GTAconsultants

St Bartholomew's Cemetery Expansion
Planning Proposal
Transport Impact Assessment

Client // Blacktown City Council
Office // NSW
Reference // N140040
Date // 22/06/18

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Quality Record

Issue	Date	Description	Prepared By	Checked By	Approved By	Signed
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Introduction

Purpose of this Report

This report provides an assessment of the anticipated transport implications of the proposed future use of the land as a cemetery and provides recommendations for the masterplan, detailed design and DA documentation, including consideration of the following:

i existing traffic conditions surrounding the site
ii parking requirements in terms of supply (quantum) and layout
iii service vehicle requirements
iv pedestrian and bicycle requirements
v the traffic generating characteristics of the proposed land use
vi suitability of the proposed access arrangements for the site
vii the transport impact of the development proposal on the surrounding road network.

References

In preparing this report, reference has been made to the following:

- an inspection of the site and its surrounds on Sunday 9 December 2017 and Tuesday 11 December 2017
- Blacktown City Council Development Control Plan (DCP) 2015
- Blacktown City Council LEP 2015
- traffic surveys undertaken by TTM Group on Sunday 9 December 2017 and Tuesday 11 December 2017, as referenced in the context of this report
- other documents and data as referenced in this report.

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1. Background

The existing St Bartholomew's Church and Cemetery is located on a 3.17-hectare lot of Ponds Road, Prospect. The cemetery comprises approximately 3,600 occupied graves. In January 2016, Blacktown City Council (Council) received approximately 6 hectares of land east of St Bartholomew's Church from the New South Wales (NSW) State Government under a Land Transfer Agreement. In addition, Council intends to acquire approximately 2 hectares of land east of the existing cemetery.

Further to this, Council is seeking to close St Bartholomew's Place (approximately 0.39 hectares), with the intention of including it in the expansion of the cemetery. This equates to a total of 11.56 hectares of land proposed to be used for the expanded cemetery.

A planning proposal (PP) is being prepared, which seeks to reactivate the existing church and cemetery on the 3.17-hectare land and to reclassify the Council-owned expansion lands from "community land" to "operational land" and to rezone the cemetery expansion lands from RE1 Public Recreation, RU4 Primary Production Small Lots and SP2 Classified Road, under the Blacktown Local Environment Plan (LEP) 2015 to SP1 Cemetery.

In addition to the existing church and cemetery, the expanded cemetery is likely to include ancillary facilities such as an office, café, flower shop and potentially chapel. They will most likely be in the vicinity of Tarlington Place. Details will be determined at the Development Application (DA) stage.

APP Corporation (APP) on behalf of Council has engaged GTA Consultants (GTA) to prepare a transport impact assessment for the St Bartholomew's Cemetery expansion, to support the PP.

2. Existing Conditions

2.1 Land Use

The site is located on land between the Great Western Highway (GWH) to the north and M4 Western Motorway (M4) to the south and is bounded by the Prospect Highway to the west. The existing cemetery has an area of approximately 3.17 hectares, with the newly acquired land adding a further 6 hectares. A further 2.39 hectares of land is also intended to be acquired, including 2 hectares from other land owners and 0.39 hectares from the closure of St Bartholomew's Place, bringing the total area for the proposed cemetery site to 11.56 hectares. This is an increase of 8.39 hectares to the existing cemetery.

The existing cemetery is zoned SP1 Cemetery under Blacktown LEP 2015. The proposed cemetery expansion land:

- Is predominantly zoned RE1 Public Recreation
- Includes land zoned RU4 Primary Production Small Lots (the site of the old Prospect Post Office)
- Includes land zoned SP2 Classified Road to the south of the existing cemetery.

The existing cemetery contains approximately 3,600 utilised graves. As the last church service was held on the site in 1967 and no new interment rights have been sold at the cemetery since 1972, the existing cemetery site does not regularly attract many visitors.

The cemetery expansion land has been largely vacant and unused since the former Prospect Village (along Tarlington Place) was disrupted and eventually vacated/ demolished following the realignment of the Great Western Highway in 1968 and the construction of the M4 in 1990.

The location of the site and its surrounding environs is shown in Figure 2.1.

Figure 2.1: Subject site and its environs

2.2 Access to the Site

Access to and from Tarlington Place can be achieved through the Great Western Highway in the eastbound and westbound directions. Eastbound access is gained via a right turn bay. Access points to the existing cemetery are from Ponds Road, Prospect.

2.3 Road Network

Adjoining Roads

Great Western Highway

The GWH is classified as a Roads and Maritime State Road and is aligned in an east-west direction to the site's north. It is a two-way road with 3 westbound lanes and 4 eastbound lanes near the site, set within a 32-metre carriageway with an approximately 9-metre central median. Being an arterial road, no parking is permitted. The GWH has a posted speed limit of 80 km/h.

Prospect Highway

The Prospect Highway is classified as a Roads and Maritime State Road and is aligned in a north-south direction to the site's west. It is a two-way road with generally one lane in each direction, set within an approximately 7-metre carriageway. Kerbside parking is not permitted, and the road has a posted speed limit of 60 km/h. Ponds Road

Ponds Road is classified as a Roads and Maritime State Road and is aligned in an east-west direction along with the site's north-western boundary. It is a two-way road with 1 lane in each direction, set within an approximately 7-metre carriageway. Ponds Road functions as an exit-ramp to the GWH and connects with the Prospect Highway to the west. It also provides access to the existing cemetery and St Bartholomew's Church. Ponds Road has a posted speed limit of 60 km/h.

M4 Western Motorway

The M4 is classified as a Roads and Maritime State Road and is aligned in an east-west direction to the site's south. It is a two-way road with generally 3 lanes in each direction, set over an approximately 22-metre wide carriageway, including a central separation barrier. The M4 has a posted speed limit of 100 km/h in the vicinity of the site, with off and on-ramps provided to/ from the Prospect Highway.

Tarlington Place and St Bartholomew's Place

Tarlington Place and St Bartholomew's Place are classified as Local Roads and are internal roads located within the subject site. St Bartholomew's Place is an unsealed road, which runs along the eastern boundary of the existing cemetery while Tarlington Place is a sealed road and primarily functions as the access road to 23 Tarlington Place (the old Prospect Post Office).

Council is looking to close St Bartholomew's Place (0.39 hectares) and absorb it into the cemetery expansion lands. It could, however, still function as an access point and internal cemetery road.

Vehicle access to the site is proposed via the existing 2 driveways along Ponds Road (access 1 and access 2) and Tarlington Place (access 3). St Bartholomew's Place, whilst proposed to be closed, may also be used as an access point, depending on how the development is staged.

The internal road network will be determined at the Development Application stage. It is recommended that an internal link between the existing and expanded cemetery areas to be provided.

3. Future Conditions

3.1 Land Uses

The proposal seeks to rezone the 8.39 hectares of land to allow for the expansion of the existing St Bartholomew's cemetery.

The cemetery expansion will be developed in stages. New burial space is expected to become available approximately five years after development consent is granted for the cemetery. The site plan is outlined in Figure 2.1.

The expanded cemetery is expected to ultimately include:

- Over 10,000 burial plots
- Above ground crypts
- Columbarium walls for ashes interment
- Ancillary facilities such as a chapel, café, office and flower shop, with associated car parking near Tarlington Place.

Table 3.1 summarises the yield of both the existing and potential future expansion of the site.

Table 3.1: Area schedule

Use		Size
Existing cemetery	Reactivation of existing church and cemetery	3.17 hectares
Future cemetery expansion	Cemetery expansion and ancillary facilities	8.39 hectares
Total		**11.56 hectares**

4. Executive Summary

The land proposed for the expansion of the cemetery has been vacant and unused for over 30 years. The existing cemetery has seen very little regular use since the last Anglican Church service was held in 1967 and the sale of new interment rights was ceased in 1972. The existing St Bartholomew's Church and Cemetery has a site area of approximately 3.17 hectares, with newly acquired land adding a further six hectares. An additional 2.39 hectares of land is intended to be acquired for the cemetery expansion, including two hectares from other land owners and 0.39 hectares from the closure of St Bartholomew's Place, bringing the total area for the proposed cemetery site to 11.56 hectares. This is a total increase of 8.39 hectares to the existing cemetery. The planning proposal seeks to reclassify the Council-owned expansion lands from "community land" to "operational land" and to rezone the additional 8.39 hectares of land to allow for the expansion of the existing St Bartholomew's cemetery.

The proposed cemetery expansion will be developed in stages. New burial space is expected to become available approximately five years after development consent is granted for the cemetery. Stage 1 will involve the opening the one-hectare of vacant land and the existing cemetery site, to burials.

The proposed expanded cemetery is expected to ultimately include:

- over 10,000 burial plots
- above ground crypts
- columbarium walls for ashes interment
- ancillary facilities such as a chapel, café, office and flower shop, with associated car parking near Tarlington Place.

Vehicle access to the site is proposed via the two existing driveways along Ponds Road and one existing driveway at Tarlington Place.

Based on an empirical assessment, the proposed development would likely generate a parking demand of up to 115 parking spaces in the peak hour.

The on-site car park would likely accommodate approximately 50 parking spaces, with the remaining parking demand accommodated for on-street, along 400 metres of Tarlington Place and the proposed internal access road. It is recommended that a provision of two motorcycle spaces be provided on site for use by staff and visitors. It is recommended that a minimum provision of one and 13 bicycle spaces be provided on site for use by staff and visitors, respectively.

The proposed development would generate 37 and 32 trips in the AM and PM commuter peak hours, respectively and up to 74 trips during the weekend noon commuter peak hour. The proposed development would generate up to 66 and 115 trips during the cemetery's peak weekday and weekend peak hours respectively.

Roads and Maritime Services (Roads and Maritime) is planning the future upgrade of the Prospect Highway between Reservoir Road at Prospect and 200 metres north of St Martins Crescent at Blacktown for a length of 3.6 kilometres. Considering a growth rate of 1.2 per cent per annum over the next 10 years and the proposed upgrade of Prospect Highway, the key intersections near the site are all expected to operate within satisfactory levels of service, with only minor increases in the delay and queue at the intersections of Prospect Highway/ M4 eastbound ramps and Great Western Highway (GWH)/ Tarlington Place.

It is recommended that two bus stops be located along Prospect Highway and GWH, with associated shared paths and crossings recommended for pedestrians and cyclists across the Prospect Highway.

Against existing traffic volumes near the site, the additional traffic generated by the proposed development could not be expected to compromise the safety and function of the surrounding road network.

5. Existing Operations

5.1 Surrounding Key Intersections

The following key intersections currently exist near the site (as shown in Figure 5.1):

1. Prospect Highway/ Ponds Road (unsignalised)
2. Prospect Highway/ M4 eastbound ramps (unsignalised roundabout)
3. Prospect Highway/ M4 westbound ramps (signalised)
4. GWH/ Tarlington Place (unsignalised).

These intersections are shown in Figure 5.1 and Figure 5.2.

Figure 5.1: Site

Figure 5.2: Surrounding key intersections

Base map source: Sydway Publishing Pty Ltd, accessed 07/02/18.

5.2 Traffic Volumes

GTA commissioned traffic movement counts at the following four key intersections on Sunday 9 December 2017 and Tuesday 11 December 2017 during the weekday (7am to 9am and 4pm to 6pm) and weekend (11am to 1pm) peak periods:

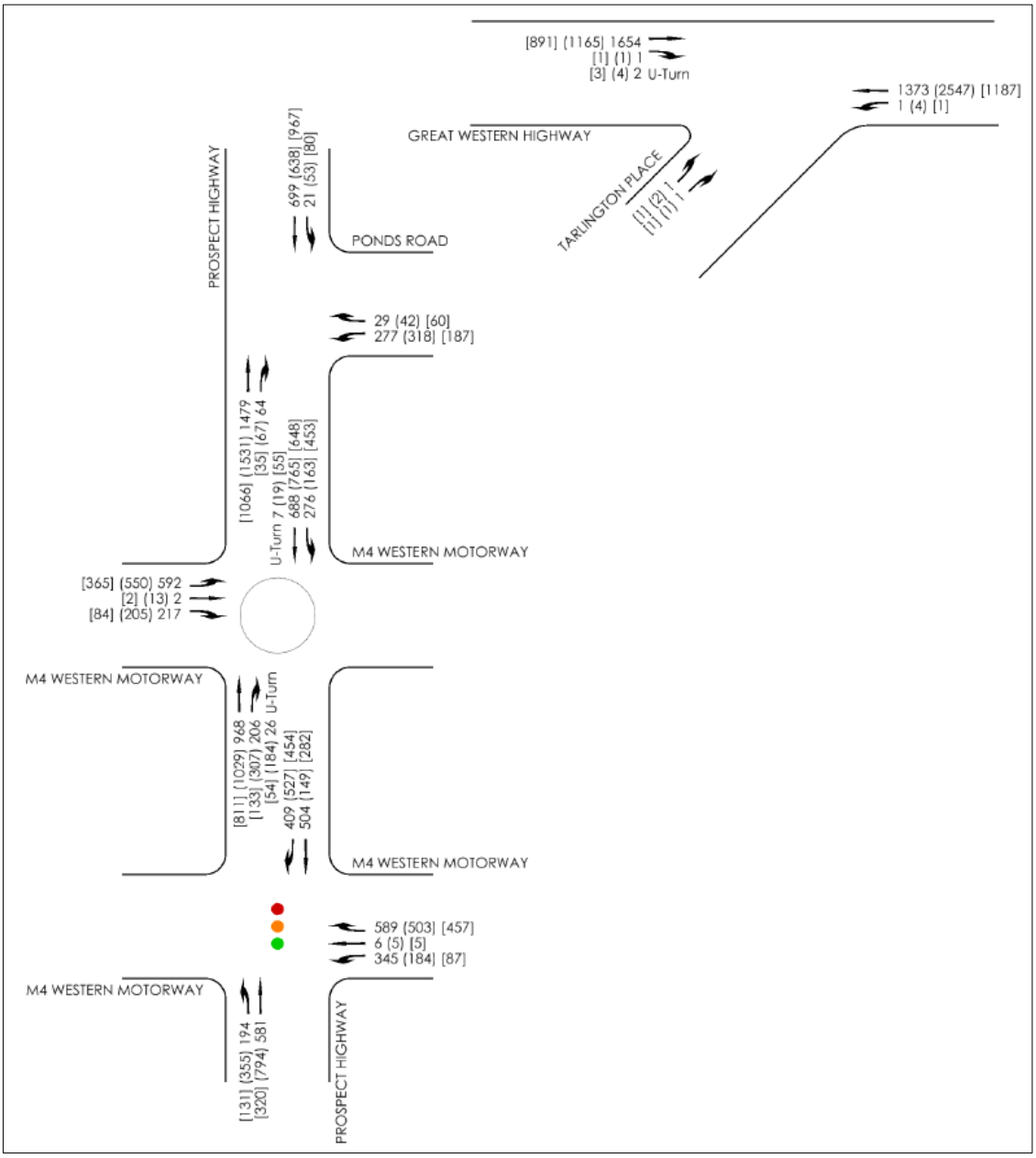
- Prospect Highway/ Ponds Road (unsignalised)
- Prospect Highway/ M4 eastbound ramps (unsignalised roundabout)
- Prospect Highway/ M4 westbound ramps (signalised)
- GWH/ Tarlington Place (unsignalised).

Photos of the adjoining roads are shown in Appendix A.

The weekday AM and PM as well as weekend noon peak hour traffic volumes are summarised in Figure 5.3, with full results contained in Appendix B.

It is noted that the U-turning traffic volumes at the Prospect Highway/ M4 eastbound ramps intersection is a reflection of the number of vehicles which intended to make a right-turn from Ponds Road onto the Prospect Highway, however did not attempt such manoeuvres as it is particularly difficult to turn right from Ponds Road onto the Prospect Highway. As such, the right-turning volumes from Ponds Road are theoretically higher than the surveyed volumes.

Figure 5.3: Existing weekday AM/ PM and weekend noon peak hour traffic volumes



Weekday AM (Weekday PM) [Weekend Noon]

5.3 Intersection Operation

The operation of the key intersections within the study area have been assessed using SIDRA Intersection[1], a computer-based modelling package which calculates intersection performance. The commonly used measure of intersection performance, as defined by RMS, is vehicle delay. SIDRA Intersection determines the average delay that vehicles encounter and provides a measure of the level of service. A level of service D or better is generally considered to be acceptable operating conditions.

Table 5.1 shows the criteria that SIDRA Intersection adopts in assessing the level of service.

[1] Program used under license from Akcelik & Associates Pty Ltd.

Table 5.1: SIDRA Intersection level of service criteria

Level of service	Average delay per vehicle (seconds/vehicle)	Traffic signals, roundabout	Give way and 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 will cause excessive delays	At capacity, requires other control mode
F	Greater than 70	Extra capacity required	Extreme delay, major treatment required

Table 5.2 presents a summary of the existing operation of the intersection, with full results presented in Appendix C of this report.

Table 5.2: Existing operating conditions

Intersection	Peak	Leg	Degree of saturation	Average delay (second)	95th percentile queue (metre)	Level of service
Prospect Highway/ Ponds Road	AM	South - Prospect Highway	0.10	10	3	A
		East - Ponds Road	0.93	38	47	C
		North - Prospect Highway	0.42	6	139	A
	PM	South - Prospect Highway	0.10	10	3	A
		East - Ponds Road	0.98	52	83	D
		North - Prospect Highway	0.41	6	304	A
	Saturday	South - Prospect Highway	0.11	16	3	B
		East - Ponds Road	0.86	37	26	C
		North - Prospect Highway	0.97	8	0	A
Prospect Highway/ M4 eastbound ramps	AM	Southeast - M4 eastbound off-ramp	0.41	11	28	A
		North - Prospect Highway	0.98	55	199	D
		Southwest - Prospect Highway	0.50	22	38	B
	PM	Southeast - M4 eastbound off-ramp	0.46	11	25	A
		North - Prospect Highway	1.04	109	199	F
		Southwest - Prospect Highway	0.54	26	51	B
	Saturday	Southeast - M4 eastbound off-ramp	0.36	11	19	A
		North - Prospect Highway	0.90	21	183	B
		Southwest - Prospect Highway	0.29	17	11	B
Prospect Highway/ M4 westbound ramps	AM	South - Prospect Highway	0.81	31	178	C
		East - M4 westbound off-ramp	0.85	35	122	C
		North - Prospect Highway	0.83	20	93	B
		Overall	**0.85**	**29**	**178**	**C**
	PM	South - Prospect Highway	0.92	37	278	C
		East - M4 westbound off-ramp	0.89	44	102	D
		North - Prospect Highway	0.93	28	80	B
		Overall	**0.93**	**36**	**278**	**C**
	Saturday	South - Prospect Highway	0.56	32	49	C
		East - M4 westbound off-ramp	0.58	34	10	C

Intersection	Peak	Leg	Degree of saturation	Average delay (second)	95th percentile queue (metre)	Level of service
		North - Prospect Highway	0.57	17	6	B
		Overall	**0.58**	**26**	**11**	**B**
GWH/ Tarlington Place	AM	East - GWH	0.26	6	0	A
		West - GWH	0.01	22	1	B
		Southwest - Tarlington Place	0.00	9	0	A
	PM	East - GWH	0.47	6	1	A
		West - GWH	0.03	32	1	C
		Southwest - Tarlington Place	0.00	9	0	A
	Saturday	East - GWH	0.22	6	0	A
		West - GWH	0.01	17	0	B
		Southwest - Tarlington Place	0.00	8	0	A

Based on the above assessment and site observations, there is considerable traffic congestion through the Prospect Highway, M4 eastbound ramps and M4 westbound ramps. The roundabout of Prospect Highway/ M4 eastbound ramps and major signalised intersection of Prospect Highway/ M4 westbound ramps experiencing peak period queuing and delays during the PM peak hour.

The above congestion will be addressed as part of the Prospect Highway upgrade which will provide increased capacity in order to cater for future traffic growth on the Prospect Highway between Reservoir Road at Prospect and St Martins Crescent at Blacktown. The Prospect Highway upgrade is detailed in Section 6.2.

The worst delay occurs on the southbound movement on the Prospect Highway approaching the M4 eastbound ramps, with an average delay of 109 seconds while the maximum vehicle queue of 199 metres occurs during the PM peak hour. The vehicle queue associated with the southbound movement extends past Ponds Road during the weekday AM and PM peak periods.

The northbound movements on the Prospect Highway are observed to be affected by the entering traffic from the M4 and GWH eastbound ramps onto the Prospect Highway and the intersections to the north, including Prospect Highway with Stoddart Road and Harrod Street.

Much of the congestion at the intersection of Prospect Highway/ Ponds Road is influenced by the intersection of Prospect Highway/ M4 eastbound ramps with the westbound Ponds Road traffic and southbound Prospect Highway traffic affected by the southbound Prospect Highway queue at the M4 eastbound ramps.

The northern and eastern legs of the intersection of Prospect Highway/ Ponds Road currently operate at capacity with level of service C and D during the AM and PM peak hours, respectively. The eastern approach experiences vehicle queues of up to 47 metres and 83 metres during the weekday AM and PM peak hours, respectively.

Notwithstanding that, the westbound traffic turning right from Ponds Road and Prospect Highway are not adversely affected by the southbound traffic as the southbound traffic was observed to give way to these movements. The southern approach of this intersection currently experiences negligible queuing and delays during both the weekday AM and PM peak periods.

The intersection of Prospect Highway/ M4 westbound ramps currently operates satisfactorily with the worst delay occurring on the eastern approach of the westbound movement on the M4 exit-ramp. This movement has an average delay of 44 seconds while the maximum vehicle queue of 278 metres occurs on the southbound movement on Prospect Highway during the PM peak hour.

The vehicle queue along Prospect Highway/ M4 westbound ramps for the southbound movement extends past the M4 eastbound ramps in the PM peak.

The intersection of GWH/ Tarlington Place currently operates satisfactorily with minimal queues and delays on all approaches.

5.4 Car Parking

There is an informal on-site car park for the St Bartholomew's Church and Cemetery. The car park is unsealed with no line marking.

Figure 5.4: Existing on-site parking

Basemap source: Sydway

5.5 Public Transport

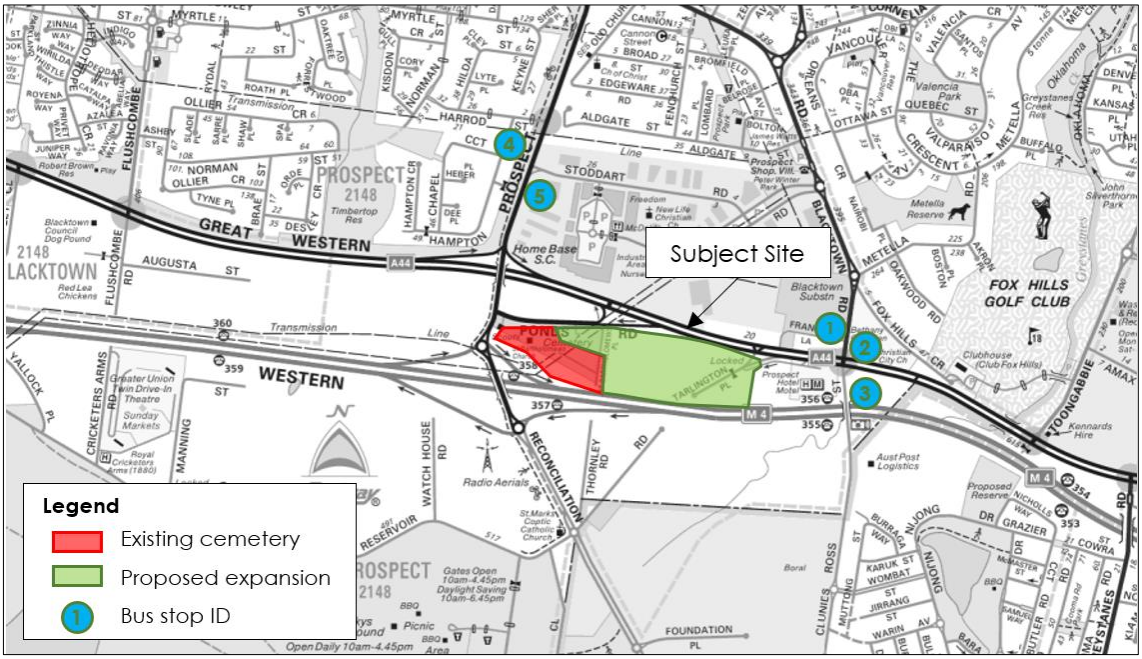
There are limited bus services in the area. A review of these services is summarised in Table 5.3. The existing bus stops are located more than 500 metres from the existing church and 1.1 kilometres from the proposed chapel, which are outside generally acceptable walking distance.

Further, the access to the existing bus stops along the Prospect Highway from the site is limited by the lack of safe crossing at the Prospect Highway/ Ponds Road and Prospect Highway/ GWH eastbound ramps intersections. There is also a lack of pedestrian footpath link on the eastern side of the Prospect Highway and Clunies Ross Street.

