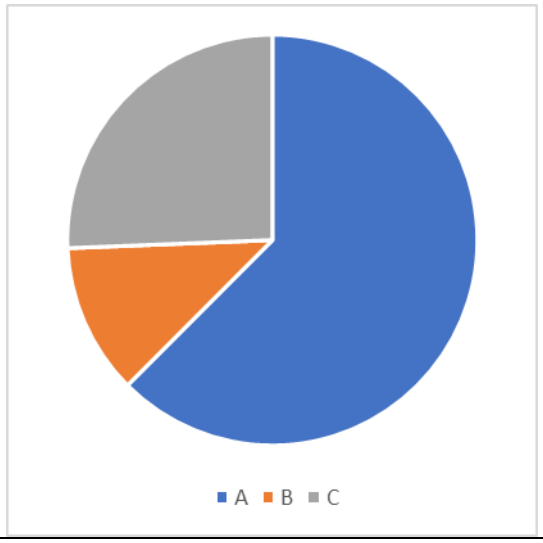
Table 3.4: Phase Times Comparison Morning Peak

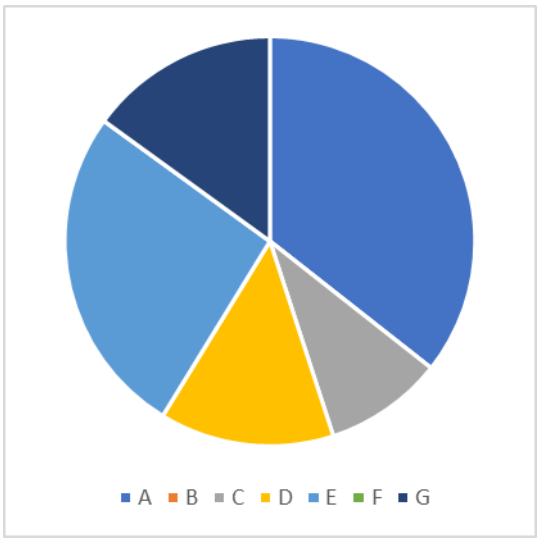
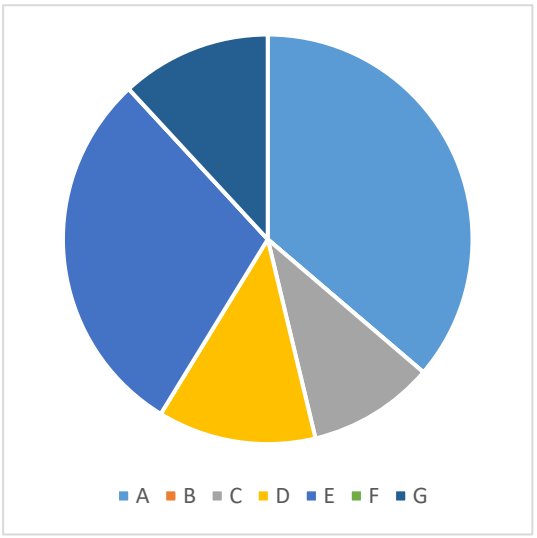
Site	Intersection	Model	A	B	C	D	E	F	G	Cyc. Time
Site 1	Warringah Road-Forest Way	Observed	48	54	39	19	-	-	-	160
		Optimised	57	37	38	28	-	-	-	160
Site 3	Warringah Road-Wakehurst Parkway	Observed	36	-	-	69	25	30	-	160
		Optimised	29	-	-	55	34	42	-	160
Site 4	Warringah Road – Allambie Street	Observed	64	-	20	23	23	30	-	160
		Optimised	51	-	13	22	34	40	-	160
Site 7	Forest Way – Naree Road	Observed	108	22	30	-	-	-	-	160
		Optimised	100	19	41	-	-	-	-	160
Site 10	FFR - Wakehurst Parkway	Observed	57	-	15	22	42	-	24	160
		Optimised	58	-	16	20	47	-	19	160

The comparison shows that while phase times changed in the optimised models they retained similar proportions. The phase splits are shown in Figure 3.5.

Figure 3.5: Morning Peak Phase Time Comparisons

User Given Phase Times	Optimised Phase Times
Warringah Road – Forest Way 	
Warringah Road – Wakehurst Parkway 	

User Given Phase Times	Optimised Phase Times
Warringah Road - Allambie Street 	
Forest Way – Naree Road 	

User Given Phase Times	Optimised Phase Times
Frenchs Forest Way – Wakehurst Parkway 	

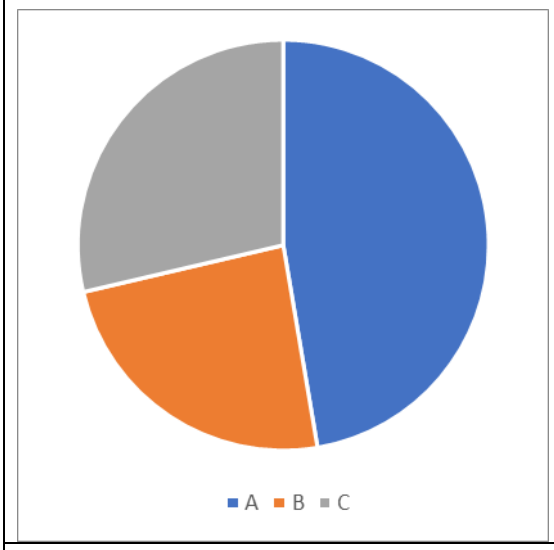
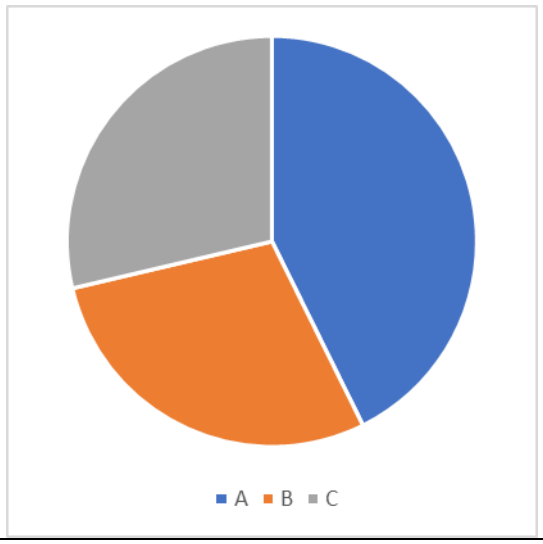
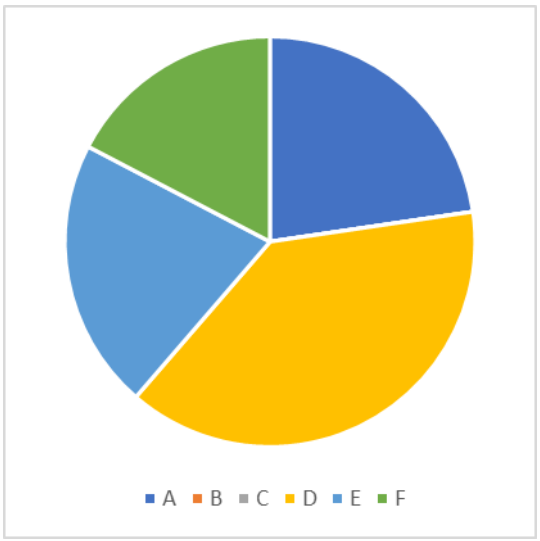
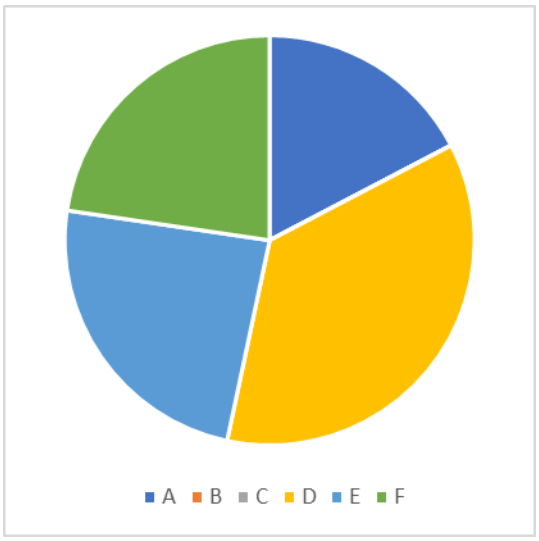
The evening peak phase times are shown in Table 3.5.

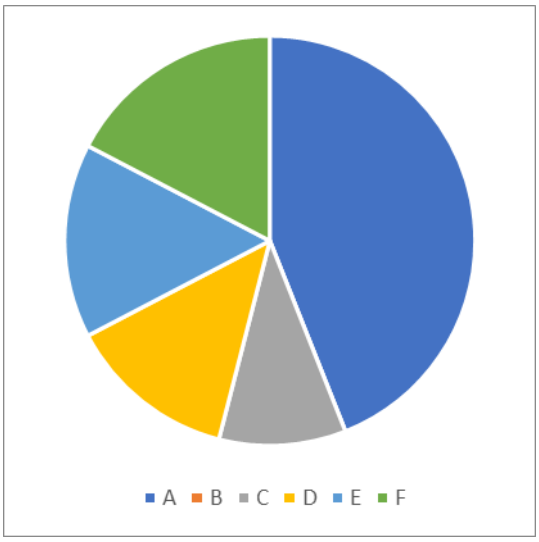
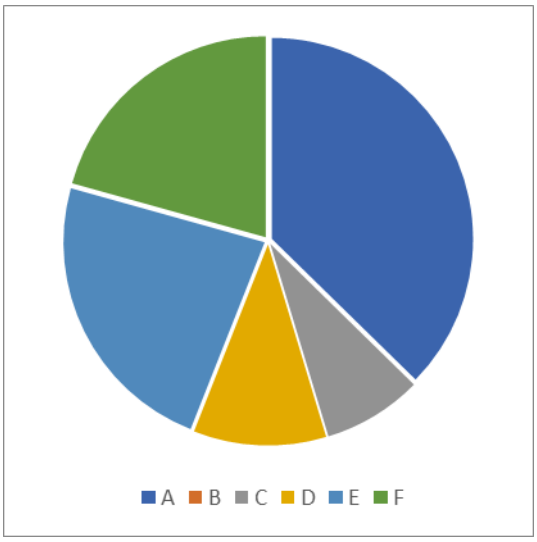
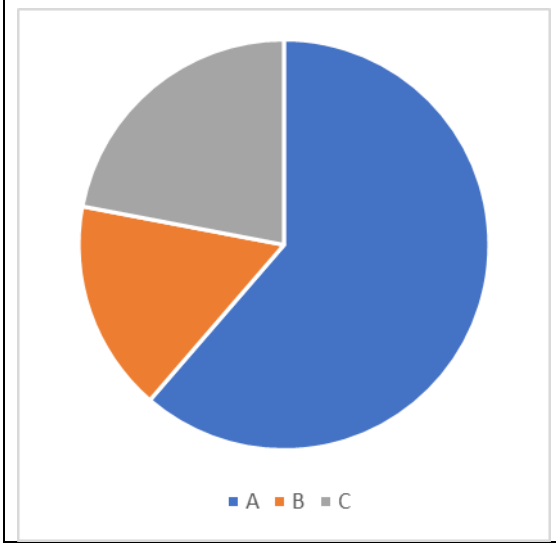
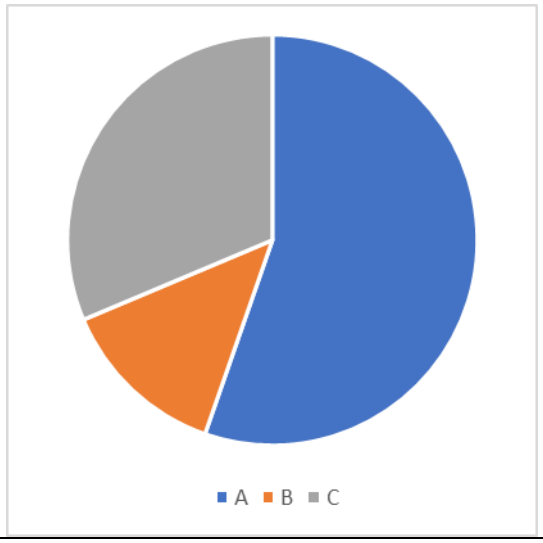
Table 3.5: Phase Times Comparison Evening Peak

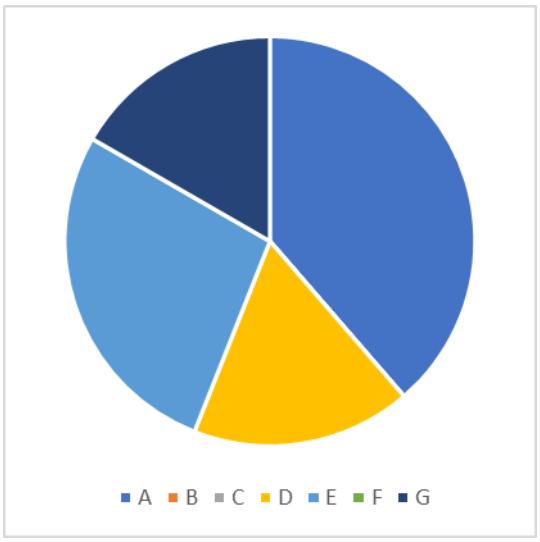
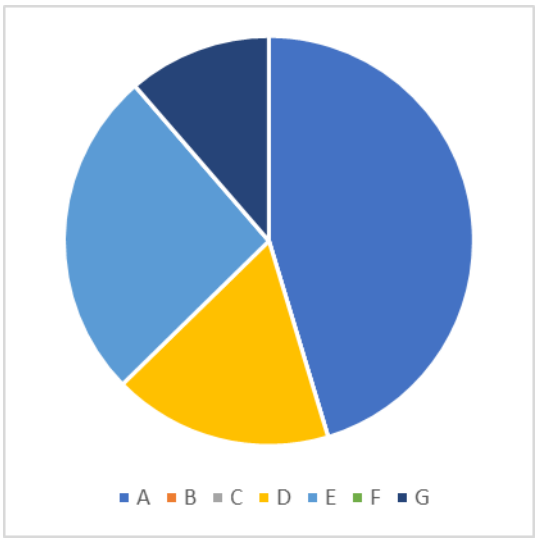
Site	Intersection	Model	A	B	C	D	E	F	G	Cyc. Time
Site 1	Warringah Road-Forest Way	Observed	71	36	43	-	-	-	-	150
		Optimised	64	43	43	-	-	-	-	150
Site 3	Warringah Road-Wakehurst Parkway	Observed	34	-	-	58	32	26	-	150
		Optimised	26	-	-	54	36	34	-	150
Site 4	Warringah Road – Allambie Street	Observed	66	-	15	20	23	26	-	150
		Optimised	56	-	12	16	35	31	-	150
Site 7	Forest Way – Naree Road	Observed	92	25	33	-	-	-	-	150
		Optimised	83	20	47	-	-	-	-	150
Site 10	FFR - Wakehurst Parkway	Observed	58	-	-	26	41	-	25	150
		Optimised	68	-	-	26	39	-	17	150

In the afternoon peak the optimised phase times also retain similar proportions to the user-give cycle times. The evening peak phase splits are compared in Figure 3.6.

Figure 3.6: Evening Peak Phase Time Comparisons

User Given Phase Times	Optimised Phase Times
Warringah Road – Forest Way 	
Warringah Road – Wakehurst Parkway 	

User Given Phase Times	Optimised Phase Times
Warringah Road - Allambie Street 	
Forest Way – Naree Road 	

User Given Phase Times	Optimised Phase Times
Frenchs Forest Way – Wakehurst Parkway 	

3.2.4 Future Year Model Development

A future year model was developed based on a 10 year horizon from 2020 to 2030. The growth in traffic volumes was derived from the growth presented in the EIS report to be consistent. The EIS reported the traffic growth in terms of total trips. The derived growth rates are shown in Table 3.6.

Table 3.6: Traffic Growth

Peak Hour	2018	2028	Growth over 10 Years
Morning Peak	43,245	45,341	4.85%
Evening Peak	49,922	52,046	4.25%

The growth percentage growth was applied to movements except on minor local roads as traffic on local roads is assumed to remain at present levels.

3.2.5 Modelling Results

The results of the intersection analysis are summarised in Table 3.7 for the 2020 and 2030 years when Stage 2 project is operational.

Table 3.7: Intersection Modelling Results

Site No.	Control	Site	Morning 2020		Morning 2030		Evening 2020		Evening 2030	
			Ave. Delay	LoS	Ave. Delay	LoS	Ave. Delay	LoS	Ave. Delay	LoS
Site 1	Signal	Warringah Rd - Forest Way	37	C	38	C	41	C	44	D
Site 2	Signal	Warringah Rd – Hilmer St	16	B	16	B	13	A	26	B
Site 3	Signal	Warringah Rd - Wakehurst Parkway	39	C	39	C	42	C	41	C
Site 4	Signal	Warringah Rd – Allambie Rd	69	E	66	E	50	D	45	D
Site 5	Signal	Warringah Rd - Ellis Rd- Government Rd	41	C	45	D	48	D	55	D
Site 6	Signal	Forest Way – Adam St	37	C	37	C	27	B	27	B
Site 7	Signal	Forest Way – Naree Rd	27	B	28	B	28	B	29	C
Site 8	Signal	FFR – Rabbet St	26	B	26	B	21	B	21	B
-	Signal	FFR – Bluegum Cres	10	A	10	A	10	A	10	A
Site 9	Signal	FFR - Gladys Ave	34	C	31	C	27	B	27	B
Site 10	Signal	FFR - Wakehurst Parkway	49	D	49	D	48	D	47	D
Site 11	Signal	FFR – Romford Rd	20	B	20	B	17	B	16	B
Site 12	Signal	Allambie Rd – Patanga Rd - FFR	13	A	14	A	15	B	15	B
Site 13	Signal	FFR – Inverness Ave	47	D	54	D	27	B	30	C

These results indicate significant improvement from the EIS results under the 'Do Minimum' scenario as shown in Table 3.1. With the grade-separation of these intersections, there would be a reduction in traffic volumes on the surface road network, with an associated improvement in performance of the surface intersections.

The only intersection shown to be over capacity during 2020 is the intersection of Warringah Road and Allambie Road in the morning peak period.

In the evening peak, all intersections are forecast to operate at Level of Service D or better.

3.2.5.1 SIDRA modelling – Comparison

A comparison has been made between the forecasted intersection performance from the EIS 2018 modelling and 2020 modelling results. This comparison is presented in Table 3.8. It should be noted that the EIS only reported Level of Service in broad bands and does not provide details of the actual results in terms of delay.

Table 3.8: EIS Forecast Intersection Performance (2018 – 2020)

Site No.	Control	Site	2018 EIS Morning Peak (project case)		2020 Morning Peak (OTPR)		2018 EIS Evening Peak (project case)		2020 Evening Peak (OTPR)	
			Ave. Delay	LoS	Ave. Delay	LoS	Ave. Delay	LoS	Ave. Delay	LoS
Site 1	Signal	Warringah Rd - Forest Way	60-90	F	37	C	0-60	A-D	41	C
Site 2	Signal	Warringah Rd – Hilmer St	0-60	A-D	16	B	0-60	A-D	13	A
Site 3	Signal	Warringah Rd - Wakehurst Parkway	60-90	E	39	C	0-60	A-D	42	C
Site 4	Signal	Warringah Rd – Allambie Rd	0-60	E	69	E	0-60	A-D	50	D
Site 5	Signal	Warringah Rd - Ellis Rd- Government Rd	0-60	A-D	41	C	90-120	F	48	D
Site 6	Signal	Forest Way – Adam St	120+	F	37	C	120+	F	27	B
Site 7	Signal	Forest Way – Naree Rd	60-90	F	27	B	-	E	28	B
Site 8	Signal	FFR – Rabbet St	0-60	A-D	26	B	0-60	A-D	21	B
Site 9	Signal	FFR - Gladys Ave	0-60	A-D	34	C	0-60	A-D	27	B
Site 10	Signal	FFR - Wakehurst Parkway	120+	F	49	D	0-60	A-D	48	D
Site 11	Signal	FFR – Romford Rd	0-60	A-D	20	B	0-60	A-D	17	B
Site 12	Signal	Allambie Rd – Patanga Rd - FFR	0-60	A-D	13	A	0-60	A-D	15	B

In the morning peak the following observations have been drawn from the modelling results:

- Overall, the network performance is better than the forecasted network performance with more intersections operating better than was forecasted as part of the EIS.
- The intersection of Warringah Road and Allambie Road was forecast to be over capacity and the OTP models have shown this to be accurate.

In the evening peak the following observations have been made from the data:

- The 2020 modelling indicates that the intersections are performing better than forecast.

- The intersections with the higher delay were Warringah Road and Allambie Road, and Warringah Road, Ellis Road and Government Road which both had a Level of Service of D.

The EIS reports a 12% to 11% increase in traffic volumes from 2012 to 2018 for the morning and evening peaks respectively. This equates to approximately 2% increase per year in traffic volumes. As a result the EIS reported higher levels of delay than are currently experienced.

A comparison has been made between the forecasted intersection performance from the EIS 2018 modelling and 2030 OPR modelling results. This comparison is presented in Table 3.9.

Table 3.9: EIS Forecast Intersection Performance (2028 and 2030)

Site No.	Control	Site	2028 EIS Morning Peak (project case)		2030 Morning Peak (OTPR)		2028 EIS Evening Peak (project case)		2030 Evening Peak (OTPR)	
			Ave. Delay	LoS	Ave. Delay	LoS	Ave. Delay	LoS	Ave. Delay	LoS
Site 1	Signal	Warringah Rd - Forest Way	0-60	A-D	38	C	0-60	A-D	44	D
Site 2	Signal	Warringah Rd – Hilmer St	0-60	A-D	16	B	0-60	A-D	26	B
Site 3	Signal	Warringah Rd - Wakehurst Parkway	0-60	A-D	39	C	0-60	A-D	41	C
Site 4	Signal	Warringah Rd – Allambie Rd	60-90	E	75	F	60-90	E	45	D
Site 5	Signal	Warringah Rd - Ellis Rd- Government Rd	60-90	E	45	D	120+	F	55	D
Site 6	Signal	Forest Way – Adam St	120+	F	37	C	60-90	F	27	B
Site 7	Signal	Forest Way – Naree Rd	60-90	E	28	B	0-60	A-D	29	C
Site 8	Signal	FFR – Rabbet St	0-60	A-D	26	B	0-60	A-D	21	B
Site 9	Signal	FFR - Gladys Ave	0-60	A-D	31	C	0-60	A-D	27	B
Site 10	Signal	FFR - Wakehurst Parkway	120+	F	49	D	60-90	E	27	B
Site 11	Signal	FFR – Romford Rd	0-60	E	20	B	0-60	A-D	47	D
Site 12	Signal	Allambie Rd – Patanga Rd - FFR	0-60	A-D	14	A	0-60	A-D	16	B

Compared to the EIS 2018 modelling the recent modelling indicates all intersections would generally operate more efficiently than was forecast in the EIS Stage 2 results in both 2018 and 2028. It is forecast that all intersections are predicted to operate at an acceptable Level of Service D or better in both morning and evening peak hours.

The only exception is the intersection of Warringah Road and Allambie Road which is forecast to be over capacity in the morning peak but at an acceptable Level of Service D in the evening peak. These results are still better than the EIS Stage 2 results.

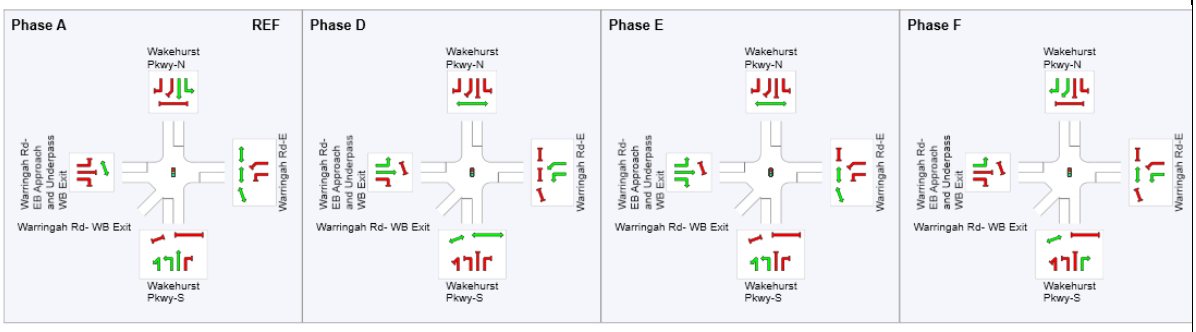
3.2.5.2 *Modelling Discussion*

The modelling shows that in 2020 all intersections are operating at Level of Service D or better during the morning peak period with the exception of the intersection of Warringah Road and Allambie Road. In the evening peak all intersections are operating at Level of Service D or better.

Warringah Road and Wakehurst Parkway

Observations on site and the model results showed localised delays for the eastbound right turn from Warringah Road to Wakehurst Parkway which has long queues in the morning peak. The modelling shows this movement has high delays (over 133 seconds) and operates at Level of Service F. Observations on-site indicated that the D Phase was operating longer than needed with little traffic approaching from the eastern approach. The optimised signal settings took time away from the D Phase and gave additional time to E Phase which reduced the delay on the right turn from 133 seconds to 69 seconds and a Level of Service E. Phasing outputs from the model are shown in Figure 3.7.

Figure 3.7: Phasing Comparison – Warringah Road and Wakehurst Parkway



Observed (User Given phase times)

Phase	A	D	E	F
Phase Change Time (sec)	0	36	105	130
Green Time (sec)	30	63	19	24
Phase Time (sec)	36	69	25	30
Phase Split	23%	43%	16%	19%

Optimised

Phase	A	D	E	F
Phase Change Time (sec)	0	29	84	118
Green Time (sec)	23	49	28	36
Phase Time (sec)	29	55	34	42
Phase Split	18%	34%	21%	26%

Patanga Road / Frenchs Forest Road

One of the conditions is to review the impacts at Patanga Road and Frenchs Forest Road intersection. At this intersection the left turn from Patanga Road is banned forcing traffic to use Inverness Avenue. Traffic congestion at these intersections was not observed. Modelling indicates that the intersection of Inverness Avenue and Frenchs Forest Road East is operating satisfactorily with all movements into and out of Inverness Avenue operating at Level of Service A. As intersection performance for priority junctions is based on the movement with the highest delay the intersection is performing at Level of Service D based on the right turn from the private access opposite Inverness Avenue. The changes to the road network as a

result of the hospital do not appear to have significantly impacted the operation of these intersections.

Adam Street / Forest Way

The modelling shows that the intersection of Adam Street and Forest Way is operating at Levels of Service C and B for the morning and evening peaks respectively. The intersection is currently performing better than the EIS forecast. Notwithstanding, the right turn movement from Adam Street Forest Way is experiencing some delay with Level of Service E in the morning peak and evening peaks. Queues of up to 200m on Forest Way were observed in the morning and afternoon peaks.

Overall Results

The EIS predicted the Stage 2 Project would reduce average delays compared with the 'Do Minimum' scenario and concluded that the Stage 2 project would generally improve the performance of the road network around the hospital and along the key arterial roads.

This OTPR forecasts that all assessed intersections would operate better than the EIS Stage 2 results, with the majority of intersections operating at an acceptable Level of Service D or better in both morning and evening peak hours, indicating the hospital access would operate acceptably with no significant delays on the surrounding road network.

Despite different transport modelling software used, the assessment indicates that the indicative predictions and outcomes for network performance are acceptable and achievable at the assessed intersections. The Project provides enhancement to road capacity to sufficiently accommodate the traffic generated by the hospital and background growth in the long term.

3.3 Bus Priority Treatment

The TCS at the Warringah Road and Forest Way intersection provides a bus jump start for about four seconds on Warringah Road eastbound. This enables buses to have an early start with sufficient time to merge with the adjacent through lane before general vehicles are given a green light. The jump start was observed to operate well during both morning and evening peak periods.

Other bus lanes within the Project area have their own departure lanes and thus a jump start is not required. Bus movements along the bus lanes and extended bus bay operated well during both morning and evening peak periods within the Project area.

Interview with STA indicates the Project has improved bus operations across the road network with better turning path at intersections. Refer to Section 5 for details regarding STA's comment and suggestion on how to address the difficulty in pulling out of the indented bus bay on Forest Road southbound near Rabbett Street.

3.4 Rat-Running on Local Roads

3.4.1 Pre-Construction

Pre-construction traffic conditions along arterial roads in the Project area exhibited high levels of traffic congestion, with key intersections experiencing long delays during the peak periods.

The EIS identified a number of common rat-running routes on local roads as shown in Figure 3.8 and Figure 3.9 where motorists avoid congested arterial roads to minimise delays.

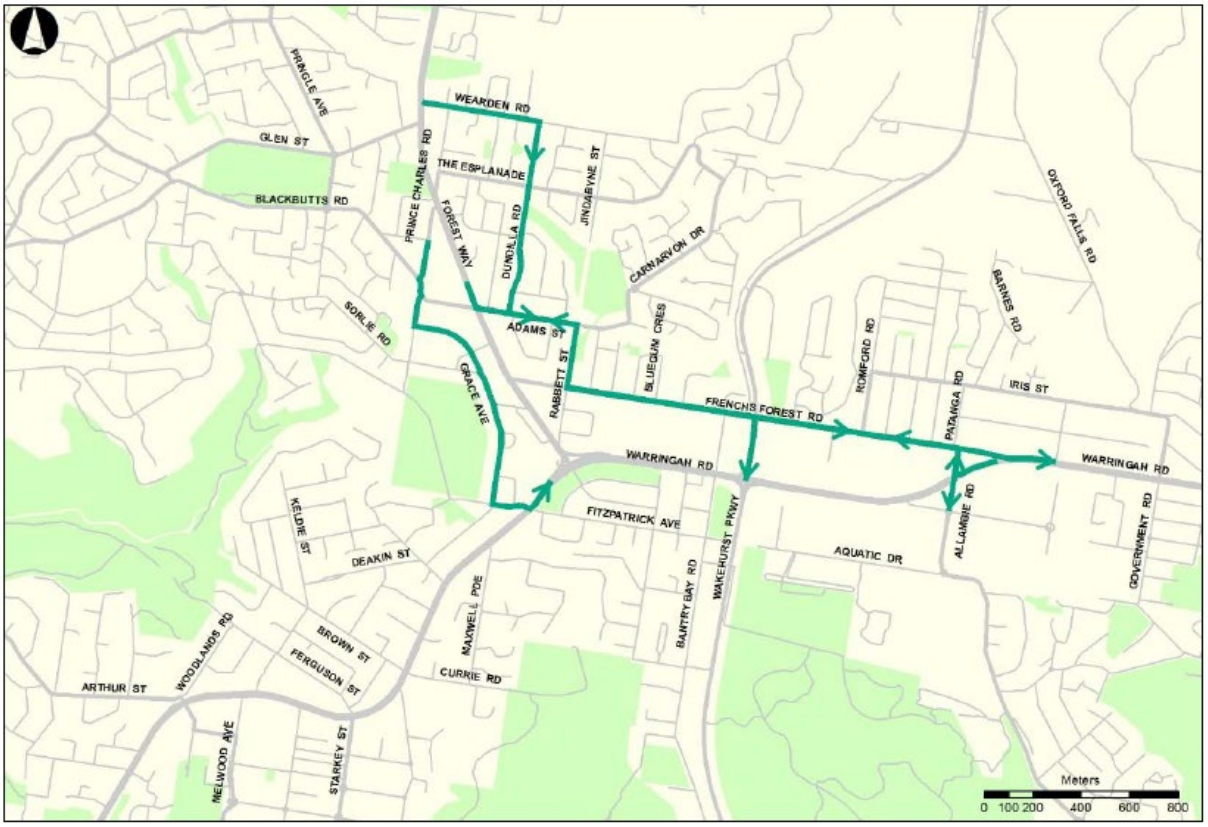
3.4.2 Observations

The Project has significantly improved traffic efficiency with less delays on the arterial road network as a key benefit of the grade-separated Warringah Road underpass, as shown in Section 3.2.5. However, intermittently long traffic queues were observed during the peak periods on Forest Way, Frenchs Forest Road East and Warringah Road.

A number of motorists were observed to take the opportunity to take a short-cut through the local road network to reduce travel time via the common rat-running routes as identified in the EIS under the pre-construction conditions, as shown in Figure 3.8 for the morning peak and Figure 3.9 for the evening peak. These rat-running routes are still in use post-Project by motorists out of habit to avoid traffic signals on arterial roads where possible to minimise travel time.

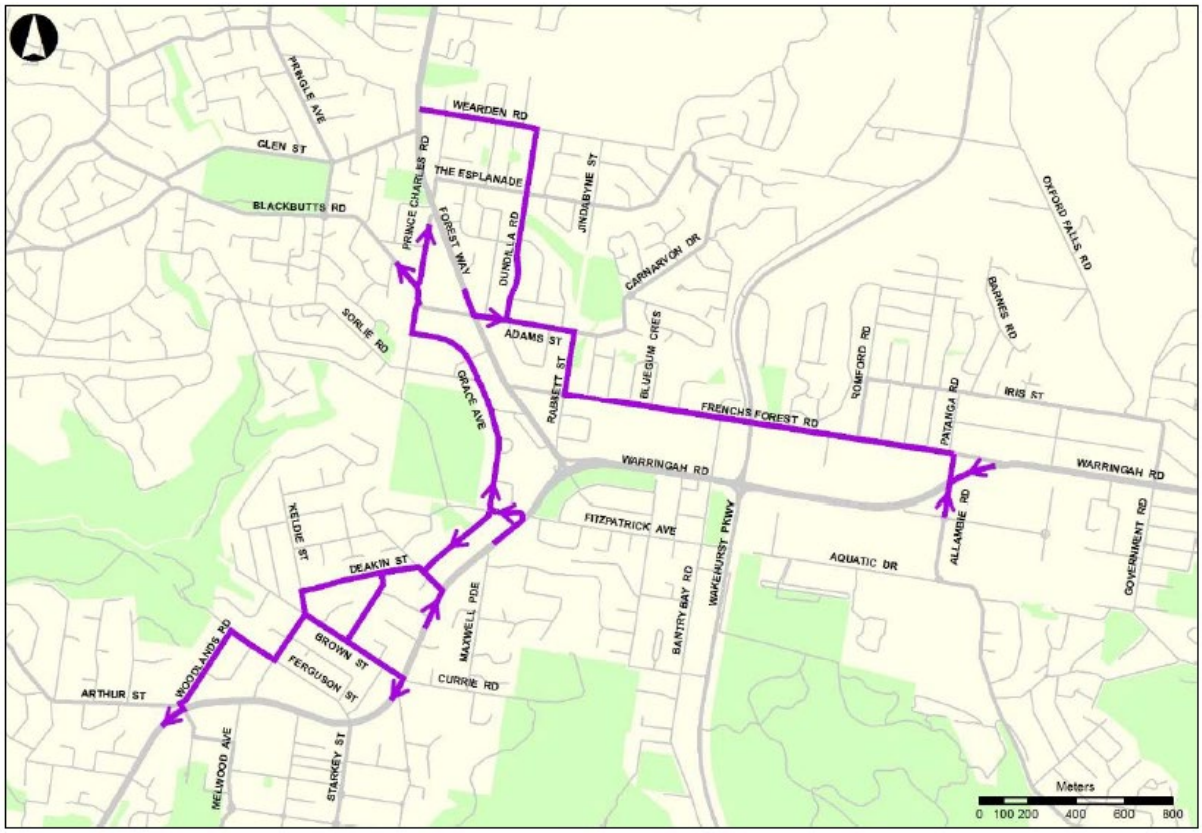
Figure 3.10 shows the tube count locations overlaid on a Sydway Map used for road classification of these residential road.

Figure 3.8: Rat-Running Routes (Morning Peak)



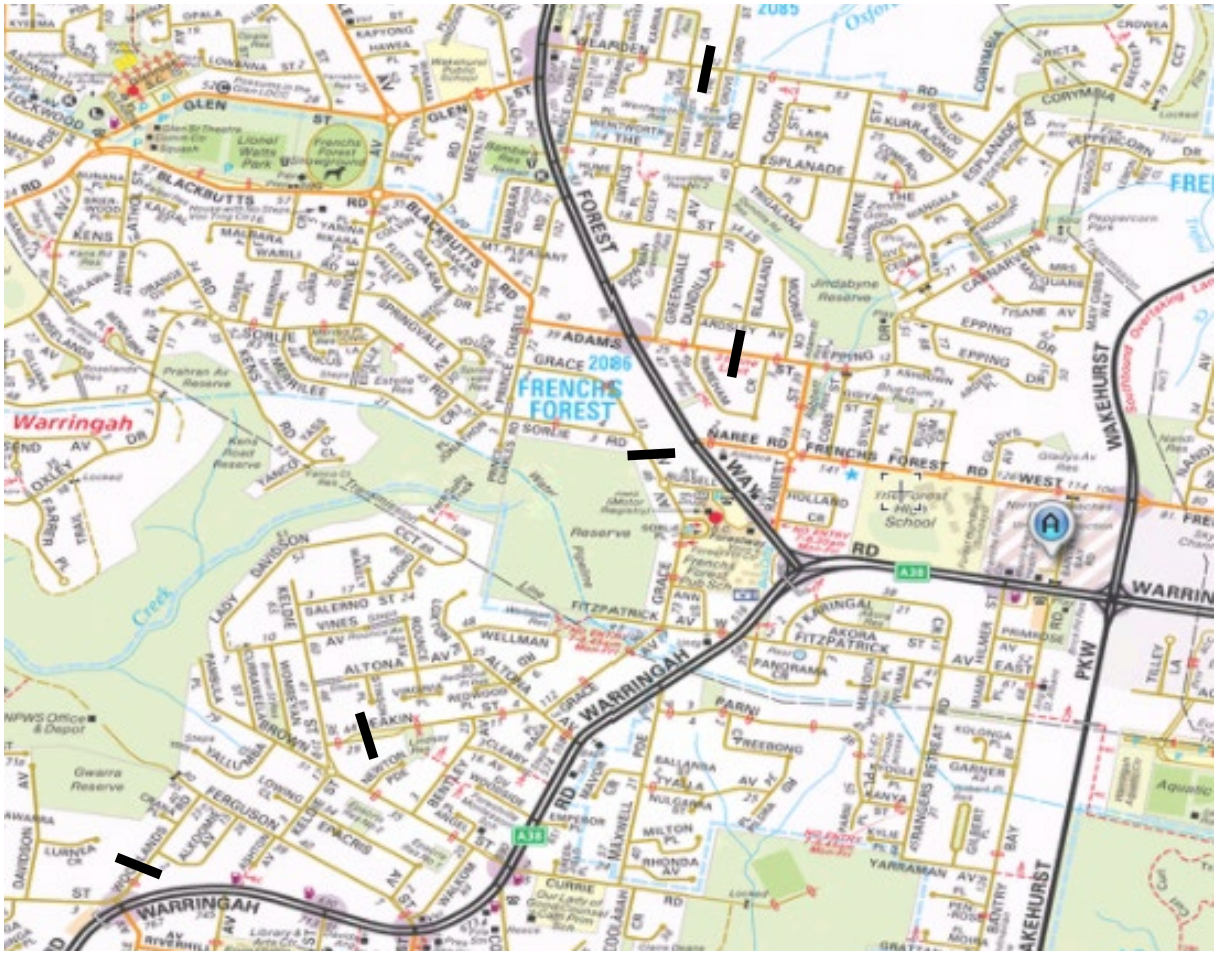
Reference: EIS

Figure 3.9: Rat-Running Routes (Evening Peak)



Reference: EIS

Figure 3.10: Tube Count Locations Overlaid on Sydway Map for Road Classification



Reference: Sydway Map

The following observations were made during the morning and evening peak periods:

- Morning Peak
  - Traffic queues on Forest Way southbound occasionally bank up from the Naree Road intersection past Adams Street. In order to minimise traffic delays, a number of motorists turn left onto Wearden Road or Adam Street to reach Rabbett Street and Frenchs Forest Road, and subsequently head towards the south via Wakehurst Parkway/Allambie Road, or further east via Warringah Road. Some motorists take this rat-running route to avoid the long right turn queue on Warringah Road eastbound towards Wakehurst Parkway (Figure 3.11).
  - The Grace Avenue and Warringah Road route is not used extensively. The long queues on the dual right turn lanes on Warringah Road eastbound onto Wakehurst Parkway would deter motorists from taking the Grace Avenue and Warringah Road route when heading towards Wakehurst Parkway southbound.
- Evening Peak

- Traffic queues on Naree Road westbound right turn lanes occasionally bank up from the Forest Way intersection past Rabbett Street (Figure 3.12). In order to minimise the traffic delay, a number of motorists turn right from Naree Road onto Rabbet Street to avoid the long delays and return to Forest Way via Adam Street to head further north.
- Motorists on Warringah Road eastbound tend to take various rat-running routes through the local road network towards Deakin Street and Grace Avenue. The rat-running traffic increase traffic volumes at the "dog-leg" movements at the staggered Altona Avenue-Deakin Street and Altona Avenue-Grace Avenue intersections (Figure 3.13).

Figure 3.11: Long Queues on Warringah Road Right Turn Lanes onto Wakehurst Parkway in Morning Peak

Figure 3.12: Rat-Running via Rabbett Street in Evening Peak

Figure 3.13: Rat-Running via the Staggered Deakin Street-Altona Avenue and Altona Avenue-Grace Avenue Intersections in Evening Peak

3.4.3 Environmental Capacity

The TfNSW Guide to Traffic Generating Developments (2002) provides guidance on typical environmental capacity of residential streets. This information has been reproduced in Table 3.10.

Table 3.10: Environmental Capacity Performance Standards on Residential Streets

Road Class	Road Type	Maximum Speed (km/h)	Maximum Peak Hour Volume (vph)
Local	Access Way	25	100
	Street	40	200 environmental goal
			300 maximum
Collector	Street	50	300 environmental goal
			500 maximum

Note: Maximum speed relates to the appropriate design maximum speeds in new residential developments. In existing areas maximum speed relates to the 85th percentile speed.

Traffic surveys were undertaken to record existing traffic volumes along Grace Avenue, Deakin Street, Wearden Road, Adams Street and Woodlands Road which have been identified as common rat-running routes within the Project area. The tube count locations are shown previously in Figure 3.8 and Figure 3.9.

A summary of the existing traffic volumes is summarised in Table 3.11 for the common rat-running routes. Classification into local street and collector street is based on Sydway Map as shown in Figure 3.10.

Table 3.11: Traffic Volumes on Residential Streets for Environmental Capacity Performance

Survey Location	Road Type	Maximum Peak Hour Volume (vph)	Weekday Average (vph) – 2-way	
			Morning Peak Hour	Evening Peak Hour
Grace Avenue (between Sorlie Road and Russell Avenue)	Local Street	200 environmental goal 300 maximum	666 (8:00am-9:00am)	767 (3:00pm-4:00pm)
Deakin Street (between Keldie Street and Bentley Avenue)			213 (8:00am-9:00am)	258 (4:00pm-5:00pm)
Wearden Road (between Dundilla Road and Jindabyne Street)	Collector Street	300 environmental goal 500 maximum	153 (8:00am-9:00am)	126 (3:00pm-4:00pm)
Adams Street (between Wareham Crescent west and Wareham Crescent east)			565 (8:00am-9:00am)	497 (3:00pm-4:00pm)
Woodlands Road (between Arthur Street and Alkoomie Avenue)			118 (9:00am-10:00am)	144 (3:00pm-4:00pm)

Note: Road classification based on Sydway Map

Taking into consideration the above, Table 3.11 indicates that the environmental capacity of Grace Avenue and Deakin Street is 200 vph (environmental goal), with a maximum of 300 vph in the peak hour. The environmental capacity for Wearden Road, Adams Street and

Woodlands Road is 300 vph (environmental goal), with a maximum of 500 vph in the peak hour.

For local roads, the current traffic flows on Grace Avenue are generally in the order of 666 to 767 vph during the peak hour and 213 to 258 vph during the peak hour along Deakin Street. The current traffic flows on Grace Avenue are in the order of 2 to 2.5 times the maximum threshold (300 vph) for a local street while traffic volumes on Deakin Street are higher than the environmental goal but are still less than the maximum threshold.

From observations, Grace Avenue operated with acceptable performance during the peak periods without excessive delays at intersections and even near the shopping centre access. Refer to Figure 3.14.

Figure 3.14: Traffic Conditions along Grace Avenue in the vicinity of Forestway Shopping Centre at 5:10pm on a Typical Thursday

For collector roads, the current traffic flows are approximately 153 vph (2-way) on Wearden Road and 144 vph (2-way) on Woodlands Road during the busiest hours. All of these collector roads currently operate well within the desirable environmental capacity.

As a collector road, traffic volumes on Adams Street are in the order of 497 to 565 vph during the peak hour. These traffic flows are at the maximum threshold for a collector street.

The above analysis indicates the performance of local/collector roads is generally acceptable with traffic volumes under the maximum threshold based on the existing measures in place. However, Grace Avenue and Adams Street have reached the maximum threshold even though the Project has significantly improved traffic efficiency on the arterial road network. It is possible that despite the long queues are intermittent at traffic signals, motorists tend to avoid arterial roads as a route choice out of habit.

It is recommended Northern Beaches Council and Police continue to monitor the use of local roads by through traffic to ensure it is not to the detriment of the local amenity. If required, investigation into local road traffic management schemes should be considered to limit the filtration of through traffic onto local streets to maintain residential amenity in the neighbourhood.

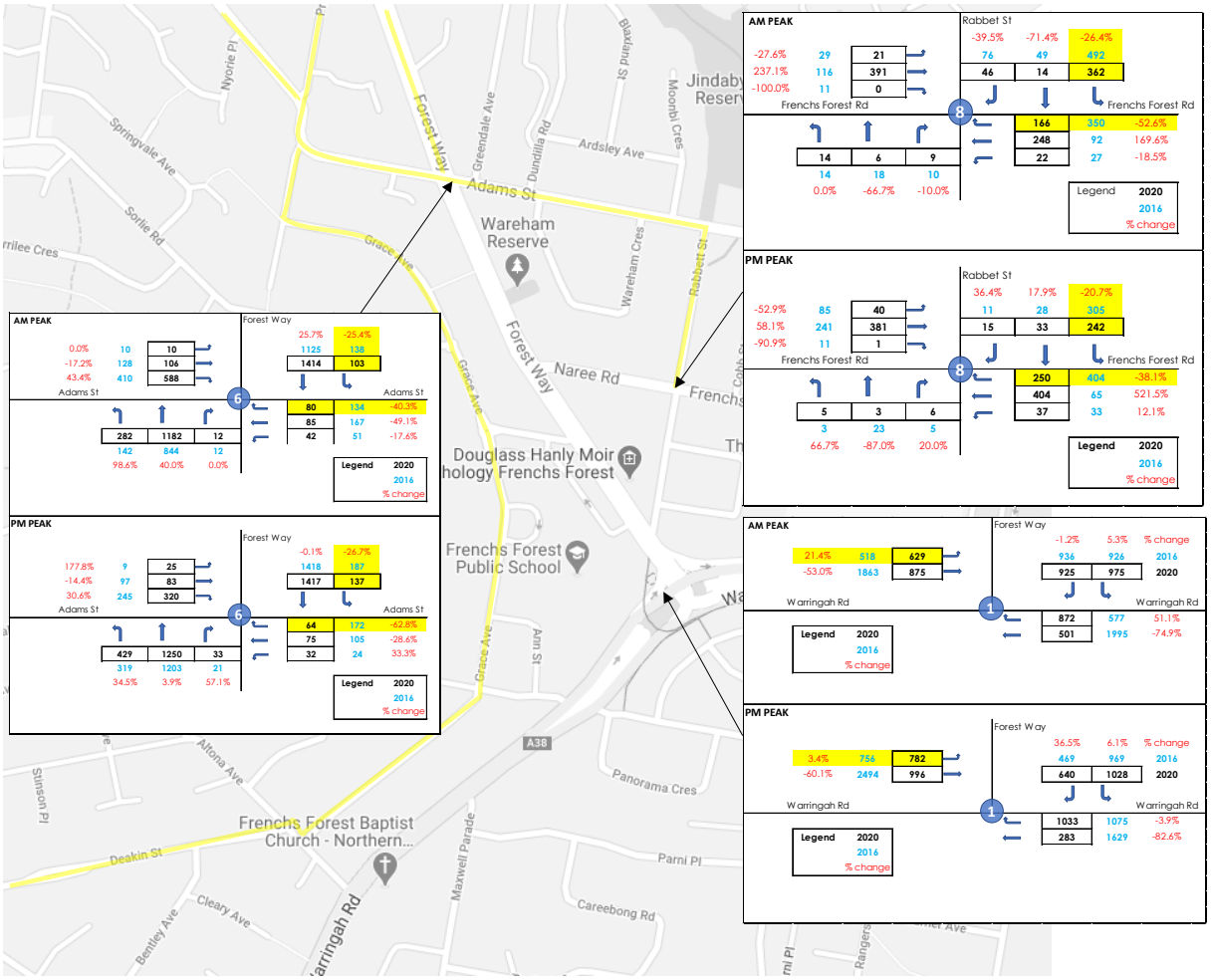
3.4.4 Comparison with the Pre-Construction Traffic Volumes

Direct comparison cannot be made with the EIS for the pre- and post-construction traffic volumes as the EIS does not provide traffic volumes on local roads during the pre-construction period. TTPP undertook traffic surveys at locations as shown in Figure 1.4 and Figure 1.5 under pre-construction conditions in 2016 that were used for construction traffic advice.

Comparison has been made for the specific turning movements at the following arterial road intersections under the pre- and post-construction conditions to determine possible changes in rat-running patterns on the local road network as shown in Figure 3.15:

- Forest Way-Adam Street intersection (southbound left turn movement and westbound right turn movement) – as opposed to rat-running on local roads such as Adam Street and Rabbett Street
- Frenchs Forest Road West-Rabbett Street intersection (southbound left turn movement and westbound right turn movement) – as opposed to rat-running on the local roads such as Adam Street and Rabbett Street
- Warringah Road-Forest Way intersection (eastbound left turn movement) – as opposed to rat-running on the local roads such as Grace Avenue

Figure 3.15: Comparison of the Pre- and Post-Construction Rat-Running Traffic Volumes



Despite daily fluctuation in traffic volumes, the comparison provided in Figure 3.15 is considered representative of the typical pre- and post-construction conditions to make the following commentary on traffic patterns:

- Increase in traffic volumes turning left from Warringah Road to Forest Way in the morning peak hour, but this movement has steady traffic volumes in the evening peak hour as compared with the 2016 data. This indicates motorists continue to use the Grace Avenue route out of habit in the evening peak in spite of significant improvement in network performance on arterial roads.
- Reduction in traffic volumes turning right from Frenchs Forest Road West onto Rabbett Street, and turning left from Forest Way onto Adam Street in the morning and evening peak hours. This indicates more motorists stay on arterial roads, as opposed to rat-running along the Adam Street and Rabbett Street route to avoid the Frenchs Forest Road West and Forest Way intersection.

As the Project significantly improves network operation with less delays on arterial roads (Section 3.2.5), comparison of the pre- and post-construction conditions based on the available data indicates motorists are more willing to stay on arterial roads instead of taking

short-cuts through local roads. However, an exception is seen in the left turning movement from Warringah Road onto Forest Way which suggests Grace Avenue is likely to be the preferred route choice to avoid the Warringah Road and Forest Way intersection.

As Grace Avenue and Adams Street currently carry more traffic volumes than their maximum environmental capacity, it is recommended Northern Beaches Council monitor the use of residential roads by through traffic and ensure it is not to the detriment of the local amenity. If required, investigation into local road traffic management schemes should be considered to limit the filtration of through traffic onto residential streets to maintain amenity in the neighbourhood.

3.5 Parking Conditions

The increase in capacity on Frenchs Forest Road is an essential component of providing access to the Northern Beaches Hospital and improving network performance along the road network. On-street parking has been removed or restricted along Frenchs Forest Road in order to increase road capacity.

In order to mitigate parking loss on Frenchs Forest Road, alternative parking arrangements have been provided for The Forest High School and Skyline shops, and relocation of the drop off facility at the school.

In addition, parking arrangements on local roads south of Warringah Road have been altered to minimise long term parking near the access to the footbridges as a way to prevent hospital staff and visitors parking on Karingal Crescent.

3.5.1 The Forest High School

3.5.1.1 Pre-Construction

Prior to the Project, The Forest High School car park provided approximately 50-60 parking off street spaces, in addition to on-street parking spaces:

- 27 marked spaces in the eastern car park
- Approximately 30 informal and unmarked spaces in the western car park (hardstand).

3.5.1.2 Post-Construction

Two formal car parking areas are currently available with a total of 101 spaces:

- 59 spaces (including one accessible space) in the western car park
- 42 spaces (including one accessible space) in the eastern car park

Parking provision is sufficient to accommodate the typical parking demands in relation to staff and student parking, and is also sufficient to cater for parents drop off and pick up during the before and after school periods. Most parents do not dwell at the drop off zone in the western car park for too long so that the three spaces in the drop off zone generally have a quick turnover. Some parents park in the regular spaces while awaiting children to finish school in the afternoon.

3.5.2 Skyline Shops

3.5.2.1 Pre- and During Construction

Prior to the Project, Skyline shop customers parked on the surrounding roads along Frenchs Forest Road East and Patanga Road.

During construction of the Project, some of the on-street parking spaces were removed and displaced by a temporary 16 space car park located east of the shops.

3.5.2.2 Post-Construction

The Project has altered the parking arrangement around Skyline shops. At the time of preparing this review, the temporary car park located to the east of the shops which contains 16 parking spaces was closed.

A breakdown of the current parking provision in the vicinity of the Skyline shops is shown as follows:

- Three angled parking spaces (including one accessible space) outside the shops on the north side of Frenchs Forest Road East
- 19 angled parking spaces (including one accessible space) with one hour restriction on the south side of Frenchs Forest Road East
- 12 angled parking spaces with three hour restriction on the west side of Patanga Road
- Approximately 17 spaces (including one accessible space) in the new car park north of Skyline shops. This new car park was opened to the public after the OTPR site inspection.
- Total 51 parking spaces (including three accessible spaces).

Observations between 9am and 11am and again between 2:30pm and 4pm on a typical Thursday indicate that parking occupancy was about 70% full at the on-street parking spaces in the vicinity of the Skyline shops. It was also observed that a vehicle parked at the mail zone outside the closed car park for a short time period when the three parking spaces on the shop front were occupied.

The new car park with approximately 17 spaces has been opened to public as a displacement for closure of the temporary car park.

Based on the above, the increase in parking spaces is sufficient to accommodate the customers parking demand associated with Skyline shops.

3.5.3 Local Roads South of Warringah Road

The widening of Warringah Road removed some 38 on-street spaces on Bantry Bay Road, Hilmer Street and Fitzpatrick Avenue East. This would not impose significant impact because parking demand in the affected roads was mostly generated by the retail premises that have been demolished for the Project.

The EIS indicated that on-street parking was not permitted along Warringah Road, Wakehurst Parkway, Allambie Road and Forest Way during construction. However, unrestricted on-street parking was permitted on the local roads south of Warringah Road, including Bantry Bay Road, Hilmer Street, Fitzpatrick Avenue East and Aquatic Drive.

The Environmental Assessment expressed a concern that on-street parking along these local roads would be occupied by hospital staff and visitors, given footbridges and signalised crossing facilities are provided across Warringah Road in the vicinity of these local roads.

Council has since implemented the following changes to parking restrictions on these local roads:

- No Parking zone (8am to 4pm Monday to Friday, 8am to 1pm Saturday) on the north side of Karingal Crescent between Akora Street and the 90 degree bend to prevent long term parking near the footbridge.
- Restricted two hour parking (8:30am to 6pm Monday to Friday, 8:30am to 12:30pm Saturday) on both sides of Bantry Bay Road between Warringah Road and Primrose Avenue.
- No Stopping zone (6am to 9am Monday to Friday) on the west side of Hilmer Street between Warringah Road and Primrose Avenue.

Long term parking is still available further south on these local roads for hospital staff to and from work in the early hours and late at night.

Parking occupancy was observed to be low to moderate for the short term and long term parking along Karingal Crescent, Bantry Bay Road and Hilmer Street on a typical Thursday between 7:30am and 11am and again between 3pm and 6pm. This indicates operation of Northern Beaches Hospital would not adversely affect parking conditions on these local roads south of Warringah Road.

3.6 Pedestrian and Cyclist Safety and Connectivity

The EIS emphasised the importance of safe and efficient pedestrian connectivity across arterial roads to hospital, school, shops and bus stops. The Project has improved pedestrian

safety and connectivity with the provision of additional crossing facilities across the road network to better facilitate pedestrian movements to these pedestrian generators.

3.6.1 Pre-Construction

The EIS documented that prior to the Project, there was low pedestrian connectivity through the network due to missing signalised crossings at some of the legs of the following intersections:

- North and west legs of the Frenchs Forest Road and Wakehurst Parkway intersection
- West leg of the Warringah Road and Wakehurst Parkway intersection
- Warringah Road and Allambie Road intersection (only east leg with crossings)

There was also no formal pedestrian crossing facilities at the following non-signalised intersections:

- Frenchs Forest Road East and Allambie Road intersection (Skyline shops)
- Forest Way and Naree Road intersection
- Warringah Road and Bantry Bay Road
- Intersections with local streets on the north side of Frenchs Forest Road East between Patanga Road and Wakehurst Parkway.

There was no formal pedestrian crossings on Forest Way between the mid-block signalised crossing outside the Forestway Shopping Centre and Adam Street.

3.6.2 Post-Construction

3.6.2.1 Pedestrian Facilities

To address the deficiencies identified in Section 3.6.1, the new pedestrian facilities are of a higher standard with the following additional signalised crossing locations to encourage higher level of usage and compliance:

- Crossings at all four legs of the Frenchs Forest Road and Wakehurst Parkway intersection
- North, south and west legs of Warringah Road and Allambie Road intersection
- South and west legs of Frenchs Forest Road East and Allambie Road intersection (Skyline shops)
- East and south legs of Forest Way and Naree Road intersection
- North, south and east legs of Frenchs Forest Road East and Romford Road intersection (between Patanga Road and Wakehurst Parkway)

Of note, signalised pedestrian crossings are provided at the north, east and south legs only of the Warringah Road and Wakehurst Parkway intersection. This is considered acceptable to minimise traffic delays at this enlarged intersection, and also as a deterrent to people who may park in the local roads south of Warringah Road and walk to Northern Beaches Hospital. For the same reason, no signalised pedestrian crossings are provided at the Warringah Road and Hilmer Street intersection located directly outside the hospital. Instead, a footpath is located west of Hilmer Street for pedestrian connectivity to the hospital from the south.

The Warringah Road and Bantry Bay Road intersection has been converted to a priority T-junction with less points of conflict at the uncontrolled pedestrian crossing location, as compared with the formal priority cross intersection.

3.6.2.2 Pedestrian Desire Lines

Key pedestrian desire lines are outside The Forest High School during the before and after school period, around the Skyline shops and around Forestway Shopping Centre. Observations indicate that pedestrian movements across the road are well accommodated by the following pedestrian crossing facilities:

- In the vicinity of Forestway Shopping Centre:
  - Mid-block signalised crossing on Forest Way between Naree Road and Warringah Road
  - Signalised pedestrian crossings at the Forest Way and Frenchs Forest Road West intersection
- In the vicinity of Skyline shops:
  - Refuge island on Frenchs Forest Road East, east of Patanga Road
  - Signalised pedestrian crossings at the Frenchs Forest Road East, Patanga Road and Allambie Road intersection
  - N.B. Customers that park in the replacement car park do not need to cross the road to/from Skyline shops as the car park is located directly north of the shops.
- In the vicinity of The Forest High School
  - Signalised pedestrian crossings at the Frenchs Forest Road West and Bluegum Crescent and School Access intersection
  - Signalised pedestrian crossings at the Frenchs Forest Road West and Wakehurst Parkway intersection.

Pedestrians generally use designated facilities to cross the roads, except for a number of students who cross Frenchs Forest Road West outside the crossing facility. Site observations indicate that pedestrian phase times are sufficient to cater for pedestrian demands during the peak periods, especially across arterial roads such as Warringah Road, Frenchs Forest Road, Forest Way and Wakehurst Parkway.

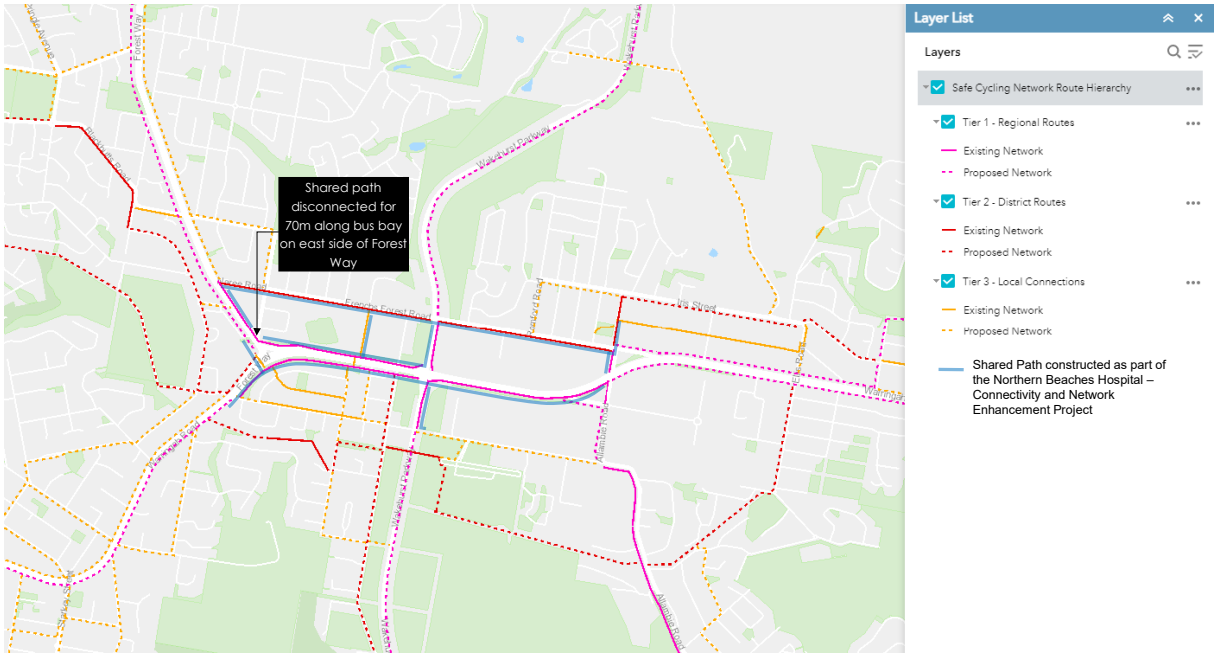
From observations, pedestrian movements are relatively lower outside Northern Beaches Hospital but signalised crossing facilities are provided on all legs of the Frenchs Forest Road West and Gladys Avenue intersection to cater for pedestrian movements.

3.6.2.3 Shared Path Facilities

New shared paths are of suitable quality to provide walking and cycling routes within the project area with the provision of good wayfinding signs. Shared paths are provided along the following arterial roads as depicted in blue in Council's Bike Plan (August 2020) as shown in Figure 3.16:

- Shared path on the north side of Warringah Road (between Forest Way and Wakehurst Parkway)
- Shared path on the south side of Warringah Road (between Fitzpatrick Avenue East and Allambie Road)
- Shared path on the east side of Forest Way (between Naree Road and the mid-block signalised crossing north of Rabbett Street)
- Shared path on the west side of Forest Way (between the footbridge and mid-block signalised crossing north of Rabbett Street)
- Shared path on the south side of Frenchs Forest Road East and West (between Forest Way and Allambie Road)
- Shared path on the east side of Patanga Road (between Frenchs Forest Road East and Dareen Street)
- Shared path on the west side of Allambie Road (between Patanga Road and Warringah Road)
- Shared path on the east side of Hilmer Street (between Warringah Road and hospital)
- Shared path on the east side of Wakehurst Parkway (between Frenchs Forest Road and Aquatic Drive)
- Shared path bridge across Warringah Road west of Forest Way
- Shared path bridge across Warringah Road west of Hilmer Street.

Figure 3.16: Existing and Proposed Bicycle Routes



Source: Northern Beaches Council Bike Plan 2020 – Safe Cycling Network (last accessed 19/2/2021) (https://northernbeaches.maps.arcgis.com/apps/webappviewer/index.html?id=abedc5db2afb4951a5596b64acc2641e)

Notably, the shared path on the east side of Forest Way discontinues for approximately 230m between the mid-block signalised crossing and Warringah Road, while the shared path continues across Forest Way and connect with the footbridge across Warringah Road west of Forest Way. However, this discontinuous shared path is shown as continuous on the east side of Forest Way on Council's Bike Plan 2020 as such it is recommended Council update the Bike Plan to better reflect the existing facilities.

Connectivity of pedestrian and cycle facilities within the project area generally serves the demand and fringes well with existing and proposed facilities.

3.6.2.4 The Forest High School

New signalised pedestrian crossings at the Frenchs Forest Road and Bluegum Crescent intersection provide safe crossing facilities for local residents and students across Frenchs Forest Road between the bus stop and the school.

A footpath is provided along the eastern boundary of carpark but not at the car park driveway off Frenchs Forest Road West (Figure 3.17). It was observed a large group of students walk on the roadway into/out of school via the driveway (Figure 3.18). Given TCS allows a filtered right turn phase on Frenchs Forest Road West, motorists may accept a small gap when making a right turn movement into the car park which may increase the risk of collision with a pedestrian walking on the driveway.

It is noteworthy to mention that there is a pedestrian gate on Frenchs Forest Road West approximately 60m east of the car park driveway at the Warringah Road-Bluegum Crescent.

Figure 3.17: No Footpath at the School Car Park Driveway

Figure 3.18: Students Leave School via the Car Park Driveway

It is understood that the school is looking to have Council install a pedestrian gate to separate pedestrians and motorists at the access driveway. In light of this, consideration should be given to extending the footpath all the way to the drop off zone for pedestrian accessibility.

The Forest High School staff stated that pedestrian safety is a concern especially when students rush to bus stops for the 3:00pm and 3:30pm services after school. The school principal suggests moving back the services by 10 minutes to allow sufficient time for students to reach the bus stop. Consideration could be given to consulting with STA for the possibility of adjusting the timetable without affecting connectivity with other services.

3.7 Property Access

Frenchs Forest Road West is signposted with Clearway At All Times signs with yellow kerbside line marking. Sight distance has been improved given there are no parked vehicles on Frenchs Forest Road West.

Observations indicate that there are generally no notable issues for vehicles accessing or exiting property driveways or side roads to/from Frenchs Forest Road during the morning and evening peak periods. Delay waiting to join Frenchs Forest Road from properties or side roads is at a minor to moderate level.

Motorists wishing to turn right could also make a left turn instead if the perceived delay becomes too long. As discussed in Section 3.2.5, the assessed intersections perform at Level of Service D or better without any significant delays.

4 Register of Traffic Issues

The FY JV has received community feedback during construction regarding construction progress and traffic changes and property access. A number of local residents commented that they have benefited from the improved traffic flows in the surrounding road network and are happy with the outcome.

The FY JV provided the traffic complaints from the Consultation Manager database for the time period between 1 May 2020 and 17 November 2020, as May 2020 was when construction was substantially complete.

A summary of traffic related issues is provided in Table 4.1 with details on the raised issues and resolutions.

Table 4.1: Register of Traffic Issues

Key Traffic Issue	Detail	JV / TTPP Notes
Parking reduction (Skyline)	Skyline car park closure as such customers are to park on surrounding street. The businesses at Skyline shops have continued to be significantly impacted by the reduction in car parking and the distance that customers have to walk to access the shops to be very unsatisfactory.	A new car park has been opened north of the Skyline shops. The parking provision is approximately 17 spaces which is similar to the car park that has been closed.
Footpath conditions	- Dangerous hole in the nature strip on the western side of the footpath near the intersection between Cobb Street & Frenchs Forest Road - Dangerous Hole on Forest Road near the lights on the western side at the intersection with Naree Road – which was a brand new road 12 months ago but this pot hole is just temporarily fixed every few weeks but never fixed properly.	JV advised works have been completed.
Property access	Incomplete repair/ construction work at various property accesses on Warringah Road and Forest Way.	JV advised works have been completed.
Lighting on footbridge	When will lights be completed on the Forest Way pedestrian bridge?	Lights have been installed on both footbridges across Warringah Road.
Pedestrian fence	Will there be permanent fencing on the Warringah Road slip lane to Forest Way northbound, near the school wombat crossing.	There are no school wombat crossing located near the school or adjacent to the left turn slip lane. There was no pedestrian fence adjacent to the left turn slip lane at the time of the site inspection. It is recommended TfNSW to perform ongoing monitoring is required to ensure pedestrian safety at this location and determine the need of a pedestrian fence.
Phase time for the Warringah Road eastbound right turn movement	Phase time for the eastbound right turn movement (dual right turn) is 5 seconds only, resulting in vehicles having to wait for three cycles to make the right turn. However, the phase time for the westbound through movement has been	TTPP notes that the phase time allocated to the eastbound right turn movement is typically 20 to 30 seconds and the westbound through movement is about 60 to 80 seconds (including

Key Traffic Issue	Detail	JV / TTPP Notes
onto Wakehurst Parkway	allocated more than required, given less traffic use the surface road.	inter-green time) during the morning and evening peak periods. Despite the dual right turn lanes, right turn traffic form long queues which cannot be cleared in one cycle. TTPP agrees that the phase time allocated to the westbound through movement seems excessive. Refer to Section 3.2.5.2 for a discussion on optimised signal settings where more phase time being allocated from Phase D (westbound through movement) to Phase E (eastbound right turn movement) which would reduce the delay significantly for the eastbound right turn movement.

