Planning Proposal for a
Proposed Mixed Use Development

2 Farrow Road, Campbelltown

TRAFFIC AND PARKING ASSESSMENT REPORT

9 April 2020

Ref 20067

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants

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TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

1. INTRODUCTION

This report has been prepared to accompany a planning proposal for a mixed-use development to be located at 2 Farrow Road, Campbelltown (Figures 1 and 2).

The planning proposal seeks approval to increase the permissible building height and Floor Space Ratio (FSR) of the site to facilitate a mixed-use development comprising high-density residential apartment buildings with commercial, retail and community components.

Off-street parking will be provided in basement car parking areas beneath each building, which will ultimately be designed to comply with the planning controls as well as the relevant Australian Standards.

Vehicular access to the site is envisaged to be provided via a new internal road network that will link with adjacent developments and provide connection to Farrow Road and Badgally Road.

Accordingly, this planning proposal has been prepared in accordance with the *Environmental Planning and Assessment Act 1979 (EP&A Act)* and the Department of Planning and Environment's – *A Guide to Preparing Planning Proposals' (August 2016)* to assess the traffic and parking implications of the planning proposal, and to that end this report:

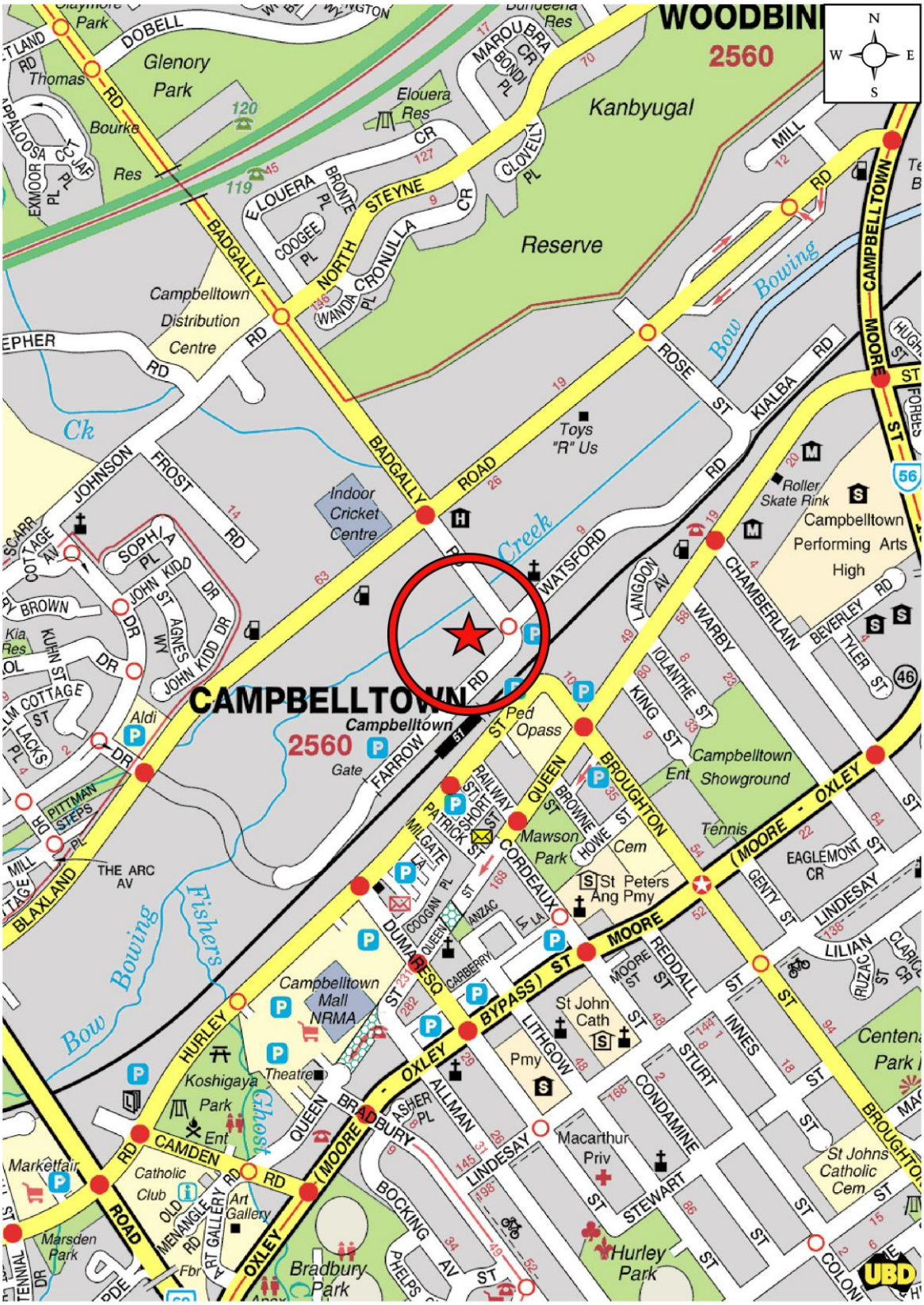
- describes the site and provides details of the planning proposal