Table 5.3: Public transport provision

Route number	Route description	Stop ID (see Figure 5.5)	Location of stop	Distance to nearest stop	Frequency on/ off peak
700	Blacktown to Parramatta	1 and 2	Blacktown Road opposite and at Bethany Christian School	1.2km to existing Church 600m to proposed chapel	15 minutes peak/ 30 minutes off peak
800	Fairfield to Blacktown via Wetherill Park	3	Clunies Ross Street after GWH		
812	Blacktown to Fairfield	4	Prospect Highway opposite Stoddart Road	630 m to existing Church 1.2km to proposed chapel	30 minutes peak only
		5	Prospect Highway after Stoddart Road	520 m to existing Church 1.1 km to proposed chapel	

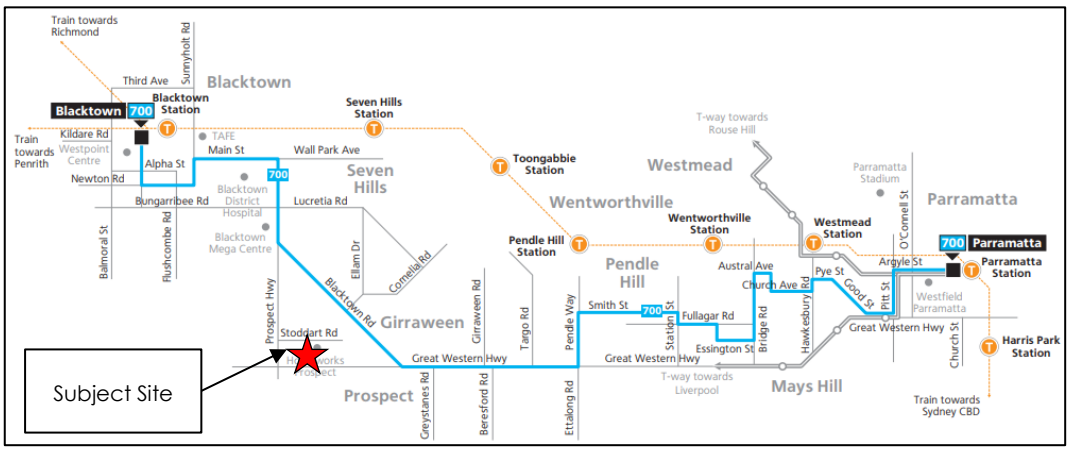
Figure 5.5: Existing bus stop locations



Basemap source: Sydway

The 700 bus route is shown in Figure 5.6 and the 800 and 812 bus routes are shown in Figure 5.7.

Figure 5.6: 700 bus route



Source: CDC Bus, accessed 12 June 2018

Figure 5.7: 800 and 812 bus routes

Source: Transit Systems, accessed 24 May 2018

5.6 Pedestrian Infrastructure

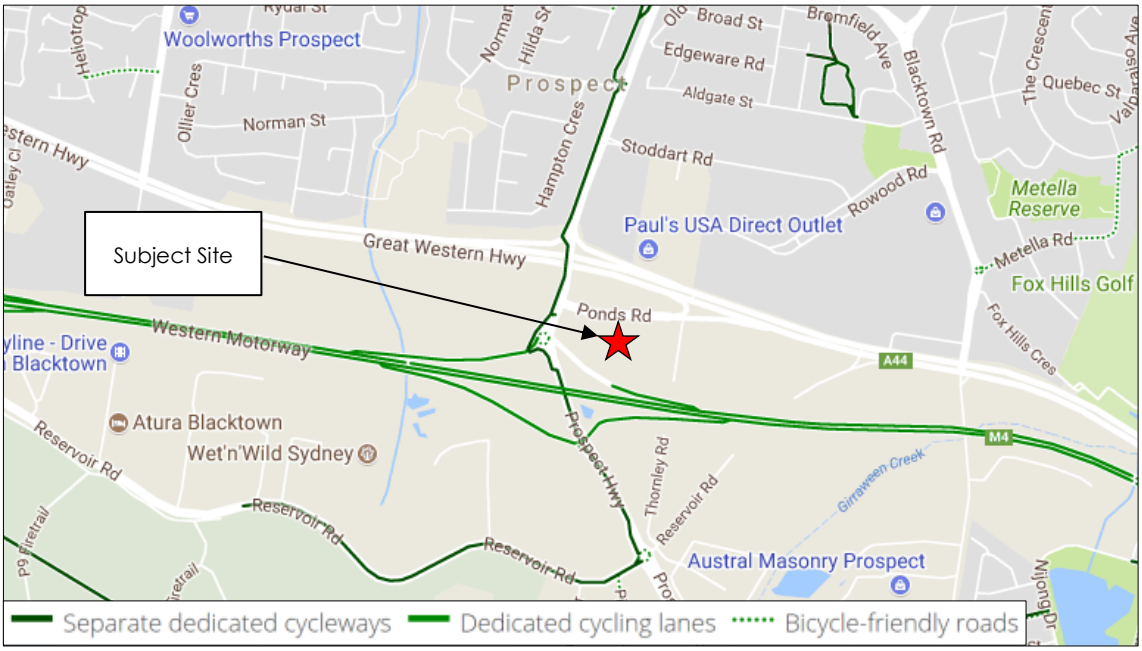
There is limited pedestrian amenity surrounding the site, with pedestrian paths only provided along the western side of the Prospect Highway. Signalised pedestrian crossings are provided on the western legs of the M4 eastbound and westbound ramps intersections with the Prospect Highway.

5.7 Cycle Infrastructure

A shared path is provided along the western side of the Prospect Highway providing a connection between Blacktown to the sites north and the M4 for cyclists. The M4 also has dedicated cycling lanes in both directions. Signalised pedestrian and cyclist crossings are provided on the left-turn slip lane from the Prospect Highway (southbound) onto the M4 eastern on-ramp and the M4 western on-ramp.

The surrounding cycling network is shown in Figure 5.8.

Figure 5.8: Surrounding cycling network



Source: http://www.sydneycycleways.net/map/, accessed 07/02/18.

The Prospect Highway upgrade would improve the temporary pedestrian and cycleway path located between the M4 westbound on-ramp and Harrod Street on the western side of Prospect Highway, detailed in Section 6.

5.8 Crash History

Crash data for the roads around the site has been obtained from RMS. The crash data relates to the latest five-year period to December 2017.

Within this period, 164 crashes occurred in vicinity of the site, with most of the crashes occurring on the M4 and GWH. The reported crashes do not include any fatalities.

A summary of crash history is provided as follows:

- 14 crashes occurred at the Prospect Highway/ Ponds Road intersection with the following characteristics:
  - Five crashes involved rear-end collisions on Prospect Highway at the intersection and resulted in serious injury.
  - Four crashes involved vehicles from adjacent directions (non-opposing directions) at the intersection, colliding with through traffic and resulted in serious injury.
- 14 crashes occurred at the Prospect Highway/ M4 eastbound ramps intersection with the following characteristics:
  - Five crashes involved rear-end collisions at intersection and resulting in serious injury.
  - Six crashes involved drivers losing control turning right on a bend and exiting the carriageway on the outside of the curve resulting in serious injury.
- 14 crashes occurred at the Prospect Highway/ M4 westbound ramps intersection with the following characteristics:
  - Six crashes involved rear-end collisions at the intersection, resulting in serious injury.

- Two crashes involved vehicles from the adjacent direction at the intersection, colliding with through traffic and resulting in serious injury.
- Two crashes involved drivers losing control turning right on a bend and exiting the carriageway on the outside of the curve resulting in serious injury.

- One crash involved a U-turning vehicle at the GWH/ Tarlington Place intersection and resulted in a non-casualty crash.

Using GIS software, the data was plotted with the crashes classified based on crash severity and shown in Figure 5.9.

Figure 5.9: Crashes near the site in the last five years

6. Traffic Impact Assessment

6.1 Vehicle Access

Vehicle access to the site is proposed via the existing two driveways along Ponds Road (access one and access two) and Tarlington Place (access three), as detailed in Figure 6.1. St Bartholomew's Place, whilst proposed to be closed, may also be used as an access point, depending on how the development is staged.

The suitability of the proposed access arrangements is discussed in Section 7.3 of this report.

Figure 6.1: Vehicle accesses

Basemap source: Sydway

The internal road network will be determined at the DA stage. It is recommended that an internal link between the existing and expanded cemetery area be provided.

It is proposed that the internal access road be sign-posted at 10 kilometres per hour between the proposed parking area and 100 metres south of Ponds Road to facilitate pedestrian safety through low vehicle speeds.

Further, it is proposed that Tarlington Place be signed posted at 50 km/h at entry point from GWH with a further speed reduction to 10 kilometres per hour at the proposed parking area. Improvements to the existing Tarlington Place would be required to maintain a safe environment for all users, and may include line marking, pedestrian facilities, signage and speed humps.

6.2 The Prospect Highway Upgrade

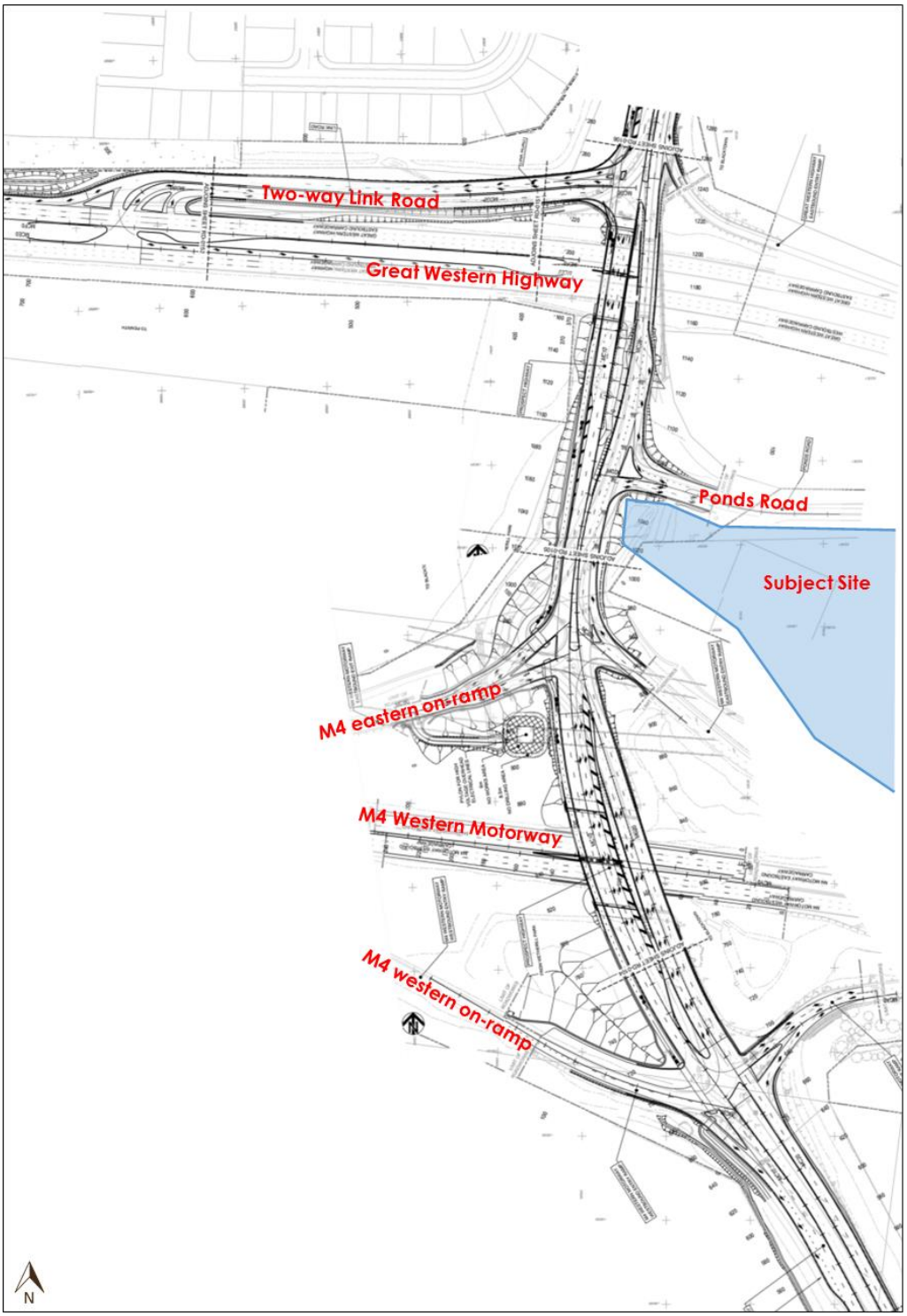
Roads and Maritime is planning to upgrade the Prospect Highway between Reservoir Road, Prospect and St Martins Crescent, Blacktown for a length of 3.6 kilometres. The proposed upgrade primarily involves upgrading Prospect Highway from a generally two-lane undivided road to a generally four-lane divided road, with the proposed arrangement near the site shown in Figure 6.2.

The proposed upgrade aims to improve performance of the road corridor with the objective to meet future traffic demand, reduce travel times and improve road safety.

The key features of the Prospect Highway upgrade near the site include:

- Upgrading Prospect Highway to two lanes in each direction with a wide central median between Reservoir Road and Blacktown Road.
- Construction of two new bridge structures over the M4and the GWH to support the Prospect Highway increased carriageway.
- Upgrading the existing GWH eastbound exit ramp to a two-way link road, providing eastbound and westbound access between the GWH and the Prospect Highway.
- Minor upgrades to the M4 westbound ramps/ Prospect Highway signalised intersection.
- Construction of three new signalised intersections, including:
    - M4eastbound ramps/ Prospect Highway
    - Two-way link road/ GWH; and
    - Two-way link road/ Prospect Highway.
- Conversion of the existing priority-controlled intersection of Ponds Road/ Prospect Highway to the left in and left out movements only. As a result, vehicles must access Ponds Road from Prospect Highway by travelling southbound along the Prospect Highway.
- Upgrading pedestrian and cyclist facilities, shared path between the M4westbound exit ramp and Harrod Street.

Figure 6.2: Prospect Highway upgrade - general arrangement



Source: MR644 – Prospect Highway from Reservoir Road to Prospect Highway Upgrade 200m North of St Martins Crescent, 100% Detailed Design, City of Blacktown, Drawings Number RD-0103, RD-0104 and RD-0105, http://www.rms.nsw.gov.au/,accessed 05/02/18.

6.3 Traffic Generation

There is currently no traffic generation guidance given within the RMS *Guide to Traffic Generating Developments* (2002) for cemeteries. As such, the proposed land use's traffic generation was determined based on an empirical assessment of the existing operational Liverpool Cemetery

which is of a similar size. Table 6.1 summarises the similarities between Liverpool Cemetery and St Bartholomew's Cemetery.

Table 6.1: Similarities between Liverpool Cemetery and St Bartholomew's Cemetery

Site	Size of site (Ha)	Supporting facilities
Liverpool Cemetery	9.5	Two chapels, condolence lounge, mausoleum and staff office
St Bartholomew's Cemetery	11.56	Reactivation of the existing cemetery, expansion of the cemetery to the east, including ancillary facilities around Tarlington Place such as a staff office, cafe, flower shop and potentially a chapel

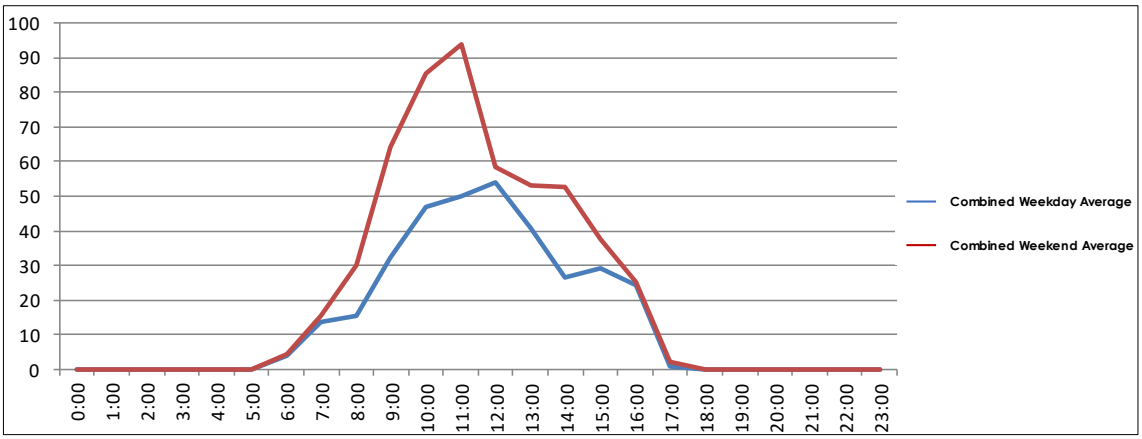
Based on the similarities of the two sites, it is assumed that the proposed land use and the current Liverpool Cemetery have similar traffic generation rates for each hectare.

Traffic counts completed at Liverpool Cemetery's three access points indicate that there are between 30 and 25 trips generated in the weekday AM and PM commuter peak hours, respectively. The trips equate to 3.2 and 2.6 trips for every hectare in the weekday AM and PM commuter peak hours, respectively.

The cemetery generated 60 trips during the weekend noon peak hour, which represents 6.3 trips per hectare.

This traffic will have comprised visitors to gravesites, use of the two chapels, the condolence room and staff.

Figure 6.3: Existing two-way traffic volumes of Liverpool Cemetery access



Based on 11.56 hectares, it is likely that the proposed land use would generate 37 and 32 trips in the AM and PM commuter peak hours, respectively and up to 74 trips during the weekend noon commuter peak hour.

It is noted that the peak for cemetery would generally occur during mid/ late morning (such as 10am to 11am), which is confirmed by Figure 6.3, which shows a profile of weekday and weekend traffic volumes at Liverpool Cemetery.

Traffic counts completed at Liverpool Cemetery access points indicate that there are 54 and 94 trips generated in the weekday and weekend cemetery peak hours, respectively. The trips equate to 5.7 and 9.9 trips per hectare in the weekday and weekend cemetery peak hours, respectively.

In the busiest weekday and weekend cemetery peak hours, the proposed land use would generate up to 66 and 115 trips, respectively.

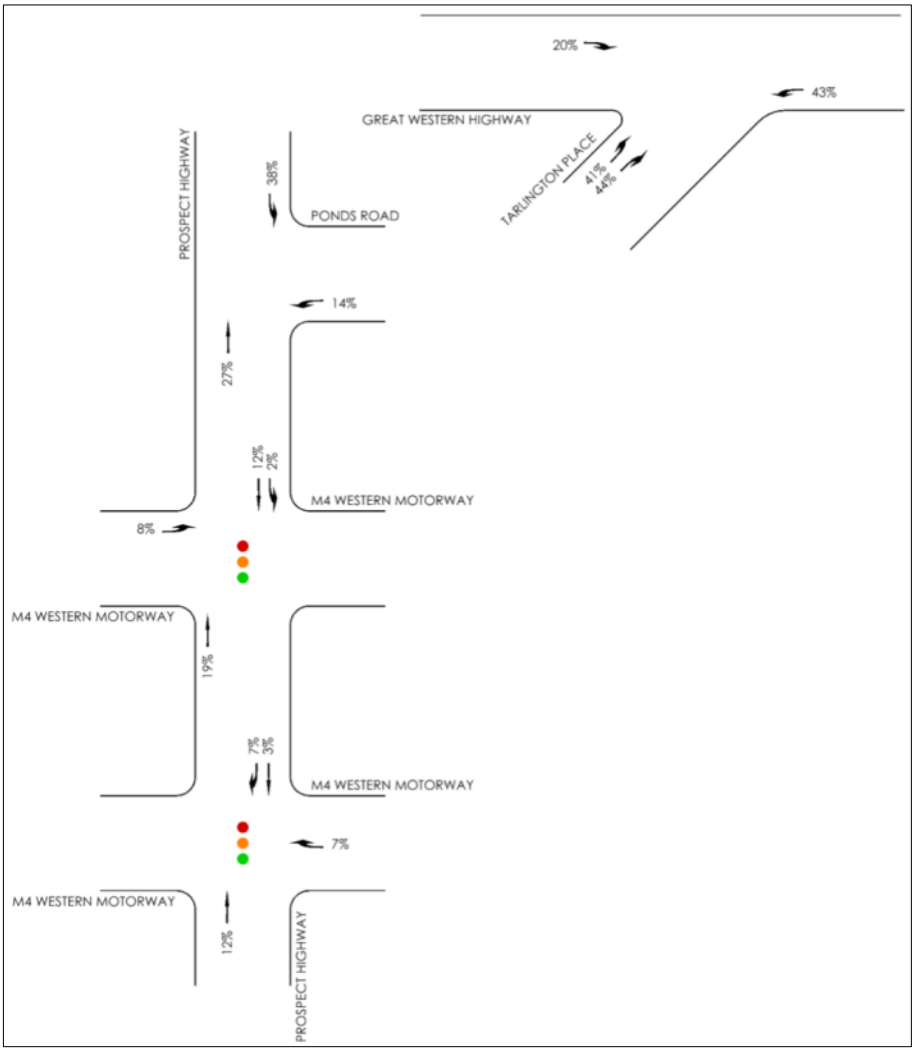
6.4 Distribution and Assignment

The directional distribution and assignment of traffic generated by the proposed land use will be influenced by a number of factors, including the:

i configuration of the arterial road network in the immediate vicinity of the site
ii existing operation of intersections providing access between the local and arterial road network
iii distribution of households near the site
iv likely distribution of visitor's residences in relation to the site
v configuration of access points to the site.

Considering the above, for the purposes of estimating vehicle movements, the following directional distributions as shown in Figure 6.4.

Figure 6.4: Peak hour arrival and departure distribution of traffic



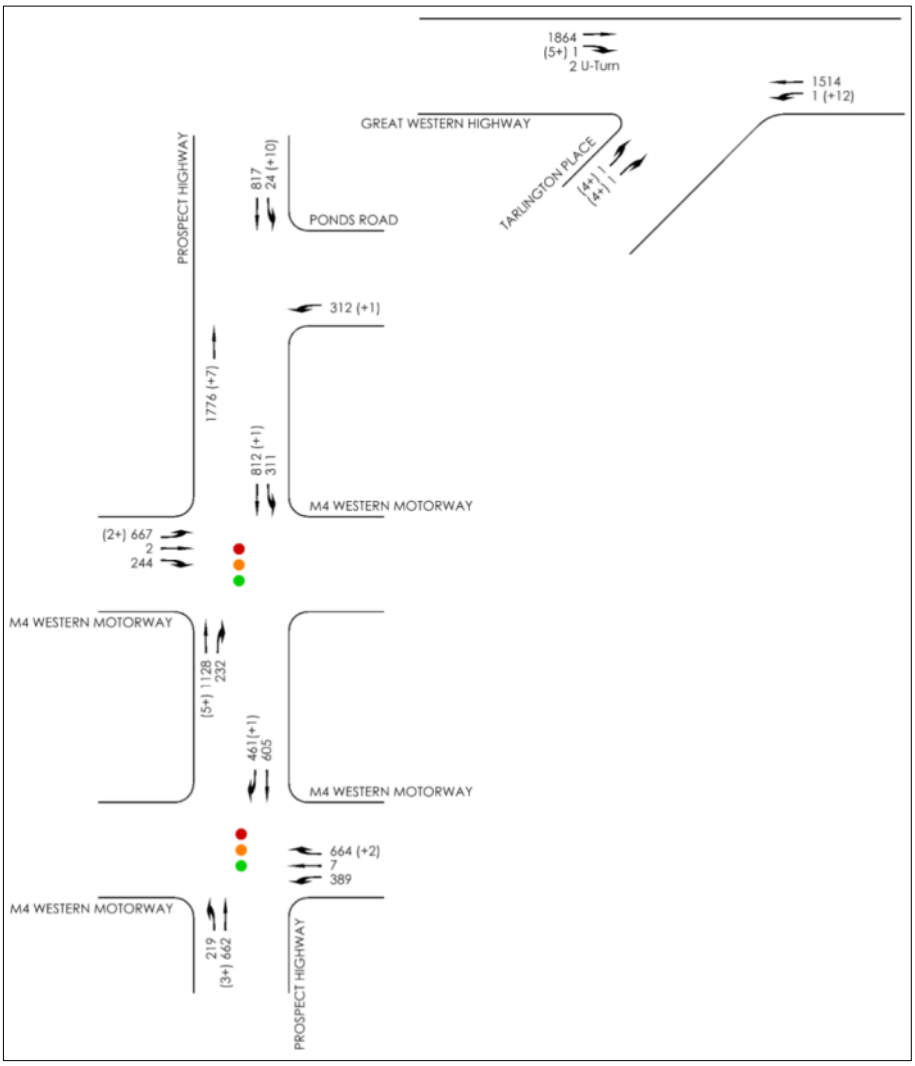
In addition, the directional split of traffic (such as the ratio between the inbound and outbound traffic movements) was determined based on traffic surveys at the Liverpool Cemetery and would be:

- Weekday AM peak hour: 75% inbound/ 25% outbound
- Weekday PM peak hour: 50% inbound/ 50% outbound

- Weekend noon peak hour: 50% inbound/ 50% outbound.