Source: JV

5 Interview with Stakeholders

The FY JV interviewed stakeholders on traffic-related matters in late November and early December 2020. A summary of the stakeholder comments is provided in Table 5.1 with full details provided in Appendix C.

Table 5.1: Interview with Stakeholders

Stakeholder	Comments	Key Traffic Issue	TTPP Notes
Frenchs Forest High School (Rosemary McDowall)	1) Council provided a fence around the perimeter of the school which has students entering/exiting school on Frenchs Forest Road via the driveway. The driveway is access for teacher/worker car parks. School is looking to have the council install a pedestrian gate so the students can move away from the cars. There has been an incident where a student climbed off #136 and stepped in front of the bus to cross Frenchs Forest Road to get to school. The student was hit by a car. Students are constantly crossing Frenchs Forest Road without using the traffic lights to get to the #136 bus. Rosemary would like for the STA to consider moving the 3.00 and 3.30pm buses by ten minutes for this gives the students time to use the traffic lights and cross safely. There have also been some reports of students crossing Warringah Road and not using the Pedestrian bridge. Not many though. 2) The bus lane runs along the stretch of Frenchs Forest Road and runs past the drive way. This creates poor vision for the drivers accessing and exiting the driveway. Students also have been known to run out in front of the buses to cross French forest Road to catch the #136 bus. Buses have been known to pull up at the school to drop off and has blocked the driveway.	• No separation of pedestrian and vehicle movements in car park driveway • Pedestrians crossing Frenchs Forest Road West and Warringah Road outside pedestrian facilities	**Pedestrian Access at School Car Park Driveway** As discussed in Section 3.6.2.4, it is understood that the school is looking to have Council install a pedestrian gate to separate pedestrians from passing vehicles at the western driveway. In addition, consideration should be given to extending the footpath to the drop off zone for pedestrian accessibility. **Jaywalking** It is noted that student behaviour whilst leaving school is a school responsibility. FY JV has consulted with STA regarding the possibility of adjusting the timetable by moving two services during the after school period by 10 minutes to allow more time for students to get to the bus stop without rushing across the road. STA confirms that #136 is now #166 with 10 minute intervals between 3pm and 6:30pm. As such, students have no need to run unsafely for the 3pm and 3:30pm services. Ms Rosemary McDowall has been notified of the STA response. This comment has now been closed. It is recommended TfNSW to perform ongoing monitoring of jaywalking across multi-lane arterials Frenchs Forest Road and Warringah Road. **Bus Lane Across School Driveway** FY JV has consulted with STA regarding bus drivers sometimes park across the school driveway. STA advised they would notify drivers through company media not to block the driveway at this location. Ms Rosemary McDowall has been notified of the STA response. This comment has now been closed.
Frenchs Forest High School (Kylie Mills-Coleman)	Traffic has improved and the pedestrian bridges mean Kylie can walk to work at the school from Allambie Road. She has no traffic issues with the exception of the car park area at the top of the school. This is the Drive way entrance at the bus stop area on Frenchs Forest	• Access to the eastern school car park is difficult given it is priority control	Downstream congestion is primarily caused by the long traffic queues further downstream towards Chatswood and the traffic merge from four lanes to three lanes at the western end of the slot.

Stakeholder	Comments	Key Traffic Issue	TTPP Notes
	Road. If she does need to drive to work she prefers to use the bottom carpark as the lights assist with safe exiting. The fences which have been installed around the school has improved safety. Kylie has noted the traffic at peak times is congested at the western end of the slot from Wakehurst Parkway all the way through past Fitzpatrick Avenue East.	and located in proximity to bus stop. • Traffic congestion at the western end of the slot from Wakehurst Parkway all the way through past Fitzpatrick Avenue East.	The rolling traffic queues at times extend to the Warringah Road and Wakehurst Parkway intersection but traffic moves forward slowly without imposing significant impact on intersection performance.
Northern Beaches Council (Phil Devon)	Traffic at the western end of Warringah Road has issues with traffic build up at the slot exit and lanes merging during peak times. Council has conducted counts and note local roads have increased traffic flow around the build up areas of Warringah Road and Wakehurst Parkway. An increase of traffic along Wakehurst Parkway and north west such as Ellis Road and Oxford Falls Road. Bantry Bay Road, Hilmer Street and the surrounding local roads are also taking an increase in local traffic getting around the congestions of WB Warringah Road from Forest Way during peak times. Local residents are resistant to the road network change such as Rabbit Street and Bantry Bay Road. Rabbit Street with the traffic calming being removed and Bantry Bay Road with the traffic changes. The traffic network is now being tested due to the Covid-19 restrictions being lifted and traffic flow has increased.	• Traffic congestion at the western end of the slot from Wakehurst Parkway all the way through past Fitzpatrick Avenue East. • Rat-running along local roads south of Warringah Road.	Refer to the above response on the traffic congestion at the western end of the slot. The Bantry Bay Road / Hilmer Street and Fitzpatrick Avenue East route is an alternative route to avoid Warringah Road. However, site observations did not indicate significant traffic issues on these local roads in the morning peak period. The November 2020 survey data indicates that some 51 vehicles possibly took the Bantry Bay Road and Fitzpatrick Avenue East route to bypass Warringah Road in the morning peak hour (8:00am to 9:00am). This is based on the discrepancy in traffic volumes on Warringah Road westbound between Wakehurst Parkway and Hilmer Street, as such not all vehicles are necessarily rat-running.
Northern Beaches Council (Kajal Todd)	Traffic flow has improved in the area. Happy with the outcome. Kajal is also a local resident and benefits from the improved flow in her personal life activities.	N/A	Noted.
Health Infrastructure (Michael Player)	Congestion was terrible in the area prior and during some of the construction phase.	N/A	Noted.

Stakeholder	Comments	Key Traffic Issue	TTPP Notes
	Traffic flow improved once works completed. Is not sure if the cost of the project would make a good business case. Would like to debate the cost and the overall benefits of the improvement to traffic flow. Experience improved travel times in the area greatly. Complex engineer job would question if there would have been a better less complex design option. Over all experience is a great improvement to the traffic flow in the Northern Beaches area.		
STA Buses (Patrick Wu)	1) Any comments on the duration of the bus jump phase? Answer – The Forest way and Warringah Road, good for STA, safe operation, only comments for improvement would be to have warning signs for the other drivers alerting to caution for the bus drivers coming back out of the pickup/drop off lanes. Need to allow for better vision for the bus drivers pulling out. 2) Effectiveness of the new bus priority measures and changes in travel times Answer – Yes Improvements here, allows for more traffic 3) Any significant improvements in bus performance as compared with the pre-construction situation Answer – Yes there have been great improvements. Only comment to add is Rabbett St turning in to Forest way ready to turn right in to Warringah Road needs to have a clear zone so the buses do not cue up coming out blocking left turn lane. 4) Any other comments on post project bus operations? Answer – Good project, tidied up corners and improved travel.	Difficulty in pulling out from bus bay on Forest Way southbound	Sight distance is generally acceptable along Forest Way. Buses should have the following signage at the back of the bus to alert motorists to give way to buses.  A Keep Clear zone has been installed at the Forest Way and Rabbett Street intersection. This enables bus drivers to pull out from the bus bay towards the kerbside lane which is a short bus lane for turning right onto Warringah Road.

6 Summary and Conclusions

6.1 The Project

The Northern Beaches Hospital Connectivity and Network Enhancement project Stage 1 was opened to traffic in October 2018 to supplement the operation of the new Northern Beaches Hospital. Stage 1 works involved the upgrade of Frenchs Forest Road East and West and Naree Road from a single to dual carriageway, improvement of pedestrian access as well as bus stop upgrades servicing Northern Beaches Hospital.

Stage 2 works involved the upgrade of Warringah Road to improve the performance of the road network to reduce congestion around the hospital, and construction of a 1.3 kilometre long underpass and three bridges at the Forest Way, Hilmer Street and Wakehurst Parkway intersections. It also includes key intersection improvements, bus stop upgrades, new shared paths and new pedestrian bridges. Stage 2 works were completed and opened to traffic in March 2020.

An Operation Traffic Performance Review has been undertaken in response to the Ministers Conditions of Approval and the Submission Report requirements to review the before and after comparison of the traffic volumes and modelling results, and develop measures to mitigate the identified transport, parking, pedestrian/cyclist and access issues on the arterial and local road networks. This Operation Traffic Performance Review also made reference to EIS results and recommendations made in Planning Secretary's Environmental Assessment Report based on the Stage 1 and 2 conditions inclusively.

Consultation with TfNSW was undertaken regarding the required traffic modelling software and modelling years. It is confirmed that SIDRA modelling is fit for purpose for this Operation Traffic Performance Review to identify capacity issues of key intersections within the Project area. The EIS predicted intersection performance for the opening year (2018) and 10 year planning horizon (2028), with and without the Project. Given the Project was delivered in 2020, modelling years would be 2020 and 2030 accordingly for comparison with the EIS results.

6.2 Traffic Surveys

In order to establish the existing traffic conditions eight months after the opening of Project, a series of traffic surveys were undertaken at 13 key intersections on Thursday 26 November 2020, 11 mid-block locations on arterial roads and five mid-block locations on local roads in November/December 2020.

Historic AADT on Warringah Road indicates that the average daily traffic volumes recorded in the month of October and November 2020 are in-line with the 2017 to 2019 AADT, with a 5% to 16% increase from the 2019 AADT. This indicates typical traffic volumes have resumed

when Covid-19 restrictions are lifted, as such survey data collected in November 2020 is considered fit for purpose in this assessment.

The intersection counts also indicate the following peak hour traffic volumes:

- Warringah Road underpass
  - 2,098 vehicles in the morning peak hour (958 vehicles eastbound and 1,140 vehicles westbound)
  - 2,345 vehicles in the evening peak hour (1,205 vehicles eastbound and 1,140 vehicles westbound)
- Warringah Road Surface Road (between Forest Way and Hilmer Street)
  - 3,179 vehicles in the morning peak hour (1,865 vehicles eastbound and 1,314 vehicles westbound)
  - 3,378 vehicles in the evening peak hour (2,042 vehicles eastbound and 1,336 vehicles westbound)

The EIS did not provide traffic volumes for the opening year to enable a direct comparison.

The intersection counts indicate that Northern Beaches Hospital generated in the order of 443 to 465 vehicles in the morning and evening peak hours at the two main access points. This represents 50% to 52% of the EIS's estimated traffic generation of 887 vehicles in each peak hour based on the TfNSW traffic generation rates of similar hospitals. As Northern Beaches Hospital has been in operation for over two years, this may represent an overprediction, unless the operation of the hospital was far from its capacity of 488 beds, 1,300 staff and 1,000 outpatients per day.

Based on the review of above traffic volumes, it is concluded that the background traffic volumes have resumed to the typical pre-Covid level but the hospital traffic generation is 50% lower than the EIS estimate.

6.3 Intersection Performance

Field monitoring in 2020 indicates that the road network is performing better than the EIS prediction for 2018 (project case) in both AM and PM peak hours.

The EIS predicted the Stage 2 Project would reduce average delays compared with the 'Do Minimum' scenario and concluded that the Stage 2 project would generally improve the performance of the road network around the hospital and along the key arterial roads.

This Operation Traffic Performance Review predicts that all assessed intersections would operate better than the EIS Stage 2 results, with 13 out of 14 intersections operating at an acceptable Level of Service D or better in both morning and evening peak hours, except for the intersection of Warringah Road and Allambie Road which is forecast to be over capacity

in the morning peak but at an acceptable Level of Service D during the evening peak. These results are still better than the EIS Stage 2 results.

Modelling results for 2020 and 2030 indicate that the Project provides enhancement to road capacity and would be sufficient to accommodate traffic generated by the hospital and background growth in the long term.

6.4 Observations

As part of the review, observations of traffic conditions and road user behaviours were made during the morning and afternoon periods in November 2020 when Covid restrictions were lifted. A short summary is provided in the following sections to discuss the effectiveness of bus priority treatment, traffic conditions on rat-running conditions, changes in parking arrangement, pedestrian/cyclist connectivity and safety, and property access.

6.4.1 Bus Priority Treatment

Additional bus lanes are provided on Frenchs Forest Road (East and West) and Warringah Road to improve the efficiency of bus services through busy intersections. From observations, the bus performance is satisfactory across the road network during both morning and evening peak periods.

Bus priority treatment is provided at the Warringah Road and Forest Way intersection which enables buses to have a jump start for about four seconds on Warringah Road eastbound, and subsequently merge with the adjacent through lane before general vehicles are given a green light. The jump start was observed to operate well during both morning and evening peak periods.

6.4.2 Rat-Running on Local Roads

While the assessed intersections operate acceptably at Level of Service D or better, the rat-running routes identified in the EIS are still being used to avoid traffic signals and the intermittent long but brief traffic queues on Forest Way, Frenchs Forest Road East and Warringah Road.

Tube count data was recorded on the common rat-running routes including Grace Avenue, Deakin Street, Wearden Road, Adams Street and Woodlands Road. It was determined that two out of five rat-running routes currently operate over the environmental capacity being a maximum of 300 vehicles (two-way) on a local road and 500 vehicles (two-way) on a collector road. These overcapacity rat-running routes include:

- Grace Avenue as a local road carries 666 to 767 vph in the morning and evening peak hours, which significantly exceeds the environmental capacity of 300 vehicles (two-way)

- Adams Street as a collector road carries 497 to 565 in the morning and evening peak hours, which marginally exceeds the environmental capacity of 500 vehicles (two-way).

However, a drive-through along Grace Avenue northbound in the evening peak hour was smooth without any excessive delays even in the vicinity of Forestway Shopping Centre and Frenchs Forest Public School.

Further review into the pre- and post-construction traffic volumes at the arterial road intersections indicates an increase of traffic turning left from Warringah Road to Forest Way in the morning peak hour, but this movement has steady traffic volumes in the evening peak hour as compared with the 2016 pre-construction data. This indicate motorists continue to use the Grace Avenue route out of habit in the evening peak in spite of significant improvement in network performance on arterial roads.

Another potential rat-running route is the Bantry Bay Road and Fitzpatrick Avenue East route to bypass Warringah Road in the morning peak period.

It is recommended Council continues to monitor the use of local roads by through traffic and ensure it is not to the detriment of the local amenity. If required, investigation into local road traffic management schemes should be considered to limit the filtration of through traffic onto local streets to maintain residential amenity in the neighbourhood.

6.4.3 Parking Conditions

A good outcome has been achieved for parking displacement as a result of removing on-street parking on Frenchs Forest Road. This has significantly improved road capacity and resolved parking issues in proximity of The Forest High School and Skyline shops, as follows:

- Parking provision is sufficient to accommodate the typical parking demands in relation to staff and student parking, and is also sufficient to cater for the drop off zone located within the western car park.
- The increase in parking provision around Skyline shops is sufficient to accommodate the typical customer parking demands on the new on-street parking spaces and the car park on the east side of Patanga Road.

Parking conditions on the local roads south of Warringah Road have changed near the access to the footbridges across Warringah Road to minimise long term parking which would deter long term parking associated with the hospital.

Low to moderate parking occupancy on Karingal Crescent, Bantry Bay Road and Hilmer Street was observed. This indicates the operation of Northern Beaches Hospital has not adversely affected parking conditions on these local roads south of Warringah Road.

6.4.4 Pedestrian and Cyclist Safety and Connectivity

Signalised intersections within the Project area have been upgraded to provide full pedestrian crossing on all legs, except for the west leg of the Warringah Road and Wakehurst Parkway intersection. This is considered acceptable to minimise traffic delays, and also as a deterrent to people who may park in the local roads south of Warringah Road and walk to the hospital.

The walking and cycling network are of a good standard with sufficient wayfinding signs for guidance. Connectivity of pedestrian and cycle facilities within the project area generally serves the demand and fringes well with existing and proposed facilities.

The shared path discontinues for 230m on the east side of Forest Way behind a bus zone between the mid-block pedestrian crossing and Warringah Road. Council's Bike Plan 2020 indicates a continuous shared path along the east side of Forest Way all the way to Warringah Road, as such it is recommended Council updates their Bike Plan to better reflect the existing facilities.

6.4.5 Property Access

Frenchs Forest Road West is signposted with Clearway At All Times signs with yellow kerbside line marking. Sight distance has been improved given there are no parked vehicles on Frenchs Forest Road West. Observations indicate that there are generally no notable issues for vehicles accessing or exiting property driveways or side roads to/from Frenchs Forest Road during the morning and evening peak periods.

6.5 Issues Raised By Community and Stakeholders

Key issues raised by the community and stakeholders for the post-construction conditions include:

- A resident reported that phase time provided to the Warringah Road eastbound right turn movement onto Wakehurst Parkway was not enough to clear the traffic queues in the dual lanes, whilst the westbound through traffic was given more than necessary phase time. It has been tested in SIDRA modelling under optimised signal settings that additional phase time assigned to the heavy eastbound right turn movements, coupled with a reduction of phase time to traffic movements in lower demand, would achieve a significant 50% reduction to the delay of this critical movement, while maintaining the same overall Level of Service of the intersection. It is recommended Transport Management Centre (TMC) to consider adjusting SCATS to make better use of the phase times to improve the performance of the right turn movement on Warringah Road eastbound onto Wakehurst Parkway.

- The Forest High School representative commented on pedestrian safety, buses along the bus lane blocking driveway access, difficulty in accessing the eastern car park, and congestion at the western end of the slot from Wakehurst Parkway all the way past Fitzpatrick Avenue East.
- Northern Beaches Council representative commented on congestion at the western end of the slot from Wakehurst Parkway all the way past Fitzpatrick Avenue East, and rat-running on local roads south of Warringah Road. The November 2020 survey data indicates that some 51 vehicles possibly took the Bantry Bay Road and Fitzpatrick Avenue East route to bypass Warringah Road in the morning peak hour (8:00am to 9:00am), but not all vehicles were necessarily rat-running.
- Health Infrastructure representative commented that the Project improves traffic flows and travel times on the road network.
- STA representative commented that the Project has improved bus operations across the road network with better turning path at intersections, but reported that there has been difficulty with buses pulling out from the bus bay on Forest Road southbound.

6.6 Conclusion

The existing and residual impacts of the Project have been identified herein and can be appropriately managed or mitigated through the following actions by the JV or relevant stakeholders as shown in Table 6.1.

Table 6.1: Recommendations

Key Traffic Issue	Detail	Responsible by	Reference in this OTPR
Network performance	Traffic Management Centre to consider adjusting SCATS to make better use of the phase times to improve the performance of the right turn movement on Warringah Road eastbound onto Wakehurst Parkway.	Traffic Management Centre	Details on network performance in Section 0 and recommendation in Section 4 and Section 6.5.
Pedestrian and cyclist safety	Council to update Bike Plan 2020 to better reflect the existing connectivity, given a 230m section is discontinuous on the east side of Forest Way.	Northern Beaches Council	Refer to Section 3.6.2.3 for the discrepancy in Bike Plan 2020 with the existing shared use path network.
	The Forest High School to discuss with Council regarding the installation of a pedestrian gate at the western car park and extension of footpath to the drop off zone.	The Forest High School and Northern Beaches Council	Refer to Section 3.6.2.4 and Section 5 for the for the safety issue and recommendation.
	TfNSW to perform ongoing monitoring of jaywalking across multi-lane arterials Frenchs Forest Road and Warringah Road.	TfNSW	Refer to Section 5 for the for the safety issue and recommendation.
	TfNSW to perform ongoing monitoring of pedestrian safety at the Warringah Road and Forest Way intersection and determine the need of a pedestrian fence adjacent to the left turn slip lane on Warringah Road eastbound.	TfNSW	Refer to Section 4 for the for the safety issue and recommendation.

Appendix A

Traffic Surveys

TRANS TRAFFIC SURVEY
trafficsurvey.com.au

Site Wearden Rd

Direction Westbound

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Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	7 days		Weekday		Weekend	
Date	30/11/2020	1/12/2020	25/11/2020	26/11/2020	27/11/2020	28/11/2020	29/11/2020	Total	Average	Total	Average	Total	Average
AM Peak	08:00	08:00	08:00	07:00	08:00	10:00	09:00	N/A	08:00	N/A	08:00	N/A	11:00
PM Peak	16:00	16:00	17:00	15:00	16:00	14:00	13:00	N/A	16:00	N/A	16:00	N/A	13:00
00:00	0	0	0	3	1	4	6	14	2	4	1	10	5
01:00	2	0	0	0	0	3	6	11	2	2	0	9	5
02:00	3	1	1	1	1	2	3	12	2	7	1	5	3
03:00	2	3	3	2	2	2	1	15	2	12	2	3	2
04:00	3	2	2	2	5	2	3	19	3	14	3	5	3
05:00	6	9	2	6	8	2	1	34	5	31	6	3	2
06:00	30	34	17	36	24	13	11	165	24	141	28	24	12
07:00	68	81	76	100	71	22	18	436	62	396	79	40	20
08:00	102	101	96	92	101	44	30	566	81	492	98	74	37
09:00	37	47	65	57	51	46	60	363	52	257	51	106	53
10:00	34	44	31	42	44	72	42	309	44	195	39	114	57
11:00	40	37	34	27	45	58	58	299	43	183	37	116	58
12:00	32	35	35	37	51	42	40	272	39	190	38	82	41
13:00	39	35	43	27	49	50	50	293	42	193	39	100	50
14:00	53	45	61	49	53	56	35	352	50	261	52	91	46
15:00	61	64	56	81	61	34	47	404	58	323	65	81	41
16:00	67	79	59	56	74	43	34	412	59	335	67	77	39
17:00	43	54	75	54	55	51	20	352	50	281	56	71	36
18:00	34	40	46	41	45	34	24	264	38	206	41	58	29
19:00	26	26	26	25	30	28	18	179	26	133	27	46	23
20:00	14	12	17	13	15	20	10	101	14	71	14	30	15
21:00	7	5	13	12	12	12	8	69	10	49	10	20	10
22:00	5	3	2	4	7	7	1	29	4	21	4	8	4
23:00	2	4	0	5	7	10	0	28	4	18	4	10	5
Total	710	761	760	772	812	657	526	4998	716	3815	762	1183	596
% Heavy	2.68%	3.29%	1.58%	1.81%	1.85%	1.52%	0.76%	1.98%		2.23%		1.18%	

TRANS TRAFFIC SURVEY
trafficsurvey.com.au

Site Wearden Rd

Direction Eastbound

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Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	7 days		Weekday		Weekend	
Date	30/11/2020	1/12/2020	25/11/2020	26/11/2020	27/11/2020	28/11/2020	29/11/2020	Total	Average	Total	Average	Total	Average
AM Peak	08:00	08:00	08:00	08:00	11:00	11:00	11:00	N/A	08:00	N/A	08:00	N/A	11:00
PM Peak	17:00	17:00	15:00	15:00	16:00	12:00	12:00	N/A	15:00	N/A	15:00	N/A	12:00
00:00	0	1	1	2	1	2	4	11	2	5	1	6	3
01:00	0	1	3	1	0	3	6	14	2	5	1	9	5
02:00	0	1	0	0	1	3	0	5	1	2	0	3	2
03:00	0	1	0	0	0	1	1	3	0	1	0	2	1
04:00	1	0	1	0	0	1	2	5	1	2	0	3	2
05:00	3	4	3	6	5	3	2	26	4	21	4	5	3
06:00	22	19	12	20	12	3	6	94	13	85	17	9	5
07:00	44	42	38	44	40	11	18	237	34	208	42	29	15
08:00	60	62	62	51	40	26	18	319	46	275	55	44	22
09:00	35	28	27	42	38	31	36	237	34	170	34	67	34
10:00	36	25	32	20	39	48	42	242	35	152	30	90	45
11:00	34	24	33	45	42	56	48	282	40	178	36	104	52
12:00	31	35	29	28	37	55	58	273	39	160	32	113	57
13:00	33	29	33	39	41	44	37	256	37	175	35	81	41
14:00	31	50	47	33	44	40	50	295	42	205	41	90	45
15:00	60	61	62	67	59	48	47	404	58	309	62	95	48
16:00	53	53	53	67	62	38	44	370	53	288	58	82	41
17:00	65	67	59	39	56	53	45	384	55	286	57	98	49
18:00	47	52	54	52	51	46	35	337	48	256	51	81	41
19:00	24	29	27	22	21	30	27	180	26	123	25	57	29
20:00	12	21	26	28	24	15	12	138	20	111	22	27	14
21:00	24	12	10	22	20	12	9	109	16	88	18	21	11
22:00	5	7	13	8	13	9	5	60	9	46	9	14	7
23:00	1	2	2	6	9	8	1	29	4	20	4	9	5
Total	621	626	627	642	655	586	553	4310	619	3171	634	1139	577
% Heavy	3.22%	1.28%	1.28%	1.87%	1.98%	1.19%	0.72%	1.67%		1.92%		0.97%	

TRANS TRAFFIC SURVEY
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Site Grace Ave

Direction Northbound

Back to Site Summary Page

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	7 days		Weekday		Weekend	
Date	30/11/2020	1/12/2020	25/11/2020	26/11/2020	27/11/2020	28/11/2020	29/11/2020	Total	Average	Total	Average	Total	Average
AM Peak	08:00	08:00	08:00	08:00	08:00	10:00	11:00	N/A	11:00	N/A	08:00	N/A	11:00
PM Peak	16:00	16:00	17:00	16:00	16:00	12:00	12:00	N/A	16:00	N/A	16:00	N/A	12:00
00:00	8	5	8	4	7	12	33	77	11	32	6	45	23
01:00	3	2	5	8	6	13	16	53	8	24	5	29	15
02:00	2	2	2	3	2	6	11	28	4	11	2	17	9
03:00	1	2	1	3	3	5	3	18	3	10	2	8	4
04:00	5	1	6	2	4	3	6	27	4	18	4	9	5
05:00	13	25	20	19	12	11	14	114	16	89	18	25	13
06:00	62	67	79	84	91	21	13	417	60	383	77	34	17
07:00	201	188	198	221	204	106	55	1173	168	1012	202	161	81
08:00	298	335	352	315	315	166	116	1897	271	1615	323	282	141
09:00	214	276	255	253	259	223	156	1636	234	1257	251	379	190
10:00	226	242	221	222	288	316	252	1767	252	1199	240	568	284
11:00	282	242	270	233	312	290	302	1931	276	1339	268	592	296
12:00	261	276	285	274	305	364	297	2062	295	1401	280	661	331
13:00	246	248	314	275	270	318	260	1931	276	1353	271	578	289
14:00	259	281	281	298	349	311	250	2029	290	1468	294	561	281
15:00	396	458	420	435	493	275	248	2725	389	2202	440	523	262
16:00	468	463	467	460	503	300	237	2898	414	2361	472	537	269
17:00	443	430	473	443	442	317	215	2763	395	2231	446	532	266
18:00	299	325	346	326	375	266	160	2097	300	1671	334	426	213
19:00	160	221	212	256	255	157	131	1392	199	1104	221	288	144
20:00	106	133	124	143	138	100	82	826	118	644	129	182	91
21:00	57	64	91	108	102	63	51	536	77	422	84	114	57
22:00	25	35	50	42	76	73	34	335	48	228	46	107	54
23:00	12	14	23	24	38	44	14	169	24	111	22	58	29
Total	**4047**	**4335**	**4503**	**4451**	**4849**	**3760**	**2956**	**28901**	**4132**	**22185**	**4437**	**6716**	**3364**
% Heavy	**2.52%**	**2.72%**	**2.58%**	**2.70%**	**2.29%**	**1.33%**	**1.01%**	**2.24%**		**2.56%**		**1.19%**	

TRANS TRAFFIC SURVEY
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Site Grace Ave

Direction Southbound

Back to Site Summary Page

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	7 days		Weekday		Weekend	
Date	30/11/2020	1/12/2020	25/11/2020	26/11/2020	27/11/2020	28/11/2020	29/11/2020	Total	Average	Total	Average	Total	Average
AM Peak	08:00	08:00	08:00	08:00	08:00	11:00	11:00	N/A	08:00	N/A	08:00	N/A	11:00
PM Peak	15:00	15:00	15:00	15:00	15:00	13:00	12:00	N/A	15:00	N/A	15:00	N/A	13:00
00:00	5	7	3	3	6	12	24	60	9	24	5	36	18
01:00	2	1	1	10	2	7	13	36	5	16	3	20	10
02:00	1	0	0	4	1	5	5	16	2	6	1	10	5
03:00	4	1	3	4	3	4	4	23	3	15	3	8	4
04:00	13	12	15	9	17	9	7	82	12	66	13	16	8
05:00	54	61	68	69	56	35	19	362	52	308	62	54	27
06:00	154	165	160	169	168	54	37	907	130	816	163	91	46
07:00	193	236	216	239	215	138	78	1315	188	1099	220	216	108
08:00	302	407	339	322	343	186	155	2054	293	1713	343	341	171
09:00	278	291	270	275	270	277	229	1890	270	1384	277	506	253
10:00	215	214	219	226	244	271	244	1633	233	1118	224	515	258
11:00	230	230	224	255	270	308	254	1771	253	1209	242	562	281
12:00	220	203	259	215	237	295	224	1653	236	1134	227	519	260
13:00	191	213	217	172	220	326	215	1554	222	1013	203	541	271
14:00	220	249	225	266	243	213	207	1623	232	1203	241	420	210
15:00	322	292	285	353	382	222	198	2054	293	1634	327	420	210
16:00	275	269	283	285	269	236	203	1820	260	1381	276	439	220
17:00	246	258	270	270	288	230	211	1773	253	1332	266	441	221
18:00	181	208	193	259	260	224	146	1471	210	1101	220	370	185
19:00	118	134	162	168	169	116	94	961	137	751	150	210	105
20:00	71	90	81	90	111	62	62	567	81	443	89	124	62
21:00	37	63	50	65	64	55	41	375	54	279	56	96	48
22:00	15	22	20	27	40	49	16	189	27	124	25	65	33
23:00	4	6	17	10	23	36	7	103	15	60	12	43	22
Total	3351	3632	3580	3765	3901	3370	2693	24292	3470	18229	3648	6063	3036
% Heavy	2.39%	2.31%	2.46%	2.52%	1.82%	1.10%	1.30%	2.02%		2.29%		1.19%	

TRANS TRAFFIC SURVEY
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Site Deakin St

Direction Eastbound

Back to Site Summary Page

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	7 days		Weekday		Weekend	
Date	30/11/2020	1/12/2020	25/11/2020	26/11/2020	27/11/2020	28/11/2020	29/11/2020	Total	Average	Total	Average	Total	Average
AM Peak	08:00	08:00	08:00	08:00	08:00	10:00	10:00	N/A	08:00	N/A	08:00	N/A	10:00
PM Peak	16:00	16:00	16:00	17:00	16:00	12:00	12:00	N/A	16:00	N/A	16:00	N/A	12:00
00:00	0	1	0	1	1	2	4	9	1	3	1	6	3
01:00	0	0	0	0	1	1	5	7	1	1	0	6	3
02:00	0	1	1	2	1	1	1	7	1	5	1	2	1
03:00	0	1	1	0	0	0	1	3	0	2	0	1	1
04:00	6	5	5	4	4	1	1	26	4	24	5	2	1
05:00	12	20	22	20	15	6	6	101	14	89	18	12	6
06:00	30	26	31	33	22	26	14	182	26	142	28	40	20
07:00	74	73	68	66	68	55	32	436	62	349	70	87	44
08:00	102	106	110	103	101	88	56	666	95	522	104	144	72
09:00	67	76	66	74	97	73	84	537	77	380	76	157	79
10:00	70	65	71	68	83	104	97	558	80	357	71	201	101
11:00	76	61	65	58	73	87	80	500	71	333	67	167	84
12:00	55	70	60	52	55	85	80	457	65	292	58	165	83
13:00	61	58	58	48	57	76	73	431	62	282	56	149	75
14:00	62	69	63	87	77	78	80	516	74	358	72	158	79
15:00	83	88	85	98	84	66	70	574	82	438	88	136	68
16:00	89	97	107	82	122	68	69	634	91	497	99	137	69
17:00	68	85	83	115	88	53	53	545	78	439	88	106	53
18:00	57	73	71	81	90	56	37	465	66	372	74	93	47
19:00	48	41	33	38	49	29	38	276	39	209	42	67	34
20:00	20	20	23	18	25	17	20	143	20	106	21	37	19
21:00	10	10	8	9	18	14	11	80	11	55	11	25	13
22:00	6	6	3	4	14	18	7	58	8	33	7	25	13
23:00	1	2	2	3	5	11	4	28	4	13	3	15	8
Total	**997**	**1054**	**1036**	**1064**	**1150**	**1015**	**923**	**7239**	**1032**	**5301**	**1060**	**1938**	**976**
% Heavy	**1.81%**	**1.90%**	**1.83%**	**2.07%**	**2.26%**	**1.28%**	**1.84%**	**1.86%**		**1.98%**		**1.55%**	

TRANS TRAFFIC SURVEY
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Site Deakin St

Direction Westbound

Back to Site Summary Page

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	7 days		Weekday		Weekend	
Date	30/11/2020	1/12/2020	25/11/2020	26/11/2020	27/11/2020	28/11/2020	29/11/2020	Total	Average	Total	Average	Total	Average
AM Peak	09:00	09:00	09:00	09:00	10:00	11:00	11:00	N/A	11:00	N/A	09:00	N/A	11:00
PM Peak	15:00	15:00	17:00	15:00	17:00	12:00	15:00	N/A	15:00	N/A	15:00	N/A	12:00
00:00	4	2	2	5	3	9	17	42	6	16	3	26	13
01:00	1	0	2	1	1	3	6	14	2	5	1	9	5
02:00	2	1	0	1	1	5	3	13	2	5	1	8	4
03:00	0	0	0	0	0	0	2	2	0	0	0	2	1
04:00	4	2	1	1	1	3	2	14	2	9	2	5	3
05:00	7	12	9	8	12	2	4	54	8	48	10	6	3
06:00	44	53	65	66	59	12	7	306	44	287	57	19	10
07:00	63	63	62	52	58	34	19	351	50	298	60	53	27
08:00	106	124	120	95	99	80	47	671	96	544	109	127	64
09:00	127	132	135	129	115	120	92	850	121	638	128	212	106
10:00	98	90	93	103	125	165	116	790	113	509	102	281	141
11:00	114	106	110	113	124	175	158	900	129	567	113	333	167
12:00	133	103	129	124	124	178	152	943	135	613	123	330	165
13:00	103	128	125	102	133	156	134	881	126	591	118	290	145
14:00	134	137	136	122	141	132	137	939	134	670	134	269	135
15:00	178	158	146	183	168	142	154	1129	161	833	167	296	148
16:00	140	158	147	172	176	157	137	1087	155	793	159	294	147
17:00	153	129	160	160	181	161	116	1060	151	783	157	277	139
18:00	118	138	123	155	139	99	79	851	122	673	135	178	89
19:00	82	98	107	103	104	64	59	617	88	494	99	123	62
20:00	49	58	55	60	70	42	28	362	52	292	58	70	35
21:00	25	36	36	44	41	28	23	233	33	182	36	51	26
22:00	5	16	20	22	19	33	11	126	18	82	16	44	22
23:00	6	9	7	6	19	26	8	81	12	47	9	34	17
Total	**1696**	**1753**	**1790**	**1827**	**1913**	**1826**	**1511**	**12316**	**1760**	**8979**	**1797**	**3337**	**1674**
% Heavy	**2.24%**	**1.31%**	**1.73%**	**2.19%**	**2.04%**	**1.53%**	**0.99%**	**1.74%**		**1.90%**		**1.29%**	

TRANS TRAFFIC SURVEY
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Site Adams St

Direction Eastbound

Back to Site Summary Page

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	7 days		Weekday		Weekend	
Date	30/11/2020	1/12/2020	25/11/2020	26/11/2020	27/11/2020	28/11/2020	29/11/2020	Total	Average	Total	Average	Total	Average
AM Peak	08:00	08:00	08:00	08:00	08:00	11:00	10:00	N/A	08:00	N/A	08:00	N/A	11:00
PM Peak	15:00	15:00	17:00	15:00	15:00	13:00	12:00	N/A	15:00	N/A	15:00	N/A	12:00
00:00	3	1	4	5	5	8	9	35	5	18	4	17	9
01:00	2	0	2	3	2	6	9	24	3	9	2	15	8
02:00	2	1	0	3	2	6	2	16	2	8	2	8	4
03:00	0	0	0	1	0	1	3	5	1	1	0	4	2
04:00	4	6	4	2	4	0	0	20	3	20	4	0	0
05:00	13	18	21	13	15	9	11	100	14	80	16	20	10
06:00	87	95	81	83	98	35	22	501	72	444	89	57	29
07:00	208	232	230	227	186	82	45	1210	173	1083	217	127	64
08:00	300	396	326	317	311	128	77	1855	265	1650	330	205	103
09:00	201	182	197	203	196	165	123	1267	181	979	196	288	144
10:00	133	149	153	155	181	183	159	1113	159	771	154	342	171
11:00	160	139	138	158	165	199	158	1117	160	760	152	357	179
12:00	136	158	153	163	159	200	176	1145	164	769	154	376	188
13:00	147	143	161	146	165	226	146	1134	162	762	152	372	186
14:00	164	166	194	162	217	157	169	1229	176	903	181	326	163
15:00	266	294	256	263	282	160	162	1683	240	1361	272	322	161
16:00	226	229	248	221	240	142	145	1451	207	1164	233	287	144
17:00	215	260	278	254	188	142	112	1449	207	1195	239	254	127
18:00	138	149	175	160	160	119	70	971	139	782	156	189	95
19:00	71	101	79	73	90	72	73	559	80	414	83	145	73
20:00	48	50	67	58	61	36	43	363	52	284	57	79	40
21:00	29	34	31	32	35	31	22	214	31	161	32	53	27
22:00	8	22	22	21	22	29	5	129	18	95	19	34	17
23:00	8	5	4	4	14	20	7	62	9	35	7	27	14
Total	**2569**	**2830**	**2824**	**2727**	**2798**	**2156**	**1748**	**17652**	**2523**	**13748**	**2751**	**3904**	**1958**
% Heavy	**1.87%**	**2.44%**	**2.37%**	**2.68%**	**2.36%**	**1.25%**	**1.37%**	**2.12%**		**2.35%**		**1.31%**	

TRANS TRAFFIC SURVEY
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Site Adams St

Direction Westbound

Back to Site Summary Page

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	7 days		Weekday		Weekend	
Date	30/11/2020	1/12/2020	25/11/2020	26/11/2020	27/11/2020	28/11/2020	29/11/2020	Total	Average	Total	Average	Total	Average
AM Peak	08:00	08:00	08:00	08:00	08:00	10:00	10:00	N/A	08:00	N/A	08:00	N/A	10:00
PM Peak	16:00	16:00	16:00	15:00	15:00	12:00	12:00	N/A	16:00	N/A	16:00	N/A	12:00
00:00	6	3	4	1	8	18	11	51	7	22	4	29	15
01:00	2	0	1	1	2	2	11	19	3	6	1	13	7
02:00	3	1	0	2	2	3	6	17	2	8	2	9	5
03:00	0	0	1	2	2	2	1	8	1	5	1	3	2
04:00	12	3	8	3	5	3	2	36	5	31	6	5	3
05:00	21	27	19	18	20	10	7	122	17	105	21	17	9
06:00	99	96	84	85	82	32	19	497	71	446	89	51	26
07:00	166	190	177	178	171	68	39	989	141	882	176	107	54
08:00	228	251	218	247	229	138	82	1393	199	1173	235	220	110
09:00	144	160	184	156	169	164	111	1088	155	813	163	275	138
10:00	146	143	129	159	148	199	160	1084	155	725	145	359	180
11:00	138	136	148	141	163	197	159	1082	155	726	145	356	178
12:00	134	165	155	141	183	191	159	1128	161	778	156	350	175
13:00	119	125	153	134	176	180	158	1045	149	707	141	338	169
14:00	148	191	190	183	193	162	137	1204	172	905	181	299	150
15:00	195	238	191	249	250	152	150	1425	204	1123	225	302	151
16:00	204	270	251	223	236	149	129	1462	209	1184	237	278	139
17:00	193	196	234	221	209	159	127	1339	191	1053	211	286	143
18:00	145	151	166	129	134	122	75	922	132	725	145	197	99
19:00	76	103	102	89	100	60	68	598	85	470	94	128	64
20:00	59	59	48	76	57	53	37	389	56	299	60	90	45
21:00	36	32	56	46	45	35	23	273	39	215	43	58	29
22:00	19	31	17	25	37	19	8	156	22	129	26	27	14
23:00	7	13	6	8	25	23	7	89	13	59	12	30	15
Total	**2300**	**2584**	**2542**	**2517**	**2646**	**2141**	**1686**	**16416**	**2344**	**12589**	**2519**	**3827**	**1920**
% Heavy	**2.17%**	**2.28%**	**2.52%**	**2.86%**	**3.02%**	**1.49%**	**1.48%**	**2.33%**		**2.58%**		**1.49%**	

TRANS TRAFFIC SURVEY
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Site Woodlands Rd

Direction Northbound

Back to Site Summary Page

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	7 days		Weekday		Weekend	
Date	30/11/2020	1/12/2020	25/11/2020	26/11/2020	27/11/2020	28/11/2020	29/11/2020	Total	Average	Total	Average	Total	Average
AM Peak	08:00	08:00	08:00	08:00	09:00	10:00	10:00	N/A	10:00	N/A	08:00	N/A	10:00
PM Peak	16:00	16:00	15:00	17:00	16:00	14:00	12:00	N/A	16:00	N/A	16:00	N/A	14:00
00:00	0	0	0	0	2	6	4	12	2	2	0	10	5
01:00	0	0	0	1	0	1	5	7	1	1	0	6	3
02:00	1	0	0	0	0	2	2	5	1	1	0	4	2
03:00	0	2	0	0	0	1	1	4	1	2	0	2	1
04:00	1	0	0	2	0	0	1	4	1	3	1	1	1
05:00	3	3	2	3	1	0	1	13	2	12	2	1	1
06:00	7	9	9	12	11	5	7	60	9	48	10	12	6
07:00	34	34	28	25	24	16	16	177	25	145	29	32	16
08:00	39	36	36	43	28	32	19	233	33	182	36	51	26
09:00	25	31	32	31	44	21	24	208	30	163	33	45	23
10:00	30	24	29	29	41	42	46	241	34	153	31	88	44
11:00	35	25	28	24	33	41	46	232	33	145	29	87	44
12:00	19	32	26	27	32	32	45	213	30	136	27	77	39
13:00	30	27	27	28	26	32	32	202	29	138	28	64	32
14:00	33	39	34	29	38	50	36	259	37	173	35	86	43
15:00	44	47	45	52	51	41	44	324	46	239	48	85	43
16:00	52	54	43	50	73	39	34	345	49	272	54	73	37
17:00	40	51	41	71	57	30	34	324	46	260	52	64	32
18:00	35	41	33	44	53	31	26	263	38	206	41	57	29
19:00	21	25	20	31	32	12	18	159	23	129	26	30	15
20:00	12	11	9	8	19	13	16	88	13	59	12	29	15
21:00	13	9	7	5	14	5	4	57	8	48	10	9	5
22:00	8	8	7	5	15	15	5	63	9	43	9	20	10
23:00	0	2	2	3	4	5	5	21	3	11	2	10	5
Total	**482**	**510**	**458**	**523**	**598**	**472**	**471**	**3514**	**503**	**2571**	**515**	**943**	**477**
% Heavy	**3.32%**	**2.16%**	**1.97%**	**2.87%**	**2.17%**	**1.48%**	**2.34%**	**2.33%**		**2.49%**		**1.91%**	

TRANS TRAFFIC SURVEY
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Site Woodlands Rd

Direction Southbound

Back to Site Summary Page

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	7 days		Weekday		Weekend	
Date	30/11/2020	1/12/2020	25/11/2020	26/11/2020	27/11/2020	28/11/2020	29/11/2020	Total	Average	Total	Average	Total	Average
AM Peak	09:00	08:00	09:00	09:00	09:00	10:00	10:00	N/A	09:00	N/A	09:00	N/A	10:00
PM Peak	15:00	15:00	15:00	15:00	16:00	12:00	13:00	N/A	15:00	N/A	15:00	N/A	12:00
00:00	2	2	1	0	2	6	12	25	4	7	1	18	9
01:00	0	1	0	0	0	5	4	10	1	1	0	9	5
02:00	1	1	1	1	1	3	2	10	1	5	1	5	3
03:00	0	0	0	2	0	1	0	3	0	2	0	1	1
04:00	4	4	2	1	2	3	1	17	2	13	3	4	2
05:00	12	16	15	15	21	3	3	85	12	79	16	6	3
06:00	51	53	54	62	56	25	8	309	44	276	55	33	17
07:00	81	66	70	78	59	37	19	410	59	354	71	56	28
08:00	76	91	78	78	73	52	43	491	70	396	79	95	48
09:00	85	90	85	87	80	74	67	568	81	427	85	141	71
10:00	59	60	59	56	62	82	87	465	66	296	59	169	85
11:00	62	56	62	68	71	79	79	477	68	319	64	158	79
12:00	70	54	64	65	72	96	73	494	71	325	65	169	85
13:00	53	61	61	58	76	61	75	445	64	309	62	136	68
14:00	61	76	64	60	66	84	61	472	67	327	65	145	73
15:00	104	95	87	99	98	71	66	620	89	483	97	137	69
16:00	80	81	65	81	105	65	53	530	76	412	82	118	59
17:00	63	78	63	90	103	68	59	524	75	397	79	127	64
18:00	61	70	56	93	78	65	56	479	68	358	72	121	61
19:00	44	46	36	45	60	37	25	293	42	231	46	62	31
20:00	29	25	20	20	35	29	13	171	24	129	26	42	21
21:00	10	15	12	18	22	18	11	106	15	77	15	29	15
22:00	5	6	5	7	11	12	7	53	8	34	7	19	10
23:00	1	1	1	0	5	11	3	22	3	8	2	14	7
Total	1014	1048	961	1084	1158	987	827	7079	1010	5265	1052	1814	914
% Heavy	2.07%	2.58%	1.56%	3.14%	2.50%	1.82%	1.09%	2.16%		2.39%		1.49%	

20SYD0051

Warringah Rd, east of Altona Ave
Northbound

Time	Week 1																						
	Tue 24/11/2020			Wed 25/11/2020			Thu 26/11/2020			Fri 27/11/2020			Sat 28/11/2020			Sun 29/11/2020			Mon 30/11/2020			Averages	
	Total	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	Weekday	7-day
0000-0100	102	86	16	130	113	17	134	120	14	173	155	18	325	303	22	366	348	17	100	88	12	128	190
0100-0200	75	61	14	67	55	12	75	66	9	82	69	13	189	179	10	201	190	11	54	43	11	71	106
0200-0300	46	31	15	56	45	11	49	39	10	70	59	11	102	94	8	116	110	6	68	56	12	58	72
0300-0400	60	40	20	56	40	16	72	59	13	69	52	17	68	60	8	86	81	5	64	50	14	64	68
0400-0500	169	140	29	212	174	38	203	167	34	196	163	33	128	112	16	114	106	8	167	141	26	189	170
0500-0600	690	603	83	700	605	93	702	605	95	711	607	99	433	394	37	292	274	18	607	532	72	682	591
0600-0700	1,963	1,650	304	1,985	1,631	319	2,055	1,739	302	1,986	1,663	306	1,275	1,170	99	815	758	57	1,878	1,565	297	1,973	1,708
0700-0800	2,452	2,136	297	2,335	2,029	283	2,597	2,287	286	2,433	2,096	319	1,748	1,590	151	1,263	1,175	72	2,365	2,050	299	2,436	2,170
0800-0900	2,638	2,353	273	2,717	2,450	245	2,755	2,438	295	2,685	2,369	296	2,187	2,000	168	1,592	1,500	76	2,644	2,316	303	2,688	2,460
0900-1000	2,463	2,092	359	2,624	2,212	396	2,600	2,212	366	2,543	2,151	380	2,767	2,544	195	2,080	1,951	113	2,312	1,956	341	2,508	2,484
1000-1100	2,213	1,855	339	2,309	1,953	340	2,547	2,164	366	2,383	2,020	341	3,112	2,865	212	2,365	2,222	130	2,136	1,805	318	2,318	2,438
1100-1200	2,213	1,881	314	2,217	1,899	307	2,530	2,177	335	2,396	2,075	290	3,192	2,956	199	2,574	2,400	159	2,024	1,738	270	2,276	2,449
1200-1300	2,177	1,866	292	2,331	2,005	303	2,512	2,156	340	2,512	2,135	351	3,203	2,943	223	2,539	2,355	163	2,171	1,862	298	2,341	2,492
1300-1400	2,290	1,955	311	2,236	1,916	306	2,429	2,094	323	2,573	2,197	347	3,037	2,810	193	2,307	2,173	116	2,099	1,804	282	2,325	2,424
1400-1500	2,576	2,239	309	2,610	2,286	302	2,608	2,251	324	2,749	2,395	320	2,869	2,679	158	2,073	1,935	116	2,458	2,134	304	2,600	2,563
1500-1600	3,100	2,670	390	2,962	2,555	376	3,070	2,657	378	2,926	2,546	355	2,391	2,232	139	1,950	1,822	109	3,034	2,653	347	3,018	2,776
1600-1700	3,202	2,796	373	3,272	2,880	353	3,346	2,951	358	2,920	2,590	292	2,196	2,063	115	1,869	1,774	84	3,238	2,859	339	3,196	2,863
1700-1800	3,268	2,953	278	3,218	2,918	266	3,365	3,053	277	3,224	2,886	294	2,235	2,106	107	1,756	1,647	98	3,283	3,011	237	3,272	2,907
1800-1900	2,837	2,606	204	2,927	2,685	209	2,895	2,633	227	2,715	2,470	219	1,837	1,721	103	1,304	1,227	66	2,678	2,471	175	2,810	2,456
1900-2000	1,698	1,568	108	1,713	1,583	115	1,921	1,759	147	1,761	1,623	125	1,334	1,249	81	1,013	946	63	1,486	1,369	100	1,716	1,561
2000-2100	1,072	974	83	1,145	1,059	80	1,277	1,172	94	1,177	1,090	83	1,022	977	40	833	786	46	1,061	975	81	1,146	1,084
2100-2200	845	783	56	892	825	63	1,118	1,043	72	1,156	1,081	70	918	876	40	612	581	31	839	780	57	970	911
2200-2300	562	522	36	718	679	38	730	682	46	843	797	43	870	822	45	470	449	19	492	447	44	669	669
2300-2400	289	267	22	298	279	18	366	343	23	591	576	15	617	593	23	229	216	13	212	191	21	351	372

Totals

0000-0000	**39,000**	**34,127**	**4,525**	**39,730**	**34,876**	**4,506**	**41,956**	**36,867**	**4,734**	**40,874**	**35,865**	**4,637**	**38,055**	**35,338**	**2,392**	**28,819**	**27,026**	**1,596**	**37,470**	**32,896**	**4,260**	**39,806**	**37,986**
0700-0900	5,090	4,489	570	5,052	4,479	528	5,352	4,725	581	5,118	4,465	615	3,935	3,590	319	2,855	2,675	148	5,009	4,366	602	5,124	4,630
1600-1800	6,470	5,749	651	6,490	5,798	619	6,711	6,004	635	6,144	5,476	586	4,431	4,169	222	3,625	3,421	182	6,521	5,870	576	6,467	5,770
Off-Peak	27,440	23,889	3,304	28,188	24,599	3,359	29,893	26,138	3,518	29,612	25,924	3,436	29,689	27,579	1,851	22,339	20,930	1,266	25,940	22,660	3,082	28,215	27,586
0700-2200	35,044	30,727	3,986	35,508	31,255	3,944	37,570	33,047	4,188	36,153	31,724	4,082	34,048	31,611	2,124	26,130	24,494	1,442	33,828	29,783	3,751	**35,621**	**34,040**
2200-0700	3,956	3,400	539	4,222	3,621	562	4,386	3,820	546	4,721	4,141	555	4,007	3,727	268	2,689	2,532	154	3,642	3,113	509	**4,185**	**3,946**

20SYD0051

Warringah Rd, east of Altona Ave
Southbound

Time	Week 1																						
	Tue 24/11/2020			Wed 25/11/2020			Thu 26/11/2020			Fri 27/11/2020			Sat 28/11/2020			Sun 29/11/2020			Mon 30/11/2020			Averages	
	Total	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	Weekday	7-day
0000-0100	113	99	14	132	116	16	128	118	10	148	132	16	298	285	13	400	384	16	109	100	9	126	190
0100-0200	65	54	11	89	77	12	77	63	14	73	66	7	201	189	12	268	260	7	65	54	11	74	120
0200-0300	59	48	11	60	49	11	63	51	12	87	75	12	125	118	7	136	132	4	62	46	16	66	85
0300-0400	81	64	17	80	65	15	91	75	16	88	73	15	102	90	12	74	71	3	84	63	21	85	86
0400-0500	256	219	37	269	233	34	255	224	31	239	194	45	162	147	15	139	131	8	226	195	31	249	221
0500-0600	1,179	1,017	155	1,207	1,045	153	1,189	1,028	159	1,105	946	150	436	392	43	222	202	20	1,151	991	156	1,166	927
0600-0700	3,158	2,715	429	3,116	2,669	428	2,985	2,563	394	2,768	2,379	368	1,038	915	120	462	420	42	2,921	2,524	375	2,990	2,350
0700-0800	3,420	3,129	253	3,495	3,171	277	3,355	3,062	250	3,303	2,998	272	1,404	1,277	121	799	738	57	3,576	3,247	299	3,430	2,765
0800-0900	2,755	2,498	228	3,004	2,723	250	2,948	2,638	262	2,916	2,681	215	1,862	1,722	131	1,150	1,091	56	3,009	2,762	223	2,926	2,521
0900-1000	2,706	2,401	273	2,484	2,224	240	2,674	2,386	267	2,363	2,116	230	2,335	2,217	103	1,901	1,813	76	2,410	2,175	214	2,527	2,410
1000-1100	2,263	1,982	269	2,281	2,035	231	2,344	2,061	270	2,511	2,242	249	2,768	2,611	134	2,394	2,282	98	2,217	1,975	236	2,323	2,397
1100-1200	2,231	1,957	260	2,316	2,031	260	2,402	2,106	281	2,470	2,186	265	2,712	2,518	173	2,602	2,482	104	2,137	1,881	248	2,311	2,410
1200-1300	2,167	1,916	239	2,185	1,935	238	2,331	2,047	271	2,473	2,209	245	2,891	2,741	133	2,707	2,589	100	2,049	1,772	261	2,241	2,400
1300-1400	2,165	1,910	240	2,208	1,953	249	2,346	2,046	290	2,438	2,139	287	2,732	2,566	149	2,355	2,214	122	2,103	1,832	259	2,252	2,335
1400-1500	2,522	2,222	281	2,566	2,278	273	2,694	2,361	317	2,704	2,402	280	2,592	2,449	129	2,193	2,079	103	2,392	2,140	240	2,576	2,523
1500-1600	2,766	2,484	265	2,854	2,565	268	2,756	2,473	263	3,047	2,743	279	2,399	2,276	111	2,227	2,122	87	2,797	2,504	277	2,844	2,692
1600-1700	2,696	2,426	254	2,704	2,412	274	2,925	2,639	265	2,852	2,613	218	2,452	2,337	102	2,344	2,234	101	2,598	2,336	251	2,755	2,653
1700-1800	2,572	2,362	191	2,807	2,582	209	2,846	2,661	164	2,761	2,541	192	2,742	2,612	111	2,027	1,933	85	2,556	2,361	178	2,708	2,616
1800-1900	1,937	1,822	103	2,081	1,949	126	2,195	2,064	121	2,196	2,053	126	2,241	2,141	94	1,628	1,559	58	1,759	1,628	123	2,034	2,005
1900-2000	1,254	1,182	66	1,224	1,148	71	1,401	1,309	88	1,518	1,426	85	1,542	1,471	61	1,070	1,028	38	1,252	1,178	63	1,330	1,323
2000-2100	884	841	40	961	923	36	1,114	1,067	46	1,050	986	60	1,284	1,227	51	901	865	34	875	825	46	977	1,010
2100-2200	772	739	30	809	770	35	913	879	33	973	928	40	1,086	1,053	29	636	614	22	650	616	29	823	834
2200-2300	481	451	29	563	542	20	667	635	31	780	738	39	964	929	33	416	406	10	419	395	24	582	613
2300-2400	274	255	19	290	268	22	341	319	20	530	512	18	643	621	21	200	192	8	211	194	17	329	356

Totals

0000-0000	**38,776**	**34,793**	**3,714**	**39,785**	**35,763**	**3,748**	**41,040**	**36,875**	**3,875**	**41,393**	**37,378**	**3,713**	**37,011**	**34,904**	**1,908**	**29,251**	**27,841**	**1,259**	**37,628**	**33,794**	**3,607**	**39,724**	**37,841**
0700-0900	6,175	5,627	481	6,499	5,894	527	6,303	5,700	512	6,219	5,679	487	3,266	2,999	252	1,949	1,829	113	6,585	6,009	522	6,356	5,285
1600-1800	5,268	4,788	445	5,511	4,994	483	5,771	5,300	429	5,613	5,154	410	5,194	4,949	213	4,371	4,167	186	5,154	4,697	429	5,463	5,269
Off-Peak	27,333	24,378	2,788	27,775	24,875	2,738	28,966	25,875	2,934	29,561	26,545	2,816	28,551	26,956	1,443	22,931	21,845	960	25,889	23,088	2,656	27,905	27,287
0700-2200	33,110	29,871	2,992	33,979	30,699	3,037	35,244	31,799	3,188	35,575	32,263	3,043	33,042	31,218	1,632	26,934	25,643	1,141	32,380	29,232	2,947	**34,058**	**32,895**
2200-0700	5,666	4,922	722	5,806	5,064	711	5,796	5,076	687	5,818	5,115	670	3,969	3,686	276	2,317	2,198	118	5,248	4,562	660	**5,667**	**4,946**

20SYD0051

Warringah Rd, west of Hilmer St
Eastbound

Time	Week 1																						
	Tue 24/11/2020			Wed 25/11/2020			Thu 26/11/2020			Fri 27/11/2020			Sat 28/11/2020			Sun 29/11/2020			Mon 30/11/2020			Averages	
	Total	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	Weekday	7-day
0000-0100	54	44	10	65	50	15	50	45	5	85	77	8	156	149	7	215	205	9	47	43	4	60	96
0100-0200	33	25	8	42	36	5	39	35	4	55	50	5	92	87	5	111	106	5	35	33	2	41	58
0200-0300	29	23	6	29	24	5	29	20	9	42	33	9	57	50	7	53	50	3	30	27	3	32	38
0300-0400	41	30	11	39	30	9	51	41	9	54	41	13	49	46	3	45	41	4	43	34	9	46	46
0400-0500	121	103	18	153	131	22	149	123	25	135	115	20	73	68	5	66	61	5	142	123	19	140	120
0500-0600	474	415	54	504	454	48	498	436	57	516	443	68	284	264	18	217	206	11	441	378	60	487	419
0600-0700	1,413	1,212	196	1,386	1,178	200	1,479	1,283	189	1,388	1,181	201	818	737	76	502	481	20	1,347	1,133	205	1,403	1,190
0700-0800	1,584	1,398	176	1,679	1,481	183	1,709	1,514	185	1,621	1,407	203	1,274	1,180	85	865	805	56	1,521	1,331	187	1,623	1,465
0800-0900	1,654	1,478	167	1,804	1,612	176	1,842	1,628	197	1,726	1,542	169	1,580	1,471	102	1,179	1,123	46	1,837	1,636	195	1,773	1,660
0900-1000	1,587	1,376	201	1,593	1,372	215	1,785	1,538	238	1,718	1,502	205	1,913	1,785	119	1,465	1,374	80	1,569	1,384	174	1,650	1,661
1000-1100	1,381	1,197	181	1,468	1,244	220	1,527	1,321	203	1,571	1,366	202	2,092	1,952	131	1,642	1,536	97	1,323	1,127	191	1,454	1,572
1100-1200	1,371	1,196	168	1,419	1,237	175	1,686	1,484	197	1,624	1,438	178	2,168	2,030	124	1,762	1,656	94	1,354	1,166	181	1,491	1,626
1200-1300	1,395	1,230	157	1,462	1,284	171	1,490	1,300	181	1,636	1,451	177	2,069	1,915	137	1,708	1,617	80	1,319	1,156	156	1,460	1,583
1300-1400	1,394	1,247	140	1,390	1,204	174	1,479	1,295	183	1,515	1,328	179	1,922	1,814	97	1,557	1,465	83	1,350	1,154	193	1,426	1,515
1400-1500	1,547	1,370	170	1,503	1,331	170	1,636	1,425	205	1,708	1,508	188	1,669	1,572	94	1,352	1,291	56	1,399	1,232	159	1,559	1,545
1500-1600	1,974	1,767	201	2,001	1,775	218	1,990	1,774	204	1,946	1,757	181	1,543	1,467	73	1,389	1,290	92	1,944	1,698	230	1,971	1,827
1600-1700	2,104	1,903	188	2,055	1,890	149	2,078	1,892	182	1,905	1,710	186	1,461	1,386	67	1,382	1,312	66	2,025	1,823	189	2,033	1,859
1700-1800	2,051	1,899	135	2,048	1,902	133	2,038	1,908	123	1,992	1,882	107	1,435	1,367	64	1,253	1,175	70	1,960	1,817	133	2,018	1,825
1800-1900	1,641	1,549	86	1,797	1,685	104	1,785	1,692	87	1,674	1,565	101	1,133	1,080	48	960	919	37	1,590	1,503	80	1,697	1,511
1900-2000	987	929	54	1,002	957	42	1,120	1,039	75	1,027	976	48	816	770	44	618	582	35	927	881	44	1,013	928
2000-2100	687	647	38	693	651	41	763	721	40	663	635	28	564	535	29	544	513	31	662	615	44	694	654
2100-2200	496	472	20	511	477	33	613	586	25	635	599	35	550	528	18	402	378	22	448	418	28	541	522
2200-2300	298	282	16	369	350	18	404	390	14	501	474	27	472	454	17	239	223	15	263	249	14	367	364
2300-2400	138	127	11	153	138	14	237	220	17	350	341	9	329	316	12	119	111	8	121	107	14	200	207

Totals

0000-0000	**24,454**	**21,919**	**2,412**	**25,165**	**22,493**	**2,540**	**26,477**	**23,710**	**2,654**	**26,087**	**23,421**	**2,547**	**24,519**	**23,023**	**1,382**	**19,645**	**18,520**	**1,025**	**23,697**	**21,068**	**2,514**	**25,176**	**24,292**
0700-0900	3,238	2,876	343	3,483	3,093	359	3,551	3,142	382	3,347	2,949	372	2,854	2,651	187	2,044	1,928	102	3,358	2,967	382	3,395	3,125
1600-1800	4,155	3,802	323	4,103	3,792	282	4,116	3,800	305	3,897	3,592	293	2,896	2,753	131	2,635	2,487	136	3,985	3,640	322	4,051	3,684
Off-Peak	17,061	15,241	1,746	17,579	15,608	1,899	18,810	16,768	1,967	18,843	16,880	1,882	18,769	17,619	1,064	14,966	14,105	787	16,354	14,461	1,810	17,729	17,483
0700-2200	21,853	19,658	2,082	22,425	20,102	2,204	23,541	21,117	2,325	22,961	20,666	2,187	22,189	20,852	1,232	18,078	17,036	945	21,228	18,941	2,184	**22,402**	**21,754**
2200-0700	2,601	2,261	330	2,740	2,391	336	2,936	2,593	329	3,126	2,755	360	2,330	2,171	150	1,567	1,484	80	2,469	2,127	330	**2,774**	**2,538**

20SYD0051

Warringah Rd, west of Hilmer St
Westbound

Time	Week 1																						
	Tue 24/11/2020			Wed 25/11/2020			Thu 26/11/2020			Fri 27/11/2020			Sat 28/11/2020			Sun 29/11/2020			Mon 30/11/2020			Averages	
	Total	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	Weekday	7-day
0000-0100	34	32	2	53	45	7	52	43	8	63	59	4	128	123	5	139	134	5	57	53	4	52	75
0100-0200	24	20	4	26	17	7	24	19	4	42	39	3	66	61	5	112	108	3	27	27	0	29	46
0200-0300	16	14	2	19	14	4	29	25	4	24	23	1	40	37	3	61	61	0	34	24	10	24	32
0300-0400	21	17	4	26	20	4	37	36	1	27	22	5	41	37	4	49	49	0	19	16	3	26	31
0400-0500	60	45	15	61	52	7	89	77	10	95	80	14	64	54	10	50	48	2	64	59	5	74	69
0500-0600	288	241	47	335	267	56	390	339	46	304	257	45	156	132	23	98	91	7	307	259	44	325	268
0600-0700	876	738	136	982	831	135	910	775	131	892	760	125	406	366	39	196	179	16	915	767	139	915	740
0700-0800	1,310	1,178	129	1,228	1,099	122	1,246	1,124	111	1,137	1,012	116	628	562	65	415	395	20	1,129	1,019	100	1,210	1,013
0800-0900	1,352	1,231	120	1,357	1,241	111	1,373	1,214	152	1,227	1,125	100	866	793	68	530	498	32	1,251	1,115	127	1,312	1,137
0900-1000	1,006	863	139	1,026	900	120	946	844	99	1,085	963	121	1,112	1,039	72	886	845	40	959	829	125	1,004	1,003
1000-1100	913	776	135	1,018	888	127	997	833	162	1,054	908	143	1,284	1,196	86	1,130	1,085	45	883	747	135	973	1,040
1100-1200	1,008	868	139	1,057	915	138	1,007	850	155	1,139	982	156	1,320	1,235	82	1,198	1,139	56	1,016	886	127	1,045	1,106
1200-1300	981	844	134	1,046	922	117	1,075	932	142	1,191	1,064	127	1,249	1,167	78	1,224	1,166	55	1,028	873	153	1,064	1,113
1300-1400	1,010	878	128	1,097	971	116	1,136	958	175	1,207	1,051	154	1,297	1,224	69	1,044	983	57	1,000	871	128	1,090	1,113
1400-1500	1,221	1,093	125	1,325	1,169	155	1,310	1,134	171	1,380	1,211	165	1,133	1,072	60	938	875	60	1,191	1,051	134	1,285	1,214
1500-1600	1,336	1,183	151	1,295	1,156	133	1,484	1,295	184	1,393	1,224	165	1,065	1,011	53	961	905	50	1,280	1,132	142	1,358	1,259
1600-1700	1,293	1,152	136	1,284	1,173	108	1,412	1,253	154	1,325	1,193	129	1,095	1,047	46	929	886	39	1,233	1,115	112	1,309	1,224
1700-1800	1,358	1,251	98	1,400	1,305	93	1,416	1,307	101	1,316	1,221	91	1,032	987	43	798	773	25	1,279	1,188	90	1,354	1,228
1800-1900	974	907	61	984	917	66	1,088	1,024	60	961	897	58	799	765	32	623	601	21	852	807	44	972	897
1900-2000	671	618	36	662	639	22	816	771	41	649	614	35	571	551	20	396	367	27	555	524	29	671	617
2000-2100	433	389	27	483	458	20	568	548	20	445	421	24	570	550	19	366	344	22	432	412	19	472	471
2100-2200	334	291	29	377	358	17	458	444	12	450	432	17	432	419	11	260	252	6	299	289	9	384	373
2200-2300	238	220	11	268	257	10	248	240	8	361	351	10	415	402	13	138	132	6	185	177	8	260	265
2300-2400	103	90	8	104	97	6	117	109	6	237	233	4	312	302	10	87	80	7	85	81	4	129	149

Totals

0000-0000	**16,860**	**14,939**	**1,816**	**17,513**	**15,711**	**1,701**	**18,228**	**16,194**	**1,957**	**18,004**	**16,142**	**1,812**	**16,081**	**15,132**	**916**	**12,628**	**11,996**	**601**	**16,080**	**14,321**	**1,691**	**17,337**	**16,485**
0700-0900	2,662	2,409	249	2,585	2,340	233	2,619	2,338	263	2,364	2,137	216	1,494	1,355	133	945	893	52	2,380	2,134	227	2,522	2,150
1600-1800	2,651	2,403	234	2,684	2,478	201	2,828	2,560	255	2,641	2,414	220	2,127	2,034	89	1,727	1,659	64	2,512	2,303	202	2,663	2,453
Off-Peak	11,547	10,127	1,333	12,244	10,893	1,267	12,781	11,296	1,439	12,999	11,591	1,376	12,460	11,743	694	9,956	9,444	485	11,188	9,884	1,262	12,152	11,882
0700-2200	15,200	13,522	1,587	15,639	14,111	1,465	16,332	14,531	1,739	15,959	14,318	1,601	14,453	13,618	804	11,698	11,114	555	14,387	12,858	1,474	**15,503**	**14,810**
2200-0700	1,660	1,417	229	1,874	1,600	236	1,896	1,663	218	2,045	1,824	211	1,628	1,514	112	930	882	46	1,693	1,463	217	**1,834**	**1,675**