- reviews the road network in the vicinity of the site, and the traffic conditions on that road network

- estimates the traffic generation potential of the planning proposal, and assigns that traffic generation to the road network serving the site

- assesses the traffic implications of the planning proposal in terms of road network capacity

- reviews the off-street parking requirements of the planning proposal under statutory planning controls.



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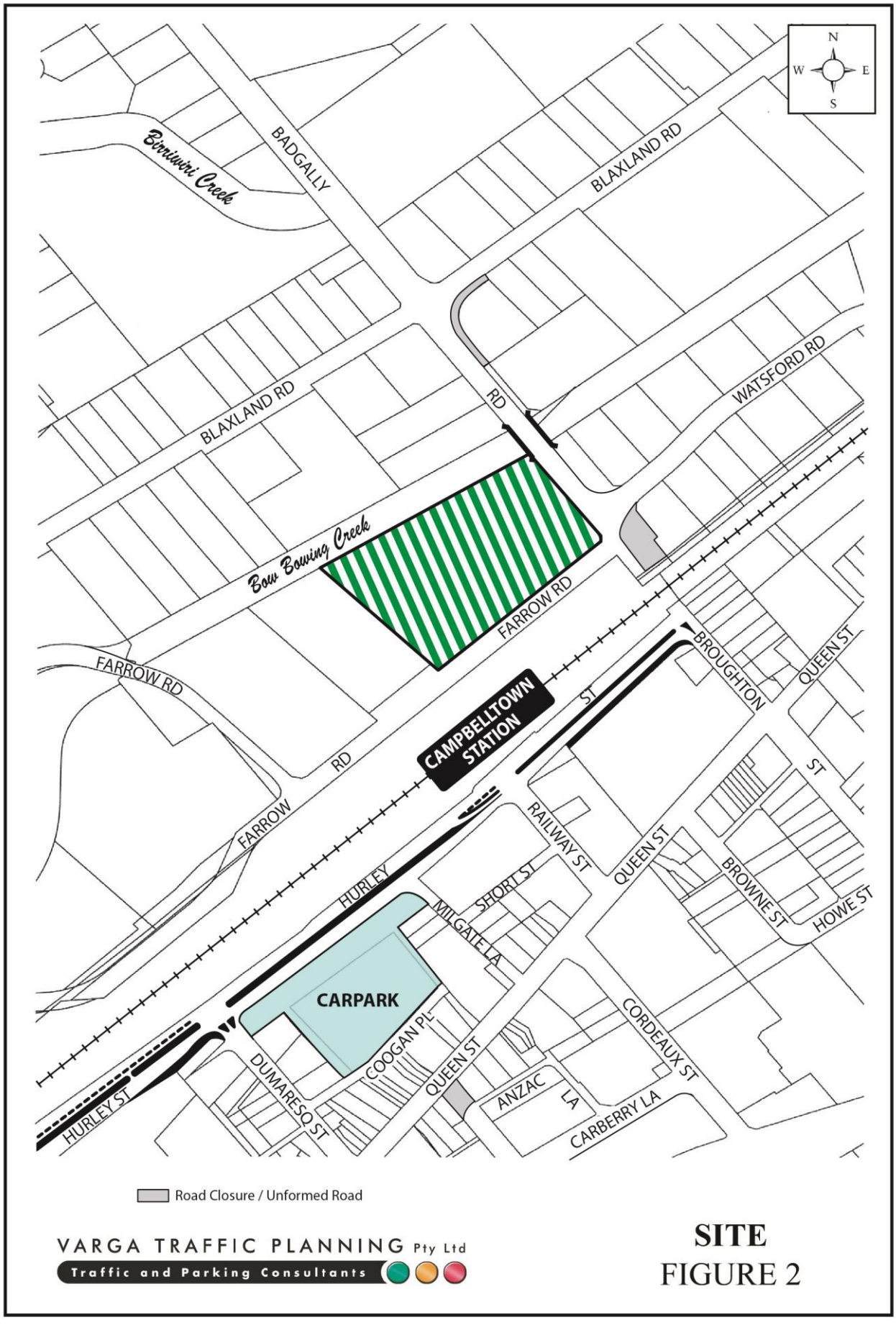
LOCATION
FIGURE 1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ANZAC
LA
CARBERRY LA
HURLEY ST
Road Closure / Unformed Road
VARGA TRAFFIC PLANNING Pty Ltd
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SITE
FIGURE 2