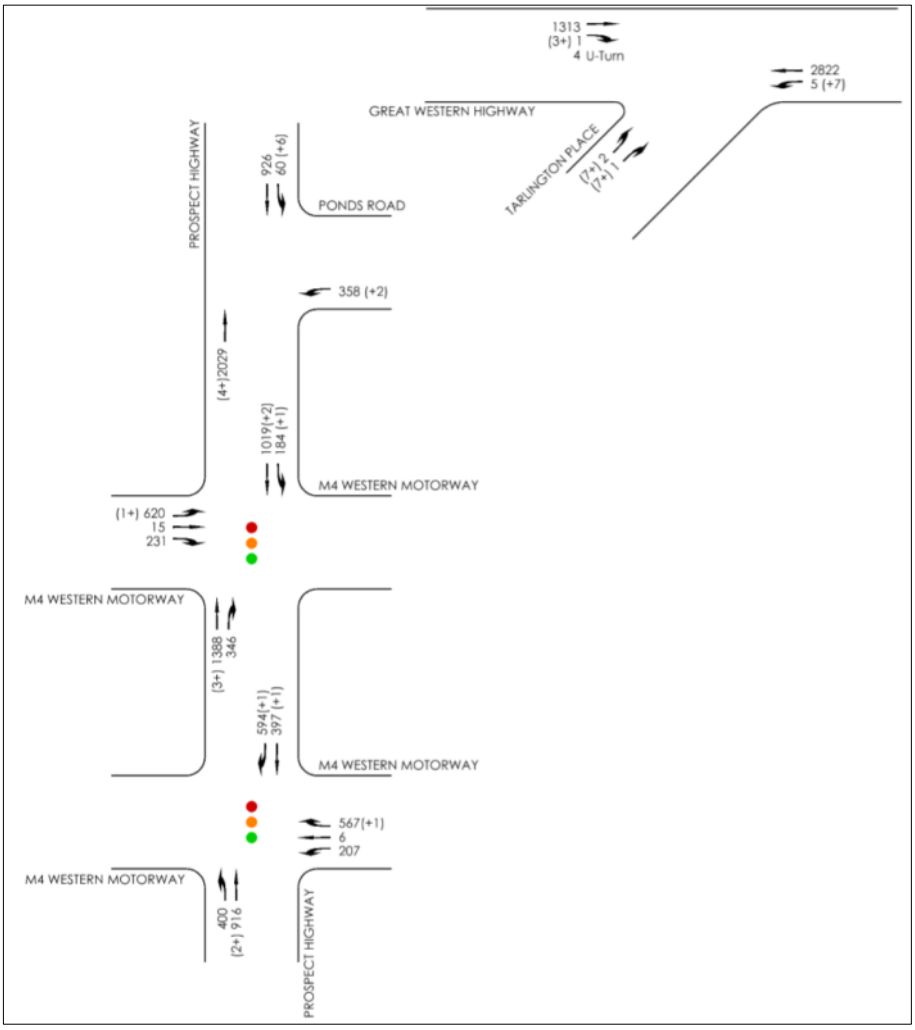
Based on the above, Figure 6.5 through Figure 6.7 show the estimated marginal increase in turning movements in the vicinity of the proposed land use.

Figure 6.5: Future weekday AM peak hour plus site generated traffic volumes



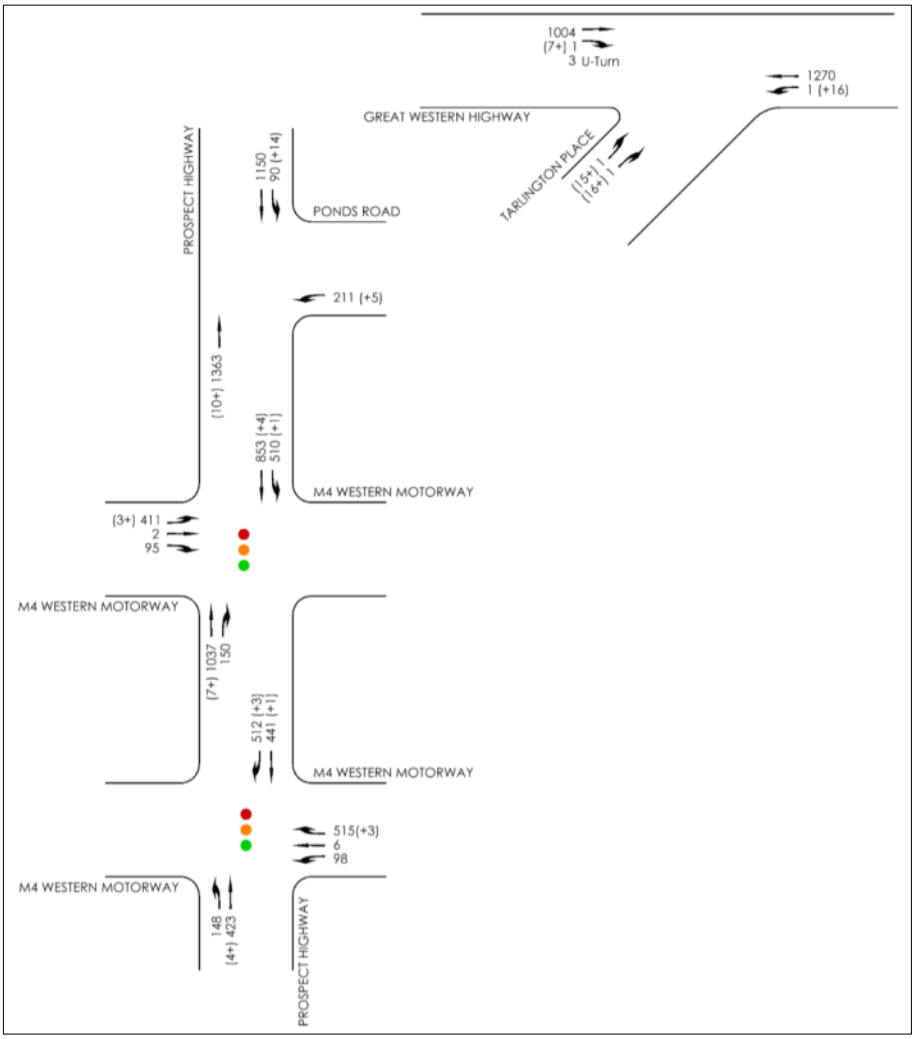
Future Weekday AM Peak Traffic Volumes (+Weekday AM Peak Development Generated Traffic)

Figure 6.6: Future weekday PM peak hour plus site generated traffic volumes



Future Weekday PM Peak Traffic Volumes (+Weekday PM Peak Development Generated Traffic)

Figure 6.7: Future weekend noon peak hour plus site generated traffic volumes



Future Weekend Noon Peak Traffic Volumes (+Weekend Noon Peak Development Generated Traffic)

6.5 Traffic Impact

A review of the Prospect Highway Upgrade Traffic and Transport Assessment[2], the proposed upgrade matrices show that the number of trips in the corridor will grow from 2018 to 2028 at about 1.2 per cent per year.

Based on the above assessment, an annual 1.2 per cent compound growth rate has been adopted for the intersection operation assessment at the expected completion year of 2028. The future assessment provides an estimate of future traffic volumes to ensure the intersection layout and operation consider background traffic growth.

The results of the future operation of the key intersections considering the cemetery expansion being operational and with the Prospect Highway upgrade, during the weekday AM and PM peak as well as the weekend noon peak are summarised in Table 6.2, with full results provided in Appendix C.

[2] Prospect Highway Upgrade Reservoir Road to St Martins Crescent Traffic and Transport Assessment- Contract Number: 13.2592.1599, prepared for NSW RMS, SMEC Australia, dated 11 April 2014

Table 6.2: Future operating conditions (with cemetery expansion being operational and with the Prospect Highway upgrade)

Intersection	Peak	Leg	Degree of saturation	Average delay (sec)	95th percentile queue (m)	Level of service
Prospect Highway/ Ponds Road [1]	AM	South	0.51	0	0	A
		East	0.32	13	11	A
		North	0.02	6	0	A
	PM	South	0.57	0	0	A
		East	0.36	13	14	A
		North	0.04	6	0	A
	Saturday	South	0.39	0	0	A
		East	0.22	14	6	A
		North	0.06	6	0	A
Prospect Highway/ M4 eastbound ramps [1]	AM	Southeast	0.68	23	109	B
		North	0.68	25	124	B
		Southwest	0.88	49	127	D
		Overall	**0.88**	**30**	**127**	**C**
	PM	Southeast	0.82	20	95	B
		North	0.83	32	131	C
		Southwest	0.9	53	125	D
		Overall	**0.90**	**31**	**131**	**C**
	Saturday	Southeast	0.46	15	53	A
		North	0.47	14	90	A
		Southwest	0.92	63	88	E
		Overall	**0.92**	**23**	**90**	**B**
Prospect Highway/ M4 westbound ramps	AM	South	0.77	35	135	C
		East	0.8	29	140	C
		North	0.78	24	96	B
		Overall	**0.80**	**29**	**140**	**C**
	PM	South	0.7	28	133	B
		East	0.89	43	114	D
		North	0.72	26	97	B
		Overall	**0.89**	**31**	**133**	**C**
	Saturday	South	0.43	31	60	C
		East	0.92	54	110	D
		North	0.43	17	67	B
		Overall	**0.92**	**31**	**110**	**C**
GWH/ Tarlington Place	AM	East	0.29	6.1	0.6	A
		West	0.02	26.6	0.5	B
		Southwest	0.01	9.0	0.2	A
	PM	East	0.53	6.1	0.8	A
		West	0.02	41.9	0.5	C
		Southwest	0.01	10.0	0.2	A
	Saturday	East	0.24	6.1	0.8	A
		West	0.02	19.6	0.4	B
		Southwest	0.02	8.4	0.5	A

[1] Worst movement reported for unsignalised intersection.

Based on the above assessment, the intersection of Prospect Highway/ Ponds Road is expected to operate at level of service A during the weekday AM and PM as well as weekend noon peak hours with the conversion of the intersection to left-in left-out movements only.

There is considerable reduction in the peak period queuing and delays at the Prospect Highway/ M4 eastbound ramps intersection, specifically with the currently congested northern leg. The intersection would generally continue to operate at the same levels of service C during the weekday peak hours and level of service B during the weekend noon peak hour. The northern leg is expected to experience reductions to average delays of up to 77 seconds and 95th percentile queues up to 93 metres during the peak hours.

It is predicted that Prospect Highway/ M4 westbound ramps intersection will operate at similar level of service C during the weekday AM and PM peak hours.

The intersection of GWH/ Tarlington Place is expected to continue to operate satisfactorily with minimal queues and delays on all approaches, with minor increase of delay up to 10 seconds per vehicle on the eastbound right-turn lane.

6.6 Summary

As discussed, the proposed land use would generate 37 and 32 trips in the AM and PM commuter peak hours, respectively and up to 74 trips during the weekend noon cemetery peak hour.

In addition, the proposed land use would generate up to 66 and 115 trips during the cemetery's busiest weekday and weekend peak hours respectively.

The additional development traffic volumes are no more than one vehicle movement every minute through the adjacent key intersections during the weekday and weekend peak hours and no more than two vehicle movements during the cemetery's busiest weekday and weekend peak hours.

Moreover, the use of Ponds Road and GWH by vehicles accessing the cemetery and church uses which abut them is entirely appropriate and consistent with their existing functional role in the road network.

In summary, against existing traffic volumes near the site, the additional traffic generated by the proposed cemetery use could not be expected to compromise the safety and function of the surrounding road network.

6.7 Construction Traffic Impact

A construction traffic management plan should be prepared prior to works commencing on-site.

7. Parking and Vehicle Access

7.1 Parking Requirements

Car Parking

There are currently no parking requirements within DCP 2015 in relation to cemeteries. As such, the proposed land use's car parking requirement was determined based on an empirical assessment of the existing similar size Liverpool Cemetery.

Off-street car parking to support the expanded cemetery will include existing parking around St Bartholomew's Church and a new car park area, likely to be located around Tarlington Place.

Considering the peak demand of traffic generated by the proposed land use discussed in Section 6.1, parking demand of up to 115 vehicles could be generated during the busiest period. It is recommended that approximately half (60 spaces) of the parking spaces required be provided within a formal car park near the proposed ancillary facilities at Tarlington Place. The remaining 55 car parking spaces, equivalent to about 350 metres (based upon an average car park length of 6 metres) of kerbside parking could be accommodated along Tarlington Place and the internal access road.

The internal access road and parking aisles should be designed with a minimum width of 6 metres to facilitate two-way movements and an additional 2.1 metres paved surfaces on either/ both sides of the road where on-street parking are proposed.

It is proposed that the kerbside parking be staggered on either side of Tarlington Place and the internal access road every 50 metres to provide parking opportunities for vehicles entering from both the access two via Ponds Road and access three via Tarlington Place.

Minibus Parking

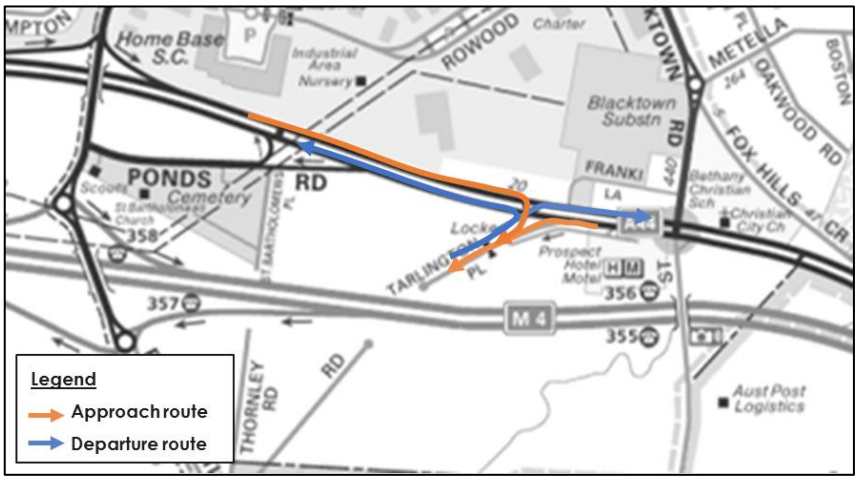
DCP 2015 does not require dedicated minibus parking.

However, it is common for minibuses (maximum of 7 metres length, for a Toyota Coaster minibus or similar) to be used to transport visitors to/ from services associated with funeral activities. The use of minibuses, which typically have a capacity of approximately 20 passengers, is encouraged to reduce the overall traffic volumes generated by the proposed land use, during extraordinary events.

It is recommended that two minibus parking spaces be provided, with the minibus arriving and departing via Tarlington Place only. The proposed minibus parking spaces should be designed to not impact the car circulation within the proposed parking area.

In the rare event when more than two minibus parking spaces are required, these minibuses could park on the kerbside along the Tarlington Place.

Figure 7.1: Proposed minibus approach and departure routes



Basemap source: Sydway.

Service Vehicle

Given the nature of the proposed land use, servicing requirements (for larger vehicles) would be limited to regular refuse collection (up to Council's 11-metre long garbage truck), the occasional service vehicle (e.g. maintenance/ delivery/ trade vehicles) and emergency vehicle. Garbage collection would occur within the parking areas, with bins to be wheeled to the kerbside for collection.

It is noted that access one, the existing access one at Ponds Road provides sufficient width for Council's garbage truck to manoeuvre into and out of the site in a forward direction. In addition, the informal parking area in front of the existing Church provides sufficient manoeuvring area for the garbage truck to complete a three-point turn and leave the site in a forward direction.

It is also proposed that all service vehicles for the new facilities to enter and exit via Tarlington Place as shown in Figure 7.1.

The maintenance/ delivery/ trade vehicles which typically include vans, utes or cars, could use the car parking spaces within the proposed car parking facility as part of the cemetery expansion.

Motorcycle Parking

DCP 2015 does not provide any requirements for motorcycle parking. It is, however, recommended that dedicated motorcycle parking spaces to be provided at the rate of one space per 25 car parking spaces. Based on the peak parking demand of 115 car spaces, the proposed land use is recommended to provide four motorcycle parking spaces. Motorcycle spaces are required to be 2.5 metres long by 1.3 metres wide.

7.2 Car Parking Layout

The proposed car park design would be developed as part of any future DA for the site. Car park layout would be designed to be in accordance with the requirements of DCP 2015 and the Australian Standard AS2890.1 (2004) Part 1: Off-street car parking, AS2890.2 (2002) Part 2: Off-street commercial vehicle facilities and AS2890.6 (2009) Part 6: Off-street parking for people with disabilities.

DCP 2015 requires car parking spaces for medium turnover to measure 5.2 metres long by 2.6 metres wide and be accessed via a minimum 7-metre wide aisle.

It is recommended that disabled spaces be measure 5.5 metres long by a minimum of 3.2 metres wide, in accordance with the Australian Standard requirements.

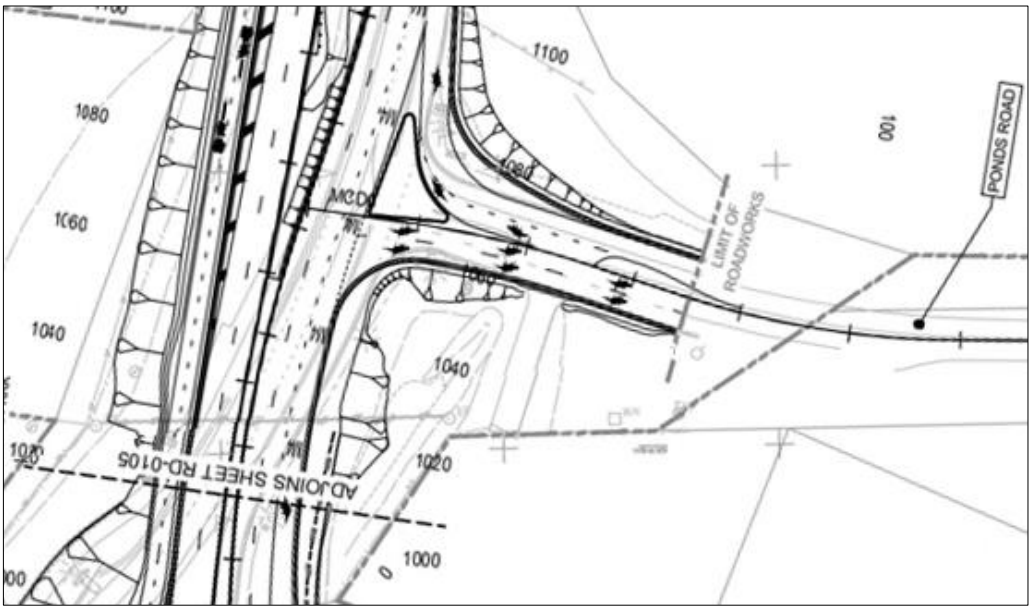
7.3 Vehicle Access Review

Access One (Secondary Access via Ponds Road)

Access one is the westernmost two-way vehicle access to the existing Church and is located around 30 metres east of the priority-controlled intersection of Prospect Highway/ Ponds Road. The site access would technically have a Stopping Sight Distance (SSD) requirement of 65 metres for a posted speed limit of 60 kilometres per hour, in accordance with AS 2890.1:2004. Given the proximity of access one to the Prospect Highway, an adequate sight distance of 65 metres would not be achievable.

Based on the above and the associated traffic queues due to entering traffic from eastbound Ponds Road, a dedicated eastbound right-turn lane proposed as part of the Prospect Highway upgrade will mitigate the inadequate SSD. The proposed 20-metre right-turn lane can accommodate up to three cars and is considered acceptable for providing access to the existing church. The proposed access arrangements of left-in, left-out and right-in only is shown in Figure 7.2. With the proposed access, right-turning from the site (south) onto Ponds Road is no longer permitted.

Figure 7.2: Proposed access one



Source: MR644 – Prospect Highway from Reservoir Road to Prospect Highway Upgrade 200m North of St Martins Crescent, 100% Detailed Design, City of Blacktown, Drawings Number RD-0103, RD-0104 and RD-0105, http://www.rms.nsw.gov.au/,accessed 05/02/18.

The site access should also serve as a secondary access and be predominantly used for visitor, staff and service vehicles of the existing church only, with the primary accesses to the existing and new cemeteries located to the east via Ponds Road and Tarlington Place.

Overall, access one's location and access arrangements are functional, with an appropriate level of safety for the intended role and use.

7.3.1 Access Two (Primary Access via Ponds Road)

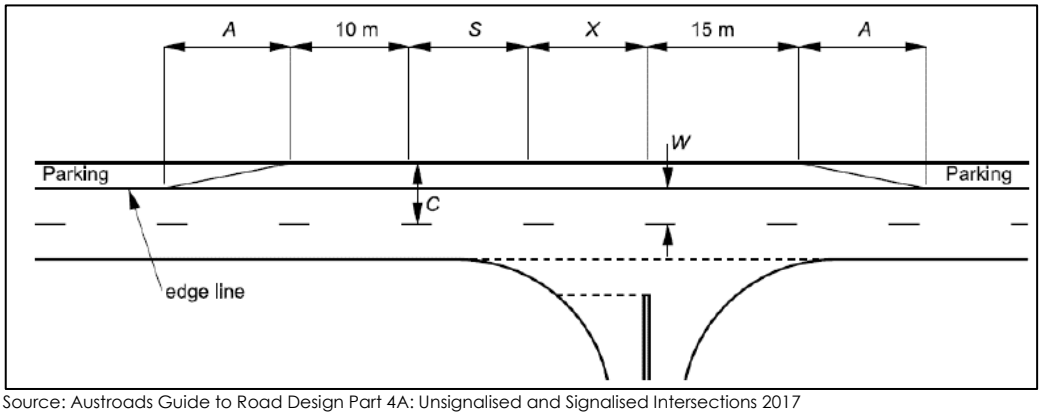
Access two is located 140 metres east of access one and would form the primary vehicle access for visitor, staff and service vehicles for the existing cemetery, for vehicles generally arriving from and departing to Prospect Highway. The existing access layout, with all turning movements permitted via Ponds Road, would be maintained.

As discussed, the traffic generated in the peak period will be up to 115 vehicles per hour between 10am and 3pm. It is noted that this will occur outside of the road network peak periods.

Considering the low turning volumes into the site during the peak hours, a basic right-turn lane treatment (BAR) intersection is recommended. This will allow through vehicles along Ponds Road to not be obstructed by vehicles turning into the proposed land use.

Site inspections have indicated that adequate sight distances can be provided at this access point. The access arrangement, as shown in Figure 7.3 will be detailed in consultation with Council and RMS.

Figure 7.3: Intersection layout sketch of an Urban Basic Right-turn treatment (BAR)



Source: Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections 2017

7.3.2 Access Three (Primary access via Tarlington Place)

Access 3 via Tarlington Place would form the primary access for visitor, staff and service vehicles accessing the eastern end of the expanded cemetery (where ancillary facilities, such as an office, café, flower shop and potentially a chapel) for vehicles generally arriving and departing from GWH. The existing access layout, with all turning movements permitted via Tarlington Place would also be maintained.

7.4 Internal Access Road Review

7.4.1 Internal Road Design

Due to the nature of the proposed use, the entering and exiting traffic is expected to be very 'tidal' during peak periods. Most of the traffic will be entering prior to a service and exiting following a service. In the event when two services are to be held in a day, it is noted that there will be around one to two hours between the conclusion of the first service and the commencement of the second service. As such, the likelihood that a vehicle will be required to pass a vehicle travelling in the opposite direction on the internal access road is expected to be low.

As discussed, it is proposed that the internal access road be a minimum of six metres wide to allow two-way traffic movements.

8. Sustainable Transport Infrastructure

8.1 Public Transport

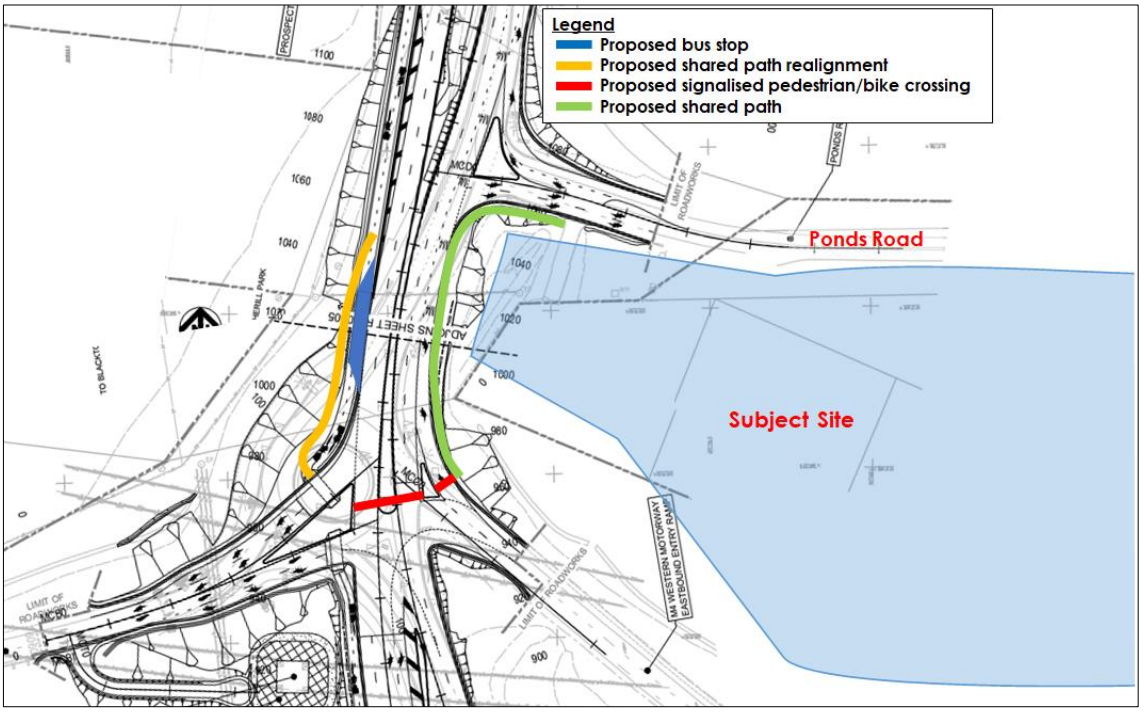
The site is currently accessible by public transport with a bus stop within 520 metres, located north of the site at the Prospect Highway/ Stoddart Road intersection.

As part of the Prospect Highway upgrade, two new bus stops (northbound and southbound) are proposed adjacent to the intersection of the Prospect Highway/ Reservoir Road/ Reconciliation Road, however this would be around one kilometre from the site.

As such, as part of the PP, it is recommended that one bus stop is be located along the Prospect Highway between the intersections of Prospect Highway/ Ponds Road and Prospect Highway/ M4 eastbound ramps. The new bus stop would require the following modifications to the proposed Prospect Highway design, as shown in Figure 8.1:

- Realignment of the proposed shared path west of the Prospect Highway north of the Prospect Highway/ M4 eastbound ramps intersection.
- Provision of east-west crossing for pedestrian and cyclist on the northern leg of the Prospect Highway/ M4 eastbound ramps intersection.
- Provision of shared path east of the Prospect Highway north of the Prospect Highway/ M4 eastbound ramps intersection to the proposed access one.