20SYD0051

Warringah Rd, west of Hilmer St (Underpass)
Eastbound

Time	Week 1																				Averages	
	Thu 26/11/2020			Fri 27/11/2020			Sat 28/11/2020			Sun 29/11/2020			Mon 30/11/2020			Tue 1/12/2020			Wed 2/12/2020			Weekday	7-day
	Total	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy		
0000-0100	17	15	2	83	76	7	122	116	6	162	154	7	47	40	7	48	40	8	69	64	5	53	78
0100-0200	36	31	4	34	26	8	72	68	4	82	78	4	30	23	7	31	23	8	36	30	6	33	46
0200-0300	24	20	4	35	32	3	45	41	4	50	49	1	38	30	8	25	20	5	28	21	7	30	35
0300-0400	35	27	8	43	36	7	30	25	5	39	37	2	41	33	8	45	38	7	42	34	8	41	39
0400-0500	109	86	22	126	107	18	71	65	6	66	60	6	96	82	14	116	96	20	112	92	20	112	99
0500-0600	374	318	54	355	303	51	211	194	17	141	129	11	341	297	41	400	348	51	370	317	49	368	313
0600-0700	943	788	143	904	750	147	578	526	49	327	303	22	859	716	134	944	786	150	939	796	133	918	785
0700-0800	1,174	1,025	138	1,100	950	138	769	703	58	598	564	27	1,136	981	137	1,108	937	149	1,086	937	137	1,121	996
0800-0900	1,220	1,072	130	1,153	1,012	130	991	897	79	689	656	27	1,209	1,051	139	1,254	1,084	149	1,270	1,125	128	1,221	1,112
0900-1000	1,211	1,032	164	1,182	1,016	155	1,182	1,074	82	929	866	52	1,046	871	162	1,130	964	154	1,102	961	128	1,134	1,112
1000-1100	1,176	999	158	1,056	879	170	1,383	1,269	100	1,001	944	47	931	787	137	986	811	161	1,039	849	176	1,038	1,082
1100-1200	1,079	917	152	1,023	876	137	1,372	1,268	78	1,087	994	76	894	764	120	959	818	131	926	775	137	976	1,049
1200-1300	1,041	865	163	1,067	898	161	1,409	1,286	102	1,137	1,058	70	897	743	141	943	811	124	998	839	151	989	1,070
1300-1400	1,006	854	137	1,033	860	156	1,342	1,227	98	934	874	47	869	733	130	976	820	144	942	789	144	965	1,015
1400-1500	1,054	914	134	1,097	961	119	1,301	1,207	80	879	824	48	1,027	878	134	1,096	935	145	1,081	929	141	1,071	1,076
1500-1600	1,314	1,125	164	1,207	1,045	144	1,009	930	69	870	811	50	1,250	1,081	154	1,285	1,102	160	1,318	1,120	181	1,275	1,179
1600-1700	1,426	1,263	142	1,241	1,100	122	949	884	55	795	759	35	1,297	1,121	149	1,336	1,169	147	1,379	1,223	141	1,336	1,203
1700-1800	1,404	1,282	104	1,260	1,135	112	937	888	40	727	676	40	1,292	1,171	104	1,388	1,274	99	1,321	1,180	123	1,333	1,190
1800-1900	1,164	1,081	76	1,043	955	80	748	705	37	518	492	24	998	923	67	1,140	1,060	67	1,038	977	49	1,077	950
1900-2000	748	680	62	652	606	41	557	518	34	423	393	26	562	514	44	653	589	54	645	594	43	652	606
2000-2100	489	450	35	472	427	39	449	428	18	315	287	26	466	425	39	419	383	32	434	408	25	456	435
2100-2200	453	415	31	480	450	29	395	378	16	266	253	13	329	302	26	340	308	30	391	364	25	399	379
2200-2300	292	273	18	319	302	16	367	351	14	223	212	9	211	199	12	214	205	9	283	271	12	264	273
2300-2400	143	134	9	224	218	6	280	268	10	118	110	8	109	101	7	121	108	13	132	121	11	146	161

Totals

0000-0000	**17,932**	**15,666**	**2,054**	**17,189**	**15,020**	**1,996**	**16,569**	**15,316**	**1,061**	**12,376**	**11,583**	**678**	**15,975**	**13,866**	**1,921**	**16,957**	**14,729**	**2,017**	**16,981**	**14,816**	**1,980**	**17,007**	**16,283**
0700-0900	2,394	2,097	268	2,253	1,962	268	1,760	1,600	137	1,287	1,220	54	2,345	2,032	276	2,362	2,021	298	2,356	2,062	265	2,342	2,108
1600-1800	2,830	2,545	246	2,501	2,235	234	1,886	1,772	95	1,522	1,435	75	2,589	2,292	253	2,724	2,443	246	2,700	2,403	264	2,669	2,393
Off-Peak	12,708	11,024	1,540	12,435	10,823	1,494	12,923	11,944	829	9,567	8,928	549	11,041	9,542	1,392	11,871	10,265	1,473	11,925	10,351	1,451	11,996	11,781
0700-2200	15,959	13,974	1,790	15,066	13,170	1,733	14,793	13,662	946	11,168	10,451	608	14,203	12,345	1,683	15,013	13,065	1,746	14,970	13,070	1,729	**15,042**	**14,453**
2200-0700	1,973	1,692	264	2,123	1,850	263	1,776	1,654	115	1,208	1,132	70	1,772	1,521	238	1,944	1,664	271	2,011	1,746	251	**1,965**	**1,830**

20SYD0051

Warringah Rd, west of Hilmer St (Underpass)
Westbound

Time	Week 1																				Averages	
	Thu 26/11/2020			Fri 27/11/2020			Sat 28/11/2020			Sun 29/11/2020			Mon 30/11/2020			Tue 1/12/2020			Wed 2/12/2020			Weekday	7-day
	Total	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy		
0000-0100	68	62	6	98	86	11	180	175	5	244	230	13	78	71	7	75	64	11	95	88	7	83	120
0100-0200	57	45	12	58	50	8	129	117	12	191	186	4	46	36	10	49	41	8	53	44	9	53	83
0200-0300	41	34	7	54	44	10	89	83	6	86	81	5	52	37	15	42	32	10	36	25	11	45	57
0300-0400	68	54	14	60	51	9	67	55	12	55	53	2	67	52	15	74	61	13	79	64	15	70	67
0400-0500	194	159	34	184	147	36	117	104	13	94	86	8	181	149	31	207	175	32	201	172	29	193	168
0500-0600	781	641	129	768	633	126	323	285	38	153	138	15	793	664	121	801	666	128	817	677	132	792	634
0600-0700	1,881	1,527	312	1,708	1,364	301	715	593	116	313	277	33	1,758	1,404	307	1,961	1,606	311	1,948	1,566	328	1,851	1,469
0700-0800	1,941	1,717	196	1,866	1,602	221	898	776	107	507	463	39	2,062	1,784	223	1,925	1,678	201	1,876	1,661	180	1,934	1,582
0800-0900	1,406	1,258	124	1,554	1,381	152	1,129	1,003	107	759	708	41	1,539	1,341	170	1,305	1,146	128	1,353	1,199	128	1,431	1,292
0900-1000	1,495	1,276	190	1,353	1,165	167	1,442	1,297	108	1,175	1,085	68	1,421	1,240	158	1,425	1,220	174	1,501	1,314	169	1,439	1,402
1000-1100	1,365	1,153	182	1,533	1,314	182	1,695	1,553	110	1,527	1,388	102	1,324	1,126	176	1,316	1,109	181	1,393	1,201	172	1,386	1,450
1100-1200	1,494	1,258	211	1,527	1,332	176	1,718	1,550	138	1,666	1,531	101	1,272	1,077	176	1,351	1,128	199	1,455	1,251	173	1,420	1,498
1200-1300	1,361	1,128	203	1,557	1,347	190	1,829	1,663	123	1,696	1,550	118	1,268	1,072	178	1,298	1,098	175	1,463	1,243	200	1,389	1,496
1300-1400	1,485	1,272	197	1,566	1,318	233	1,690	1,516	138	1,487	1,364	92	1,300	1,077	199	1,345	1,162	167	1,358	1,147	189	1,411	1,462
1400-1500	1,738	1,478	231	1,697	1,446	210	1,672	1,515	118	1,386	1,276	90	1,447	1,248	175	1,520	1,271	218	1,672	1,432	205	1,615	1,590
1500-1600	1,774	1,546	203	1,858	1,620	204	1,560	1,417	108	1,468	1,366	77	1,700	1,485	195	1,726	1,493	210	1,815	1,586	202	1,775	1,700
1600-1700	1,797	1,563	203	1,760	1,552	171	1,556	1,434	89	1,461	1,342	94	1,611	1,400	188	1,773	1,549	193	1,694	1,470	185	1,727	1,665
1700-1800	1,837	1,665	148	1,683	1,483	168	1,764	1,622	119	1,284	1,196	65	1,529	1,379	120	1,666	1,493	150	1,684	1,496	152	1,680	1,635
1800-1900	1,391	1,264	118	1,369	1,232	112	1,380	1,265	88	1,057	994	53	1,129	1,016	96	1,331	1,203	108	1,273	1,161	96	1,299	1,276
1900-2000	871	799	64	937	868	59	987	931	44	675	634	29	806	749	49	810	751	57	780	733	41	841	838
2000-2100	728	682	41	658	610	39	843	796	43	577	544	28	551	520	28	481	450	28	579	546	31	599	631
2100-2200	581	552	21	639	602	31	727	702	19	414	392	22	390	374	16	462	443	18	506	480	22	516	531
2200-2300	421	398	23	504	474	27	662	638	24	282	271	9	290	272	17	294	283	11	377	361	16	377	404
2300-2400	198	185	13	354	340	13	394	377	16	137	127	9	143	136	7	160	151	8	177	163	14	206	223

Totals

0000-0000	**24,973**	**21,716**	**2,882**	**25,345**	**22,061**	**2,856**	**23,566**	**21,467**	**1,701**	**18,694**	**17,282**	**1,117**	**22,757**	**19,709**	**2,677**	**23,397**	**20,273**	**2,739**	**24,185**	**21,080**	**2,706**	**24,131**	**23,274**
0700-0900	3,347	2,975	320	3,420	2,983	373	2,027	1,779	214	1,266	1,171	80	3,601	3,125	393	3,230	2,824	329	3,229	2,860	308	3,365	2,874
1600-1800	3,634	3,228	351	3,443	3,035	339	3,320	3,056	208	2,745	2,538	159	3,140	2,779	308	3,439	3,042	343	3,378	2,966	337	3,407	3,300
Off-Peak	17,992	15,513	2,211	18,482	16,043	2,144	18,219	16,632	1,279	14,683	13,573	878	16,016	13,805	1,976	16,728	14,407	2,067	17,578	15,254	2,061	17,359	17,100
0700-2200	21,264	18,611	2,332	21,557	18,872	2,315	20,890	19,040	1,459	17,139	15,833	1,019	19,349	16,888	2,147	19,734	17,194	2,207	20,402	17,920	2,145	**20,461**	**20,048**
2200-0700	3,709	3,105	550	3,788	3,189	541	2,676	2,427	242	1,555	1,449	98	3,408	2,821	530	3,663	3,079	532	3,783	3,160	561	**3,670**	**3,226**

20SYD0051

Warringah Rd, btwn Jones St & Courtley Rd
Eastbound

Time	Week 1																				Averages	
	Tue 24/11/2020			Wed 25/11/2020			Thu 26/11/2020			Fri 27/11/2020			Sat 28/11/2020			Sun 29/11/2020			Mon 30/11/2020			Weekday	7-day
	Total	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy		
0000-0100	89	80	9	86	78	8	87	78	9	105	98	7	190	182	8	263	255	8	77	66	11	89	128
0100-0200	52	43	9	62	53	9	64	57	7	60	53	7	115	107	8	144	139	5	53	47	6	58	79
0200-0300	41	28	13	43	38	5	45	38	7	49	42	7	77	67	10	79	74	5	51	43	8	46	55
0300-0400	57	42	15	44	32	12	48	41	7	66	50	16	50	44	6	63	60	3	48	37	11	53	54
0400-0500	170	146	24	190	167	23	183	159	24	178	159	19	93	84	9	93	85	8	176	149	27	179	155
0500-0600	570	492	75	568	501	66	561	495	63	542	459	81	284	253	30	186	175	11	528	454	70	554	463
0600-0700	1,235	1,023	204	1,240	1,069	160	1,278	1,069	198	1,205	987	209	768	685	79	419	397	22	1,194	990	190	1,230	1,048
0700-0800	1,765	1,555	196	1,778	1,559	202	1,777	1,537	223	1,734	1,503	212	1,229	1,135	91	843	806	33	1,662	1,468	180	1,743	1,541
0800-0900	1,815	1,609	190	1,896	1,690	189	1,877	1,664	199	1,847	1,642	184	1,687	1,563	115	1,082	1,036	39	1,849	1,624	206	1,857	1,722
0900-1000	1,788	1,526	253	1,903	1,633	251	1,872	1,613	238	1,895	1,659	215	2,022	1,873	128	1,527	1,432	84	1,676	1,430	233	1,827	1,812
1000-1100	1,679	1,441	227	1,690	1,422	262	1,855	1,582	257	1,865	1,608	243	2,199	2,026	146	1,661	1,565	85	1,522	1,285	231	1,722	1,782
1100-1200	1,612	1,370	224	1,622	1,382	227	1,828	1,599	215	1,762	1,559	195	2,144	1,987	147	1,854	1,733	110	1,525	1,345	167	1,670	1,764
1200-1300	1,635	1,425	200	1,668	1,427	228	1,749	1,510	226	1,857	1,623	224	2,050	1,878	156	1,862	1,713	137	1,530	1,325	197	1,688	1,764
1300-1400	1,613	1,372	225	1,569	1,362	199	1,694	1,447	224	1,736	1,508	215	2,016	1,869	134	1,588	1,495	86	1,569	1,323	234	1,636	1,684
1400-1500	1,737	1,523	191	1,889	1,662	216	1,842	1,584	247	1,882	1,651	211	1,949	1,827	104	1,498	1,426	66	1,748	1,521	214	1,820	1,792
1500-1600	2,197	1,917	245	2,153	1,881	249	2,119	1,843	254	2,094	1,844	224	1,688	1,572	105	1,482	1,396	78	2,165	1,869	260	2,146	1,985
1600-1700	2,265	1,980	244	2,214	1,948	243	2,293	2,016	253	2,162	1,938	200	1,539	1,429	100	1,409	1,325	73	2,299	2,027	241	2,247	2,026
1700-1800	2,341	2,128	176	2,260	2,048	176	2,313	2,093	188	2,054	1,842	194	1,458	1,373	73	1,301	1,210	76	2,141	1,955	153	2,222	1,981
1800-1900	1,712	1,571	122	1,754	1,608	124	1,840	1,706	122	1,698	1,556	126	1,191	1,112	69	950	889	56	1,684	1,550	125	1,738	1,547
1900-2000	1,092	1,011	77	1,164	1,078	79	1,315	1,201	104	1,124	1,036	80	923	868	51	709	668	36	1,028	954	68	1,145	1,051
2000-2100	714	658	52	787	726	57	840	781	55	734	686	46	747	712	33	566	532	34	751	684	65	765	734
2100-2200	586	552	33	638	593	41	711	683	28	719	671	48	637	614	19	478	453	23	544	499	42	640	616
2200-2300	408	391	16	454	426	28	446	426	18	540	514	25	588	562	26	315	303	12	359	331	28	441	444
2300-2400	218	208	10	197	181	16	239	219	20	399	389	9	421	405	14	174	161	13	186	169	17	248	262

Totals

0000-0000	**27,391**	**24,091**	**3,030**	**27,869**	**24,564**	**3,070**	**28,876**	**25,441**	**3,186**	**28,307**	**25,077**	**2,997**	**26,065**	**24,227**	**1,661**	**20,546**	**19,328**	**1,103**	**26,365**	**23,145**	**2,984**	**27,762**	**26,488**
0700-0900	3,580	3,164	386	3,674	3,249	391	3,654	3,201	422	3,581	3,145	396	2,916	2,698	206	1,925	1,842	72	3,511	3,092	386	3,600	3,263
1600-1800	4,606	4,108	420	4,474	3,996	419	4,606	4,109	441	4,216	3,780	394	2,997	2,802	173	2,710	2,535	149	4,440	3,982	394	4,468	4,007
Off-Peak	19,205	16,819	2,224	19,721	17,319	2,260	20,616	18,131	2,323	20,510	18,152	2,207	20,152	18,727	1,282	15,911	14,951	882	18,414	16,071	2,204	19,693	19,218
0700-2200	24,551	21,638	2,655	24,985	22,019	2,743	25,925	22,859	2,833	25,163	22,326	2,617	23,479	21,838	1,471	18,810	17,679	1,016	23,693	20,859	2,616	**24,863**	**23,801**
2200-0700	2,840	2,453	375	2,884	2,545	327	2,951	2,582	353	3,144	2,751	380	2,586	2,389	190	1,736	1,649	87	2,672	2,286	368	**2,898**	**2,688**

20SYD0051

Warringah Rd, btwn Jones St & Courtley Rd
Westbound

Time	Week 1																						
	Tue 24/11/2020			Wed 25/11/2020			Thu 26/11/2020			Fri 27/11/2020			Sat 28/11/2020			Sun 29/11/2020			Mon 30/11/2020			Averages	
	Total	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	Weekday	7-day
0000-0100	87	74	13	75	60	15	102	87	15	102	87	15	185	173	12	256	244	12	93	83	10	92	129
0100-0200	48	40	8	72	63	9	50	41	9	57	51	6	133	124	9	221	215	6	42	36	6	54	89
0200-0300	39	30	9	42	34	8	48	39	9	63	53	10	93	88	5	97	90	7	62	42	19	51	63
0300-0400	66	53	13	70	56	14	81	68	13	65	55	10	73	60	13	78	75	3	70	58	12	70	72
0400-0500	233	193	40	229	203	26	207	168	39	230	190	40	133	114	19	98	91	7	191	165	26	218	189
0500-0600	871	745	123	847	722	120	873	723	146	797	647	145	331	286	45	198	175	23	873	722	144	852	684
0600-0700	2,216	1,898	307	2,032	1,699	318	2,111	1,785	312	1,897	1,561	318	768	655	112	363	320	42	2,019	1,707	304	2,055	1,629
0700-0800	2,385	2,164	208	2,329	2,096	218	2,256	2,031	208	2,120	1,870	238	1,023	909	108	582	537	44	2,252	2,035	199	2,268	1,850
0800-0900	2,135	1,940	173	2,172	1,995	165	2,184	1,977	185	2,107	1,927	166	1,392	1,275	109	866	817	48	2,117	1,919	181	2,143	1,853
0900-1000	1,648	1,472	161	1,703	1,501	192	1,711	1,529	178	1,625	1,425	185	1,767	1,665	89	1,325	1,246	69	1,659	1,452	197	1,669	1,634
1000-1100	1,526	1,304	214	1,548	1,321	215	1,667	1,436	231	1,790	1,550	229	2,053	1,896	133	1,702	1,607	86	1,475	1,260	214	1,601	1,680
1100-1200	1,567	1,354	203	1,694	1,454	232	1,674	1,443	230	1,711	1,509	195	2,150	1,994	142	1,884	1,778	92	1,513	1,321	182	1,632	1,742
1200-1300	1,609	1,393	209	1,703	1,475	215	1,723	1,507	211	1,830	1,598	220	2,114	1,958	142	1,872	1,774	84	1,577	1,341	226	1,688	1,775
1300-1400	1,575	1,375	192	1,636	1,435	192	1,844	1,575	261	1,925	1,681	236	1,994	1,863	120	1,610	1,522	78	1,608	1,388	209	1,718	1,742
1400-1500	1,889	1,627	249	1,957	1,695	245	2,044	1,782	255	2,079	1,830	240	1,860	1,705	136	1,500	1,393	96	1,870	1,632	222	1,968	1,886
1500-1600	1,938	1,697	228	1,921	1,677	227	2,178	1,916	255	2,115	1,845	255	1,742	1,634	97	1,521	1,429	80	1,909	1,651	241	2,012	1,903
1600-1700	1,920	1,733	170	1,941	1,701	228	1,958	1,717	231	1,997	1,765	220	1,788	1,689	88	1,535	1,457	68	1,901	1,697	186	1,943	1,863
1700-1800	1,858	1,678	162	1,964	1,762	182	2,044	1,867	160	1,921	1,725	182	1,787	1,673	98	1,336	1,273	55	1,804	1,636	152	1,918	1,816
1800-1900	1,407	1,306	87	1,459	1,340	109	1,579	1,453	118	1,555	1,430	121	1,396	1,338	49	1,037	993	38	1,309	1,178	119	1,462	1,392
1900-2000	873	805	65	949	888	53	1,158	1,082	70	1,041	983	54	985	945	38	697	662	34	884	820	57	981	941
2000-2100	717	683	33	698	664	29	945	898	43	729	689	39	887	860	27	558	524	33	652	625	27	748	741
2100-2200	525	503	22	580	553	25	731	704	25	713	679	30	755	734	21	400	384	16	434	411	22	597	591
2200-2300	318	294	24	370	357	13	403	370	32	519	492	25	661	643	18	283	272	11	324	300	24	387	411
2300-2400	170	161	9	204	189	15	220	206	14	359	345	14	430	410	20	166	148	18	146	133	13	220	242

Totals

0000-0000	**27,620**	**24,522**	**2,922**	**28,195**	**24,940**	**3,065**	**29,791**	**26,404**	**3,250**	**29,347**	**25,987**	**3,193**	**26,500**	**24,691**	**1,650**	**20,185**	**19,026**	**1,050**	**26,784**	**23,612**	**2,992**	**28,347**	**26,917**
0700-0900	4,520	4,104	381	4,501	4,091	383	4,440	4,008	393	4,227	3,797	404	2,415	2,184	217	1,448	1,354	92	4,369	3,954	380	4,411	3,703
1600-1800	3,778	3,411	332	3,905	3,463	410	4,002	3,584	391	3,918	3,490	402	3,575	3,362	186	2,871	2,730	123	3,705	3,333	338	3,862	3,679
Off-Peak	19,322	17,007	2,209	19,789	17,386	2,272	21,349	18,812	2,466	21,202	18,700	2,387	20,510	19,145	1,247	15,866	14,942	835	18,710	16,325	2,274	20,074	19,535
0700-2200	23,572	21,034	2,376	24,254	21,557	2,527	25,696	22,917	2,661	25,258	22,506	2,610	23,693	22,138	1,397	18,425	17,396	921	22,964	20,366	2,434	**24,349**	**23,409**
2200-0700	4,048	3,488	546	3,941	3,383	538	4,095	3,487	589	4,089	3,481	583	2,807	2,553	253	1,760	1,630	129	3,820	3,246	558	**3,999**	**3,509**

20SYD0051

Forest Way, north of Naree Rd
Northbound

Time	Week 1																					Averages	
	Wed 25/11/2020			Thu 26/11/2020			Fri 27/11/2020			Sat 28/11/2020			Sun 29/11/2020			Mon 30/11/2020			Tue 1/12/2020			Weekday	7-day
	Total	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy		
0000-0100	57	47	10	85	73	12	89	80	9	171	164	7	197	188	9	65	57	8	52	47	5	70	102
0100-0200	30	22	8	35	29	6	49	40	9	101	93	8	152	148	4	25	23	2	30	23	7	34	60
0200-0300	20	16	4	29	26	3	25	18	7	57	53	4	73	68	5	46	33	13	22	15	7	28	39
0300-0400	28	24	4	36	29	7	33	25	8	39	33	6	63	61	2	35	29	6	36	27	9	34	39
0400-0500	82	70	12	87	71	16	102	86	16	89	68	21	53	53	0	78	66	12	88	65	23	87	83
0500-0600	353	296	55	387	331	54	354	304	49	200	167	32	130	118	11	350	298	50	329	273	54	355	300
0600-0700	1,011	878	131	1,013	856	154	985	820	159	583	526	53	314	281	31	960	798	153	994	830	159	993	837
0700-0800	1,325	1,163	153	1,370	1,181	178	1,331	1,147	175	895	795	95	577	543	33	1,244	1,081	152	1,371	1,218	151	1,328	1,159
0800-0900	1,631	1,449	168	1,586	1,418	159	1,561	1,378	162	1,186	1,093	89	791	741	44	1,626	1,445	173	1,564	1,392	159	1,594	1,421
0900-1000	1,476	1,272	193	1,349	1,164	177	1,457	1,247	198	1,546	1,429	114	1,157	1,084	64	1,397	1,174	215	1,397	1,169	219	1,415	1,397
1000-1100	1,405	1,203	198	1,390	1,174	207	1,437	1,234	195	1,729	1,622	102	1,476	1,396	71	1,305	1,094	201	1,358	1,165	188	1,379	1,443
1100-1200	1,481	1,257	220	1,388	1,164	219	1,629	1,425	197	1,766	1,629	118	1,564	1,470	85	1,389	1,204	179	1,302	1,120	176	1,438	1,503
1200-1300	1,488	1,298	185	1,441	1,244	187	1,574	1,382	185	1,691	1,573	108	1,537	1,433	98	1,405	1,170	224	1,463	1,237	217	1,474	1,514
1300-1400	1,499	1,259	233	1,509	1,271	226	1,651	1,429	214	1,563	1,445	109	1,360	1,287	67	1,391	1,208	174	1,475	1,272	196	1,505	1,493
1400-1500	1,720	1,491	221	1,749	1,512	227	1,863	1,644	209	1,529	1,413	109	1,225	1,135	78	1,586	1,384	194	1,593	1,380	200	1,702	1,609
1500-1600	1,720	1,511	197	1,832	1,596	224	1,792	1,582	202	1,352	1,266	75	1,151	1,096	49	1,725	1,521	190	1,673	1,448	214	1,748	1,606
1600-1700	1,889	1,679	195	1,868	1,649	202	1,795	1,620	164	1,338	1,266	67	1,104	1,043	53	1,843	1,656	171	1,853	1,661	179	1,850	1,670
1700-1800	1,896	1,740	142	1,912	1,756	144	1,862	1,713	141	1,249	1,186	54	1,024	977	44	1,840	1,675	142	1,813	1,650	149	1,865	1,657
1800-1900	1,586	1,475	101	1,696	1,567	120	1,583	1,463	112	994	929	62	783	739	40	1,398	1,284	101	1,574	1,430	123	1,567	1,373
1900-2000	986	920	65	1,095	1,010	81	1,052	978	73	736	697	37	551	517	32	815	756	57	941	872	64	978	882
2000-2100	654	605	45	783	729	49	675	625	47	657	621	33	459	425	32	592	556	35	582	544	36	657	629
2100-2200	512	473	39	637	594	39	653	616	35	556	532	24	356	335	20	429	403	26	436	403	31	533	511
2200-2300	374	352	22	377	349	28	495	473	21	525	498	24	201	187	14	303	272	31	299	273	26	370	368
2300-2400	143	133	10	202	189	13	322	307	15	353	335	18	103	89	14	109	97	12	130	113	17	181	195

Totals

0000-0000	**23,366**	**20,633**	**2,611**	**23,856**	**20,982**	**2,732**	**24,369**	**21,636**	**2,602**	**20,905**	**19,433**	**1,369**	**16,401**	**15,414**	**900**	**21,956**	**19,284**	**2,521**	**22,375**	**19,627**	**2,609**	**23,184**	**21,890**
0700-0900	2,956	2,612	321	2,956	2,599	337	2,892	2,525	337	2,081	1,888	184	1,368	1,284	77	2,870	2,526	325	2,935	2,610	310	2,922	2,580
1600-1800	3,785	3,419	337	3,780	3,405	346	3,657	3,333	305	2,587	2,452	121	2,128	2,020	97	3,683	3,331	313	3,666	3,311	328	3,714	3,327
Off-Peak	16,625	14,602	1,953	17,120	14,978	2,049	17,820	15,778	1,960	16,237	15,093	1,064	12,905	12,110	726	15,403	13,427	1,883	15,774	13,706	1,971	16,548	15,983
0700-2200	21,268	18,795	2,355	21,605	19,029	2,439	21,915	19,483	2,309	18,787	17,496	1,196	15,115	14,221	810	19,985	17,611	2,234	20,395	17,961	2,302	**21,034**	**19,867**
2200-0700	2,098	1,838	256	2,251	1,953	293	2,454	2,153	293	2,118	1,937	173	1,286	1,193	90	1,971	1,673	287	1,980	1,666	307	**2,151**	**2,023**

20SYD0051

Forest Way, north of Naree Rd
Southbound

Time	Week 1																						
	Wed 25/11/2020			Thu 26/11/2020			Fri 27/11/2020			Sat 28/11/2020			Sun 29/11/2020			Mon 30/11/2020			Tue 1/12/2020			Averages	
	Total	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	Weekday	7-day
0000-0100	54	43	11	46	43	3	70	65	5	111	106	5	195	187	8	35	31	4	44	37	7	50	79
0100-0200	32	26	6	35	32	3	31	27	4	85	79	6	111	106	5	30	28	2	26	22	4	31	50
0200-0300	20	19	1	27	23	4	44	35	9	43	37	6	50	47	3	30	25	5	38	33	5	32	36
0300-0400	39	32	7	43	37	6	50	36	14	36	33	3	46	42	4	54	42	12	45	36	9	46	45
0400-0500	132	112	20	149	126	23	126	109	17	73	65	8	62	56	6	129	106	23	135	121	14	134	115
0500-0600	582	503	77	563	481	76	553	476	76	229	204	24	164	150	14	551	470	77	571	483	87	564	459
0600-0700	1,461	1,203	249	1,460	1,217	233	1,329	1,091	223	592	519	69	294	278	16	1,375	1,142	226	1,522	1,257	257	1,429	1,148
0700-0800	2,014	1,796	212	1,923	1,725	182	1,781	1,579	192	1,031	941	79	645	594	48	1,809	1,610	182	1,828	1,642	171	1,871	1,576
0800-0900	2,020	1,843	172	2,050	1,871	164	1,917	1,761	142	1,437	1,338	91	901	850	44	1,974	1,810	150	1,963	1,792	158	1,985	1,752
0900-1000	1,679	1,476	194	1,853	1,643	201	1,712	1,548	158	1,685	1,590	86	1,322	1,246	68	1,593	1,415	161	1,631	1,464	164	1,694	1,639
1000-1100	1,497	1,305	184	1,497	1,294	190	1,579	1,406	166	1,772	1,670	89	1,469	1,387	77	1,323	1,151	168	1,391	1,239	150	1,457	1,504
1100-1200	1,525	1,332	189	1,530	1,363	163	1,626	1,483	139	1,851	1,742	100	1,649	1,545	95	1,371	1,191	172	1,440	1,285	152	1,498	1,570
1200-1300	1,424	1,247	171	1,417	1,224	184	1,532	1,384	139	1,871	1,761	99	1,558	1,463	78	1,332	1,143	181	1,380	1,190	181	1,417	1,502
1300-1400	1,392	1,205	174	1,341	1,166	159	1,443	1,267	167	1,526	1,437	81	1,367	1,283	80	1,364	1,186	169	1,355	1,175	170	1,379	1,398
1400-1500	1,581	1,361	210	1,560	1,371	177	1,611	1,440	161	1,365	1,273	80	1,287	1,212	67	1,402	1,245	148	1,496	1,321	166	1,530	1,472
1500-1600	1,786	1,602	172	1,829	1,638	181	1,859	1,704	147	1,323	1,244	71	1,279	1,194	78	1,872	1,695	169	1,709	1,535	167	1,811	1,665
1600-1700	1,682	1,552	124	1,747	1,610	133	1,707	1,582	116	1,376	1,302	69	1,375	1,314	57	1,713	1,562	136	1,646	1,503	133	1,699	1,607
1700-1800	1,747	1,622	108	1,720	1,609	106	1,677	1,576	85	1,270	1,212	51	1,213	1,128	76	1,687	1,575	107	1,680	1,559	106	1,702	1,571
1800-1900	1,277	1,194	73	1,330	1,248	71	1,333	1,266	59	1,072	1,006	61	918	861	51	1,110	1,026	75	1,264	1,175	80	1,263	1,186
1900-2000	792	736	51	857	797	57	865	822	38	709	664	42	602	570	31	735	682	47	763	709	49	802	760
2000-2100	565	531	31	575	538	36	554	529	23	535	507	28	492	455	36	581	532	47	541	511	30	563	549
2100-2200	426	398	28	486	455	28	436	410	26	447	428	19	379	357	21	393	353	39	392	365	26	427	423
2200-2300	288	272	16	325	311	14	412	397	15	377	367	9	174	160	14	216	206	10	216	196	20	291	287
2300-2400	114	98	15	230	221	8	247	240	7	295	281	14	79	70	9	103	94	9	90	84	6	157	165

Totals

0000-0000	**24,129**	**21,508**	**2,495**	**24,593**	**22,043**	**2,402**	**24,494**	**22,233**	**2,128**	**21,111**	**19,806**	**1,190**	**17,631**	**16,555**	**986**	**22,782**	**20,320**	**2,319**	**23,166**	**20,734**	**2,312**	**23,833**	**22,558**
0700-0900	4,034	3,639	384	3,973	3,596	346	3,698	3,340	334	2,468	2,279	170	1,546	1,444	92	3,783	3,420	332	3,791	3,434	329	3,856	3,328
1600-1800	3,429	3,174	232	3,467	3,219	239	3,384	3,158	201	2,646	2,514	120	2,588	2,442	133	3,400	3,137	243	3,326	3,062	239	3,401	3,177
Off-Peak	16,666	14,695	1,879	17,153	15,228	1,817	17,412	15,735	1,593	15,997	15,013	900	13,497	12,669	761	15,599	13,763	1,744	16,049	14,238	1,744	16,576	16,053
0700-2200	21,407	19,200	2,093	21,715	19,552	2,032	21,632	19,757	1,758	19,270	18,115	1,046	16,456	15,459	907	20,259	18,176	1,951	20,479	18,465	1,903	**21,098**	**20,174**
2200-0700	2,722	2,308	402	2,878	2,491	370	2,862	2,476	370	1,841	1,691	144	1,175	1,096	79	2,523	2,144	368	2,687	2,269	409	**2,734**	**2,384**

20SYD0051

Frenchs Forest Rd W, btwn Bluegum Cres & Gladys Ave
Eastbound

Time	Week 1																					Averages	
	Tue 24/11/2020			Wed 25/11/2020			Thu 26/11/2020			Fri 27/11/2020			Sat 28/11/2020			Sun 29/11/2020			Mon 30/11/2020			Weekday	7-day
	Total	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy		
0000-0100	0	0	0	9	8	1	12	9	3	5	4	1	21	20	1	22	20	2	14	12	2	8	12
0100-0200	7	7	0	10	8	2	3	2	1	9	5	4	22	16	6	16	14	2	6	5	1	7	10
0200-0300	3	2	1	1	1	0	4	4	0	4	2	2	11	10	1	5	5	0	2	2	0	3	4
0300-0400	6	4	2	5	4	1	4	3	1	5	4	1	6	6	0	11	11	0	8	6	2	6	6
0400-0500	16	15	1	15	14	1	20	17	3	19	19	0	15	12	3	11	10	1	15	14	1	17	16
0500-0600	78	70	8	105	94	10	84	78	6	90	81	9	41	38	3	33	30	3	66	57	9	85	71
0600-0700	276	243	33	262	242	20	263	229	33	277	246	28	133	125	8	82	78	4	269	234	33	269	223
0700-0800	516	480	33	525	479	40	505	467	33	500	471	27	283	259	22	152	136	15	519	477	40	513	429
0800-0900	825	753	58	796	743	39	771	717	45	715	669	39	406	380	24	254	242	11	749	701	42	771	645
0900-1000	481	439	38	508	469	37	557	515	39	561	522	34	483	451	29	354	331	21	531	493	34	528	496
1000-1100	403	371	27	434	399	33	451	418	31	441	409	29	523	490	30	380	356	23	420	389	30	430	436
1100-1200	411	381	26	434	405	28	448	411	36	452	414	36	517	490	26	422	397	24	385	356	25	426	438
1200-1300	433	404	26	429	391	36	444	411	33	447	415	30	534	509	23	462	431	27	399	363	34	430	450
1300-1400	444	407	36	442	400	36	440	400	36	457	410	43	454	421	30	370	345	24	433	392	41	443	434
1400-1500	450	416	31	527	485	35	469	425	43	489	442	45	432	401	28	383	355	26	474	441	30	482	461
1500-1600	659	610	43	603	548	48	664	615	46	620	582	35	415	394	19	325	301	21	636	587	41	636	560
1600-1700	559	512	44	540	490	46	589	545	37	527	490	34	399	378	20	364	344	17	557	506	44	554	505
1700-1800	600	559	36	592	555	31	535	498	34	500	472	25	343	323	20	314	293	18	515	477	33	548	486
1800-1900	362	337	21	391	368	22	377	353	23	405	376	28	288	274	13	234	216	18	358	338	20	379	345
1900-2000	261	247	13	240	221	18	281	261	17	245	227	17	195	176	15	163	151	12	236	220	15	253	232
2000-2100	160	147	13	169	156	13	183	168	15	150	142	8	164	150	13	116	104	12	148	133	13	162	156
2100-2200	102	92	10	97	88	9	114	102	12	111	102	8	113	100	12	99	91	8	95	79	16	104	104
2200-2300	57	49	8	58	55	3	62	57	5	101	97	4	97	87	10	35	28	7	52	46	6	66	66
2300-2400	19	18	1	12	11	1	21	19	2	60	58	2	58	52	6	8	7	1	20	18	2	26	28

Totals

0000-0000	**7,128**	**6,563**	**509**	**7,204**	**6,634**	**510**	**7,301**	**6,724**	**534**	**7,190**	**6,659**	**489**	**5,953**	**5,562**	**362**	**4,615**	**4,296**	**297**	**6,907**	**6,346**	**514**	**7,146**	**6,614**
0700-0900	1,341	1,233	91	1,321	1,222	79	1,276	1,184	78	1,215	1,140	66	689	639	46	406	378	26	1,268	1,178	82	1,284	1,074
1600-1800	1,159	1,071	80	1,132	1,045	77	1,124	1,043	71	1,027	962	59	742	701	40	678	637	35	1,072	983	77	1,103	991
Off-Peak	4,628	4,259	338	4,751	4,367	354	4,901	4,497	385	4,948	4,557	364	4,522	4,222	276	3,531	3,281	236	4,567	4,185	355	4,759	4,550
0700-2200	6,666	6,155	455	6,727	6,197	471	6,828	6,306	480	6,620	6,143	438	5,549	5,196	324	4,392	4,093	277	6,455	5,952	458	**6,659**	**6,177**
2200-0700	462	408	54	477	437	39	473	418	54	570	516	51	404	366	38	223	203	20	452	394	56	**487**	**437**

20SYD0051

Frenchs Forest Rd W, btwn Bluegum Cres & Gladys Ave
Westbound

Time	Week 1																						
	Tue 24/11/2020			Wed 25/11/2020			Thu 26/11/2020			Fri 27/11/2020			Sat 28/11/2020			Sun 29/11/2020			Mon 30/11/2020			Averages	
	Total	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	Weekday	7-day
0000-0100	9	9	0	20	17	3	24	22	2	15	12	3	39	35	4	47	41	4	19	14	5	17	25
0100-0200	10	10	0	11	11	0	8	6	2	7	5	2	24	23	1	29	26	2	4	3	1	8	13
0200-0300	3	3	0	1	1	0	6	6	0	4	2	2	23	19	4	13	12	1	8	8	0	4	8
0300-0400	10	9	1	14	14	0	13	12	1	10	9	1	12	10	2	9	9	0	8	7	1	11	11
0400-0500	19	15	4	16	16	0	12	11	1	17	17	0	16	16	0	7	7	0	10	10	0	15	14
0500-0600	58	47	10	61	54	7	62	55	7	57	54	3	20	19	1	18	15	3	61	53	8	60	48
0600-0700	202	173	25	187	159	26	210	179	28	207	175	28	89	82	5	51	46	5	207	168	34	203	165
0700-0800	417	363	44	388	342	38	387	331	46	373	306	61	185	161	18	145	129	16	386	326	54	390	326
0800-0900	483	404	64	558	480	65	569	482	74	556	483	61	286	248	35	192	163	27	540	450	69	541	455
0900-1000	387	326	48	386	340	39	409	348	53	381	313	61	398	352	33	298	263	27	397	347	45	392	379
1000-1100	376	325	45	376	320	48	393	339	48	412	355	47	530	472	46	385	335	37	367	330	32	385	406
1100-1200	387	345	34	415	368	40	438	378	48	440	386	43	534	464	54	462	408	43	417	364	45	419	442
1200-1300	418	367	47	441	385	42	463	402	49	439	391	35	474	419	45	444	391	40	424	383	37	437	443
1300-1400	400	354	41	428	366	54	438	387	41	450	394	38	475	411	48	419	368	40	413	363	45	426	432
1400-1500	512	448	53	462	386	66	502	434	53	496	423	58	418	363	46	372	333	34	493	427	54	493	465
1500-1600	590	517	63	535	462	61	554	477	66	596	522	68	422	381	31	323	296	19	552	483	57	565	510
1600-1700	644	564	65	633	561	57	592	513	68	594	517	62	373	337	28	340	315	21	622	549	63	617	543
1700-1800	547	467	68	573	496	63	588	511	62	538	460	68	369	328	34	328	295	28	583	522	52	566	504
1800-1900	468	424	35	484	426	48	437	382	45	421	380	35	293	267	21	214	192	21	365	327	33	435	383
1900-2000	277	244	30	297	262	31	335	301	29	311	275	30	240	211	22	177	158	17	287	258	27	301	275
2000-2100	221	202	17	187	170	13	243	216	23	218	195	20	204	187	16	132	118	14	179	163	12	210	198
2100-2200	151	135	16	179	163	14	173	156	16	180	165	13	150	139	10	99	90	9	130	119	9	163	152
2200-2300	94	85	8	80	73	7	102	88	14	119	109	10	155	140	15	72	61	11	87	76	11	96	101
2300-2400	48	43	4	45	41	4	48	42	5	69	62	7	72	63	6	25	20	5	40	35	5	50	50

Totals

0000-0000	**6,731**	**5,879**	**722**	**6,777**	**5,913**	**726**	**7,006**	**6,078**	**781**	**6,910**	**6,010**	**756**	**5,801**	**5,147**	**525**	**4,601**	**4,091**	**424**	**6,599**	**5,785**	**699**	**6,805**	**6,346**
0700-0900	900	767	108	946	822	103	956	813	120	929	789	122	471	409	53	337	292	43	926	776	123	931	781
1600-1800	1,191	1,031	133	1,206	1,057	120	1,180	1,024	130	1,132	977	130	742	665	62	668	610	49	1,205	1,071	115	1,183	1,046
Off-Peak	4,640	4,081	481	4,625	4,034	503	4,870	4,241	531	4,849	4,244	504	4,588	4,073	410	3,596	3,189	332	4,468	3,938	461	4,690	4,519
0700-2200	6,278	5,485	670	6,342	5,527	679	6,521	5,657	721	6,405	5,565	700	5,351	4,740	487	4,330	3,854	393	6,155	5,411	634	**6,340**	**5,912**
2200-0700	453	394	52	435	386	47	485	421	60	505	445	56	450	407	38	271	237	31	444	374	65	**464**	**435**

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Frenchs Forest Rd E, btwn Harmston Ave & Inverness Ave
Eastbound

Time	Week 1																					Averages	
	Tue 24/11/2020			Wed 25/11/2020			Thu 26/11/2020			Fri 27/11/2020			Sat 28/11/2020			Sun 29/11/2020			Mon 30/11/2020			Weekday	7-day
	Total	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy		
0000-0100	10	8	2	15	12	3	20	17	3	16	14	2	31	27	4	28	26	2	11	8	3	14	19
0100-0200	7	7	0	9	9	0	8	7	1	9	8	1	6	6	0	16	16	0	5	4	1	8	9
0200-0300	3	3	0	3	3	0	7	7	0	6	3	3	13	11	2	10	9	1	4	4	0	5	7
0300-0400	8	6	2	2	1	1	3	3	0	4	4	0	8	7	1	11	11	0	8	6	2	5	6
0400-0500	16	15	1	16	16	0	21	18	3	21	18	3	12	11	1	8	8	0	12	10	2	17	15
0500-0600	71	58	12	89	81	8	80	65	15	69	59	10	26	23	3	20	17	3	76	66	10	77	62
0600-0700	187	159	27	194	164	29	201	173	28	180	146	33	105	94	11	52	46	6	190	158	31	190	158
0700-0800	369	331	34	348	311	34	356	317	36	342	306	35	234	212	20	121	107	13	353	315	33	354	303
0800-0900	556	509	41	540	489	44	545	490	49	528	477	45	295	268	26	161	152	9	542	497	40	542	452
0900-1000	405	368	35	391	343	46	406	368	37	431	384	46	371	343	25	240	217	23	387	340	44	404	376
1000-1100	336	302	32	371	338	32	395	349	45	395	354	38	455	430	23	298	267	28	357	328	27	371	372
1100-1200	353	323	30	379	338	40	409	379	29	434	405	26	426	390	35	339	313	26	368	329	36	389	387
1200-1300	415	390	25	402	352	49	431	394	37	403	361	40	405	384	18	388	366	21	353	316	35	401	400
1300-1400	345	322	23	394	362	32	370	335	34	404	370	33	382	351	31	322	299	22	395	354	40	382	373
1400-1500	431	390	40	483	437	42	417	375	40	464	425	38	349	328	19	304	275	29	457	406	45	450	415
1500-1600	564	508	55	529	461	64	570	504	62	567	518	48	349	325	23	279	262	15	575	520	51	561	490
1600-1700	547	488	56	546	497	47	554	498	56	523	464	59	338	318	19	285	266	19	567	506	61	547	480
1700-1800	555	510	37	563	520	37	561	526	33	452	411	40	317	291	25	259	240	19	500	453	45	526	458
1800-1900	327	294	32	401	366	32	378	351	26	366	331	34	248	231	16	198	184	14	357	321	33	366	325
1900-2000	229	204	25	266	244	22	285	249	36	255	239	16	176	167	9	155	144	11	224	208	16	252	227
2000-2100	162	147	15	161	147	14	163	142	20	139	125	14	139	130	9	106	96	10	148	129	19	155	145
2100-2200	114	105	9	117	107	10	111	102	9	114	105	9	90	82	7	73	64	8	117	104	13	115	105
2200-2300	75	70	5	65	60	4	83	77	5	91	86	5	100	91	9	48	43	5	64	55	9	76	75
2300-2400	38	34	4	20	17	3	34	30	4	53	50	3	65	60	5	21	20	1	31	28	3	35	37

Totals

0000-0000	**6,123**	**5,551**	**542**	**6,304**	**5,675**	**593**	**6,408**	**5,776**	**608**	**6,266**	**5,663**	**581**	**4,940**	**4,580**	**341**	**3,742**	**3,448**	**285**	**6,101**	**5,465**	**599**	**6,240**	**5,698**
0700-0900	925	840	75	888	800	78	901	807	85	870	783	80	529	480	46	282	259	22	895	812	73	896	756
1600-1800	1,102	998	93	1,109	1,017	84	1,115	1,024	89	975	875	99	655	609	44	544	506	38	1,067	959	106	1,074	938
Off-Peak	4,096	3,713	374	4,307	3,858	431	4,392	3,945	434	4,421	4,005	402	3,756	3,491	251	2,916	2,683	225	4,139	3,694	420	4,271	4,004
0700-2200	5,708	5,191	489	5,891	5,312	545	5,951	5,379	549	5,817	5,275	521	4,574	4,250	305	3,528	3,252	267	5,700	5,126	538	**5,813**	**5,310**
2200-0700	415	360	53	413	363	48	457	397	59	449	388	60	366	330	36	214	196	18	401	339	61	**427**	**388**

20SYD0051

Frenchs Forest Rd E, btwn Harmston Ave & Inverness Ave
Westbound

Time	Week 1																						
	Tue 24/11/2020			Wed 25/11/2020			Thu 26/11/2020			Fri 27/11/2020			Sat 28/11/2020			Sun 29/11/2020			Mon 30/11/2020			Averages	
	Total	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	Weekday	7-day
0000-0100	19	15	4	20	16	4	19	17	2	23	20	3	28	25	3	37	33	4	14	13	1	19	23
0100-0200	11	10	1	8	8	0	9	9	0	11	8	3	23	21	2	34	33	1	3	3	0	8	14
0200-0300	4	4	0	6	6	0	10	7	3	7	6	1	20	18	2	20	19	1	7	7	0	7	11
0300-0400	10	9	1	9	8	1	13	11	2	6	5	1	10	9	1	10	10	0	5	4	1	9	9
0400-0500	29	21	8	25	22	3	22	19	3	19	17	2	7	6	1	10	8	2	18	15	3	23	19
0500-0600	93	82	11	83	77	5	117	104	12	93	85	8	47	43	4	40	36	3	103	91	12	98	82
0600-0700	343	311	27	301	281	20	317	297	17	311	284	27	144	135	8	92	89	3	276	249	23	310	255
0700-0800	528	484	40	491	447	39	543	503	34	454	408	41	211	201	8	134	129	5	496	454	40	502	408
0800-0900	639	597	36	660	620	35	691	636	48	628	598	26	353	329	20	209	195	12	648	610	33	653	547
0900-1000	536	480	49	513	465	37	511	473	35	472	430	32	436	415	16	312	291	20	525	485	39	511	472
1000-1100	492	452	38	442	394	42	491	446	42	516	467	46	600	561	30	402	386	14	439	403	34	476	483
1100-1200	473	425	44	515	467	45	537	493	42	536	498	37	615	573	35	480	459	20	483	429	52	509	520
1200-1300	472	429	38	514	475	35	519	474	43	544	505	36	594	564	27	466	429	32	485	439	43	507	513
1300-1400	471	429	38	530	488	42	510	468	39	548	502	42	546	505	32	442	415	24	503	466	34	512	507
1400-1500	582	543	35	551	501	45	542	498	41	531	486	44	450	420	24	360	339	17	527	482	37	547	506
1500-1600	581	534	42	640	592	46	604	557	43	620	558	53	437	416	21	319	306	9	609	560	46	611	544
1600-1700	631	585	42	604	546	52	561	509	48	577	530	45	396	375	17	333	320	13	638	592	44	602	534
1700-1800	582	544	34	613	582	28	594	559	30	577	541	31	408	383	25	285	270	14	578	548	27	589	520
1800-1900	437	401	28	451	429	21	470	441	26	395	366	29	298	286	10	226	213	12	399	369	29	430	382
1900-2000	278	253	23	310	288	22	338	318	19	288	266	20	199	189	9	140	128	12	248	228	17	292	257
2000-2100	225	212	12	230	216	11	236	219	16	214	203	11	176	166	10	124	118	5	182	172	10	217	198
2100-2200	138	126	12	130	121	9	164	155	8	163	156	6	103	94	8	82	75	6	127	119	8	144	130
2200-2300	68	61	7	87	83	4	77	75	2	102	96	6	131	122	9	56	48	8	69	62	7	81	84
2300-2400	42	39	3	37	35	2	51	48	3	67	64	3	62	59	3	34	30	4	42	38	4	48	48

Totals

0000-0000	**7,684**	**7,046**	**573**	**7,770**	**7,167**	**548**	**7,946**	**7,336**	**558**	**7,702**	**7,099**	**553**	**6,294**	**5,915**	**325**	**4,647**	**4,379**	**241**	**7,424**	**6,838**	**544**	**7,705**	**7,067**
0700-0900	1,167	1,081	76	1,151	1,067	74	1,234	1,139	82	1,082	1,006	67	564	530	28	343	324	17	1,144	1,064	73	1,156	955
1600-1800	1,213	1,129	76	1,217	1,128	80	1,155	1,068	78	1,154	1,071	76	804	758	42	618	590	27	1,216	1,140	71	1,191	1,054
Off-Peak	5,304	4,836	421	5,402	4,972	394	5,557	5,129	398	5,466	5,022	410	4,926	4,627	255	3,686	3,465	197	5,064	4,634	400	5,359	5,058
0700-2200	7,065	6,494	511	7,194	6,631	509	7,311	6,749	514	7,063	6,514	499	5,822	5,477	292	4,314	4,073	215	6,887	6,356	493	**7,104**	**6,522**
2200-0700	619	552	62	576	536	39	635	587	44	639	585	54	472	438	33	333	306	26	537	482	51	**601**	**544**

20SYD0051

Wakehurst Pkwy, north of Frenchs Forest Rd
Northbound

Time	Week 1																						
	Wed 25/11/2020			Thu 26/11/2020			Fri 27/11/2020			Sat 28/11/2020			Sun 29/11/2020			Mon 30/11/2020			Tue 1/12/2020			Averages	
	Total	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	Weekday	7-day
0000-0100	19	18	1	27	23	4	45	39	6	97	96	1	82	79	3	13	13	0	24	22	2	26	44
0100-0200	15	14	1	13	12	1	22	17	5	39	37	2	34	31	3	14	12	2	18	12	6	16	22
0200-0300	12	12	0	13	11	2	17	13	4	23	20	3	31	29	2	9	7	2	11	10	1	12	17
0300-0400	18	12	6	24	19	5	11	8	3	10	9	1	18	17	1	9	7	2	8	6	2	14	14
0400-0500	37	30	7	52	44	8	31	26	5	32	27	5	31	28	3	20	19	1	26	22	4	33	33
0500-0600	139	119	20	139	121	18	167	142	25	91	82	9	94	84	10	114	99	15	131	111	20	138	125
0600-0700	550	471	79	605	497	107	603	534	66	377	347	30	239	226	13	518	458	60	505	439	65	556	485
0700-0800	640	574	66	659	586	64	655	580	72	727	697	30	460	438	22	597	528	66	583	514	62	627	617
0800-0900	908	846	61	900	813	71	862	792	65	768	731	36	591	569	22	796	724	66	849	768	79	863	811
0900-1000	688	593	95	720	618	98	723	621	101	992	933	53	762	725	37	667	591	74	711	611	99	702	752
1000-1100	681	593	87	724	632	91	692	608	82	1,049	1,000	48	751	718	33	571	502	68	587	507	80	651	722
1100-1200	600	536	64	715	650	65	731	659	70	1,092	1,053	37	772	745	26	598	523	74	588	524	64	646	728
1200-1300	713	625	87	685	607	78	762	688	74	1,042	981	59	814	781	33	573	518	55	664	592	72	679	750
1300-1400	673	600	70	703	621	81	801	711	90	961	919	41	660	619	41	562	504	58	632	558	74	674	713
1400-1500	820	738	79	842	758	81	906	808	93	809	770	36	574	554	20	717	643	71	770	691	77	811	777
1500-1600	1,158	1,035	115	1,060	952	107	1,032	912	117	756	727	29	523	498	25	1,057	932	119	1,111	998	109	1,084	957
1600-1700	1,216	1,077	119	1,242	1,133	98	1,048	955	87	706	687	19	531	507	23	1,216	1,101	104	1,134	1,033	92	1,171	1,013
1700-1800	1,172	1,081	74	1,096	1,016	69	1,131	1,067	47	634	605	28	496	474	21	1,084	1,022	51	1,184	1,116	60	1,133	971
1800-1900	909	843	50	900	852	40	776	719	47	504	481	23	323	307	16	891	833	50	951	901	43	885	751
1900-2000	517	484	31	585	556	28	465	437	28	307	291	16	233	222	11	459	441	18	426	408	18	490	427
2000-2100	357	337	18	379	363	16	319	306	13	214	211	3	181	172	9	268	258	10	240	233	7	313	280
2100-2200	271	255	16	316	299	17	322	305	16	240	234	6	168	158	10	217	207	10	199	192	7	265	248
2200-2300	217	208	9	224	215	9	273	262	11	247	236	11	118	115	3	121	114	7	148	142	6	197	193
2300-2400	63	57	6	101	92	9	181	175	6	149	146	3	47	45	2	73	64	9	63	59	4	96	97

Totals

0000-0000	**12,393**	**11,158**	**1,161**	**12,724**	**11,490**	**1,167**	**12,575**	**11,384**	**1,133**	**11,866**	**11,320**	**529**	**8,533**	**8,141**	**389**	**11,164**	**10,120**	**992**	**11,563**	**10,469**	**1,053**	**12,084**	**11,545**
0700-0900	1,548	1,420	127	1,559	1,399	135	1,517	1,372	137	1,495	1,428	66	1,051	1,007	44	1,393	1,252	132	1,432	1,282	141	1,490	1,428
1600-1800	2,388	2,158	193	2,338	2,149	167	2,179	2,022	134	1,340	1,292	47	1,027	981	44	2,300	2,123	155	2,318	2,149	152	2,305	1,984
Off-Peak	8,457	7,580	841	8,827	7,942	865	8,879	7,990	862	9,031	8,600	416	6,455	6,153	301	7,471	6,745	705	7,813	7,038	760	8,289	8,133
0700-2200	11,323	10,217	1,032	11,526	10,456	1,004	11,225	10,168	1,002	10,801	10,320	464	7,839	7,487	349	10,273	9,327	894	10,629	9,646	943	**10,995**	**10,517**
2200-0700	1,070	941	129	1,198	1,034	163	1,350	1,216	131	1,065	1,000	65	694	654	40	891	793	98	934	823	110	**1,089**	**1,029**

20SYD0051

Wakehurst Pkwy, north of Frenchs Forest Rd
Southbound

Time	Week 1																					
	Wed 25/11/2020			Thu 26/11/2020			Fri 27/11/2020			Sat 28/11/2020			Sun 29/11/2020			Mon 30/11/2020			Tue 1/12/2020			Averages	
	Total	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	Weekday	7-day
0000-0100	23	17	6	25	23	2	20	17	3	69	66	3	64	61	3	16	16	0	24	18	6	22	34
0100-0200	13	13	0	20	15	5	14	11	3	35	32	3	44	42	2	9	7	2	9	7	2	13	21
0200-0300	11	8	3	16	14	2	10	8	2	22	17	5	21	20	1	14	12	2	11	9	2	12	15
0300-0400	15	12	3	19	18	1	20	15	5	15	12	3	22	22	0	18	14	4	16	14	2	18	18
0400-0500	71	65	6	72	64	8	74	64	10	42	39	3	18	16	2	59	54	5	74	68	6	70	59
0500-0600	387	326	60	350	293	57	328	287	41	125	114	11	62	54	8	351	303	44	384	328	56	360	284
0600-0700	1,146	943	192	1,063	875	182	1,003	824	172	356	308	48	144	132	11	1,089	890	191	1,121	905	206	1,084	846
0700-0800	1,190	1,096	86	1,208	1,103	98	1,034	944	78	496	449	43	256	229	26	1,107	1,018	79	1,204	1,095	99	1,149	928
0800-0900	954	874	71	1,070	973	89	857	785	64	583	535	44	396	366	29	994	903	83	973	883	86	970	832
0900-1000	810	736	70	874	785	85	802	717	77	781	718	57	665	625	34	813	726	77	885	792	88	837	804
1000-1100	735	670	60	687	601	79	790	714	70	868	814	48	819	773	39	657	583	72	680	602	73	710	748
1100-1200	656	579	69	731	650	75	752	673	76	877	817	53	868	828	36	646	575	69	706	620	79	698	748
1200-1300	697	636	57	710	637	69	696	600	91	904	843	53	830	787	36	648	583	62	626	568	56	675	730
1300-1400	675	606	66	629	552	72	712	631	77	888	829	53	813	757	52	628	554	66	623	548	72	653	710
1400-1500	685	613	70	713	622	83	707	625	77	824	776	40	746	704	36	666	608	56	653	553	97	685	713
1500-1600	795	721	70	860	785	70	791	699	88	712	665	39	691	652	30	730	649	79	736	654	78	782	759
1600-1700	789	716	70	756	681	68	740	675	61	755	707	43	724	691	32	690	617	67	738	665	65	743	742
1700-1800	756	683	65	768	714	48	774	714	55	799	759	32	647	623	21	692	626	62	730	662	66	744	738
1800-1900	604	548	55	519	469	43	569	525	42	580	558	21	431	405	23	475	439	34	521	485	30	538	528
1900-2000	364	332	28	376	351	23	393	363	25	434	409	18	328	316	12	386	354	32	344	317	27	373	375
2000-2100	254	244	9	252	236	16	228	217	11	331	314	16	262	247	15	228	219	9	192	184	8	231	250
2100-2200	205	193	12	189	177	11	219	206	10	266	262	4	160	155	5	159	149	10	179	170	9	190	197
2200-2300	131	121	9	156	142	12	166	157	8	259	246	13	101	96	5	110	109	1	95	93	1	132	145
2300-2400	58	54	4	58	52	6	137	132	5	124	120	4	36	33	3	43	41	2	47	45	2	69	72

Totals

0000-0000	**12,024**	**10,806**	**1,141**	**12,121**	**10,832**	**1,204**	**11,836**	**10,603**	**1,151**	**11,145**	**10,409**	**657**	**9,148**	**8,634**	**461**	**11,228**	**10,049**	**1,108**	**11,571**	**10,285**	**1,216**	**11,756**	**11,296**
0700-0900	2,144	1,970	157	2,278	2,076	187	1,891	1,729	142	1,079	984	87	652	595	55	2,101	1,921	162	2,177	1,978	185	2,118	1,760
1600-1800	1,545	1,399	135	1,524	1,395	116	1,514	1,389	116	1,554	1,466	75	1,371	1,314	53	1,382	1,243	129	1,468	1,327	131	1,487	1,480
Off-Peak	8,335	7,437	849	8,319	7,361	901	8,431	7,485	893	8,512	7,959	495	7,125	6,725	353	7,745	6,885	817	7,926	6,980	900	8,151	8,056
0700-2200	10,169	9,247	858	10,342	9,336	929	10,064	9,088	902	10,098	9,455	564	8,636	8,158	426	9,519	8,603	857	9,790	8,798	933	**9,977**	**9,803**
2200-0700	1,855	1,559	283	1,779	1,496	275	1,772	1,515	249	1,047	954	93	512	476	35	1,709	1,446	251	1,781	1,487	283	**1,779**	**1,494**

20SYD0051

Wakehurst Pkwy, south of Aquatic Dr
Northbound

Time	Week 1																					Averages	
	Wed 25/11/2020			Thu 26/11/2020			Fri 27/11/2020			Sat 28/11/2020			Sun 29/11/2020			Mon 30/11/2020			Tue 1/12/2020			Weekday	7-day
	Total	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy		
0000-0100	25	22	3	29	27	2	35	32	3	105	99	6	122	114	8	26	23	3	21	19	2	27	52
0100-0200	12	10	2	16	14	2	18	17	1	44	40	4	60	57	3	12	12	0	9	8	1	13	24
0200-0300	7	6	1	11	10	1	9	9	0	24	24	0	42	42	0	9	6	3	5	5	0	8	15
0300-0400	5	5	0	6	6	0	16	14	2	18	16	2	31	29	2	12	6	6	6	5	1	9	13
0400-0500	25	20	5	33	27	6	27	19	8	29	25	4	31	31	0	25	18	7	29	23	6	28	28
0500-0600	159	130	29	170	143	27	158	138	20	81	65	15	44	39	5	157	125	32	144	118	26	158	130
0600-0700	517	440	77	523	435	87	503	417	85	336	309	23	151	139	11	481	391	90	540	446	93	513	436
0700-0800	842	757	85	827	738	89	820	736	84	598	554	41	361	341	19	791	709	82	841	759	82	824	726
0800-0900	1,036	957	79	980	878	102	961	873	88	754	694	60	461	429	31	904	819	85	957	873	84	968	865
0900-1000	846	764	82	757	685	72	886	813	73	942	870	72	672	626	46	782	694	88	811	702	108	816	814
1000-1100	726	627	99	749	638	110	775	682	93	998	921	77	813	767	46	651	541	110	691	601	90	718	772
1100-1200	694	592	102	762	653	109	832	719	113	941	875	66	816	763	52	684	583	101	675	580	95	729	772
1200-1300	692	582	110	737	622	115	819	711	108	1,008	932	76	892	835	57	676	564	112	711	601	110	727	791
1300-1400	774	632	142	796	668	128	854	726	128	893	831	62	643	600	43	658	536	122	738	616	122	764	765
1400-1500	893	753	140	993	827	166	985	860	125	816	763	53	641	608	33	808	692	116	853	724	129	906	856
1500-1600	1,157	968	189	1,217	1,023	194	1,136	950	186	817	755	62	634	601	33	1,120	931	189	1,135	916	219	1,153	1,031
1600-1700	1,035	888	147	1,144	994	150	1,006	891	115	762	711	51	673	624	49	994	846	147	1,033	890	143	1,042	950
1700-1800	1,009	912	97	989	882	107	933	842	91	752	710	42	505	479	26	863	789	74	966	870	96	952	860
1800-1900	694	619	75	699	641	58	732	664	67	583	537	46	453	424	29	590	529	61	743	670	73	692	642
1900-2000	470	435	35	467	439	28	456	416	40	385	366	19	269	247	22	343	305	38	378	346	32	423	395
2000-2100	297	274	23	366	336	30	315	285	30	326	314	12	226	206	20	216	206	10	237	218	19	286	283
2100-2200	269	252	17	249	232	17	279	262	17	314	297	17	215	204	11	139	129	10	210	186	24	229	239
2200-2300	135	126	9	166	152	14	301	290	11	343	316	27	95	87	8	94	83	11	115	105	10	162	178
2300-2400	57	50	7	72	57	15	184	174	10	236	220	16	44	40	4	53	48	5	56	54	2	84	100

Totals

0000-0000	**12,376**	**10,821**	**1,555**	**12,758**	**11,127**	**1,629**	**13,040**	**11,540**	**1,498**	**12,105**	**11,244**	**853**	**8,894**	**8,332**	**558**	**11,088**	**9,585**	**1,502**	**11,904**	**10,335**	**1,567**	**12,233**	**11,738**
0700-0900	1,878	1,714	164	1,807	1,616	191	1,781	1,609	172	1,352	1,248	101	822	770	50	1,695	1,528	167	1,798	1,632	166	1,792	1,590
1600-1800	2,044	1,800	244	2,133	1,876	257	1,939	1,733	206	1,514	1,421	93	1,178	1,103	75	1,857	1,635	221	1,999	1,760	239	1,994	1,809
Off-Peak	8,454	7,307	1,147	8,818	7,635	1,181	9,320	8,198	1,120	9,239	8,575	659	6,894	6,459	433	7,536	6,422	1,114	8,107	6,943	1,162	8,447	8,338
0700-2200	11,434	10,012	1,422	11,732	10,256	1,475	11,789	10,430	1,358	10,889	10,130	756	8,274	7,754	517	10,219	8,873	1,345	10,979	9,552	1,426	**11,231**	**10,759**
2200-0700	942	809	133	1,026	871	154	1,251	1,110	140	1,216	1,114	97	620	578	41	869	712	157	925	783	141	**1,003**	**978**

20SYD0051

Wakehurst Pkwy, south of Aquatic Dr
Southbound

Time	Week 1																					
	Wed 25/11/2020			Thu 26/11/2020			Fri 27/11/2020			Sat 28/11/2020			Sun 29/11/2020			Mon 30/11/2020			Tue 1/12/2020			Averages	
	Total	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	Weekday	7-day
0000-0100	19	16	3	23	22	1	23	19	4	49	48	1	91	88	3	16	16	0	21	17	4	20	35
0100-0200	7	7	0	8	7	1	10	10	0	31	30	1	42	40	2	7	6	1	8	8	0	8	16
0200-0300	8	5	3	12	11	1	17	14	3	17	15	2	22	19	3	7	5	2	7	6	1	10	13
0300-0400	9	6	3	14	11	3	23	20	3	13	13	0	14	14	0	11	8	3	14	10	4	14	14
0400-0500	48	43	5	39	34	4	40	38	2	28	26	2	26	22	4	36	32	4	43	39	4	41	37
0500-0600	196	176	20	171	157	14	165	153	12	122	114	8	76	71	4	149	135	14	177	158	19	172	151
0600-0700	764	657	107	779	656	123	723	607	115	361	328	33	203	196	7	724	606	118	752	622	130	748	615
0700-0800	741	672	69	778	709	68	716	640	76	507	478	29	329	314	15	665	591	74	720	632	88	724	637
0800-0900	862	804	58	843	779	64	868	808	60	636	599	36	463	439	24	883	811	72	884	816	67	868	777
0900-1000	760	704	56	842	753	89	808	738	70	796	757	39	570	548	22	723	663	60	766	690	76	780	752
1000-1100	661	597	64	681	618	63	771	708	63	959	924	35	694	670	24	617	554	63	628	568	60	672	716
1100-1200	649	584	65	811	741	70	804	748	56	1,044	1,011	33	737	713	24	650	604	46	682	624	58	719	768
1200-1300	689	617	72	692	637	55	726	677	49	962	928	34	712	699	13	624	567	57	685	632	53	683	727
1300-1400	623	571	52	658	598	60	683	638	45	868	832	36	657	638	19	570	523	46	611	562	49	629	667
1400-1500	674	612	62	666	620	46	697	650	47	760	735	25	620	601	19	639	601	38	652	589	63	666	673
1500-1600	848	791	57	876	818	58	869	828	41	707	684	23	641	621	20	820	772	48	808	755	53	844	796
1600-1700	860	810	50	902	859	43	885	847	38	728	703	25	699	682	17	802	761	41	807	759	48	851	812
1700-1800	1,010	973	37	967	941	26	942	919	23	765	750	15	589	571	18	889	862	27	976	942	34	957	877
1800-1900	778	753	25	749	727	22	758	731	27	583	571	12	464	454	10	670	652	18	742	716	26	739	678
1900-2000	454	436	18	434	414	20	517	502	15	414	405	9	292	283	9	412	387	25	419	404	15	447	420
2000-2100	290	283	7	288	277	11	266	255	11	281	272	9	243	236	7	282	276	6	243	236	7	274	270
2100-2200	248	242	6	262	255	7	231	222	9	234	229	5	167	159	8	179	173	6	190	183	7	222	216
2200-2300	131	127	4	171	164	7	184	178	6	219	213	6	95	89	6	103	101	2	96	92	4	137	143
2300-2400	61	59	2	116	113	3	139	136	3	146	143	3	42	42	0	34	32	2	42	40	2	78	83