2. PLANNING PROPOSAL

Site

The subject site is located immediately north of the Campbelltown Railway Station, situated at the north-western corner of Badgally Road / Farrow Road intersection. The site has street frontages approximately 113 metres in length to Badgally Road, approximately 201 metres in length to Farrow Road, and occupies an area of approximately 28,122m^2.

The site is currently zoned *DM – Deferred Matter* and does not have any applicable height or FSR controls.

The site is currently occupied by a single storey warehouse building with a cumulative floor area in the order of 10,543m^2 with the remainder of the site generally providing landscape, and informal surface parking and loading.

A recent aerial image of the site and its surroundings is reproduced below.

Courtesy of SIX Maps 2020

Planning Proposal

The planning proposal seeks to ascertain the permissible building height and FSR of the site to facilitate a mixed-use development comprising high-density residential apartment buildings with commercial, retail and community components.

A total of seven mixed-use residential apartment buildings are envisaged, with height varying from 20 to 36 storeys, and FSR ranging from 4:1 to 5:1. It is estimated that the envisaged development on the site will provide:

- 1,565 residential apartments
- 4,481m^2 of commercial floor space
- 1,684m^2 of retail floor space, and
- 5,192m^2 of community space for local residents.

Off-street parking is envisaged to be provided in basement car parking areas beneath each building, which will ultimately be designed to comply with statutory planning controls as well as the relevant Australian Standards.

Vehicular access to the site is envisaged to be provided via a new internal road network that will link with adjacent developments and provide connection to Farrow Road and Badgally Road.

3. TRAFFIC ASSESSMENT

Road Hierarchy

The road hierarchy allocated to the road network in the vicinity of the site by the Roads and Maritime Services is illustrated on Figure 3.