Figure 8.1: Recommended new bus stop and associated proposed shared path and crossing along Prospect Highway



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The proposed bus stop along Prospect Highway would be 300 metres from the existing church.

In addition, the proposed bus stop along the Prospect Highway, it is also recommended that a bus stop be located along GWH, about 20 metres west of Tarlington Place.

Such recommendations would require further investigations and consultation with RMS considering their proximity to the intersections of Prospect Highway/ M4 eastbound ramps and GWH/ Tarlington Place as well as Transport for NSW and bus operators to ensure there will be sufficient demand for the additional stops.

It is noted that the development of the lands west of the Prospect Highway between GWH and M4 which are currently zoned as IN1 – General Industrial. The proximity to the recommended bus stops could contribute to increasing the use of public transport (bus only and bus/ rail) by visitors and staff and discourage the use of private motor vehicles.

The recommended bus stop layout will be detailed during the DA stage.

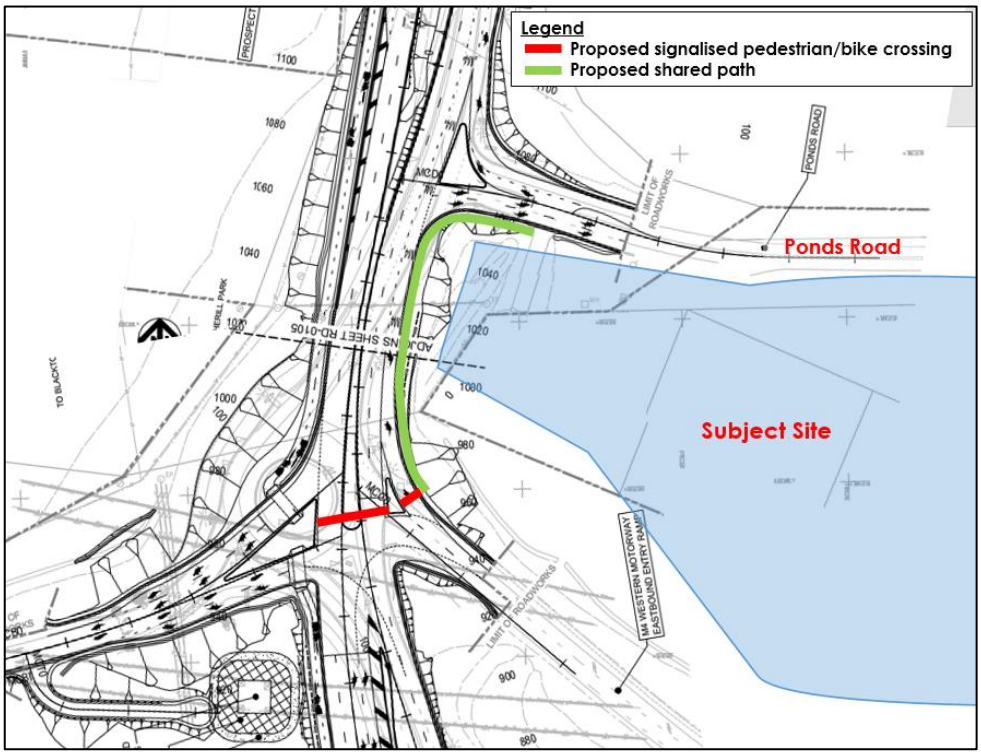
8.2 Bicycle and Walking Network

The proposed Prospect Highway upgrade would improve pedestrian and cyclist connectivity and amenity along the Prospect Highway corridor, providing safer crossing provisions at signalised intersections and implementing additional shared user path facilities. The new northbound bridges over the M4 and GWH on the western side of the existing bridge structures, include provision of a shared pedestrian and cyclist path.

Figure 8.1 shows the shared path and crossing to be proposed as part of the bus stops on the Prospect Highway.

If the recommended bus stops are not installed, the proposed shared path and crossing for pedestrians and cyclists could be implemented to provide the missing east-west crossing along the Prospect Highway near the site, as shown in Figure 8.2.

Figure 8.2: Proposed shared path and crossing



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8.3 Bicycle End of Trip Facilities

DCP 2015 does not provide bicycle parking requirement, however, encourages the provision of bicycle parking, with adequate shower and change facilities provided for staff (where appropriate).

In acknowledgement of general changing travel patterns and the increased use of active modes of travel, the potential to incorporate these facilities has been reviewed. As such, reference to the Planning Guidelines for Walking and Cycling (Department of Planning, 2004) suggests the following bicycle parking provisions for community facilities:

- Staff (long-term use) – rate of three to five per cent of number of staff
- Visitor (short-term use) – rate of five to 10 per cent of visitors.

Applying this to the anticipated number of staff (14 staff) and up to 115 vehicles (and vehicle occupancy of 2.2 visitors per vehicle) per hour between 10am and 3pm, the proposed land use could provide a minimum of one and 13 bicycle spaces are provided for staff and visitors respectively.

Bicycle parking spaces would be designed in accordance with relevant Australian Standard (AS2890.3 – Bicycle Parking Facilities). To comply with the Australian Standard, the bicycle parking spaces for visitor bicycle spaces will need to be provided as Class 3 bicycle spaces (such as bicycle racks in public area at 1,200 millimetres centre to centre). Secure racks for use by staff should be provided in a secure location (such as individual locker of secure room/ enclosure).

9. Conclusion

The proposed cemetery expansion land has been vacant and unused for over 30 years. The existing cemetery has seen very little regular use since the last Anglican Church service was held in 1967 and the sale of new interment rights ceased in 1972.

The use of the subject land as a cemetery (including ancillary uses such as an office, café, flower shop and potentially a chapel) is likely to:

- Generate a parking demand of up to 115 parking spaces in the peak hour.
- Require the provision of 115 car spaces, two motorcycle spaces and 14 bicycle spaces be provided on site for use by staff and visitors.
- Generate 37 and 32 trips in the AM and PM commuter peak hours, respectively and up to 74 trips during the weekend noon commuter peak hour.
- Generate up to 66 and 115 trips during the cemetery's peak weekday and weekend peak hours, respectively.
- Warrant no more than three access points (two via Ponds Road and one via Tarlington Place.

It is recommended that two bus stops be located on the Prospect Highway and GWH with associated shared path and crossing for pedestrians and cyclists across the Prospect Highway.

Considering a growth rate of 1.2 per cent per annum over the next 10 years and the proposed upgrade of the Prospect Highway, the key intersections near the site are all expected to operate within satisfactory levels of service, with only minor increases in the delay and queue at the intersections of Prospect Highway/ M4 eastbound ramps and GWH/ Tarlington Place.

The additional traffic that would be generated by the proposed cemetery use of the land is not expected to compromise the safety and function of the surrounding road network.

Appendix A

Adjoining Roads

Figure A.1: GWH (looking east from Tarlington Place)

Figure A.2: GWH (looking west towards Tarlington Place)

Figure A.3: Prospect Highway (looking south towards Ponds Road)

Figure A.4: Prospect Highway (looking north towards Ponds Road)

Figure A.5: Ponds Road (looking east from Prospect Highway)

Figure A.6: Ponds Road (looking west towards Prospect Highway)

Figure A.7: M4 (looking east from Prospect Highway)

Figure A.8: M4 (looking west towards Prospect Highway)

Figure A.9: Tarlington Place (from Ponds Road towards the cemetery)

Figure A.10: St Bartholomew's Place (from Ponds Road towards the cemetery)

Appendix B

Survey Results

TTM Data

TTM Reference: 17SYD0166
Location: Prospect Hwy & Ponds Rd
Suburb: Prospect
Date: Tuesday, 12 December 2017
Survey Duration: 0700-1000 & 1500-1900
Weather: Fine
Notes:

AM Peak: 0715-0815
PM Peak: 1600-1700

Time	Southern Approach: Prospect Hwy														Eastern Approach: Ponds Rd												Northern Approach: Prospect Hwy											
15 min	Straight					Right					U Turn	TOTAL	Cycle	Peds	Left					Right					U Turn	TOTAL	Cycle	Peds	Left					Straight					U Turn	TOTAL	Cycle	Peds
time start	Light	Heavy	Bus	Total	Cycle	Heavy	Truck	Bus	Total	Cycle					Light	Heavy	Bus	Total	Cycle	Light	Heavy	Bus	Total	Cycle					Light	Heavy	Bus	Total	Cycle	Light	Heavy	Bus	Total	Cycle				
7:00	300	38	0	**338**	0	12	1	0	**13**	0	0	**351**	**0**	0	46	12	0	**58**	0	2	1	0	**3**	0	0	**61**	**0**	0	1	2	0	**3**	0	182	23	1	**206**	0	0	**209**	**0**	0
7:15	341	40	0	**381**	0	19	1	0	**20**	0	0	**401**	**0**	0	51	7	0	**58**	0	5	0	0	**5**	0	0	**63**	**0**	0	0	0	0	**0**	0	179	20	1	**200**	0	0	**200**	**0**	0
7:30	332	32	1	**365**	0	11	0	0	**11**	0	0	**376**	**0**	0	62	3	0	**65**	0	6	4	0	**10**	0	0	**75**	**0**	0	4	3	0	**7**	0	164	20	0	**184**	0	0	**191**	**0**	0
7:45	358	26	0	**384**	0	10	1	0	**11**	0	0	**395**	**0**	0	71	4	0	**75**	0	7	0	0	**7**	0	0	**82**	**0**	0	10	0	0	**10**	0	145	23	1	**169**	0	0	**179**	**0**	0
8:00	311	37	1	**349**	0	21	1	0	**22**	0	0	**371**	**0**	0	74	5	0	**79**	0	4	3	0	**7**	0	0	**86**	**0**	0	2	2	0	**4**	0	119	27	0	**146**	0	0	**150**	**0**	0
8:15	329	44	0	**373**	0	14	1	0	**15**	0	0	**388**	**0**	0	48	8	0	**56**	0	1	0	0	**1**	0	0	**57**	**0**	0	5	0	0	**5**	0	161	30	1	**192**	0	0	**197**	**0**	0
8:30	299	36	1	**336**	0	14	1	0	**15**	0	0	**351**	**0**	0	77	10	0	**87**	0	4	2	0	**6**	0	0	**93**	**0**	0	4	1	0	**5**	0	154	31	0	**185**	0	0	**190**	**0**	0
8:45	272	34	0	**306**	0	15	4	0	**19**	0	0	**325**	**0**	0	52	5	0	**57**	0	4	1	0	**5**	0	0	**62**	**0**	0	10	0	0	**10**	0	176	25	1	**202**	0	0	**212**	**0**	0
9:00	249	35	0	**284**	0	14	0	0	**14**	0	0	**298**	**0**	0	45	13	0	**58**	0	8	0	0	**8**	0	0	**66**	**0**	0	10	4	0	**14**	0	125	33	0	**158**	0	0	**172**	**0**	0
9:15	231	43	0	**274**	0	11	1	0	**12**	0	0	**286**	**0**	0	45	4	0	**49**	0	10	3	0	**13**	0	0	**62**	**0**	0	8	0	0	**8**	0	158	37	4	**199**	0	0	**207**	**0**	0
9:30	229	40	0	**269**	0	6	5	0	**11**	0	0	**280**	**0**	0	41	15	0	**56**	0	4	1	0	**5**	0	0	**61**	**0**	0	10	3	0	**13**	0	141	35	0	**176**	0	0	**189**	**0**	0
9:45	216	38	0	**254**	0	5	0	0	**5**	0	0	**259**	**0**	0	34	6	0	**40**	0	8	1	0	**9**	0	0	**49**	**0**	0	16	1	0	**17**	0	163	29	1	**193**	0	0	**210**	**0**	0
TOTAL	**3467**	**443**	**3**	**3913**	**0**	**152**	**16**	**0**	**168**	**0**	**0**	**4081**	**0**	**0**	**646**	**92**	**0**	**738**	**0**	**63**	**16**	**0**	**79**	**0**	**0**	**817**	**0**	**0**	**80**	**16**	**0**	**96**	**0**	**1867**	**333**	**10**	**2210**	**0**	**0**	**2306**	**0**	**0**
AM Peak	1331	136	1	1468	0	52	3	0	55	0	0	1523	0	0	230	26	0	256	0	20	5	0	25	0	0	281	0	0	15	5	0	20	0	670	86	3	759	0	0	779	0	0
15:00	297	29	1	**327**	0	7	3	0	**10**	0	0	**337**	**0**	0	49	10	0	**59**	0	8	0	0	**8**	0	0	**67**	**0**	0	11	2	0	**13**	0	153	24	1	**178**	0	0	**191**	**0**	0
15:15	293	34	0	**327**	0	8	4	0	**12**	0	0	**339**	**0**	0	74	10	0	**84**	0	12	1	0	**13**	0	0	**97**	**0**	0	11	1	0	**12**	0	121	18	0	**139**	0	0	**151**	**0**	0
15:30	299	27	1	**327**	0	9	0	0	**9**	0	0	**336**	**0**	0	81	10	0	**91**	0	10	3	0	**13**	0	0	**104**	**0**	0	13	0	0	**13**	0	114	22	1	**137**	0	0	**150**	**0**	0
15:45	318	34	0	**352**	0	13	0	0	**13**	0	0	**365**	**0**	0	78	6	0	**84**	0	13	0	0	**13**	0	0	**97**	**0**	0	13	3	0	**16**	0	137	26	0	**163**	0	0	**179**	**0**	0
16:00	363	18	1	**382**	0	18	0	0	**18**	0	0	**400**	**0**	0	76	12	0	**88**	0	6	1	0	**7**	0	0	**95**	**0**	0	9	0	0	**9**	0	107	22	1	**130**	0	0	**139**	**0**	0
16:15	395	23	1	**419**	0	11	3	0	**14**	0	0	**433**	**0**	0	62	7	0	**69**	0	12	0	0	**12**	0	0	**81**	**0**	0	20	2	0	**22**	0	140	20	0	**160**	0	0	**182**	**0**	0
16:30	342	19	1	**362**	0	20	2	0	**22**	0	0	**384**	**0**	0	73	8	0	**81**	0	13	0	0	**13**	0	0	**94**	**0**	0	9	0	0	**9**	0	161	18	1	**180**	0	0	**189**	**0**	0
16:45	351	17	0	**368**	0	13	0	0	**13**	0	0	**381**	**0**	0	75	5	0	**80**	0	10	0	0	**10**	0	0	**90**	**0**	0	12	1	0	**13**	0	146	22	0	**168**	0	0	**181**	**0**	0
17:00	291	20	0	**311**	0	17	0	0	**17**	0	0	**328**	**0**	0	68	7	0	**75**	0	10	0	0	**10**	0	0	**85**	**0**	0	11	1	0	**12**	0	191	15	1	**207**	0	0	**219**	**0**	0
17:15	361	17	1	**379**	0	10	1	0	**11**	0	0	**390**	**0**	0	84	4	0	**88**	0	10	0	0	**10**	0	0	**98**	**0**	0	9	2	0	**11**	0	173	13	0	**186**	0	0	**197**	**0**	0
17:30	354	8	1	**363**	0	7	2	0	**9**	0	0	**372**	**0**	0	58	8	0	**66**	0	15	1	0	**16**	0	0	**82**	**0**	0	16	6	0	**22**	0	178	18	1	**197**	0	0	**219**	**0**	0
17:45	348	16	0	**364**	0	12	2	0	**14**	0	0	**378**	**0**	0	37	5	0	**42**	0	14	0	0	**14**	0	0	**56**	**0**	0	18	0	0	**18**	0	218	20	0	**238**	0	0	**256**	**0**	0
18:00	342	8	1	**351**	0	7	0	0	**7**	0	0	**358**	**0**	0	36	0	0	**36**	0	21	0	0	**21**	0	0	**57**	**0**	0	6	0	0	**6**	0	218	14	1	**233**	0	0	**239**	**0**	0
18:15	317	13	0	**330**	0	7	0	0	**7**	0	0	**337**	**0**	0	39	6	0	**45**	0	13	0	0	**13**	0	0	**58**	**0**	0	11	1	0	**12**	0	208	20	2	**230**	0	0	**242**	**0**	0
18:30	249	12	1	**262**	0	12	1	0	**13**	0	0	**275**	**0**	0	33	1	0	**34**	0	12	0	0	**12**	0	0	**46**	**0**	0	8	0	0	**8**	0	189	11	1	**201**	0	0	**209**	**0**	0
18:45	273	10	0	**283**	0	3	3	0	**6**	0	0	**289**	**0**	0	26	3	0	**29**	0	10	0	0	**10**	0	0	**39**	**0**	0	5	2	0	**7**	0	183	9	2	**194**	0	0	**201**	**0**	0
TOTAL	**5193**	**305**	**9**	**5507**	**0**	**174**	**21**	**0**	**195**	**0**	**0**	**5702**	**0**	**0**	**949**	**102**	**0**	**1051**	**0**	**189**	**6**	**0**	**195**	**0**	**0**	**1246**	**0**	**0**	**182**	**21**	**0**	**203**	**0**	**2637**	**292**	**12**	**2941**	**0**	**0**	**3144**	**0**	**0**
PM Peak	1405	49	3	1457	0	36	5	0	41	0	0	1498	0	0	215	17	0	232	0	60	1	0	61	0	0	293	0	0	49	8	0	57	0	787	65	2	854	0	0	911	0	0

TTM Data

TTM Reference: 17SYD0166
Location: Prospect Hwy & M4 Eastbound Ramps
Suburb: Prospect
Date: Tuesday, 12 December 2017
Survey Duration: 0700-1000 & 1500-1800
AM Peak: 0715-0815
Weather: Fine
PM Peak: 1600-1700
Notes:

Time	Northern Approach: Prospect Hwy																			Southern Approach: Prospect Hwy																		
15 min	Left					Straight					Right					U Turn	TOTAL	Cycle	Peds	Left					Straight					Right					U Turn	TOTAL	Cycle	Peds
time start	Light	Heavy	Bus	Total	Cycle	Light	Heavy	Bus	Total	Cycle	Light	Heavy	Bus	Total	Cycle					Light	Heavy	Bus	Total	Cycle	Light	Heavy	Bus	Total	Cycle	Light	Heavy	Bus	Total	Cycle				
7:00	77	8	0	**85**	0	145	26	1	**172**	0	0	0	0	**0**	0	1	**258**	**0**	0	0	0	0	**0**	0	184	29	0	**213**	0	19	22	0	**41**	0	4	**258**	**0**	0
7:15	69	10	0	**79**	0	153	19	1	**173**	0	0	0	0	**0**	0	4	**256**	**0**	0	0	0	0	**0**	0	192	31	0	**223**	0	31	22	0	**53**	0	8	**284**	**0**	0
7:30	68	11	0	**79**	0	157	13	0	**170**	0	0	0	0	**0**	0	0	**249**	**0**	0	0	0	0	**0**	0	215	23	1	**239**	0	30	21	0	**51**	0	9	**299**	**0**	0
7:45	61	3	0	**64**	0	158	23	1	**182**	0	0	0	0	**0**	0	1	**247**	**0**	0	0	0	0	**0**	0	248	20	0	**268**	0	33	17	1	**51**	0	3	**322**	**0**	0
8:00	45	9	0	**54**	0	139	24	0	**163**	0	0	0	0	**0**	0	2	**219**	**0**	0	0	0	0	**0**	0	206	31	1	**238**	0	29	22	0	**51**	0	6	**295**	**0**	0
8:15	86	10	1	**97**	0	129	24	1	**154**	0	0	0	0	**0**	0	0	**251**	**0**	0	0	0	0	**0**	0	198	32	0	**230**	0	36	20	0	**56**	0	3	**289**	**0**	0
8:30	61	13	0	**74**	0	165	28	0	**193**	0	0	0	0	**0**	0	2	**269**	**0**	0	0	0	0	**0**	0	210	32	2	**244**	0	33	15	0	**48**	0	3	**295**	**0**	0
8:45	77	3	0	**80**	0	148	25	2	**175**	0	0	0	0	**0**	0	1	**256**	**0**	0	0	0	0	**0**	0	182	24	0	**206**	0	27	18	0	**45**	0	2	**253**	**0**	0
9:00	55	15	0	**70**	0	115	32	0	**147**	0	0	0	0	**0**	0	1	**218**	**0**	0	0	0	0	**0**	0	169	21	0	**190**	0	24	34	0	**58**	0	2	**250**	**0**	0
9:15	60	15	1	**76**	0	132	26	2	**160**	0	0	0	0	**0**	0	7	**243**	**0**	0	0	0	0	**0**	0	129	33	0	**162**	0	35	16	0	**51**	0	2	**215**	**0**	0
9:30	52	12	0	**64**	0	132	30	0	**162**	0	0	0	0	**0**	0	4	**230**	**0**	0	0	0	0	**0**	0	148	26	0	**174**	0	29	20	0	**49**	0	1	**224**	**0**	0
9:45	70	11	0	**81**	0	125	25	1	**151**	0	0	0	0	**0**	0	2	**234**	**0**	0	0	0	0	**0**	0	143	24	0	**167**	0	27	9	0	**36**	0	3	**206**	**0**	0
TOTAL	**781**	**120**	**2**	**903**	**0**	**1698**	**295**	**9**	**2002**	**0**	**0**	**0**	**0**	**0**	**0**	**25**	**2930**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2224**	**326**	**4**	**2554**	**0**	**353**	**236**	**1**	**590**	**0**	**46**	**3190**	**0**	**0**
AM Peak	243	33	0	276	0	607	79	2	688	0	0	0	0	0	0	7	971	0	0	0	0	0	0	0	861	105	2	968	0	123	82	1	206	0	26	1200	0	0
15:00	51	3	0	**54**	0	145	29	1	**175**	0	0	0	0	**0**	0	4	**233**	**0**	0	0	0	0	**0**	0	213	18	1	**232**	0	56	11	0	**67**	0	1	**300**	**0**	0
15:15	43	4	0	**47**	0	153	23	0	**176**	0	0	0	0	**0**	0	0	**223**	**0**	0	0	0	0	**0**	0	197	28	0	**225**	0	72	14	0	**86**	0	1	**312**	**0**	0
15:30	35	7	0	**42**	0	157	21	1	**179**	0	0	0	0	**0**	0	4	**225**	**0**	0	0	0	0	**0**	0	216	19	1	**236**	0	72	12	0	**84**	0	0	**320**	**0**	0
15:45	38	7	0	**45**	0	182	20	0	**202**	0	0	0	0	**0**	0	0	**247**	**0**	0	0	0	0	**0**	0	201	15	0	**216**	0	46	9	0	**55**	0	0	**271**	**0**	0
16:00	37	6	0	**43**	0	143	26	1	**170**	0	0	0	0	**0**	0	3	**216**	**0**	0	0	0	0	**0**	0	218	9	0	**227**	0	84	4	0	**88**	0	33	**348**	**0**	0
16:15	28	3	0	**31**	0	170	21	0	**191**	0	0	0	0	**0**	0	5	**227**	**0**	0	0	0	0	**0**	0	248	13	1	**262**	0	71	4	0	**75**	0	44	**381**	**0**	0
16:30	43	5	0	**48**	0	181	21	1	**203**	0	0	0	0	**0**	0	5	**256**	**0**	0	0	0	0	**0**	0	262	17	1	**280**	0	73	2	0	**75**	0	53	**408**	**0**	0
16:45	36	5	0	**41**	0	181	20	0	**201**	0	0	0	0	**0**	0	6	**248**	**0**	0	0	0	0	**0**	0	250	10	0	**260**	0	64	5	0	**69**	0	54	**383**	**0**	0
17:00	60	2	0	**62**	0	183	22	1	**206**	0	0	0	0	**0**	0	1	**269**	**0**	0	0	0	0	**0**	0	217	15	0	**232**	0	83	5	0	**88**	0	7	**327**	**0**	0
17:15	58	4	0	**62**	0	200	9	0	**209**	0	0	0	0	**0**	0	3	**274**	**0**	0	0	0	0	**0**	0	241	12	1	**254**	0	83	9	0	**92**	0	6	**352**	**0**	0
17:30	54	4	0	**58**	0	181	19	1	**201**	0	0	0	0	**0**	0	3	**262**	**0**	0	0	0	0	**0**	0	256	8	1	**265**	0	90	7	0	**97**	0	2	**364**	**0**	0
17:45	61	3	0	**64**	0	189	17	0	**206**	0	0	0	0	**0**	0	5	**275**	**0**	0	0	0	0	**0**	0	255	18	0	**273**	0	63	5	0	**68**	0	1	**342**	**0**	0
TOTAL	**873**	**66**	**1**	**940**	**0**	**2652**	**299**	**9**	**2960**	**0**	**0**	**0**	**0**	**0**	**0**	**53**	**3953**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3685**	**217**	**8**	**3910**	**0**	**1014**	**105**	**1**	**1120**	**0**	**208**	**5238**	**0**	**0**
PM Peak	144	19	0	163	0	675	88	2	765	0	0	0	0	0	0	19	947	0	0	0	0	0	0	0	978	49	2	1029	0	292	15	0	307	0	184	1520	0	0

TTM Data

TTM Reference: 17SYD0166
Location: Prospect Hwy & M4 Eastbound Ramps
Suburb: Prospect
Date: Tuesday, 12 December 2017
Survey Duration: 0700-1000 & 1500-1800
AM Peak: 0715-0815
Weather: Fine
PM Peak: 1600-1700
Notes:

Time	Eastern Approach: M4 Entry Ramp																			Western Approach: M4 Exit Ramp																			
15 min	Left					Straight					Right					U Turn	TOTAL	Cycle	Peds	Left					Straight					Right					U Turn	TOTAL	Cycle	Peds	
time start	Light	Heavy	Bus	Total	Cycle	Light	Heavy	Bus	Total	Cycle	Light	Heavy	Bus	Total	Cycle					Light	Heavy	Bus	Total	Cycle	Light	Heavy	Bus	Total	Cycle	Light	Heavy	Bus	Total	Cycle					
7:00	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	137	9	0	**146**	0	0	0	0	**0**	0	37	10	0	**47**	0	0	**193**	**0**	0
7:15	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	147	6	0	**153**	0	1	0	0	**1**	0	46	11	0	**57**	0	0	**211**	**0**	0
7:30	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	144	8	0	**152**	0	0	0	0	**0**	0	53	11	0	**64**	0	0	**216**	**0**	0
7:45	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	132	7	0	**139**	0	1	0	0	**1**	0	32	14	0	**46**	0	0	**186**	**0**	0
8:00	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	139	9	0	**148**	0	0	0	0	**0**	0	37	13	0	**50**	0	0	**198**	**0**	0
8:15	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	149	11	0	**160**	0	0	0	0	**0**	0	32	11	0	**43**	0	0	**203**	**0**	0
8:30	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	110	7	0	**117**	0	2	0	0	**2**	0	33	6	0	**39**	0	0	**158**	**0**	0
8:45	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	108	12	0	**120**	0	0	0	0	**0**	0	29	17	0	**46**	0	0	**166**	**0**	0
9:00	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	89	12	0	**101**	0	1	0	0	**1**	0	31	22	0	**53**	0	0	**155**	**0**	0
9:15	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	109	13	0	**122**	0	0	0	0	**0**	0	38	15	0	**53**	0	0	**175**	**0**	0
9:30	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	94	18	0	**112**	0	0	0	0	**0**	0	36	18	0	**54**	0	0	**166**	**0**	0
9:45	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	79	14	0	**93**	0	1	0	0	**1**	0	21	25	0	**46**	0	0	**140**	**0**	0
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1437**	**126**	**0**	**1563**	**0**	**6**	**0**	**0**	**6**	**0**	**425**	**173**	**0**	**598**	**0**	**0**	**2167**	**0**	**0**
AM Peak	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	562	30	0	592	0	2	0	0	2	0	168	49	0	217	0	0	811	0	0
15:00	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	102	14	0	**116**	0	11	0	0	**11**	0	32	30	0	**62**	0	0	**189**	**0**	0
15:15	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	101	20	0	**121**	0	6	0	0	**6**	0	27	21	0	**48**	0	0	**175**	**0**	0
15:30	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	111	10	0	**121**	0	2	0	0	**2**	0	29	18	0	**47**	0	0	**170**	**0**	0
15:45	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	150	15	0	**165**	0	6	0	0	**6**	0	38	27	0	**65**	0	0	**236**	**0**	0
16:00	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	164	9	1	**174**	0	8	0	0	**8**	0	43	19	0	**62**	0	0	**244**	**0**	0
16:15	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	129	12	0	**141**	0	2	0	0	**2**	0	32	32	0	**64**	0	0	**207**	**0**	0
16:30	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	106	4	0	**110**	0	2	0	0	**2**	0	23	11	0	**34**	0	0	**146**	**0**	0
16:45	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	118	7	0	**125**	0	1	0	0	**1**	0	31	14	0	**45**	0	0	**171**	**0**	0
17:00	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	91	6	0	**97**	0	0	0	0	**0**	0	30	13	0	**43**	0	0	**140**	**0**	0
17:15	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	129	9	0	**138**	0	2	0	0	**2**	0	26	15	0	**41**	0	0	**181**	**0**	0
17:30	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	102	4	0	**106**	0	1	0	0	**1**	0	15	13	0	**28**	0	0	**135**	**0**	0
17:45	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	103	3	0	**106**	0	0	0	0	**0**	0	30	12	0	**42**	0	0	**148**	**0**	0
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1726**	**127**	**1**	**1854**	**0**	**43**	**0**	**0**	**43**	**0**	**408**	**260**	**0**	**668**	**0**	**0**	**2565**	**0**	**0**
PM Peak	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	517	32	1	550	0	13	0	0	13	0	129	76	0	205	0	0	768	0	0

TTM Data

TTM Reference: 17SYD0166
Location: Great Western Hwy & Tarlington Pl
Suburb: Prospect
Date: Tuesday, 12 December 2017
Survey Duration: 0700-1000 & 1500-1900
AM Peak: 0715-0815
Weather: Fine
PM Peak: 1600-1700
Notes:

Time	Western Approach: Great Western Hwy														Southern Approach: Tarlington Pl														Eastern Approach: Great Western Hwy													
15 min	Straight					Right					U Turn	TOTAL	Cycle	Peds	Left					Right					U Turn	TOTAL	Cycle	Peds	Left					Straight					U Turn	TOTAL	Cycle	Peds
time start	Light	Heavy	Bus	**Total**	Cycle	Light	Heavy	Bus	**Total**	Cycle					Light	Heavy	Bus	**Total**	Cycle	Light	Heavy	Bus	**Total**	Cycle					Light	Heavy	Bus	**Total**	Cycle	Light	Heavy	Bus	**Total**	Cycle				
7:00	418	16	0	**434**	0	0	0	0	**0**	0	0	**434**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	0	0	0	**0**	0	225	26	0	**251**	0	0	**251**	**0**	0
7:15	397	18	3	**418**	0	0	0	0	**0**	0	1	**419**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	0	0	0	**0**	0	279	30	0	**309**	0	0	**309**	**0**	0
7:30	377	24	0	**401**	0	0	0	0	**0**	0	0	**401**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	0	0	0	**0**	0	307	35	0	**342**	0	0	**342**	**0**	0
7:45	408	12	2	**422**	0	0	0	0	**0**	0	1	**423**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	0	0	0	**0**	0	345	18	1	**364**	0	0	**364**	**0**	0
8:00	399	14	0	**413**	0	0	0	0	**0**	0	0	**413**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	0	0	0	**0**	0	325	31	2	**358**	0	0	**358**	**0**	0
8:15	389	17	3	**409**	0	1	0	0	**1**	0	0	**410**	**0**	0	1	0	0	**1**	0	0	0	0	**0**	0	0	**1**	**0**	0	0	0	0	**0**	0	278	20	0	**298**	0	0	**298**	**0**	0
8:30	391	18	4	**413**	0	1	0	0	**1**	0	0	**414**	**0**	0	1	0	0	**1**	0	0	0	0	**0**	0	0	**1**	**0**	0	0	0	0	**0**	0	318	24	2	**344**	0	0	**344**	**0**	0
8:45	371	15	2	**388**	0	0	0	0	**0**	0	0	**388**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	0	0	0	**0**	0	294	20	1	**315**	0	0	**315**	**0**	0
9:00	255	32	0	**287**	0	0	0	0	**0**	0	0	**287**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	0	0	0	**0**	0	266	21	0	**287**	0	0	**287**	**0**	0
9:15	254	31	0	**285**	0	0	0	0	**0**	0	0	**285**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	0	0	0	**0**	0	283	19	0	**302**	0	0	**302**	**0**	0
9:30	219	19	0	**238**	0	0	0	0	**0**	0	0	**238**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	0	0	0	**0**	0	233	29	0	**262**	0	0	**262**	**0**	0
9:45	208	25	0	**233**	0	0	0	0	**0**	0	0	**233**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	0	0	0	**0**	0	217	23	0	**240**	0	0	**240**	**0**	0
TOTAL	**4086**	**241**	**14**	**4341**	**0**	**2**	**0**	**0**	**2**	**0**	**2**	**4345**	**0**	**0**	**2**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3370**	**296**	**6**	**3672**	**0**	**0**	**3672**	**0**	**0**
AM Peak	1581	68	5	1654	0	0	0	0	0	0	2	1656	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1256	114	3	1373	0	0	1373	0	0
15:00	232	22	2	**256**	0	0	0	0	**0**	0	0	**256**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	0	0	0	**0**	0	453	14	0	**467**	0	0	**467**	**0**	0
15:15	238	23	2	**263**	0	0	0	0	**0**	0	0	**263**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	0	0	0	**0**	0	482	20	0	**502**	0	0	**502**	**0**	0
15:30	235	13	0	**248**	0	0	0	0	**0**	0	0	**248**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	0	0	0	**0**	0	583	32	1	**616**	0	1	**618**	**0**	0
15:45	265	18	2	**285**	0	0	0	0	**0**	0	0	**285**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	0	0	0	**0**	0	551	32	1	**584**	0	0	**584**	**0**	0
16:00	277	24	1	**302**	0	0	0	0	**0**	0	1	**303**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	0	0	0	**0**	0	614	28	0	**642**	0	0	**643**	**0**	0
16:15	270	11	0	**281**	0	0	0	0	**0**	0	0	**281**	**0**	0	1	0	0	**1**	0	0	0	0	**0**	0	0	**1**	**0**	0	1	0	0	**1**	0	635	33	0	**668**	0	0	**669**	**0**	0
16:30	283	7	1	**291**	0	1	0	0	**1**	0	1	**293**	**0**	0	1	0	0	**1**	0	0	0	0	**0**	0	0	**1**	**0**	0	2	0	0	**2**	0	607	32	0	**639**	0	0	**641**	**0**	0
16:45	281	9	1	**291**	0	0	0	0	**0**	0	2	**293**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	0	0	0	**0**	0	569	29	0	**598**	0	0	**598**	**0**	0
17:00	262	3	0	**265**	0	0	0	0	**0**	0	0	**265**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	1	0	0	**1**	0	592	26	1	**619**	0	0	**620**	**0**	0
17:15	240	10	0	**250**	0	0	0	0	**0**	0	0	**250**	**0**	0	0	0	0	**0**	0	0	1	0	**1**	0	0	**1**	**0**	0	0	1	0	**1**	0	617	21	0	**638**	0	0	**639**	**0**	0
17:30	267	5	0	**272**	0	0	0	0	**0**	0	0	**272**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	1	0	0	**1**	0	559	36	1	**596**	0	0	**597**	**0**	0
17:45	224	12	0	**236**	0	0	0	0	**0**	0	1	**237**	**0**	0	1	0	0	**1**	0	0	0	0	**0**	0	0	**1**	**0**	0	1	0	0	**1**	0	545	22	0	**567**	0	0	**568**	**0**	0
18:00	214	6	2	**222**	0	0	0	0	**0**	0	2	**224**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	0	0	0	**0**	0	504	16	0	**520**	0	0	**520**	**0**	0
18:15	208	6	0	**214**	0	0	0	0	**0**	0	0	**214**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	0	0	0	**0**	0	365	14	0	**379**	0	0	**379**	**0**	0
18:30	169	8	0	**177**	0	0	0	0	**0**	0	0	**177**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	0	0	0	**0**	0	311	7	0	**318**	0	0	**318**	**0**	0
18:45	204	7	0	**211**	0	0	0	0	**0**	0	1	**212**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	1	0	0	**1**	0	221	12	0	**233**	0	0	**234**	**0**	0
TOTAL	**3869**	**184**	**11**	**4064**	**0**	**1**	**0**	**0**	**1**	**0**	**8**	**4073**	**0**	**0**	**3**	**0**	**0**	**3**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**4**	**0**	**0**	**9**	**1**	**0**	**10**	**0**	**8208**	**374**	**4**	**8586**	**0**	**1**	**8597**	**0**	**0**
PM Peak	1111	51	3	1165	0	1	0	0	1	0	4	1170	0	0	2	0	0	2	0	0	0	0	0	0	0	2	0	0	4	0	0	4	0	2425	122	0	2547	0	0	2551	0	0

Tuesday, 12 December 2017

	Approach	Approach	1	detector(s)... 1	2	3	4	5	6	7	8	13	
00:15	Approach	1		7	21	8	10	1	17	10	27	5	106
00:30	Approach	1		8	14	7	11	4	17	8	24	6	99
00:45	Approach	1		12	20	7	7	2	7	14	28	8	105
01:00	Approach	1		4	15	4	7	4	9	10	14	6	73
01:15	Approach	1		9	16	17	4	4	10	8	12	3	83
01:30	Approach	1		1	5	8	16	5	10	9	12	7	73
01:45	Approach	1		7	6	9	9	1	6	6	10	4	58
02:00	Approach	1		5	8	4	7	5	5	8	10	5	57
02:15	Approach	1		1	8	8	6	6	4	8	13	2	56
02:30	Approach	1		4	3	6	12	1	10	5	6	4	51
02:45	Approach	1		9	4	4	9	4	10	2	12	4	58
03:00	Approach	1		2	6	6	9	4	10	3	10	2	52
03:15	Approach	1		2	6	4	18	4	11	3	5	5	58
03:30	Approach	1		3	10	5	28	2	9	7	9	8	81
03:45	Approach	1		4	7	7	36	6	17	5	5	17	104
04:00	Approach	1		9	12	5	43	6	15	5	11	16	122
04:15	Approach	1		6	7	9	31	3	10	4	8	11	89
04:30	Approach	1		6	13	10	51	6	18	7	10	20	141
04:45	Approach	1		11	14	18	92	11	40	8	14	23	231
05:00	Approach	1		13	15	10	90	18	29	10	24	33	242
05:15	Approach	1		19	41	15	103	13	30	9	15	27	272
05:30	Approach	1		29	45	25	136	14	50	15	26	35	375
05:45	Approach	1		36	50	37	168	23	58	27	49	66	514
06:00	Approach	1		43	41	34	169	32	66	28	54	74	541
06:15	Approach	1		55	68	36	126	25	49	32	42	63	496
06:30	Approach	1		63	72	42	137	35	72	50	70	89	630
06:45	Approach	1		66	62	50	146	33	68	60	85	82	652
07:00	Approach	1		78	64	36	145	27	59	62	81	67	619
07:15	Approach	1		62	69	58	140	18	62	57	75	75	616
07:30	Approach	1		70	76	49	125	28	68	53	84	95	648
07:45	Approach	1		75	81	33	127	29	78	57	74	86	640
08:00	Approach	1		63	73	54	129	29	69	69	101	88	675
08:15	Approach	1		68	75	58	123	36	72	61	96	76	665
08:30	Approach	1		61	79	47	105	30	61	46	73	72	574
08:45	Approach	1		67	78	38	122	30	67	60	88	86	636
09:00	Approach	1		63	68	41	144	28	59	45	69	67	584
09:15	Approach	1		51	71	38	114	30	64	46	74	74	562
09:30	Approach	1		50	61	52	131	27	67	32	60	53	533
09:45	Approach	1		45	64	53	125	22	72	38	68	59	546
10:00	Approach	1		41	63	47	116	29	66	36	59	74	531
10:15	Approach	1		29	65	64	104	23	60	34	55	61	495
10:30	Approach	1		49	75	55	111	26	62	41	68	66	553
10:45	Approach	1		52	72	49	89	28	54	40	61	50	495
11:00	Approach	1		46	61	45	108	30	51	45	59	74	519
11:15	Approach	1		41	71	50	101	32	56	36	58	51	496
11:30	Approach	1		54	77	43	100	30	68	39	58	64	533
11:45	Approach	1		52	74	45	115	28	67	44	71	54	550
12:00	Approach	1		52	75	58	98	27	57	36	59	52	514

12:15	Approach	1	51	75	51	108	25	57	32	48	52	499
12:30	Approach	1	71	81	55	101	36	64	31	59	60	558
12:45	Approach	1	49	68	55	129	21	54	36	54	53	519
13:00	Approach	1	49	66	45	129	26	63	38	62	54	532
13:15	Approach	1	47	74	69	113	31	68	38	64	56	560
13:30	Approach	1	54	78	74	116	27	81	39	61	63	593
13:45	Approach	1	54	69	61	116	42	67	44	71	61	585
14:00	Approach	1	50	65	70	132	40	70	36	62	68	593
14:15	Approach	1	72	91	85	118	34	70	47	73	57	647
14:30	Approach	1	77	91	67	100	35	83	50	66	54	623
14:45	Approach	1	75	86	93	116	33	76	50	85	68	682
15:00	Approach	1	78	106	98	105	40	76	55	67	49	674
15:15	Approach	1	69	93	81	112	37	69	49	79	42	631
15:30	Approach	1	78	98	97	111	49	75	45	69	45	667
15:45	Approach	1	77	112	81	101	40	77	40	57	28	613
16:00	Approach	1	82	87	82	117	57	92	38	64	40	659
16:15	Approach	1	96	115	105	108	34	87	48	58	43	694
16:30	Approach	1	84	112	95	121	47	80	41	72	48	700
16:45	Approach	1	97	110	75	92	51	88	69	74	45	701
17:00	Approach	1	72	108	80	98	50	90	70	76	48	692
17:15	Approach	1	77	99	75	99	51	95	54	73	47	670
17:30	Approach	1	92	96	80	76	59	104	68	85	37	697
17:45	Approach	1	86	114	68	94	46	91	63	88	47	697
18:00	Approach	1	93	106	66	102	50	83	61	79	36	676
18:15	Approach	1	78	86	56	85	42	65	66	81	56	615
18:30	Approach	1	62	63	39	88	45	89	72	84	31	573
18:45	Approach	1	39	47	44	62	20	82	66	87	28	475
19:00	Approach	1	44	51	28	62	28	64	65	79	36	457
19:15	Approach	1	47	56	37	59	28	55	43	71	13	409
19:30	Approach	1	24	39	20	53	21	68	38	58	16	337
19:45	Approach	1	25	29	18	39	11	50	29	48	22	271
20:00	Approach	1	22	35	16	42	14	40	26	52	12	259
20:15	Approach	1	18	37	28	36	22	48	39	61	14	303
20:30	Approach	1	18	24	20	37	14	63	35	49	8	268
20:45	Approach	1	10	18	24	33	18	53	33	57	10	256
21:00	Approach	1	14	15	20	39	8	52	27	56	12	243
21:15	Approach	1	16	28	13	30	10	32	25	39	10	203
21:30	Approach	1	20	26	11	43	22	51	32	41	13	259
21:45	Approach	1	10	19	15	39	17	48	27	51	15	241
22:00	Approach	1	15	27	22	34	13	45	24	40	7	227
22:15	Approach	1	16	24	23	31	15	31	28	43	5	216
22:30	Approach	1	19	20	13	23	8	27	26	45	5	186
22:45	Approach	1	16	19	10	30	9	38	20	47	17	206
23:00	Approach	1	14	23	18	27	6	23	18	37	5	171
23:15	Approach	1	15	27	26	19	5	22	11	35	9	169
23:30	Approach	1	15	13	15	20	11	20	20	33	5	152
23:45	Approach	1	11	16	13	18	2	8	16	25	11	120
24:00	Approach	1	9	9	7	10	0	13	12	41	8	109

Approach 1 AM peak 2628 07:15 - 08:15 PM peak 2787 16:00 - 17:00
Daily Total 39290

TTM Data

TTM Reference: 17SYD0166
Location: Prospect Hwy & Ponds Rd
Suburb: Prospect
Date: Saturday, 9 December 2017
Survey Duration: 1000-1300 Noon Peak: 1200-1300
Weather: Fine
Notes:

Time	Southern Approach: Prospect Hwy														Eastern Approach: Ponds Rd												Northern Approach: Prospect Hwy											
15 min	Straight					Right					U Turn	TOTAL	Cycle	Peds	Left					Right					U Turn	TOTAL	Cycle	Peds	Left					Straight					U Turn	TOTAL	Cycle	Peds
time start	Light	Heavy	Bus	**Total**	Cycle	Light	Heavy	Bus	**Total**	Cycle					Light	Heavy	Bus	**Total**	Cycle	Light	Heavy	Bus	**Total**	Cycle					Light	Heavy	Bus	**Total**	Cycle	Light	Heavy	Bus	**Total**	Cycle				
10:00	200	10	0	**210**	0	7	0	0	**7**	0	0	**217**	**0**	0	41	2	0	**43**	0	12	0	0	**12**	0	0	**55**	**0**	0	12	2	0	**14**	0	229	13	0	**242**	0	0	**256**	**0**	0
10:15	202	13	0	**215**	0	2	0	0	**2**	0	0	**217**	**0**	0	38	5	0	**43**	0	10	0	0	**10**	0	0	**53**	**0**	0	13	1	0	**14**	0	203	14	1	**218**	0	0	**232**	**0**	0
10:30	200	12	0	**212**	0	5	0	0	**5**	0	0	**217**	**0**	0	38	3	0	**41**	0	10	0	0	**10**	0	0	**51**	**0**	0	17	0	0	**17**	0	237	9	0	**246**	0	0	**263**	**0**	0
10:45	247	8	0	**255**	0	7	0	0	**7**	0	0	**262**	**0**	0	35	0	0	**35**	0	24	0	0	**24**	0	0	**59**	**0**	0	20	0	0	**20**	0	205	17	0	**222**	0	0	**242**	**0**	0
11:00	215	15	0	**230**	0	11	0	0	**11**	0	0	**241**	**0**	0	48	0	0	**48**	0	12	1	0	**13**	0	0	**61**	**0**	0	15	0	0	**15**	0	202	10	0	**212**	0	0	**227**	**0**	0
11:15	247	14	0	**261**	0	10	0	0	**10**	0	0	**271**	0	0	46	6	0	**52**	0	13	2	0	**15**	0	0	**67**	0	0	19	1	0	**20**	0	209	10	0	**219**	0	0	**239**	0	0
11:30	229	9	0	**238**	0	7	0	0	**7**	0	0	**245**	0	0	39	2	0	**41**	0	9	1	0	**10**	0	0	**51**	0	0	23	1	0	**24**	0	220	16	0	**236**	0	0	**260**	0	0
11:45	255	16	1	**272**	0	9	1	0	**10**	0	0	**282**	0	0	44	4	0	**48**	0	15	0	0	**15**	0	0	**63**	0	0	14	0	0	**14**	0	210	16	0	**226**	0	0	**240**	0	0
12:00	256	12	0	**268**	0	11	0	0	**11**	0	0	**279**	0	0	41	0	0	**41**	0	11	0	0	**11**	0	0	**52**	0	0	21	0	0	**21**	0	258	13	0	**271**	0	0	**292**	0	0
12:15	266	16	0	**282**	0	9	0	0	**9**	0	0	**291**	0	0	56	3	0	**59**	0	17	0	0	**17**	0	0	**76**	0	0	19	3	0	**22**	0	221	12	0	**233**	0	0	**255**	0	0
12:30	242	15	0	**257**	0	10	0	0	**10**	0	0	**267**	0	0	50	4	0	**54**	0	11	1	0	**12**	0	0	**66**	0	0	22	0	0	**22**	0	218	6	0	**224**	0	0	**246**	0	0
12:45	249	10	0	**259**	0	3	2	0	**5**	0	0	**264**	0	0	33	0	0	**33**	0	20	0	0	**20**	0	0	**53**	0	0	15	0	0	**15**	0	227	12	0	**239**	0	0	**254**	0	0
TOTAL	**2808**	**150**	**1**	**2959**	**0**	**91**	**3**	**0**	**94**	0	**0**	**3053**	0	**0**	**509**	**29**	**0**	**538**	**0**	**164**	**5**	**0**	**169**	**0**	**0**	**707**	0	**0**	**210**	**8**	**0**	**218**	0	**2639**	**148**	**1**	**2788**	**0**	**0**	**3006**	**0**	**0**
AM Peak	946	54	1	1001	0	37	1	0	38	0	0	1039	0	0	177	12	0	189	0	49	4	0	53	0	0	242	0	0	71	2	0	73	0	841	52	0	893	0	0	966	0	0
PM Peak	1013	53	0	1066	0	33	2	0	35	0	0	1101	0	0	180	7	0	187	0	59	1	0	60	0	0	247	0	0	77	3	0	80	0	924	43	0	967	0	0	1047	0	0

TTM Data

TTM Reference: 17SYD0166
Location: Prospect Hwy & M4 Eastbound Ramps
Suburb: Prospect
Date: Saturday, 9 December 2017
Survey Duration: 1000-1300 Noon Peak: 1200-1300
Weather: Fine
Notes:

Time	Northern Approach: Prospect Hwy																			Southern Approach: Prospect Hwy																		
15 min	Left					Straight					Right					U Turn	TOTAL	Cycle	Peds	Left					Straight					Right					U Turn	TOTAL	Cycle	Peds
time start	Light	Heavy	Bus	**Total**	Cycle	Light	Heavy	Bus	**Total**	Cycle	Light	Heavy	Bus	**Total**	Cycle					Light	Heavy	Bus	**Total**	Cycle	Light	Heavy	Bus	**Total**	Cycle	Light	Heavy	Bus	**Total**	Cycle				
10:00	113	3	0	**116**	0	153	11	0	**164**	0	0	0	0	**0**	0	8	**288**	**0**	0	0	0	0	**0**	0	135	9	0	**144**	0	12	10	0	**22**	0	0	**166**	**0**	0
10:15	104	4	1	**109**	0	126	15	1	**142**	0	0	0	0	**0**	0	7	**258**	**0**	0	0	0	0	**0**	0	123	8	0	**131**	0	22	12	0	**34**	0	0	**165**	**0**	0
10:30	120	2	1	**123**	0	154	6	0	**160**	0	0	0	0	**0**	0	7	**290**	**0**	0	0	0	0	**0**	0	138	7	0	**145**	0	16	11	0	**27**	0	1	**173**	**0**	0
10:45	97	9	0	**106**	0	133	7	0	**140**	0	0	0	0	**0**	0	8	**254**	**0**	0	0	0	0	**0**	0	154	5	0	**159**	0	21	7	0	**28**	0	2	**189**	**0**	0
11:00	107	3	0	**110**	0	138	9	0	**147**	0	0	0	0	**0**	0	6	**263**	**0**	0	0	0	0	**0**	0	165	7	1	**173**	0	19	5	0	**24**	0	2	**199**	**0**	0
11:15	102	2	0	**104**	0	145	13	0	**158**	0	0	0	0	**0**	0	7	**269**	**0**	0	0	0	0	**0**	0	173	11	1	**185**	0	22	2	0	**24**	0	2	**211**	**0**	0
11:30	107	5	0	**112**	0	143	9	0	**152**	0	0	0	0	**0**	0	10	**274**	**0**	0	0	0	0	**0**	0	155	6	0	**161**	0	15	4	0	**19**	0	2	**182**	**0**	0
11:45	99	7	0	**106**	0	149	11	0	**160**	0	0	0	0	**0**	0	11	**277**	**0**	0	0	0	0	**0**	0	175	11	1	**187**	0	15	5	0	**20**	0	3	**210**	**0**	0
12:00	120	5	0	**125**	0	162	5	0	**167**	0	0	0	0	**0**	0	17	**309**	**0**	0	0	0	0	**0**	0	184	8	0	**192**	0	31	5	0	**36**	0	8	**236**	**0**	0
12:15	108	4	0	**112**	0	163	10	0	**173**	0	0	0	0	**0**	0	11	**296**	**0**	0	0	0	0	**0**	0	219	10	0	**229**	0	31	3	0	**34**	0	22	**285**	**0**	0
12:30	100	1	0	**101**	0	153	6	0	**159**	0	0	0	0	**0**	0	14	**274**	**0**	0	0	0	0	**0**	0	195	9	0	**204**	0	34	4	0	**38**	0	13	**255**	**0**	0
12:45	110	5	0	**115**	0	141	8	0	**149**	0	0	0	0	**0**	0	13	**277**	**0**	0	0	0	0	**0**	0	183	3	0	**186**	0	22	3	0	**25**	0	11	**222**	**0**	0
TOTAL	**1287**	**50**	**2**	**1339**	**0**	**1760**	**110**	**1**	**1871**	**0**	**0**	**0**	**0**	**0**	**0**	**119**	**3329**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1999**	**94**	**3**	**2096**	**0**	**260**	**71**	**0**	**331**	**0**	**66**	**2493**	**0**	**0**
AM Peak	415	17	0	432	0	575	42	0	617	0	0	0	0	0	0	34	1083	0	0	0	0	0	0	0	668	35	3	706	0	71	16	0	87	0	9	802	0	0
PM Peak	438	15	0	453	0	619	29	0	648	0	0	0	0	0	0	55	1156	0	0	0	0	0	0	0	781	30	0	811	0	118	15	0	133	0	54	998	0	0

TTM Data

TTM Reference: 17SYD0166
Location: Prospect Hwy & M4 Eastbound Ramps
Suburb: Prospect
Date: Saturday, 9 December 2017
Survey Duration: 1000-1300 AM Peak: 1100-1200
Weather: Fine PM Peak: 1200-1300
Notes:

Time	Eastern Approach: M4 Entry Ramp																			Western Approach: M4 Exit Ramp																		
15 min	Left					Straight					Right					U Turn	TOTAL	Cycle	Peds	Left					Straight					Right					U Turn	TOTAL	Cycle	Peds
time start	Light	Heavy	Bus	**Total**	Cycle	Light	Heavy	Bus	**Total**	Cycle	Light	Heavy	Bus	**Total**	Cycle					Light	Heavy	Bus	**Total**	Cycle	Light	Heavy	Bus	**Total**	Cycle	Light	Heavy	Bus	**Total**	Cycle				
10:00	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	71	2	0	**73**	0	2	0	0	**2**	0	20	3	0	**23**	0	0	**98**	**0**	0
10:15	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	80	5	0	**85**	0	2	0	0	**2**	0	19	10	0	**29**	0	0	**116**	**0**	0
10:30	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	68	5	0	**73**	0	0	0	0	**0**	0	4	4	0	**8**	0	0	**81**	**0**	0
10:45	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	98	3	0	**101**	0	0	0	0	**0**	0	8	2	0	**10**	0	0	**111**	**0**	0
11:00	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	62	7	0	**69**	0	0	0	0	**0**	0	13	6	0	**19**	0	0	**88**	**0**	0
11:15	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	88	4	0	**92**	0	1	0	0	**1**	0	12	1	0	**13**	0	0	**106**	**0**	0
11:30	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	87	3	0	**90**	0	0	0	0	**0**	0	8	4	2	**14**	0	0	**104**	**0**	0
11:45	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	83	8	0	**91**	0	1	0	0	**1**	0	23	7	0	**30**	0	0	**122**	**0**	0
12:00	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	93	1	0	**94**	0	1	0	0	**1**	0	12	2	0	**14**	0	0	**109**	**0**	0
12:15	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	92	5	0	**97**	0	1	0	0	**1**	0	25	6	1	**32**	0	0	**130**	**0**	0
12:30	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	73	7	1	**81**	0	0	0	0	**0**	0	16	5	0	**21**	0	0	**102**	**0**	0
12:45	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	85	8	0	**93**	0	0	0	0	**0**	0	15	2	0	**17**	0	0	**110**	**0**	0
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**980**	**58**	**1**	**1039**	**0**	**8**	**0**	**0**	**8**	**0**	**175**	**52**	**3**	**230**	**0**	**0**	**1277**	**0**	**0**
AM Peak	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	22	0	342	0	2	0	0	2	0	56	18	2	76	0	0	420	0	0
PM Peak	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	343	21	1	365	0	2	0	0	2	0	68	15	1	84	0	0	451	0	0

TTM Data

TTM Reference: 17SYD0166
Location: Great Western Hwy & Tarlington Pl
Suburb: Prospect
Date: Saturday, 9 December 2017
Survey Duration: 1000-1300 Noon Peak: 1200-1300
Weather: Fine
Notes:

Time	Western Approach: Great Western Hwy														Southern Approach: Tarlington Pl														Eastern Approach: Great Western Hwy													
15 min	Straight					Right					U Turn	TOTAL	Cycle	Peds	Left					Right					U Turn	TOTAL	Cycle	Peds	Left					Straight					U Turn	TOTAL	Cycle	Peds
time start	Light	Heavy	Bus	**Total**	Cycle	Light	Heavy	Bus	**Total**	Cycle					Light	Heavy	Bus	**Total**	Cycle	Light	Heavy	Bus	**Total**	Cycle					Light	Heavy	Bus	**Total**	Cycle	Light	Heavy	Bus	**Total**	Cycle				
10:00	212	7	1	**220**	0	0	0	0	**0**	0	0	**220**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	0	0	0	**0**	0	250	13	0	**263**	0	0	**263**	**0**	0
10:15	187	12	0	**199**	0	0	0	0	**0**	0	2	**201**	**0**	0	0	0	0	**0**	0	1	0	0	**1**	0	0	**1**	**0**	0	1	0	0	**1**	0	225	6	0	**231**	0	0	**232**	**0**	0
10:30	190	8	0	**198**	0	0	0	0	**0**	0	2	**200**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	0	0	0	**0**	0	245	8	0	**253**	0	0	**253**	**0**	0
10:45	224	9	0	**233**	0	0	0	0	**0**	0	1	**234**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	0	0	0	**0**	0	242	6	0	**248**	0	0	**248**	**0**	0
11:00	233	1	1	**235**	0	0	0	0	**0**	0	0	**235**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	0	0	0	**0**	0	273	4	0	**277**	0	0	**277**	**0**	0
11:15	215	3	1	**219**	0	2	0	0	**2**	0	0	**221**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	0	0	0	**0**	0	281	12	0	**293**	0	0	**293**	**0**	0
11:30	230	7	0	**237**	0	0	0	0	**0**	0	0	**237**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	0	0	0	**0**	0	260	9	0	**269**	0	0	**269**	**0**	0
11:45	228	5	0	**233**	0	0	0	0	**0**	0	2	**235**	**0**	0	1	0	0	**1**	0	0	0	0	**0**	0	0	**1**	**0**	0	1	0	0	**1**	0	267	12	0	**279**	0	0	**280**	**0**	0
12:00	191	3	4	**198**	0	0	0	0	**0**	0	0	**198**	**0**	0	1	0	0	**1**	0	0	0	0	**0**	0	0	**1**	**0**	0	1	0	0	**1**	0	310	5	0	**315**	0	0	**316**	**0**	0
12:15	234	1	8	**243**	0	0	0	0	**0**	0	1	**244**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	0	0	0	**0**	0	271	6	0	**277**	0	0	**277**	**0**	0
12:30	211	0	0	**211**	0	0	0	0	**0**	0	2	**213**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	0	0	0	**0**	0	290	8	0	**298**	0	0	**298**	**0**	0
12:45	236	3	0	**239**	0	0	0	0	**0**	0	0	**239**	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	**0**	**0**	0	0	0	0	**0**	0	290	7	0	**297**	0	0	**297**	**0**	0
TOTAL	**2591**	**59**	**15**	**2665**	**0**	**2**	**0**	**0**	**2**	**0**	**10**	**2677**	**0**	**0**	**2**	**0**	**0**	**2**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**3**	**0**	**0**	**3**	**0**	**0**	**3**	**0**	**3204**	**96**	**0**	**3300**	**0**	**0**	**3303**	**0**	**0**
AM Peak	906	16	2	924	0	2	0	0	2	0	2	928	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1081	37	0	1118	0	0	1119	0	0
PM Peak	872	7	12	891	0	0	0	0	0	0	3	894	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1161	26	0	1187	0	0	1188	0	0

Saturday, 09 December 2017

	Approach	Approach	1	detector(s)... 1	2	3	4	5	6	7	8	13	
00:15	Approach	1	14	15	12	24	7	17	16	57	7	169
00:30	Approach	1	15	16	8	15	7	26	19	48	8	162
00:45	Approach	1	14	16	6	9	7	23	17	49	13	154
01:00	Approach	1	8	11	12	6	5	18	13	24	4	101
01:15	Approach	1	5	11	7	6	2	8	19	23	4	85
01:30	Approach	1	14	9	4	9	2	10	12	17	6	83
01:45	Approach	1	5	7	3	7	2	10	6	21	4	65
02:00	Approach	1	3	10	2	5	1	10	5	24	1	61
02:15	Approach	1	2	12	5	7	7	16	5	13	6	73
02:30	Approach	1	4	3	3	5	3	6	1	24	2	51
02:45	Approach	1	3	5	4	14	2	6	0	21	5	60
03:00	Approach	1	2	6	4	5	0	6	3	19	3	48
03:15	Approach	1	0	6	3	10	4	9	1	19	2	54
03:30	Approach	1	1	7	2	19	3	9	2	13	8	64
03:45	Approach	1	5	6	1	36	9	11	5	16	11	100
04:00	Approach	1	4	5	9	20	4	6	9	12	11	80
04:15	Approach	1	7	10	4	13	2	9	3	13	5	66
04:30	Approach	1	7	9	9	17	4	14	8	10	11	89
04:45	Approach	1	5	12	13	37	0	20	8	13	14	122
05:00	Approach	1	2	6	11	34	9	25	4	13	7	111
05:15	Approach	1	9	10	4	32	3	21	4	12	6	101
05:30	Approach	1	11	9	16	46	5	16	11	18	20	152
05:45	Approach	1	14	20	9	90	16	41	10	25	26	251
06:00	Approach	1	13	16	6	72	14	27	18	31	37	234
06:15	Approach	1	26	30	25	59	15	32	16	24	18	245
06:30	Approach	1	29	32	14	55	12	33	23	31	15	244
06:45	Approach	1	30	31	15	54	16	42	30	67	24	309
07:00	Approach	1	32	37	16	53	13	44	34	41	20	290
07:15	Approach	1	17	25	17	37	18	41	31	45	23	254
07:30	Approach	1	16	30	13	42	16	39	28	34	26	244
07:45	Approach	1	22	29	14	61	28	54	27	51	26	312
08:00	Approach	1	19	27	22	63	18	42	31	52	17	291
08:15	Approach	1	29	38	18	48	13	53	36	52	19	306
08:30	Approach	1	30	30	21	45	24	65	38	58	22	333
08:45	Approach	1	31	29	21	52	17	57	31	58	18	314
09:00	Approach	1	24	37	16	61	22	51	35	63	22	331
09:15	Approach	1	24	36	20	71	20	48	32	55	38	344
09:30	Approach	1	35	33	26	59	21	54	36	56	24	344
09:45	Approach	1	32	39	23	70	18	71	37	48	29	367
10:00	Approach	1	25	33	17	69	30	64	27	49	37	351
10:15	Approach	1	33	29	30	84	29	78	48	47	34	412
10:30	Approach	1	29	41	26	71	34	62	34	44	23	364
10:45	Approach	1	33	41	22	66	23	82	38	59	33	397
11:00	Approach	1	26	34	27	52	36	66	52	73	21	387
11:15	Approach	1	39	30	34	54	30	81	47	66	31	412
11:30	Approach	1	26	35	29	55	35	81	53	77	38	429
11:45	Approach	1	22	43	21	62	29	66	39	68	30	380
12:00	Approach	1	25	33	29	83	35	74	57	78	26	440

12:15	Approach	1	40	57	50	70	29	81	43	61	14	445
12:30	Approach	1	36	39	33	80	33	90	51	80	25	467
12:45	Approach	1	30	46	21	69	30	86	51	75	24	432
13:00	Approach	1	33	39	27	63	33	72	39	62	24	392
13:15	Approach	1	31	49	33	47	30	76	54	71	12	403
13:30	Approach	1	25	28	29	50	37	81	46	63	19	378
13:45	Approach	1	31	27	25	63	30	73	47	69	14	379
14:00	Approach	1	24	32	20	47	28	69	65	62	23	370
14:15	Approach	1	31	37	29	55	26	65	50	78	16	387
14:30	Approach	1	40	45	27	62	32	73	50	72	22	423
14:45	Approach	1	44	44	14	65	22	71	49	80	20	409
15:00	Approach	1	34	55	19	57	25	67	54	70	22	403
15:15	Approach	1	31	31	14	50	26	65	42	74	24	357
15:30	Approach	1	24	39	13	59	31	59	48	71	21	365
15:45	Approach	1	33	45	25	52	25	77	53	73	23	406
16:00	Approach	1	22	43	15	50	28	64	51	73	24	370
16:15	Approach	1	29	34	22	61	24	63	41	53	19	346
16:30	Approach	1	29	39	16	46	24	79	48	66	19	366
16:45	Approach	1	36	33	16	47	13	65	35	68	18	331
17:00	Approach	1	26	50	17	59	16	69	44	61	14	356
17:15	Approach	1	20	33	24	59	38	96	44	64	11	389
17:30	Approach	1	30	47	16	55	20	71	44	75	14	372
17:45	Approach	1	31	47	12	66	26	68	39	58	14	361
18:00	Approach	1	33	37	18	68	16	60	42	70	8	352
18:15	Approach	1	25	28	22	48	11	55	43	69	10	311
18:30	Approach	1	18	27	18	51	19	73	39	68	19	332
18:45	Approach	1	25	29	13	54	17	48	39	60	8	293
19:00	Approach	1	19	28	12	32	21	40	41	51	20	264
19:15	Approach	1	24	45	11	36	16	51	34	60	12	289
19:30	Approach	1	24	22	12	26	15	50	33	65	7	254
19:45	Approach	1	23	20	9	38	7	38	31	44	7	217
20:00	Approach	1	12	23	9	30	9	41	39	53	8	224
20:15	Approach	1	17	20	6	26	6	30	25	44	3	177
20:30	Approach	1	17	24	6	33	12	36	24	54	11	217
20:45	Approach	1	22	26	8	23	13	28	32	47	13	212
21:00	Approach	1	13	9	0	17	11	33	21	51	11	166
21:15	Approach	1	21	13	7	30	7	34	24	42	7	185
21:30	Approach	1	16	14	4	13	4	36	26	47	7	167
21:45	Approach	1	11	11	5	30	14	42	27	35	8	183
22:00	Approach	1	9	16	2	20	11	38	24	46	11	177
22:15	Approach	1	20	12	5	17	12	36	23	53	11	189
22:30	Approach	1	22	26	8	31	10	44	25	62	29	257
22:45	Approach	1	22	16	6	30	7	38	34	67	24	244
23:00	Approach	1	16	18	7	16	9	35	30	67	11	209
23:15	Approach	1	12	16	5	16	10	41	31	63	16	210
23:30	Approach	1	17	11	4	19	8	31	18	41	10	159
23:45	Approach	1	6	8	9	18	11	36	30	66	5	189
24:00	Approach	1	9	8	2	13	10	32	27	50	4	155

Approach 1 AM peak 1661 11:00 - 12:00 PM peak 1736 12:00 - 13:00
Daily Total 25175

Appendix C

SIDRA INTERSECTION Results

MOVEMENT SUMMARY

Site: 1 [Prospect Highway / Ponds Road - Tue (AM)]

Network: N101 [AM Network]

Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total	Demand Flows HV	Arrival Flows Total	Arrival Flows HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	95% Back of Queue Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Prospect Highway													
2	T1	1557	9.3	1557	9.3	0.846	0.1	LOS A	0.0	0.0	0.00	0.00	59.1
3	R2	67	4.7	67	4.7	0.103	9.9	LOS A	0.4	2.9	0.65	0.85	44.7
Approach		1624	9.1	1624	9.1	0.846	0.5	NA	0.4	2.9	0.03	0.04	58.3
East: Ponds Road													
4	L2	292	6.9	292	6.9	0.934	37.5	LOS C	6.3	46.9	0.74	1.46	33.2
6	R2	31	24.1	31	24.1	0.126	22.0	LOS B	0.4	3.5	0.80	0.94	49.4
Approach		322	8.5	322	8.5	0.934	36.1	LOS C	6.3	46.9	0.75	1.41	35.2
North: Prospect Highway													
7	L2	22	23.8	22	23.8	0.424	5.9	LOS A	17.8	139.1	0.00	0.02	57.0
8	T1	736	13.2	736	13.2	0.424	0.1	LOS A	17.8	139.1	0.00	0.02	59.6
Approach		758	13.5	758	13.5	0.424	0.2	NA	17.8	139.1	0.00	0.02	59.4
All Vehicles		2704	10.2	2704	10.2	0.934	4.7	NA	17.8	139.1	0.11	0.19	54.4

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.
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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 6.4 %
Number of Iterations: 10 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 2 [Prospect Highway / M4 Western Motorway Eastbound - Tue (AM)]

Network: N101 [AM Network]

Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
SouthEast: Prospect Highway													
23a	R1	1019	11.1	1019	11.1	0.408	7.8	LOS A	3.6	27.5	0.07	0.60	41.5
23b	R3	217	40.3	217	40.3	0.408	10.3	LOS A	3.4	28.0	0.07	0.61	50.3
23u	U	27	0.0	27	0.0	0.408	10.9	LOS A	3.4	28.0	0.07	0.61	40.9
Approach		1263	15.8	1263	15.8	0.408	8.3	LOS A	3.6	28.0	0.07	0.60	44.3
North: Prospect Highway													
7	L2	291	12.0	291	12.0	0.983	48.4	LOS D	25.8	198.8	1.00	1.87	25.4
7a	L1	724	11.8	724	11.8	0.983	48.3	LOS D	25.8	198.8	1.00	1.87	6.9
9u	U	7	0.0	7	0.0	0.983	55.0	LOS D	25.8	198.8	1.00	1.87	6.9
Approach		1022	11.7	1022	11.7	0.983	48.3	LOS D	25.8	198.8	1.00	1.87	14.0
SouthWest: M4 Western Motorway													
30a	L1	623	5.1	623	5.1	0.502	14.5	LOS B	5.0	36.2	0.91	0.81	55.8
32a	R1	2	0.0	2	0.0	0.502	19.4	LOS B	4.7	37.8	0.89	0.89	55.0
32	R2	228	22.6	228	22.6	0.502	21.9	LOS B	4.7	37.8	0.89	0.89	50.7
Approach		854	9.7	854	9.7	0.502	16.5	LOS B	5.0	37.8	0.90	0.83	54.3
All Vehicles		3139	12.8	3139	12.8	0.983	23.6	LOS B	25.8	198.8	0.60	1.08	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.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 6.4 %
Number of Iterations: 10 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 3 [Prospect Highway / M4 Western Motorway Westbound - Tues (AM)]

Network: N101 [AM Network]

Signals - Fixed Time Isolated Cycle Time = 90 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Prospect Highway													
1	L2	204	16.0	204	16.0	0.345	28.9	LOS C	6.6	52.8	0.78	0.77	40.2
2	T1	612	16.0	612	16.0	0.812	31.0	LOS C	22.4	178.1	0.93	0.88	29.9
Approach		816	16.0	816	16.0	0.812	30.5	LOS C	22.4	178.1	0.89	0.86	33.3
East: M4 Western Motorway													
4	L2	363	16.0	363	16.0	0.450	9.9	LOS A	5.9	47.4	0.48	0.71	50.6
5	T1	6	16.0	6	16.0	0.845	44.4	LOS D	15.3	121.5	1.00	0.96	33.0
6	R2	620	16.0	620	16.0	0.845	50.2	LOS D	15.3	121.5	1.00	0.96	22.9
Approach		989	16.0	989	16.0	0.845	35.3	LOS C	15.3	121.5	0.81	0.87	32.5
North: Prospect Highway													
8	T1	531	16.0	531	16.0	0.466	8.7	LOS A	11.7	93.4	0.55	0.49	50.6
9	R2	431	16.0	431	16.0	0.830	33.6	LOS C	6.6	52.8	1.00	0.93	33.9
Approach		961	16.0	961	16.0	0.830	19.9	LOS B	11.7	93.4	0.75	0.69	41.4
All Vehicles		2766	16.0	2766	16.0	0.845	28.5	LOS C	22.4	178.1	0.81	0.80	35.6

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 6.4 %
Number of Iterations: 10 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1S	South Slip/Bypass Lane Crossing	53	11.8	LOS B	0.1	0.1	0.51	0.51
P4	West Full Crossing	53	22.1	LOS C	0.1	0.1	0.70	0.70
All Pedestrians		105	16.9	LOS B			0.61	0.61

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

MOVEMENT SUMMARY

Site: 4 [Great Western Highway / Tarlington Place - Tue (AM)]

Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Great Western Highway											
4a	L1	1	0.0	0.261	6.0	LOS A	0.0	0.0	0.00	0.00	70.5
5	T1	1445	8.5	0.261	0.0	LOS A	0.0	0.0	0.00	0.00	79.9
Approach		1446	8.5	0.261	0.0	NA	0.0	0.0	0.00	0.00	79.9
West: Great Western Highway											
11	T1	1741	4.4	0.230	0.0	LOS A	0.0	0.0	0.00	0.00	79.9
12b	R3	1	0.0	0.012	12.5	LOS A	0.0	0.2	0.77	0.90	43.1
12u	U	2	0.0	0.012	21.7	LOS B	0.0	0.2	0.77	0.90	46.8
Approach		1744	4.4	0.230	0.1	NA	0.0	0.2	0.00	0.00	79.8
SouthWest: Tarlington Place											
30b	L3	1	0.0	0.001	8.7	LOS A	0.0	0.0	0.46	0.58	54.7
32a	R1	1	0.0	0.001	6.2	LOS A	0.0	0.0	0.50	0.57	57.6
Approach		2	0.0	0.001	7.4	LOS A	0.0	0.0	0.48	0.57	56.1
All Vehicles		3193	6.3	0.261	0.0	NA	0.0	0.2	0.00	0.00	79.8

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

MOVEMENT SUMMARY

Site: 1 [Prospect Highway / Ponds Road - Tue (PM)]

Network: N101 [PM Network]

Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Prospect Highway													
2	T1	1612	5.2	1611	5.2	0.854	0.1	LOS A	0.0	0.0	0.00	0.00	59.0
3	R2	71	7.5	70	7.5	0.104	9.6	LOS A	0.4	3.0	0.64	0.84	44.8
Approach		1682	5.3	1681 N1	5.3	0.854	0.5	NA	0.4	3.0	0.03	0.04	58.3
East: Ponds Road													
4	L2	335	10.1	335	10.1	0.987	51.7	LOS D	10.9	83.0	0.72	1.80	26.5
6	R2	44	2.4	44	2.4	0.126	16.7	LOS B	0.4	3.1	0.73	0.91	53.9
Approach		379	9.2	379	9.2	0.987	47.6	LOS D	10.9	83.0	0.72	1.70	29.6
North: Prospect Highway													
7	L2	56	5.7	56	5.7	0.405	5.7	LOS A	39.2	304.2	0.00	0.05	57.6
8	T1	672	13.2	672	13.2	0.405	0.1	LOS A	39.2	304.2	0.00	0.05	59.0
Approach		727	12.6	727	12.6	0.405	0.5	NA	39.2	304.2	0.00	0.05	58.8
All Vehicles		2788	7.7	2788	7.7	0.987	6.9	NA	39.2	304.2	0.11	0.26	51.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 9.6 %
Number of Iterations: 10 (maximum specified: 10)

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

MOVEMENT SUMMARY

Site: 2 [Prospect Highway / M4 Western Motorway Eastbound - Tue (PM)]

Network: N101 [PM Network]

Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
SouthEast: Prospect Highway													
23a	R1	1083	5.0	1083	5.0	0.462	7.8	LOS A	3.5	25.2	0.10	0.60	41.1
23b	R3	323	4.9	323	4.9	0.462	9.9	LOS A	3.5	25.2	0.10	0.63	51.1
23u	U	194	0.0	194	0.0	0.462	10.9	LOS A	3.5	25.2	0.10	0.63	39.9
Approach		1600	4.3	1600	4.3	0.462	8.6	LOS A	3.5	25.4	0.10	0.61	44.5
North: Prospect Highway													
7	L2	172	11.7	172	11.7	1.036	102.1	LOS F	25.9	198.8	1.00	2.75	15.6
7a	L1	805	11.8	805	11.8	1.036	102.0	LOS F	25.9	198.8	1.00	2.75	3.5
9u	U	20	0.0	20	0.0	1.036	108.7	LOS F	25.9	198.8	1.00	2.75	3.5
Approach		997	11.5	997	11.5	1.036	102.2	LOS F	25.9	198.8	1.00	2.75	6.1
SouthWest: M4 Western Motorway													
30a	L1	579	6.0	579	6.0	0.541	19.1	LOS B	6.3	46.3	0.99	0.94	49.2
32a	R1	14	0.0	14	0.0	0.541	22.7	LOS B	6.1	50.9	0.98	0.96	52.4
32	R2	216	37.1	216	37.1	0.541	26.2	LOS B	6.1	50.9	0.98	0.96	46.6
Approach		808	14.2	808	14.2	0.541	21.0	LOS B	6.3	50.9	0.99	0.95	48.6
All Vehicles		3405	8.8	3405	8.8	1.036	38.9	LOS C	25.9	198.8	0.58	1.32	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.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 9.6 %
Number of Iterations: 10 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 3 [Prospect Highway / M4 Western Motorway Westbound - Tues (PM)]