Totals

0000-0000	**11,390**	**10,545**	**845**	**11,782**	**10,921**	**859**	**11,865**	**11,086**	**778**	**11,230**	**10,808**	**421**	**8,488**	**8,209**	**278**	**10,512**	**9,738**	**773**	**10,973**	**10,100**	**872**	**11,304**	**10,891**
0700-0900	1,603	1,476	127	1,621	1,488	132	1,584	1,448	136	1,143	1,077	65	792	753	39	1,548	1,402	146	1,604	1,448	155	1,592	1,414
1600-1800	1,870	1,783	87	1,869	1,800	69	1,827	1,766	61	1,493	1,453	40	1,288	1,253	35	1,691	1,623	68	1,783	1,701	82	1,808	1,689
Off-Peak	7,917	7,286	631	8,292	7,633	658	8,454	7,872	581	8,594	8,278	316	6,408	6,203	204	7,273	6,713	559	7,586	6,951	635	7,904	7,789
0700-2200	10,147	9,449	698	10,449	9,746	702	10,541	9,911	630	10,244	9,878	365	7,877	7,628	249	9,425	8,797	627	9,813	9,108	704	**10,075**	**9,785**
2200-0700	1,243	1,096	147	1,333	1,175	157	1,324	1,175	148	986	930	56	611	581	29	1,087	941	146	1,160	992	168	**1,229**	**1,106**

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY trafficsurvey.com.au

Intersection of Warringah Rd and Forest Way, Frenchs F

GPS -33.751685, 151.226414

Date:	Thu 26/11/20
Weather:	Fine
Suburban:	Frenchs Forest
Customer:	TTPP

North:	Forest Way
East:	Warringah Rd
South:	N/A
West:	Warringah Rd

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

All Vehicles

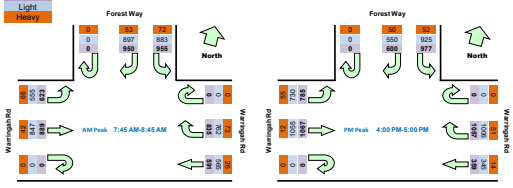
Time		North Approach Forest Way			East Approach Warringah R			West Approach Warringah R			Hourly Total	
Period Start	Period End	U	R	L	U	R	WB	U	EB	L	Hour	Peak
7:00	7:15	0	181	154	0	173	63	0	180	113	4257	
7:15	7:30	0	244	200	0	202	92	0	203	119	4613	
7:30	7:45	0	233	212	0	180	132	0	226	148	4784	
7:45	8:00	0	258	235	0	184	154	0	206	165	4843	Peak
8:00	8:15	0	241	245	0	237	146	0	216	135	4777	
8:15	8:30	0	218	221	0	209	172	0	240	171		
8:30	8:45	0	233	254	0	205	119	0	227	152		
8:45	9:00	0	233	255	0	221	64	0	192	171		
16:00	16:15	0	138	242	0	257	120	0	258	186	4845	Peak
16:15	16:30	0	148	208	0	261	98	0	301	221	4845	Peak
16:30	16:45	0	143	251	0	296	76	0	262	198	4762	
16:45	17:00	0	171	276	0	243	65	0	246	180	4759	
17:00	17:15	0	163	266	0	248	56	0	267	201	4730	
17:15	17:30	0	163	235	0	246	86	0	221	203		
17:30	17:45	0	147	246	0	262	68	0	302	198		
17:45	18:00	0	164	218	0	259	56	0	231	224		

Peak Time		North Approach Forest Way			East Approach Warringah R			West Approach Warringah R			Peak total
Period Start	Period End	U	R	L	U	R	WB	U	EB	L	
7:45	8:45	0	950	955	0	835	591	0	889	623	4843
16:00	17:00	0	600	977	0	1057	359	0	1067	785	4845

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

Graphic

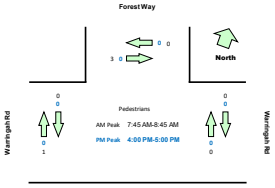
Total
Light
Heavy



Pedestrians Crossing

Time		North Approach Forest Way		East Approach Warringah Rd		West Approach Warringah Rd		Hourly Total
Period Start	Period End	Westbound	Eastbound	Northbound	Southbound	Northbound	Southbound	
7:00	7:15	0	0	0	0	0	0	1
7:15	7:30	0	0	0	0	0	0	1
7:30	7:45	0	0	0	0	0	0	4
7:45	8:00	0	0	0	0	0	1	4
8:00	8:15	0	0	0	0	0	0	3
8:15	8:30	0	3	0	0	0	0	
8:30	8:45	0	0	0	0	0	0	
8:45	9:00	0	0	0	0	0	0	
16:00	16:15	0	0	0	0	0	0	0
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	
17:30	17:45	0	0	0	0	0	0	
17:45	18:00	0	0	0	0	0	0	

Peak Time		North Approach Forest Way		East Approach Warringah Rd		West Approach Warringah Rd		Peak total
Period Start	Period End	Westbound	Eastbound	Northbound	Southbound	Northbound	Southbound	
7:45	8:45	0	3	0	0	0	1	4
16:00	17:00	0	0	0	0	0	0	0



Queue

Time		North	East	West
Period Start	Period End			
7:00	7:05	17	12	13
7:05	7:10	19	14	12
7:10	7:15	22	13	14
7:15	7:20	24	15	14
7:20	7:25	26	15	14
7:25	7:30	24	17	12
7:30	7:35	21	12	17
7:35	7:40	25	18	16
7:40	7:45	20	12	19
7:45	7:50	23	12	17
7:50	7:55	20	14	14
7:55	8:00	19	14	14
8:00	8:05	18	18	13
8:05	8:10	21	20	16
8:10	8:15	19	16	18
8:15	8:20	18	22	17
8:20	8:25	19	14	15
8:25	8:30	23	17	17
8:30	8:35	24	16	12
8:35	8:40	18	20	15
8:40	8:45	21	16	18
8:45	8:50	20	18	15
8:50	8:55	24	17	15
8:55	9:00	18	17	12
16:00	16:05	10	17	15
16:05	16:10	12	16	18
16:10	16:15	13	15	17
16:15	16:20	13	17	13
16:20	16:25	18	17	16
16:25	16:30	18	16	18
16:30	16:35	13	15	14
16:35	16:40	12	16	16
16:40	16:45	15	20	16
16:45	16:50	12	17	14
16:50	16:55	13	14	12
16:55	17:00	15	12	13
17:00	17:05	16	16	15
17:05	17:10	15	16	18
17:10	17:15	13	18	12
17:15	17:20	15	18	16
17:20	17:25	16	21	15
17:25	17:30	17	22	14
17:30	17:35	16	29	16
17:35	17:40	13	22	14
17:40	17:45	16	20	15
17:45	17:50	16	19	15
17:50	17:55	16	20	17
17:55	18:00	14	20	17

Light Vehicles

Time		North Approach Forest Way			East Approach Warringah R			West Approach Warringah R		
Period Start	Period End	U	R	L	U	R	WB	U	EB	L
7:00	7:15	0	163	143	0	164	61	0	174	102
7:15	7:30	0	229	176	0	188	88	0	194	104
7:30	7:45	0	211	199	0	160	129	0	215	134
7:45	8:00	0	243	212	0	163	151	0	194	142
8:00	8:15	0	229	224	0	217	140	0	204	121
8:15	8:30	0	204	209	0	187	163	0	230	153
8:30	8:45	0	221	238	0	195	111	0	219	139
8:45	9:00	0	216	234	0	203	61	0	181	151
16:00	16:15	0	116	221	0	241	116	0	254	171
16:15	16:30	0	138	199	0	251	93	0	298	204
16:30	16:45	0	133	236	0	282	72	0	259	188
16:45	17:00	0	163	269	0	232	64	0	244	167
17:00	17:15	0	155	257	0	240	51	0	264	190
17:15	17:30	0	155	229	0	238	81	0	218	193
17:30	17:45	0	140	242	0	254	68	0	296	184
17:45	18:00	0	156	210	0	251	55	0	230	213

Peak Time		North Approach Forest Way			East Approach Warringah R			West Approach Warringah R			Peak total
Period Start	Period End	U	R	L	U	R	WB	U	EB	L	
7:45	8:45	0	897	883	0	762	565	0	847	555	4509
16:00	17:00	0	550	925	0	1006	345	0	1055	730	4611

Heavy Vehicles

Time		North Approach Forest Way			East Approach Warringah R			West Approach Warringah R		
Period Start	Period End	U	R	L	U	R	WB	U	EB	L
7:00	7:15	0	3	11	0	7	1	0	5	5
7:15	7:30	0	4	23	0	11	4	0	8	10
7:30	7:45	0	11	12	0	17	2	0	7	9
7:45	8:00	0	6	19	0	21	1	0	10	12
8:00	8:15	0	4	15	0	18	6	0	9	6
8:15	8:30	0	5	10	0	17	8	0	9	8
8:30	8:45	0	4	14	0	10	8	0	5	6
8:45	9:00	0	10	17	0	15	3	0	7	11
16:00	16:15	0	4	16	0	15	2	0	4	7
16:15	16:30	0	2	6	0	8	3	0	2	11
16:30	16:45	0	2	13	0	13	3	0	1	3
16:45	17:00	0	3	7	0	10	1	0	2	4
17:00	17:15	0	3	9	0	7	2	0	2	2
17:15	17:30	0	1	5	0	8	2	0	3	4
17:30	17:45	0	1	2	0	8	0	0	6	7
17:45	18:00	0	1	7	0	8	0	0	1	2

Peak Time		North Approach Forest Way			East Approach Warringah R			West Approach Warringah R			Peak total
Period Start	Period End	U	R	L	U	R	WB	U	EB	L	
7:45	8:45	0	53	72	0	73	26	0	42	68	334
16:00	17:00	0	50	52	0	51	14	0	12	55	234

Bus

Time		North Approach Forest Way			East Approach Warringah R			West Approach Warringah R		
Period Start	Period End	U	R	L	U	R	WB	U	EB	L
7:00	7:15	0	15	0	0	2	1	0	1	6
7:15	7:30	0	11	1	0	3	0	0	1	5
7:30	7:45	0	11	1	0	3	1	0	4	5
7:45	8:00	0	9	4	0	0	2	0	2	11
8:00	8:15	0	8	6	0	2	0	0	3	8
8:15	8:30	0	9	2	0	5	1	0	1	10
8:30	8:45	0	8	2	0	0	0	0	3	7
8:45	9:00	0	7	4	0	3	0	0	4	9
16:00	16:15	0	18	5	0	1	2	0	0	8
16:15	16:30	0	8	3	0	2	2	0	1	6
16:30	16:45	0	8	2	0	1	1	0	2	7
16:45	17:00	0	5	0	0	1	0	0	0	9
17:00	17:15	0	5	0	0	1	3	0	1	9
17:15	17:30	0	7	1	0	0	3	0	0	6
17:30	17:45	0	6	2	0	0	0	0	0	7
17:45	18:00	0	7	1	0	0	1	0	0	9

Peak Time		North Approach Forest Way			East Approach Warringah R			West Approach Warringah R			Peak total
Period Start	Period End	U	R	L	U	R	WB	U	EB	L	
7:45	8:45	0	34	14	0	7	3	0	9	36	103
16:00	17:00	0	39	10	0	5	5	0	3	30	92

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY trafficsurvey.com.au

Intersection of Warringah Rd and Hospital Access, Frenchs Forest

GPS -33.751906, 151.231455

Date:	Thu 26/11/20
Weather:	Fine
Suburban:	Frenchs Forest
Customer:	TTPP

North:	Hospital Access
East:	Warringah Rd
South:	Hilmer St
West:	Warringah Rd

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

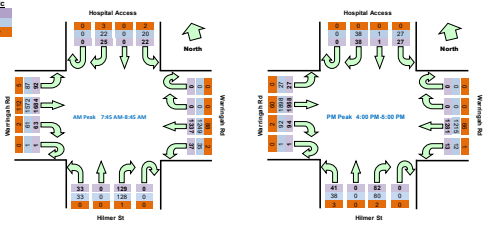
All Vehicles

Time		North Approach Hospital Access				East Approach Warringah Rd				South Approach Hilmer St				West Approach Warringah 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
7:00	7:15	0	2	0	2	0	0	221	1	0	9	0	4	0	8	329	14	2946	
7:15	7:30	0	4	1	6	0	0	259	0	0	30	0	4	0	6	379	33	3246	
7:30	7:45	0	8	0	6	0	0	281	0	0	22	0	8	2	21	394	24	3371	
7:45	8:00	0	8	0	3	0	0	347	3	0	33	0	5	0	15	419	35	3423	Peak
8:00	8:15	0	4	0	4	0	0	375	19	0	29	0	9	1	19	406	24	3373	
8:15	8:30	0	5	0	10	0	0	309	8	0	28	0	10	0	16	444	17		
8:30	8:45	0	8	0	5	0	0	306	7	0	39	0	9	0	13	415	16		
8:45	9:00	0	7	0	8	0	0	260	8	0	28	0	12	0	24	455	16		
16:00	16:15	0	14	1	9	0	0	322	3	0	27	0	12	0	36	471	11	3563	Peak
16:15	16:30	0	10	0	8	0	0	347	4	0	22	0	14	0	24	474	5	3516	
16:30	16:45	0	7	0	6	0	0	342	5	0	16	0	6	0	17	507	6	3480	
16:45	17:00	0	7	0	4	0	0	270	1	0	17	0	9	1	17	506	5	3481	
17:00	17:15	0	6	0	6	0	0	306	3	0	22	0	9	0	18	487	2	3466	
17:15	17:30	0	10	0	4	0	0	353	5	0	12	0	11	0	24	450	3		
17:30	17:45	0	5	0	8	0	0	333	2	0	23	0	5	0	20	510	7		
17:45	18:00	0	7	0	3	0	0	301	4	0	17	0	8	0	37	443	2		

Peak Time		North Approach Hospital Access				East Approach Warringah Rd				South Approach Hilmer St				West Approach Warringah 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	25	0	22	0	0	1337	37	0	129	0	33	1	63	1684	92	3423
16:00	17:00	0	38	1	27	0	0	1281	13	0	82	0	41	1	94	1958	27	3563

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 Hospital Access				East Approach Warringah Rd				South Approach Hilmer St				West Approach Warringah Rd				
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
7:00	7:15	0	2	0	2	0	0	210	1	0	9	0	4	0	8	314	14	
7:15	7:30	0	4	1	4	0	0	241	0	0	30	0	4	0	6	351	31	
7:30	7:45	0	8	0	6	0	0	251	0	0	22	0	8	2	19	371	23	
7:45	8:00	0	8	0	3	0	0	328	2	0	32	0	5	0	15	386	33	
8:00	8:15	0	3	0	2	0	0	349	18	0	29	0	9	1	17	376	23	
8:15	8:30	0	4	0	10	0	0	282	8	0	28	0	10	0	16	418	15	
8:30	8:45	0	7	0	5	0	0	290	7	0	39	0	9	0	13	392	16	
8:45	9:00	0	6	0	8	0	0	239	8	0	28	0	12	0	24	420	16	
16:00	16:15	0	14	1	9	0	0	302	3	0	27	0	11	0	34	448	11	
16:15	16:30	0	10	0	8	0	0	331	4	0	21	0	13	0	24	465	5	
16:30	16:45	0	7	0	6	0	0	322	4	0	16	0	6	0	17	490	6	
16:45	17:00	0	7	0	4	0	0	260	1	0	16	0	8	1	17	495	5	
17:00	17:15	0	6	0	6	0	0	292	3	0	22	0	9	0	17	477	2	
17:15	17:30	0	10	0	4	0	0	340	5	0	12	0	11	0	24	438	3	
17:30	17:45	0	5	0	8	0	0	324	2	0	23	0	5	0	20	499	7	
17:45	18:00	0	7	0	3	0	0	294	4	0	17	0	8	0	36	436	2	

Peak Time		North Approach Hospital Access				East Approach Warringah Rd				South Approach Hilmer St				West Approach Warringah 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	22	0	20	0	0	1249	35	0	128	0	33	0	61	1572	87	3208
16:00	17:00	0	38	1	27	0	0	1215	12	0	80	0	38	1	92	1898	27	3429

Heavy Vehicles

Time		North Approach Hospital Access				East Approach Warringah Rd				South Approach Hilmer St				West Approach Warringah Rd			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	0	0	0	0	0	8	0	0	0	0	0	0	0	14	0
7:15	7:30	0	0	0	2	0	0	15	0	0	0	0	0	0	0	26	2
7:30	7:45	0	0	0	0	0	0	27	0	0	0	0	0	0	1	17	1
7:45	8:00	0	0	0	0	0	0	16	1	0	0	0	0	0	0	27	2
8:00	8:15	0	1	0	2	0	0	25	1	0	0	0	0	0	2	22	1
8:15	8:30	0	1	0	0	0	0	21	0	0	0	0	0	0	0	22	2
8:30	8:45	0	1	0	0	0	0	16	0	0	0	0	0	0	0	17	0
8:45	9:00	0	0	0	0	0	0	18	0	0	0	0	0	0	0	29	0
16:00	16:15	0	0	0	0	0	0	17	0	0	0	0	1	0	1	19	0
16:15	16:30	0	0	0	0	0	0	12	0	0	1	0	0	0	0	5	0
16:30	16:45	0	0	0	0	0	0	19	1	0	0	0	0	0	0	13	0
16:45	17:00	0	0	0	0	0	0	9	0	0	1	0	1	0	0	11	0
17:00	17:15	0	0	0	0	0	0	10	0	0	0	0	0	0	1	9	0
17:15	17:30	0	0	0	0	0	0	11	0	0	0	0	0	0	0	10	0
17:30	17:45	0	0	0	0	0	0	9	0	0	0	0	0	0	0	9	0
17:45	18:00	0	0	0	0	0	0	6	0	0	0	0	0	0	1	6	0

Peak Time		North Approach Hospital Access				East Approach Warringah Rd				South Approach Hilmer St				West Approach Warringah 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	3	0	2	0	0	88	2	0	1	0	0	0	2	112	5	215
16:00	17:00	0	0	0	0	0	0	66	1	0	2	0	3	0	2	60	0	134

Bus

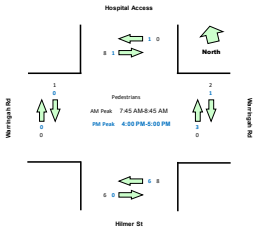
Time		North Approach Hospital Access				East Approach Warringah Rd				South Approach Hilmer St				West Approach Warringah Rd			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0
7:15	7:30	0	0	0	0	0	0	3	0	0	0	0	0	0	0	2	0
7:30	7:45	0	0	0	0	0	0	3	0	0	0	0	0	0	1	6	0
7:45	8:00	0	0	0	0	0	0	3	0	0	1	0	0	0	0	6	0
8:00	8:15	0	0	0	0	0	0	1	0	0	0	0	0	0	0	8	0
8:15	8:30	0	0	0	0	0	0	6	0	0	0	0	0	0	0	4	0
8:30	8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0
8:45	9:00	0	1	0	0	0	0	3	0	0	0	0	0	0	0	6	0
16:00	16:15	0	0	0	0	0	0	3	0	0	0	0	0	0	1	4	0
16:15	16:30	0	0	0	0	0	0	4	0	0	0	0	1	0	0	4	0
16:30	16:45	0	0	0	0	0	0	1	0	0	0	0	0	0	0	4	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	4	0	0	0	0	0	0	0	1	0
17:15	17:30	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0
17:30	17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
17:45	18:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0

Peak Time		North Approach Hospital Access				East Approach Warringah Rd				South Approach Hilmer St				West Approach Warringah 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	0	0	0	0	0	10	0	0	1	0	0	0	0	24	0	35
16:00	17:00	0	0	0	0	0	0	9	0	0	0	0	1	0	1	12	0	23

Pedestrians Crossing

Time		North Approach Hospital Access		East Approach Warringah Rd		South Approach Hilmer St		West Approach Warringah Rd		Hourly Total
Period Start	Period End	Westbound	Eastbound	Northbound	Southbound	Westbound	Eastbound	Northbound	Southbound	
7:00	7:15	0	0	0	0	2	1	0	0	8
7:15	7:30	0	0	0	0	0	1	0	0	14
7:30	7:45	0	0	0	0	1	0	0	0	20
7:45	8:00	0	1	1	0	0	0	1	0	25
8:00	8:15	0	2	0	0	5	2	0	0	22
8:15	8:30	0	3	0	0	2	2	0	0	13
8:30	8:45	0	2	1	0	1	2	0	0	6
8:45	9:00	0	0	0	0	0	0	0	0	0
16:00	16:15	1	0	0	2	1	0	0	0	12
16:15	16:30	0	0	0	1	3	0	0	0	11
16:30	16:45	0	0	1	0	1	0	0	0	7
16:45	17:00	0	1	0	0	1	0	0	0	5
17:00	17:15	1	0	0	1	0	1	0	0	3
17:15	17:30	0	0	0	0	0	0	0	0	0
17:30	17:45	0	0	0	0	0	0	0	0	0
17:45	18:00	0	0	0	0	0	0	0	0	0

Peak Time		North Approach Hospital Access		East Approach Warringah Rd		South Approach Hilmer St		West Approach Warringah Rd		Peak hour
Period Start	Period End	Westbound	Eastbound	Northbound	Southbound	Westbound	Eastbound	Northbound	Southbound	total
7:45	8:45	0	8	2	0	8	6	1	0	25
16:00	17:00	1	1	1	3	6	0	0	0	12



Queue

Time		North
Period Start	Period End	
7:00	7:05	2
7:05	7:10	0
7:10	7:15	0
7:15	7:20	3
7:20	7:25	0
7:25	7:30	0
7:30	7:35	4
7:35	7:40	3
7:40	7:45	2
7:45	7:50	2
7:50	7:55	3
7:55	8:00	0
8:00	8:05	2
8:05	8:10	0
8:10	8:15	0
8:15	8:20	4
8:20	8:25	2
8:25	8:30	2
8:30	8:35	2
8:35	8:40	2
8:40	8:45	4
8:45	8:50	2
8:50	8:55	0
8:55	9:00	2
16:00	16:05	4
16:05	16:10	4
16:10	16:15	2
16:15	16:20	0
16:20	16:25	2
16:25	16:30	0
16:30	16:35	2
16:35	16:40	2
16:40	16:45	2
16:45	16:50	3
16:50	16:55	0
16:55	17:00	2
17:00	17:05	3
17:05	17:10	2
17:10	17:15	2
17:15	17:20	0
17:20	17:25	3
17:25	17:30	2
17:30	17:35	2
17:35	17:40	2
17:40	17:45	2
17:45	17:50	0
17:50	17:55	2
17:55	18:00	0

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY trafficsurvey.com.au

Intersection of Warringah Rd and Wakehurst Pky, Frenchs Forest

GPS -33.752346, 151.234265

Date:	Thu 26/11/20
Weather:	Fine
Suburban:	Frenchs Forest
Customer:	TTPP

North:	Wakehurst Pky
East:	Warringah Rd
South:	Wakehurst Pky
West:	Warringah Rd

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

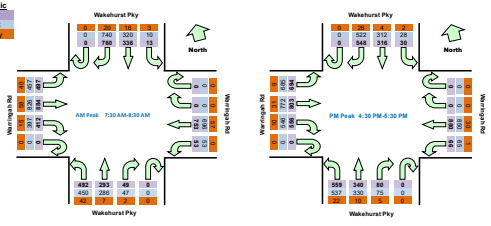
All Vehicles

Time		North Approach Wakehurst Pky				East Approach Warringah Rd				South Approach Wakehurst Pky				West Approach Warringah 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
7:00	7:15	0	197	62	2	0	0	131	9	0	3	49	86	0	89	147	89	4121	
7:15	7:30	0	243	83	4	0	0	106	8	0	4	71	116	0	139	172	91	4425	
7:30	7:45	0	225	77	2	0	0	158	6	0	8	61	108	0	105	210	127	4542	Peak
7:45	8:00	0	174	92	4	0	0	195	13	0	8	69	145	0	109	217	107	4507	
8:00	8:15	0	223	102	4	0	0	203	12	0	14	79	123	0	104	187	117	4519	
8:15	8:30	0	138	65	3	0	0	197	22	0	19	84	116	0	94	270	146		
8:30	8:45	0	162	58	9	0	0	189	21	0	6	91	99	0	95	223	99		
8:45	9:00	0	145	116	6	0	0	162	34	0	17	93	117	0	123	234	98		
16:00	16:15	0	139	79	5	0	0	205	6	0	24	99	140	0	144	180	176	4871	
16:15	16:30	0	139	78	5	0	0	236	24	0	11	88	144	0	132	213	186	4856	
16:30	16:45	0	138	89	7	0	0	222	15	0	25	103	156	0	122	195	189	4872	Peak
16:45	17:00	0	147	68	6	0	0	166	19	0	17	89	129	0	141	206	169	4817	
17:00	17:15	0	124	79	13	0	0	230	13	0	13	60	120	0	146	223	161	4788	
17:15	17:30	0	139	80	4	0	0	262	19	0	25	88	154	0	147	179	175		
17:30	17:45	0	151	99	8	0	0	228	11	0	16	76	123	0	145	183	166		
17:45	18:00	0	122	68	4	0	0	228	9	0	8	65	135	0	151	158	180		

Peak Time		North Approach Wakehurst Pky				East Approach Warringah Rd				South Approach Wakehurst Pky				West Approach Warringah Rd				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
7:30	8:30	0	760	336	13	0	0	753	53	0	49	293	492	0	412	884	497	4542
16:30	17:30	0	548	316	30	0	0	880	66	0	80	340	559	0	556	803	694	4872

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

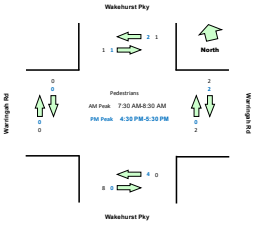
Graphic
Total
Light
Heavy



Pedestrians Crossing

Time		North Approach Wakehurst Pky		East Approach Warringah Rd		South Approach Wakehurst Pky		West Approach Warringah Rd		Hourly Total
Period Start	Period End	Westbound	Eastbound	Northbound	Southbound	Westbound	Eastbound	Northbound	Southbound	
7:00	7:15	0	0	0	1	0	2	0	0	9
7:15	7:30	0	0	0	0	0	1	0	0	9
7:30	7:45	0	0	1	0	0	1	0	0	14
7:45	8:00	0	0	1	1	0	1	0	0	18
8:00	8:15	0	0	0	1	0	2	0	0	16
8:15	8:30	1	1	0	0	0	4	0	0	
8:30	8:45	0	0	1	1	4	0	0	0	
8:45	9:00	0	0	0	0	0	1	0	0	
16:00	16:15	0	0	1	0	0	0	0	0	7
16:15	16:30	0	0	0	0	4	0	0	0	11
16:30	16:45	0	0	0	0	1	0	0	0	9
16:45	17:00	0	0	0	0	1	0	0	0	13
17:00	17:15	1	1	1	0	2	0	0	0	13
17:15	17:30	1	0	1	0	0	0	0	0	
17:30	17:45	0	1	2	1	0	1	0	0	
17:45	18:00	0	0	0	0	1	0	0	0	

Peak Time		North Approach Wakehurst Pky		East Approach Warringah Rd		South Approach Wakehurst Pky		West Approach Warringah Rd		Peak hour
Period Start	Period End	Westbound	Eastbound	Northbound	Southbound	Westbound	Eastbound	Northbound	Southbound	total
7:30	8:30	1	1	2	2	0	8	0	0	14
16:30	17:30	2	1	2	0	4	0	0	0	9



Queue

Time		North
Period Start	Period End	
7:00	7:05	16
7:05	7:10	17
7:10	7:15	16
7:15	7:20	19
7:20	7:25	18
7:25	7:30	17
7:30	7:35	18
7:35	7:40	19
7:40	7:45	14
7:45	7:50	17
7:50	7:55	14
7:55	8:00	13
8:00	8:05	10
8:05	8:10	12
8:10	8:15	13
8:15	8:20	16
8:20	8:25	8
8:25	8:30	11
8:30	8:35	13
8:35	8:40	11
8:40	8:45	10
8:45	8:50	13
8:50	8:55	15
8:55	9:00	12
16:00	16:05	11
16:05	16:10	14
16:10	16:15	12
16:15	16:20	9
16:20	16:25	11
16:25	16:30	13
16:30	16:35	13
16:35	16:40	10
16:40	16:45	12
16:45	16:50	15
16:50	16:55	10
16:55	17:00	11
17:00	17:05	12
17:05	17:10	8
17:10	17:15	12
17:15	17:20	11
17:20	17:25	12
17:25	17:30	16
17:30	17:35	12
17:35	17:40	11
17:40	17:45	17
17:45	17:50	13
17:50	17:55	10
17:55	18:00	14

Light Vehicles

Time		North Approach Wakehurst Pky				East Approach Warringah Rd				South Approach Wakehurst Pky				West Approach Warringah Rd			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	188	59	2	0	0	126	7	0	3	48	84	0	80	141	87
7:15	7:30	0	239	76	3	0	0	99	8	0	4	70	108	0	129	154	87
7:30	7:45	0	219	72	2	0	0	138	6	0	8	60	101	0	101	197	119
7:45	8:00	0	172	86	3	0	0	185	13	0	8	67	134	0	107	197	98
8:00	8:15	0	216	99	3	0	0	191	12	0	14	76	111	0	99	176	100
8:15	8:30	0	133	63	2	0	0	182	22	0	17	83	104	0	90	256	140
8:30	8:45	0	156	55	8	0	0	182	20	0	6	89	91	0	88	212	92
8:45	9:00	0	143	112	6	0	0	154	32	0	17	90	101	0	115	218	88
16:00	16:15	0	126	78	5	0	0	199	6	0	24	98	131	0	137	167	172
16:15	16:30	0	137	76	5	0	0	227	23	0	11	80	134	0	128	209	182
16:30	16:45	0	127	88	7	0	0	208	15	0	24	101	152	0	119	185	185
16:45	17:00	0	145	66	6	0	0	163	18	0	16	86	122	0	138	201	167
17:00	17:15	0	116	79	12	0	0	224	13	0	11	56	116	0	144	214	160
17:15	17:30	0	134	79	3	0	0	255	19	0	24	87	147	0	145	172	173
17:30	17:45	0	149	99	8	0	0	219	11	0	15	76	121	0	144	180	162
17:45	18:00	0	118	66	4	0	0	222	9	0	8	60	134	0	149	151	179

Peak Time		North Approach Wakehurst Pky				East Approach Warringah Rd				South Approach Wakehurst Pky				West Approach Warringah Rd				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
7:30	8:30	0	740	320	10	0	0	696	53	0	47	286	450	0	397	626	457	4252
16:30	17:30	0	522	312	28	0	0	850	65	0	75	330	537	0	546	772	685	4722

Heavy Vehicles

Time		North Approach Wakehurst Pky				East Approach Warringah Rd				South Approach Wakehurst Pky				West Approach Warringah Rd			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	6	1	0	0	0	4	2	0	0	1	2	0	8	6	2
7:15	7:30	0	4	3	1	0	0	7	0	0	0	1	5	0	10	18	2
7:30	7:45	0	4	2	0	0	0	19	0	0	0	0	7	0	4	13	2
7:45	8:00	0	2	2	1	0	0	8	0	0	0	1	10	0	2	19	4
8:00	8:15	0	6	1	1	0	0	12	0	0	0	1	11	0	4	9	12
8:15	8:30	0	5	0	1	0	0	12	0	0	1	1	9	0	4	11	5
8:30	8:45	0	6	2	1	0	0	7	1	0	0	0	8	0	7	11	1
8:45	9:00	0	1	2	0	0	0	8	2	0	0	2	13	0	8	15	7
16:00	16:15	0	9	0	0	0	0	6	0	0	0	1	8	0	5	12	3
16:15	16:30	0	2	2	0	0	0	9	0	0	0	2	5	0	3	3	2
16:30	16:45	0	9	1	0	0	0	14	0	0	1	2	4	0	2	9	2
16:45	17:00	0	2	0	0	0	0	3	1	0	1	2	6	0	3	5	2
17:00	17:15	0	0	0	1	0	0	5	0	0	2	2	4	0	2	8	1
17:15	17:30	0	2	0	1	0	0	7	0	0	1	1	5	0	1	7	1
17:30	17:45	0	0	0	0	0	0	9	0	0	1	0	0	0	0	3	3
17:45	18:00	0	1	1	0	0	0	6	0	0	0	1	1	0	1	7	1

Peak Time		North Approach Wakehurst Pky				East Approach Warringah Rd				South Approach Wakehurst Pky				West Approach Warringah Rd				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
7:30	8:30	0	20	16	3	0	0	57	0	0	2	7	42	0	15	58	40	260
16:30	17:30	0	26	4	2	0	0	30	1	0	5	10	22	0	10	31	9	150

Bus

Time		North Approach Wakehurst Pky				East Approach Warringah Rd				South Approach Wakehurst Pky				West Approach Warringah Rd			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	3	2	0	0	0	1	0	0	0	0	0	0	1	0	0
7:15	7:30	0	0	4	0	0	0	0	0	0	0	0	3	0	0	0	2
7:30	7:45	0	2	3	0	0	0	1	0	0	0	1	0	0	0	0	6
7:45	8:00	0	0	4	0	0	0	2	0	0	0	1	1	0	0	1	5
8:00	8:15	0	1	2	0	0	0	0	0	0	0	2	1	0	1	2	5
8:15	8:30	0	0	2	0	0	0	3	0	0	1	0	3	0	0	3	1
8:30	8:45	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	6
8:45	9:00	0	1	2	0	0	0	0	0	0	1	3	0	0	1	1	3
16:00	16:15	0	4	1	0	0	0	0	0	0	0	1	0	2	1	1	
16:15	16:30	0	0	0	0	0	0	1	0	0	6	5	0	1	1	2	
16:30	16:45	0	2	0	0	0	0	0	0	0	0	0	0	1	1	2	
16:45	17:00	0	0	2	0	0	0	0	0	0	1	1	0	0	0	0	
17:00	17:15	0	8	0	0	0	0	1	0	0	2	0	0	0	1	0	
17:15	17:30	0	3	1	0	0	0	0	0	0	0	2	0	1	0	1	
17:30	17:45	0	2	0	0	0	0	0	0	0	0	2	0	1	0	1	
17:45	18:00	0	3	1	0	0	0	0	0	0	4	0	0	1	0	0	

Peak Time		North Approach Wakehurst Pky				East Approach Warringah Rd				South Approach Wakehurst Pky				West Approach Warringah Rd				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
7:30	8:30	0	3	11	0	0	0	6	0	0	1	4	5	0	1	6	17	54
16:30	17:30	0	13	3	0	0	0	1	0	0	0	3	3	0	2	2	3	30

TRANS TRAFFIC SURVEY

trafficsurvey.com.au

TURNING MOVEMENT SURVEY

Intersection of Warringah Rd and Wakehurst Pky, Frenchs Forest

GPS *-33.752346, 151.234365*

Date:	Thu 26/11/20
Weather:	Fine
Suburban:	Frenchs Forest
Customer:	TTPP

North:	Wakehurst Pky
East:	Warringah Rd
South:	Wakehurst Pky
West:	Warringah Rd

All Vehicles

Time		Wakehurst Pkwy South Approach		Wakehurst Pkwy North Approach	
Period Start	Period End	Left to Warringah Rd	Left to Underpass	Right to Warringah Rd	Right to Underpass
7:00	7:15	57	29	52	145
7:15	7:30	69	47	60	183
7:30	7:45	70	38	73	152
7:45	8:00	112	33	51	123
8:00	8:15	80	43	84	139
8:15	8:30	82	34	76	62
8:30	8:45	72	27	64	98
8:45	9:00	82	35	52	93
16:00	16:15	88	52	40	99
16:15	16:30	89	55	45	94
16:30	16:45	106	50	23	115
16:45	17:00	78	51	35	112
17:00	17:15	73	47	29	95
17:15	17:30	103	51	35	104
17:30	17:45	76	47	30	121
17:45	18:00	90	45	25	97

Light Vehicles

Time		Wakehurst Pkwy South Approach		Wakehurst Pkwy North Approach	
Period Start	Period End	Left to Warringah Rd	Left to Underpass	Right to Warringah Rd	Right to Underpass
7:00	7:15	56	28	47	141
7:15	7:30	63	45	59	180
7:30	7:45	64	37	68	151
7:45	8:00	101	33	50	122
8:00	8:15	69	42	79	137
8:15	8:30	72	32	73	60
8:30	8:45	66	25	61	95
8:45	9:00	67	34	51	92
16:00	16:15	85	46	36	90
16:15	16:30	83	51	44	93
16:30	16:45	103	49	19	108
16:45	17:00	73	49	34	111
17:00	17:15	70	46	26	90
17:15	17:30	101	46	30	104
17:30	17:45	76	45	30	119
17:45	18:00	90	44	24	94

Heavy Vehicles

Time		Wakehurst Pkwy South Approach		Wakehurst Pkwy North Approach	
Period Start	Period End	Left to Warringah Rd	Left to Underpass	Right to Warringah Rd	Right to Underpass
7:00	7:15	1	1	3	3
7:15	7:30	3	2	1	3
7:30	7:45	6	1	3	1
7:45	8:00	10	0	1	1
8:00	8:15	10	1	4	2
8:15	8:30	7	2	3	2
8:30	8:45	6	2	3	3
8:45	9:00	12	1	0	1
16:00	16:15	3	5	1	8
16:15	16:30	3	2	1	1
16:30	16:45	3	1	3	6
16:45	17:00	5	1	1	1
17:00	17:15	3	1	0	0
17:15	17:30	1	4	2	0
17:30	17:45	0	0	0	0
17:45	18:00	0	1	0	1

Bus

Time		Wakehurst Pkwy South Approach		Wakehurst Pkwy North Approach	
Period Start	Period End	Left to Warringah Rd	Left to Underpass	Right to Warringah Rd	Right to Underpass
7:00	7:15	0	0	2	1
7:15	7:30	3	0	0	0
7:30	7:45	0	0	2	0
7:45	8:00	1	0	0	0
8:00	8:15	1	0	1	0
8:15	8:30	3	0	0	0
8:30	8:45	0	0	0	0
8:45	9:00	3	0	1	0
16:00	16:15	0	1	3	1
16:15	16:30	3	2	0	0
16:30	16:45	0	0	1	1
16:45	17:00	0	1	0	0
17:00	17:15	0	0	3	5
17:15	17:30	1	1	3	0
17:30	17:45	0	2	0	2
17:45	18:00	0	0	1	2

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY trafficsurvey.com.au

Intersection of Warringah Rd and Allambie Rd, Frenchs Forest

GPS -33.752296, 151.243770

Date:	Thu 26/11/20
Weather:	Fine
Suburban:	Frenchs Forest
Customer:	TTPP

North:	Allambie Rd
East:	Warringah Rd
South:	Allambie Rd
West:	Warringah Rd

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

All Vehicles

Time		North Approach Allambie Rd				East Approach Warringah Rd				South Approach Allambie Rd				West Approach Warringah 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
7:00	7:15	0	0	33	0	0	56	420	43	0	26	38	0	0	85	280	12	4444	
7:15	7:30	0	0	44	0	0	60	485	36	0	27	65	0	0	104	316	16	4616	
7:30	7:45	0	0	45	1	0	69	395	49	0	30	34	0	0	140	307	18	4752	
7:45	8:00	0	0	49	2	0	71	382	70	0	44	102	0	0	135	342	13	4883	
8:00	8:15	0	0	72	0	0	84	385	63	0	39	61	0	0	144	312	5	4965	Peak
8:15	8:30	0	0	87	1	0	107	397	74	0	40	89	0	0	139	341	14		
8:30	8:45	0	0	77	3	0	118	312	71	0	45	75	0	0	191	312	15		
8:45	9:00	0	0	81	2	0	93	355	85	0	29	88	0	1	183	352	23		
16:00	16:15	0	0	47	2	0	88	384	37	0	49	81	0	0	132	386	18	4750	
16:15	16:30	0	0	53	4	0	68	367	37	0	64	64	0	1	130	392	18	4796	
16:30	16:45	0	0	48	4	0	68	336	44	0	67	88	0	0	128	400	5	4837	
16:45	17:00	0	0	41	4	0	55	344	41	0	54	92	0	0	104	393	12	4858	
17:00	17:15	0	0	59	5	0	68	372	44	0	81	90	0	0	124	416	11	4978	Peak
17:15	17:30	0	0	49	6	0	93	409	42	0	62	69	0	0	140	358	11		
17:30	17:45	0	0	32	5	0	59	374	28	0	89	94	0	0	122	390	16		
17:45	18:00	0	0	49	12	0	73	393	31	0	53	75	0	0	111	449	14		

Peak Time		North Approach Allambie Rd				East Approach Warringah Rd				South Approach Allambie Rd				West Approach Warringah Rd				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	0	0	317	6	0	402	1449	293	0	153	313	0	1	657	1317	57	4965
17:00	18:00	0	0	189	28	0	293	1548	145	0	285	328	0	0	497	1613	52	4978

Pedestrians Crossing

Time		North Approach Allambie Rd		East Approach Warringah Rd		South Approach Allambie Rd		West Approach Warringah Rd		Hourly Total
Period Start	Period End	Eastbound	Westbound	Eastbound	Westbound	Soutbound	Northbound	Soutbound	Northbound	
7:00	7:15	2	0	0	0	0	0	3	3	31
7:15	7:30	0	0	2	0	0	0	4	0	32
7:30	7:45	0	2	0	0	0	0	5	1	32
7:45	8:00	0	1	0	2	0	0	4	2	34
8:00	8:15	0	0	0	2	0	0	4	3	42
8:15	8:30	0	0	0	1	0	0	2	3	33
8:30	8:45	0	1	0	2	0	0	6	1	27
8:45	9:00	1	1	5	0	0	0	9	1	17
16:00	16:15	0	0	0	6	0	0	3	3	34
16:15	16:30	0	0	5	1	0	0	5	3	27
16:30	16:45	0	0	0	0	0	0	3	3	24
16:45	17:00	0	0	1	0	0	0	0	1	30
17:00	17:15	0	0	0	1	0	0	1	3	32
17:15	17:30	0	0	1	1	0	0	2	7	27
17:30	17:45	0	0	3	0	0	0	3	6	16
17:45	18:00	0	0	1	0	0	0	2	1	4

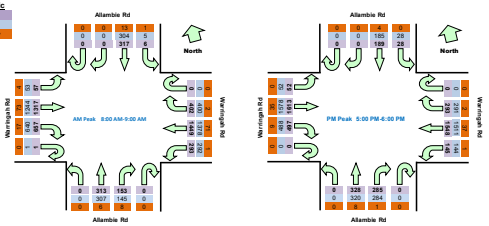
Peak Time		North Approach Allambie Rd		East Approach Warringah Rd		South Approach Allambie Rd		West Approach Warringah Rd		Peak hour
Period Start	Period End	Eastbound	Westbound	Eastbound	Westbound	Soutbound	Northbound	Soutbound	Northbound	total
8:00	9:00	1	2	5	5	0	0	21	8	42
17:00	18:00	0	0	5	2	0	0	8	17	32

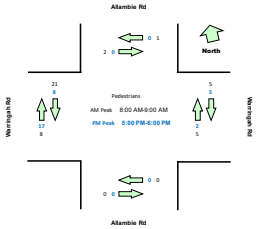
Queue

Time		North
Period Start	Period End	
7:00	7:05	3
7:05	7:10	4
7:10	7:15	3
7:15	7:20	4
7:20	7:25	5
7:25	7:30	4
7:30	7:35	3
7:35	7:40	3
7:40	7:45	7
7:45	7:50	5
7:50	7:55	5
7:55	8:00	4
8:00	8:05	6
8:05	8:10	7
8:10	8:15	7
8:15	8:20	7
8:20	8:25	10
8:25	8:30	7
8:30	8:35	10
8:35	8:40	5
8:40	8:45	10
8:45	8:50	8
8:50	8:55	8
8:55	9:00	4
16:00	16:05	6
16:05	16:10	7
16:10	16:15	6
16:15	16:20	7
16:20	16:25	6
16:25	16:30	8
16:30	16:35	11
16:35	16:40	9
16:40	16:45	5
16:45	16:50	7
16:50	16:55	4
16:55	17:00	3
17:00	17:05	5
17:05	17:10	9
17:10	17:15	5
17:15	17:20	6
17:20	17:25	6
17:25	17:30	5
17:30	17:35	4
17:35	17:40	6
17:40	17:45	6
17:45	17:50	11
17:50	17:55	7
17:55	18:00	9

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 Allambie Rd				East Approach Warringah Rd				South Approach Allambie Rd				West Approach Warringah Rd			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	0	29	0	0	55	405	42	0	25	37	0	0	83	261	12
7:15	7:30	0	0	41	0	0	60	462	36	0	25	61	0	0	98	291	13
7:30	7:45	0	0	43	1	0	68	372	48	0	27	31	0	0	134	289	15
7:45	8:00	0	0	46	2	0	67	365	69	0	42	98	0	0	132	314	12
8:00	8:15	0	0	66	0	0	83	364	63	0	39	60	0	0	142	293	4
8:15	8:30	0	0	84	1	0	107	375	73	0	38	85	0	0	136	319	13
8:30	8:45	0	0	75	2	0	118	302	71	0	42	74	0	0	184	297	14
8:45	9:00	0	0	79	2	0	92	337	85	0	26	88	0	1	178	335	22
16:00	16:15	0	0	45	2	0	88	365	35	0	47	79	0	0	128	365	14
16:15	16:30	0	0	52	4	0	67	350	36	0	63	63	0	1	127	385	16
16:30	16:45	0	0	46	4	0	68	321	42	0	66	85	0	0	126	389	4
16:45	17:00	0	0	38	4	0	55	332	41	0	54	89	0	0	102	386	12
17:00	17:15	0	0	58	5	0	68	359	44	0	80	88	0	0	123	404	11
17:15	17:30	0	0	47	6	0	92	401	42	0	62	69	0	0	138	351	11
17:30	17:45	0	0	32	5	0	58	362	28	0	89	90	0	0	121	381	16
17:45	18:00	0	0	48	12	0	73	389	30	0	53	73	0	0	106	442	14

Peak Time		North Approach Allambie Rd				East Approach Warringah Rd				South Approach Allambie Rd				West Approach Warringah Rd				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	0	0	304	5	0	400	1378	252	0	145	307	0	0	640	1244	53	4769
17:00	18:00	0	0	185	28	0	291	1511	144	0	284	320	0	0	488	1578	52	4881

Heavy Vehicles

Time		North Approach Allambie Rd				East Approach Warringah Rd				South Approach Allambie Rd				West Approach Warringah Rd			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	0	2	0	0	1	15	1	0	1	1	0	0	2	19	0
7:15	7:30	0	0	0	0	0	0	22	0	0	1	4	0	0	6	23	2
7:30	7:45	0	0	0	0	0	1	23	1	0	2	0	0	0	6	18	2
7:45	8:00	0	0	0	0	0	2	16	1	0	2	4	0	0	3	27	0
8:00	8:15	0	0	0	0	0	1	20	0	0	0	1	0	0	2	17	1
8:15	8:30	0	0	0	0	0	0	20	1	0	1	3	0	0	3	19	1
8:30	8:45	0	0	1	0	0	0	10	0	0	3	0	0	0	7	15	1
8:45	9:00	0	0	1	0	0	1	18	0	0	3	0	0	0	5	16	0
16:00	16:15	0	0	0	0	0	0	17	2	0	2	2	0	0	4	21	1
16:15	16:30	0	0	0	0	0	1	15	1	0	1	0	0	0	3	7	1
16:30	16:45	0	0	0	0	0	0	14	2	0	1	2	0	0	2	10	1
16:45	17:00	0	0	1	0	0	0	10	0	0	0	1	0	0	2	7	0
17:00	17:15	0	0	0	0	0	0	11	0	0	0	1	0	0	1	12	0
17:15	17:30	0	0	0	0	0	1	8	0	0	0	0	0	0	2	7	0
17:30	17:45	0	0	0	0	0	1	12	0	0	0	1	0	0	1	9	0
17:45	18:00	0	0	0	0	0	0	4	1	0	0	2	0	0	5	7	0

Peak Time		North Approach Allambie Rd				East Approach Warringah Rd				South Approach Allambie Rd				West Approach Warringah Rd				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	0	0	13	1	0	2	71	1	0	8	6	0	0	17	73	4	196
17:00	18:00	0	0	4	0	0	2	37	1	0	1	8	0	0	9	35	0	97

Bus

Time		North Approach Allambie Rd				East Approach Warringah Rd				South Approach Allambie Rd				West Approach Warringah Rd			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	7:30	0	0	3	0	0	0	1	0	0	1	0	0	0	0	2	1
7:30	7:45	0	0	2	0	0	0	0	0	0	1	3	0	0	0	0	1
7:45	8:00	0	0	3	0	0	2	1	0	0	0	0	0	0	0	1	1
8:00	8:15	0	0	6	0	0	0	1	0	0	0	0	0	0	0	2	0
8:15	8:30	0	0	3	0	0	0	2	0	0	1	1	0	0	0	3	0
8:30	8:45	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0
8:45	9:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
16:00	16:15	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	3
16:15	16:30	0	0	1	0	0	0	2	0	0	0	1	0	0	0	0	1
16:30	16:45	0	0	2	0	0	0	1	0	0	0	1	0	0	0	1	0
16:45	17:00	0	0	2	0	0	0	2	0	0	0	2	0	0	0	0	0
17:00	17:15	0	0	1	0	0	0	2	0	0	1	1	0	0	0	0	0
17:15	17:30	0	0	2	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	3	0	0	0	0	0
17:45	18:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0

Peak Time		North Approach Allambie Rd				East Approach Warringah Rd				South Approach Allambie Rd				West Approach Warringah Rd				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	0	0	11	1	0	0	3	0	0	1	2	0	0	0	6	1	25
17:00	18:00	0	0	4	0	0	0	2	0	0	1	4	0	0	0	0	0	11

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY trafficsurvey.com.au

Intersection of Warringah Rd and Ellis Rd, Frenchs Forest

GPS -33.752522, 151.252903

Date:	Thu 26/11/20
Weather:	Fine
Suburban:	Frenchs Forest
Customer:	TTPP

North:	Ellis Rd
East:	Warringah Rd
South:	Government Rd
West:	Warringah Rd

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

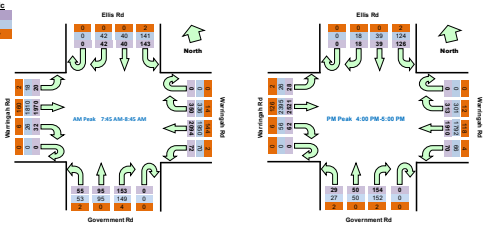
All Vehicles

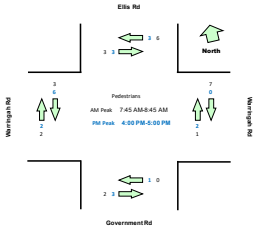
Time		North Approach Ellis Rd				East Approach Warringah Rd				South Approach Government Rd				West Approach Warringah Rd				Hourly Total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
7:00	7:15	0	8	2	19	0	50	487	4	0	22	6	11	0	7	384	1	4766	
7:15	7:30	0	5	3	24	0	57	574	8	0	36	16	14	0	5	479	2	4909	
7:30	7:45	0	6	10	34	0	51	550	12	0	30	13	9	0	10	473	3	4992	
7:45	8:00	0	6	10	24	0	75	559	22	0	35	15	16	0	4	571	4	5066	Peak
8:00	8:15	0	5	10	35	0	94	493	13	0	34	15	16	0	10	411	8	5052	
8:15	8:30	0	10	10	34	0	96	552	16	0	40	31	16	0	10	486	5		
8:30	8:45	0	21	10	50	0	85	490	21	0	44	34	7	0	8	502	3		
8:45	9:00	0	3	12	55	0	106	507	18	0	39	32	6	0	9	533	7		
16:00	16:15	0	6	9	31	0	80	520	14	0	40	14	9	0	15	657	9	5320	Peak
16:15	16:30	0	0	9	28	0	83	470	18	0	35	11	8	0	19	657	6	5207	
16:30	16:45	0	6	12	36	0	85	455	21	0	37	12	6	0	16	587	8	5314	
16:45	17:00	0	6	9	31	0	65	465	17	0	42	13	6	0	12	620	5	5230	
17:00	17:15	0	4	10	32	0	80	478	21	0	44	13	7	0	16	585	1	5241	
17:15	17:30	0	4	14	25	0	93	586	15	0	33	8	12	0	22	633	6		
17:30	17:45	0	5	11	24	0	53	466	11	0	26	10	8	0	14	563	6		
17:45	18:00	0	3	4	21	0	86	519	16	0	27	11	7	0	15	586	7		

Peak Time		North Approach Ellis Rd				East Approach Warringah Rd				South Approach Government Rd				West Approach Warringah 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	40	143	0	350	2094	72	0	153	95	55	0	32	1970	20	5066
16:00	17:00	0	18	39	126	0	313	1910	70	0	154	50	29	0	62	2521	28	5320

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 Ellis Rd				East Approach Warringah Rd				South Approach Government Rd				West Approach Warringah Rd			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	8	2	17	0	48	467	4	0	22	6	9	0	5	344	1
7:15	7:30	0	5	3	24	0	57	528	6	0	36	16	12	0	5	425	2
7:30	7:45	0	6	10	32	0	49	508	10	0	28	13	7	0	8	431	1
7:45	8:00	0	6	10	24	0	71	515	22	0	33	15	14	0	4	511	4
8:00	8:15	0	5	10	33	0	90	455	13	0	34	15	16	0	8	385	6
8:15	8:30	0	10	10	34	0	90	514	14	0	40	31	16	0	8	450	5
8:30	8:45	0	21	10	50	0	85	466	21	0	42	34	7	0	6	464	3
8:45	9:00	0	3	12	51	0	106	469	18	0	39	32	6	0	9	493	5
16:00	16:15	0	6	9	31	0	76	482	14	0	40	14	7	0	13	597	7
16:15	16:30	0	0	9	28	0	81	438	18	0	33	11	8	0	19	631	6
16:30	16:45	0	6	12	34	0	83	427	19	0	37	12	6	0	14	567	8
16:45	17:00	0	6	9	31	0	61	445	15	0	42	13	6	0	10	600	5
17:00	17:15	0	4	10	32	0	78	456	19	0	40	11	7	0	16	553	1
17:15	17:30	0	4	14	25	0	93	564	13	0	33	8	12	0	22	615	6
17:30	17:45	0	5	11	24	0	53	448	11	0	26	10	4	0	12	543	6
17:45	18:00	0	3	4	21	0	86	503	16	0	27	11	5	0	15	564	7

Peak Time		North Approach Ellis Rd				East Approach Warringah Rd				South Approach Government Rd				West Approach Warringah 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	40	141	0	336	1950	70	0	149	95	53	0	26	1810	18	4730
16:00	17:00	0	18	39	124	0	301	1792	66	0	152	50	27	0	56	2395	26	5046

Heavy Vehicles

Time		North Approach Ellis Rd				East Approach Warringah Rd				South Approach Government Rd				West Approach Warringah Rd			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	0	0	1	0	1	10	0	0	0	0	1	0	1	20	0
7:15	7:30	0	0	0	0	0	0	23	1	0	0	0	1	0	0	27	0
7:30	7:45	0	0	0	1	0	1	21	1	0	1	0	1	0	1	21	1
7:45	8:00	0	0	0	0	0	2	22	0	0	1	0	1	0	0	30	0
8:00	8:15	0	0	0	1	0	2	19	0	0	0	0	0	0	1	13	1
8:15	8:30	0	0	0	0	0	3	19	1	0	0	0	0	0	1	18	0
8:30	8:45	0	0	0	0	0	0	12	0	0	1	0	0	0	1	19	0
8:45	9:00	0	0	0	2	0	0	19	0	0	0	0	0	0	0	20	1
16:00	16:15	0	0	0	0	0	2	19	0	0	0	0	1	0	1	30	1
16:15	16:30	0	0	0	0	0	1	16	0	0	1	0	0	0	0	13	0
16:30	16:45	0	0	0	1	0	1	14	1	0	0	0	0	0	1	10	0
16:45	17:00	0	0	0	0	0	2	10	1	0	0	0	0	0	1	10	0
17:00	17:15	0	0	0	0	0	1	11	1	0	2	1	0	0	0	16	0
17:15	17:30	0	0	0	0	0	0	11	1	0	0	0	0	0	0	9	0
17:30	17:45	0	0	0	0	0	0	9	0	0	0	0	2	0	1	10	0
17:45	18:00	0	0	0	0	0	0	8	0	0	0	0	1	0	0	11	0

Peak Time		North Approach Ellis Rd				East Approach Warringah Rd				South Approach Government Rd				West Approach Warringah 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	0	0	2	0	14	144	2	0	4	0	2	0	6	160	2	336
16:00	17:00	0	0	0	2	0	12	118	4	0	2	0	2	0	6	126	2	274

Bus

Time		North Approach Ellis Rd				East Approach Warringah Rd				South Approach Government Rd				West Approach Warringah Rd			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	0	0	1	0	1	10	0	0	0	0	1	0	1	20	0
7:15	7:30	0	0	0	0	0	0	23	1	0	0	0	1	0	0	27	0
7:30	7:45	0	0	0	1	0	1	21	1	0	1	0	1	0	1	21	1
7:45	8:00	0	0	0	0	0	2	22	0	0	1	0	1	0	0	30	0
8:00	8:15	0	0	0	1	0	2	19	0	0	0	0	0	0	1	13	1
8:15	8:30	0	0	0	0	0	3	19	1	0	0	0	0	0	1	18	0
8:30	8:45	0	0	0	0	0	0	12	0	0	1	0	0	0	1	19	0
8:45	9:00	0	0	0	2	0	0	19	0	0	0	0	0	0	0	20	1
16:00	16:15	0	0	0	0	0	2	19	0	0	0	0	1	0	1	30	1
16:15	16:30	0	0	0	0	0	1	16	0	0	1	0	0	0	0	13	0
16:30	16:45	0	0	0	1	0	1	14	1	0	0	0	0	0	1	10	0
16:45	17:00	0	0	0	0	0	2	10	1	0	0	0	0	0	1	10	0
17:00	17:15	0	0	0	0	0	1	11	1	0	2	1	0	0	0	16	0
17:15	17:30	0	0	0	0	0	0	11	1	0	0	0	0	0	0	9	0
17:30	17:45	0	0	0	0	0	0	9	0	0	0	0	2	0	1	10	0
17:45	18:00	0	0	0	0	0	0	8	0	0	0	0	1	0	0	11	0

Peak Time		North Approach Ellis Rd				East Approach Warringah Rd				South Approach Government Rd				West Approach Warringah 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	0	0	1	0	7	72	1	0	2	0	1	0	3	80	1	168
16:00	17:00	0	0	0	1	0	6	59	2	0	1	0	1	0	3	63	1	137

Pedestrians Crossing

Time		North Approach Ellis Rd		East Approach Warringah Rd		South Approach Government Rd		West Approach Warringah Rd		Hourly Total
Period Start	Period End	Eastbound	Westbound	Northbound	Southbound	Eastbound	Westbound	Northbound	Southbound	
7:00	7:15	1	0	0	0	0	0	1	0	25
7:15	7:30	2	0	0	0	0	0	3	0	32
7:30	7:45	2	0	3	0	0	0	2	2	30
7:45	8:00	1	1	1	0	0	1	3	2	24
8:00	8:15	2	1	4	1	0	1	0	0	27
8:15	8:30	2	0	1	0	0	0	0	0	18
8:30	8:45	1	1	1	0	0	0	0	0	15
8:45	9:00	3	0	0	1	0	1	3	4	12
16:00	16:15	0	1	0	1	0	1	5	2	20
16:15	16:30	0	0	0	0	1	0	0	0	11
16:30	16:45	2	1	0	0	0	0	1	0	19
16:45	17:00	1	1	0	1	0	2	0	0	21
17:00	17:15	0	0	0	0	1	0	0	0	17
17:15	17:30	1	0	2	5	1	0	0	0	16
17:30	17:45	2	0	1	0	0	0	2	1	7
17:45	18:00	0	0	0	0	1	0	0	0	1

Peak Time		North Approach Ellis Rd		East Approach Warringah Rd		South Approach Government Rd		West Approach Warringah Rd		Peak hour total
Period Start	Period End	Eastbound	Westbound	Northbound	Southbound	Eastbound	Westbound	Northbound	Southbound	
7:45	8:45	6	3	7	1	0	2	3	2	24
16:00	17:00	3	3	0	2	1	3	6	2	20

Queue

Time		North
Period Start	Period End	
7:00	7:05	2
7:05	7:10	2
7:10	7:15	2
7:15	7:20	3
7:20	7:25	2
7:25	7:30	6
7:30	7:35	8
7:35	7:40	4
7:40	7:45	5
7:45	7:50	4
7:50	7:55	5
7:55	8:00	3
8:00	8:05	7
8:05	8:10	8
8:10	8:15	6
8:15	8:20	7
8:20	8:25	4
8:25	8:30	8
8:30	8:35	6
8:35	8:40	9
8:40	8:45	13
8:45	8:50	7
8:50	8:55	6
8:55	9:00	8
16:00	16:05	5
16:05	16:10	7
16:10	16:15	3
16:15	16:20	4
16:20	16:25	5
16:25	16:30	6
16:30	16:35	3
16:35	16:40	10
16:40	16:45	4
16:45	16:50	4
16:50	16:55	4
16:55	17:00	8
17:00	17:05	7
17:05	17:10	8
17:10	17:15	6
17:15	17:20	7
17:20	17:25	5
17:25	17:30	5
17:30	17:35	3
17:35	17:40	4
17:40	17:45	5
17:45	17:50	6
17:50	17:55	8
17:55	18:00	5

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY trafficsurvey.com.au

Intersection of Adams St and Forest Way, Frenchs Forest

GPS -33.745706, 151.222528

Date:	Thu 26/11/20
Weather:	Fine
Suburban:	Frenchs Forest
Customer:	TTPP

North:	Forest Way
East:	Adams St
South:	Forest Way
West:	Adams St

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

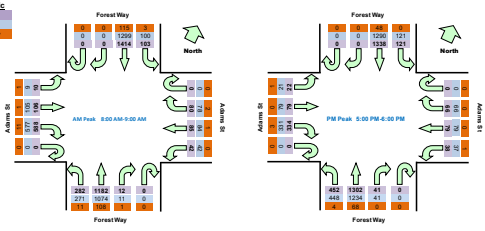
All Vehicles

Time		North Approach Forest Way				East Approach Adams St				South Approach Forest Way				West Approach Adams St				Hourly Total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
7:00	7:15	0	0	261	22	0	13	7	13	0	2	251	39	0	117	13	1	3377	
7:15	7:30	0	0	288	11	0	17	11	6	0	5	268	46	0	146	10	3	3597	
7:30	7:45	0	0	343	21	0	12	16	10	0	1	275	57	0	158	18	2	3784	
7:45	8:00	0	0	286	29	0	15	15	16	0	2	287	63	0	180	19	2	3823	
8:00	8:15	0	0	346	27	0	17	10	10	0	3	300	58	0	164	22	2	3904	Peak
8:15	8:30	0	0	354	26	0	16	32	6	0	1	325	77	0	131	26	4		
8:30	8:45	0	0	330	22	0	10	19	15	0	4	308	51	0	162	30	1		
8:45	9:00	0	0	384	28	0	37	24	11	0	4	249	96	0	131	28	3		
16:00	16:15	0	0	325	31	0	13	18	10	0	7	307	107	0	76	20	2	3753	
16:15	16:30	0	0	321	33	0	22	17	7	0	7	339	128	0	67	12	1	3816	
16:30	16:45	0	0	348	33	0	17	22	6	0	8	324	104	0	74	21	4	3865	
16:45	17:00	0	0	357	31	0	12	8	9	0	11	273	98	0	89	29	5	3861	
17:00	17:15	0	0	349	46	0	17	20	9	0	9	314	109	0	78	18	10	3872	Peak
17:15	17:30	0	0	363	27	0	18	25	8	0	5	339	118	0	79	15	6		
17:30	17:45	0	0	311	22	0	18	15	10	0	17	339	98	0	98	25	4		
17:45	18:00	0	0	315	26	0	13	19	11	0	10	310	127	0	79	21	2		

Peak Time		North Approach Forest Way				East Approach Adams St				South Approach Forest Way				West Approach Adams St				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	0	0	1414	103	0	80	85	42	0	12	1182	282	0	588	106	10	3904
17:00	18:00	0	0	1338	121	0	66	79	38	0	41	1302	452	0	334	79	22	3872

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 Forest Way				East Approach Adams St				South Approach Forest Way				West Approach Adams St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	0	231	22	0	12	7	12	0	2	238	38	0	117	13	1
7:15	7:30	0	0	257	11	0	17	10	6	0	5	239	45	0	144	10	2
7:30	7:45	0	0	306	21	0	12	16	9	0	1	245	55	0	157	18	2
7:45	8:00	0	0	259	29	0	15	14	14	0	2	244	62	0	177	19	2
8:00	8:15	0	0	319	27	0	16	10	10	0	3	277	55	0	161	22	1
8:15	8:30	0	0	328	25	0	15	32	6	0	1	293	71	0	129	26	4
8:30	8:45	0	0	302	22	0	10	18	15	0	4	287	51	0	158	29	1
8:45	9:00	0	0	350	26	0	37	24	11	0	3	217	94	0	129	28	3
16:00	16:15	0	0	295	31	0	13	18	10	0	7	280	103	0	72	20	2
16:15	16:30	0	0	305	32	0	20	17	7	0	7	314	127	0	67	12	1
16:30	16:45	0	0	332	32	0	17	22	6	0	8	304	104	0	74	21	4
16:45	17:00	0	0	346	31	0	12	8	9	0	11	253	94	0	88	29	5
17:00	17:15	0	0	337	46	0	17	20	8	0	9	298	108	0	78	18	10
17:15	17:30	0	0	348	27	0	18	25	8	0	5	325	117	0	79	15	6
17:30	17:45	0	0	300	22	0	18	15	10	0	17	321	96	0	97	25	4
17:45	18:00	0	0	305	26	0	13	19	11	0	10	290	127	0	77	21	1

Peak Time		North Approach Forest Way				East Approach Adams St				South Approach Forest Way				West Approach Adams St				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	0	0	1299	100	0	78	84	42	0	11	1074	271	0	577	105	9	3650
17:00	18:00	0	0	1290	121	0	66	79	37	0	41	1234	448	0	331	79	21	3747

Heavy Vehicles

Time		North Approach Forest Way				East Approach Adams St				South Approach Forest Way				West Approach Adams St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	0	21	0	0	1	0	0	0	0	10	0	0	0	0	0
7:15	7:30	0	0	18	0	0	0	1	0	0	0	22	1	0	2	0	1
7:30	7:45	0	0	24	0	0	0	0	1	0	0	27	1	0	1	0	0
7:45	8:00	0	0	22	0	0	0	0	0	0	0	31	1	0	2	0	0
8:00	8:15	0	0	21	0	0	0	0	0	0	0	20	0	0	2	0	1
8:15	8:30	0	0	17	0	0	1	0	0	0	0	24	3	0	2	0	0
8:30	8:45	0	0	21	0	0	0	0	0	0	0	16	0	0	3	0	0
8:45	9:00	0	0	27	1	0	0	0	0	0	1	22	1	0	1	0	0
16:00	16:15	0	0	18	0	0	0	0	0	0	0	22	3	0	4	0	0
16:15	16:30	0	0	8	1	0	1	0	0	0	0	19	0	0	0	0	0
16:30	16:45	0	0	14	1	0	0	0	0	0	0	14	0	0	0	0	0
16:45	17:00	0	0	7	0	0	0	0	0	0	0	12	3	0	1	0	0
17:00	17:15	0	0	10	0	0	0	0	0	0	0	8	1	0	0	0	0
17:15	17:30	0	0	11	0	0	0	0	0	0	0	9	0	0	0	0	0
17:30	17:45	0	0	7	0	0	0	0	0	0	0	12	1	0	0	0	0
17:45	18:00	0	0	4	0	0	0	0	0	0	0	10	0	0	2	0	1

Peak Time		North Approach Forest Way				East Approach Adams St				South Approach Forest Way				West Approach Adams St				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	0	0	115	3	0	2	1	0	0	1	108	11	0	11	1	1	254
17:00	18:00	0	0	48	0	0	0	0	1	0	0	68	4	0	3	0	1	125

Bus

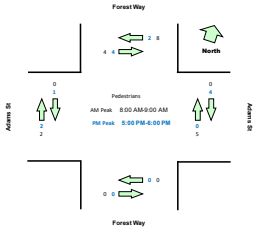
Time		North Approach Forest Way				East Approach Adams St				South Approach Forest Way				West Approach Adams St			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	0	9	0	0	0	0	1	0	0	3	1	0	0	0	0
7:15	7:30	0	0	13	0	0	0	0	0	0	0	7	0	0	0	0	0
7:30	7:45	0	0	13	0	0	0	0	0	0	0	3	1	0	0	0	0
7:45	8:00	0	0	5	0	0	0	1	2	0	0	12	0	0	1	0	0
8:00	8:15	0	0	6	0	0	1	0	0	0	0	3	3	0	1	0	0
8:15	8:30	0	0	9	1	0	0	0	0	0	0	8	3	0	0	0	0
8:30	8:45	0	0	7	0	0	0	1	0	0	0	5	0	0	1	1	0
8:45	9:00	0	0	7	1	0	0	0	0	0	0	10	1	0	1	0	0
16:00	16:15	0	0	12	0	0	0	0	0	0	0	5	1	0	0	0	0
16:15	16:30	0	0	8	0	0	1	0	0	0	0	6	1	0	0	0	0
16:30	16:45	0	0	2	0	0	0	0	0	0	0	6	0	0	0	0	0
16:45	17:00	0	0	4	0	0	0	0	0	0	0	8	1	0	0	0	0
17:00	17:15	0	0	2	0	0	0	0	1	0	0	8	0	0	0	0	0
17:15	17:30	0	0	4	0	0	0	0	0	0	0	5	1	0	0	0	0
17:30	17:45	0	0	4	0	0	0	0	0	0	0	6	1	0	1	0	0
17:45	18:00	0	0	6	0	0	0	0	0	0	0	10	0	0	0	0	0