Network: N101 [PM Network]

Signals - Fixed Time Isolated Cycle Time = 90 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Prospect Highway													
1	L2	374	5.0	374	5.0	0.521	27.8	LOS B	12.5	91.2	0.81	0.81	40.8
2	T1	836	5.0	836	5.0	0.922	41.3	LOS C	38.1	278.0	0.95	1.05	25.6
Approach		1209	5.0	1209	5.0	0.922	37.1	LOS C	38.1	278.0	0.90	0.97	31.1
East: M4 Western Motorway													
4	L2	194	5.0	194	5.0	0.204	7.2	LOS A	1.5	11.1	0.27	0.63	52.9
5	T1	5	5.0	5	5.0	0.894	52.3	LOS D	14.0	101.9	1.00	1.01	30.8
6	R2	529	5.0	529	5.0	0.894	57.9	LOS E	14.0	101.9	1.00	1.01	20.9
Approach		728	5.0	728	5.0	0.894	44.4	LOS D	14.0	101.9	0.81	0.91	28.1
North: Prospect Highway													
8	T1	441	5.0	431	5.0	0.326	5.6	LOS A	7.2	52.9	0.42	0.37	53.6
9	R2	555	5.0	542	5.0	0.929	45.9	LOS D	10.9	79.8	1.00	1.04	29.7
Approach		996	5.0	973 N1	5.0	0.929	28.0	LOS B	10.9	79.8	0.74	0.74	37.0
All Vehicles		2934	5.0	2910 N1	5.0	0.929	35.9	LOS C	38.1	278.0	0.83	0.88	32.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 9.6 %
Number of Iterations: 10 (maximum specified: 10)

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

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1S	South Slip/Bypass Lane Crossing	53	13.9	LOS B	0.1	0.1	0.56	0.56
P4	West Full Crossing	53	19.4	LOS B	0.1	0.1	0.66	0.66
All Pedestrians		105	16.7	LOS B			0.61	0.61

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

MOVEMENT SUMMARY

Site: 4 [Great Western Highway / Tarlington Place - Tue (PM)]

Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Great Western Highway											
4a	L1	4	0.0	0.473	6.0	LOS A	0.0	0.3	0.00	0.00	70.5
5	T1	2681	4.8	0.473	0.1	LOS A	0.0	0.3	0.00	0.00	79.8
Approach		2685	4.8	0.473	0.1	NA	0.0	0.3	0.00	0.00	79.8
West: Great Western Highway											
11	T1	1226	4.6	0.162	0.0	LOS A	0.0	0.0	0.00	0.00	79.9
12b	R3	1	0.0	0.033	15.2	LOS B	0.1	0.7	0.88	0.96	36.0
12u	U	4	0.0	0.033	32.3	LOS C	0.1	0.7	0.88	0.96	40.9
Approach		1232	4.6	0.162	0.1	NA	0.1	0.7	0.00	0.00	79.6
SouthWest: Tarlington Place											
30b	L3	2	0.0	0.001	8.4	LOS A	0.0	0.1	0.60	0.51	54.4
32a	R1	1	0.0	0.002	8.7	LOS A	0.0	0.0	0.69	0.66	55.0
Approach		3	0.0	0.002	8.5	LOS A	0.0	0.1	0.63	0.56	54.6
All Vehicles		3920	4.7	0.473	0.1	NA	0.1	0.7	0.00	0.00	79.7

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

MOVEMENT SUMMARY

Site: 1 [Prospect Highway / Ponds Road - Sat (noon)]

Network: N101 [Saturday Network]

Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Prospect Highway													
2	T1	1122	5.0	1122	5.0	0.594	0.0	LOS A	0.0	0.0	0.00	0.00	59.8
3	R2	37	5.7	37	5.7	0.114	16.1	LOS B	0.4	2.8	0.83	0.93	39.5
Approach		1159	5.0	1159	5.0	0.594	0.5	NA	0.4	2.8	0.03	0.03	58.8
East: Ponds Road													
4	L2	197	3.7	197	3.7	0.867	37.7	LOS C	3.6	26.1	0.86	1.24	33.0
6	R2	63	1.7	63	1.7	0.402	36.5	LOS C	1.4	10.0	0.92	1.01	41.7
Approach		260	3.2	260	3.2	0.867	37.4	LOS C	3.6	26.1	0.88	1.18	35.9
North: Prospect Highway													
7	L2	84	3.8	84	3.8	0.967	8.4	LOS A	0.0	0.0	0.00	0.04	52.7
8	T1	1018	4.4	1018	4.4	0.967	3.4	LOS A	0.0	0.0	0.00	0.04	53.4
Approach		1102	4.4	1102	4.4	0.967	3.8	NA	0.0	0.0	0.00	0.04	53.3
All Vehicles		2521	4.6	2521	4.6	0.967	5.8	NA	3.6	26.1	0.10	0.15	52.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 3.4 %
Number of Iterations: 10 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 2 [Prospect Highway / M4 Western Motorway Eastbound - Sat (noon)]

Network: N101 [Saturday Network]

Roundabout

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
SouthEast: Prospect Highway													
23a	R1	854	3.7	854	3.7	0.357	8.0	LOS A	2.7	19.6	0.23	0.59	40.4
23b	R3	140	11.3	140	11.3	0.357	10.3	LOS A	2.6	19.0	0.23	0.60	50.8
23u	U	57	0.0	57	0.0	0.357	11.2	LOS A	2.6	19.0	0.23	0.60	39.7
Approach		1051	4.5	1051	4.5	0.357	8.5	LOS A	2.7	19.6	0.23	0.59	42.9
North: Prospect Highway													
7	L2	477	3.3	477	3.3	0.899	13.9	LOS A	25.3	182.6	1.00	0.94	42.4
7a	L1	682	4.5	682	4.5	0.899	13.9	LOS A	25.3	182.6	1.00	0.94	18.4
9u	U	58	0.0	58	0.0	0.899	20.9	LOS B	25.3	182.6	1.00	0.94	18.4
Approach		1217	3.8	1217	3.8	0.899	14.2	LOS A	25.3	182.6	1.00	0.94	33.2
SouthWest: M4 Western Motorway													
30a	L1	384	6.0	384	6.0	0.286	10.7	LOS A	1.5	11.3	0.67	0.83	62.2
32a	R1	2	0.0	2	0.0	0.286	14.5	LOS A	1.4	10.9	0.67	0.87	60.1
32	R2	88	19.0	88	19.0	0.286	16.8	LOS B	1.4	10.9	0.67	0.87	59.6
Approach		475	8.4	475	8.4	0.286	11.9	LOS A	1.5	11.3	0.67	0.84	61.7
All Vehicles		2742	4.9	2742	4.9	0.899	11.6	LOS A	25.3	182.6	0.65	0.79	41.7

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.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 3.4 %
Number of Iterations: 10 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 3 [Prospect Highway / M4 Western Motorway Westbound - Sat (noon)]

Network: N101 [Saturday Network]

Signals - Fixed Time Isolated Cycle Time = 90 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Prospect Highway													
1	L2	138	5.0	138	5.0	0.288	34.2	LOS C	4.9	35.5	0.84	0.77	38.1
2	T1	337	5.0	337	5.0	0.557	30.4	LOS C	10.8	78.7	0.89	0.74	30.2
Approach		475	5.0	475	5.0	0.557	31.5	LOS C	10.8	78.7	0.88	0.75	33.3
East: M4 Western Motorway													
4	L2	92	5.0	92	5.0	0.083	6.8	LOS A	0.6	4.2	0.23	0.61	53.1
5	T1	5	5.0	5	5.0	0.581	33.7	LOS C	9.7	70.8	0.94	0.82	36.5
6	R2	481	5.0	481	5.0	0.581	39.3	LOS C	9.7	70.8	0.94	0.82	26.5
Approach		578	5.0	578	5.0	0.581	34.1	LOS C	9.7	70.8	0.83	0.79	30.8
North: Prospect Highway													
8	T1	297	5.0	297	5.0	0.248	7.6	LOS A	5.6	40.8	0.46	0.40	51.6
9	R2	478	5.0	478	5.0	0.571	23.1	LOS B	5.1	37.4	0.93	0.81	39.1
Approach		775	5.0	775	5.0	0.571	17.1	LOS B	5.6	40.8	0.75	0.65	43.1
All Vehicles		1827	5.0	1827	5.0	0.581	26.2	LOS B	10.8	78.7	0.81	0.72	36.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 3.4 %
Number of Iterations: 10 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1S	South Slip/Bypass Lane Crossing	53	8.0	LOS A	0.1	0.1	0.42	0.42
P4	West Full Crossing	53	28.1	LOS C	0.1	0.1	0.79	0.79
All Pedestrians		105	18.1	LOS B			0.61	0.61

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

MOVEMENT SUMMARY

Site: 4 [Great Western Highway / Tarlington Place - Sat (noon)]

Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Great Western Highway											
4a	L1	1	0.0	0.217	6.0	LOS A	0.0	0.0	0.00	0.00	70.5
5	T1	1249	2.2	0.217	0.0	LOS A	0.0	0.0	0.00	0.00	79.9
Approach		1251	2.2	0.217	0.0	NA	0.0	0.0	0.00	0.00	79.9
West: Great Western Highway											
11	T1	938	2.1	0.122	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
12b	R3	1	0.0	0.013	10.9	LOS A	0.0	0.3	0.70	0.85	44.9
12u	U	3	0.0	0.013	17.1	LOS B	0.0	0.3	0.70	0.85	48.3
Approach		942	2.1	0.122	0.1	NA	0.0	0.3	0.00	0.00	79.7
SouthWest: Tarlington Place											
30b	L3	1	0.0	0.001	8.2	LOS A	0.0	0.0	0.42	0.56	55.3
32a	R1	1	0.0	0.001	5.8	LOS A	0.0	0.0	0.43	0.54	58.1
Approach		2	0.0	0.001	7.0	LOS A	0.0	0.0	0.42	0.55	56.6
All Vehicles		2195	2.2	0.217	0.1	NA	0.0	0.3	0.00	0.00	79.8

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

MOVEMENT SUMMARY

Site: 4 [Great Western Highway / Tarlington Place - Tue (PM)]

Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Great Western Highway											
4a	L1	12	0.0	0.499	6.1	LOS A	0.1	0.8	0.00	0.01	70.4
5	T1	2815	4.8	0.499	0.1	LOS A	0.1	0.8	0.00	0.00	79.7
Approach		2827	4.8	0.499	0.1	NA	0.1	0.8	0.00	0.00	79.7
West: Great Western Highway											
11	T1	1288	4.6	0.170	0.0	LOS A	0.0	0.0	0.00	0.00	79.9
12b	R3	4	0.0	0.049	16.9	LOS B	0.1	1.0	0.88	0.96	38.6
12u	U	4	0.0	0.049	36.8	LOS C	0.1	1.0	0.88	0.96	43.1
Approach		1296	4.6	0.170	0.2	NA	0.1	1.0	0.01	0.01	79.5
SouthWest: Tarlington Place											
30b	L3	10	0.0	0.006	8.7	LOS A	0.0	0.3	0.61	0.56	54.3
32a	R1	4	0.0	0.008	9.4	LOS A	0.0	0.2	0.71	0.76	54.2
Approach		14	0.0	0.008	8.9	LOS A	0.0	0.3	0.64	0.62	54.3
All Vehicles		4138	4.7	0.499	0.2	NA	0.1	1.0	0.00	0.01	79.5

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

MOVEMENT SUMMARY

Site: 1 [Prospect Highway / Ponds Road - Sat (noon)]

Network: N101 [Saturday Network 2028 + Dev]

Giveway / Yield (Two-Way)

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Prospect Highway													
2	T1	1178	5.0	1178	5.0	0.624	0.0	LOS A	0.0	0.0	0.00	0.00	59.7
3	R2	50	4.4	50	4.4	0.178	18.5	LOS B	0.6	4.3	0.87	0.95	37.9
Approach		1228	5.0	1228	5.0	0.624	0.8	NA	0.6	4.3	0.04	0.04	58.4
East: Ponds Road													
4	L2	212	3.6	212	3.6	1.234	248.3	LOS F	28.8	207.9	1.00	3.34	6.9
6	R2	76	1.4	76	1.4	0.590	51.0	LOS D	2.2	15.6	0.95	1.05	35.7
Approach		288	3.1	288	3.1	1.234	196.1	LOS F	28.8	207.9	0.99	2.73	10.3
North: Prospect Highway													
7	L2	93	3.6	93	3.6	0.615	5.7	LOS A	8.6	62.5	0.00	0.05	57.6
8	T1	1069	4.4	1069	4.4	0.615	0.1	LOS A	8.6	62.5	0.00	0.05	58.9
Approach		1162	4.4	1162	4.4	0.615	0.6	NA	8.6	62.5	0.00	0.05	58.7
All Vehicles		2678	4.5	2678	4.5	1.234	21.7	NA	28.8	207.9	0.12	0.33	37.6

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 30.2 %
Number of Iterations: 10 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 2 [Prospect Highway / M4 Western Motorway Eastbound - Sat (noon)]

Network: N101 [Saturday Network 2028 + Dev]

Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
SouthEast: Prospect Highway													
23a	R1	904	3.7	904	3.7	0.378	8.0	LOS A	3.0	21.3	0.23	0.59	40.4
23b	R3	147	11.3	147	11.3	0.378	10.3	LOS A	2.8	20.6	0.24	0.60	50.8
23u	U	60	0.0	60	0.0	0.378	11.2	LOS A	2.8	20.6	0.24	0.60	39.7
Approach		1111	4.5	1111	4.5	0.378	8.5	LOS A	3.0	21.3	0.24	0.59	42.9
North: Prospect Highway													
7	L2	502	3.3	496	3.3	0.950	21.5	LOS B	27.5	198.8	1.00	1.16	37.0
7a	L1	721	4.4	712	4.5	0.950	21.4	LOS B	27.5	198.8	1.00	1.16	13.5
9u	U	61	0.0	60	0.0	0.950	28.4	LOS B	27.5	198.8	1.00	1.16	13.5
Approach		1283	3.8	1267 N1	3.8	0.950	21.8	LOS B	27.5	198.8	1.00	1.16	27.0
SouthWest: M4 Western Motorway													
30a	L1	407	6.0	407	6.0	0.309	11.0	LOS A	1.7	12.7	0.69	0.84	61.8
32a	R1	2	0.0	2	0.0	0.309	14.8	LOS B	1.6	12.2	0.70	0.89	59.8
32	R2	93	19.0	93	19.0	0.309	17.1	LOS B	1.6	12.2	0.70	0.89	59.1
Approach		502	8.4	502	8.4	0.309	12.1	LOS A	1.7	12.7	0.69	0.85	61.3
All Vehicles		2896	4.8	2880 N1	4.9	0.950	15.0	LOS B	27.5	198.8	0.65	0.88	37.8

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.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 30.2 %
Number of Iterations: 10 (maximum specified: 10)

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

MOVEMENT SUMMARY

Site: 3 [Prospect Highway / M4 Western Motorway Westbound - Sat (noon)]

Network: N101 [Saturday Network 2028 + Dev]

Signals - Fixed Time Isolated Cycle Time = 90 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Prospect Highway													
1	L2	145	5.3	145	5.3	0.303	34.4	LOS C	5.1	37.6	0.84	0.77	38.1
2	T1	358	4.9	358	4.9	0.592	30.7	LOS C	11.6	84.6	0.90	0.75	30.0
Approach		503	5.1	503	5.1	0.592	31.7	LOS C	11.6	84.6	0.89	0.76	33.2
East: M4 Western Motorway													
4	L2	96	4.6	96	4.6	0.088	6.8	LOS A	0.6	4.5	0.23	0.61	53.1
5	T1	6	0.0	6	0.0	0.614	34.0	LOS C	10.3	75.4	0.95	0.83	36.4
6	R2	508	5.0	508	5.0	0.614	39.6	LOS C	10.3	75.4	0.95	0.83	26.3
Approach		610	4.9	610	4.9	0.614	34.4	LOS C	10.3	75.4	0.83	0.79	30.6
North: Prospect Highway													
8	T1	313	4.9	311	5.0	0.260	7.7	LOS A	5.9	43.1	0.47	0.41	51.5
9	R2	505	5.0	502	5.0	0.600	23.2	LOS B	5.4	39.7	0.94	0.81	39.0
Approach		818	5.0	813 N1	5.0	0.600	17.3	LOS B	5.9	43.1	0.76	0.66	43.0
All Vehicles		1931	5.0	1926 N1	5.0	0.614	26.5	LOS B	11.6	84.6	0.82	0.73	36.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 30.2 %
Number of Iterations: 10 (maximum specified: 10)

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

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1S	South Slip/Bypass Lane Crossing	53	8.0	LOS A	0.1	0.1	0.42	0.42
P4	West Full Crossing	53	28.1	LOS C	0.1	0.1	0.79	0.79
All Pedestrians		105	18.1	LOS B			0.61	0.61

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

MOVEMENT SUMMARY

Site: 4 [Great Western Highway / Tarlington Place - Sat (noon)]

Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Great Western Highway											
4a	L1	19	0.0	0.231	6.1	LOS A	0.1	0.8	0.00	0.03	70.0
5	T1	1312	2.2	0.231	0.0	LOS A	0.1	0.8	0.00	0.01	79.8
Approach		1331	2.2	0.231	0.1	NA	0.1	0.8	0.00	0.01	79.7
West: Great Western Highway											
11	T1	985	2.1	0.128	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
12b	R3	9	0.0	0.028	12.2	LOS A	0.1	0.6	0.67	0.87	49.6
12u	U	3	0.0	0.028	19.0	LOS B	0.1	0.6	0.67	0.87	51.9
Approach		997	2.1	0.128	0.2	NA	0.1	0.6	0.01	0.01	79.5
SouthWest: Tarlington Place											
30b	L3	18	0.0	0.020	8.3	LOS A	0.1	0.5	0.43	0.63	55.1
32a	R1	9	0.0	0.008	6.0	LOS A	0.0	0.2	0.45	0.62	57.9
Approach		27	0.0	0.020	7.6	LOS A	0.1	0.5	0.44	0.63	56.0
All Vehicles		2354	2.1	0.231	0.2	NA	0.1	0.8	0.01	0.02	79.3

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

MOVEMENT SUMMARY

Site: 1 [Prospect Highway / Ponds Road - Tue (AM)]

Network: N101 [AM Network 2028 + Dev]

Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Prospect Highway													
2	T1	1635	9.3	1634	9.3	0.889	0.1	LOS A	0.0	0.0	0.00	0.00	58.7
3	R2	78	4.2	78	4.2	0.129	10.5	LOS A	0.5	3.5	0.69	0.87	44.2
Approach		1713	9.0	1713	9.0	0.889	0.6	NA	0.5	3.5	0.03	0.04	57.8
East: Ponds Road													
4	L2	307	6.8	307	6.8	1.054	94.1	LOS F	17.8	132.2	1.00	2.44	16.4
6	R2	34	22.6	34	22.6	0.157	24.0	LOS B	0.5	4.3	0.82	0.94	48.2
Approach		342	8.4	342	8.4	1.054	87.0	LOS F	17.8	132.2	0.98	2.29	18.7
North: Prospect Highway													
7	L2	27	20.8	27	20.8	0.446	5.8	LOS A	45.1	351.7	0.00	0.02	57.1
8	T1	773	13.2	773	13.2	0.446	0.1	LOS A	45.1	351.7	0.00	0.02	59.5
Approach		799	13.4	799	13.4	0.446	0.3	NA	45.1	351.7	0.00	0.02	59.4
All Vehicles		2854	10.2	2853[N1]	10.2	1.054	10.9	NA	45.1	351.7	0.14	0.30	46.6

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 15.6 %
Number of Iterations: 10 (maximum specified: 10)

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

MOVEMENT SUMMARY

Site: 2 [Prospect Highway / M4 Western Motorway Eastbound - Tue (AM)]

Network: N101 [AM Network 2028 + Dev]

Roundabout

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
SouthEast: Prospect Highway													
23a	R1	1075	11.0	1075	11.0	0.430	7.8	LOS A	3.9	30.1	0.07	0.60	41.5
23b	R3	228	40.3	228	40.3	0.430	10.3	LOS A	3.7	30.6	0.07	0.61	50.3
23u	U	29	0.0	29	0.0	0.430	10.9	LOS A	3.7	30.6	0.07	0.61	40.9
Approach		1332	15.8	1332	15.8	0.430	8.3	LOS A	3.9	30.6	0.07	0.60	44.2
North: Prospect Highway													
7	L2	305	12.0	305	12.0	1.069	100.5	LOS F	25.8	198.8	1.00	2.93	15.7
7a	L1	762	11.8	762	11.8	1.069	100.4	LOS F	25.8	198.8	1.00	2.93	3.5
9u	U	8	0.0	8	0.0	1.069	107.1	LOS F	25.8	198.8	1.00	2.93	3.5
Approach		1074	11.7	1074	11.7	1.069	100.5	LOS F	25.8	198.8	1.00	2.93	7.6
SouthWest: M4 Western Motorway													
30a	L1	657	5.1	657	5.1	0.537	16.3	LOS B	6.2	45.3	0.98	0.81	53.1
32a	R1	2	0.0	2	0.0	0.537	21.6	LOS B	6.0	47.7	0.96	0.89	53.3
32	R2	240	22.6	240	22.6	0.537	24.1	LOS B	6.0	47.7	0.96	0.89	47.9
Approach		899	9.7	899	9.7	0.537	18.4	LOS B	6.2	47.7	0.98	0.83	51.6
All Vehicles		3305	12.8	3305	12.8	1.069	41.0	LOS C	25.8	198.8	0.62	1.42	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.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 15.6 %
Number of Iterations: 10 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 3 [Prospect Highway / M4 Western Motorway Westbound - Tues (AM)]

Network: N101 [AM Network 2028 + Dev]

Signals - Fixed Time Isolated Cycle Time = 90 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Prospect Highway													
1	L2	214	16.0	214	16.0	0.373	29.9	LOS C	7.1	56.9	0.80	0.78	39.7
2	T1	645	15.9	645	15.9	0.884	38.5	LOS C	27.1	215.9	0.96	1.00	26.6
Approach		860	15.9	860	15.9	0.884	36.4	LOS C	27.1	215.9	0.92	0.94	30.7
East: M4 Western Motorway													
4	L2	381	15.9	381	15.9	0.469	10.4	LOS A	6.8	53.8	0.51	0.72	50.2
5	T1	7	16.7	7	16.7	0.847	44.0	LOS D	16.1	128.0	1.00	0.96	33.1
6	R2	653	15.9	653	15.9	0.847	49.7	LOS D	16.1	128.0	1.00	0.96	23.1
Approach		1041	15.9	1041	15.9	0.847	35.3	LOS C	16.1	128.0	0.82	0.87	32.5
North: Prospect Highway													
8	T1	558	16.0	532	16.2	0.476	9.2	LOS A	12.2	96.9	0.57	0.51	50.1
9	R2	452	15.9	431	16.1	0.831	33.5	LOS C	6.5	51.9	1.00	0.93	33.9
Approach		1010	16.0	963 N1	16.2	0.831	20.1	LOS B	12.2	96.9	0.76	0.70	41.3
All Vehicles		2911	15.9	2864 N1	16.2	0.884	30.5	LOS C	27.1	215.9	0.83	0.83	34.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 15.6 %
Number of Iterations: 10 (maximum specified: 10)

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

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1S	South Slip/Bypass Lane Crossing	53	11.3	LOS B	0.1	0.1	0.50	0.50
P4	West Full Crossing	53	22.8	LOS C	0.1	0.1	0.71	0.71
All Pedestrians		105	17.0	LOS B			0.61	0.61

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

MOVEMENT SUMMARY

Site: 4 [Great Western Highway / Tarlington Place - Tue (AM)]

Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Great Western Highway											
4a	L1	14	0.0	0.277	6.1	LOS A	0.1	0.7	0.00	0.02	70.1
5	T1	1518	8.5	0.277	0.0	LOS A	0.1	0.7	0.00	0.01	79.8
Approach		1532	8.4	0.277	0.1	NA	0.1	0.7	0.00	0.01	79.7
West: Great Western Highway											
11	T1	1828	4.4	0.241	0.0	LOS A	0.0	0.0	0.00	0.00	79.9
12b	R3	7	0.0	0.026	13.9	LOS A	0.1	0.5	0.75	0.91	47.5
12u	U	2	0.0	0.026	24.4	LOS B	0.1	0.5	0.75	0.91	50.3
Approach		1837	4.4	0.241	0.1	NA	0.1	0.5	0.00	0.00	79.7
SouthWest: Tarlington Place											
30b	L3	6	0.0	0.007	8.8	LOS A	0.0	0.2	0.47	0.63	54.5
32a	R1	3	0.0	0.003	6.4	LOS A	0.0	0.1	0.52	0.63	57.5
Approach		9	0.0	0.007	7.9	LOS A	0.0	0.2	0.49	0.63	55.6
All Vehicles		3378	6.2	0.277	0.1	NA	0.1	0.7	0.00	0.01	79.7

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

MOVEMENT SUMMARY

Site: 1 [Prospect Highway / Ponds Road - Tue (PM)]