Peak Time		North Approach Forest Way				East Approach Adams St				South Approach Forest Way				West Approach Adams St				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	0	0	29	2	0	1	1	0	0	0	26	7	0	3	1	0	70
17:00	18:00	0	0	16	0	0	0	0	1	0	0	29	2	0	1	0	0	49

Pedestrians Crossing

Time		North Approach Forest Way		East Approach Adams St		South Approach Forest Way		West Approach Adams St		Hourly Total
Period Start	Period End	Westbound	Eastbound	Northbound	Southbound	Westbound	Eastbound	Northbound	Southbound	
7:00	7:15	3	3	0	2	0	0	0	0	42
7:15	7:30	2	9	0	1	0	0	0	0	44
7:30	7:45	5	1	0	1	0	0	2	0	35
7:45	8:00	1	6	0	6	0	0	0	0	30
8:00	8:15	3	2	0	4	0	0	0	1	19
8:15	8:30	0	2	0	1	0	0	0	0	9
8:30	8:45	3	0	0	0	0	0	0	1	6
8:45	9:00	2	0	0	0	0	0	0	0	2
16:00	16:15	3	4	2	0	0	0	0	0	23
16:15	16:30	0	1	1	0	0	0	0	1	16
16:30	16:45	1	1	0	0	0	0	0	0	20
16:45	17:00	0	6	0	1	0	0	1	1	20
17:00	17:15	0	2	0	0	0	0	0	0	13
17:15	17:30	2	2	2	0	0	0	1	0	11
17:30	17:45	0	0	1	0	0	0	0	1	4
17:45	18:00	0	0	1	0	0	0	0	1	2

Peak Time		North Approach Forest Way		East Approach Adams St		South Approach Forest Way		West Approach Adams St		Peak hour
Period Start	Period End	Westbound	Eastbound	Northbound	Southbound	Westbound	Eastbound	Northbound	Southbound	total
8:00	9:00	8	4	0	5	0	0	0	2	19
17:00	18:00	2	4	4	0	0	0	1	2	13



Queue

Time		North
Period Start	Period End	
7:00	7:05	8
7:05	7:10	16
7:10	7:15	12
7:15	7:20	17
7:20	7:25	11
7:25	7:30	15
7:30	7:35	15
7:35	7:40	18
7:40	7:45	18
7:45	7:50	19
7:50	7:55	14
7:55	8:00	12
8:00	8:05	12
8:05	8:10	14
8:10	8:15	19
8:15	8:20	16
8:20	8:25	17
8:25	8:30	16
8:30	8:35	20
8:35	8:40	15
8:40	8:45	16
8:45	8:50	16
8:50	8:55	15
8:55	9:00	20
16:00	16:05	10
16:05	16:10	12
16:10	16:15	10
16:15	16:20	13
16:20	16:25	17
16:25	16:30	11
16:30	16:35	19
16:35	16:40	15
16:40	16:45	17
16:45	16:50	13
16:50	16:55	16
16:55	17:00	14
17:00	17:05	15
17:05	17:10	16
17:10	17:15	20
17:15	17:20	14
17:20	17:25	19
17:25	17:30	15
17:30	17:35	10
17:35	17:40	13
17:40	17:45	14
17:45	17:50	11
17:50	17:55	10
17:55	18:00	10

TRANS TRAFFIC SURVEY

trafficsurvey.com.au

TURNING MOVEMENT SURVEY

Intersection of Forest Way and Naree Rd, Frenchs Forest

GPS -33.748468, 151.224066

Date:	Thu 26/11/20
Weather:	Fine
Suburban:	Frenchs Forest
Customer:	TTPP

North:	Forest Way
East:	Naree Rd
South:	Forest Way
West:	N/A

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

All Vehicles

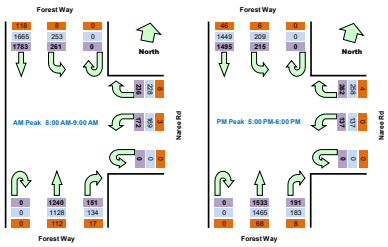
Time		North Approach Forest Way			East Approach Naree Rd			South Approach Forest Way			Hourly Total	
Period Start	Period End	U	SB	L	U	R	L	U	R	NB	Hour	Peak
7:00	7:15	0	359	32	0	37	18	0	24	255	3378	
7:15	7:30	0	407	33	0	51	28	0	27	268	3605	
7:30	7:45	0	459	52	0	47	28	0	35	286	3759	
7:45	8:00	0	436	46	0	58	56	0	42	294	3819	
8:00	8:15	0	451	69	0	48	32	0	39	313	3843	Peak
8:15	8:30	0	430	61	0	78	46	0	28	325		
8:30	8:45	0	447	60	0	58	53	0	44	305		
8:45	9:00	0	455	71	0	52	41	0	40	297		
16:00	16:15	0	360	51	0	59	37	0	44	362	3726	
16:15	16:30	0	349	46	0	73	36	0	47	401	3758	
16:30	16:45	0	368	60	0	84	38	0	41	352	3794	
16:45	17:00	0	387	68	0	61	31	0	50	321	3821	
17:00	17:15	0	378	58	0	67	27	0	50	365	3833	Peak
17:15	17:30	0	396	54	0	81	35	0	41	381		
17:30	17:45	0	371	48	0	65	40	0	57	389		
17:45	18:00	0	350	55	0	49	35	0	43	398		

Peak Time		North Approach Forest Way			East Approach Naree Rd			South Approach Forest Way			Peak total
Period Start	Period End	U	SB	L	U	R	L	U	R	NB	
8:00	9:00	0	1783	261	0	236	172	0	151	1240	3843
17:00	18:00	0	1495	215	0	262	137	0	191	1533	3833

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 Forest Way			East Approach Naree Rd			South Approach Forest Way		
Period Start	Period End	U	SB	L	U	R	L	U	R	NB
7:00	7:15	0	330	30	0	37	16	0	21	241
7:15	7:30	0	375	32	0	49	28	0	23	240
7:30	7:45	0	421	51	0	46	27	0	29	255
7:45	8:00	0	405	45	0	54	56	0	38	254
8:00	8:15	0	424	66	0	47	32	0	33	288
8:15	8:30	0	402	61	0	75	45	0	25	290
8:30	8:45	0	420	55	0	58	51	0	38	284
8:45	9:00	0	419	71	0	48	41	0	38	266
16:00	16:15	0	330	47	0	58	37	0	42	332
16:15	16:30	0	334	45	0	71	36	0	46	377
16:30	16:45	0	354	58	0	82	38	0	36	334
16:45	17:00	0	376	67	0	59	30	0	47	299
17:00	17:15	0	366	57	0	66	27	0	47	349
17:15	17:30	0	382	53	0	81	35	0	40	366
17:30	17:45	0	361	46	0	64	40	0	54	370
17:45	18:00	0	340	53	0	47	35	0	42	380

Peak Time		North Approach Forest Way			East Approach Naree Rd			South Approach Forest Way			Peak total
Period Start	Period End	U	SB	L	U	R	L	U	R	NB	
8:00	9:00	0	1665	253	0	228	169	0	134	1128	3577
17:00	18:00	0	1449	209	0	258	137	0	183	1465	3701

Heavy Vehicles

Time		North Approach Forest Way			East Approach Naree Rd			South Approach Forest Way		
Period Start	Period End	U	SB	L	U	R	L	U	R	NB
7:00	7:15	0	20	1	0	0	2	0	0	10
7:15	7:30	0	20	0	0	0	0	0	0	23
7:30	7:45	0	26	0	0	0	1	0	1	28
7:45	8:00	0	24	0	0	1	0	0	0	31
8:00	8:15	0	21	2	0	1	0	0	2	19
8:15	8:30	0	19	0	0	2	0	0	0	25
8:30	8:45	0	22	2	0	0	2	0	2	16
8:45	9:00	0	28	0	0	1	0	0	0	23
16:00	16:15	0	21	1	0	0	0	0	0	25
16:15	16:30	0	8	0	0	1	0	0	0	18
16:30	16:45	0	13	1	0	0	0	0	0	14
16:45	17:00	0	8	0	0	0	1	0	0	15
17:00	17:15	0	10	0	0	0	0	0	0	9
17:15	17:30	0	11	0	0	0	0	0	0	9
17:30	17:45	0	6	1	0	0	0	0	0	13
17:45	18:00	0	6	0	0	0	0	0	0	10

Peak Time		North Approach Forest Way			East Approach Naree Rd			South Approach Forest Way			Peak total
Period Start	Period End	U	SB	L	U	R	L	U	R	NB	
8:00	9:00	0	118	8	0	8	3	0	17	112	266
17:00	18:00	0	46	6	0	4	0	0	8	68	132

Bus

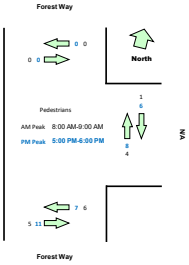
Time		North Approach Forest Way			East Approach Naree Rd			South Approach Forest Way		
Period Start	Period End	U	SB	L	U	R	L	U	R	NB
7:00	7:15	0	9	1	0	0	0	0	3	4
7:15	7:30	0	12	1	0	2	0	0	4	5
7:30	7:45	0	12	1	0	1	0	0	5	3
7:45	8:00	0	7	1	0	3	0	0	4	9
8:00	8:15	0	6	1	0	0	0	0	4	6
8:15	8:30	0	9	0	0	1	1	0	3	10
8:30	8:45	0	5	3	0	0	0	0	4	5
8:45	9:00	0	8	0	0	3	0	0	2	8
16:00	16:15	0	9	3	0	1	0	0	2	5
16:15	16:30	0	7	1	0	1	0	0	1	6
16:30	16:45	0	1	1	0	2	0	0	5	4
16:45	17:00	0	3	1	0	2	0	0	3	7
17:00	17:15	0	2	1	0	1	0	0	3	7
17:15	17:30	0	3	1	0	0	0	0	1	6
17:30	17:45	0	4	1	0	1	0	0	3	6
17:45	18:00	0	4	2	0	2	0	0	1	8

Peak Time		North Approach Forest Way			East Approach Naree Rd			South Approach Forest Way			Peak total
Period Start	Period End	U	SB	L	U	R	L	U	R	NB	
8:00	9:00	0	28	4	0	4	1	0	13	29	79
17:00	18:00	0	13	5	0	4	0	0	8	27	57

Pedestrians Crossing

Time		North Approach Forest Way		East Approach Naree Rd		South Approach Forest Way		Hourly Total
Period Start	Period End	Westbound	Eastbound	Northbound	Southbound	Westbound	Eastbound	
7:00	7:15	0	0	0	5	5	0	26
7:15	7:30	0	0	0	0	0	1	19
7:30	7:45	0	0	0	3	1	2	22
7:45	8:00	0	0	1	1	3	4	17
8:00	8:15	0	0	0	0	1	2	16
8:15	8:30	0	0	0	1	1	2	
8:30	8:45	0	0	0	0	1	0	
8:45	9:00	0	0	1	3	3	1	
16:00	16:15	0	0	2	0	0	4	22
16:15	16:30	0	0	4	0	0	0	23
16:30	16:45	0	0	0	0	1	1	24
16:45	17:00	0	0	4	2	3	1	35
17:00	17:15	0	0	0	1	0	6	32
17:15	17:30	0	0	1	2	1	1	
17:30	17:45	0	0	4	2	3	4	
17:45	18:00	0	0	1	3	3	0	

Peak Time		North Approach Forest Way		East Approach Naree Rd		South Approach Forest Way		Peak total
Period Start	Period End	Westbound	Eastbound	Northbound	Southbound	Westbound	Eastbound	
8:00	9:00	0	0	1	4	6	5	16
17:00	18:00	0	0	6	8	7	11	32



Queue

Time		North	East	South
Period Start	Period End			
7:00	7:05	6	5	4
7:05	7:10	8	6	10
7:10	7:15	15	9	10
7:15	7:20	16	5	7
7:20	7:25	12	12	5
7:25	7:30	18	6	4
7:30	7:35	10	10	6
7:35	7:40	16	8	7
7:40	7:45	16	8	10
7:45	7:50	15	8	10
7:50	7:55	19	14	10
7:55	8:00	24	9	11
8:00	8:05	16	8	8
8:05	8:10	10	10	10
8:10	8:15	8	10	8
8:15	8:20	12	12	6
8:20	8:25	11	11	10
8:25	8:30	13	10	12
8:30	8:35	17	10	10
8:35	8:40	15	9	10
8:40	8:45	13	12	11
8:45	8:50	13	9	10
8:50	8:55	13	11	8
8:55	9:00	15	9	10
16:00	16:05	12	12	11
16:05	16:10	15	7	10
16:10	16:15	11	10	10
16:15	16:20	11	14	13
16:20	16:25	15	9	10
16:25	16:30	12	11	11
16:30	16:35	8	12	11
16:35	16:40	10	10	14
16:40	16:45	11	13	10
16:45	16:50	15	11	8
16:50	16:55	19	9	10
16:55	17:00	20	8	12
17:00	17:05	14	8	10
17:05	17:10	10	9	11
17:10	17:15	20	11	13
17:15	17:20	20	13	10
17:20	17:25	15	15	10
17:25	17:30	18	17	10
17:30	17:35	20	7	13
17:35	17:40	13	12	10
17:40	17:45	17	7	11
17:45	17:50	15	13	9
17:50	17:55	14	7	8
17:55	18:00	17	8	10

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY trafficsurvey.com.au

Intersection of Frenchs Forest Rd and Rabbett St, Frenchs Forest

GPS -33.749713, 151.226825

Date:	Thu 26/11/20
Weather:	Fine
Suburban:	Frenchs Forest
Customer:	TTPP

North:	Rabbett St
East:	Frenchs Forest Rd
South:	Rabbett St
West:	Naree Rd

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

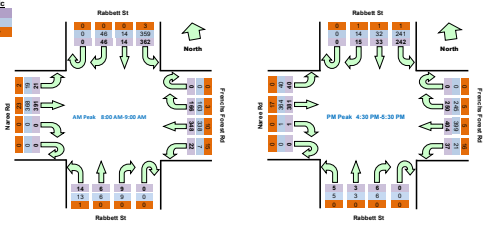
All Vehicles

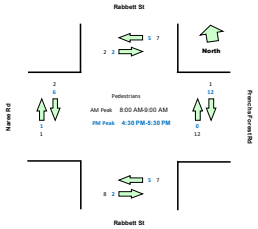
Time		North Approach Rabbett St				East Approach Frenchs Forest Rd				South Approach Rabbett St				West Approach Naree Rd				Hourly Total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
7:00	7:15	0	10	3	35	0	31	44	6	0	0	2	1	0	1	55	0	1052	
7:15	7:30	0	13	2	59	0	33	62	2	0	1	1	4	0	0	54	6	1175	
7:30	7:45	0	8	9	72	0	32	58	5	0	2	4	9	0	4	76	7	1302	
7:45	8:00	0	21	7	82	0	40	85	7	0	0	3	8	0	0	83	5	1388	
8:00	8:15	0	11	5	70	0	34	66	8	0	3	3	3	0	0	102	6	1399	Peak
8:15	8:30	0	12	3	97	0	42	107	5	0	2	2	5	0	0	85	4		
8:30	8:45	0	10	3	101	0	46	98	4	0	3	0	3	0	0	96	8		
8:45	9:00	0	13	3	94	0	44	77	5	0	1	1	3	0	0	108	3		
16:00	16:15	0	5	1	59	0	61	90	17	0	6	3	1	0	0	83	12	1377	
16:15	16:30	0	2	4	50	0	60	106	12	0	2	1	1	0	0	77	16	1390	
16:30	16:45	0	3	7	53	0	70	118	17	0	0	0	1	0	0	90	11	1417	Peak
16:45	17:00	0	4	10	68	0	41	86	5	0	2	2	2	0	1	110	7	1379	
17:00	17:15	0	4	11	60	0	71	90	5	0	2	0	0	0	0	98	10	1337	
17:15	17:30	0	4	5	61	0	68	110	10	0	2	1	2	0	0	83	12		
17:30	17:45	0	5	11	45	0	56	97	8	0	1	1	3	0	0	87	18		
17:45	18:00	0	5	4	43	0	59	77	8	0	0	0	2	0	0	82	16		

Peak Time		North Approach Rabbett St				East Approach Frenchs Forest Rd				South Approach Rabbett St				West Approach Naree Rd				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	0	46	14	362	0	166	348	22	0	9	6	14	0	0	391	21	1399
16:30	17:30	0	15	33	242	0	250	404	37	0	6	3	5	0	1	381	40	1417

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 Rabbett St				East Approach Frenchs Forest Rd				South Approach Rabbett St				West Approach Naree Rd			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	10	3	35	0	29	42	3	0	0	2	1	0	1	50	0
7:15	7:30	0	13	2	59	0	32	60	0	0	1	1	4	0	0	49	6
7:30	7:45	0	8	9	72	0	32	56	3	0	2	4	9	0	2	72	6
7:45	8:00	0	21	7	82	0	39	81	1	0	0	3	8	0	0	78	5
8:00	8:15	0	11	5	69	0	33	65	1	0	3	3	3	0	0	95	4
8:15	8:30	0	12	3	96	0	41	103	2	0	2	2	5	0	0	82	4
8:30	8:45	0	10	3	100	0	45	97	2	0	3	0	2	0	0	85	8
8:45	9:00	0	13	3	94	0	44	73	2	0	1	1	3	0	0	106	3
16:00	16:15	0	5	1	58	0	61	89	6	0	6	3	1	0	0	77	12
16:15	16:30	0	2	4	48	0	58	104	8	0	2	1	1	0	0	75	16
16:30	16:45	0	3	7	53	0	67	116	10	0	0	0	1	0	0	83	11
16:45	17:00	0	3	9	67	0	41	84	3	0	2	2	2	0	1	106	7
17:00	17:15	0	4	11	60	0	69	89	2	0	2	0	0	0	0	94	10
17:15	17:30	0	4	5	61	0	68	110	6	0	2	1	2	0	0	81	12
17:30	17:45	0	5	11	45	0	56	96	3	0	1	1	3	0	0	82	18
17:45	18:00	0	5	4	43	0	59	75	5	0	0	0	2	0	0	79	16

Peak Time		North Approach Rabbett St				East Approach Frenchs Forest Rd				South Approach Rabbett St				West Approach Naree Rd				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	0	46	14	359	0	163	338	7	0	9	6	13	0	0	368	19	1342
16:30	17:30	0	14	32	241	0	245	399	21	0	6	3	5	0	1	364	40	1371

Heavy Vehicles

Time		North Approach Rabbett St				East Approach Frenchs Forest Rd				South Approach Rabbett St				West Approach Naree Rd			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	0	0	0	0	2	2	0	0	0	0	0	0	0	1	0
7:15	7:30	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
7:30	7:45	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
7:45	8:00	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
8:00	8:15	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2	2
8:15	8:30	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0
8:30	8:45	0	0	0	0	0	1	1	0	0	0	0	1	0	0	4	0
8:45	9:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
16:00	16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
16:15	16:30	0	0	0	2	0	1	1	0	0	0	0	0	0	0	0	0
16:30	16:45	0	0	0	0	0	3	0	0	0	0	0	0	0	0	1	0
16:45	17:00	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
17:00	17:15	0	0	0	0	0	2	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	0	0	0	0	0
17:30	17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
17:45	18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Peak Time		North Approach Rabbett St				East Approach Frenchs Forest Rd				South Approach Rabbett St				West Approach Naree Rd				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	0	0	0	3	0	3	10	15	0	0	0	1	0	0	23	2	57
16:30	17:30	0	1	1	1	0	5	5	16	0	0	0	0	0	0	17	0	46

Bus

Time		North Approach Rabbett St				East Approach Frenchs Forest Rd				South Approach Rabbett St				West Approach Naree Rd			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	0	0	0	0	0	0	3	0	0	0	0	0	0	4	0
7:15	7:30	0	0	0	0	0	0	2	2	0	0	0	0	0	0	5	0
7:30	7:45	0	0	0	0	0	0	1	2	0	0	0	0	0	2	4	0
7:45	8:00	0	0	0	0	0	0	3	6	0	0	0	0	0	0	5	0
8:00	8:15	0	0	0	0	0	1	0	7	0	0	0	0	0	0	5	0
8:15	8:30	0	0	0	1	0	0	2	3	0	0	0	0	0	0	3	0
8:30	8:45	0	0	0	1	0	0	0	2	0	0	0	0	0	0	7	0
8:45	9:00	0	0	0	0	0	0	3	3	0	0	0	0	0	0	2	0
16:00	16:15	0	0	0	1	0	0	1	11	0	0	0	0	0	0	5	0
16:15	16:30	0	0	0	0	0	1	1	4	0	0	0	0	0	0	2	0
16:30	16:45	0	0	0	0	0	0	2	7	0	0	0	0	0	0	6	0
16:45	17:00	0	0	0	0	0	0	2	2	0	0	0	0	0	0	4	0
17:00	17:15	0	0	0	0	0	0	1	3	0	0	0	0	0	0	4	0
17:15	17:30	0	0	0	0	0	0	0	4	0	0	0	0	0	0	2	0
17:30	17:45	0	0	0	0	0	0	1	5	0	0	0	0	0	0	4	0
17:45	18:00	0	0	0	0	0	0	2	3	0	0	0	0	0	0	3	0

Peak Time		North Approach Rabbett St				East Approach Frenchs Forest Rd				South Approach Rabbett St				West Approach Naree Rd				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	0	0	0	2	0	1	5	15	0	0	0	0	0	0	17	0	40
16:30	17:30	0	0	0	0	0	0	5	16	0	0	0	0	0	0	16	0	37

Pedestrians Crossing

Time		North Approach Rabbett St		st Approach Frenchs Forest R		South Approach Rabbett St		West Approach Naree Rd		Hourly Total
Period Start	Period End	Eastbound	Westbound	Northbound	Southbound	Eastbound	Westbound	Northbound	Southbound	
7:00	7:15	0	0	0	0	0	0	0	1	14
7:15	7:30	0	0	2	1	0	1	0	0	21
7:30	7:45	0	1	2	0	0	0	0	0	38
7:45	8:00	0	0	0	2	1	2	0	1	40
8:00	8:15	0	1	0	4	1	0	2	0	40
8:15	8:30	3	0	0	8	4	5	0	1	
8:30	8:45	0	1	1	0	2	1	0	0	
8:45	9:00	4	0	0	0	0	2	0	0	
16:00	16:15	2	0	4	2	0	0	3	0	39
16:15	16:30	2	0	2	0	0	0	1	0	34
16:30	16:45	4	2	3	0	0	0	2	0	33
16:45	17:00	1	0	3	0	3	1	3	1	25
17:00	17:15	0	0	6	0	0	0	0	0	19
17:15	17:30	0	0	0	0	2	1	1	0	
17:30	17:45	0	0	1	0	0	1	1	0	
17:45	18:00	0	0	3	0	0	2	1	0	

Peak Time		North Approach Rabbett St		st Approach Frenchs Forest R		South Approach Rabbett St		West Approach Naree Rd		Peak hour
Period Start	Period End	Eastbound	Westbound	Northbound	Southbound	Eastbound	Westbound	Northbound	Southbound	total
8:00	9:00	7	2	1	12	7	8	2	1	40
16:30	17:30	5	2	12	0	5	2	6	1	33

Queue

Time		North
Period Start	Period End	
7:00	7:05	4
7:05	7:10	5
7:10	7:15	5
7:15	7:20	6
7:20	7:25	8
7:25	7:30	3
7:30	7:35	7
7:35	7:40	10
7:40	7:45	7
7:45	7:50	10
7:50	7:55	15
7:55	8:00	8
8:00	8:05	15
8:05	8:10	10
8:10	8:15	12
8:15	8:20	10
8:20	8:25	12
8:25	8:30	10
8:30	8:35	7
8:35	8:40	12
8:40	8:45	8
8:45	8:50	15
8:50	8:55	9
8:55	9:00	6
16:00	16:05	6
16:05	16:10	12
16:10	16:15	6
16:15	16:20	4
16:20	16:25	5
16:25	16:30	8
16:30	16:35	5
16:35	16:40	6
16:40	16:45	6
16:45	16:50	8
16:50	16:55	8
16:55	17:00	7
17:00	17:05	10
17:05	17:10	10
17:10	17:15	8
17:15	17:20	12
17:20	17:25	7
17:25	17:30	5
17:30	17:35	4
17:35	17:40	10
17:40	17:45	6
17:45	17:50	5
17:50	17:55	7
17:55	18:00	5

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY trafficsurvey.com.au

Intersection of Frenchs Forest Rd and Gladys Ave, Frenchs Forest

GPS -33.749504, 151.231730

Date:	Thu 26/11/20
Weather:	Fine
Suburban:	Frenchs Forest
Customer:	TTPP

North:	Gladys Ave
East:	Frenchs Forest Rd
South:	No Name Rd
West:	Frenchs Forest Rd

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

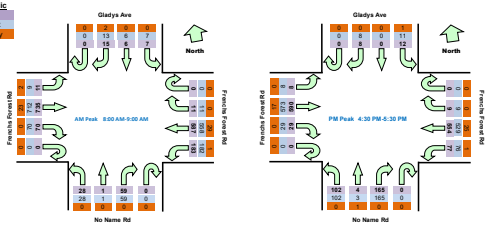
All Vehicles

Time		North Approach Gladys Ave				East Approach Frenchs Forest Rd				South Approach No Name Rd				West Approach Frenchs Forest 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
7:00	7:15	0	2	0	4	0	3	83	25	0	6	0	1	0	13	70	1	1205	
7:15	7:30	0	6	1	7	0	3	99	55	0	8	0	1	0	22	94	1	1357	
7:30	7:45	0	2	0	2	0	4	85	41	0	14	1	9	0	16	133	3	1523	
7:45	8:00	0	1	1	4	0	0	124	70	0	13	0	6	0	23	146	2	1684	
8:00	8:15	0	3	1	1	0	3	110	41	0	15	1	12	0	20	151	2	1713	Peak
8:15	8:30	0	6	2	2	0	2	175	44	0	11	0	4	0	13	201	3		
8:30	8:45	0	0	2	2	0	3	165	44	0	17	0	6	0	16	215	1		
8:45	9:00	0	6	1	2	0	3	137	54	0	16	0	6	0	21	168	5		
16:00	16:15	0	3	0	5	0	2	150	14	0	50	3	18	0	9	141	2	1537	
16:15	16:30	0	1	2	2	0	4	126	16	0	51	0	27	0	6	120	3	1523	
16:30	16:45	0	1	0	2	0	1	153	22	0	42	0	26	0	9	143	1	1558	Peak
16:45	17:00	0	2	0	1	0	1	114	14	0	47	1	26	0	8	167	1	1510	
17:00	17:15	0	3	0	6	0	4	134	24	0	37	2	27	0	8	136	2	1450	
17:15	17:30	0	2	0	3	0	3	153	17	0	39	1	23	0	4	144	4		
17:30	17:45	0	1	1	3	0	1	151	16	0	36	2	13	0	8	120	0		
17:45	18:00	0	1	0	2	0	2	125	12	0	29	0	17	0	2	130	2		

Peak Time		North Approach Gladys Ave				East Approach Frenchs Forest Rd				South Approach No Name Rd				West Approach Frenchs Forest Rd				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	0	15	6	7	0	11	587	183	0	59	1	28	0	70	735	11	1713
16:30	17:30	0	8	0	12	0	9	554	77	0	165	4	102	0	29	590	8	1558

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 Gladys Ave				East Approach Frenchs Forest Rd				South Approach No Name Rd				West Approach Frenchs Forest Rd				
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
7:00	7:15	0	2	0	4	0	3	80	25	0	6	0	1	0	13	64	1	
7:15	7:30	0	6	1	7	0	3	93	55	0	8	0	1	0	22	90	1	
7:30	7:45	0	2	0	2	0	4	78	41	0	14	1	9	0	16	127	3	
7:45	8:00	0	1	1	4	0	0	114	70	0	13	0	6	0	23	141	2	
8:00	8:15	0	3	1	1	0	3	100	41	0	15	1	12	0	20	145	0	
8:15	8:30	0	4	2	2	0	2	171	44	0	11	0	4	0	13	197	3	
8:30	8:45	0	0	2	2	0	3	159	44	0	17	0	6	0	16	204	1	
8:45	9:00	0	6	1	2	0	3	128	53	0	16	0	6	0	21	166	5	
16:00	16:15	0	3	0	5	0	2	140	14	0	50	3	18	0	9	135	2	
16:15	16:30	0	1	2	2	0	4	120	16	0	51	0	27	0	6	114	3	
16:30	16:45	0	1	0	2	0	1	141	22	0	42	0	26	0	9	137	1	
16:45	17:00	0	2	0	1	0	1	110	13	0	47	1	26	0	8	162	1	
17:00	17:15	0	3	0	6	0	4	128	24	0	37	1	27	0	8	133	2	
17:15	17:30	0	2	0	2	0	3	150	17	0	39	1	23	0	4	141	4	
17:30	17:45	0	1	1	3	0	1	145	16	0	36	2	13	0	8	116	0	
17:45	18:00	0	1	0	2	0	2	120	12	0	29	0	17	0	2	128	2	

Peak Time		North Approach Gladys Ave				East Approach Frenchs Forest Rd				South Approach No Name Rd				West Approach Frenchs Forest Rd				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	0	13	6	7	0	11	558	182	0	59	1	28	0	70	712	9	1656
16:30	17:30	0	8	0	11	0	9	529	76	0	165	3	102	0	29	573	8	1513

Heavy Vehicles

Time		North Approach Gladys Ave				East Approach Frenchs Forest Rd				South Approach No Name Rd				West Approach Frenchs Forest Rd				
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
7:00	7:15	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	
7:15	7:30	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
7:30	7:45	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
7:45	8:00	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	
8:00	8:15	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	2	
8:15	8:30	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	
8:30	8:45	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	
8:45	9:00	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	
16:00	16:15	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	
16:15	16:30	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	
16:30	16:45	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	
16:45	17:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	
17:00	17:15	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	
17:15	17:30	0	0	0	1	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	

Peak Time		North Approach Gladys Ave				East Approach Frenchs Forest Rd				South Approach No Name Rd				West Approach Frenchs Forest Rd				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	0	2	0	0	0	0	29	1	0	0	0	0	0	0	23	2	57
16:30	17:30	0	0	0	1	0	0	25	1	0	0	1	0	0	0	17	0	45

Bus

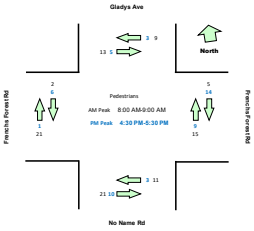
Time		North Approach Gladys Ave				East Approach Frenchs Forest Rd				South Approach No Name Rd				West Approach Frenchs Forest Rd				
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
7:00	7:15	0	0	0	0	0	0	1	0	0	0	0	0	0	0	5	0	
7:15	7:30	0	0	0	0	0	0	5	0	0	0	0	0	0	0	4	0	
7:30	7:45	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6	0	
7:45	8:00	0	0	0	0	0	0	7	0	0	0	0	0	0	0	5	0	
8:00	8:15	0	0	0	0	0	0	9	0	0	0	0	0	0	0	5	0	
8:15	8:30	0	0	0	0	0	0	2	0	0	0	0	0	0	0	4	0	
8:30	8:45	0	0	0	0	0	0	5	0	0	0	0	0	0	0	9	0	
8:45	9:00	0	0	0	0	0	0	7	0	0	0	0	0	0	0	2	0	
16:00	16:15	0	0	0	0	0	0	9	0	0	0	0	0	0	0	5	0	
16:15	16:30	0	0	0	0	0	0	5	0	0	0	0	0	0	0	4	0	
16:30	16:45	0	0	0	0	0	0	10	0	0	0	0	0	0	0	6	0	
16:45	17:00	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4	0	
17:00	17:15	0	0	0	0	0	0	4	0	0	0	0	0	0	0	3	0	
17:15	17:30	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	0	
17:30	17:45	0	0	0	0	0	0	6	0	0	0	0	0	0	0	4	0	
17:45	18:00	0	0	0	0	0	0	5	0	0	0	0	0	0	0	2	0	

Peak Time		North Approach Gladys Ave				East Approach Frenchs Forest Rd				South Approach No Name Rd				West Approach Frenchs Forest Rd				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	0	0	0	0	0	0	23	0	0	0	0	0	0	0	20	0	43
16:30	17:30	0	0	0	0	0	0	21	0	0	0	0	0	0	0	16	0	37

Pedestrians Crossing

Time		North Approach Gladys Ave		st Approach Frenchs Forest R		South Approach No Name Rd		st Approach Frenchs Forest I		Hourly Total
Period Start	Period End	Eastbound	Westbound	Northbound	Southbound	Eastbound	Westbound	Northbound	Southbound	
7:00	7:15	1	2	4	2	1	0	1	1	65
7:15	7:30	2	0	2	4	7	1	0	3	77
7:30	7:45	0	1	1	3	3	1	2	2	79
7:45	8:00	2	1	2	4	5	3	0	4	92
8:00	8:15	3	6	2	4	0	4	1	4	97
8:15	8:30	1	3	2	3	2	4	0	6	
8:30	8:45	2	3	0	3	1	12	0	5	
8:45	9:00	3	1	1	5	8	1	1	6	
16:00	16:15	5	1	3	8	0	5	7	0	64
16:15	16:30	0	3	5	3	2	2	1	0	48
16:30	16:45	0	1	2	2	0	2	0	0	51
16:45	17:00	1	0	6	0	2	2	1	0	50
17:00	17:15	1	3	1	3	0	2	2	1	54
17:15	17:30	1	1	5	4	1	4	3	0	
17:30	17:45	0	0	3	1	1	1	0	0	
17:45	18:00	1	0	2	0	1	7	5	0	

Peak Time		North Approach Gladys Ave		st Approach Frenchs Forest R		South Approach No Name Rd		st Approach Frenchs Forest I		Peak hour
Period Start	Period End	Eastbound	Westbound	Northbound	Southbound	Eastbound	Westbound	Northbound	Southbound	total
8:00	9:00	9	13	5	15	11	21	2	21	97
16:30	17:30	3	5	14	9	3	10	6	1	51



Queue

Time		North
Period Start	Period End	
7:00	7:05	0
7:05	7:10	2
7:10	7:15	0
7:15	7:20	2
7:20	7:25	0
7:25	7:30	0
7:30	7:35	2
7:35	7:40	2
7:40	7:45	0
7:45	7:50	3
7:50	7:55	0
7:55	8:00	0
8:00	8:05	2
8:05	8:10	2
8:10	8:15	0
8:15	8:20	2
8:20	8:25	0
8:25	8:30	3
8:30	8:35	0
8:35	8:40	2
8:40	8:45	0
8:45	8:50	2
8:50	8:55	0
8:55	9:00	2
16:00	16:05	4
16:05	16:10	0
16:10	16:15	0
16:15	16:20	2
16:20	16:25	2
16:25	16:30	0
16:30	16:35	0
16:35	16:40	0
16:40	16:45	0
16:45	16:50	0
16:50	16:55	0
16:55	17:00	0
17:00	17:05	2
17:05	17:10	2
17:10	17:15	0
17:15	17:20	0
17:20	17:25	0
17:25	17:30	2
17:30	17:35	2
17:35	17:40	0
17:40	17:45	0
17:45	17:50	2
17:50	17:55	0
17:55	18:00	0

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY trafficsurvey.com.au

Intersection of Frenchs Forest Rd and Wakehurst Pkwy, Frenchs For

GPS -33.749981, 151.234900

Date:	Thu 26/11/20
Weather:	Fine
Suburban:	Frenchs Forest
Customer:	TTPP

North:	Wakehurst Pkwy
East:	Frenchs Forest Rd
South:	Wakehurst Pkwy
West:	Frenchs Forest Rd

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

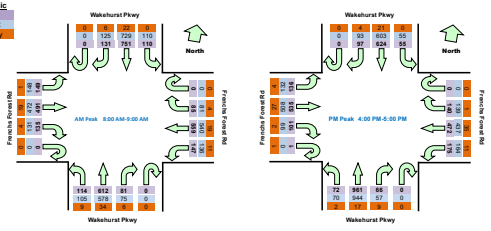
All Vehicles

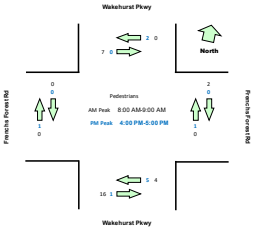
Time		North Approach Wakehurst Pkwy				East Approach Frenchs Forest Rd				South Approach Wakehurst Pkwy				West Approach Frenchs Forest Rd				Hourly Total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
7:00	7:15	0	9	224	11	0	17	84	28	0	15	108	15	0	9	43	12	2863	
7:15	7:30	0	24	279	9	0	12	117	35	0	5	133	24	0	16	75	27	3082	
7:30	7:45	0	32	241	15	0	15	76	45	0	15	155	18	0	18	59	15	3129	
7:45	8:00	0	42	203	12	0	8	141	37	0	23	125	28	0	30	147	32	3328	
8:00	8:15	0	29	259	24	0	11	97	37	0	25	137	34	0	33	87	21	3365	Peak
8:15	8:30	0	24	141	31	0	24	151	31	0	14	187	29	0	34	103	34		
8:30	8:45	0	34	147	22	0	23	177	43	0	19	143	28	0	41	173	53		
8:45	9:00	0	44	204	33	0	27	134	36	0	23	145	23	0	27	128	41		
16:00	16:15	0	39	155	16	0	27	134	44	0	13	250	12	0	24	139	24	3435	Peak
16:15	16:30	0	19	138	16	0	45	103	58	0	21	230	23	0	26	130	33	3354	
16:30	16:45	0	30	170	10	0	36	132	39	0	21	250	21	1	25	123	34	3410	
16:45	17:00	0	9	161	13	0	32	103	34	0	11	231	16	0	26	143	45	3347	
17:00	17:15	0	15	134	11	0	34	127	55	0	16	194	11	0	27	129	43	3310	
17:15	17:30	0	22	153	11	0	47	140	43	0	18	229	16	0	27	158	34		
17:30	17:45	0	19	198	11	0	32	127	36	0	10	217	15	0	24	108	32		
17:45	18:00	0	27	124	17	0	32	117	46	0	18	214	13	0	24	130	25		

Peak Time		North Approach Wakehurst Pkwy				East Approach Frenchs Forest Rd				South Approach Wakehurst Pkwy				West Approach Frenchs Forest Rd				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
8:00	9:00	0	131	751	110	0	85	559	147	0	81	612	114	0	135	491	149	3365
16:00	17:00	0	97	624	55	0	140	472	175	0	66	961	72	1	101	535	136	3435

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 Wakehurst Pkwy				East Approach Frenchs Forest Rd				South Approach Wakehurst Pkwy				West Approach Frenchs Forest Rd			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	9	219	11	0	14	79	21	0	15	105	15	0	9	42	12
7:15	7:30	0	23	270	9	0	11	114	32	0	5	128	24	0	16	69	27
7:30	7:45	0	32	236	15	0	14	72	39	0	13	149	17	0	18	56	14
7:45	8:00	0	41	198	12	0	7	132	34	0	21	118	26	0	29	140	32
8:00	8:15	0	29	252	24	0	9	93	34	0	20	125	31	0	32	82	21
8:15	8:30	0	24	137	31	0	23	146	28	0	14	181	28	0	33	98	34
8:30	8:45	0	33	139	22	0	23	171	40	0	19	136	26	0	40	167	52
8:45	9:00	0	39	201	33	0	26	130	34	0	22	136	20	0	26	125	41
16:00	16:15	0	38	146	16	0	27	124	40	0	12	246	12	0	23	132	24
16:15	16:30	0	18	137	16	0	44	95	55	0	15	225	22	0	26	125	32
16:30	16:45	0	29	160	10	0	36	124	37	0	19	246	21	0	25	117	32
16:45	17:00	0	8	160	13	0	32	94	32	0	11	227	15	0	25	134	44
17:00	17:15	0	14	125	11	0	33	122	55	0	15	190	11	0	27	126	43
17:15	17:30	0	22	148	11	0	47	135	42	0	17	227	16	0	26	155	34
17:30	17:45	0	19	196	11	0	32	122	36	0	9	214	15	0	24	105	32
17:45	18:00	0	26	120	17	0	32	113	45	0	15	212	12	0	23	128	25

Peak Time		North Approach Wakehurst Pkwy				East Approach Frenchs Forest Rd				South Approach Wakehurst Pkwy				West Approach Frenchs Forest Rd				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
8:00	9:00	0	125	729	110	0	81	540	136	0	75	576	105	0	131	472	148	3230
16:00	17:00	0	93	603	55	0	139	437	164	0	57	944	70	0	99	508	132	3301

Heavy Vehicles

Time		North Approach Wakehurst Pkwy				East Approach Frenchs Forest Rd				South Approach Wakehurst Pkwy				West Approach Frenchs Forest Rd			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	0	5	0	0	3	2	2	0	0	3	0	0	0	0	0
7:15	7:30	0	1	8	0	0	1	0	0	0	0	3	0	0	0	1	0
7:30	7:45	0	0	4	0	0	1	1	2	0	0	2	0	0	0	0	0
7:45	8:00	0	0	5	0	0	1	3	0	0	1	4	0	0	0	0	0
8:00	8:15	0	0	7	0	0	1	0	0	0	2	11	0	0	1	0	0
8:15	8:30	0	0	3	0	0	1	2	2	0	0	6	0	0	1	1	0
8:30	8:45	0	1	8	0	0	0	2	1	0	0	1	0	0	0	2	0
8:45	9:00	0	0	2	0	0	0	1	1	0	1	8	0	0	0	0	0
16:00	16:15	0	0	7	0	0	0	0	2	0	0	4	0	0	0	1	0
16:15	16:30	0	1	1	0	0	1	1	3	0	2	2	0	0	0	2	1
16:30	16:45	0	0	8	0	0	0	2	2	0	0	4	0	1	0	1	1
16:45	17:00	0	0	0	0	0	0	0	2	0	0	4	0	0	0	1	0
17:00	17:15	0	1	1	0	0	1	1	0	0	0	3	0	0	0	0	0
17:15	17:30	0	0	2	0	0	0	1	1	0	0	2	0	0	0	0	0
17:30	17:45	0	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0
17:45	18:00	0	0	2	0	0	0	0	0	0	1	1	0	0	0	0	0

Peak Time		North Approach Wakehurst Pkwy				East Approach Frenchs Forest Rd				South Approach Wakehurst Pkwy				West Approach Frenchs Forest Rd				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
8:00	9:00	0	6	22	0	0	4	19	11	0	6	34	9	0	4	19	1	135
16:00	17:00	0	4	21	0	0	1	35	11	0	9	17	2	1	2	27	4	134

Bus

Time		North Approach Wakehurst Pkwy				East Approach Frenchs Forest Rd				South Approach Wakehurst Pkwy				West Approach Frenchs Forest Rd			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	0	0	0	0	0	3	5	0	0	0	0	0	0	1	0
7:15	7:30	0	0	1	0	0	0	3	3	0	0	2	0	0	0	5	0
7:30	7:45	0	0	1	0	0	0	3	4	0	2	4	1	0	0	3	1
7:45	8:00	0	1	0	0	0	0	6	3	0	1	3	2	0	1	7	0
8:00	8:15	0	0	0	0	0	1	4	3	0	3	1	3	0	0	5	0
8:15	8:30	0	0	1	0	0	0	3	1	0	0	0	1	0	0	4	0
8:30	8:45	0	0	0	0	0	0	4	2	0	0	6	2	0	1	4	1
8:45	9:00	0	5	1	0	0	1	3	1	0	0	1	3	0	1	3	0
16:00	16:15	0	1	2	0	0	0	10	2	0	1	0	0	0	1	6	0
16:15	16:30	0	0	0	0	0	0	7	0	0	4	3	1	0	0	3	0
16:30	16:45	0	1	2	0	0	0	6	0	0	2	0	0	0	0	5	1
16:45	17:00	0	1	1	0	0	0	9	0	0	0	0	1	0	1	8	1
17:00	17:15	0	0	8	0	0	0	4	0	0	1	1	0	0	0	3	0
17:15	17:30	0	0	3	0	0	0	4	0	0	1	0	0	0	1	3	0
17:30	17:45	0	0	2	0	0	0	5	0	0	1	0	0	0	0	2	0
17:45	18:00	0	1	2	0	0	0	4	1	0	2	1	1	0	1	2	0

Peak Time		North Approach Wakehurst Pkwy				East Approach Frenchs Forest Rd				South Approach Wakehurst Pkwy				West Approach Frenchs Forest Rd				Peak total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
8:00	9:00	0	5	2	0	0	2	14	7	0	3	8	9	0	2	16	1	69
16:00	17:00	0	3	5	0	0	0	32	2	0	7	3	2	0	2	22	2	80

Pedestrians Crossing

Time		North Approach Wakehurst Pkwy		West Approach Frenchs Forest Rd		South Approach Wakehurst Pkwy		East Approach Frenchs Forest Rd		Hourly Total
Period Start	Period End	Eastbound	Westbound	Southbound	Northbound	Eastbound	Westbound	Southbound	Northbound	
7:00	7:15	0	0	0	0	1	2	0	0	6
7:15	7:30	0	0	0	0	2	1	0	0	8
7:30	7:45	0	0	0	0	0	0	0	0	12
7:45	8:00	0	0	0	0	0	0	0	0	27
8:00	8:15	0	0	0	0	2	3	0	0	29
8:15	8:30	0	2	0	0	0	5	0	0	
8:30	8:45	0	5	2	0	1	7	0	0	
8:45	9:00	0	0	0	0	1	1	0	0	
16:00	16:15	0	0	0	1	1	0	0	0	10
16:15	16:30	0	0	0	0	3	1	0	1	12
16:30	16:45	0	0	0	0	1	0	0	0	9
16:45	17:00	2	0	0	0	0	0	0	0	13
17:00	17:15	1	1	0	1	1	0	0	0	14
17:15	17:30	1	1	0	0	0	0	0	0	
17:30	17:45	0	1	0	0	2	2	0	0	
17:45	18:00	0	0	0	1	1	1	0	0	

Peak Time		North Approach Wakehurst Pkwy		West Approach Frenchs Forest Rd		South Approach Wakehurst Pkwy		East Approach Frenchs Forest Rd		Peak hour total
Period Start	Period End	Eastbound	Westbound	Southbound	Northbound	Eastbound	Westbound	Southbound	Northbound	
8:00	9:00	0	7	2	0	4	16	0	0	29
16:00	17:00	2	0	0	1	5	1	0	1	10

Queue

Time		North
Period Start	Period End	
7:00	7:05	9
7:05	7:10	13
7:10	7:15	14
7:15	7:20	12
7:20	7:25	16
7:25	7:30	15
7:30	7:35	15
7:35	7:40	15
7:40	7:45	16
7:45	7:50	16
7:50	7:55	15
7:55	8:00	14
8:00	8:05	20
8:05	8:10	14
8:10	8:15	11
8:15	8:20	16
8:20	8:25	12
8:25	8:30	12
8:30	8:35	11
8:35	8:40	9
8:40	8:45	10
8:45	8:50	12
8:50	8:55	9
8:55	9:00	7
16:00	16:05	6
16:05	16:10	9
16:10	16:15	8
16:15	16:20	10
16:20	16:25	10
16:25	16:30	9
16:30	16:35	9
16:35	16:40	8
16:40	16:45	6
16:45	16:50	10
16:50	16:55	4
16:55	17:00	9
17:00	17:05	8
17:05	17:10	10
17:10	17:15	10
17:15	17:20	12
17:20	17:25	10
17:25	17:30	9
17:30	17:35	8
17:35	17:40	9
17:40	17:45	9
17:45	17:50	9
17:50	17:55	7
17:55	18:00	9

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY trafficsurvey.com.au

Intersection of Frenchs Forest Rd and Romford Rd, Frenchs Forest

GPS -33.750617, 151.239676

Date:	Thu 26/11/20
Weather:	Fine
Suburban:	Frenchs Forest
Customer:	TTPP

North:	Romford Rd
East:	Frenchs Forest Rd
South:	No Name Rd
West:	Frenchs Forest Rd

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

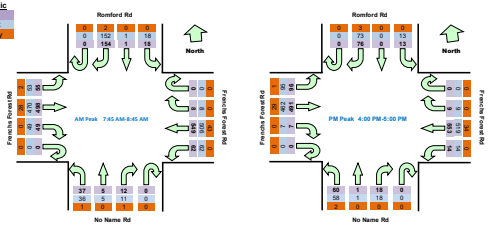
All Vehicles

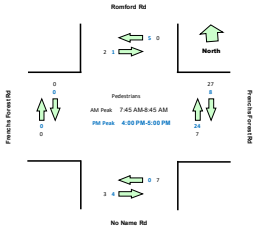
Time		North Approach Romford Rd				East Approach Frenchs Forest Rd				South Approach No Name Rd				West Approach Frenchs Forest Rd				Hourly Total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
7:00	7:15	0	33	0	2	0	1	98	10	0	3	0	4	0	3	48	4	1058	
7:15	7:30	0	32	1	1	0	1	112	8	0	1	0	0	0	8	78	3	1134	
7:30	7:45	0	33	0	1	0	2	95	14	0	0	0	5	0	12	87	10	1287	
7:45	8:00	0	35	0	4	0	2	128	19	0	2	0	5	0	16	121	16	1448	Peak
8:00	8:15	0	35	0	5	0	2	100	14	0	4	2	2	0	11	100	7	1440	
8:15	8:30	0	45	1	6	0	2	161	10	0	2	1	12	0	9	134	15		
8:30	8:45	0	39	0	3	0	2	160	19	0	4	2	18	0	13	143	17		
8:45	9:00	0	27	1	0	0	2	123	16	0	8	0	7	0	12	126	18		
16:00	16:15	0	28	0	3	0	1	161	5	0	5	0	17	0	3	126	23	1338	Peak
16:15	16:30	0	16	0	3	0	1	130	4	0	4	0	17	0	3	135	24	1324	
16:30	16:45	0	20	0	6	0	4	140	3	0	5	1	16	0	1	110	33	1337	
16:45	17:00	0	12	0	1	0	3	122	2	0	4	0	10	0	0	120	16	1314	
17:00	17:15	0	21	0	2	0	1	144	1	0	5	3	22	0	0	143	16	1318	
17:15	17:30	0	28	0	2	0	3	141	0	0	9	1	17	0	0	126	23		
17:30	17:45	0	22	0	1	0	3	142	1	0	4	0	11	0	0	113	19		
17:45	18:00	0	12	0	2	0	4	134	0	0	2	0	9	0	0	118	13		

Peak Time		North Approach Romford Rd				East Approach Frenchs Forest Rd				South Approach No Name Rd				West Approach Frenchs Forest 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	154	1	18	0	8	549	62	0	12	5	37	0	49	498	55	1448
16:00	17:00	0	76	0	13	0	9	553	14	0	18	1	60	0	7	491	96	1338

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 Romford Rd				East Approach Frenchs Forest Rd				South Approach No Name Rd				West Approach Frenchs Forest Rd			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	32	0	2	0	1	90	10	0	3	0	4	0	3	43	4
7:15	7:30	0	32	1	1	0	1	102	8	0	1	0	0	0	8	75	3
7:30	7:45	0	33	0	1	0	2	86	14	0	0	0	5	0	12	81	10
7:45	8:00	0	34	0	4	0	2	118	19	0	2	0	5	0	16	113	15
8:00	8:15	0	35	0	5	0	2	88	14	0	4	2	2	0	11	92	6
8:15	8:30	0	45	1	6	0	2	146	10	0	2	1	11	0	9	130	15
8:30	8:45	0	38	0	3	0	2	154	19	0	3	2	18	0	13	135	17
8:45	9:00	0	26	1	0	0	2	116	16	0	8	0	7	0	12	122	18
16:00	16:15	0	27	0	3	0	1	149	5	0	5	0	16	0	3	118	22
16:15	16:30	0	14	0	3	0	1	122	4	0	4	0	16	0	3	124	24
16:30	16:45	0	20	0	6	0	4	130	3	0	5	1	16	0	1	104	33
16:45	17:00	0	12	0	1	0	3	118	2	0	4	0	10	0	0	116	16
17:00	17:15	0	20	0	2	0	1	139	1	0	5	3	22	0	0	138	16
17:15	17:30	0	28	0	2	0	3	139	0	0	9	1	17	0	0	122	23
17:30	17:45	0	22	0	1	0	3	137	1	0	4	0	11	0	0	107	19
17:45	18:00	0	12	0	2	0	4	128	0	0	2	0	9	0	0	114	13

Peak Time		North Approach Romford Rd				East Approach Frenchs Forest Rd				South Approach No Name Rd				West Approach Frenchs Forest 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	152	1	18	0	8	506	62	0	11	5	36	0	49	470	53	1371
16:00	17:00	0	73	0	13	0	9	519	14	0	18	1	58	0	7	462	95	1269

Heavy Vehicles

Time		North Approach Romford Rd				East Approach Frenchs Forest Rd				South Approach No Name Rd				West Approach Frenchs Forest Rd			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	1	0	0	0	0	2	0	0	0	0	0	0	0	1	0
7:15	7:30	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
7:30	7:45	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
7:45	8:00	0	0	0	0	0	0	3	0	0	0	0	0	0	0	2	0
8:00	8:15	0	0	0	0	0	0	3	0	0	0	0	0	0	0	2	0
8:15	8:30	0	0	0	0	0	0	3	0	0	0	0	1	0	0	0	0
8:30	8:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	2	0
8:45	9:00	0	1	0	0	0	0	4	0	0	0	0	0	0	0	1	0
16:00	16:15	0	0	0	0	0	0	2	0	0	0	0	1	0	0	3	1
16:15	16:30	0	1	0	0	0	0	3	0	0	0	0	1	0	0	4	0
16:30	16:45	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
16:45	17:00	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0
17:00	17:15	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	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	1	0
17:45	18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Peak Time		North Approach Romford Rd				East Approach Frenchs Forest Rd				South Approach No Name Rd				West Approach Frenchs Forest 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	0	0	0	0	43	0	0	1	0	1	0	0	28	2	77
16:00	17:00	0	3	0	0	0	0	34	0	0	0	0	2	0	0	29	1	69

Bus

Time		North Approach Romford Rd				East Approach Frenchs Forest Rd				South Approach No Name Rd				West Approach Frenchs Forest Rd			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	0	0	0	0	0	6	0	0	0	0	0	0	0	4	0
7:15	7:30	0	0	0	0	0	0	8	0	0	0	0	0	0	0	3	0
7:30	7:45	0	0	0	0	0	0	7	0	0	0	0	0	0	0	6	0
7:45	8:00	0	1	0	0	0	0	7	0	0	0	0	0	0	0	6	1
8:00	8:15	0	0	0	0	0	0	9	0	0	0	0	0	0	0	6	1
8:15	8:30	0	0	0	0	0	0	12	0	0	0	0	0	0	0	4	0
8:30	8:45	0	1	0	0	0	0	5	0	0	0	0	0	0	0	6	0
8:45	9:00	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	0
16:00	16:15	0	1	0	0	0	0	10	0	0	0	0	0	0	0	5	0
16:15	16:30	0	1	0	0	0	0	5	0	0	0	0	0	0	0	7	0
16:30	16:45	0	0	0	0	0	0	7	0	0	0	0	0	0	0	6	0
16:45	17:00	0	0	0	0	0	0	2	0	0	0	0	0	0	0	3	0
17:00	17:15	0	0	0	0	0	0	4	0	0	0	0	0	0	0	5	0
17:15	17:30	0	0	0	0	0	0	2	0	0	0	0	0	0	0	4	0
17:30	17:45	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5	0
17:45	18:00	0	0	0	0	0	0	6	0	0	0	0	0	0	0	4	0

Peak Time		North Approach Romford Rd				East Approach Frenchs Forest Rd				South Approach No Name Rd				West Approach Frenchs Forest 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	0	0	0	0	33	0	0	0	0	0	0	0	22	2	59
16:00	17:00	0	2	0	0	0	0	24	0	0	0	0	0	0	0	21	0	47

Pedestrians Crossing

Time		North Approach Romford Rd		st Approach Frenchs Forest R		South Approach No Name Rd		est Approach Frenchs Forest I		Hourly Total
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	
7:00	7:15	1	0	2	0	0	2	0	0	28
7:15	7:30	0	0	4	0	0	0	0	0	33
7:30	7:45	0	1	5	0	3	0	0	0	42
7:45	8:00	0	0	10	0	0	0	0	0	46
8:00	8:15	0	1	5	2	1	1	0	0	50
8:15	8:30	0	1	5	2	4	1	0	0	
8:30	8:45	0	0	7	3	2	1	0	0	
8:45	9:00	0	0	8	4	1	1	0	0	
16:00	16:15	2	0	5	3	0	1	0	0	42
16:15	16:30	1	0	2	3	0	1	0	0	36
16:30	16:45	1	0	0	12	0	1	0	0	40
16:45	17:00	1	1	1	6	0	1	0	0	28
17:00	17:15	0	1	0	3	1	0	0	0	24
17:15	17:30	1	1	1	7	1	0	0	0	
17:30	17:45	0	0	1	1	0	0	0	0	
17:45	18:00	0	0	1	4	0	0	1	0	

Peak Time		North Approach Romford Rd		st Approach Frenchs Forest R		South Approach No Name Rd		est Approach Frenchs Forest I		Peak hour
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	total
7:45	8:45	0	2	27	7	7	3	0	0	46
16:00	17:00	5	1	8	24	0	4	0	0	42

Queue

Time		North
Period Start	Period End	
7:00	7:05	2
7:05	7:10	3
7:10	7:15	5
7:15	7:20	3
7:20	7:25	3
7:25	7:30	4
7:30	7:35	3
7:35	7:40	4
7:40	7:45	2
7:45	7:50	6
7:50	7:55	4
7:55	8:00	6
8:00	8:05	4
8:05	8:10	4
8:10	8:15	4
8:15	8:20	8
8:20	8:25	8
8:25	8:30	5
8:30	8:35	4
8:35	8:40	8
8:40	8:45	5
8:45	8:50	5
8:50	8:55	4
8:55	9:00	3
16:00	16:05	4
16:05	16:10	2
16:10	16:15	3
16:15	16:20	3
16:20	16:25	2
16:25	16:30	2
16:30	16:35	4
16:35	16:40	3
16:40	16:45	2
16:45	16:50	3
16:50	16:55	3
16:55	17:00	3
17:00	17:05	2
17:05	17:10	2
17:10	17:15	2
17:15	17:20	4
17:20	17:25	3
17:25	17:30	4
17:30	17:35	3
17:35	17:40	4
17:40	17:45	3
17:45	17:50	3
17:50	17:55	2
17:55	18:00	2

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY trafficsurvey.com.au

Intersection of Frenchs Forest Rd and Patanga Rd, Frenchs Forest

GPS -33.751251, 151.243897

Date:	Thu 26/11/20
Weather:	Fine
Suburban:	Frenchs Forest
Customer:	TTPP

North:	Patanga Rd
East:	Frenchs Forest Rd
South:	Allambie Rd
West:	Frenchs Forest Rd

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

All Vehicles

Time		North Approach Patanga Rd				East Approach Frenchs Forest Rd				South Approach Allambie Rd				West Approach Frenchs Forest 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
7:00	7:15	0	2	0	0	0	0	5	5	0	3	0	103	0	28	31	5	994	
7:15	7:30	0	7	0	0	0	0	8	7	0	5	0	136	0	37	50	4	1105	
7:30	7:45	0	6	0	0	0	0	6	0	0	3	0	118	0	46	54	4	1246	
7:45	8:00	0	7	0	0	0	0	3	4	0	6	0	180	0	47	65	9	1387	
8:00	8:15	0	6	0	0	0	0	5	4	0	3	0	147	0	68	54	6	1438	Peak
8:15	8:30	0	5	0	0	0	0	9	2	0	4	0	206	0	86	80	3		
8:30	8:45	0	8	0	0	0	0	3	1	0	2	0	206	0	79	74	5		
8:45	9:00	0	6	0	0	0	0	5	4	0	12	0	192	0	79	69	5		
16:00	16:15	0	8	0	0	0	0	11	3	0	19	0	168	0	46	100	10	1320	
16:15	16:30	0	4	0	0	0	0	8	7	0	13	0	137	0	50	93	7	1316	
16:30	16:45	0	6	0	0	0	0	9	5	0	16	0	145	0	47	90	10	1350	
16:45	17:00	0	1	0	0	0	0	8	3	0	15	0	144	0	42	89	6	1357	
17:00	17:15	0	5	0	0	0	0	12	5	0	12	0	157	0	59	101	10	1388	Peak
17:15	17:30	0	4	0	0	0	0	13	7	0	11	0	162	0	48	99	9		
17:30	17:45	0	4	0	0	0	0	16	3	0	27	0	142	0	34	103	6		
17:45	18:00	0	6	0	0	0	0	13	15	0	26	0	136	0	46	88	9		

Peak Time		North Approach Patanga Rd				East Approach Frenchs Forest Rd				South Approach Allambie Rd				West Approach Frenchs Forest Rd				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	0	25	0	0	0	0	22	11	0	21	0	751	0	312	277	19	1438
17:00	18:00	0	19	0	0	0	0	54	30	0	76	0	597	0	187	391	34	1388

Pedestrians Crossing

Time		North Approach Patanga Rd		st Approach Frenchs Forest R		South Approach Allambie Rd		est Approach Frenchs Forest		Hourly Total
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	
7:00	7:15	0	4	7	4	0	0	0	0	79
7:15	7:30	0	0	4	4	0	0	0	0	97
7:30	7:45	0	1	9	5	9	5	0	0	107
7:45	8:00	3	0	8	4	8	4	0	0	97
8:00	8:15	0	3	9	7	8	6	0	0	96
8:15	8:30	0	1	6	3	5	3	0	0	
8:30	8:45	1	1	6	2	6	2	1	0	
8:45	9:00	0	0	7	6	7	6	0	0	
16:00	16:15	4	2	7	10	5	5	0	0	80
16:15	16:30	1	2	3	4	0	4	0	0	67
16:30	16:45	3	1	3	4	2	5	0	0	69
16:45	17:00	1	5	2	2	2	3	0	0	67
17:00	17:15	2	2	1	7	1	7	0	0	56
17:15	17:30	0	1	6	1	6	2	0	0	
17:30	17:45	1	0	3	5	3	4	0	0	
17:45	18:00	0	4	0	0	0	0	0	0	

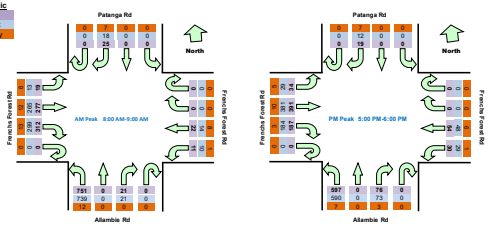
Peak Time		North Approach Patanga Rd		st Approach Frenchs Forest R		South Approach Allambie Rd		est Approach Frenchs Forest		Peak hour
Period Start	Period End	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	total
8:00	9:00	1	5	28	18	26	17	1	0	96
17:00	18:00	3	7	10	13	10	13	0	0	56

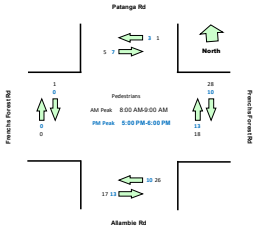
Queue

Time		North
Period Start	Period End	
7:00	7:05	0
7:05	7:10	0
7:10	7:15	0
7:15	7:20	2
7:20	7:25	2
7:25	7:30	0
7:30	7:35	2
7:35	7:40	0
7:40	7:45	0
7:45	7:50	2
7:50	7:55	2
7:55	8:00	0
8:00	8:05	0
8:05	8:10	2
8:10	8:15	0
8:15	8:20	0
8:20	8:25	0
8:25	8:30	2
8:30	8:35	2
8:35	8:40	2
8:40	8:45	0
8:45	8:50	0
8:50	8:55	0
8:55	9:00	0
16:00	16:05	2
16:05	16:10	2
16:10	16:15	2
16:15	16:20	0
16:20	16:25	0
16:25	16:30	0
16:30	16:35	0
16:35	16:40	2
16:40	16:45	2
16:45	16:50	0
16:50	16:55	0
16:55	17:00	0
17:00	17:05	2
17:05	17:10	2
17:10	17:15	2
17:15	17:20	0
17:20	17:25	0
17:25	17:30	0
17:30	17:35	0
17:35	17:40	0
17:40	17:45	2
17:45	17:50	0
17:50	17:55	2
17:55	18:00	2

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 Patanga Rd				East Approach Frenchs Forest Rd				South Approach Allambie Rd				West Approach Frenchs Forest Rd				
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
7:00	7:15	0	1	0	0	0	0	2	3	0	3	0	101	0	26	30	3	
7:15	7:30	0	6	0	0	0	0	1	6	0	4	0	130	0	35	49	4	
7:30	7:45	0	4	0	0	0	0	2	0	0	3	0	111	0	44	51	2	
7:45	8:00	0	5	0	0	0	0	2	4	0	5	0	172	0	44	62	7	
8:00	8:15	0	4	0	0	0	0	2	4	0	3	0	144	0	62	51	4	
8:15	8:30	0	4	0	0	0	0	8	1	0	4	0	201	0	84	78	2	
8:30	8:45	0	6	0	0	0	0	1	1	0	2	0	204	0	76	69	3	
8:45	9:00	0	4	0	0	0	0	3	4	0	12	0	190	0	77	67	4	
16:00	16:15	0	6	0	0	0	0	8	3	0	19	0	162	0	44	100	7	
16:15	16:30	0	3	0	0	0	0	8	7	0	12	0	134	0	49	88	5	
16:30	16:45	0	3	0	0	0	0	7	5	0	15	0	142	0	45	87	7	
16:45	17:00	0	1	0	0	0	0	7	3	0	15	0	141	0	39	86	5	
17:00	17:15	0	3	0	0	0	0	11	5	0	12	0	155	0	58	99	9	
17:15	17:30	0	3	0	0	0	0	12	6	0	11	0	161	0	47	97	7	
17:30	17:45	0	2	0	0	0	0	12	3	0	25	0	139	0	34	99	4	
17:45	18:00	0	4	0	0	0	0	13	15	0	25	0	135	0	45	86	9	

Peak Time		North Approach Patanga Rd				East Approach Frenchs Forest Rd				South Approach Allambie Rd				West Approach Frenchs Forest Rd				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	0	18	0	0	0	0	14	10	0	21	0	739	0	299	265	13	1379
17:00	18:00	0	12	0	0	0	0	48	29	0	73	0	590	0	184	381	29	1346

Heavy Vehicles

Time		North Approach Patanga Rd				East Approach Frenchs Forest Rd				South Approach Allambie Rd				West Approach Frenchs Forest Rd				
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
7:00	7:15	0	0	0	0	0	0	0	1	0	0	0	2	0	1	0	0	
7:15	7:30	0	0	0	0	0	0	0	0	0	1	0	5	0	0	0	0	
7:30	7:45	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	
7:45	8:00	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	
8:00	8:15	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	
8:15	8:30	0	0	0	0	0	0	0	0	0	0	0	4	0	0	1	0	
8:30	8:45	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3	0	
8:45	9:00	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	
16:00	16:15	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	
16:15	16:30	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	0	
16:30	16:45	0	0	0	0	0	0	0	0	0	1	0	2	0	0	1	0	
16:45	17:00	0	0	0	0	0	0	1	0	0	0	0	1	0	1	2	0	
17:00	17:15	0	0	0	0	0	0	0	0	0	0	0	1	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	0	0	0	0	0	1	0	0	2	0	0	0	0	1	0	
17:45	18:00	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	

Peak Time		North Approach Patanga Rd				East Approach Frenchs Forest Rd				South Approach Allambie Rd				West Approach Frenchs Forest Rd				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	0	7	0	0	0	0	8	1	0	0	0	12	0	13	12	6	59
17:00	18:00	0	7	0	0	0	0	6	1	0	3	0	7	0	3	10	5	42

Bus

Time		North Approach Patanga Rd				East Approach Frenchs Forest Rd				South Approach Allambie Rd				West Approach Frenchs Forest Rd				
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	
7:00	7:15	0	1	0	0	0	0	3	1	0	0	0	0	0	1	1	2	
7:15	7:30	0	1	0	0	0	0	7	1	0	0	0	1	0	2	1	0	
7:30	7:45	0	2	0	0	0	0	4	0	0	0	0	4	0	2	3	2	
7:45	8:00	0	2	0	0	0	0	1	0	0	1	0	2	0	3	3	2	
8:00	8:15	0	2	0	0	0	0	3	0	0	0	0	0	0	6	3	2	
8:15	8:30	0	1	0	0	0	0	1	1	0	0	0	1	0	2	1	1	
8:30	8:45	0	2	0	0	0	0	2	0	0	0	0	1	0	2	2	2	
8:45	9:00	0	2	0	0	0	0	2	0	0	0	0	1	0	1	1	1	
16:00	16:15	0	2	0	0	0	0	3	0	0	0	0	3	0	2	0	3	
16:15	16:30	0	1	0	0	0	0	0	0	0	0	0	2	0	1	3	2	
16:30	16:45	0	3	0	0	0	0	2	0	0	0	0	1	0	2	2	3	
16:45	17:00	0	0	0	0	0	0	0	0	0	0	0	2	0	2	1	1	
17:00	17:15	0	2	0	0	0	0	1	0	0	0	0	1	0	1	2	1	
17:15	17:30	0	1	0	0	0	0	1	1	0	0	0	0	0	1	2	2	
17:30	17:45	0	2	0	0	0	0	3	0	0	0	0	3	0	0	3	2	
17:45	18:00	0	2	0	0	0	0	0	0	0	0	0	0	0	1	2	0	

Peak Time		North Approach Patanga Rd				East Approach Frenchs Forest Rd				South Approach Allambie Rd				West Approach Frenchs Forest Rd				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	0	7	0	0	0	0	8	1	0	0	0	3	0	11	7	6	43
17:00	18:00	0	7	0	0	0	0	5	1	0	0	0	4	0	3	9	5	34

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY trafficsurvey.com.au

Intersection of Frenchs Forest Rd and Iverness Ave, Frenchs Forest

GPS -33.751058, 151.242741

Date:	Thu 26/11/20
Weather:	Fine
Suburban:	Frenchs Forest
Customer:	TTPP

North:	Iverness Ave
East:	Frenchs Forest Rd
South:	No Name Rd
West:	Frenchs Forest Rd

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

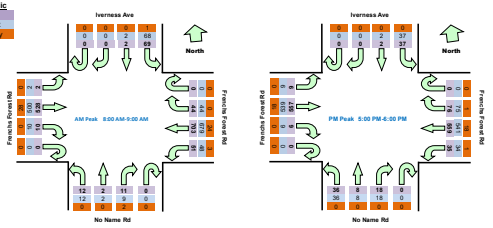
All Vehicles

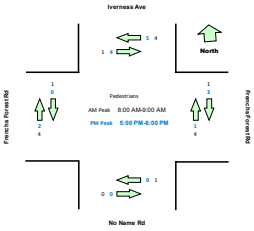
Time		North Approach Iverness Ave				East Approach Frenchs Forest Rd				South Approach No Name Rd				West Approach Frenchs Forest Rd				Hourly Total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
7:00	7:15	0	0	1	9	0	6	97	7	0	2	0	3	0	0	53	1	987	
7:15	7:30	0	0	0	11	0	3	134	14	0	1	0	2	0	0	79	0	1101	
7:30	7:45	0	0	0	9	0	5	118	7	0	1	0	2	0	4	94	0	1251	
7:45	8:00	0	0	2	18	0	10	165	15	0	3	0	4	0	7	100	0	1392	
8:00	8:15	0	0	0	11	0	5	138	15	0	2	2	3	0	2	115	0	1434	Peak
8:15	8:30	0	0	0	26	0	15	195	10	0	2	0	2	0	3	141	0		
8:30	8:45	0	0	1	16	0	10	197	10	0	4	0	3	0	2	138	0		
8:45	9:00	0	0	1	16	0	14	173	16	0	3	0	4	0	3	134	2		
16:00	16:15	0	0	0	8	0	20	154	13	0	8	2	6	0	1	140	1	1278	
16:15	16:30	0	0	2	7	0	24	116	9	0	3	3	2	0	0	140	2	1286	
16:30	16:45	0	0	1	6	0	20	131	9	0	2	1	6	0	0	139	0	1331	
16:45	17:00	0	0	1	5	0	12	133	8	0	6	1	7	0	3	126	0	1339	
17:00	17:15	0	0	0	11	0	18	144	12	0	5	4	11	0	2	154	0	1343	Peak
17:15	17:30	0	0	2	9	0	17	155	7	0	2	4	7	0	2	145	3		
17:30	17:45	0	0	0	11	0	22	136	4	0	9	0	12	0	1	123	5		
17:45	18:00	0	0	0	6	0	19	124	12	0	2	0	6	0	1	135	1		

Peak Time		North Approach Iverness Ave				East Approach Frenchs Forest Rd				South Approach No Name Rd				West Approach Frenchs Forest Rd				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	0	0	2	69	0	44	703	51	0	11	2	12	0	10	528	2	1434
17:00	18:00	0	0	2	37	0	76	559	35	0	18	8	36	0	6	557	9	1343

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





Pedestrians Crossing

Time		North Approach Iverness Ave		st Approach Frenchs Forest R		South Approach No Name Rd		st Approach Frenchs Forest I		Hourly Total
Period Star	Period End	Eastbound	Westbound	Northbound	Southbound	Eastbound	Westbound	Northbound	Southbound	
7:00	7:15	2	0	0	1	0	0	0	1	19
7:15	7:30	1	1	0	0	0	0	0	3	21
7:30	7:45	1	0	0	0	0	0	0	0	22
7:45	8:00	1	3	0	0	0	0	0	5	23
8:00	8:15	3	0	1	1	0	0	0	1	16
8:15	8:30	1	0	0	2	0	0	1	2	
8:30	8:45	0	1	0	1	0	0	0	0	
8:45	9:00	0	0	0	0	1	0	0	1	
16:00	16:15	2	4	1	0	0	0	4	0	29
16:15	16:30	3	0	1	0	0	0	0	0	23
16:30	16:45	3	4	2	0	0	0	0	0	21
16:45	17:00	1	1	2	0	0	0	0	1	16
17:00	17:15	3	2	0	0	0	0	0	0	15
17:15	17:30	1	1	0	0	0	0	0	0	
17:30	17:45	0	1	2	0	0	0	0	1	
17:45	18:00	1	0	1	1	0	0	0	1	

Peak Time		North Approach Iverness Ave		st Approach Frenchs Forest R		South Approach No Name Rd		st Approach Frenchs Forest I		Peak hour
Period Star	Period End	Eastbound	Westbound	Northbound	Southbound	Eastbound	Westbound	Northbound	Southbound	total
8:00	9:00	4	1	1	4	1	0	1	4	16
17:00	18:00	5	4	3	1	0	0	0	2	15

Queue

Time		North
Period Star	Period End	
7:00	7:05	0
7:05	7:10	0
7:10	7:15	2
7:15	7:20	0
7:20	7:25	0
7:25	7:30	0
7:30	7:35	0
7:35	7:40	0
7:40	7:45	2
7:45	7:50	2
7:50	7:55	3
7:55	8:00	2
8:00	8:05	0
8:05	8:10	2
8:10	8:15	2
8:15	8:20	2
8:20	8:25	2
8:25	8:30	0
8:30	8:35	0
8:35	8:40	2
8:40	8:45	3
8:45	8:50	3
8:50	8:55	0
8:55	9:00	0
16:00	16:05	0
16:05	16:10	0
16:10	16:15	2
16:15	16:20	2
16:20	16:25	0
16:25	16:30	0
16:30	16:35	0
16:35	16:40	0
16:40	16:45	0
16:45	16:50	0
16:50	16:55	0
16:55	17:00	0
17:00	17:05	0
17:05	17:10	0
17:10	17:15	3
17:15	17:20	0
17:20	17:25	0
17:25	17:30	0
17:30	17:35	0
17:35	17:40	0
17:40	17:45	2
17:45	17:50	0
17:50	17:55	0
17:55	18:00	0

Light Vehicles

Time		North Approach Iverness Ave				East Approach Frenchs Forest Rd				South Approach No Name Rd				West Approach Frenchs Forest Rd			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	0	1	9	0	6	91	7	0	2	0	3	0	0	48	1
7:15	7:30	0	0	0	10	0	3	120	14	0	1	0	1	0	0	77	0
7:30	7:45	0	0	0	9	0	5	105	7	0	1	0	2	0	4	87	0
7:45	8:00	0	0	2	16	0	10	155	14	0	2	0	4	0	7	95	0
8:00	8:15	0	0	0	10	0	5	131	14	0	2	2	3	0	2	105	0
8:15	8:30	0	0	0	26	0	15	190	8	0	1	0	2	0	3	137	0
8:30	8:45	0	0	1	16	0	10	191	10	0	3	0	3	0	2	129	0
8:45	9:00	0	0	1	16	0	14	167	16	0	3	0	4	0	3	129	2
16:00	16:15	0	0	0	8	0	20	145	11	0	8	2	5	0	0	135	1
16:15	16:30	0	0	2	7	0	24	112	9	0	3	3	2	0	0	132	2
16:30	16:45	0	0	1	6	0	20	125	7	0	2	1	6	0	0	131	0
16:45	17:00	0	0	1	5	0	12	129	8	0	6	1	7	0	3	119	0
17:00	17:15	0	0	0	11	0	18	139	12	0	5	4	11	0	2	150	0
17:15	17:30	0	0	2	9	0	17	153	6	0	2	4	7	0	2	140	3
17:30	17:45	0	0	0	11	0	21	128	4	0	9	0	12	0	1	117	5
17:45	18:00	0	0	0	6	0	19	121	12	0	2	0	6	0	1	132	1

Peak Time		North Approach Iverness Ave				East Approach Frenchs Forest Rd				South Approach No Name Rd				West Approach Frenchs Forest Rd				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	0	0	2	68	0	44	679	48	0	9	2	12	0	10	500	2	1376
17:00	18:00	0	0	2	37	0	75	541	34	0	18	8	36	0	6	539	9	1305

Heavy Vehicles

Time		North Approach Iverness Ave				East Approach Frenchs Forest Rd				South Approach No Name Rd				West Approach Frenchs Forest Rd			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0
7:15	7:30	0	0	0	0	0	0	5	0	0	0	0	1	0	0	0	0
7:30	7:45	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
7:45	8:00	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0
8:00	8:15	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0
8:15	8:30	0	0	0	0	0	0	2	2	0	1	0	0	0	0	0	0
8:30	8:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	3	0
8:45	9:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0
16:00	16:15	0	0	0	0	0	0	1	2	0	0	0	1	0	1	0	0
16:15	16:30	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0
16:30	16:45	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0
16:45	17:00	0	0	0	0	0	0	2	0	0	0	0	0	0	0	3	0
17:00	17:15	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
17:15	17:30	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
17:30	17:45	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0
17:45	18:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0

Peak Time		North Approach Iverness Ave				East Approach Frenchs Forest Rd				South Approach No Name Rd				West Approach Frenchs Forest Rd				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	0	0	0	1	0	0	24	3	0	2	0	0	0	0	28	0	58
17:00	18:00	0	0	0	0	0	1	18	1	0	0	0	0	0	0	18	0	38

Bus

Time		North Approach Iverness Ave				East Approach Frenchs Forest Rd				South Approach No Name Rd				West Approach Frenchs Forest Rd			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4	0
7:15	7:30	0	0	0	1	0	0	9	0	0	0	0	0	0	0	2	0
7:30	7:45	0	0	0	0	0	0	10	0	0	0	0	0	0	0	7	0
7:45	8:00	0	0	0	2	0	0	4	1	0	1	0	0	0	0	5	0
8:00	8:15	0	0	0	1	0	0	5	0	0	0	0	0	0	0	10	0
8:15	8:30	0	0	0	0	0	0	3	0	0	0	0	0	0	0	4	0
8:30	8:45	0	0	0	0	0	0	5	0	0	0	0	0	0	0	6	0
8:45	9:00	0	0	0	0	0	0	5	0	0	0	0	0	0	0	3	0
16:00	16:15	0	0	0	0	0	0	8	0	0	0	0	0	0	0	5	0
16:15	16:30	0	0	0	0	0	0	3	0	0	0	0	0	0	0	6	0
16:30	16:45	0	0	0	0	0	0	6	0	0	0	0	0	0	0	7	0
16:45	17:00	0	0	0	0	0	0	2	0	0	0	0	0	0	0	4	0
17:00	17:15	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4	0
17:15	17:30	0	0	0	0	0	0	2	0	0	0	0	0	0	0	5	0
17:30	17:45	0	0	0	0	0	0	8	0	0	0	0	0	0	0	5	0
17:45	18:00	0	0	0	0	0	0	2	0	0	0	0	0	0	0	3	0

Peak Time		North Approach Iverness Ave				East Approach Frenchs Forest Rd				South Approach No Name Rd				West Approach Frenchs Forest Rd				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
8:00	9:00	0	0	0	1	0	0	18	0	0	0	0	0	0	0	23	0	42
17:00	18:00	0	0	0	0	0	0	16	0	0	0	0	0	0	0	17	0	33

Appendix B

SIDRA Modelling Output

USER REPORT FOR NETWORK SITE

All Movement Classes

Project: 16036 OPM 210505 SCATS vs Optimised Existing Case **Template: Movement Summary**

Site: TCS0007 [1. Warringah Rd-Forest Way - AM (Site Folder: AM Network (SCATS))] **Network: 3 [AM 2020 (Network Folder: SCATS Model)]**

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 160 seconds (Network Site User-Given Phase Times)

Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Warringah Rd-E														
5	T1	527	5.2	523	5.2	* 0.601	21.3	LOS B	12.7	92.7	0.76	0.67	0.76	38.6
6	R2	918	8.0	911	8.1	0.851	75.1	LOS F	14.8	111.0	1.00	0.94	1.12	14.6
Approach		1445	7.0	1434 N1	7.0	0.851	55.5	LOS D	14.8	111.0	0.91	0.84	0.99	18.9
North: Forest Way-N														
7	L2	1026	7.2	1025	7.2	0.517	5.3	LOS A	2.2	16.1	0.09	0.40	0.09	34.9
9	R2	974	5.9	972	6.0	* 0.762	30.2	LOS C	14.7	105.2	0.89	0.86	0.89	21.8
Approach		2000	6.6	1996 N1	6.6	0.762	17.4	LOS B	14.7	105.2	0.48	0.62	0.48	27.0
West: Warringah Rd-W														
10	L2	662	10.3	662	10.3	0.275	11.4	LOS A	5.5	41.8	0.38	0.58	0.38	28.8
11	T1	921	4.7	921	4.7	* 1.034	134.0	LOS F	35.0	252.2	1.00	1.33	1.57	7.2
Approach		1583	7.0	1583	7.0	1.034	82.7	LOS F	35.0	252.2	0.74	1.02	1.07	10.4
All Vehicles		5028	6.8	5014 N1	6.9	1.034	48.9	LOS D	35.0	252.2	0.69	0.81	0.81	17.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Site: TCS0781 [2. Warringah Rd-Hilmer St - AM (Site Folder: AM Network (SCATS))]

Network: 3 [AM 2020 (Network Folder: SCATS Model)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 160 seconds (Network Site User-Given Phase Times)

Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: Two-Phase
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Hilmer St-S														
1	L2	42	0.0	42	0.0	0.242	78.4	LOS F	1.9	13.3	0.96	0.74	0.96	16.1
3	R2	131	0.0	131	0.0	0.703	82.8	LOS F	6.3	44.1	1.00	0.83	1.07	15.5
Approach		173	0.0	173	0.0	0.703	81.8	LOS F	6.3	44.1	0.99	0.81	1.04	15.6
East: Warringah Rd-E														
4	L2	44	2.4	44	2.4	0.348	16.3	LOS B	8.3	61.3	0.43	0.42	0.43	44.4
5	T1	1316	7.2	1304	7.2	0.348	8.3	LOS A	8.3	61.3	0.34	0.31	0.34	40.5
Approach		1360	7.0	1348 N1	7.1	0.348	8.6	LOS A	8.3	61.3	0.34	0.32	0.34	40.9
North: Hospital Site Access-N														
7	L2	28	7.4	28	7.4	0.322	86.6	LOS F	1.4	10.3	1.00	0.72	1.00	14.0
9	R2	25	16.7	25	16.7	0.152	75.6	LOS F	1.1	9.0	0.95	0.71	0.95	15.3
Approach		54	11.8	54	11.8	0.322	81.4	LOS F	1.4	10.3	0.98	0.72	0.98	14.6
West: Warringah Rd-W														
10	L2	77	4.1	76	4.1	* 0.451	18.4	LOS B	11.2	82.9	0.43	0.48	0.43	16.2
11	T1	1811	6.6	1781	6.7	0.451	3.2	LOS A	11.2	82.9	0.16	0.17	0.16	60.9
12	R2	76	2.8	75	2.8	0.437	88.4	LOS F	3.6	25.9	1.00	0.77	1.00	23.4
Approach		1963	6.4	1931 N1	6.4	0.451	7.1	LOS A	11.2	82.9	0.20	0.21	0.20	45.9
All Vehicles		3549	6.4	3506 N1	6.5	0.703	12.5	LOS A	11.2	82.9	0.30	0.28	0.31	38.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Site: TCS0375 [3. Warringah Rd-Wakehurst Pkwy - AM (Site Folder: AM Network (SCATS))]

Network: 3 [AM 2020 (Network Folder: SCATS Model)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 160 seconds (Network Site User-Given Phase Times)

Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: Variable Phasing
Reference Phase: Phase A
Input Phase Sequence: A, D, E, F
Output Phase Sequence: A, D, E, F

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Wakehurst Pkwy-S														
1b	L3	333	13.3	333	13.3	* 0.726	41.7	LOS C	9.7	76.0	0.95	0.87	0.95	27.9
1	L2	146	4.3	146	4.3	0.265	33.0	LOS C	3.7	26.5	0.80	0.77	0.80	31.8
2	T1	365	2.6	365	2.6	0.508	63.0	LOS E	7.9	56.3	0.95	0.78	0.95	21.4
3	R2	59	3.6	59	3.6	0.217	71.2	LOS F	2.5	18.0	0.92	0.76	0.92	19.2
Approach		903	6.9	903	6.9	0.726	50.8	LOS D	9.7	76.0	0.92	0.81	0.92	24.6
East: Warringah Rd-E														
4	L2	94	3.4	94	3.4	0.095	19.7	LOS B	1.8	12.6	0.73	0.74	0.73	46.0
4a	L1	791	5.6	791	5.6	* 0.542	50.9	LOS D	16.8	123.1	0.97	0.85	0.97	14.5
Approach		884	5.4	884	5.4	0.542	47.6	LOS D	16.8	123.1	0.94	0.84	0.94	17.5
North: Wakehurst Pkwy-N														
7	L2	23	13.6	23	13.6	* 0.538	70.0	LOS E	8.5	62.1	0.99	0.82	0.99	11.8
8	T1	359	3.5	359	3.5	0.538	63.4	LOS E	8.6	62.2	0.99	0.82	0.99	27.8
9a	R1	291	4.3	290	4.3	* 1.044	107.3	LOS F	18.4	133.9	1.00	1.09	1.42	7.6
9	R2	413	2.0	413	2.0	0.932	64.3	LOS E	12.6	89.9	0.94	0.85	1.02	11.6
Approach		1085	3.4	1085	3.4	1.044	75.7	LOS F	18.4	133.9	0.97	0.91	1.11	15.7
West: Warringah Rd- EB Approach and Underpass WB Exit														
10	L2	484	8.7	477	8.8	0.375	11.9	LOS A	5.0	37.6	0.24	0.65	0.24	27.2
11	T1	1047	5.2	1032	5.3	0.327	13.4	LOS A	6.2	45.4	0.37	0.32	0.37	25.3
12	R2	438	5.8	431	5.8	1.018	133.5	LOS F	13.4	98.5	1.00	1.02	1.47	13.6
Approach		1969	6.2	1940 N1	6.2	1.018	39.7	LOS C	13.4	98.5	0.48	0.56	0.58	17.3
All Vehicles		4842	5.5	4813 N1	5.6	1.044	51.4	LOS D	18.4	133.9	0.76	0.74	0.83	18.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Site: TCS0713 [4. Warringah Rd-Allambie Rd - AM (Site Folder: AM Network (SCATS))]

Network: 3 [AM 2020 (Network Folder: SCATS Model)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 160 seconds (Network Site User-Given Phase Times)

Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, C, D, E, F
Output Phase Sequence: A, C, D, E, F

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Allambie Rd-S														
2	T1	329	1.9	329	1.9	0.749	60.3	LOS E	14.4	102.1	0.97	0.85	0.98	6.9
3	R2	161	5.2	161	5.2	0.423	79.3	LOS F	3.7	27.0	0.98	0.77	0.98	5.2
Approach		491	3.0	491	3.0	0.749	66.5	LOS E	14.4	102.1	0.97	0.82	0.98	6.2
East: Warringah Rd-E														
4	L2	308	0.3	308	0.3	* 0.676	39.4	LOS C	20.6	147.5	0.83	0.84	0.83	38.5
5	T1	1525	4.9	1525	4.9	0.676	33.0	LOS C	22.3	163.0	0.83	0.76	0.83	39.6
6	R2	423	0.5	423	0.5	0.481	36.2	LOS C	5.2	36.6	0.91	0.81	0.91	38.2
Approach		2257	3.5	2257	3.5	0.676	34.5	LOS C	22.3	163.0	0.84	0.78	0.84	39.1
North: Allambie Rd-N														
7	L2	6	16.7	6	16.7	* 0.840	89.8	LOS F	8.7	63.0	1.00	0.97	1.21	4.2
8	T1	334	4.1	333	4.1	0.840	84.3	LOS F	8.7	63.0	1.00	0.97	1.21	7.8
Approach		340	4.3	340	4.3	0.840	84.4	LOS F	8.7	63.0	1.00	0.97	1.21	7.7
West: Warringah Rd-W														
10	L2	60	7.0	60	7.0	* 0.709	53.7	LOS D	18.6	136.7	0.90	0.81	0.90	24.4
11	T1	1386	5.5	1376	5.6	0.709	38.7	LOS C	19.1	140.0	0.82	0.73	0.82	27.8
12	R2	692	2.6	686	2.6	* 1.255	314.4	LOS F	36.2	258.9	1.00	1.40	2.39	5.9
Approach		2138	4.6	2122 N1	4.6	1.255	128.3	LOS F	36.2	258.9	0.88	0.95	1.33	11.9
All Vehicles		5225	3.9	5209 N1	4.0	1.255	79.0	LOS F	36.2	258.9	0.88	0.87	1.08	19.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Site: TCS1350 [5. Warringah Rd-Ellis Rd-Government Rd - AM (Site Folder: AM Network (SCATS))]

Network: 3 [AM 2020 (Network Folder: SCATS Model)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 130 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, C, D, E
Output Phase Sequence: A, C, D, E

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Government Rd														
1	L2	47	0.0	47	0.0	0.511	57.4	LOS E	5.9	41.3	0.96	0.79	0.96	20.5
2	T1	118	0.0	118	0.0	0.511	52.9	LOS D	5.9	41.3	0.96	0.79	0.96	28.8
3	R2	165	1.3	165	1.3	* 0.793	69.8	LOS E	6.8	48.0	1.00	0.91	1.18	25.5
Approach		331	0.6	331	0.6	0.793	62.0	LOS E	6.8	48.0	0.98	0.85	1.07	26.2
East: Warring Rd - E														
4	L2	72	2.9	72	2.9	0.810	37.1	LOS C	24.0	177.3	0.92	0.85	0.92	33.8
5	T1	2149	6.8	2149	6.8	0.810	30.2	LOS C	24.3	179.9	0.92	0.84	0.92	28.8
6	R2	401	2.6	401	2.6	* 0.923	69.9	LOS E	14.7	105.6	1.00	1.08	1.31	25.9
Approach		2622	6.0	2622	6.0	0.923	36.4	LOS C	24.3	179.9	0.93	0.88	0.98	28.1
North: Ellis Rd														
7	L2	183	3.4	183	3.4	0.439	43.3	LOS D	7.1	50.6	0.85	0.79	0.85	32.0
8	T1	44	0.0	44	0.0	0.439	40.2	LOS C	7.1	50.6	0.85	0.79	0.85	29.3
9	R2	41	0.0	41	0.0	0.253	63.9	LOS E	1.5	10.6	0.95	0.74	0.95	18.5
Approach		268	2.4	268	2.4	0.439	45.9	LOS D	7.1	50.6	0.87	0.78	0.87	29.5
West: Warringah Rd - W														
10	L2	24	17.4	24	17.4	0.943	71.9	LOS F	32.4	241.7	1.00	1.11	1.27	33.2
11	T1	2034	7.2	2024	7.3	* 0.943	65.1	LOS E	32.7	243.5	1.00	1.12	1.27	34.7
12	R2	39	16.2	39	16.3	0.126	54.6	LOS D	1.3	10.1	0.87	0.73	0.87	34.1
Approach		2097	7.5	2087 N1	7.5	0.943	65.0	LOS E	32.7	243.5	1.00	1.11	1.26	34.6
All Vehicles		5318	6.1	5308 N1	6.1	0.943	49.7	LOS D	32.7	243.5	0.96	0.96	1.09	31.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Site: TCS1304 [6. Forest Way-Adams St - AM (Site Folder: AM Network (SCATS))]

Network: 3 [AM 2020 (Network Folder: SCATS Model)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Forest Way - S														
1	L2	297	3.9	296	3.9	0.614	30.1	LOS C	13.6	100.6	0.78	0.78	0.78	36.7
2	T1	1244	9.1	1239	9.1	0.614	24.1	LOS B	14.1	106.4	0.79	0.72	0.79	48.7
3	R2	13	8.3	13	8.3	0.614	32.0	LOS C	12.5	94.5	0.80	0.72	0.80	37.4
Approach		1554	8.1	1548 N1	8.1	0.614	25.3	LOS B	14.1	106.4	0.79	0.73	0.79	46.3
East: Adams St - E														
4	L2	44	0.0	44	0.0	1.106	174.4	LOS F	14.8	104.8	1.00	1.54	2.21	8.7
5	T1	89	1.2	89	1.2	* 1.106	169.8	LOS F	14.8	104.8	1.00	1.54	2.21	14.6
6	R2	84	2.5	84	2.5	1.106	174.4	LOS F	14.8	104.8	1.00	1.54	2.21	18.1
Approach		218	1.4	218	1.4	1.106	172.5	LOS F	14.8	104.8	1.00	1.54	2.21	15.0
North: Forest Way - N														
7	L2	108	2.9	108	2.9	* 0.583	30.2	LOS C	13.2	98.1	0.77	0.72	0.77	45.4
8	T1	1488	8.1	1488	8.1	0.583	22.8	LOS B	13.5	101.1	0.76	0.69	0.76	44.7
Approach		1597	7.8	1597	7.8	0.583	23.3	LOS B	13.5	101.1	0.76	0.69	0.76	44.7
West: Adams St - W														
10	L2	11	10.0	11	10.0	* 0.835	57.6	LOS E	13.9	98.6	1.00	0.95	1.15	34.1
11	T1	112	0.9	112	0.9	0.835	53.0	LOS D	13.9	98.6	1.00	0.95	1.15	28.3
12	R2	619	1.9	619	1.9	0.835	57.6	LOS E	13.9	98.6	1.00	0.94	1.15	19.8
Approach		741	1.8	741	1.8	0.835	56.9	LOS E	13.9	98.6	1.00	0.94	1.15	21.7
All Vehicles		4109	6.5	4104 N1	6.5	1.106	38.1	LOS C	14.8	106.4	0.83	0.80	0.92	36.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Site: TCS4706 [7. Forest Way-Naree Rd - AM (Site Folder: AM Network (SCATS))]

Network: 3 [AM 2020 (Network Folder: SCATS Model)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 160 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Forest Way-S														
2	T1	1305	9.0	1299	9.0	0.308	5.6	LOS A	5.9	44.8	0.32	0.29	0.32	54.8
3	R2	159	11.3	158	11.3	* 0.663	68.0	LOS E	7.5	57.9	1.00	1.01	1.02	16.0
Approach		1464	9.3	1458 N1	9.3	0.663	12.3	LOS A	7.5	57.9	0.39	0.37	0.40	43.4
East: Naree Rd-E														
4	L2	181	1.7	181	1.7	0.364	53.0	LOS D	6.8	48.5	0.84	0.79	0.84	11.3
6	R2	248	3.4	248	3.4	* 0.968	111.1	LOS F	15.0	107.7	1.00	1.06	1.46	6.2
Approach		429	2.7	429	2.7	0.968	86.6	LOS F	15.0	107.7	0.93	0.95	1.20	7.6
North: Forest Way-N														
7	L2	275	3.1	274	3.1	0.612	23.9	LOS B	19.1	139.5	0.62	0.77	0.62	29.9
8	T1	1877	6.6	1873	6.6	* 0.612	21.4	LOS B	19.9	147.5	0.64	0.75	0.64	30.2
Approach		2152	6.2	2147 N1	6.2	0.612	21.8	LOS B	19.9	147.5	0.64	0.76	0.64	30.2
All Vehicles		4045	6.9	4034 N1	6.9	0.968	25.2	LOS B	19.9	147.5	0.58	0.63	0.61	28.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Site: TCS4712 [8. FFR-Rabbett Street - AM (Site Folder: AM Network (SCATS))]

Network: 3 [AM 2020 (Network Folder: SCATS Model)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: Two-Phase
Reference Phase: Phase A
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Rabbett St-S														
1	L2	15	7.1	15	7.1	0.124	41.9	LOS C	0.7	5.3	0.90	0.70	0.90	14.7
2	T1	6	0.0	6	0.0	0.124	37.2	LOS C	0.7	5.3	0.90	0.70	0.90	22.9
3	R2	9	0.0	9	0.0	0.124	41.7	LOS C	0.7	5.3	0.90	0.70	0.90	14.7
Approach		31	3.4	31	3.4	0.124	40.9	LOS C	0.7	5.3	0.90	0.70	0.90	16.8
East: FFRW-E														
4	L2	23	68.2	23	68.2	0.372	18.2	LOS B	5.7	42.0	0.60	0.54	0.60	35.5
5	T1	366	2.9	366	2.9	0.372	12.1	LOS A	5.7	42.0	0.60	0.54	0.60	30.2
6	R2	175	1.8	175	1.8	* 0.372	19.8	LOS B	3.1	22.1	0.65	0.74	0.65	32.0
Approach		564	5.2	564	5.2	0.372	14.7	LOS B	5.7	42.0	0.62	0.60	0.62	31.3
North: Rabbett St-N														
7	L2	381	0.8	381	0.8	1.000	88.4	LOS F	19.2	135.1	1.00	1.25	1.78	8.8
8	T1	15	0.0	15	0.0	1.000	83.8	LOS F	19.2	135.1	1.00	1.25	1.78	14.1
9	R2	48	0.0	48	0.0	* 1.000	88.4	LOS F	19.2	135.1	1.00	1.25	1.78	8.8
Approach		444	0.7	444	0.7	1.000	88.2	LOS F	19.2	135.1	1.00	1.25	1.78	9.0
West: Naree Rd-W														
10	L2	22	9.5	22	9.5	0.212	15.9	LOS B	2.9	21.6	0.55	0.49	0.55	36.2
11	T1	412	5.9	410	5.9	0.212	11.0	LOS A	2.9	21.6	0.54	0.47	0.54	28.8
12	R2	1	0.0	1	0.0	0.212	15.3	LOS B	2.9	21.6	0.54	0.45	0.54	36.2
Approach		435	6.1	433 N1	6.1	0.212	11.2	LOS A	2.9	21.6	0.54	0.47	0.54	29.4
All Vehicles		1474	4.1	1472 N1	4.1	1.000	36.4	LOS C	19.2	135.1	0.72	0.76	0.95	18.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Site: TCS4751 [FFR-Bluegum Cres - AM (Site Folder: AM Network (SCATS))]

Network: 3 [AM 2020 (Network Folder: SCATS Model)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: School Access-S														
1	L2	6	0.0	6	0.0	0.028	41.5	LOS C	0.2	1.1	0.90	0.64	0.90	21.1
2	T1	1	0.0	1	0.0	0.261	39.4	LOS C	1.4	9.5	0.94	0.74	0.94	27.2
3	R2	53	0.0	53	0.0	0.261	42.9	LOS D	1.4	9.5	0.94	0.74	0.94	20.8
Approach		60	0.0	60	0.0	0.261	42.7	LOS D	1.4	9.5	0.93	0.73	0.93	21.0
East: FFRW-E														
4	L2	49	0.0	49	0.0	0.307	10.1	LOS A	4.2	31.0	0.45	0.43	0.45	36.1
5	T1	561	5.8	560	5.8	0.307	7.1	LOS A	4.2	31.0	0.46	0.44	0.46	28.3
6	R2	53	0.0	53	0.0	0.307	11.1	LOS A	3.3	24.3	0.47	0.46	0.47	35.4
Approach		663	4.9	662 N1	4.9	0.307	7.6	LOS A	4.2	31.0	0.46	0.44	0.46	30.7
North: Bluegum Cres - N														
7	L2	53	0.0	53	0.0	0.245	42.5	LOS D	1.4	9.6	0.93	0.74	0.93	20.9
8	T1	1	0.0	1	0.0	0.245	39.1	LOS C	1.4	9.6	0.93	0.74	0.93	27.3
9	R2	1	0.0	1	0.0	* 0.245	42.6	LOS D	1.4	9.6	0.93	0.74	0.93	20.9
Approach		55	0.0	55	0.0	0.245	42.5	LOS C	1.4	9.6	0.93	0.74	0.93	21.1
West: FFRW-W														
10	L2	53	0.0	53	0.0	* 0.369	10.5	LOS A	5.1	36.8	0.48	0.45	0.48	36.2
11	T1	697	3.9	696	3.9	0.369	7.1	LOS A	5.1	36.8	0.47	0.45	0.47	30.4
12	R2	53	0.0	53	0.0	0.369	10.5	LOS A	4.3	31.2	0.47	0.45	0.47	36.2
Approach		802	3.4	801 N1	3.4	0.369	7.5	LOS A	5.1	36.8	0.47	0.45	0.47	31.9
All Vehicles		1580	3.8	1578 N1	3.8	0.369	10.1	LOS A	5.1	36.8	0.50	0.47	0.50	29.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Site: TCS4705 [9. FFR-Gladys Ave - AM (Site Folder: AM Network (SCATS))]

Network: 3 [AM 2020 (Network Folder: SCATS Model)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 130 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, D, E, F
Output Phase Sequence: A, B, D, E, F

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Hospital Access-S														
1	L2	29	0.0	29	0.0	0.046	20.7	LOS B	0.6	4.0	0.66	0.63	0.66	27.7
2	T1	1	0.0	1	0.0	0.046	17.3	LOS B	0.6	4.0	0.66	0.63	0.66	32.7
3	R2	62	0.0	62	0.0	0.155	47.8	LOS D	2.0	13.7	0.85	0.72	0.85	19.8
Approach		93	0.0	93	0.0	0.155	38.8	LOS C	2.0	13.7	0.79	0.69	0.79	21.9
East: FFRW-E														
4	L2	193	0.5	192	0.5	* 0.306	17.7	LOS B	3.0	22.8	0.72	0.71	0.72	32.2
5	T1	618	4.9	617	4.9	* 0.449	34.2	LOS C	9.0	63.5	0.82	0.71	0.82	17.0
6	R2	12	0.0	12	0.0	0.101	67.9	LOS E	0.4	3.1	0.97	0.68	0.97	20.3
Approach		822	3.8	821 N1	3.8	0.449	30.8	LOS C	9.0	63.5	0.80	0.71	0.80	21.6
North: Gladys Ave-N														
7	L2	7	0.0	7	0.0	* 0.280	45.9	LOS D	0.8	5.8	0.99	0.72	0.99	20.3
8	T1	6	0.0	6	0.0	* 0.280	42.5	LOS C	0.8	5.8	0.99	0.72	0.99	26.8
9	R2	16	13.3	16	13.3	0.280	45.9	LOS D	0.8	5.8	0.99	0.72	0.99	20.3
Approach		29	7.1	29	7.1	0.280	45.2	LOS D	0.8	5.8	0.99	0.72	0.99	22.2
West: FFRW-W														
10	L2	12	18.2	12	18.2	0.501	31.4	LOS C	11.5	82.9	0.77	0.68	0.77	27.8
11	T1	774	3.1	773	3.1	0.501	27.5	LOS B	11.5	82.9	0.76	0.67	0.76	16.0
12	R2	74	0.0	74	0.0	* 0.368	34.4	LOS C	1.4	10.0	0.97	0.75	0.97	26.2
Approach		859	3.1	858 N1	3.1	0.501	28.1	LOS B	11.5	82.9	0.78	0.67	0.78	17.9
All Vehicles		1803	3.3	1801 N1	3.3	0.501	30.2	LOS C	11.5	82.9	0.79	0.69	0.79	20.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Site: TCS0848 [10. Wakehurst Pkwy-FFR - AM (Site Folder: AM Network (SCATS))]

Network: 3 [AM 2020 (Network Folder: SCATS Model)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 160 seconds (Network Site User-Given Phase Times)

Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, C, D, E, G
Output Phase Sequence: A, C, D, E, G

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Wakehurst Pkwy-S														
1	L2	120	7.9	119	8.0	0.162	29.4	LOS C	3.2	24.1	0.78	0.76	0.78	20.7
2	T1	644	5.6	639	5.6	* 0.588	59.6	LOS E	15.9	116.7	0.92	0.80	0.92	27.7
3	R2	85	7.4	85	7.4	* 0.426	87.2	LOS F	4.1	30.4	1.00	0.78	1.00	8.8
Approach		849	6.1	842 N1	6.1	0.588	58.1	LOS E	15.9	116.7	0.91	0.79	0.91	25.1
East: FFRE-E														
4	L2	155	7.5	155	7.5	0.121	39.1	LOS C	2.4	18.0	0.69	0.70	0.69	22.1
5	T1	588	3.4	588	3.4	* 0.668	60.6	LOS E	12.5	88.2	0.97	0.82	0.97	16.9
6	R2	89	4.7	89	4.7	* 0.506	80.0	LOS F	4.2	30.4	0.99	0.78	0.99	24.2
Approach		833	4.3	833	4.3	0.668	58.7	LOS E	12.5	88.2	0.92	0.80	0.92	18.8
North: Wakehurst Pkwy-N														
7	L2	116	0.0	116	0.0	0.099	11.9	LOS A	1.4	10.1	0.31	0.66	0.31	48.5
8	T1	791	2.9	791	2.9	0.355	34.2	LOS C	8.7	62.5	0.73	0.63	0.73	31.1
9	R2	138	4.6	138	4.6	0.473	40.5	LOS C	3.2	23.4	0.95	0.79	0.95	28.0
Approach		1044	2.8	1044	2.8	0.473	32.6	LOS C	8.7	62.5	0.72	0.66	0.72	31.9
West: FFRW-E														
10	L2	157	0.7	157	0.7	* 0.306	32.5	LOS C	4.6	35.0	0.79	0.75	0.79	35.2
11	T1	517	3.9	516	3.9	0.572	58.2	LOS E	10.6	74.6	0.94	0.80	0.94	13.3
12	R2	142	3.0	142	3.0	0.397	79.0	LOS F	3.3	23.8	0.98	0.77	0.98	10.4
Approach		816	3.1	815 N1	3.1	0.572	56.9	LOS E	10.6	74.6	0.92	0.78	0.92	16.7
All Vehicles		3542	4.0	3534 N1	4.0	0.668	50.4	LOS D	15.9	116.7	0.86	0.75	0.86	22.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Site: TCS4750 [11. FFR-Romford Rd - AM (Site Folder: AM Network (SCATS))]

Network: 3 [AM 2020 (Network Folder: SCATS Model)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: Two-Phase
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Local Business Access														
1	L2	41	2.6	41	2.6	0.336	41.7	LOS C	1.1	8.1	0.98	0.73	0.98	16.0
2	T1	5	0.0	5	0.0	* 0.336	40.7	LOS C	1.1	8.1	0.98	0.73	0.98	24.1
3	R2	19	5.6	19	5.6	0.141	41.1	LOS C	0.5	3.3	0.96	0.69	0.96	16.0
Approach		65	3.2	65	3.2	0.336	41.5	LOS C	1.1	8.1	0.98	0.72	0.98	16.9
East: FFRE-E														
5	T1	573	7.4	572	7.4	0.291	10.3	LOS A	3.8	28.2	0.57	0.49	0.57	32.8
6	R2	8	0.0	8	0.0	0.291	14.9	LOS B	3.6	26.8	0.57	0.50	0.57	41.4
Approach		581	7.2	581	7.2	0.291	10.4	LOS A	3.8	28.2	0.57	0.49	0.57	33.1
North: Romford Rd														
7	L2	15	0.0	15	0.0	0.563	39.2	LOS C	3.9	27.4	0.97	0.80	0.97	24.3
9	R2	154	1.4	154	1.4	* 0.563	39.2	LOS C	3.9	27.4	0.97	0.80	0.97	24.3
Approach		168	1.3	168	1.3	0.563	39.2	LOS C	3.9	27.4	0.97	0.80	0.97	24.3
West: FFRE-W														
10	L2	60	1.8	60	1.8	* 0.301	16.1	LOS B	3.8	27.9	0.60	0.56	0.60	41.7
11	T1	529	4.8	529	4.8	0.301	10.9	LOS A	3.9	28.3	0.59	0.52	0.59	36.3
Approach		589	4.5	588 N1	4.5	0.301	11.4	LOS A	3.9	28.3	0.59	0.53	0.59	37.3
All Vehicles		1404	5.2	1403 N1	5.2	0.563	15.7	LOS B	3.9	28.3	0.65	0.55	0.65	31.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Site: TCS4711 [12. Allambie Rd-Patanga Rd-FFE - AM (Site Folder: AM Network (SCATS))]

Network: 3 [AM 2020 (Network Folder: SCATS Model)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 100 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Allambie Rd-S														
1	L2	791	1.6	790	1.6	0.321	11.7	LOS A	4.9	34.7	0.45	0.65	0.45	20.3
3	R2	22	0.0	22	0.0	* 0.132	51.5	LOS D	0.6	4.4	0.95	0.70	0.95	12.8
Approach		813	1.6	812 N1	1.6	0.321	12.8	LOS A	4.9	34.7	0.46	0.65	0.46	19.6
East: FFRE-E														
4	L2	12	9.1	12	9.1	0.025	26.8	LOS B	0.2	1.7	0.67	0.65	0.67	15.8
5	T1	23	36.4	23	36.4	* 0.163	47.6	LOS D	0.7	6.2	0.96	0.69	0.96	10.5
Approach		35	27.3	35	27.3	0.163	40.6	LOS C	0.7	6.2	0.86	0.67	0.86	11.8
North: Patanga Rd-N														
9	R2	26	28.0	26	28.0	* 0.283	57.2	LOS E	0.8	7.1	0.99	0.72	0.99	19.7
Approach		26	28.0	26	28.0	0.283	57.2	LOS E	0.8	7.1	0.99	0.72	0.99	19.7
West: FFRE-W														
10	L2	20	31.6	20	31.6	0.251	11.6	LOS A	3.6	26.7	0.42	0.39	0.42	42.0
11	T1	292	4.3	291	4.3	0.251	6.9	LOS A	3.6	26.7	0.42	0.39	0.42	35.8
12	R2	328	4.2	328	4.2	* 0.483	21.2	LOS B	6.3	45.7	0.69	0.76	0.69	12.0
Approach		640	5.1	639 N1	5.1	0.483	14.4	LOS A	6.3	45.7	0.56	0.58	0.56	23.7
All Vehicles		1514	4.1	1513 N1	4.1	0.483	14.9	LOS B	6.3	45.7	0.52	0.63	0.52	21.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Site: [13. FFR-Iverness Avenue - AM (Site Folder: AM Network (SCATS))]

Network: 3 [AM 2020 (Network Folder: SCATS Model)]

Operational Performance Model
Site Category: Existing Design 2020
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Local Site Access														
1	L2	13	0.0	13	0.0	0.178	2.8	LOS A	0.2	1.6	0.79	0.74	0.79	18.8
2	T1	2	0.0	2	0.0	0.178	23.4	LOS B	0.2	1.6	0.79	0.74	0.79	27.1
3	R2	12	18.2	12	18.2	0.178	48.6	LOS D	0.2	1.6	0.79	0.74	0.79	18.8
Approach		26	8.0	26	8.0	0.178	24.6	LOS B	0.2	1.6	0.79	0.74	0.79	19.7
East: FFRE - E														
4	L2	54	5.9	54	5.9	0.236	4.6	LOS A	0.0	0.0	0.00	0.07	0.00	48.4
5	T1	740	3.4	740	3.4	0.236	0.4	LOS A	0.2	1.8	0.08	0.07	0.08	43.1
6	R2	46	0.0	46	0.0	0.236	7.8	LOS A	0.2	1.8	0.17	0.07	0.17	47.1
Approach		840	3.4	840	3.4	0.236	1.0	NA	0.2	1.8	0.08	0.07	0.08	45.2
North: Iverness Avenue														
7	L2	72	0.0	72	0.0	0.071	5.9	LOS A	0.1	0.8	0.37	0.58	0.37	43.0
Approach		72	0.0	72	0.0	0.071	5.9	LOS A	0.1	0.8	0.37	0.58	0.37	43.0
West: FFRE - W														
10	L2	2	0.0	2	0.0	0.158	4.6	LOS A	0.0	0.0	0.00	0.00	0.00	49.3
11	T1	556	5.3	555	5.3	0.158	0.2	LOS A	0.1	0.6	0.04	0.01	0.04	49.0
12	R2	11	0.0	11	0.0	0.158	9.6	LOS A	0.1	0.6	0.08	0.02	0.08	31.1
Approach		568	5.2	568	5.2	0.158	0.4	NA	0.1	0.6	0.04	0.01	0.04	47.6
All Vehicles		1506	4.0	1505 N1	4.0	0.236	1.4	NA	0.2	1.8	0.09	0.08	0.09	43.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Organisation: TTPP - THE TRANSPORT PLANNING PARTNERSHIP | Licence: NETWORK / 1PC | Created: Tuesday, 11 May 2021 9:58:11 AM
Project: X:\16036 - Northern Beaches Hospital\08 Modelling Files\201217 Operational Performance Model\16036 OPM 210505 SCATS vs Optimised Existing Case.sip9

USER REPORT FOR NETWORK SITE

All Movement Classes

Project: 16036 OPM 210505 SCATS vs Optimised Existing Case **Template: Movement Summary**

Site: TCS0007 [1. Warringah Rd-Forest Way - PM (Site Folder: PM Network (SCATS))] **Network: 4 [PM 2020 (Network Folder: SCATS Model)]**

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Network Site User-Given Phase Times)

Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Warringah Rd-E														
5	T1	298	5.3	298	5.3	0.223	10.6	LOS A	6.1	45.0	0.51	0.44	0.51	49.7
6	R2	1087	4.0	1087	4.0	* 0.826	71.8	LOS F	16.6	120.2	1.00	0.90	1.07	17.9
Approach		1385	4.3	1385	4.3	0.826	58.7	LOS E	16.6	120.2	0.89	0.80	0.95	20.8
North: Forest Way-N														
7	L2	1082	3.6	1081	3.6	0.565	10.5	LOS A	2.8	20.0	0.06	0.58	0.06	46.6
9	R2	674	5.3	673	5.3	* 0.992	95.1	LOS F	21.8	154.4	0.99	0.98	1.30	12.5
Approach		1756	4.3	1753 N1	4.3	0.992	43.0	LOS D	21.8	154.4	0.42	0.73	0.53	22.8
West: Warringah Rd-W														
10	L2	823	5.6	823	5.6	0.349	17.6	LOS B	7.7	56.6	0.46	0.73	0.46	34.1
11	T1	1048	1.1	1048	1.1	* 0.700	35.7	LOS C	20.2	142.4	0.85	0.76	0.85	22.4
Approach		1872	3.1	1872	3.1	0.700	27.7	LOS B	20.2	142.4	0.68	0.75	0.68	26.4
All Vehicles		5013	3.8	5010 N1	3.8	0.992	41.6	LOS C	21.8	154.4	0.65	0.76	0.70	23.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Site: TCS0781 [2. Warringah Rd-Hilmer St - PM (Site Folder: PM Network (SCATS))]

Network: 4 [PM 2020 (Network Folder: SCATS Model)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Network Site User-Given Phase Times)

Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: Two-Phase
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Hilmer St-S														
1	L2	37	2.9	37	2.9	0.253	76.5	LOS F	1.6	11.5	0.98	0.73	0.98	16.3
3	R2	71	1.5	71	1.5	0.523	79.7	LOS F	3.2	22.5	1.00	0.77	1.00	15.9
Approach		107	2.0	107	2.0	0.523	78.6	LOS F	3.2	22.5	0.99	0.75	0.99	16.1
East: Warringah Rd-E														
4	L2	15	7.1	15	7.1	0.328	12.9	LOS A	5.4	39.1	0.30	0.28	0.30	47.5
5	T1	1338	4.5	1338	4.5	0.328	4.5	LOS A	5.4	39.1	0.21	0.19	0.21	50.4
Approach		1353	4.5	1352 N1	4.5	0.328	4.6	LOS A	5.4	39.1	0.21	0.19	0.21	50.3
North: Hospital Site Access-N														
7	L2	21	0.0	21	0.0	0.213	79.9	LOS F	0.9	6.6	0.99	0.70	0.99	14.7
9	R2	32	0.0	32	0.0	0.232	76.1	LOS F	1.4	9.7	0.98	0.72	0.98	15.2
Approach		53	0.0	53	0.0	0.232	77.7	LOS F	1.4	9.7	0.98	0.72	0.98	15.0
West: Warringah Rd-W														
10	L2	17	0.0	17	0.0	* 0.478	16.5	LOS B	10.9	78.1	0.40	0.38	0.40	16.4
11	T1	2053	2.6	2051	2.6	0.478	3.2	LOS A	10.9	78.1	0.18	0.17	0.18	61.6
12	R2	80	1.3	80	1.3	0.543	85.5	LOS F	3.7	26.1	1.00	0.77	1.00	23.9
Approach		2149	2.5	2148 N1	2.5	0.543	6.4	LOS A	10.9	78.1	0.21	0.20	0.21	53.1
All Vehicles		3662	3.2	3660 N1	3.2	0.543	8.8	LOS A	10.9	78.1	0.25	0.22	0.25	46.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Site: TCS0375 [3. Warringah Rd-Wakehurst Pkwy - PM (Site Folder: PM Network (SCATS))]

Network: 4 [PM 2020 (Network Folder: SCATS Model)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Network Site User-Given Phase Times)

Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: Variable Phasing
Reference Phase: Phase A
Input Phase Sequence: A, D, E, F
Output Phase Sequence: A, D, E, F

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Wakehurst Pkwy-S														
1b	L3	379	3.6	379	3.6	0.663	32.5	LOS C	9.8	70.4	0.90	0.84	0.90	32.1
1	L2	207	3.6	207	3.6	0.318	28.1	LOS B	4.5	32.7	0.77	0.77	0.77	34.6
2	T1	358	2.9	358	2.9	* 0.563	60.3	LOS E	8.2	59.2	0.96	0.80	0.96	22.1
3	R2	84	6.3	84	6.3	0.355	71.3	LOS F	3.5	25.8	0.95	0.78	0.95	19.1
Approach		1028	3.6	1028	3.6	0.663	44.5	LOS D	9.8	70.4	0.90	0.81	0.90	26.8
East: Warringah Rd-E														
4	L2	69	1.5	69	1.5	0.079	19.9	LOS B	1.1	7.5	0.71	0.73	0.71	46.3
4a	L1	926	3.4	926	3.4	* 0.714	53.0	LOS D	19.4	139.4	1.00	0.88	1.00	14.0
Approach		996	3.3	996	3.3	0.714	50.7	LOS D	19.4	139.4	0.98	0.87	0.98	16.0
North: Wakehurst Pkwy-N														
7	L2	32	6.7	32	6.7	0.508	75.8	LOS F	7.9	56.5	1.00	0.82	1.00	10.8
8	T1	333	1.3	332	1.3	0.508	69.3	LOS E	8.1	57.0	1.00	0.82	1.00	26.1
9a	R1	128	10.7	128	10.7	0.540	71.5	LOS F	5.7	43.3	1.00	0.80	1.00	11.1
9	R2	442	1.7	441	1.7	* 1.118	149.7	LOS F	21.4	152.2	1.00	1.10	1.59	5.3
Approach		935	2.9	932 N1	2.9	1.118	107.9	LOS F	21.4	152.2	1.00	0.95	1.28	11.9
West: Warringah Rd- EB Approach and Underpass WB Exit														
10	L2	731	1.3	730	1.3	0.543	12.4	LOS A	8.8	62.1	0.30	0.68	0.30	26.4
11	T1	828	4.1	828	4.1	0.258	11.4	LOS A	4.6	33.5	0.33	0.28	0.33	28.0
12	R2	585	1.8	585	1.8	* 0.920	90.2	LOS F	14.9	105.7	1.00	0.95	1.25	18.7
Approach		2144	2.5	2143 N1	2.5	0.920	33.3	LOS C	14.9	105.7	0.50	0.60	0.57	21.2
All Vehicles		5103	2.9	5099 N1	3.0	1.118	52.6	LOS D	21.4	152.2	0.77	0.76	0.85	18.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Site: TCS0713 [4. Warringah Rd-Allambie Rd - PM (Site Folder: PM Network (SCATS))]

Network: 4 [PM 2020 (Network Folder: SCATS Model)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Network Site User-Given Phase Times)

Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, C, D, E, F
Output Phase Sequence: A, C, D, E, F

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Allambie Rd-S														
2	T1	357	2.4	357	2.4	0.861	66.4	LOS E	16.3	116.5	0.99	0.97	1.14	6.3
3	R2	278	0.8	278	0.8	0.493	70.3	LOS E	5.8	40.7	0.96	0.91	0.96	5.8
Approach		635	1.7	635	1.7	0.861	68.1	LOS E	16.3	116.5	0.98	0.94	1.06	6.1
East: Warringah Rd-E														
4	L2	180	1.2	180	1.2	* 0.608	36.1	LOS C	17.4	124.5	0.79	0.77	0.79	40.6
5	T1	1538	3.3	1538	3.3	0.608	28.8	LOS C	18.4	132.2	0.78	0.72	0.78	41.9
6	R2	299	0.4	299	0.4	* 0.417	37.5	LOS C	3.7	26.1	0.92	0.79	0.92	37.6
Approach		2017	2.7	2017	2.7	0.608	30.7	LOS C	18.4	132.2	0.80	0.73	0.80	41.1
North: Allambie Rd-N														
7	L2	20	0.0	20	0.0	0.617	73.1	LOS F	4.9	35.2	1.00	0.82	1.01	5.0
8	T1	207	4.1	205	4.1	* 0.617	70.8	LOS F	4.9	35.4	1.00	0.81	1.01	9.0
Approach		227	3.7	225 N1	3.7	0.617	71.0	LOS F	4.9	35.4	1.00	0.81	1.01	8.7
West: Warringah Rd-W														
10	L2	41	2.6	41	2.6	* 0.738	45.3	LOS D	19.5	139.2	0.85	0.77	0.85	27.7
11	T1	1649	2.4	1649	2.4	0.738	31.3	LOS C	19.8	141.7	0.77	0.69	0.77	31.5
12	R2	522	1.4	522	1.4	* 1.065	160.9	LOS F	18.5	131.0	1.00	1.16	1.81	10.8
Approach		2213	2.1	2212 N1	2.1	1.065	62.1	LOS E	19.8	141.7	0.82	0.80	1.01	20.8
All Vehicles		5092	2.4	5088 N1	2.4	1.065	50.8	LOS D	19.8	141.7	0.84	0.79	0.94	25.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Site: TCS1350 [5. Warringah Rd-Ellis Rd-Government Rd - PM (Site Folder: PM Network (SCATS))]

Network: 4 [PM 2020 (Network Folder: SCATS Model)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, C, D, E
Output Phase Sequence: A, C, D, E

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Government Rd														
1	L2	33	0.0	33	0.0	0.308	62.5	LOS E	3.1	22.0	0.93	0.75	0.93	19.3
2	T1	48	4.3	48	4.3	0.308	57.9	LOS E	3.1	22.0	0.93	0.75	0.93	27.6
3	R2	164	2.6	164	2.6	* 0.911	88.3	LOS F	8.0	57.5	1.00	1.03	1.42	22.3
Approach		245	2.6	245	2.6	0.911	78.9	LOS F	8.0	57.5	0.98	0.94	1.26	23.0
East: Warring Rd - E														
4	L2	78	10.8	78	10.8	0.691	30.7	LOS C	21.2	155.0	0.79	0.73	0.79	36.2
5	T1	2088	4.6	2088	4.6	0.691	23.8	LOS B	21.5	156.8	0.78	0.72	0.78	32.9
6	R2	340	2.5	340	2.5	* 0.767	46.2	LOS D	9.4	66.9	0.99	0.92	1.03	31.8
Approach		2506	4.5	2506	4.5	0.767	27.0	LOS B	21.5	156.8	0.81	0.75	0.82	32.8
North: Ellis Rd														
7	L2	131	1.6	131	1.6	0.428	52.9	LOS D	6.3	44.6	0.89	0.79	0.89	29.4
8	T1	47	0.0	47	0.0	0.428	49.8	LOS D	6.3	44.6	0.89	0.79	0.89	27.3
9	R2	21	0.0	21	0.0	0.120	65.8	LOS E	0.8	5.7	0.93	0.71	0.93	18.1
Approach		199	1.1	199	1.1	0.428	53.5	LOS D	6.3	44.6	0.90	0.78	0.90	27.7
West: Warringah Rd - W														
10	L2	21	0.0	21	0.0	1.064	141.2	LOS F	60.8	438.8	1.00	1.45	1.67	22.2
11	T1	2553	3.7	2553	3.7	* 1.064	135.0	LOS F	61.1	441.3	1.00	1.46	1.68	22.2
12	R2	69	6.1	69	6.1	0.248	62.8	LOS E	2.6	19.0	0.92	0.76	0.92	32.2
Approach		2643	3.7	2643	3.7	1.064	133.2	LOS F	61.1	441.3	1.00	1.44	1.66	22.4
All Vehicles		5594	4.0	5594	4.0	1.064	80.4	LOS F	61.1	441.3	0.91	1.08	1.24	24.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS1304 [6. Forest Way-Adams St - PM (Site Folder: PM Network (SCATS))]

Network: 4 [PM 2020 (Network Folder: SCATS Model)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 110 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: Split-Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Forest Way - S														
1	L2	452	1.4	451	1.4	0.644	23.3	LOS B	14.5	103.7	0.73	0.78	0.73	39.6
2	T1	1316	5.6	1315	5.6	* 0.644	18.3	LOS B	14.9	109.2	0.75	0.70	0.75	52.3
3	R2	35	0.0	35	0.0	0.644	27.6	LOS B	11.2	82.1	0.79	0.71	0.79	39.5
Approach		1802	4.4	1801 N1	4.4	0.644	19.8	LOS B	14.9	109.2	0.75	0.72	0.75	48.9
East: Adams St - E														
4	L2	34	3.1	34	3.1	1.081	150.2	LOS F	10.8	75.8	1.00	1.45	2.21	9.8
5	T1	79	0.0	79	0.0	* 1.081	145.7	LOS F	10.8	75.8	1.00	1.45	2.21	16.2
6	R2	67	0.0	67	0.0	1.081	150.2	LOS F	10.8	75.8	1.00	1.45	2.21	20.1
Approach		180	0.6	180	0.6	1.081	148.2	LOS F	10.8	75.8	1.00	1.45	2.21	16.7
North: Forest Way - N														
7	L2	144	0.7	144	0.7	0.509	22.5	LOS B	10.6	76.1	0.67	0.65	0.67	48.8
8	T1	1492	3.8	1492	3.8	0.509	15.3	LOS B	10.9	78.4	0.65	0.60	0.65	50.5
Approach		1636	3.5	1636	3.5	0.509	16.0	LOS B	10.9	78.4	0.66	0.61	0.66	50.3
West: Adams St - W														
10	L2	26	0.0	26	0.0	0.685	52.4	LOS D	7.0	49.3	0.99	0.85	1.03	35.8
11	T1	87	0.0	87	0.0	* 0.685	47.8	LOS D	7.0	49.3	0.99	0.85	1.03	29.6
12	R2	337	0.3	337	0.3	0.685	51.8	LOS D	7.3	51.6	0.99	0.85	1.03	21.1
Approach		451	0.2	451	0.2	0.685	51.0	LOS D	7.3	51.6	0.99	0.85	1.03	24.3
All Vehicles		4068	3.4	4068	3.4	1.081	27.4	LOS B	14.9	109.2	0.75	0.72	0.81	41.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Site: TCS4706 [7. Forest Way-Naree Rd - PM (Site Folder: PM Network (SCATS))]

Network: 4 [PM 2020 (Network Folder: SCATS Model)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 150 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Forest Way-S														
2	T1	1494	5.0	1494	5.0	0.362	7.2	LOS A	7.7	56.3	0.38	0.35	0.38	51.4
3	R2	192	6.6	192	6.6	* 0.614	57.6	LOS E	8.0	59.1	0.98	1.00	0.98	18.2
Approach		1685	5.2	1685	5.2	0.614	13.0	LOS A	8.0	59.1	0.45	0.42	0.45	42.5
East: Naree Rd-E														
4	L2	138	0.8	137	0.7	0.227	41.5	LOS C	4.3	30.4	0.75	0.75	0.75	13.6
6	R2	308	1.7	308	1.7	* 0.988	113.5	LOS F	18.5	131.1	1.00	1.10	1.51	6.0
Approach		446	1.4	445 N1	1.4	0.988	91.3	LOS F	18.5	131.1	0.92	0.99	1.28	7.3
North: Forest Way-N														
7	L2	253	2.1	252	2.1	0.579	27.5	LOS B	16.8	120.7	0.68	0.70	0.68	28.7
8	T1	1609	3.3	1607	3.3	* 0.579	21.4	LOS B	17.5	125.8	0.69	0.64	0.69	30.0
Approach		1862	3.2	1860 N 1	3.2	0.579	22.3	LOS B	17.5	125.8	0.69	0.65	0.69	29.8
All Vehicles		3994	3.8	3990 N 1	3.8	0.988	26.0	LOS B	18.5	131.1	0.61	0.59	0.65	27.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Site: TCS4712 [8. FFR-Rabbett Street - PM (Site Folder: PM Network (SCATS))]

Network: 4 [PM 2020 (Network Folder: SCATS Model)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: Two-Phase
Reference Phase: Phase A
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Rabbett St-S														
1	L2	5	0.0	5	0.0	0.076	40.1	LOS C	0.3	2.3	0.92	0.68	0.92	15.1
2	T1	3	0.0	3	0.0	0.076	35.6	LOS C	0.3	2.3	0.92	0.68	0.92	23.4
3	R2	6	0.0	6	0.0	0.076	40.1	LOS C	0.3	2.3	0.92	0.68	0.92	15.1
Approach		15	0.0	15	0.0	0.076	39.2	LOS C	0.3	2.3	0.92	0.68	0.92	17.3
East: FFRW-E														
4	L2	39	43.2	39	43.2	0.402	13.6	LOS A	5.5	40.2	0.54	0.50	0.54	39.3
5	T1	425	1.2	425	1.2	0.402	8.0	LOS A	5.5	40.2	0.54	0.50	0.54	34.7
6	R2	263	2.0	263	2.0	* 0.486	16.8	LOS B	4.0	28.2	0.66	0.76	0.66	33.6
Approach		727	3.8	727	3.8	0.486	11.5	LOS A	5.5	40.2	0.58	0.59	0.58	34.4
North: Rabbett St-N														
7	L2	255	0.4	255	0.4	1.090	142.3	LOS F	16.1	113.9	1.00	1.64	2.56	5.7
8	T1	35	3.0	35	3.0	1.090	137.7	LOS F	16.1	113.9	1.00	1.64	2.56	9.6
9	R2	16	6.7	16	6.7	* 1.090	142.4	LOS F	16.1	113.9	1.00	1.64	2.56	5.7
Approach		305	1.0	305	1.0	1.090	141.8	LOS F	16.1	113.9	1.00	1.64	2.56	6.2
West: Naree Rd-W														
10	L2	42	0.0	42	0.0	0.192	12.3	LOS A	2.3	16.8	0.48	0.46	0.48	38.9
11	T1	401	4.5	401	4.5	0.192	7.2	LOS A	2.3	16.8	0.47	0.42	0.47	33.3
12	R2	1	0.0	1	0.0	0.192	11.4	LOS A	2.3	16.6	0.45	0.38	0.45	39.9
Approach		444	4.0	444	4.0	0.192	7.7	LOS A	2.3	16.8	0.47	0.42	0.47	34.2
All Vehicles		1492	3.2	1491 N1	3.2	1.090	37.3	LOS C	16.1	113.9	0.64	0.76	0.96	18.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Site: TCS4751 [FFR-Bluegum Cres - PM (Site Folder: PM Network (SCATS))]

Network: 4 [PM 2020 (Network Folder: SCATS Model)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: School Access-S														
1	L2	68	0.0	68	0.0	0.474	46.8	LOS D	1.9	13.2	1.00	0.76	1.00	15.3
2	T1	1	0.0	1	0.0	* 0.304	44.1	LOS D	1.1	7.9	0.97	0.73	0.97	23.5
3	R2	41	0.0	41	0.0	0.304	45.4	LOS D	1.1	7.9	0.97	0.73	0.97	15.5
Approach		111	0.0	111	0.0	0.474	46.3	LOS D	1.9	13.2	0.99	0.75	0.99	15.5
East: FFRW-E														
4	L2	21	0.0	21	0.0	0.290	8.9	LOS A	3.6	26.0	0.36	0.34	0.36	45.3
5	T1	615	4.3	615	4.3	0.290	4.6	LOS A	3.6	26.0	0.37	0.37	0.37	37.0
6	R2	63	0.0	63	0.0	* 0.290	9.6	LOS A	2.9	20.9	0.39	0.41	0.39	43.9
Approach		699	3.8	699	3.8	0.290	5.2	LOS A	3.6	26.0	0.37	0.37	0.37	39.1
North: Bluegum Cres - N														
7	L2	6	0.0	6	0.0	0.058	46.8	LOS D	0.2	1.5	0.94	0.66	0.94	22.3
8	T1	1	0.0	1	0.0	0.058	42.2	LOS C	0.2	1.5	0.94	0.66	0.94	30.6
9	R2	1	0.0	1	0.0	0.058	46.8	LOS D	0.2	1.5	0.94	0.66	0.94	22.3
Approach		8	0.0	8	0.0	0.058	46.2	LOS D	0.2	1.5	0.94	0.66	0.94	23.7
West: FFRW-W														
10	L2	34	0.0	33	0.0	0.256	9.1	LOS A	3.0	21.3	0.36	0.35	0.36	45.3
11	T1	613	3.1	593	3.2	0.256	4.3	LOS A	3.0	21.3	0.36	0.34	0.36	40.1
12	R2	16	0.0	15	0.0	0.256	8.7	LOS A	2.7	19.5	0.35	0.32	0.35	45.7
Approach		662	2.9	641 N1	2.9	0.256	4.7	LOS A	3.0	21.3	0.36	0.34	0.36	41.0
All Vehicles		1480	3.1	1459 N1	3.1	0.474	8.3	LOS A	3.6	26.0	0.42	0.39	0.42	33.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Site: TCS4705 [9. FFR-Gladys Ave - PM (Site Folder: PM Network (SCATS))]

Network: 4 [PM 2020 (Network Folder: SCATS Model)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, D, E, F
Output Phase Sequence: A, D, E, F

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Hospital Access-S														
1	L2	107	0.0	107	0.0	0.157	21.9	LOS B	1.9	13.5	0.67	0.69	0.67	27.2
2	T1	4	25.0	4	25.0	0.157	18.5	LOS B	1.9	13.5	0.67	0.69	0.67	35.5
3	R2	174	0.0	174	0.0	* 0.351	32.4	LOS C	3.8	26.8	0.85	0.76	0.85	23.6
Approach		285	0.4	285	0.4	0.351	28.2	LOS B	3.8	26.8	0.78	0.73	0.78	25.1
East: FFRW-E														
4	L2	81	1.3	81	1.3	0.200	18.1	LOS B	1.3	11.0	0.77	0.71	0.77	34.3
5	T1	583	4.5	583	4.5	0.502	28.4	LOS B	6.4	44.9	0.88	0.74	0.88	20.7
6	R2	9	0.0	9	0.0	0.077	49.3	LOS D	0.3	1.8	0.96	0.67	0.96	26.3
Approach		674	4.1	674	4.1	0.502	27.4	LOS B	6.4	44.9	0.87	0.74	0.87	23.3
North: Gladys Ave-N														
7	L2	13	8.3	13	8.3	0.134	26.8	LOS B	0.3	2.3	0.94	0.69	0.94	29.1
8	T1	1	0.0	1	0.0	* 0.134	23.6	LOS B	0.3	2.3	0.94	0.69	0.94	33.6
9	R2	8	0.0	8	0.0	0.134	26.8	LOS B	0.3	2.3	0.94	0.69	0.94	29.1
Approach		22	4.8	22	4.8	0.134	26.6	LOS B	0.3	2.3	0.94	0.69	0.94	29.5
West: FFRW-W														
10	L2	8	0.0	8	0.0	* 0.556	34.1	LOS C	7.0	50.3	0.90	0.77	0.90	31.2
11	T1	621	2.9	603	3.0	0.556	29.6	LOS C	7.1	51.0	0.90	0.77	0.90	16.5
12	R2	31	0.0	30	0.0	* 0.239	50.4	LOS D	0.8	5.7	0.98	0.71	0.98	23.3
Approach		660	2.7	641 N1	2.8	0.556	30.6	LOS C	7.1	51.0	0.90	0.76	0.90	17.6
All Vehicles		1641	2.9	1622 N1	2.9	0.556	28.8	LOS C	7.1	51.0	0.87	0.75	0.87	21.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Site: TCS0848 [10. Wakehurst Pkwy-FFR - PM (Site Folder: PM Network (SCATS))]

Network: 4 [PM 2020 (Network Folder: SCATS Model)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Network Site User-Given Phase Times)

Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, D, E, G
Output Phase Sequence: A, D, E, G