Network: N101 [PM Network 2028 + Dev]

Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Prospect Highway													
2	T1	1692	5.2	1690	5.2	0.896	0.1	LOS A	0.0	0.0	0.00	0.00	58.6
3	R2	78	7.0	78	7.1	0.124	10.1	LOS A	0.5	3.5	0.67	0.86	44.4
Approach		1771	5.3	1768 N1	5.3	0.896	0.6	NA	0.5	3.5	0.03	0.04	57.8
East: Ponds Road													
4	L2	354	10.0	354	10.0	1.106	129.4	LOS F	28.4	215.5	1.00	3.10	12.5
6	R2	51	2.2	51	2.2	0.160	18.0	LOS B	0.5	3.9	0.76	0.92	52.9
Approach		405	9.0	405	9.0	1.106	115.4	LOS F	28.4	215.5	0.97	2.83	15.0
North: Prospect Highway													
7	L2	61	5.5	61	5.5	0.427	5.7	LOS A	75.9	588.6	0.00	0.05	57.5
8	T1	705	13.2	705	13.2	0.427	0.1	LOS A	75.9	588.6	0.00	0.05	59.0
Approach		766	12.6	766	12.6	0.427	0.5	NA	75.9	588.6	0.00	0.05	58.8
All Vehicles		2941	7.7	2938 N1	7.7	1.106	16.4	NA	75.9	588.6	0.15	0.42	41.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 22.5 %
Number of Iterations: 10 (maximum specified: 10)

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

MOVEMENT SUMMARY

Site: 2 [Prospect Highway / M4 Western Motorway Eastbound - Tue (PM)]

Network: N101 [PM Network 2028 + Dev]

Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
SouthEast: Prospect Highway													
23a	R1	1141	4.9	1141	4.9	0.486	7.8	LOS A	3.8	27.7	0.10	0.60	41.1
23b	R3	339	4.9	339	4.9	0.486	9.9	LOS A	3.8	27.7	0.10	0.63	51.1
23u	U	203	0.0	203	0.0	0.486	10.9	LOS A	3.8	27.7	0.10	0.63	39.9
Approach		1683	4.3	1683	4.3	0.486	8.6	LOS A	3.8	28.0	0.10	0.61	44.5
North: Prospect Highway													
7	L2	180	11.7	180	11.7	1.145	184.1	LOS F	25.9	198.8	1.00	3.96	9.8
7a	L1	848	11.7	848	11.7	1.145	184.0	LOS F	25.9	198.8	1.00	3.96	2.0
9u	U	21	0.0	21	0.0	1.145	190.7	LOS F	25.9	198.8	1.00	3.96	2.0
Approach		1049	11.5	1049	11.5	1.145	184.1	LOS F	25.9	198.8	1.00	3.96	3.5
SouthWest: M4 Western Motorway													
30a	L1	609	6.0	609	6.0	0.589	23.1	LOS B	8.3	61.4	1.00	0.97	44.6
32a	R1	14	0.0	14	0.0	0.589	26.8	LOS B	8.0	67.1	1.00	0.99	49.5
32	R2	227	37.1	227	37.1	0.589	30.4	LOS C	8.0	67.1	1.00	0.99	42.4
Approach		850	14.2	850	14.2	0.589	25.1	LOS B	8.3	67.1	1.00	0.97	44.1
All Vehicles		3582	8.8	3582	8.8	1.145	63.9	LOS E	25.9	198.8	0.58	1.68	16.3

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.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 22.5 %
Number of Iterations: 10 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 3 [Prospect Highway / M4 Western Motorway Westbound - Tues (PM)]

Network: N101 [PM Network 2028 + Dev]

Signals - Fixed Time Isolated Cycle Time = 90 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Prospect Highway													
1	L2	392	5.1	392	5.1	0.532	27.2	LOS B	13.0	95.2	0.81	0.81	41.1
2	T1	880	5.0	880	5.0	0.944	46.4	LOS D	43.1	314.5	0.95	1.10	23.9
Approach		1272	5.0	1272	5.0	0.944	40.5	LOS C	43.1	314.5	0.90	1.01	29.8
East: M4 Western Motorway													
4	L2	203	4.9	203	4.9	0.167	6.4	LOS A	0.9	6.8	0.19	0.60	53.4
5	T1	6	0.0	6	0.0	0.940	61.2	LOS E	16.1	117.4	1.00	1.08	28.7
6	R2	557	5.0	557	5.0	0.940	66.8	LOS E	16.1	117.4	1.00	1.08	19.0
Approach		766	4.9	766	4.9	0.940	50.7	LOS D	16.1	117.4	0.79	0.95	26.1
North: Prospect Highway													
8	T1	166	4.7	152	4.8	0.114	4.6	LOS A	2.1	15.5	0.35	0.29	54.6
9	R2	584	4.9	533	5.0	0.956	54.6	LOS D	11.7	85.6	1.00	1.10	27.2
Approach		749	4.9	685 N1	5.0	0.956	43.5	LOS D	11.7	85.6	0.86	0.92	30.6
All Vehicles		2787	5.0	2723 N1	5.1	0.956	44.1	LOS D	43.1	314.5	0.86	0.97	28.9

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 22.5 %
Number of Iterations: 10 (maximum specified: 10)

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

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1S	South Slip/Bypass Lane Crossing	53	14.5	LOS B	0.1	0.1	0.57	0.57
P4	West Full Crossing	53	18.7	LOS B	0.1	0.1	0.65	0.65
All Pedestrians		105	16.6	LOS B			0.61	0.61

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

MOVEMENT SUMMARY

Site: 2v [Prospect Highway / M4 Western Motorway Eastbound - Tue (AM) - Upgrade - 1.2]

Network: N101 [AM Network 2028 + Dev Upgrade 1.2]

Signals - Fixed Time Coordinated Cycle Time = 90 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
SouthEast: Prospect Highway													
23a	R1	1194	10.7	1194	10.7	0.559	16.0	LOS B	14.2	108.3	0.58	0.74	28.9
23b	R3	245	40.3	245	40.3	0.674	52.4	LOS D	7.2	67.5	1.00	0.82	26.4
Approach		1439	15.7	1439	15.7	0.674	22.2	LOS B	14.2	108.3	0.66	0.75	27.9
North: Prospect Highway													
7	L2	327	11.9	327	11.9	0.268	7.4	LOS A	3.3	25.4	0.33	0.65	48.1
7a	L1	856	11.2	856	11.2	0.679	30.7	LOS C	16.1	123.7	0.91	0.84	9.6
Approach		1183	11.4	1183	11.4	0.679	24.2	LOS B	16.1	123.7	0.75	0.78	21.9
West: M4 Western Motorway													
10	L2	705	5.1	705	5.1	0.877	53.2	LOS D	17.3	126.5	0.97	0.95	26.2
11	T1	2	0.0	2	0.0	0.294	32.8	LOS C	4.6	38.3	0.84	0.78	43.4
12a	R1	257	22.5	257	22.5	0.294	36.3	LOS C	4.6	38.3	0.84	0.78	34.1
Approach		964	9.7	964	9.7	0.877	48.6	LOS D	17.3	126.5	0.94	0.90	28.0
All Vehicles		3586	12.7	3586	12.7	0.877	30.0	LOS C	17.3	126.5	0.76	0.80	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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 2.8 %
Number of Iterations: 10 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P4	West Full Crossing	53	9.4	LOS A	0.1	0.1	0.46	0.46
P4S	West Slip/Bypass Lane Crossing	53	8.9	LOS A	0.1	0.1	0.45	0.45
All Pedestrians		105	9.1	LOS A			0.45	0.45

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

MOVEMENT SUMMARY

Site: 3 [Prospect Highway / M4 Western Motorway Westbound - Tues (AM) - upgrade - 1.2]

Network: N101 [AM Network 2028 + Dev Upgrade 1.2]

Signals - Fixed Time Coordinated Cycle Time = 90 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Prospect Highway													
1	L2	258	16.0	258	16.0	0.536	35.3	LOS C	9.7	77.3	0.89	0.81	37.5
2	T1	785	15.8	785	15.8	0.768	34.6	LOS C	16.9	134.3	0.98	0.91	28.3
Approach		1043	15.8	1043	15.8	0.768	34.8	LOS C	16.9	134.3	0.95	0.88	31.3
East: M4 Western Motorway													
4	L2	459	15.9	459	15.9	0.515	8.0	LOS A	6.4	51.0	0.43	0.70	51.9
5	T1	8	14.3	8	14.3	0.791	35.5	LOS C	17.5	139.5	0.98	0.92	35.9
6	R2	784	15.9	784	15.9	0.791	41.3	LOS C	17.5	139.5	0.98	0.91	25.9
Approach		1251	15.9	1251	15.9	0.791	29.0	LOS C	17.5	139.5	0.78	0.83	35.4
North: Prospect Highway													
8	T1	713	15.0	713	15.0	0.354	6.8	LOS A	4.9	38.7	0.34	0.29	52.0
9	R2	545	16.0	545	16.0	0.774	45.3	LOS D	12.0	95.3	0.98	0.88	28.8
Approach		1258	15.5	1258	15.5	0.774	23.5	LOS B	12.0	95.3	0.62	0.55	38.6
All Vehicles		3552	15.7	3552	15.7	0.791	28.8	LOS C	17.5	139.5	0.77	0.75	35.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 2.8 %
Number of Iterations: 10 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1S	South Slip/Bypass Lane Crossing	53	8.9	LOS A	0.1	0.1	0.45	0.45
P4	West Full Crossing	53	26.5	LOS C	0.1	0.1	0.77	0.77
All Pedestrians		105	17.7	LOS B			0.61	0.61

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

MOVEMENT SUMMARY

Site: 1 [Prospect Highway / Ponds Road - Tue (AM) - upgrade - 1.2]

Network: N101 [AM Network 2028 + Dev Upgrade 1.2]

Giveway / Yield (Two-Way)

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Prospect Highway													
2	T1	1876	8.8	1876	8.8	0.509	0.0	LOS A	0.0	0.0	0.00	0.00	59.8
Approach		1876	8.8	1876	8.8	0.509	0.0	NA	0.0	0.0	0.00	0.00	59.8
East: Ponds Road													
4	L2	329	6.7	329	6.7	0.312	12.7	LOS A	1.4	10.4	0.57	0.84	60.1
Approach		329	6.7	329	6.7	0.312	12.7	LOS A	1.4	10.4	0.57	0.84	60.1
North: Prospect Highway													
7	L2	28	22.2	28	22.2	0.017	5.8	LOS A	0.0	0.0	0.00	0.52	54.2
8	T1	860	12.7	860	12.7	0.219	0.0	LOS A	0.0	0.0	0.00	0.00	59.9
Approach		888	13.0	888	13.0	0.219	0.2	NA	0.0	0.0	0.00	0.02	59.5
All Vehicles		3094	9.8	3094	9.8	0.509	1.4	NA	1.4	10.4	0.06	0.09	59.8

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.
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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 2.8 %
Number of Iterations: 10 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 4 [Great Western Highway / Tarlington Place - Tue (AM)]

Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Great Western Highway											
4a	L1	14	0.0	0.290	6.1	LOS A	0.1	0.6	0.00	0.02	70.2
5	T1	1594	8.2	0.290	0.0	LOS A	0.1	0.6	0.00	0.01	79.8
Approach		1607	8.1	0.290	0.1	NA	0.1	0.6	0.00	0.01	79.7
West: Great Western Highway											
11	T1	1961	4.4	0.259	0.0	LOS A	0.0	0.0	0.00	0.00	79.9
12b	R3	7	0.0	0.024	14.6	LOS B	0.1	0.5	0.74	0.91	48.6
12u	U	1	0.0	0.024	26.6	LOS B	0.1	0.5	0.74	0.91	51.1
Approach		1969	4.4	0.259	0.1	NA	0.1	0.5	0.00	0.00	79.7
SouthWest: Tarlington Place											
30b	L3	5	0.0	0.007	9.0	LOS A	0.0	0.2	0.48	0.63	54.3
32a	R1	3	0.0	0.003	6.6	LOS A	0.0	0.1	0.55	0.64	57.3
Approach		8	0.0	0.007	8.1	LOS A	0.0	0.2	0.51	0.64	55.4
All Vehicles		3585	6.0	0.290	0.1	NA	0.1	0.6	0.00	0.01	79.7

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

MOVEMENT SUMMARY

Site: 1 [Prospect Highway / Ponds Road - Tue (PM) - upgrade - 1.2]

Network: N101 [PM Network 2028 + Dev Upgrade 1.2]

Giveway / Yield (Two-Way)

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Prospect Highway													
2	T1	2141	4.7	2141	4.7	0.566	0.0	LOS A	0.0	0.0	0.00	0.00	59.8
Approach		2141	4.7	2141	4.7	0.566	0.0	NA	0.0	0.0	0.00	0.00	59.8
East: Ponds Road													
4	L2	380	10.0	380	10.0	0.352	12.4	LOS A	1.7	13.2	0.54	0.80	60.7
Approach		380	10.0	380	10.0	0.352	12.4	LOS A	1.7	13.2	0.54	0.80	60.7
North: Prospect Highway													
7	L2	64	4.9	64	4.9	0.035	5.7	LOS A	0.0	0.0	0.00	0.53	54.8
8	T1	975	10.3	975	10.3	0.171	0.0	LOS A	7.9	60.3	0.00	0.00	60.0
Approach		1039	9.9	1039	9.9	0.171	0.4	NA	7.9	60.3	0.00	0.03	59.3
All Vehicles		3560	6.8	3560	6.8	0.566	1.4	NA	7.9	60.3	0.06	0.10	59.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 3.2 %
Number of Iterations: 10 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 2v [Prospect Highway / M4 Western Motorway Eastbound - Tue (PM) - Upgrade - 1.2]

Network: N101 [PM Network 2028 + Dev Upgrade 1.2]

Signals - Fixed Time Coordinated Cycle Time = 90 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
SouthEast: Prospect Highway													
23a	R1	1464	4.1	1464	4.1	0.622	11.4	LOS A	13.1	94.8	0.44	0.68	33.9
23b	R3	364	4.9	364	4.9	0.819	51.9	LOS D	10.8	79.0	1.00	0.85	27.0
Approach		1828	4.3	1828	4.3	0.819	19.5	LOS B	13.1	94.8	0.55	0.72	30.5
North: Prospect Highway													
7	L2	194	11.4	194	11.4	0.163	7.9	LOS A	2.1	15.9	0.33	0.64	47.6
7a	L1	1149	9.2	1149	9.2	0.823	35.6	LOS C	17.3	130.6	0.97	0.94	8.4
Approach		1343	9.6	1343	9.6	0.823	31.6	LOS C	17.3	130.6	0.87	0.89	14.6
West: M4 Western Motorway													
10	L2	654	6.0	654	6.0	0.898	58.3	LOS E	16.9	124.6	1.00	0.98	24.5
11	T1	16	0.0	16	0.0	0.361	35.9	LOS C	4.9	44.3	0.88	0.79	42.0
12a	R1	243	37.2	243	37.2	0.361	39.8	LOS C	4.9	44.3	0.88	0.79	32.4
Approach		913	14.2	913	14.2	0.898	53.0	LOS D	16.9	124.6	0.97	0.92	26.5
All Vehicles		4084	8.2	4084	8.2	0.898	31.0	LOS C	17.3	130.6	0.75	0.82	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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 3.2 %
Number of Iterations: 10 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P4	West Full Crossing	53	8.0	LOS A	0.1	0.1	0.42	0.42
P4S	West Slip/Bypass Lane Crossing	53	7.6	LOS A	0.1	0.1	0.41	0.41
All Pedestrians		105	7.8	LOS A			0.42	0.42

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

MOVEMENT SUMMARY

Site: 3 [Prospect Highway / M4 Western Motorway Westbound - Tues (PM) - upgrade - 1.2]

Network: N101 [PM Network 2028 + Dev Upgrade 1.2]

Signals - Fixed Time Coordinated Cycle Time = 90 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Prospect Highway													
1	L2	421	5.0	421	5.0	0.640	31.3	LOS C	15.4	112.7	0.89	0.84	39.3
2	T1	966	4.9	966	4.9	0.697	26.3	LOS B	18.2	132.6	0.91	0.80	32.4
Approach		1387	4.9	1387	4.9	0.697	27.8	LOS B	18.2	132.6	0.90	0.81	35.3
East: M4 Western Motorway													
4	L2	218	4.8	218	4.8	0.203	6.3	LOS A	0.9	6.8	0.18	0.60	53.4
5	T1	5	0.0	5	0.0	0.889	50.6	LOS D	15.6	113.9	1.00	1.01	31.3
6	R2	598	4.9	598	4.9	0.889	56.2	LOS D	15.6	113.9	1.00	1.01	21.4
Approach		821	4.9	821	4.9	0.889	42.9	LOS D	15.6	113.9	0.78	0.90	28.6
North: Prospect Highway													
8	T1	418	2.0	418	2.0	0.160	2.3	LOS A	1.2	8.9	0.14	0.12	57.1
9	R2	626	5.0	626	5.0	0.715	40.8	LOS C	13.2	96.3	0.97	0.86	30.4
Approach		1044	3.8	1044	3.8	0.715	25.4	LOS B	13.2	96.3	0.64	0.57	37.4
All Vehicles		3253	4.6	3253	4.6	0.889	30.8	LOS C	18.2	132.6	0.79	0.76	34.0

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 3.2 %
Number of Iterations: 10 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1S	South Slip/Bypass Lane Crossing	53	12.3	LOS B	0.1	0.1	0.52	0.52
P4	West Full Crossing	53	21.4	LOS C	0.1	0.1	0.69	0.69
All Pedestrians		105	16.9	LOS B			0.61	0.61

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

MOVEMENT SUMMARY

Site: 4 [Great Western Highway / Tarlington Place - Tue (PM)]

Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Great Western Highway											
4a	L1	12	0.0	0.526	6.1	LOS A	0.1	0.8	0.00	0.01	70.4
5	T1	2971	4.8	0.526	0.1	LOS A	0.1	0.8	0.00	0.00	79.7
Approach		2982	4.8	0.526	0.1	NA	0.1	0.8	0.00	0.00	79.7
West: Great Western Highway											
11	T1	1382	4.6	0.183	0.0	LOS A	0.0	0.0	0.00	0.00	79.9
12b	R3	4	0.0	0.023	18.5	LOS B	0.1	0.5	0.86	0.95	42.4
12u	U	1	0.0	0.023	41.9	LOS C	0.1	0.5	0.86	0.95	46.3
Approach		1387	4.6	0.183	0.1	NA	0.1	0.5	0.00	0.00	79.7
SouthWest: Tarlington Place											
30b	L3	9	0.0	0.006	8.9	LOS A	0.0	0.3	0.64	0.57	54.2
32a	R1	4	0.0	0.008	10.0	LOS A	0.0	0.2	0.74	0.79	53.5
Approach		14	0.0	0.008	9.2	LOS A	0.0	0.3	0.67	0.63	54.0
All Vehicles		4383	4.7	0.526	0.1	NA	0.1	0.8	0.00	0.00	79.6

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

MOVEMENT SUMMARY

Site: 2v [Prospect Highway / M4 Western Motorway Eastbound - Sat (noon) - Upgrade - 1.2]

Network: N101 [Sat Network 2028 + Dev Upgrade 1.2]

Signals - Fixed Time Coordinated Cycle Time = 90 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
SouthEast: Prospect Highway													
23a	R1	1099	3.3	1099	3.3	0.401	8.8	LOS A	7.3	52.4	0.33	0.63	37.6
23b	R3	158	11.3	158	11.3	0.454	50.9	LOS D	4.5	34.6	1.00	0.78	27.2
Approach		1257	4.3	1257	4.3	0.454	14.1	LOS A	7.3	52.4	0.41	0.65	33.7
North: Prospect Highway													
7	L2	539	3.3	539	3.3	0.379	6.6	LOS A	4.4	31.8	0.30	0.64	49.4
7a	L1	902	3.9	902	3.9	0.464	18.4	LOS B	12.4	89.8	0.68	0.75	14.4
Approach		1441	3.7	1441	3.7	0.464	14.0	LOS A	12.4	89.8	0.53	0.71	32.6
West: M4 Western Motorway													
10	L2	437	6.0	437	6.0	0.920	66.3	LOS E	11.9	87.5	1.00	1.00	22.2
11	T1	2	0.0	2	0.0	0.226	43.0	LOS D	2.1	16.9	0.93	0.75	38.7
12a	R1	100	18.9	100	18.9	0.226	46.5	LOS D	2.1	16.9	0.93	0.75	28.7
Approach		539	8.4	539	8.4	0.920	62.5	LOS E	11.9	87.5	0.99	0.95	23.2
All Vehicles		3237	4.7	3237	4.7	0.920	22.1	LOS B	12.4	89.8	0.56	0.73	29.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1.0 %
Number of Iterations: 6 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P4	West Full Crossing	53	4.7	LOS A	0.0	0.0	0.32	0.32
P4S	West Slip/Bypass Lane Crossing	53	4.4	LOS A	0.0	0.0	0.31	0.31
All Pedestrians		105	4.5	LOS A			0.32	0.32

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

MOVEMENT SUMMARY

Site: 3 [Prospect Highway / M4 Western Motorway Westbound - Sat (noon) - upgrade - 1.2]

Network: N101 [Sat Network 2028 + Dev Upgrade 1.2]

Signals - Fixed Time Coordinated Cycle Time = 90 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Prospect Highway													
1	L2	155	4.8	155	4.8	0.310	33.6	LOS C	5.4	39.6	0.83	0.77	38.4
2	T1	449	4.2	449	4.2	0.426	29.0	LOS C	8.2	59.3	0.87	0.72	30.9
Approach		604	4.4	604	4.4	0.426	30.2	LOS C	8.2	59.3	0.86	0.74	33.6
East: M4 Western Motorway													
4	L2	103	5.1	103	5.1	0.101	6.2	LOS A	0.4	2.8	0.17	0.59	53.5
5	T1	5	0.0	5	0.0	0.920	56.7	LOS E	15.1	110.0	1.00	1.06	29.7
6	R2	545	5.0	545	5.0	0.920	62.3	LOS E	15.1	110.0	1.00	1.06	20.0
Approach		654	5.0	654	5.0	0.920	53.4	LOS D	15.1	110.0	0.87	0.98	24.2
North: Prospect Highway													
8	T1	465	3.6	465	3.6	0.174	1.4	LOS A	0.9	6.7	0.10	0.08	58.1
9	R2	542	5.0	542	5.0	0.425	29.4	LOS C	9.1	66.4	0.81	0.80	35.0
Approach		1007	4.4	1007	4.4	0.425	16.5	LOS B	9.1	66.4	0.48	0.47	42.9
All Vehicles		2265	4.6	2265	4.6	0.920	30.8	LOS C	15.1	110.0	0.69	0.69	33.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1.0 %
Number of Iterations: 6 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1S	South Slip/Bypass Lane Crossing	53	8.5	LOS A	0.1	0.1	0.43	0.43
P4	West Full Crossing	53	27.3	LOS C	0.1	0.1	0.78	0.78
All Pedestrians		105	17.9	LOS B			0.61	0.61

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

MOVEMENT SUMMARY

Site: 1 [Prospect Highway / Ponds Road - Sat (noon) - upgrade - 1.2]

Network: N101 [Sat Network 2028 + Dev Upgrade 1.2]

Giveway / Yield (Two-Way)

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Prospect Highway													
2	T1	1445	4.5	1445	4.5	0.381	0.0	LOS A	0.0	0.0	0.00	0.00	59.9
Approach		1445	4.5	1445	4.5	0.381	0.0	NA	0.0	0.0	0.00	0.00	59.9
East: Ponds Road													
4	L2	227	3.7	227	3.7	0.216	13.3	LOS A	0.8	6.0	0.58	0.82	58.7
Approach		227	3.7	227	3.7	0.216	13.3	LOS A	0.8	6.0	0.58	0.82	58.7
North: Prospect Highway													
7	L2	99	3.2	99	3.2	0.053	5.6	LOS A	0.0	0.0	0.00	0.53	54.8
8	T1	1211	4.2	1211	4.2	0.229	0.0	LOS A	0.0	0.0	0.00	0.00	59.9
Approach		1309	4.1	1309	4.1	0.229	0.5	NA	0.0	0.0	0.00	0.04	59.2
All Vehicles		2982	4.3	2982	4.3	0.381	1.2	NA	0.8	6.0	0.04	0.08	59.5

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.
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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1.0 %
Number of Iterations: 6 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 4 [Great Western Highway / Tarlington Place - Sat (noon)]

Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Great Western Highway											
4a	L1	18	0.0	0.235	6.1	LOS A	0.1	0.8	0.00	0.02	70.0
5	T1	1337	2.2	0.235	0.0	LOS A	0.1	0.8	0.00	0.01	79.8
Approach		1355	2.2	0.235	0.1	NA	0.1	0.8	0.00	0.01	79.7
West: Great Western Highway											
11	T1	1056	2.1	0.137	0.0	LOS A	0.0	0.0	0.00	0.00	80.0
12b	R3	8	0.0	0.019	12.5	LOS A	0.1	0.4	0.65	0.84	51.5
12u	U	1	0.0	0.019	19.6	LOS B	0.1	0.4	0.65	0.84	53.2
Approach		1065	2.1	0.137	0.1	NA	0.1	0.4	0.01	0.01	79.7
SouthWest: Tarlington Place											
30b	L3	17	0.0	0.019	8.4	LOS A	0.1	0.5	0.43	0.64	55.0
32a	R1	8	0.0	0.008	6.0	LOS A	0.0	0.1	0.46	0.62	57.9
Approach		25	0.0	0.019	7.6	LOS A	0.1	0.5	0.44	0.63	55.9
All Vehicles		2445	2.1	0.235	0.2	NA	0.1	0.8	0.01	0.01	79.4

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

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