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Wakehurst Pkwy-S														
1	L2	67	1.6	67	1.6	0.071	17.7	LOS B	0.8	5.4	0.27	0.64	0.27	28.7
2	T1	952	1.5	951	1.5	* 0.794	45.8	LOS D	22.4	159.0	0.77	0.69	0.78	32.6
3	R2	69	6.1	69	6.1	0.308	36.5	LOS C	1.5	11.4	0.51	0.68	0.51	18.0
Approach		1088	1.8	1088	1.8	0.794	43.5	LOS D	22.4	159.0	0.72	0.68	0.73	31.9
East: FFRE-E														
4	L2	180	2.9	180	2.9	0.132	34.6	LOS C	2.6	18.9	0.67	0.70	0.67	23.6
5	T1	528	5.4	528	5.4	0.566	54.4	LOS D	10.0	70.4	0.93	0.78	0.93	18.2
6	R2	157	0.7	157	0.7	* 0.646	72.3	LOS F	6.8	48.0	1.00	0.82	1.01	25.7
Approach		865	4.0	865	4.0	0.646	53.5	LOS D	10.0	70.4	0.89	0.77	0.89	21.0
North: Wakehurst Pkwy-N														
7	L2	47	0.0	47	0.0	0.038	10.8	LOS A	0.5	3.4	0.28	0.64	0.28	49.9
8	T1	651	4.0	651	4.0	0.364	39.0	LOS C	7.6	55.4	0.80	0.67	0.80	28.9
9	R2	80	3.9	80	3.9	* 0.364	72.4	LOS F	3.3	24.2	0.96	0.77	0.96	19.0
Approach		778	3.8	778	3.8	0.364	40.7	LOS C	7.6	55.4	0.78	0.68	0.78	28.1
West: FFRW-E														
10	L2	164	1.9	161	2.0	0.371	52.0	LOS D	6.4	50.0	0.85	0.78	0.85	28.6
11	T1	582	3.8	570	3.9	* 0.606	54.9	LOS D	11.0	77.3	0.95	0.81	0.95	13.8
12	R2	111	1.9	108	1.9	0.243	68.2	LOS E	2.4	17.2	0.94	0.75	0.94	11.7
Approach		857	3.2	839 N1	3.3	0.606	56.1	LOS D	11.0	77.3	0.93	0.79	0.93	16.9
All Vehicles		3588	3.1	3570 N1	3.1	0.794	48.3	LOS D	22.4	159.0	0.82	0.73	0.83	24.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Site: TCS4750 [11. FFR-Romford Rd - PM (Site Folder: PM Network (SCATS))]

Network: 4 [PM 2020 (Network Folder: SCATS Model)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: Two-Phase
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Local Business Access														
1	L2	68	0.0	68	0.0	0.461	36.5	LOS C	1.6	11.1	0.99	0.75	0.99	16.8
2	T1	5	0.0	5	0.0	* 0.461	35.5	LOS C	1.6	11.1	0.99	0.75	0.99	24.9
3	R2	24	0.0	24	0.0	0.152	35.4	LOS C	0.5	3.5	0.96	0.69	0.96	16.9
Approach		98	0.0	98	0.0	0.461	36.2	LOS C	1.6	11.1	0.98	0.74	0.98	17.4
East: FFRE-E														
5	T1	576	3.8	576	3.8	0.295	9.6	LOS A	3.5	25.0	0.59	0.51	0.59	33.5
6	R2	12	0.0	12	0.0	0.295	14.5	LOS A	3.3	23.9	0.59	0.52	0.59	41.7
Approach		587	3.8	587	3.8	0.295	9.7	LOS A	3.5	25.0	0.59	0.51	0.59	33.9
North: Romford Rd														
7	L2	12	0.0	12	0.0	0.381	35.4	LOS C	1.9	13.7	0.95	0.77	0.95	25.5
9	R2	85	1.2	85	1.2	* 0.381	35.4	LOS C	1.9	13.7	0.95	0.77	0.95	25.5
Approach		97	1.1	97	1.1	0.381	35.4	LOS C	1.9	13.7	0.95	0.77	0.95	25.5
West: FFRE-W														
10	L2	93	0.0	91	0.0	* 0.318	15.8	LOS B	3.6	25.9	0.63	0.60	0.63	41.6
11	T1	525	3.8	516	3.9	0.318	10.2	LOS A	3.7	26.5	0.61	0.54	0.61	36.8
Approach		618	3.2	607 N1	3.3	0.318	11.0	LOS A	3.7	26.5	0.61	0.55	0.61	38.0
All Vehicles		1400	3.1	1389 N1	3.1	0.461	13.9	LOS A	3.7	26.5	0.65	0.56	0.65	32.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Site: TCS4711 [12. Allambie Rd-Patanga Rd-FFE - PM (Site Folder: PM Network (SCATS))]

Network: 4 [PM 2020 (Network Folder: SCATS Model)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Allambie Rd-S														
1	L2	640	1.5	640	1.5	0.275	12.2	LOS A	3.8	26.7	0.47	0.66	0.47	19.9
3	R2	57	1.9	57	1.9	* 0.310	47.2	LOS D	1.5	10.6	0.97	0.75	0.97	13.6
Approach		697	1.5	697	1.5	0.310	15.0	LOS B	3.8	26.7	0.51	0.66	0.51	18.5
East: FFRE-E														
4	L2	21	5.0	21	5.0	0.029	22.0	LOS B	0.3	2.5	0.63	0.66	0.63	17.9
5	T1	44	11.9	44	11.9	0.244	42.2	LOS C	1.2	8.9	0.96	0.71	0.96	11.5
Approach		65	9.7	65	9.7	0.244	35.7	LOS C	1.2	8.9	0.85	0.69	0.85	13.0
North: Patanga Rd-N														
9	R2	17	37.5	17	37.5	* 0.172	51.0	LOS D	0.5	4.3	0.97	0.70	0.97	21.1
Approach		17	37.5	17	37.5	0.172	51.0	LOS D	0.5	4.3	0.97	0.70	0.97	21.1
West: FFRE-W														
10	L2	37	20.0	36	20.2	* 0.365	13.5	LOS A	5.6	40.5	0.52	0.48	0.52	40.5
11	T1	399	2.6	393	2.7	0.365	8.8	LOS A	5.6	40.5	0.52	0.48	0.52	33.1
12	R2	206	3.6	203	3.6	0.241	20.0	LOS B	3.3	23.6	0.64	0.72	0.64	12.6
Approach		642	3.9	633 N1	4.0	0.365	12.7	LOS A	5.6	40.5	0.56	0.56	0.56	27.7
All Vehicles		1421	3.4	1412 N1	3.4	0.365	15.4	LOS B	5.6	40.5	0.56	0.62	0.56	22.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Site: [13. FFR-Iverness Avenue - PM (Site Folder: PM Network (SCATS))]

Network: 4 [PM 2020 (Network Folder: SCATS Model)]

Operational Performance Model
Site Category: Existing Design 2020
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Local Site Access														
1	L2	33	0.0	33	0.0	0.196	2.6	LOS A	0.3	1.9	0.64	0.62	0.64	21.4
2	T1	11	0.0	11	0.0	0.196	19.6	LOS B	0.3	1.9	0.64	0.62	0.64	29.8
3	R2	16	0.0	16	0.0	0.196	27.5	LOS B	0.3	1.9	0.64	0.62	0.64	21.4
Approach		59	0.0	59	0.0	0.196	12.3	LOS A	0.3	1.9	0.64	0.62	0.64	23.4
East: FFRE - E														
4	L2	38	8.3	38	8.3	0.207	4.6	LOS A	0.0	0.0	0.00	0.05	0.00	48.5
5	T1	593	3.0	593	3.0	0.207	0.6	LOS A	0.3	2.4	0.12	0.09	0.12	41.0
6	R2	71	0.0	71	0.0	0.207	7.9	LOS A	0.3	2.4	0.30	0.15	0.30	45.7
Approach		701	3.0	701	3.0	0.207	1.5	NA	0.3	2.4	0.13	0.10	0.13	43.9
North: Iverness Avenue														
7	L2	33	0.0	33	0.0	0.032	5.8	LOS A	0.0	0.3	0.36	0.56	0.36	43.0
Approach		33	0.0	33	0.0	0.032	5.8	LOS A	0.0	0.3	0.36	0.56	0.36	43.0
West: FFRE - W														
10	L2	3	0.0	3	0.0	0.160	4.6	LOS A	0.0	0.0	0.00	0.01	0.00	49.3
11	T1	594	4.3	585	4.3	0.160	0.1	LOS A	0.0	0.3	0.02	0.01	0.02	49.4
12	R2	7	0.0	7	0.0	0.160	8.1	LOS A	0.0	0.3	0.04	0.01	0.04	31.2
Approach		604	4.2	595 N1	4.2	0.160	0.2	NA	0.0	0.3	0.02	0.01	0.02	48.5
All Vehicles		1397	3.3	1388 N1	3.3	0.207	1.5	NA	0.3	2.4	0.11	0.09	0.11	42.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

USER REPORT FOR NETWORK SITE

All Movement Classes

Project: 16036 OPM 210505 SCATS vs Optimised Existing Case **Template: Movement Summary**

Site: TCS0007 [1. Warringah Rd-Forest Way - AM (Site Folder: AM Network (SIDRA Optimised))] **Network: 5 [AM 2020 (Network Folder: SIDRA Optimised)]**

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 160 seconds (Network User-Given Cycle Time)

Timings based on settings in the Network Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Warringah Rd-E														
5	T1	527	5.2	527	5.2	0.547	13.5	LOS A	7.8	57.3	0.59	0.52	0.59	46.9
6	R2	918	8.0	918	8.0	* 0.885	79.6	LOS F	15.4	115.2	1.00	0.97	1.17	14.1
Approach		1445	7.0	1445	7.0	0.885	55.5	LOS D	15.4	115.2	0.85	0.81	0.96	18.9
North: Forest Way-N														
7	L2	1026	7.2	1026	7.2	0.526	5.4	LOS A	2.3	16.7	0.08	0.39	0.08	34.9
9	R2	974	5.9	974	5.9	* 0.878	35.5	LOS C	16.4	117.6	0.96	0.89	1.02	20.2
Approach		2000	6.6	2000	6.6	0.878	20.1	LOS B	16.4	117.6	0.51	0.64	0.54	25.8
West: Warringah Rd-W														
10	L2	662	10.3	662	10.3	0.272	11.1	LOS A	5.3	40.7	0.37	0.58	0.37	29.0
11	T1	921	4.7	921	4.7	* 0.875	63.2	LOS E	25.0	180.2	0.97	0.96	1.10	12.7
Approach		1583	7.0	1583	7.0	0.875	41.4	LOS C	25.0	180.2	0.72	0.80	0.79	16.6
All Vehicles		5028	6.8	5028	6.8	0.885	37.0	LOS C	25.0	180.2	0.67	0.74	0.74	20.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS0781 [2. Warringah Rd-Hilmer St - AM (Site Folder: AM Network (SIDRA Optimised))]

Network: 5 [AM 2020 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 160 seconds (Network User-Given Cycle Time)

Timings based on settings in the Network Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Two-Phase
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Hilmer St-S														
1	L2	42	0.0	42	0.0	0.125	63.3	LOS E	1.7	11.8	0.87	0.73	0.87	18.5
3	R2	131	0.0	131	0.0	0.469	72.1	LOS F	5.8	40.4	0.96	0.80	0.96	17.0
Approach		173	0.0	173	0.0	0.469	70.0	LOS E	5.8	40.4	0.94	0.78	0.94	17.3
East: Warringah Rd-E														
4	L2	44	2.4	44	2.4	0.437	27.7	LOS B	12.9	95.7	0.66	0.61	0.66	37.2
5	T1	1316	7.2	1316	7.2	0.437	16.8	LOS B	12.9	95.7	0.49	0.44	0.49	28.6
Approach		1360	7.0	1360	7.0	0.437	17.2	LOS B	12.9	95.7	0.50	0.45	0.50	29.2
North: Hospital Site Access-N														
7	L2	28	7.4	28	7.4	0.430	90.4	LOS F	1.4	10.6	1.00	0.72	1.00	13.6
9	R2	25	16.7	25	16.7	0.101	66.7	LOS E	1.0	8.4	0.90	0.70	0.90	16.5
Approach		54	11.8	54	11.8	0.430	79.3	LOS F	1.4	10.6	0.95	0.71	0.95	14.8
West: Warringah Rd-W														
10	L2	77	4.1	77	4.1	* 0.483	21.1	LOS B	13.2	97.1	0.50	0.53	0.50	16.0
11	T1	1811	6.6	1811	6.6	0.483	4.7	LOS A	13.2	97.1	0.21	0.21	0.21	57.7
12	R2	76	2.8	76	2.8	0.230	78.6	LOS F	3.6	25.6	1.00	0.78	1.00	25.1
Approach		1963	6.4	1963	6.4	0.483	8.2	LOS A	13.2	97.1	0.25	0.25	0.25	44.7
All Vehicles		3549	6.4	3549	6.4	0.483	15.7	LOS B	13.2	97.1	0.39	0.36	0.39	35.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS0375 [3. Warringah Rd-Wakehurst Pkwy - AM (Site Folder: AM Network (SIDRA Optimised))]

Network: 5 [AM 2020 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 160 seconds (Network User-Given Cycle Time)

Timings based on settings in the Network Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Variable Phasing
Reference Phase: Phase A
Input Phase Sequence: A, D, E, F
Output Phase Sequence: A, D, E, F

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Wakehurst Pkwy-S														
1b	L3	333	13.3	333	13.3	* 0.698	34.7	LOS C	8.0	62.2	0.93	0.85	0.93	31.1
1	L2	146	4.3	146	4.3	0.255	29.4	LOS C	2.9	21.2	0.78	0.76	0.78	33.8
2	T1	365	2.6	365	2.6	0.663	70.7	LOS F	8.4	60.0	1.00	0.82	1.00	19.7
3	R2	59	3.6	59	3.6	0.145	59.6	LOS E	2.2	16.2	0.84	0.75	0.84	21.7
Approach		903	6.9	903	6.9	0.698	50.0	LOS D	8.4	62.2	0.93	0.82	0.93	24.9
East: Warringah Rd-E														
4	L2	94	3.4	94	3.4	0.097	17.1	LOS B	1.3	9.6	0.59	0.71	0.59	48.1
4a	L1	791	5.6	791	5.6	* 0.697	52.3	LOS D	16.3	119.0	0.93	0.81	0.93	14.2
Approach		884	5.4	884	5.4	0.697	48.5	LOS D	16.3	119.0	0.89	0.80	0.89	17.3
North: Wakehurst Pkwy-N														
7	L2	23	13.6	23	13.6	* 0.701	78.3	LOS F	9.0	65.4	1.00	0.84	1.02	10.6
8	T1	359	3.5	359	3.5	0.701	71.7	LOS F	9.1	65.4	1.00	0.84	1.02	25.6
9a	R1	291	4.3	291	4.3	* 0.696	36.9	LOS C	9.6	69.9	0.74	0.74	0.74	18.6
9	R2	413	2.0	413	2.0	0.622	41.2	LOS C	8.4	59.8	0.68	0.75	0.68	16.6
Approach		1085	3.4	1085	3.4	0.701	50.9	LOS D	9.6	69.9	0.81	0.78	0.82	21.3
West: Warringah Rd- EB Approach and Underpass WB Exit														
10	L2	484	8.7	484	8.7	0.354	7.8	LOS A	1.5	11.4	0.07	0.59	0.07	34.4
11	T1	1047	5.2	1047	5.2	0.352	12.3	LOS A	5.7	41.4	0.33	0.29	0.33	26.8
12	R2	438	5.8	438	5.8	0.701	69.0	LOS E	10.2	75.1	0.97	0.83	0.98	22.4
Approach		1969	6.2	1969	6.2	0.701	23.8	LOS B	10.2	75.1	0.41	0.48	0.41	24.8
All Vehicles		4842	5.5	4842	5.5	0.701	39.3	LOS C	16.3	119.0	0.68	0.67	0.69	22.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS0713 [4. Warringah Rd-Allambie Rd - AM (Site Folder: AM Network (SIDRA Optimised))]

Network: 5 [AM 2020 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 160 seconds (Network User-Given Cycle Time)

Timings based on settings in the Network Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, C, D, E, F
Output Phase Sequence: A, C, D, E, F

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Allambie Rd-S														
2	T1	329	1.9	329	1.9	0.568	49.9	LOS D	12.9	92.0	0.89	0.79	0.89	8.1
3	R2	161	5.2	161	5.2	0.257	67.1	LOS E	3.3	24.4	0.91	0.76	0.91	6.0
Approach		491	3.0	491	3.0	0.568	55.5	LOS D	12.9	92.0	0.89	0.78	0.89	7.3
East: Warringah Rd-E														
4	L2	308	0.3	308	0.3	* 0.935	79.0	LOS F	32.5	232.2	1.00	1.05	1.20	26.6
5	T1	1525	4.9	1525	4.9	0.935	72.9	LOS F	35.1	255.9	1.00	1.06	1.20	26.1
6	R2	423	0.5	423	0.5	* 0.446	35.8	LOS C	4.6	32.5	0.89	0.81	0.89	38.5
Approach		2257	3.5	2257	3.5	0.935	66.8	LOS E	35.1	255.9	0.98	1.01	1.14	27.8
North: Allambie Rd-N														
7	L2	6	16.7	6	16.7	* 0.893	98.5	LOS F	9.1	66.2	1.00	1.04	1.32	3.9
8	T1	334	4.1	334	4.1	* 0.893	91.8	LOS F	9.1	66.2	1.00	1.03	1.32	7.2
Approach		340	4.3	340	4.3	0.893	91.9	LOS F	9.1	66.2	1.00	1.03	1.32	7.2
West: Warringah Rd-W														
10	L2	60	7.0	60	7.0	0.923	77.7	LOS F	23.7	174.2	1.00	0.98	1.13	18.4
11	T1	1386	5.5	1386	5.5	* 0.923	62.7	LOS E	24.5	179.4	0.99	0.98	1.12	20.3
12	R2	692	2.6	692	2.6	0.892	85.3	LOS F	18.1	129.6	1.00	0.94	1.20	18.1
Approach		2138	4.6	2138	4.6	0.923	70.4	LOS E	24.5	179.4	1.00	0.97	1.15	19.4
All Vehicles		5225	3.9	5225	3.9	0.935	68.9	LOS E	35.1	255.9	0.98	0.97	1.13	21.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS1350 [5. Warringah Rd-Ellis Rd-Government Rd - AM (Site Folder: AM Network (SIDRA Optimised))]

Network: 5 [AM 2020 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 130 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, C, D, E
Output Phase Sequence: A, C, D, E

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Government Rd														
1	L2	47	0.0	47	0.0	0.593	60.8	LOS E	6.1	42.8	0.98	0.80	0.98	19.8
2	T1	118	0.0	118	0.0	0.593	56.3	LOS D	6.1	42.8	0.98	0.80	0.98	28.1
3	R2	165	1.3	165	1.3	* 0.894	80.1	LOS F	7.4	52.4	1.00	1.02	1.39	23.6
Approach		331	0.6	331	0.6	0.894	68.9	LOS E	7.4	52.4	0.99	0.91	1.19	24.8
East: Warring Rd - E														
4	L2	72	2.9	72	2.9	0.720	29.8	LOS C	20.9	154.6	0.81	0.75	0.81	36.5
5	T1	2149	6.8	2149	6.8	0.720	23.0	LOS B	21.1	156.6	0.81	0.74	0.81	33.5
6	R2	401	2.6	401	2.6	* 0.923	63.9	LOS E	13.0	93.1	1.00	1.04	1.31	27.2
Approach		2622	6.0	2622	6.0	0.923	29.4	LOS C	21.1	156.6	0.84	0.79	0.88	31.6
North: Ellis Rd														
7	L2	183	3.4	183	3.4	0.481	45.9	LOS D	7.3	52.3	0.88	0.80	0.88	31.2
8	T1	44	0.0	44	0.0	0.481	42.8	LOS D	7.3	52.3	0.88	0.80	0.88	28.7
9	R2	41	0.0	41	0.0	0.314	68.5	LOS E	1.6	11.1	0.98	0.74	0.98	17.7
Approach		268	2.4	268	2.4	0.481	48.9	LOS D	7.3	52.3	0.89	0.79	0.89	28.7
West: Warringah Rd - W														
10	L2	24	17.4	24	17.4	* 0.896	56.2	LOS D	28.5	212.4	1.00	1.02	1.14	37.2
11	T1	2034	7.2	2034	7.2	0.896	49.4	LOS D	28.8	213.8	1.00	1.02	1.14	39.5
12	R2	39	16.2	39	16.2	0.160	59.7	LOS E	1.3	10.7	0.91	0.74	0.91	32.9
Approach		2097	7.5	2097	7.5	0.896	49.7	LOS D	28.8	213.8	1.00	1.01	1.14	39.3
All Vehicles		5318	6.1	5318	6.1	0.923	40.8	LOS C	28.8	213.8	0.91	0.88	1.00	34.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS1304 [6. Forest Way-Adams St - AM (Site Folder: AM Network (SIDRA Optimised))]

Network: 5 [AM 2020 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Forest Way - S														
1	L2	297	3.9	297	3.9	0.743	38.7	LOS C	16.1	118.4	0.91	0.85	0.91	33.1
2	T1	1244	9.1	1244	9.1	* 0.743	33.1	LOS C	16.8	126.6	0.92	0.83	0.92	43.8
3	R2	13	8.3	13	8.3	0.743	41.7	LOS C	14.7	110.7	0.93	0.83	0.94	33.4
Approach		1554	8.1	1554	8.1	0.743	34.3	LOS C	16.8	126.6	0.92	0.83	0.92	41.7
East: Adams St - E														
4	L2	44	0.0	44	0.0	0.757	60.2	LOS E	7.9	56.2	1.00	0.89	1.11	19.5
5	T1	89	1.2	89	1.2	* 0.757	55.7	LOS D	7.9	56.2	1.00	0.89	1.11	27.9
6	R2	84	2.5	84	2.5	0.757	60.2	LOS E	7.9	56.2	1.00	0.89	1.11	33.7
Approach		218	1.4	218	1.4	0.757	58.4	LOS E	7.9	56.2	1.00	0.89	1.11	29.1
North: Forest Way - N														
7	L2	108	2.9	108	2.9	0.701	38.6	LOS C	15.3	113.8	0.90	0.81	0.90	41.9
8	T1	1488	8.1	1488	8.1	0.701	31.2	LOS C	15.9	119.0	0.89	0.80	0.89	39.5
Approach		1597	7.8	1597	7.8	0.701	31.7	LOS C	15.9	119.0	0.89	0.80	0.89	39.8
West: Adams St - W														
10	L2	11	10.0	11	10.0	* 0.733	48.2	LOS D	12.3	87.7	0.97	0.86	0.99	36.6
11	T1	112	0.9	112	0.9	0.733	43.5	LOS D	12.3	87.7	0.97	0.86	0.99	30.6
12	R2	619	1.9	619	1.9	0.733	48.1	LOS D	12.3	87.7	0.97	0.86	0.99	22.0
Approach		741	1.8	741	1.8	0.733	47.4	LOS D	12.3	87.7	0.97	0.86	0.99	24.0
All Vehicles		4109	6.5	4109	6.5	0.757	36.9	LOS C	16.8	126.6	0.92	0.83	0.93	36.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS4706 [7. Forest Way-Naree Rd - AM (Site Folder: AM Network (SIDRA Optimised))]

Network: 5 [AM 2020 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 160 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Forest Way-S														
2	T1	1305	9.0	1305	9.0	0.340	9.5	LOS A	7.8	59.0	0.42	0.37	0.42	47.5
3	R2	159	11.3	159	11.3	* 0.787	87.7	LOS F	8.6	65.8	1.00	1.07	1.18	13.1
Approach		1464	9.3	1464	9.3	0.787	18.0	LOS B	8.6	65.8	0.48	0.45	0.50	36.9
East: Naree Rd-E														
4	L2	181	1.7	181	1.7	0.310	46.2	LOS D	6.3	45.0	0.79	0.77	0.79	12.6
6	R2	248	3.4	248	3.4	* 0.664	66.3	LOS E	10.9	78.6	0.97	0.84	0.97	9.5
Approach		429	2.7	429	2.7	0.664	57.8	LOS E	10.9	78.6	0.89	0.81	0.89	10.6
North: Forest Way-N														
7	L2	275	3.1	275	3.1	0.666	29.1	LOS C	21.8	159.5	0.71	0.80	0.71	26.3
8	T1	1877	6.6	1877	6.6	* 0.666	26.8	LOS B	22.8	168.7	0.73	0.79	0.73	26.5
Approach		2152	6.2	2152	6.2	0.666	27.1	LOS B	22.8	168.7	0.73	0.79	0.73	26.5
All Vehicles		4045	6.9	4045	6.9	0.787	27.1	LOS B	22.8	168.7	0.66	0.67	0.66	26.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS4712 [8. FFR-Rabbett Street - AM (Site Folder: AM Network (SIDRA Optimised))]

Network: 5 [AM 2020 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Two-Phase
Reference Phase: Phase A
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Rabbett St-S														
1	L2	15	7.1	15	7.1	0.048	21.7	LOS B	0.5	3.5	0.63	0.63	0.63	22.6
2	T1	6	0.0	6	0.0	0.048	17.0	LOS B	0.5	3.5	0.63	0.63	0.63	31.3
3	R2	9	0.0	9	0.0	0.048	21.6	LOS B	0.5	3.5	0.63	0.63	0.63	22.6
Approach		31	3.4	31	3.4	0.048	20.7	LOS B	0.5	3.5	0.63	0.63	0.63	25.0
East: FFRW-E														
4	L2	23	68.2	23	68.2	* 0.620	33.0	LOS C	8.8	65.3	0.89	0.78	0.89	27.2
5	T1	366	2.9	366	2.9	0.620	26.7	LOS B	8.8	65.3	0.89	0.78	0.89	20.6
6	R2	175	1.8	175	1.8	0.638	38.9	LOS C	4.5	31.6	0.94	0.84	0.98	23.9
Approach		564	5.2	564	5.2	0.638	30.8	LOS C	8.8	65.3	0.91	0.80	0.92	22.3
North: Rabbett St-N														
7	L2	381	0.8	381	0.8	0.543	23.0	LOS B	8.5	60.2	0.77	0.79	0.77	22.5
8	T1	15	0.0	15	0.0	0.543	18.5	LOS B	8.5	60.2	0.77	0.79	0.77	30.1
9	R2	48	0.0	48	0.0	* 0.543	23.0	LOS B	8.5	60.2	0.77	0.79	0.77	22.5
Approach		444	0.7	444	0.7	0.543	22.9	LOS B	8.5	60.2	0.77	0.79	0.77	22.9
West: Naree Rd-W														
10	L2	22	9.5	22	9.5	0.346	29.1	LOS C	4.4	32.2	0.80	0.68	0.80	28.0
11	T1	412	5.9	412	5.9	0.346	24.1	LOS B	4.4	32.7	0.79	0.67	0.79	19.2
12	R2	1	0.0	1	0.0	0.346	28.3	LOS B	4.4	32.7	0.79	0.66	0.79	27.8
Approach		435	6.1	435	6.1	0.346	24.3	LOS B	4.4	32.7	0.79	0.67	0.79	19.9
All Vehicles		1474	4.1	1474	4.1	0.638	26.3	LOS B	8.8	65.3	0.82	0.75	0.83	21.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS4751 [FFR-Bluegum Cres - AM (Site Folder: AM Network (SIDRA Optimised))]

Network: 5 [AM 2020 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: School Access-S														
1	L2	6	0.0	6	0.0	0.028	41.5	LOS C	0.2	1.1	0.90	0.64	0.90	21.1
2	T1	1	0.0	1	0.0	0.261	39.4	LOS C	1.4	9.5	0.94	0.74	0.94	27.2
3	R2	53	0.0	53	0.0	0.261	42.9	LOS D	1.4	9.5	0.94	0.74	0.94	20.8
Approach		60	0.0	60	0.0	0.261	42.7	LOS D	1.4	9.5	0.93	0.73	0.93	21.0
East: FFRW-E														
4	L2	49	0.0	49	0.0	0.308	10.1	LOS A	4.2	31.0	0.45	0.43	0.45	36.1
5	T1	561	5.8	561	5.8	0.308	7.1	LOS A	4.2	31.0	0.46	0.44	0.46	28.3
6	R2	53	0.0	53	0.0	0.308	11.1	LOS A	3.3	24.3	0.47	0.46	0.47	35.4
Approach		663	4.9	663	4.9	0.308	7.6	LOS A	4.2	31.0	0.46	0.44	0.46	30.7
North: Bluegum Cres - N														
7	L2	53	0.0	53	0.0	0.245	42.5	LOS D	1.4	9.6	0.93	0.74	0.93	20.9
8	T1	1	0.0	1	0.0	0.245	39.1	LOS C	1.4	9.6	0.93	0.74	0.93	27.3
9	R2	1	0.0	1	0.0	* 0.245	42.6	LOS D	1.4	9.6	0.93	0.74	0.93	20.9
Approach		55	0.0	55	0.0	0.245	42.5	LOS C	1.4	9.6	0.93	0.74	0.93	21.1
West: FFRW-W														
10	L2	53	0.0	53	0.0	* 0.370	10.5	LOS A	5.1	36.9	0.48	0.45	0.48	36.2
11	T1	697	3.9	697	3.9	0.370	7.1	LOS A	5.1	36.9	0.48	0.45	0.48	30.3
12	R2	53	0.0	53	0.0	0.370	10.5	LOS A	4.3	31.3	0.47	0.45	0.47	36.2
Approach		802	3.4	802	3.4	0.370	7.5	LOS A	5.1	36.9	0.48	0.45	0.48	31.9
All Vehicles		1580	3.8	1580	3.8	0.370	10.1	LOS A	5.1	36.9	0.50	0.47	0.50	29.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS4705 [9. FFR-Gladys Ave - AM (Site Folder: AM Network (SIDRA Optimised))]

Network: 5 [AM 2020 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 130 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, D, E, F
Output Phase Sequence: A, B, D, E, F

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Hospital Access-S														
1	L2	29	0.0	29	0.0	0.039	17.5	LOS B	0.5	3.6	0.60	0.62	0.60	29.1
2	T1	1	0.0	1	0.0	0.039	14.1	LOS A	0.5	3.6	0.60	0.62	0.60	33.6
3	R2	62	0.0	62	0.0	0.117	39.9	LOS C	1.8	12.4	0.78	0.70	0.78	21.6
Approach		93	0.0	93	0.0	0.117	32.5	LOS C	1.8	12.4	0.72	0.67	0.72	23.7
East: FFRW-E														
4	L2	193	0.5	193	0.5	* 0.337	19.8	LOS B	3.4	26.4	0.76	0.73	0.76	31.4
5	T1	618	4.9	618	4.9	* 0.518	39.4	LOS C	9.7	68.3	0.88	0.75	0.88	15.6
6	R2	12	0.0	12	0.0	0.135	71.1	LOS F	0.5	3.2	0.99	0.68	0.99	19.8
Approach		822	3.8	822	3.8	0.518	35.3	LOS C	9.7	68.3	0.85	0.75	0.85	20.3
North: Gladys Ave-N														
7	L2	7	0.0	7	0.0	* 0.322	51.5	LOS D	0.8	6.0	1.00	0.74	1.00	19.2
8	T1	6	0.0	6	0.0	* 0.322	48.1	LOS D	0.8	6.0	1.00	0.74	1.00	25.8
9	R2	16	13.3	16	13.3	0.322	51.5	LOS D	0.8	6.0	1.00	0.74	1.00	19.2
Approach		29	7.1	29	7.1	0.322	50.8	LOS D	0.8	6.0	1.00	0.74	1.00	21.0
West: FFRW-W														
10	L2	12	18.2	12	18.2	0.560	36.3	LOS C	12.4	89.8	0.83	0.73	0.83	26.4
11	T1	774	3.1	774	3.1	0.560	32.3	LOS C	12.4	89.8	0.82	0.72	0.82	14.5
12	R2	74	0.0	74	0.0	* 0.430	36.4	LOS C	1.7	11.6	0.98	0.75	0.98	25.6
Approach		859	3.1	859	3.1	0.560	32.7	LOS C	12.4	89.8	0.84	0.72	0.84	16.5
All Vehicles		1803	3.3	1803	3.3	0.560	34.2	LOS C	12.4	89.8	0.84	0.73	0.84	19.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS0848 [10. Wakehurst Pkwy-FFR - AM (Site Folder: AM Network (SIDRA Optimised))]

Network: 5 [AM 2020 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 160 seconds (Network User-Given Cycle Time)

Timings based on settings in the Network Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, C, D, E, G
Output Phase Sequence: A, C, D, E, G

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Wakehurst Pkwy-S														
1	L2	120	7.9	120	7.9	0.165	30.1	LOS C	3.3	24.7	0.80	0.77	0.80	20.4
2	T1	644	5.6	644	5.6	* 0.582	58.8	LOS E	16.0	117.4	0.93	0.81	0.93	27.9
3	R2	85	7.4	85	7.4	* 0.595	91.4	LOS F	4.2	31.3	1.00	0.78	1.01	8.5
Approach		849	6.1	849	6.1	0.595	58.0	LOS E	16.0	117.4	0.92	0.80	0.92	25.1
East: FFRE-E														
4	L2	155	7.5	155	7.5	0.119	39.0	LOS C	2.4	17.7	0.69	0.70	0.69	22.1
5	T1	588	3.4	588	3.4	* 0.586	55.6	LOS D	11.9	84.3	0.93	0.79	0.93	17.9
6	R2	89	4.7	89	4.7	* 0.578	82.6	LOS F	4.3	31.0	1.00	0.78	1.00	23.8
Approach		833	4.3	833	4.3	0.586	55.4	LOS D	11.9	84.3	0.89	0.77	0.89	19.5
North: Wakehurst Pkwy-N														
7	L2	116	0.0	116	0.0	0.092	9.0	LOS A	1.0	6.7	0.23	0.64	0.23	52.3
8	T1	791	2.9	791	2.9	0.337	32.6	LOS C	8.3	59.6	0.72	0.62	0.72	32.0
9	R2	138	4.6	138	4.6	* 0.555	42.8	LOS D	3.4	24.9	0.98	0.80	0.98	27.1
Approach		1044	2.8	1044	2.8	0.555	31.3	LOS C	8.3	59.6	0.70	0.64	0.70	32.6
West: FFRW-E														
10	L2	157	0.7	157	0.7	0.285	29.5	LOS C	4.4	33.3	0.76	0.73	0.76	36.6
11	T1	517	3.9	517	3.9	0.502	53.3	LOS D	10.1	71.4	0.90	0.77	0.90	14.2
12	R2	142	3.0	142	3.0	0.446	81.4	LOS F	3.3	23.9	0.99	0.77	0.99	10.2
Approach		816	3.1	816	3.1	0.502	53.6	LOS D	10.1	71.4	0.89	0.76	0.89	17.4
All Vehicles		3542	4.0	3542	4.0	0.595	48.5	LOS D	16.0	117.4	0.84	0.74	0.84	23.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS4750 [11. FFR-Romford Rd - AM (Site Folder: AM Network (SIDRA Optimised))]

Network: 5 [AM 2020 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Two-Phase
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Local Business Access														
1	L2	41	2.6	41	2.6	0.336	41.7	LOS C	1.1	8.1	0.98	0.73	0.98	16.0
2	T1	5	0.0	5	0.0	* 0.336	40.7	LOS C	1.1	8.1	0.98	0.73	0.98	24.1
3	R2	19	5.6	19	5.6	0.141	41.1	LOS C	0.5	3.3	0.96	0.69	0.96	16.0
Approach		65	3.2	65	3.2	0.336	41.5	LOS C	1.1	8.1	0.98	0.72	0.98	16.9
East: FFRE-E														
5	T1	573	7.4	573	7.4	0.367	16.3	LOS B	4.8	35.7	0.71	0.61	0.71	27.4
6	R2	8	0.0	8	0.0	0.367	20.9	LOS B	4.5	33.8	0.71	0.61	0.71	38.1
Approach		581	7.2	581	7.2	0.367	16.3	LOS B	4.8	35.7	0.71	0.61	0.71	27.7
North: Romford Rd														
7	L2	15	0.0	15	0.0	* 0.366	31.8	LOS C	3.4	24.0	0.87	0.78	0.87	26.9
9	R2	154	1.4	154	1.4	0.366	31.8	LOS C	3.4	24.0	0.87	0.78	0.87	26.9
Approach		168	1.3	168	1.3	0.366	31.8	LOS C	3.4	24.0	0.87	0.78	0.87	26.9
West: FFRE-W														
10	L2	60	1.8	60	1.8	* 0.382	22.3	LOS B	4.8	34.5	0.74	0.66	0.74	38.6
11	T1	529	4.8	529	4.8	0.382	17.0	LOS B	4.9	36.0	0.73	0.64	0.73	31.6
Approach		589	4.5	589	4.5	0.382	17.5	LOS B	4.9	36.0	0.73	0.64	0.73	32.8
All Vehicles		1404	5.2	1404	5.2	0.382	19.8	LOS B	4.9	36.0	0.75	0.65	0.75	28.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS4711 [12. Allambie Rd-Patanga Rd-FFE - AM (Site Folder: AM Network (SIDRA Optimised))]

Network: 5 [AM 2020 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 100 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Allambie Rd-S														
1	L2	791	1.6	791	1.6	0.308	10.5	LOS A	4.4	31.5	0.41	0.64	0.41	21.7
3	R2	22	0.0	22	0.0	* 0.198	55.8	LOS D	0.7	4.7	0.98	0.70	0.98	12.1
Approach		813	1.6	813	1.6	0.308	11.7	LOS A	4.4	31.5	0.43	0.64	0.43	20.7
East: FFRE-E														
4	L2	12	9.1	12	9.1	0.032	31.3	LOS C	0.2	1.9	0.73	0.66	0.73	14.1
5	T1	23	36.4	23	36.4	* 0.245	52.1	LOS D	0.7	6.5	0.99	0.70	0.99	9.7
Approach		35	27.3	35	27.3	0.245	45.2	LOS D	0.7	6.5	0.90	0.69	0.90	10.8
North: Patanga Rd-N														
9	R2	26	28.0	26	28.0	* 0.283	57.2	LOS E	0.8	7.1	0.99	0.72	0.99	19.7
Approach		26	28.0	26	28.0	0.283	57.2	LOS E	0.8	7.1	0.99	0.72	0.99	19.7
West: FFRE-W														
10	L2	20	31.6	20	31.6	0.241	10.4	LOS A	3.3	24.3	0.39	0.36	0.39	43.0
11	T1	292	4.3	292	4.3	0.241	5.7	LOS A	3.3	24.3	0.39	0.36	0.39	37.6
12	R2	328	4.2	328	4.2	* 0.460	17.5	LOS B	5.6	40.9	0.61	0.74	0.61	13.9
Approach		640	5.1	640	5.1	0.460	11.9	LOS A	5.6	40.9	0.50	0.55	0.50	26.1
All Vehicles		1514	4.1	1514	4.1	0.460	13.4	LOS A	5.6	40.9	0.48	0.61	0.48	22.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: [13. FFR-Iverness Avenue - AM (Site Folder: AM Network (SIDRA Optimised))]

Network: 5 [AM 2020 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Existing Design 2020
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Local Site Access														
1	L2	13	0.0	13	0.0	0.172	2.8	LOS A	0.2	1.6	0.79	0.74	0.79	18.9
2	T1	2	0.0	2	0.0	0.172	22.8	LOS B	0.2	1.6	0.79	0.74	0.79	27.2
3	R2	12	18.2	12	18.2	0.172	47.3	LOS D	0.2	1.6	0.79	0.74	0.79	18.9
Approach		26	8.0	26	8.0	0.172	24.0	LOS B	0.2	1.6	0.79	0.74	0.79	19.8
East: FFRE - E														
4	L2	54	5.9	54	5.9	0.236	4.6	LOS A	0.0	0.0	0.00	0.07	0.00	48.4
5	T1	740	3.4	740	3.4	0.236	0.3	LOS A	0.2	1.8	0.08	0.07	0.08	43.3
6	R2	46	0.0	46	0.0	0.236	7.7	LOS A	0.2	1.8	0.16	0.07	0.16	47.1
Approach		840	3.4	840	3.4	0.236	1.0	NA	0.2	1.8	0.08	0.07	0.08	45.3
North: Iverness Avenue														
7	L2	72	0.0	72	0.0	0.070	5.8	LOS A	0.1	0.8	0.36	0.57	0.36	43.0
Approach		72	0.0	72	0.0	0.070	5.8	LOS A	0.1	0.8	0.36	0.57	0.36	43.0
West: FFRE - W														
10	L2	2	0.0	2	0.0	0.156	4.6	LOS A	0.0	0.0	0.00	0.00	0.00	49.3
11	T1	556	5.3	556	5.3	0.156	0.2	LOS A	0.1	0.6	0.04	0.01	0.04	49.0
12	R2	11	0.0	11	0.0	0.156	9.7	LOS A	0.1	0.6	0.08	0.02	0.08	31.1
Approach		568	5.2	568	5.2	0.156	0.4	NA	0.1	0.6	0.04	0.01	0.04	47.6
All Vehicles		1506	4.0	1506	4.0	0.236	1.4	NA	0.2	1.8	0.09	0.08	0.09	43.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

USER REPORT FOR NETWORK SITE

All Movement Classes

Project: 16036 OPM 210505 SCATS vs Optimised Existing Case **Template: Movement Summary**

Site: TCS0007 [1. Warringah Rd-Forest Way - PM (Site Folder: PM Network (SIDRA Optimised))] **Network: 6 [PM 2020 (Network Folder: SIDRA Optimised)]**

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Network User-Given Cycle Time)

Timings based on settings in the Network Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Warringah Rd-E														
5	T1	298	5.3	298	5.3	0.238	12.3	LOS A	6.2	45.5	0.51	0.45	0.51	47.4
6	R2	1087	4.0	1087	4.0	* 0.827	79.4	LOS F	16.6	119.8	1.00	0.89	1.05	16.6
Approach		1385	4.3	1385	4.3	0.827	65.0	LOS E	16.6	119.8	0.90	0.79	0.94	19.3
North: Forest Way-N														
7	L2	1082	3.6	1082	3.6	0.557	10.8	LOS A	3.2	23.0	0.07	0.58	0.07	46.2
9	R2	674	5.3	674	5.3	* 0.806	64.3	LOS E	15.9	112.5	0.97	0.87	1.01	17.0
Approach		1756	4.3	1756	4.3	0.806	31.3	LOS C	15.9	112.5	0.42	0.69	0.43	27.9
West: Warringah Rd-W														
10	L2	823	5.6	823	5.6	0.349	17.6	LOS B	7.7	56.6	0.46	0.73	0.46	34.1
11	T1	1048	1.1	1048	1.1	* 0.810	44.2	LOS D	23.3	164.5	0.93	0.85	0.95	19.3
Approach		1872	3.1	1872	3.1	0.810	32.5	LOS C	23.3	164.5	0.72	0.79	0.74	23.8
All Vehicles		5013	3.8	5013	3.8	0.827	41.1	LOS C	23.3	164.5	0.66	0.76	0.68	23.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS0781 [2. Warringah Rd-Hilmer St - PM (Site Folder: PM Network (SIDRA Optimised))]

Network: 6 [PM 2020 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Network User-Given Cycle Time)

Timings based on settings in the Network Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Two-Phase
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Hilmer St-S														
1	L2	37	2.9	37	2.9	0.179	70.3	LOS E	1.5	10.9	0.94	0.73	0.94	17.3
3	R2	71	1.5	71	1.5	0.186	57.2	LOS E	2.6	18.4	0.86	0.75	0.86	19.7
Approach		107	2.0	107	2.0	0.186	61.7	LOS E	2.6	18.4	0.89	0.74	0.89	18.8
East: Warringah Rd-E														
4	L2	15	7.1	15	7.1	0.425	22.1	LOS B	8.5	61.8	0.46	0.42	0.46	40.7
5	T1	1338	4.5	1338	4.5	0.425	10.8	LOS A	8.5	61.8	0.33	0.30	0.33	36.3
Approach		1353	4.5	1353	4.5	0.425	10.9	LOS A	8.5	61.8	0.33	0.30	0.33	36.5
North: Hospital Site Access-N														
7	L2	21	0.0	21	0.0	0.189	78.4	LOS F	0.9	6.5	0.98	0.70	0.98	14.9
9	R2	32	0.0	32	0.0	0.082	54.5	LOS D	1.1	7.9	0.84	0.69	0.84	18.5
Approach		53	0.0	53	0.0	0.189	64.1	LOS E	1.1	7.9	0.90	0.70	0.90	16.9
West: Warringah Rd-W														
10	L2	17	0.0	17	0.0	* 0.587	27.4	LOS B	17.8	127.3	0.64	0.60	0.64	15.6
11	T1	2053	2.6	2053	2.6	0.587	7.2	LOS A	17.8	127.3	0.28	0.26	0.28	53.5
12	R2	80	1.3	80	1.3	0.384	81.4	LOS F	3.6	25.6	1.00	0.78	1.00	24.6
Approach		2149	2.5	2149	2.5	0.587	10.2	LOS A	17.8	127.3	0.31	0.28	0.31	47.6
All Vehicles		3662	3.2	3662	3.2	0.587	12.7	LOS A	17.8	127.3	0.35	0.31	0.35	41.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS0375 [3. Warringah Rd-Wakehurst Pkwy - PM (Site Folder: PM Network (SIDRA Optimised))]

Network: 6 [PM 2020 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Network User-Given Cycle Time)

Timings based on settings in the Network Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Variable Phasing
Reference Phase: Phase A
Input Phase Sequence: A, D, E, F
Output Phase Sequence: A, D, E, F

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Wakehurst Pkwy-S														
1b	L3	379	3.6	379	3.6	0.716	32.9	LOS C	9.1	65.6	0.93	0.85	0.93	31.9
1	L2	207	3.6	207	3.6	0.343	28.5	LOS C	4.2	30.5	0.80	0.78	0.80	34.4
2	T1	358	2.9	358	2.9	* 0.781	72.7	LOS F	9.1	65.4	1.00	0.89	1.13	19.3
3	R2	84	6.3	84	6.3	0.254	62.8	LOS E	3.2	23.8	0.90	0.77	0.90	21.0
Approach		1028	3.6	1028	3.6	0.781	48.3	LOS D	9.1	65.6	0.93	0.84	0.97	25.4
East: Warringah Rd-E														
4	L2	69	1.5	69	1.5	0.075	18.2	LOS B	1.1	7.7	0.64	0.71	0.64	47.7
4a	L1	926	3.4	926	3.4	* 0.774	52.4	LOS D	19.5	140.4	1.00	0.89	1.01	14.1
Approach		996	3.3	996	3.3	0.774	50.0	LOS D	19.5	140.4	0.97	0.88	0.98	16.2
North: Wakehurst Pkwy-N														
7	L2	32	6.7	32	6.7	0.713	69.7	LOS E	7.7	55.2	0.98	0.82	1.01	11.7
8	T1	333	1.3	333	1.3	0.713	63.3	LOS E	7.9	55.8	0.98	0.82	1.01	27.7
9a	R1	128	10.7	128	10.7	0.387	63.5	LOS E	5.4	41.0	0.98	0.80	0.98	12.2
9	R2	442	1.7	442	1.7	* 0.801	71.1	LOS F	12.5	88.6	0.98	0.86	1.05	10.7
Approach		935	2.9	935	2.9	0.801	67.2	LOS E	12.5	88.6	0.98	0.84	1.02	17.7
West: Warringah Rd- EB Approach and Underpass WB Exit														
10	L2	731	1.3	731	1.3	0.505	7.6	LOS A	2.2	15.3	0.07	0.60	0.07	34.8
11	T1	828	4.1	828	4.1	0.258	9.9	LOS A	3.9	28.5	0.29	0.25	0.29	30.4
12	R2	585	1.8	585	1.8	* 0.798	66.2	LOS E	13.4	95.2	0.98	0.88	1.07	23.2
Approach		2144	2.5	2144	2.5	0.798	24.5	LOS B	13.4	95.2	0.40	0.54	0.43	26.0
All Vehicles		5103	2.9	5103	2.9	0.801	42.1	LOS C	19.5	140.4	0.73	0.72	0.75	21.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS0713 [4. Warringah Rd-Allambie Rd - PM (Site Folder: PM Network (SIDRA Optimised))]

Network: 6 [PM 2020 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Network User-Given Cycle Time)

Timings based on settings in the Network Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, C, D, E, F
Output Phase Sequence: A, C, D, E, F

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Allambie Rd-S														
2	T1	357	2.4	357	2.4	0.670	49.6	LOS D	13.7	97.6	0.92	0.81	0.92	8.1
3	R2	278	0.8	278	0.8	0.348	63.7	LOS E	5.4	38.1	0.89	0.90	0.89	6.3
Approach		635	1.7	635	1.7	0.670	55.8	LOS D	13.7	97.6	0.91	0.85	0.91	7.2
East: Warringah Rd-E														
4	L2	180	1.2	180	1.2	* 0.737	46.4	LOS D	20.4	146.0	0.92	0.86	0.92	36.1
5	T1	1538	3.3	1538	3.3	0.737	39.6	LOS C	21.7	156.4	0.91	0.83	0.91	36.5
6	R2	299	0.4	299	0.4	* 0.390	35.7	LOS C	3.3	23.1	0.91	0.78	0.91	38.5
Approach		2017	2.7	2017	2.7	0.737	39.6	LOS C	21.7	156.4	0.91	0.82	0.91	36.7
North: Allambie Rd-N														
7	L2	20	0.0	20	0.0	* 0.866	88.8	LOS F	5.6	40.5	1.00	1.00	1.33	4.2
8	T1	207	4.1	207	4.1	* 0.866	84.7	LOS F	5.6	40.5	1.00	0.98	1.34	7.7
Approach		227	3.7	227	3.7	0.866	85.1	LOS F	5.6	40.5	1.00	0.99	1.34	7.4
West: Warringah Rd-W														
10	L2	41	2.6	41	2.6	* 0.886	59.5	LOS E	24.1	172.4	0.98	0.93	1.05	22.7
11	T1	1649	2.4	1649	2.4	0.886	45.4	LOS D	24.5	175.3	0.95	0.90	1.02	25.2
12	R2	522	1.4	522	1.4	0.852	80.2	LOS F	12.4	88.1	1.00	0.91	1.18	18.9
Approach		2213	2.1	2213	2.1	0.886	53.9	LOS D	24.5	175.3	0.96	0.90	1.06	23.1
All Vehicles		5092	2.4	5092	2.4	0.886	49.9	LOS D	24.5	175.3	0.94	0.87	0.99	26.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS1350 [5. Warringah Rd-Ellis Rd-Government Rd - PM (Site Folder: PM Network (SIDRA Optimised))]

Network: 6 [PM 2020 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, C, D, E
Output Phase Sequence: A, C, D, E

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Government Rd														
1	L2	33	0.0	33	0.0	0.325	63.6	LOS E	3.1	22.2	0.94	0.75	0.94	19.1
2	T1	48	4.3	48	4.3	0.325	59.0	LOS E	3.1	22.2	0.94	0.75	0.94	27.4
3	R2	164	2.6	164	2.6	* 1.023	130.4	LOS F	10.0	71.5	1.00	1.22	1.78	17.2
Approach		245	2.6	245	2.6	1.023	107.4	LOS F	10.0	71.5	0.98	1.06	1.51	19.0
East: Warring Rd - E														
4	L2	78	10.8	78	10.8	0.665	28.4	LOS B	20.2	147.5	0.75	0.70	0.75	37.1
5	T1	2088	4.6	2088	4.6	0.665	21.5	LOS B	20.5	149.1	0.74	0.69	0.74	34.7
6	R2	340	2.5	340	2.5	* 0.966	92.1	LOS F	14.6	104.1	1.00	1.14	1.45	22.0
Approach		2506	4.5	2506	4.5	0.966	31.3	LOS C	20.5	149.1	0.78	0.75	0.84	30.4
North: Ellis Rd														
7	L2	131	1.6	131	1.6	0.448	54.7	LOS D	6.4	45.4	0.91	0.79	0.91	28.9
8	T1	47	0.0	47	0.0	0.448	51.6	LOS D	6.4	45.4	0.91	0.79	0.91	26.9
9	R2	21	0.0	21	0.0	0.127	66.9	LOS E	0.8	5.7	0.94	0.71	0.94	17.9
Approach		199	1.1	199	1.1	0.448	55.3	LOS D	6.4	45.4	0.91	0.79	0.91	27.3
West: Warringah Rd - W														
10	L2	21	0.0	21	0.0	0.940	63.7	LOS E	41.9	302.7	1.00	1.07	1.18	35.1
11	T1	2553	3.7	2553	3.7	* 0.940	57.2	LOS E	42.1	304.1	1.00	1.07	1.19	36.9
12	R2	69	6.1	69	6.1	0.273	65.0	LOS E	2.6	19.4	0.93	0.76	0.93	31.8
Approach		2643	3.7	2643	3.7	0.940	57.5	LOS E	42.1	304.1	1.00	1.06	1.18	36.7
All Vehicles		5594	4.0	5594	4.0	1.023	47.9	LOS D	42.1	304.1	0.90	0.91	1.03	33.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS1304 [6. Forest Way-Adams St - PM (Site Folder: PM Network (SIDRA Optimised))]

Network: 6 [PM 2020 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 110 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split-Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Forest Way - S														
1	L2	452	1.4	452	1.4	0.714	28.0	LOS B	16.4	117.7	0.83	0.82	0.83	37.3
2	T1	1316	5.6	1316	5.6	* 0.714	23.3	LOS B	16.9	124.1	0.84	0.77	0.84	49.1
3	R2	35	0.0	35	0.0	0.714	33.2	LOS C	12.5	91.2	0.87	0.79	0.87	36.8
Approach		1802	4.4	1802	4.4	0.714	24.7	LOS B	16.9	124.1	0.84	0.79	0.84	45.9
East: Adams St - E														
4	L2	34	3.1	34	3.1	0.721	56.8	LOS E	6.0	42.3	1.00	0.88	1.10	20.3
5	T1	79	0.0	79	0.0	* 0.721	52.2	LOS D	6.0	42.3	1.00	0.88	1.10	28.6
6	R2	67	0.0	67	0.0	0.721	56.8	LOS E	6.0	42.3	1.00	0.88	1.10	34.7
Approach		180	0.6	180	0.6	0.721	54.8	LOS D	6.0	42.3	1.00	0.88	1.10	29.9
North: Forest Way - N														
7	L2	144	0.7	144	0.7	0.564	26.8	LOS B	11.9	85.3	0.75	0.71	0.75	46.7
8	T1	1492	3.8	1492	3.8	0.564	19.5	LOS B	12.3	88.9	0.74	0.67	0.74	47.1
Approach		1636	3.5	1636	3.5	0.564	20.1	LOS B	12.3	88.9	0.74	0.67	0.74	47.0
West: Adams St - W														
10	L2	26	0.0	26	0.0	* 0.685	52.4	LOS D	7.0	49.3	0.99	0.85	1.03	35.8
11	T1	87	0.0	87	0.0	0.685	47.8	LOS D	7.0	49.3	0.99	0.85	1.03	29.6
12	R2	337	0.3	337	0.3	0.685	51.8	LOS D	7.3	51.6	0.99	0.85	1.03	21.1
Approach		451	0.2	451	0.2	0.685	51.0	LOS D	7.3	51.6	0.99	0.85	1.03	24.3
All Vehicles		4068	3.4	4068	3.4	0.721	27.1	LOS B	16.9	124.1	0.82	0.75	0.83	42.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS4706 [7. Forest Way-Naree Rd - PM (Site Folder: PM Network (SIDRA Optimised))]

Network: 6 [PM 2020 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 150 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Forest Way-S														
2	T1	1494	5.0	1494	5.0	0.420	13.4	LOS A	10.7	78.2	0.52	0.47	0.52	41.9
3	R2	192	6.6	192	6.6	* 0.788	79.1	LOS F	9.2	68.3	1.00	1.07	1.15	14.2
Approach		1685	5.2	1685	5.2	0.788	20.9	LOS B	10.7	78.2	0.58	0.54	0.59	34.3
East: Naree Rd-E														
4	L2	138	0.8	138	0.8	0.195	34.9	LOS C	3.9	27.6	0.68	0.73	0.68	15.4
6	R2	308	1.7	308	1.7	* 0.652	56.4	LOS D	12.2	86.8	0.94	0.84	0.94	10.8
Approach		446	1.4	446	1.4	0.652	49.8	LOS D	12.2	86.8	0.86	0.81	0.86	11.9
North: Forest Way-N														
7	L2	253	2.1	253	2.1	0.647	33.9	LOS C	19.3	138.4	0.77	0.76	0.77	24.7
8	T1	1609	3.3	1609	3.3	* 0.647	28.0	LOS B	20.0	144.2	0.78	0.72	0.78	25.6
Approach		1862	3.2	1862	3.2	0.647	28.8	LOS C	20.0	144.2	0.78	0.73	0.78	25.5
All Vehicles		3994	3.8	3994	3.8	0.788	27.8	LOS B	20.0	144.2	0.70	0.66	0.71	26.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS4712 [8. FFR-Rabbett Street - PM (Site Folder: PM Network (SIDRA Optimised))]

Network: 6 [PM 2020 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Two-Phase
Reference Phase: Phase A
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Rabbett St-S														
1	L2	5	0.0	5	0.0	0.032	25.9	LOS B	0.2	1.7	0.73	0.64	0.73	20.2
2	T1	3	0.0	3	0.0	0.032	21.3	LOS B	0.2	1.7	0.73	0.64	0.73	29.0
3	R2	6	0.0	6	0.0	0.032	25.9	LOS B	0.2	1.7	0.73	0.64	0.73	20.2
Approach		15	0.0	15	0.0	0.032	24.9	LOS B	0.2	1.7	0.73	0.64	0.73	22.7
East: FFRW-E														
4	L2	39	43.2	39	43.2	0.547	22.3	LOS B	8.0	58.4	0.77	0.69	0.77	32.8
5	T1	425	1.2	425	1.2	0.547	16.7	LOS B	8.0	58.4	0.77	0.69	0.77	26.3
6	R2	263	2.0	263	2.0	* 0.689	29.8	LOS C	5.8	41.0	0.90	0.86	0.97	27.1
Approach		727	3.8	727	3.8	0.689	21.8	LOS B	8.0	58.4	0.82	0.75	0.84	27.1
North: Rabbett St-N														
7	L2	255	0.4	255	0.4	0.529	28.6	LOS C	6.0	42.7	0.87	0.80	0.87	20.0
8	T1	35	3.0	35	3.0	0.529	24.1	LOS B	6.0	42.7	0.87	0.80	0.87	27.6
9	R2	16	6.7	16	6.7	* 0.529	28.7	LOS C	6.0	42.7	0.87	0.80	0.87	20.0
Approach		305	1.0	305	1.0	0.529	28.1	LOS B	6.0	42.7	0.87	0.80	0.87	21.1
West: Naree Rd-W														
10	L2	42	0.0	42	0.0	0.263	19.9	LOS B	3.3	23.7	0.67	0.60	0.67	32.9
11	T1	401	4.5	401	4.5	0.263	14.7	LOS B	3.3	24.2	0.66	0.57	0.66	25.1
12	R2	1	0.0	1	0.0	0.263	18.7	LOS B	3.3	24.2	0.65	0.55	0.65	33.5
Approach		444	4.0	444	4.0	0.263	15.2	LOS B	3.3	24.2	0.66	0.57	0.66	26.2
All Vehicles		1492	3.2	1492	3.2	0.689	21.1	LOS B	8.0	58.4	0.78	0.71	0.79	25.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS4751 [FFR-Bluegum Cres - PM (Site Folder: PM Network (SIDRA Optimised))]

Network: 6 [PM 2020 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: School Access-S														
1	L2	68	0.0	68	0.0	0.301	41.4	LOS C	1.7	12.2	0.95	0.74	0.95	16.1
2	T1	1	0.0	1	0.0	* 0.203	39.0	LOS C	1.1	7.4	0.93	0.71	0.93	24.3
3	R2	41	0.0	41	0.0	0.203	40.3	LOS C	1.1	7.4	0.93	0.71	0.93	16.2
Approach		111	0.0	111	0.0	0.301	41.0	LOS C	1.7	12.2	0.94	0.73	0.94	16.2
East: FFRW-E														
4	L2	21	0.0	21	0.0	* 0.318	10.9	LOS A	4.4	31.9	0.44	0.40	0.44	43.7
5	T1	615	4.3	615	4.3	0.318	6.8	LOS A	4.4	31.9	0.45	0.43	0.45	33.3
6	R2	63	0.0	63	0.0	0.318	12.2	LOS A	3.5	25.4	0.48	0.48	0.48	41.9
Approach		699	3.8	699	3.8	0.318	7.4	LOS A	4.4	31.9	0.46	0.44	0.46	35.7
North: Bluegum Cres - N														
7	L2	6	0.0	6	0.0	0.038	41.9	LOS C	0.2	1.4	0.90	0.66	0.90	23.7
8	T1	1	0.0	1	0.0	0.038	37.4	LOS C	0.2	1.4	0.90	0.66	0.90	31.9
9	R2	1	0.0	1	0.0	0.038	41.9	LOS C	0.2	1.4	0.90	0.66	0.90	23.7
Approach		8	0.0	8	0.0	0.038	41.3	LOS C	0.2	1.4	0.90	0.66	0.90	25.1
West: FFRW-W														
10	L2	34	0.0	34	0.0	0.287	11.1	LOS A	3.7	26.7	0.44	0.42	0.44	43.8
11	T1	613	3.1	613	3.1	0.287	6.4	LOS A	3.7	26.7	0.43	0.40	0.43	36.9
12	R2	16	0.0	16	0.0	0.287	10.7	LOS A	3.4	24.6	0.43	0.39	0.43	44.3
Approach		662	2.9	662	2.9	0.287	6.7	LOS A	3.7	26.7	0.43	0.40	0.43	38.1
All Vehicles		1480	3.1	1480	3.1	0.318	9.8	LOS A	4.4	31.9	0.49	0.44	0.49	31.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS4705 [9. FFR-Gladys Ave - PM (Site Folder: PM Network (SIDRA Optimised))]

Network: 6 [PM 2020 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, D, E, F
Output Phase Sequence: A, D, E, F

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Hospital Access-S														
1	L2	107	0.0	107	0.0	0.197	27.3	LOS B	2.2	15.4	0.76	0.72	0.76	25.2
2	T1	4	25.0	4	25.0	0.197	23.9	LOS B	2.2	15.4	0.76	0.72	0.76	33.8
3	R2	174	0.0	174	0.0	* 0.495	39.4	LOS C	4.3	30.1	0.94	0.79	0.94	21.7
Approach		285	0.4	285	0.4	0.495	34.6	LOS C	4.3	30.1	0.87	0.76	0.87	23.1
East: FFRW-E														
4	L2	81	1.3	81	1.3	0.173	15.6	LOS B	1.1	9.2	0.71	0.68	0.71	35.4
5	T1	583	4.5	583	4.5	0.420	23.9	LOS B	5.8	40.9	0.81	0.69	0.81	22.8
6	R2	9	0.0	9	0.0	0.077	49.3	LOS D	0.3	1.8	0.96	0.67	0.96	26.3
Approach		674	4.1	674	4.1	0.420	23.3	LOS B	5.8	40.9	0.80	0.69	0.80	25.3
North: Gladys Ave-N														
7	L2	13	8.3	13	8.3	0.134	26.9	LOS B	0.3	2.4	0.94	0.69	0.94	29.1
8	T1	1	0.0	1	0.0	* 0.134	23.7	LOS B	0.3	2.4	0.94	0.69	0.94	33.6
9	R2	8	0.0	8	0.0	0.134	26.9	LOS B	0.3	2.4	0.94	0.69	0.94	29.1
Approach		22	4.8	22	4.8	0.134	26.8	LOS B	0.3	2.4	0.94	0.69	0.94	29.4
West: FFRW-W														
10	L2	8	0.0	8	0.0	* 0.480	29.7	LOS C	6.7	47.7	0.84	0.72	0.84	33.1
11	T1	621	2.9	621	2.9	0.480	25.1	LOS B	6.7	48.3	0.84	0.72	0.84	18.4
12	R2	31	0.0	31	0.0	* 0.247	50.4	LOS D	0.8	5.8	0.98	0.72	0.98	23.2
Approach		660	2.7	660	2.7	0.480	26.3	LOS B	6.7	48.3	0.84	0.72	0.84	19.3
All Vehicles		1641	2.9	1641	2.9	0.495	26.5	LOS B	6.7	48.3	0.83	0.71	0.83	22.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS0848 [10. Wakehurst Pkwy-FFR - PM (Site Folder: PM Network (SIDRA Optimised))]

Network: 6 [PM 2020 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Network User-Given Cycle Time)

Timings based on settings in the Network Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, D, E, G
Output Phase Sequence: A, D, E, G

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Wakehurst Pkwy-S														
1	L2	67	1.6	67	1.6	0.063	14.2	LOS A	0.6	4.3	0.22	0.63	0.22	32.5
2	T1	952	1.5	952	1.5	* 0.664	41.5	LOS C	22.0	156.0	0.75	0.67	0.75	34.4
3	R2	69	6.1	69	6.1	0.532	73.2	LOS F	2.9	21.7	0.94	0.76	0.94	10.3
Approach		1088	1.8	1088	1.8	0.664	41.9	LOS C	22.0	156.0	0.73	0.67	0.73	32.6
East: FFRE-E														
4	L2	180	2.9	180	2.9	0.151	41.7	LOS C	2.8	20.0	0.74	0.72	0.74	21.3
5	T1	528	5.4	528	5.4	0.600	56.4	LOS D	10.2	71.7	0.95	0.80	0.95	17.8
6	R2	157	0.7	157	0.7	* 0.646	72.3	LOS F	6.8	48.0	1.00	0.82	1.01	25.7
Approach		865	4.0	865	4.0	0.646	56.2	LOS D	10.2	71.7	0.91	0.79	0.92	20.4
North: Wakehurst Pkwy-N														
7	L2	47	0.0	47	0.0	0.038	12.0	LOS A	0.6	3.9	0.31	0.64	0.31	48.4
8	T1	651	4.0	651	4.0	0.287	31.0	LOS C	6.4	46.1	0.71	0.60	0.71	32.9
9	R2	80	3.9	80	3.9	* 0.628	83.2	LOS F	3.7	26.6	1.00	0.79	1.05	17.1
Approach		778	3.8	778	3.8	0.628	35.2	LOS C	6.4	46.1	0.71	0.62	0.72	30.6
West: FFRW-E														
10	L2	164	1.9	164	1.9	0.420	55.9	LOS D	6.9	53.2	0.88	0.79	0.88	27.5
11	T1	582	3.8	582	3.8	* 0.657	57.2	LOS E	11.5	80.8	0.97	0.82	0.97	13.4
12	R2	111	1.9	111	1.9	0.226	67.8	LOS E	2.2	15.9	0.93	0.75	0.93	11.7
Approach		857	3.2	857	3.2	0.657	58.3	LOS E	11.5	80.8	0.95	0.81	0.95	16.4
All Vehicles		3588	3.1	3588	3.1	0.664	47.8	LOS D	22.0	156.0	0.82	0.72	0.82	24.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS4750 [11. FFR-Romford Rd - PM (Site Folder: PM Network (SIDRA Optimised))]

Network: 6 [PM 2020 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Two-Phase
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Local Business Access														
1	L2	68	0.0	68	0.0	0.395	35.1	LOS C	1.5	10.8	0.98	0.75	0.98	17.0
2	T1	5	0.0	5	0.0	* 0.395	34.0	LOS C	1.5	10.8	0.98	0.75	0.98	25.1
3	R2	24	0.0	24	0.0	0.130	34.1	LOS C	0.5	3.4	0.94	0.69	0.94	17.1
Approach		98	0.0	98	0.0	0.395	34.8	LOS C	1.5	10.8	0.97	0.73	0.97	17.6
East: FFRE-E														
5	T1	576	3.8	576	3.8	0.341	12.9	LOS A	4.0	29.2	0.68	0.58	0.68	30.2
6	R2	12	0.0	12	0.0	0.341	17.8	LOS B	3.8	27.6	0.68	0.59	0.68	39.7
Approach		587	3.8	587	3.8	0.341	13.0	LOS A	4.0	29.2	0.68	0.58	0.68	30.6
North: Romford Rd														
7	L2	12	0.0	12	0.0	* 0.345	34.2	LOS C	1.9	13.4	0.93	0.77	0.93	26.0
9	R2	85	1.2	85	1.2	0.345	34.2	LOS C	1.9	13.4	0.93	0.77	0.93	26.0
Approach		97	1.1	97	1.1	0.345	34.2	LOS C	1.9	13.4	0.93	0.77	0.93	26.0
West: FFRE-W														
10	L2	93	0.0	93	0.0	* 0.376	19.4	LOS B	4.2	30.1	0.72	0.66	0.72	39.8
11	T1	525	3.8	525	3.8	0.376	13.6	LOS A	4.4	31.8	0.70	0.62	0.70	33.9
Approach		618	3.2	618	3.2	0.376	14.5	LOS A	4.4	31.8	0.70	0.62	0.70	35.4
All Vehicles		1400	3.1	1400	3.1	0.395	16.6	LOS B	4.4	31.8	0.73	0.62	0.73	30.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS4711 [12. Allambie Rd-Patanga Rd-FFE - PM (Site Folder: PM Network (SIDRA Optimised))]

Network: 6 [PM 2020 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Existing Design 2020
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Allambie Rd-S														
1	L2	640	1.5	640	1.5	0.275	12.2	LOS A	3.8	26.7	0.47	0.66	0.47	19.9
3	R2	57	1.9	57	1.9	* 0.349	48.5	LOS D	1.5	10.8	0.98	0.75	0.98	13.4
Approach		697	1.5	697	1.5	0.349	15.1	LOS B	3.8	26.7	0.52	0.66	0.52	18.4
East: FFRE-E														
4	L2	21	5.0	21	5.0	0.030	22.6	LOS B	0.3	2.5	0.64	0.66	0.64	17.6
5	T1	44	11.9	44	11.9	0.244	42.2	LOS C	1.2	8.9	0.96	0.71	0.96	11.5
Approach		65	9.7	65	9.7	0.244	35.9	LOS C	1.2	8.9	0.86	0.69	0.86	12.9
North: Patanga Rd-N														
9	R2	17	37.5	17	37.5	* 0.172	51.0	LOS D	0.5	4.3	0.97	0.70	0.97	21.1
Approach		17	37.5	17	37.5	0.172	51.0	LOS D	0.5	4.3	0.97	0.70	0.97	21.1
West: FFRE-W														
10	L2	37	20.0	37	20.0	* 0.364	12.5	LOS A	5.4	39.0	0.50	0.46	0.50	41.2
11	T1	399	2.6	399	2.6	0.364	7.9	LOS A	5.4	39.0	0.50	0.46	0.50	34.3
12	R2	206	3.6	206	3.6	0.238	19.4	LOS B	3.3	23.4	0.63	0.72	0.63	12.9
Approach		642	3.9	642	3.9	0.364	11.9	LOS A	5.4	39.0	0.54	0.55	0.54	28.6
All Vehicles		1421	3.4	1421	3.4	0.364	15.0	LOS B	5.4	39.0	0.55	0.61	0.55	22.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: [13. FFR-Iverness Avenue - PM (Site Folder: PM Network (SIDRA Optimised))]

Network: 6 [PM 2020 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Existing Design 2020
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Local Site Access														
1	L2	33	0.0	33	0.0	0.194	2.6	LOS A	0.3	1.9	0.64	0.62	0.64	21.5
2	T1	11	0.0	11	0.0	0.194	19.3	LOS B	0.3	1.9	0.64	0.62	0.64	29.8
3	R2	16	0.0	16	0.0	0.194	27.1	LOS B	0.3	1.9	0.64	0.62	0.64	21.5
Approach		59	0.0	59	0.0	0.194	12.2	LOS A	0.3	1.9	0.64	0.62	0.64	23.5
East: FFRE - E														
4	L2	38	8.3	38	8.3	0.207	4.6	LOS A	0.0	0.0	0.00	0.05	0.00	48.5
5	T1	593	3.0	593	3.0	0.207	0.6	LOS A	0.3	2.4	0.12	0.09	0.12	41.0
6	R2	71	0.0	71	0.0	0.207	7.9	LOS A	0.3	2.4	0.30	0.15	0.30	45.7
Approach		701	3.0	701	3.0	0.207	1.5	NA	0.3	2.4	0.13	0.10	0.13	43.9
North: Iverness Avenue														
7	L2	33	0.0	33	0.0	0.032	5.8	LOS A	0.1	0.4	0.36	0.56	0.36	43.0
Approach		33	0.0	33	0.0	0.032	5.8	LOS A	0.1	0.4	0.36	0.56	0.36	43.0
West: FFRE - W														
10	L2	3	0.0	3	0.0	0.162	4.6	LOS A	0.0	0.0	0.00	0.01	0.00	49.3
11	T1	594	4.3	594	4.3	0.162	0.1	LOS A	0.0	0.3	0.02	0.01	0.02	49.4
12	R2	7	0.0	7	0.0	0.162	8.2	LOS A	0.0	0.3	0.04	0.01	0.04	31.2
Approach		604	4.2	604	4.2	0.162	0.2	NA	0.0	0.3	0.02	0.01	0.02	48.5
All Vehicles		1397	3.3	1397	3.3	0.207	1.5	NA	0.3	2.4	0.11	0.09	0.11	42.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

USER REPORT FOR NETWORK SITE

All Movement Classes

Project: 16036 OPM 210505 Optimised Future Case **Template: Movement Summary**

Site: TCS0007 [1. Warringah Rd-Forest Way - AM (Site Folder: AM Network (SIDRA Optimised))]

Network: 5 [AM 2030 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Future 2030
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 160 seconds (Network User-Given Cycle Time)

Timings based on settings in the Network Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Warringah Rd-E														
5	T1	552	5.0	552	5.0	0.572	12.0	LOS A	8.4	61.1	0.50	0.44	0.50	49.1
6	R2	959	7.7	959	7.7	* 0.922	56.5	LOS E	15.3	114.5	1.00	0.93	1.10	17.3
Approach		1511	6.7	1511	6.7	0.922	40.3	LOS C	15.3	114.5	0.82	0.75	0.88	22.7
North: Forest Way-N														
7	L2	1073	6.9	1073	6.9	0.549	5.5	LOS A	2.5	18.3	0.08	0.39	0.08	34.8
9	R2	1018	5.7	1018	5.7	* 0.919	53.4	LOS D	23.0	164.7	0.97	1.05	1.07	16.2
Approach		2091	6.3	2091	6.3	0.919	28.9	LOS C	23.0	164.7	0.51	0.71	0.56	22.3
West: Warringah Rd-W														
10	L2	691	9.9	691	9.9	0.283	11.1	LOS A	5.6	42.8	0.37	0.58	0.37	29.0
11	T1	963	4.5	963	4.5	* 0.919	72.9	LOS F	28.6	205.5	0.97	1.03	1.18	11.5
Approach		1654	6.7	1654	6.7	0.919	47.1	LOS D	28.6	205.5	0.72	0.84	0.84	15.3
All Vehicles		5255	6.6	5255	6.6	0.922	37.9	LOS C	28.6	205.5	0.67	0.76	0.74	20.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS0781 [2. Warringah Rd-Hilmer St - AM (Site Folder: AM Network (SIDRA Optimised))]

Network: 5 [AM 2030 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Future 2030
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 160 seconds (Network User-Given Cycle Time)

Timings based on settings in the Network Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Two-Phase
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Hilmer St-S														
1	L2	42	0.0	42	0.0	0.130	64.3	LOS E	1.7	11.9	0.88	0.73	0.88	18.3
3	R2	131	0.0	131	0.0	0.489	73.3	LOS F	5.8	40.7	0.97	0.80	0.97	16.8
Approach		173	0.0	173	0.0	0.489	71.1	LOS F	5.8	40.7	0.95	0.78	0.95	17.2
East: Warringah Rd-E														
4	L2	44	2.4	44	2.4	0.446	26.8	LOS B	12.6	93.3	0.62	0.57	0.62	37.7
5	T1	1375	6.9	1375	6.9	0.446	16.4	LOS B	12.6	93.3	0.48	0.44	0.48	29.0
Approach		1419	6.8	1419	6.8	0.446	16.7	LOS B	12.6	93.3	0.48	0.44	0.48	29.7
North: Hospital Site Access-N														
7	L2	28	7.4	28	7.4	0.430	90.4	LOS F	1.4	10.6	1.00	0.72	1.00	13.6
9	R2	25	16.7	25	16.7	0.106	67.7	LOS E	1.1	8.4	0.90	0.70	0.90	16.3
Approach		54	11.8	54	11.8	0.430	79.7	LOS F	1.4	10.6	0.95	0.71	0.95	14.8
West: Warringah Rd-W														
10	L2	77	4.1	77	4.1	* 0.499	20.9	LOS B	13.8	101.3	0.50	0.53	0.50	16.0
11	T1	1893	6.3	1893	6.3	0.499	5.0	LOS A	13.8	101.3	0.22	0.23	0.22	57.2
12	R2	76	2.8	76	2.8	0.238	79.2	LOS F	3.6	25.6	1.00	0.78	1.00	25.0
Approach		2045	6.1	2045	6.1	0.499	8.4	LOS A	13.8	101.3	0.26	0.26	0.26	44.7
All Vehicles		3691	6.2	3691	6.2	0.499	15.5	LOS B	13.8	101.3	0.39	0.36	0.39	35.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS0375 [3. Warringah Rd-Wakehurst Pkwy - AM (Site Folder: AM Network (SIDRA Optimised))]

Network: 5 [AM 2030 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Future 2030
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 160 seconds (Network User-Given Cycle Time)

Timings based on settings in the Network Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Variable Phasing
Reference Phase: Phase A
Input Phase Sequence: A, D, E, F
Output Phase Sequence: A, D, E, F

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Wakehurst Pkwy-S														
1b	L3	346	12.8	346	12.8	* 0.724	35.0	LOS C	8.4	65.2	0.94	0.85	0.94	30.9
1	L2	153	4.1	153	4.1	0.265	29.5	LOS C	3.1	22.2	0.79	0.77	0.79	33.8
2	T1	382	2.5	382	2.5	0.693	71.5	LOS F	8.9	63.3	1.00	0.84	1.02	19.6
3	R2	62	3.4	62	3.4	0.152	59.7	LOS E	2.4	17.0	0.84	0.75	0.84	21.7
Approach		943	6.6	943	6.6	0.724	50.5	LOS D	8.9	65.2	0.93	0.82	0.94	24.7
East: Warringah Rd-E														
4	L2	98	3.2	98	3.2	0.102	17.1	LOS B	1.4	9.9	0.59	0.71	0.59	48.2
4a	L1	826	5.4	826	5.4	* 0.727	52.9	LOS D	17.1	124.6	0.93	0.82	0.93	14.0
Approach		924	5.1	924	5.1	0.727	49.1	LOS D	17.1	124.6	0.90	0.81	0.90	17.1
North: Wakehurst Pkwy-N														
7	L2	24	13.0	24	13.0	* 0.733	79.2	LOS F	9.5	69.0	1.00	0.85	1.04	10.5
8	T1	376	3.4	376	3.4	0.733	72.6	LOS F	9.6	69.0	1.00	0.85	1.04	25.4
9a	R1	304	4.2	304	4.2	* 0.728	37.3	LOS C	10.4	75.6	0.76	0.75	0.76	18.5
9	R2	433	1.9	433	1.9	0.651	41.4	LOS C	9.0	64.3	0.70	0.76	0.70	16.5
Approach		1137	3.2	1137	3.2	0.733	51.4	LOS D	10.4	75.6	0.82	0.79	0.84	21.1
West: Warringah Rd- EB Approach and Underpass WB Exit														
10	L2	505	8.3	505	8.3	0.369	7.4	LOS A	1.2	8.9	0.05	0.58	0.05	35.2
11	T1	1096	5.0	1096	5.0	0.368	10.8	LOS A	5.4	39.4	0.29	0.26	0.29	28.9
12	R2	458	5.5	458	5.5	0.732	68.5	LOS E	10.8	79.0	0.96	0.85	1.00	22.5
Approach		2059	5.9	2059	5.9	0.732	22.8	LOS B	10.8	79.0	0.38	0.47	0.39	25.5
All Vehicles		5063	5.3	5063	5.3	0.733	39.2	LOS C	17.1	124.6	0.68	0.67	0.69	22.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS0713 [4. Warringah Rd-Allambie Rd - AM (Site Folder: AM Network (SIDRA Optimised))]

Network: 5 [AM 2030 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Future 2030
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 160 seconds (Network User-Given Cycle Time)

Timings based on settings in the Network Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, C, D, E, F
Output Phase Sequence: A, C, D, E, F

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Allambie Rd-S														
2	T1	345	1.8	345	1.8	0.672	54.1	LOS D	14.2	101.1	0.93	0.82	0.93	7.5
3	R2	168	5.0	168	5.0	0.313	71.4	LOS F	3.6	26.4	0.94	0.77	0.94	5.7
Approach		514	2.9	514	2.9	0.672	59.8	LOS E	14.2	101.1	0.93	0.80	0.93	6.8
East: Warringah Rd-E														
4	L2	323	0.3	323	0.3	* 0.918	70.9	LOS F	32.5	232.2	1.00	1.02	1.15	28.4
5	T1	1596	4.7	1596	4.7	0.918	64.5	LOS E	35.0	254.7	0.99	1.01	1.14	28.1
6	R2	443	0.5	443	0.5	* 0.456	34.7	LOS C	4.9	34.1	0.89	0.80	0.89	39.0
Approach		2362	3.3	2362	3.3	0.918	59.8	LOS E	35.0	254.7	0.97	0.98	1.10	29.7
North: Allambie Rd-N														
7	L2	6	16.7	6	16.7	* 0.934	105.8	LOS F	10.0	72.8	1.00	1.11	1.41	3.6
8	T1	349	3.9	349	3.9	* 0.934	99.1	LOS F	10.0	72.8	1.00	1.10	1.41	6.8
Approach		356	4.1	356	4.1	0.934	99.3	LOS F	10.0	72.8	1.00	1.10	1.41	6.7
West: Warringah Rd-W														
10	L2	63	6.7	63	6.7	0.903	71.2	LOS F	23.8	174.4	1.00	0.96	1.10	19.7
11	T1	1449	5.3	1449	5.3	* 0.903	54.7	LOS D	24.5	179.3	0.97	0.94	1.07	22.3
12	R2	724	2.5	724	2.5	0.934	95.1	LOS F	20.3	145.3	1.00	0.98	1.29	16.7
Approach		2237	4.4	2237	4.4	0.934	68.3	LOS E	24.5	179.3	0.98	0.95	1.14	19.8
All Vehicles		5468	3.8	5468	3.8	0.934	65.8	LOS E	35.0	254.7	0.97	0.96	1.12	22.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS1350 [5. Warringah Rd-Ellis Rd-Government Rd - AM (Site Folder: AM Network (SIDRA Optimised))]

Network: 5 [AM 2030 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Future 2030
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 130 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, C, D, E
Output Phase Sequence: A, C, D, E

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Government Rd														
1	L2	47	0.0	47	0.0	0.593	60.8	LOS E	6.1	42.8	0.98	0.80	0.98	19.8
2	T1	118	0.0	118	0.0	0.593	56.3	LOS D	6.1	42.8	0.98	0.80	0.98	28.1
3	R2	165	1.3	165	1.3	* 0.892	79.9	LOS F	7.4	52.3	1.00	1.01	1.39	23.6
Approach		331	0.6	331	0.6	0.892	68.8	LOS E	7.4	52.3	0.99	0.91	1.19	24.8
East: Warring Rd - E														
4	L2	72	2.9	72	2.9	0.740	29.6	LOS C	22.1	162.7	0.82	0.76	0.82	36.6
5	T1	2246	6.5	2246	6.5	0.740	22.8	LOS B	22.3	164.7	0.82	0.75	0.82	33.6
6	R2	401	2.6	401	2.6	* 0.923	62.5	LOS E	13.1	93.7	1.00	1.03	1.31	27.5
Approach		2719	5.8	2719	5.8	0.923	28.9	LOS C	22.3	164.7	0.84	0.79	0.89	31.8
North: Ellis Rd														
7	L2	183	3.4	183	3.4	0.480	45.9	LOS D	7.3	52.3	0.88	0.80	0.88	31.2
8	T1	44	0.0	44	0.0	0.480	42.8	LOS D	7.3	52.3	0.88	0.80	0.88	28.7
9	R2	41	0.0	41	0.0	0.314	68.5	LOS E	1.6	11.1	0.98	0.74	0.98	17.7
Approach		268	2.4	268	2.4	0.480	48.8	LOS D	7.3	52.3	0.89	0.79	0.89	28.7
West: Warringah Rd - W														
10	L2	24	17.4	24	17.4	0.933	66.4	LOS E	32.9	244.9	1.00	1.09	1.23	34.5
11	T1	2125	6.9	2125	6.9	* 0.933	59.6	LOS E	33.2	246.5	1.00	1.09	1.23	36.2
12	R2	39	16.2	39	16.2	0.169	60.8	LOS E	1.4	10.8	0.92	0.74	0.92	32.7
Approach		2188	7.2	2188	7.2	0.933	59.7	LOS E	33.2	246.5	1.00	1.08	1.22	36.1
All Vehicles		5506	5.9	5506	5.9	0.933	44.5	LOS D	33.2	246.5	0.92	0.91	1.04	33.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS1304 [6. Forest Way-Adams St - AM (Site Folder: AM Network (SIDRA Optimised))]

Network: 5 [AM 2030 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Future 2030
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Forest Way - S														
1	L2	297	3.9	297	3.9	0.754	38.3	LOS C	16.6	122.5	0.92	0.85	0.92	33.3
2	T1	1299	8.8	1299	8.8	* 0.754	32.8	LOS C	17.4	130.9	0.92	0.83	0.92	44.0
3	R2	13	8.3	13	8.3	0.754	41.5	LOS C	15.3	114.8	0.93	0.84	0.94	33.4
Approach		1608	7.9	1608	7.9	0.754	33.9	LOS C	17.4	130.9	0.92	0.83	0.92	42.0
East: Adams St - E														
4	L2	44	0.0	44	0.0	0.759	60.3	LOS E	7.9	56.3	1.00	0.90	1.11	19.5
5	T1	89	1.2	89	1.2	* 0.759	55.8	LOS D	7.9	56.3	1.00	0.90	1.11	27.8
6	R2	84	2.5	84	2.5	0.759	60.3	LOS E	7.9	56.3	1.00	0.90	1.11	33.7
Approach		218	1.4	218	1.4	0.759	58.5	LOS E	7.9	56.3	1.00	0.90	1.11	29.0
North: Forest Way - N														
7	L2	108	2.9	108	2.9	0.724	38.4	LOS C	16.4	121.2	0.90	0.82	0.90	42.1
8	T1	1555	7.8	1555	7.8	0.724	31.0	LOS C	16.6	123.6	0.90	0.81	0.90	39.6
Approach		1663	7.5	1663	7.5	0.724	31.5	LOS C	16.6	123.6	0.90	0.81	0.90	39.9
West: Adams St - W														
10	L2	11	10.0	11	10.0	* 0.768	50.6	LOS D	12.9	91.6	0.98	0.89	1.04	35.9
11	T1	112	0.9	112	0.9	0.768	46.0	LOS D	12.9	91.6	0.98	0.89	1.04	29.9
12	R2	619	1.9	619	1.9	0.768	50.6	LOS D	12.9	91.6	0.98	0.89	1.04	21.4
Approach		741	1.8	741	1.8	0.768	49.9	LOS D	12.9	91.6	0.98	0.89	1.04	23.4
All Vehicles		4231	6.3	4231	6.3	0.768	37.0	LOS C	17.4	130.9	0.93	0.84	0.94	36.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS4706 [7. Forest Way-Naree Rd - AM (Site Folder: AM Network (SIDRA Optimised))]

Network: 5 [AM 2030 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Future 2030
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 160 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Forest Way-S														
2	T1	1363	8.6	1363	8.6	0.354	9.6	LOS A	8.3	62.2	0.42	0.38	0.42	47.3
3	R2	165	10.8	165	10.8	* 0.832	97.5	LOS F	9.4	71.9	1.00	1.10	1.25	12.0
Approach		1528	8.9	1528	8.9	0.832	19.1	LOS B	9.4	71.9	0.49	0.46	0.51	35.9
East: Naree Rd-E														
4	L2	189	1.7	189	1.7	0.324	46.5	LOS D	6.7	47.3	0.79	0.78	0.79	12.5
6	R2	260	3.2	260	3.2	* 0.694	66.8	LOS E	11.5	82.8	0.98	0.84	0.98	9.5
Approach		449	2.6	449	2.6	0.694	58.2	LOS E	11.5	82.8	0.90	0.81	0.90	10.5
North: Forest Way-N														
7	L2	287	2.9	287	2.9	0.695	29.8	LOS C	23.4	171.0	0.73	0.81	0.73	26.0
8	T1	1962	6.3	1962	6.3	* 0.695	27.5	LOS B	24.5	181.1	0.75	0.81	0.75	26.1
Approach		2249	5.9	2249	5.9	0.695	27.8	LOS B	24.5	181.1	0.75	0.81	0.75	26.1
All Vehicles		4227	6.6	4227	6.6	0.832	27.9	LOS B	24.5	181.1	0.67	0.68	0.68	26.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS4712 [8. FFR-Rabbett Street - AM (Site Folder: AM Network (SIDRA Optimised))]

Network: 5 [AM 2030 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Future 2030
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Two-Phase
Reference Phase: Phase A
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Rabbett St-S														
1	L2	15	7.1	15	7.1	0.049	22.4	LOS B	0.5	3.6	0.64	0.63	0.64	22.2
2	T1	6	0.0	6	0.0	0.049	17.7	LOS B	0.5	3.6	0.64	0.63	0.64	31.0
3	R2	9	0.0	9	0.0	0.049	22.2	LOS B	0.5	3.6	0.64	0.63	0.64	22.2
Approach		31	3.4	31	3.4	0.049	21.4	LOS B	0.5	3.6	0.64	0.63	0.64	24.6
East: FFRW-E														
4	L2	23	68.2	23	68.2	* 0.625	32.3	LOS C	9.1	67.5	0.89	0.77	0.89	27.5
5	T1	383	2.7	383	2.7	0.625	26.1	LOS B	9.1	67.5	0.89	0.77	0.89	20.9
6	R2	175	1.8	175	1.8	0.631	38.7	LOS C	4.4	31.4	0.94	0.84	0.97	24.0
Approach		581	5.1	581	5.1	0.631	30.1	LOS C	9.1	67.5	0.90	0.79	0.91	22.5
North: Rabbett St-N														
7	L2	381	0.8	381	0.8	0.556	23.8	LOS B	8.7	61.5	0.78	0.80	0.78	22.1
8	T1	15	0.0	15	0.0	0.556	19.3	LOS B	8.7	61.5	0.78	0.80	0.78	29.7
9	R2	48	0.0	48	0.0	* 0.556	23.8	LOS B	8.7	61.5	0.78	0.80	0.78	22.1
Approach		444	0.7	444	0.7	0.556	23.7	LOS B	8.7	61.5	0.78	0.80	0.78	22.4
West: Naree Rd-W														
10	L2	22	9.5	22	9.5	0.349	28.4	LOS B	4.5	33.1	0.79	0.67	0.79	28.4
11	T1	431	5.6	431	5.6	0.349	23.4	LOS B	4.6	33.5	0.79	0.66	0.79	19.5
12	R2	1	0.0	1	0.0	0.349	27.6	LOS B	4.6	33.5	0.78	0.66	0.78	28.1
Approach		454	5.8	454	5.8	0.349	23.6	LOS B	4.6	33.5	0.79	0.66	0.79	20.2
All Vehicles		1509	4.0	1509	4.0	0.631	26.1	LOS B	9.1	67.5	0.83	0.75	0.83	21.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS4751 [FFR-Bluegum Cres - AM (Site Folder: AM Network (SIDRA Optimised))]

Network: 5 [AM 2030 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Future 2030
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: School Access-S														
1	L2	6	0.0	6	0.0	0.028	41.5	LOS C	0.2	1.1	0.90	0.64	0.90	21.1
2	T1	1	0.0	1	0.0	0.261	39.4	LOS C	1.4	9.5	0.94	0.74	0.94	27.2
3	R2	53	0.0	53	0.0	0.261	42.9	LOS D	1.4	9.5	0.94	0.74	0.94	20.8
Approach		60	0.0	60	0.0	0.261	42.7	LOS D	1.4	9.5	0.93	0.73	0.93	21.0
East: FFRW-E														
4	L2	49	0.0	49	0.0	0.320	10.2	LOS A	4.5	32.7	0.45	0.43	0.45	36.1
5	T1	586	5.6	586	5.6	0.320	7.3	LOS A	4.5	32.7	0.47	0.45	0.47	28.0
6	R2	53	0.0	53	0.0	0.320	11.6	LOS A	3.6	26.0	0.49	0.47	0.49	35.1
Approach		688	4.7	688	4.7	0.320	7.8	LOS A	4.5	32.7	0.47	0.45	0.47	30.4
North: Bluegum Cres - N														
7	L2	53	0.0	53	0.0	0.245	42.5	LOS D	1.4	9.6	0.93	0.74	0.93	20.9
8	T1	1	0.0	1	0.0	0.245	39.1	LOS C	1.4	9.6	0.93	0.74	0.93	27.3
9	R2	1	0.0	1	0.0	* 0.245	42.6	LOS D	1.4	9.6	0.93	0.74	0.93	20.9
Approach		55	0.0	55	0.0	0.245	42.5	LOS C	1.4	9.6	0.93	0.74	0.93	21.1
West: FFRW-W														
10	L2	53	0.0	53	0.0	* 0.385	10.6	LOS A	5.4	39.0	0.48	0.46	0.48	36.2
11	T1	729	3.8	729	3.8	0.385	7.4	LOS A	5.4	39.0	0.49	0.46	0.49	30.1
12	R2	53	0.0	53	0.0	0.385	11.1	LOS A	4.7	33.8	0.49	0.47	0.49	35.9
Approach		835	3.3	835	3.3	0.385	7.8	LOS A	5.4	39.0	0.49	0.46	0.49	31.6
All Vehicles		1638	3.7	1638	3.7	0.385	10.3	LOS A	5.4	39.0	0.51	0.48	0.51	29.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS4705 [9. FFR-Gladys Ave - AM (Site Folder: AM Network (SIDRA Optimised))]

Network: 5 [AM 2030 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Future 2030
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 130 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, D, E, F
Output Phase Sequence: A, B, D, E, F

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Hospital Access-S														
1	L2	29	0.0	29	0.0	0.043	20.0	LOS B	0.6	3.9	0.64	0.63	0.64	28.0
2	T1	1	0.0	1	0.0	0.043	16.6	LOS B	0.6	3.9	0.64	0.63	0.64	32.9
3	R2	62	0.0	62	0.0	0.136	44.2	LOS D	1.9	13.1	0.82	0.71	0.82	20.6
Approach		93	0.0	93	0.0	0.136	36.2	LOS C	1.9	13.1	0.76	0.68	0.76	22.6
East: FFRW-E														
4	L2	193	0.5	193	0.5	* 0.309	17.8	LOS B	3.0	23.4	0.72	0.71	0.72	32.2
5	T1	646	4.7	646	4.7	0.481	35.4	LOS C	9.6	68.0	0.84	0.72	0.84	16.6
6	R2	12	0.0	12	0.0	0.135	71.1	LOS F	0.5	3.2	0.99	0.68	0.99	19.8
Approach		851	3.7	851	3.7	0.481	31.9	LOS C	9.6	68.0	0.81	0.72	0.81	21.2
North: Gladys Ave-N														
7	L2	7	0.0	7	0.0	* 0.322	49.0	LOS D	0.8	6.0	1.00	0.73	1.00	19.7
8	T1	6	0.0	6	0.0	* 0.322	45.6	LOS D	0.8	6.0	1.00	0.73	1.00	26.2
9	R2	16	13.3	16	13.3	0.322	49.1	LOS D	0.8	6.0	1.00	0.73	1.00	19.7
Approach		29	7.1	29	7.1	0.322	48.3	LOS D	0.8	6.0	1.00	0.73	1.00	21.5
West: FFRW-W														
10	L2	12	18.2	12	18.2	* 0.533	32.6	LOS C	12.3	88.9	0.79	0.70	0.79	27.5
11	T1	811	3.0	811	3.0	0.533	28.6	LOS C	12.3	88.9	0.78	0.69	0.78	15.6
12	R2	74	0.0	74	0.0	0.430	35.9	LOS C	1.5	10.8	0.98	0.75	0.98	25.8
Approach		896	2.9	896	2.9	0.533	29.2	LOS C	12.3	88.9	0.80	0.69	0.80	17.5
All Vehicles		1868	3.2	1868	3.2	0.533	31.1	LOS C	12.3	88.9	0.80	0.70	0.80	19.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS0848 [10. Wakehurst Pkwy-FFR - AM (Site Folder: AM Network (SIDRA Optimised))]

Network: 5 [AM 2030 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Future 2030
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 160 seconds (Network User-Given Cycle Time)

Timings based on settings in the Network Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, C, D, E, G
Output Phase Sequence: A, C, D, E, G

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Wakehurst Pkwy-S														
1	L2	125	7.6	125	7.6	0.172	30.7	LOS C	3.5	26.3	0.82	0.77	0.82	20.1
2	T1	674	5.3	674	5.3	* 0.610	59.5	LOS E	16.7	122.2	0.94	0.82	0.94	27.7
3	R2	89	7.1	89	7.1	* 0.623	91.8	LOS F	4.4	32.8	1.00	0.79	1.01	8.5
Approach		888	5.8	888	5.8	0.623	58.7	LOS E	16.7	122.2	0.93	0.81	0.93	25.0
East: FFRE-E														
4	L2	162	7.1	162	7.1	0.124	39.1	LOS C	2.5	18.5	0.69	0.70	0.69	22.1
5	T1	616	3.2	616	3.2	* 0.614	56.1	LOS D	12.6	89.1	0.94	0.80	0.94	17.8
6	R2	94	4.5	94	4.5	* 0.604	82.9	LOS F	4.5	32.5	1.00	0.79	1.01	23.7
Approach		872	4.1	872	4.1	0.614	55.8	LOS D	12.6	89.1	0.90	0.78	0.90	19.4
North: Wakehurst Pkwy-N														
7	L2	121	0.0	121	0.0	0.097	9.3	LOS A	1.1	7.4	0.23	0.64	0.23	52.0
8	T1	827	2.8	827	2.8	0.352	32.9	LOS C	8.8	62.8	0.72	0.62	0.72	31.8
9	R2	144	4.4	144	4.4	* 0.579	43.0	LOS D	3.6	26.1	0.98	0.80	0.98	27.0
Approach		1093	2.7	1093	2.7	0.579	31.6	LOS C	8.8	62.8	0.70	0.65	0.70	32.5
West: FFRW-E														
10	L2	164	0.6	164	0.6	0.295	29.7	LOS C	4.6	35.2	0.76	0.74	0.76	36.5
11	T1	541	3.7	541	3.7	0.527	53.8	LOS D	10.7	75.4	0.91	0.78	0.91	14.1
12	R2	148	2.8	148	2.8	0.466	81.6	LOS F	3.5	25.0	0.99	0.77	0.99	10.2
Approach		854	3.0	854	3.0	0.527	54.0	LOS D	10.7	75.4	0.90	0.77	0.90	17.3
All Vehicles		3706	3.8	3706	3.8	0.623	48.9	LOS D	16.7	122.2	0.85	0.75	0.85	23.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS4750 [11. FFR-Romford Rd - AM (Site Folder: AM Network (SIDRA Optimised))]

Network: 5 [AM 2030 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Future 2030
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Two-Phase
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Local Business Access														
1	L2	41	2.6	41	2.6	0.336	41.7	LOS C	1.1	8.1	0.98	0.73	0.98	16.0
2	T1	5	0.0	5	0.0	* 0.336	40.7	LOS C	1.1	8.1	0.98	0.73	0.98	24.1
3	R2	19	5.6	19	5.6	0.141	41.1	LOS C	0.5	3.3	0.96	0.69	0.96	16.0
Approach		65	3.2	65	3.2	0.336	41.5	LOS C	1.1	8.1	0.98	0.72	0.98	16.9
East: FFRE-E														
5	T1	598	7.0	598	7.0	0.371	16.0	LOS B	4.9	36.6	0.71	0.61	0.71	27.6
6	R2	8	0.0	8	0.0	0.371	20.9	LOS B	4.7	35.2	0.72	0.62	0.72	38.1
Approach		606	6.9	606	6.9	0.371	16.0	LOS B	4.9	36.6	0.71	0.61	0.71	27.9
North: Romford Rd														
7	L2	15	0.0	15	0.0	* 0.385	32.7	LOS C	3.5	24.5	0.89	0.78	0.89	26.5
9	R2	154	1.4	154	1.4	0.385	32.8	LOS C	3.5	24.5	0.89	0.78	0.89	26.5
Approach		168	1.3	168	1.3	0.385	32.8	LOS C	3.5	24.5	0.89	0.78	0.89	26.5
West: FFRE-W														
10	L2	60	1.8	60	1.8	* 0.386	21.7	LOS B	4.9	35.5	0.73	0.66	0.73	38.9
11	T1	554	4.6	554	4.6	0.386	16.3	LOS B	5.1	36.8	0.72	0.63	0.72	32.1
Approach		614	4.3	614	4.3	0.386	16.9	LOS B	5.1	36.8	0.72	0.63	0.72	33.2
All Vehicles		1454	5.0	1454	5.0	0.386	19.5	LOS B	5.1	36.8	0.75	0.64	0.75	28.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS4711 [12. Allambie Rd-Patanga Rd-FFE - AM (Site Folder: AM Network (SIDRA Optimised))]

Network: 5 [AM 2030 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Future 2030
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 100 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Allambie Rd-S														
1	L2	828	1.5	828	1.5	0.322	10.5	LOS A	4.7	33.4	0.42	0.64	0.42	21.6
3	R2	23	0.0	23	0.0	* 0.208	55.9	LOS D	0.7	4.9	0.98	0.70	0.98	12.1
Approach		852	1.5	852	1.5	0.322	11.8	LOS A	4.7	33.4	0.43	0.64	0.43	20.7
East: FFRE-E														
4	L2	12	9.1	12	9.1	0.037	31.6	LOS C	0.2	1.9	0.73	0.67	0.73	14.0
5	T1	24	34.8	24	34.8	* 0.254	52.1	LOS D	0.7	6.8	0.99	0.70	0.99	9.7
Approach		36	26.5	36	26.5	0.254	45.5	LOS D	0.7	6.8	0.90	0.69	0.90	10.8
North: Patanga Rd-N														
9	R2	26	28.0	26	28.0	* 0.283	57.2	LOS E	0.8	7.1	0.99	0.72	0.99	19.7
Approach		26	28.0	26	28.0	0.283	57.2	LOS E	0.8	7.1	0.99	0.72	0.99	19.7
West: FFRE-W														
10	L2	20	31.6	20	31.6	0.251	10.4	LOS A	3.5	25.5	0.39	0.36	0.39	43.0
11	T1	305	4.1	305	4.1	0.251	5.8	LOS A	3.5	25.5	0.39	0.36	0.39	37.5
12	R2	343	4.0	343	4.0	* 0.550	18.6	LOS B	6.4	46.2	0.66	0.76	0.66	13.3
Approach		668	4.9	668	4.9	0.550	12.5	LOS A	6.4	46.2	0.53	0.57	0.53	25.4
All Vehicles		1582	3.9	1582	3.9	0.550	13.6	LOS A	6.4	46.2	0.49	0.61	0.49	22.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: [13. FFR-Iverness Avenue - AM (Site Folder: AM Network (SIDRA Optimised))]

Network: 5 [AM 2030 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Future 2030
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Local Site Access														
1	L2	13	0.0	13	0.0	0.194	3.3	LOS A	0.2	1.8	0.81	0.78	0.82	18.3
2	T1	2	0.0	2	0.0	0.194	25.9	LOS B	0.2	1.8	0.81	0.78	0.82	26.5
3	R2	12	18.2	12	18.2	0.194	54.0	LOS D	0.2	1.8	0.81	0.78	0.82	18.3
Approach		26	8.0	26	8.0	0.194	27.4	LOS B	0.2	1.8	0.81	0.78	0.82	19.1
East: FFRE - E														
4	L2	54	5.9	54	5.9	0.245	4.6	LOS A	0.0	0.0	0.00	0.06	0.00	48.4
5	T1	775	3.3	775	3.3	0.245	0.4	LOS A	0.3	1.9	0.08	0.07	0.08	43.3
6	R2	46	0.0	46	0.0	0.245	8.0	LOS A	0.3	1.9	0.17	0.07	0.17	47.1
Approach		875	3.2	875	3.2	0.245	1.0	NA	0.3	1.9	0.08	0.07	0.08	45.2
North: Iverness Avenue														
7	L2	72	0.0	72	0.0	0.071	5.9	LOS A	0.1	0.8	0.37	0.57	0.37	43.0
Approach		72	0.0	72	0.0	0.071	5.9	LOS A	0.1	0.8	0.37	0.57	0.37	43.0
West: FFRE - W														
10	L2	2	0.0	2	0.0	0.163	4.6	LOS A	0.0	0.0	0.00	0.00	0.00	49.3
11	T1	581	5.1	581	5.1	0.163	0.2	LOS A	0.1	0.6	0.04	0.01	0.04	49.0
12	R2	11	0.0	11	0.0	0.163	10.1	LOS A	0.1	0.6	0.08	0.02	0.08	31.1
Approach		594	5.0	594	5.0	0.163	0.4	NA	0.1	0.6	0.04	0.01	0.04	47.7
All Vehicles		1566	3.8	1566	3.8	0.245	1.5	NA	0.3	1.9	0.09	0.08	0.09	43.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

USER REPORT FOR NETWORK SITE

All Movement Classes

Project: 16036 OPM 210505 Optimised Future Case **Template: Movement Summary**

Site: TCS0007 [1. Warringah Rd-Forest Way - PM (Site Folder: PM Network (SIDRA Optimised))]

Network: 6 [PM 2030 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Future 2030
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Network User-Given Cycle Time)

Timings based on settings in the Network Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Warringah Rd-E														
5	T1	309	5.1	309	5.1	0.247	11.8	LOS A	6.2	45.2	0.49	0.43	0.49	48.2
6	R2	1132	3.8	1132	3.8	* 0.859	86.8	LOS F	17.7	128.0	1.00	0.90	1.08	15.5
Approach		1441	4.1	1441	4.1	0.859	70.7	LOS F	17.7	128.0	0.89	0.80	0.95	18.2
North: Forest Way-N														
7	L2	1126	3.5	1126	3.5	0.579	10.8	LOS A	3.3	24.0	0.07	0.58	0.07	46.2
9	R2	701	5.1	701	5.1	* 0.840	66.1	LOS E	17.1	121.5	0.98	0.88	1.04	16.6
Approach		1827	4.1	1827	4.1	0.840	32.0	LOS C	17.1	121.5	0.42	0.70	0.44	27.5
West: Warringah Rd-W														
10	L2	856	5.4	856	5.4	0.362	17.7	LOS B	8.1	59.4	0.47	0.73	0.47	34.0
11	T1	1093	1.1	1093	1.1	* 0.861	50.4	LOS D	27.0	190.5	0.95	0.91	1.03	17.5
Approach		1948	3.0	1948	3.0	0.861	36.0	LOS C	27.0	190.5	0.73	0.83	0.78	22.2
All Vehicles		5217	3.7	5217	3.7	0.861	44.2	LOS D	27.0	190.5	0.67	0.78	0.71	22.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS0781 [2. Warringah Rd-Hilmer St - PM (Site Folder: PM Network (SIDRA Optimised))]

Network: 6 [PM 2030 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Future 2030
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Network User-Given Cycle Time)

Timings based on settings in the Network Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Two-Phase
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Hilmer St-S														
1	L2	37	2.9	37	2.9	0.253	76.5	LOS F	1.6	11.5	0.98	0.73	0.98	16.3
3	R2	71	1.5	71	1.5	0.111	39.7	LOS C	2.1	14.9	0.71	0.71	0.71	24.2
Approach		107	2.0	107	2.0	0.253	52.3	LOS D	2.1	14.9	0.80	0.72	0.80	20.8
East: Warringah Rd-E														
4	L2	15	7.1	15	7.1	0.546	34.5	LOS C	12.8	93.0	0.67	0.60	0.67	34.1
5	T1	1393	4.3	1393	4.3	0.546	20.1	LOS B	12.8	93.0	0.55	0.49	0.55	25.8
Approach		1407	4.3	1407	4.3	0.546	20.2	LOS B	12.8	93.0	0.55	0.49	0.55	26.0
North: Hospital Site Access-N														
7	L2	21	0.0	21	0.0	0.106	69.3	LOS E	0.9	6.0	0.94	0.70	0.94	16.0
9	R2	32	0.0	32	0.0	0.049	37.5	LOS C	0.9	6.4	0.69	0.65	0.69	22.2
Approach		53	0.0	53	0.0	0.106	50.3	LOS D	0.9	6.4	0.79	0.67	0.79	19.3
West: Warringah Rd-W														
10	L2	17	0.0	17	0.0	* 0.900	57.2	LOS E	32.3	230.9	1.00	0.96	1.06	13.8
11	T1	2138	2.5	2138	2.5	0.900	25.0	LOS B	32.3	230.9	0.68	0.66	0.74	34.1
12	R2	80	1.3	80	1.3	0.544	80.7	LOS F	3.6	25.2	1.00	0.77	1.00	24.7
Approach		2235	2.4	2235	2.4	0.900	27.2	LOS B	32.3	230.9	0.69	0.67	0.75	32.5
All Vehicles		3802	3.1	3802	3.1	0.900	25.7	LOS B	32.3	230.9	0.65	0.61	0.68	29.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS0375 [3. Warringah Rd-Wakehurst Pkwy - PM (Site Folder: PM Network (SIDRA Optimised))]

Network: 6 [PM 2030 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Future 2030
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Network User-Given Cycle Time)

Timings based on settings in the Network Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Variable Phasing
Reference Phase: Phase A
Input Phase Sequence: A, D, E, F
Output Phase Sequence: A, D, E, F

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Wakehurst Pkwy-S														
1b	L3	395	3.5	395	3.5	0.745	33.3	LOS C	9.6	69.3	0.95	0.86	0.95	31.7
1	L2	216	3.4	216	3.4	0.357	28.7	LOS C	4.4	31.9	0.80	0.78	0.80	34.3
2	T1	373	2.8	373	2.8	* 0.828	75.8	LOS F	10.0	71.4	1.00	0.93	1.19	18.7
3	R2	87	6.0	87	6.0	0.263	62.9	LOS E	3.4	24.7	0.90	0.77	0.90	20.9
Approach		1071	3.4	1071	3.4	0.828	49.6	LOS D	10.0	71.4	0.93	0.86	1.00	25.0
East: Warringah Rd-E														
4	L2	73	1.4	73	1.4	0.078	18.0	LOS B	1.1	8.0	0.64	0.71	0.64	47.8
4a	L1	964	3.3	964	3.3	* 0.807	53.1	LOS D	20.7	149.0	1.00	0.91	1.03	14.0
Approach		1037	3.1	1037	3.1	0.807	50.6	LOS D	20.7	149.0	0.97	0.89	1.00	16.0
North: Wakehurst Pkwy-N														
7	L2	33	6.5	33	6.5	0.741	70.3	LOS E	8.1	58.0	0.99	0.84	1.03	11.6
8	T1	346	1.2	346	1.2	0.741	63.9	LOS E	8.3	58.6	0.99	0.83	1.03	27.6
9a	R1	134	10.2	134	10.2	0.401	63.4	LOS E	5.6	42.5	0.98	0.80	0.98	12.2
9	R2	461	1.6	461	1.6	* 0.834	72.8	LOS F	13.4	94.8	0.98	0.88	1.07	10.5
Approach		974	2.8	974	2.8	0.834	68.3	LOS E	13.4	94.8	0.99	0.85	1.04	17.5
West: Warringah Rd- EB Approach and Underpass WB Exit														
10	L2	761	1.2	761	1.2	0.526	7.2	LOS A	1.4	9.7	0.04	0.59	0.04	35.9
11	T1	862	3.9	862	3.9	0.269	4.4	LOS A	2.1	15.1	0.15	0.13	0.15	44.4
12	R2	609	1.7	609	1.7	* 0.831	55.9	LOS D	12.7	90.3	0.96	0.86	1.00	26.0
Approach		2233	2.4	2233	2.4	0.831	19.4	LOS B	12.7	90.3	0.34	0.48	0.35	29.9
All Vehicles		5314	2.8	5314	2.8	0.834	40.5	LOS C	20.7	149.0	0.70	0.71	0.73	22.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS0713 [4. Warringah Rd-Allambie Rd - PM (Site Folder: PM Network (SIDRA Optimised))]

Network: 6 [PM 2030 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Future 2030
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Network User-Given Cycle Time)

Timings based on settings in the Network Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, C, D, E, F
Output Phase Sequence: A, C, D, E, F

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Allambie Rd-S														
2	T1	372	2.3	372	2.3	0.800	57.2	LOS E	15.6	111.3	0.96	0.89	1.02	7.2
3	R2	289	0.7	289	0.7	0.421	68.2	LOS E	5.9	41.2	0.93	0.92	0.93	5.9
Approach		661	1.6	661	1.6	0.800	62.0	LOS E	15.6	111.3	0.95	0.90	0.98	6.6
East: Warringah Rd-E														
4	L2	187	1.1	187	1.1	* 0.731	44.6	LOS D	20.9	149.4	0.90	0.85	0.90	36.9
5	T1	1601	3.2	1601	3.2	0.731	37.6	LOS C	22.2	159.6	0.90	0.82	0.90	37.4
6	R2	312	0.3	312	0.3	* 0.394	35.7	LOS C	3.6	25.4	0.90	0.78	0.90	38.5
Approach		2100	2.6	2100	2.6	0.731	37.9	LOS C	22.2	159.6	0.90	0.82	0.90	37.5
North: Allambie Rd-N														
7	L2	21	0.0	21	0.0	* 0.821	83.8	LOS F	5.7	40.8	1.00	0.95	1.24	4.4
8	T1	216	3.9	216	3.9	* 0.821	80.4	LOS F	5.7	40.8	1.00	0.94	1.24	8.1
Approach		237	3.6	237	3.6	0.821	80.7	LOS F	5.7	40.8	1.00	0.94	1.24	7.8
West: Warringah Rd-W														
10	L2	43	2.4	43	2.4	* 0.870	41.7	LOS C	23.0	164.1	0.91	0.86	0.96	29.3
11	T1	1718	2.3	1718	2.3	0.870	31.7	LOS C	23.4	167.1	0.88	0.83	0.93	31.2
12	R2	544	1.4	544	1.4	0.853	79.7	LOS F	13.0	91.8	1.00	0.92	1.18	19.0
Approach		2305	2.1	2305	2.1	0.870	43.2	LOS D	23.4	167.1	0.91	0.85	0.99	26.6
All Vehicles		5303	2.3	5303	2.3	0.870	45.2	LOS D	23.4	167.1	0.91	0.85	0.96	27.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS1350 [5. Warringah Rd-Ellis Rd-Government Rd - PM (Site Folder: PM Network (SIDRA Optimised))]

Network: 6 [PM 2030 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Future 2030
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, C, D, E
Output Phase Sequence: A, C, D, E

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Government Rd														
1	L2	33	0.0	33	0.0	0.325	63.6	LOS E	3.1	22.2	0.94	0.75	0.94	19.1
2	T1	48	4.3	48	4.3	0.325	59.0	LOS E	3.1	22.2	0.94	0.75	0.94	27.4
3	R2	164	2.6	164	2.6	* 1.021	129.0	LOS F	9.9	71.1	1.00	1.21	1.78	17.4
Approach		245	2.6	245	2.6	1.021	106.5	LOS F	9.9	71.1	0.98	1.06	1.50	19.1
East: Warring Rd - E														
4	L2	78	10.8	78	10.8	0.681	28.2	LOS B	21.1	154.1	0.75	0.71	0.75	37.2
5	T1	2173	4.5	2173	4.5	0.681	21.3	LOS B	21.4	155.6	0.75	0.69	0.75	34.8
6	R2	340	2.5	340	2.5	* 0.966	90.5	LOS F	14.0	100.2	1.00	1.14	1.45	22.3
Approach		2591	4.4	2591	4.4	0.966	30.6	LOS C	21.4	155.6	0.78	0.75	0.84	30.7
North: Ellis Rd														
7	L2	131	1.6	131	1.6	0.446	54.7	LOS D	6.4	45.4	0.91	0.79	0.91	28.9
8	T1	47	0.0	47	0.0	0.446	51.6	LOS D	6.4	45.4	0.91	0.79	0.91	26.9
9	R2	21	0.0	21	0.0	0.127	66.9	LOS E	0.8	5.7	0.94	0.71	0.94	17.9
Approach		199	1.1	199	1.1	0.446	55.3	LOS D	6.4	45.4	0.91	0.79	0.91	27.3
West: Warringah Rd - W														
10	L2	21	0.0	21	0.0	0.977	80.8	LOS F	49.5	356.5	1.00	1.16	1.30	31.3
11	T1	2657	3.6	2657	3.6	* 0.977	74.3	LOS F	49.6	358.1	1.00	1.16	1.30	32.4
12	R2	69	6.1	69	6.1	0.288	66.1	LOS E	2.7	19.6	0.94	0.76	0.94	31.5
Approach		2747	3.6	2747	3.6	0.977	74.2	LOS F	49.6	358.1	1.00	1.15	1.29	32.3
All Vehicles		5782	3.8	5782	3.8	1.021	55.4	LOS D	49.6	358.1	0.90	0.96	1.08	30.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS1304 [6. Forest Way-Adams St - PM (Site Folder: PM Network (SIDRA Optimised))]

Network: 6 [PM 2030 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Future 2030
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 110 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split-Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Forest Way - S														
1	L2	452	1.4	452	1.4	0.724	28.2	LOS B	17.0	122.1	0.83	0.83	0.83	37.2
2	T1	1368	5.4	1368	5.4	* 0.724	23.0	LOS B	17.5	128.1	0.84	0.78	0.84	49.3
3	R2	35	0.0	35	0.0	0.724	32.7	LOS C	12.8	93.2	0.87	0.79	0.87	37.0
Approach		1855	4.3	1855	4.3	0.724	24.4	LOS B	17.5	128.1	0.84	0.79	0.84	46.1
East: Adams St - E														
4	L2	34	3.1	34	3.1	0.721	56.8	LOS E	6.0	42.3	1.00	0.88	1.10	20.3
5	T1	79	0.0	79	0.0	* 0.721	52.2	LOS D	6.0	42.3	1.00	0.88	1.10	28.6
6	R2	67	0.0	67	0.0	0.721	56.8	LOS E	6.0	42.3	1.00	0.88	1.10	34.7
Approach		180	0.6	180	0.6	0.721	54.8	LOS D	6.0	42.3	1.00	0.88	1.10	29.9
North: Forest Way - N														
7	L2	144	0.7	144	0.7	0.574	26.3	LOS B	12.3	88.2	0.75	0.71	0.75	47.0
8	T1	1553	3.7	1553	3.7	0.574	19.1	LOS B	12.7	91.6	0.73	0.67	0.73	47.4
Approach		1697	3.4	1697	3.4	0.574	19.7	LOS B	12.7	91.6	0.74	0.67	0.74	47.4
West: Adams St - W														
10	L2	26	0.0	26	0.0	* 0.723	54.3	LOS D	7.2	50.4	1.00	0.88	1.08	35.3
11	T1	87	0.0	87	0.0	0.723	49.7	LOS D	7.2	50.4	1.00	0.88	1.08	29.2
12	R2	337	0.3	337	0.3	0.723	53.7	LOS D	7.6	53.0	1.00	0.87	1.07	20.6
Approach		451	0.2	451	0.2	0.723	53.0	LOS D	7.6	53.0	1.00	0.87	1.07	23.9
All Vehicles		4182	3.3	4182	3.3	0.724	26.9	LOS B	17.5	128.1	0.82	0.75	0.83	42.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS4706 [7. Forest Way-Naree Rd - PM (Site Folder: PM Network (SIDRA Optimised))]

Network: 6 [PM 2030 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Future 2030
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 150 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Forest Way-S														
2	T1	1554	4.8	1554	4.8	0.462	13.7	LOS A	12.3	89.4	0.53	0.48	0.53	41.6
3	R2	199	6.3	199	6.3	* 0.835	87.7	LOS F	10.1	74.7	1.00	1.10	1.23	13.1
Approach		1753	5.0	1753	5.0	0.835	22.1	LOS B	12.3	89.4	0.59	0.55	0.61	33.3
East: Naree Rd-E														
4	L2	144	0.7	144	0.7	0.204	35.0	LOS C	4.1	28.9	0.69	0.73	0.69	15.4
6	R2	321	1.6	321	1.6	* 0.678	56.9	LOS E	12.8	91.2	0.95	0.85	0.95	10.8
Approach		465	1.4	465	1.4	0.678	50.1	LOS D	12.8	91.2	0.87	0.81	0.87	11.9
North: Forest Way-N														
7	L2	263	2.0	263	2.0	0.673	34.5	LOS C	20.5	146.8	0.79	0.77	0.79	24.4
8	T1	1676	3.2	1676	3.2	* 0.673	28.6	LOS C	21.3	153.1	0.80	0.74	0.80	25.3
Approach		1939	3.0	1939	3.0	0.673	29.4	LOS C	21.3	153.1	0.80	0.74	0.80	25.2
All Vehicles		4157	3.7	4157	3.7	0.835	28.6	LOS C	21.3	153.1	0.72	0.67	0.73	26.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS4712 [8. FFR-Rabbett Street - PM (Site Folder: PM Network (SIDRA Optimised))]

Network: 6 [PM 2030 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Future 2030
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Two-Phase
Reference Phase: Phase A
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Rabbett St-S														
1	L2	5	0.0	5	0.0	0.032	25.9	LOS B	0.2	1.7	0.73	0.64	0.73	20.2
2	T1	3	0.0	3	0.0	0.032	21.3	LOS B	0.2	1.7	0.73	0.64	0.73	29.0
3	R2	6	0.0	6	0.0	0.032	25.9	LOS B	0.2	1.7	0.73	0.64	0.73	20.2
Approach		15	0.0	15	0.0	0.032	24.9	LOS B	0.2	1.7	0.73	0.64	0.73	22.7
East: FFRW-E														
4	L2	39	43.2	39	43.2	0.567	22.5	LOS B	8.4	61.4	0.78	0.70	0.78	32.7
5	T1	443	1.2	443	1.2	0.567	16.9	LOS B	8.4	61.4	0.78	0.70	0.78	26.1
6	R2	263	2.0	263	2.0	* 0.703	31.1	LOS C	5.9	42.0	0.91	0.87	1.00	26.6
Approach		745	3.7	745	3.7	0.703	22.2	LOS B	8.4	61.4	0.83	0.76	0.86	26.7
North: Rabbett St-N														
7	L2	255	0.4	255	0.4	0.529	28.6	LOS C	6.0	42.7	0.87	0.80	0.87	20.0
8	T1	35	3.0	35	3.0	0.529	24.1	LOS B	6.0	42.7	0.87	0.80	0.87	27.6
9	R2	16	6.7	16	6.7	* 0.529	28.7	LOS C	6.0	42.7	0.87	0.80	0.87	20.0
Approach		305	1.0	305	1.0	0.529	28.1	LOS B	6.0	42.7	0.87	0.80	0.87	21.1
West: Naree Rd-W														
10	L2	42	0.0	42	0.0	0.272	20.0	LOS B	3.4	24.7	0.68	0.60	0.68	32.9
11	T1	417	4.3	417	4.3	0.272	14.7	LOS B	3.5	25.1	0.66	0.57	0.66	25.0
12	R2	1	0.0	1	0.0	0.272	18.8	LOS B	3.5	25.1	0.65	0.55	0.65	33.5
Approach		460	3.9	460	3.9	0.272	15.2	LOS B	3.5	25.1	0.66	0.58	0.66	26.2
All Vehicles		1525	3.2	1525	3.2	0.703	21.3	LOS B	8.4	61.4	0.79	0.71	0.80	25.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS4751 [FFR-Bluegum Cres - PM (Site Folder: PM Network (SIDRA Optimised))]

Network: 6 [PM 2030 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Future 2030
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B
Output Phase Sequence: A, B

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: School Access-S														
1	L2	68	0.0	68	0.0	0.301	41.4	LOS C	1.7	12.2	0.95	0.74	0.95	16.1
2	T1	1	0.0	1	0.0	* 0.203	39.0	LOS C	1.1	7.4	0.93	0.71	0.93	24.3
3	R2	41	0.0	41	0.0	0.203	40.3	LOS C	1.1	7.4	0.93	0.71	0.93	16.2
Approach		111	0.0	111	0.0	0.301	41.0	LOS C	1.7	12.2	0.94	0.73	0.94	16.2
East: FFRW-E														
4	L2	21	0.0	21	0.0	* 0.329	10.9	LOS A	4.6	33.4	0.45	0.41	0.45	43.7
5	T1	640	4.1	640	4.1	0.329	6.9	LOS A	4.6	33.4	0.46	0.44	0.46	33.2
6	R2	63	0.0	63	0.0	0.329	12.3	LOS A	3.7	26.5	0.48	0.48	0.48	41.9
Approach		724	3.6	724	3.6	0.329	7.5	LOS A	4.6	33.4	0.46	0.44	0.46	35.6
North: Bluegum Cres - N														
7	L2	6	0.0	6	0.0	0.038	41.9	LOS C	0.2	1.4	0.90	0.66	0.90	23.7
8	T1	1	0.0	1	0.0	0.038	37.4	LOS C	0.2	1.4	0.90	0.66	0.90	31.9
9	R2	1	0.0	1	0.0	0.038	41.9	LOS C	0.2	1.4	0.90	0.66	0.90	23.7
Approach		8	0.0	8	0.0	0.038	41.3	LOS C	0.2	1.4	0.90	0.66	0.90	25.1
West: FFRW-W														
10	L2	34	0.0	34	0.0	0.298	11.2	LOS A	3.9	28.0	0.45	0.42	0.45	43.8
11	T1	638	3.0	638	3.0	0.298	6.4	LOS A	3.9	28.0	0.44	0.41	0.44	36.9
12	R2	16	0.0	16	0.0	0.298	10.8	LOS A	3.6	25.7	0.43	0.39	0.43	44.2
Approach		687	2.8	687	2.8	0.298	6.8	LOS A	3.9	28.0	0.44	0.41	0.44	38.0
All Vehicles		1531	3.0	1531	3.0	0.329	9.8	LOS A	4.6	33.4	0.49	0.45	0.49	31.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS4705 [9. FFR-Gladys Ave - PM (Site Folder: PM Network (SIDRA Optimised))]

Network: 6 [PM 2030 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Future 2030
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, D, E, F
Output Phase Sequence: A, D, E, F

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Hospital Access-S														
1	L2	107	0.0	107	0.0	0.197	27.3	LOS B	2.2	15.4	0.76	0.72	0.76	25.2
2	T1	4	25.0	4	25.0	0.197	23.9	LOS B	2.2	15.4	0.76	0.72	0.76	33.8
3	R2	174	0.0	174	0.0	* 0.495	39.4	LOS C	4.3	30.1	0.94	0.79	0.94	21.7
Approach		285	0.4	285	0.4	0.495	34.6	LOS C	4.3	30.1	0.87	0.76	0.87	23.1
East: FFRW-E														
4	L2	81	1.3	81	1.3	0.173	15.6	LOS B	1.1	9.2	0.71	0.68	0.71	35.4
5	T1	607	4.3	607	4.3	0.438	24.1	LOS B	6.1	43.0	0.82	0.70	0.82	22.7
6	R2	9	0.0	9	0.0	0.077	49.3	LOS D	0.3	1.8	0.96	0.67	0.96	26.3
Approach		698	3.9	698	3.9	0.438	23.5	LOS B	6.1	43.0	0.81	0.70	0.81	25.1
North: Gladys Ave-N														
7	L2	13	8.3	13	8.3	0.134	26.9	LOS B	0.3	2.4	0.94	0.69	0.94	29.1
8	T1	1	0.0	1	0.0	* 0.134	23.7	LOS B	0.3	2.4	0.94	0.69	0.94	33.6
9	R2	8	0.0	8	0.0	0.134	26.9	LOS B	0.3	2.4	0.94	0.69	0.94	29.1
Approach		22	4.8	22	4.8	0.134	26.8	LOS B	0.3	2.4	0.94	0.69	0.94	29.4
West: FFRW-W														
10	L2	8	0.0	8	0.0	* 0.499	29.9	LOS C	7.0	50.0	0.84	0.72	0.84	33.0
11	T1	646	2.8	646	2.8	0.499	25.3	LOS B	7.1	50.5	0.84	0.72	0.84	18.3
12	R2	31	0.0	31	0.0	* 0.247	50.4	LOS D	0.8	5.8	0.98	0.72	0.98	23.2
Approach		685	2.6	685	2.6	0.499	26.5	LOS B	7.1	50.5	0.85	0.72	0.85	19.2
All Vehicles		1691	2.8	1691	2.8	0.499	26.6	LOS B	7.1	50.5	0.84	0.72	0.84	22.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS0848 [10. Wakehurst Pkwy-FFR - PM (Site Folder: PM Network (SIDRA Optimised))]

Network: 6 [PM 2030 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Future 2030
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Network User-Given Cycle Time)

Timings based on settings in the Network Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, D, E, G
Output Phase Sequence: A, D, E, G

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Wakehurst Pkwy-S														
1	L2	71	1.5	71	1.5	0.065	9.1	LOS A	0.2	1.7	0.08	0.61	0.08	40.3
2	T1	992	1.5	992	1.5	* 0.682	38.6	LOS C	22.9	162.0	0.67	0.60	0.67	35.8
3	R2	73	5.8	73	5.8	0.611	72.0	LOS F	3.1	22.8	0.95	0.76	0.96	10.4
Approach		1135	1.8	1135	1.8	0.682	38.9	LOS C	22.9	162.0	0.65	0.61	0.65	34.0
East: FFRE-E														
4	L2	187	2.8	187	2.8	0.160	42.6	LOS D	2.9	21.1	0.75	0.73	0.75	21.0
5	T1	549	5.2	549	5.2	0.625	56.8	LOS E	10.7	75.2	0.96	0.80	0.96	17.7
6	R2	163	0.6	163	0.6	* 0.672	72.9	LOS F	7.2	50.4	1.00	0.83	1.02	25.5
Approach		900	3.9	900	3.9	0.672	56.7	LOS E	10.7	75.2	0.92	0.79	0.92	20.3
North: Wakehurst Pkwy-N														
7	L2	49	0.0	49	0.0	0.037	9.7	LOS A	0.4	3.1	0.25	0.63	0.25	51.4
8	T1	677	3.9	677	3.9	0.294	30.4	LOS C	6.6	47.6	0.70	0.60	0.70	33.2
9	R2	83	3.8	83	3.8	* 0.717	86.0	LOS F	3.9	28.3	1.00	0.83	1.14	16.7
Approach		809	3.6	809	3.6	0.717	34.9	LOS C	6.6	47.6	0.71	0.63	0.72	30.8
West: FFRW-E														
10	L2	172	1.8	172	1.8	0.439	57.1	LOS E	7.2	55.7	0.89	0.80	0.89	27.2
11	T1	606	3.6	606	3.6	* 0.685	57.7	LOS E	12.1	84.9	0.97	0.83	0.97	13.3
12	R2	115	1.8	115	1.8	0.235	67.9	LOS E	2.3	16.6	0.93	0.75	0.93	11.7
Approach		893	3.1	893	3.1	0.685	58.9	LOS E	12.1	84.9	0.95	0.81	0.95	16.4
All Vehicles		3737	3.0	3737	3.0	0.717	47.1	LOS D	22.9	162.0	0.80	0.71	0.81	24.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS4750 [11. FFR-Romford Rd - PM (Site Folder: PM Network (SIDRA Optimised))]

Network: 6 [PM 2030 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Future 2030
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Two-Phase
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Local Business Access														
1	L2	68	0.0	68	0.0	0.395	35.1	LOS C	1.5	10.8	0.98	0.75	0.98	17.0
2	T1	5	0.0	5	0.0	* 0.395	34.0	LOS C	1.5	10.8	0.98	0.75	0.98	25.1
3	R2	24	0.0	24	0.0	0.130	34.1	LOS C	0.5	3.4	0.94	0.69	0.94	17.1
Approach		98	0.0	98	0.0	0.395	34.8	LOS C	1.5	10.8	0.97	0.73	0.97	17.6
East: FFRE-E														
5	T1	599	3.7	599	3.7	0.343	12.3	LOS A	4.1	29.7	0.66	0.57	0.66	30.8
6	R2	12	0.0	12	0.0	0.343	17.2	LOS B	3.9	28.1	0.67	0.58	0.67	40.1
Approach		611	3.6	611	3.6	0.343	12.4	LOS A	4.1	29.7	0.66	0.57	0.66	31.1
North: Romford Rd														
7	L2	12	0.0	12	0.0	* 0.381	35.4	LOS C	1.9	13.7	0.95	0.77	0.95	25.5
9	R2	85	1.2	85	1.2	0.381	35.4	LOS C	1.9	13.7	0.95	0.77	0.95	25.5
Approach		97	1.1	97	1.1	0.381	35.4	LOS C	1.9	13.7	0.95	0.77	0.95	25.5
West: FFRE-W														
10	L2	93	0.0	93	0.0	* 0.376	18.7	LOS B	4.3	30.6	0.71	0.66	0.71	40.1
11	T1	546	3.7	546	3.7	0.376	13.0	LOS A	4.4	32.0	0.69	0.61	0.69	34.4
Approach		639	3.1	639	3.1	0.376	13.8	LOS A	4.4	32.0	0.69	0.61	0.69	35.8
All Vehicles		1444	3.0	1444	3.0	0.395	16.1	LOS B	4.4	32.0	0.72	0.61	0.72	30.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: TCS4711 [12. Allambie Rd-Patanga Rd-FFE - PM (Site Folder: PM Network (SIDRA Optimised))]

Network: 6 [PM 2030 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Future 2030
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Split Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Allambie Rd-S														
1	L2	666	1.4	666	1.4	0.286	12.2	LOS A	4.0	28.1	0.48	0.66	0.48	19.8
3	R2	59	1.8	59	1.8	* 0.362	48.6	LOS D	1.6	11.2	0.98	0.75	0.98	13.4
Approach		725	1.5	725	1.5	0.362	15.2	LOS B	4.0	28.1	0.52	0.67	0.52	18.3
East: FFRE-E														
4	L2	21	5.0	21	5.0	0.030	22.6	LOS B	0.3	2.5	0.64	0.66	0.64	17.6
5	T1	46	11.4	46	11.4	0.255	42.3	LOS C	1.2	9.3	0.96	0.71	0.96	11.5
Approach		67	9.4	67	9.4	0.255	36.1	LOS C	1.2	9.3	0.86	0.70	0.86	12.8
North: Patanga Rd-N														
9	R2	17	37.5	17	37.5	* 0.172	51.0	LOS D	0.5	4.3	0.97	0.70	0.97	21.1
Approach		17	37.5	17	37.5	0.172	51.0	LOS D	0.5	4.3	0.97	0.70	0.97	21.1
West: FFRE-W														
10	L2	37	20.0	37	20.0	* 0.377	12.6	LOS A	5.7	40.9	0.50	0.47	0.50	41.2
11	T1	416	2.5	416	2.5	0.377	8.0	LOS A	5.7	40.9	0.50	0.47	0.50	34.2
12	R2	215	3.4	215	3.4	0.248	19.4	LOS B	3.4	24.5	0.63	0.72	0.63	12.8
Approach		667	3.8	667	3.8	0.377	11.9	LOS A	5.7	40.9	0.54	0.55	0.54	28.4
All Vehicles		1477	3.3	1477	3.3	0.377	15.1	LOS B	5.7	40.9	0.55	0.62	0.55	22.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
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)

Site: [13. FFR-Iverness Avenue - PM (Site Folder: PM Network (SIDRA Optimised))]

Network: 6 [PM 2030 (Network Folder: SIDRA Optimised)]

Operational Performance Model
Site Category: Future 2030
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	50% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Local Site Access														
1	L2	33	0.0	33	0.0	0.209	2.7	LOS A	0.3	2.0	0.66	0.64	0.66	21.2
2	T1	11	0.0	11	0.0	0.209	21.1	LOS B	0.3	2.0	0.66	0.64	0.66	29.6
3	R2	16	0.0	16	0.0	0.209	29.7	LOS C	0.3	2.0	0.66	0.64	0.66	21.2
Approach		59	0.0	59	0.0	0.209	13.2	LOS A	0.3	2.0	0.66	0.64	0.66	23.2
East: FFRE - E														
4	L2	38	8.3	38	8.3	0.215	4.6	LOS A	0.0	0.0	0.00	0.05	0.00	48.5
5	T1	617	2.9	617	2.9	0.215	0.6	LOS A	0.4	2.5	0.12	0.09	0.12	40.9
6	R2	71	0.0	71	0.0	0.215	8.1	LOS A	0.4	2.5	0.30	0.15	0.30	45.6
Approach		725	2.9	725	2.9	0.215	1.6	NA	0.4	2.5	0.13	0.09	0.13	43.8
North: Iverness Avenue														
7	L2	33	0.0	33	0.0	0.033	5.9	LOS A	0.1	0.4	0.37	0.56	0.37	43.0
Approach		33	0.0	33	0.0	0.033	5.9	LOS A	0.1	0.4	0.37	0.56	0.37	43.0
West: FFRE - W														
10	L2	3	0.0	3	0.0	0.168	4.6	LOS A	0.0	0.0	0.00	0.01	0.00	49.3
11	T1	618	4.1	618	4.1	0.168	0.1	LOS A	0.0	0.3	0.02	0.01	0.02	49.4
12	R2	7	0.0	7	0.0	0.168	8.4	LOS A	0.0	0.3	0.04	0.01	0.04	31.2
Approach		628	4.0	628	4.0	0.168	0.2	NA	0.0	0.3	0.02	0.01	0.02	48.5
All Vehicles		1445	3.2	1445	3.2	0.215	1.6	NA	0.4	2.5	0.11	0.09	0.11	42.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Appendix C

Stakeholder Interview Record

Operational Traffic Stakeholder Review Sheet

Ferrovial Officer:	**Vicki Hardaker**
Date and Time discussion held:	27**/11/2020 1.14pm**
Stakeholder:	**Frenchs Forest High**
Contact Person and Phone number:	**Rosemary McDowall 9451 5111**

Details discussed:

Over all the traffic has improvement has been well received.

The issues the school now faces are;

1) Council provided a fence around the perimeter of the school which has students entering/exiting school on Frenchs Forest Rd via the driveway. The driveway is access for teacher/worker car parks. School is looking to have the council install a pedestrian gate so the students can move away from the cars.

   There has been an incident where a student climbed off #136 and stepped in front of the bus to cross Frenchs Forest Rd to get to school. The student was hit by a car.

   Students are constantly crossing Frenchs Forest Rd without using the traffic lights to get to the #136 bus.
   Rosemary would like for the STA to consider moving the 3.00 and 3.30pm buses by ten minutes for this gives the students time to use the traffic lights and cross safely.

   She also notes adults have been seen doing the same thing especially from the hospital area.

   There have also been some reports of students crossing Warrignah Rd and not using the Pedestrian bridge. Not many though.

2) The bus lane runs along the stretch of Frenchs Forest Rd and runs past the drive way. This creates poor vision for the drivers accessing and exiting the driveway. Students also have been known to run out in front of the buses to cross French forest Rd to catch the #136 bus.

   Buses have been known to pull up at the school to drop off and has blocked the driveway. This does not happen often but is known to happen.

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