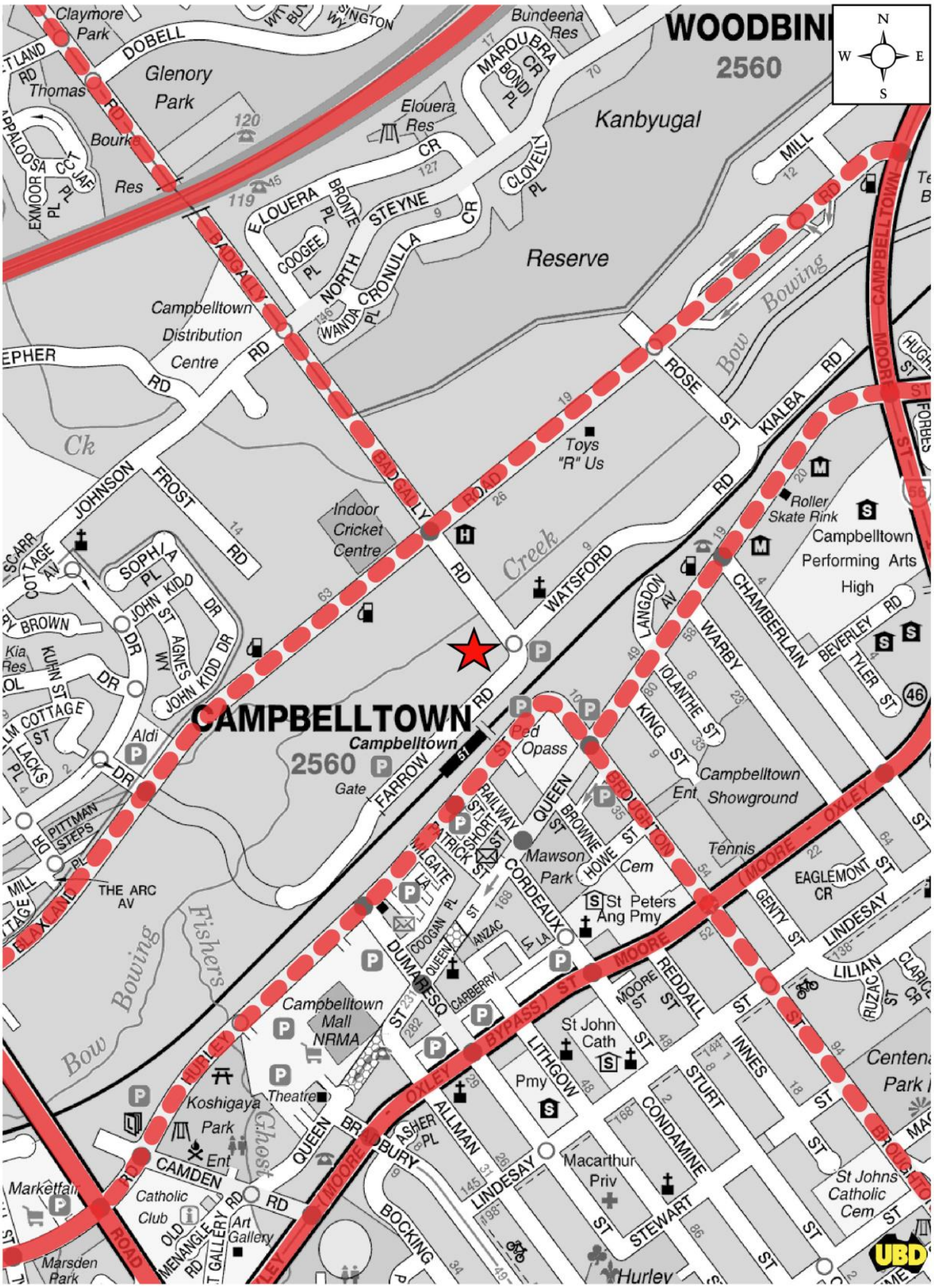
Oxley Street / Moore Street are classified by the RMS as a *State Road* which provides the key north-south road link through the Campbelltown area. It typically carries three traffic lanes in each direction in the vicinity of the site, with opposing traffic flows separated by a central median island.

Badgally Road (north of Blaxland Road) is classified by the RMS as a *Regional Road* and provides another north-south road link in the area, linking Blaxland Road and Camden Valley Way via Gregory Hills Drive. It carries multiple traffic lanes between Johnson Road and Blaxland Road, and generally one traffic lane in each direction elsewhere.

Blaxland Road is also classified by the RMS as a *Regional Road* and provides the key east-west road link in the area, linking Narellan Road and Campbelltown Road. It typically carries two traffic lanes in each direction in the vicinity of the site.

Badgally Road (along the site frontage) and Farrow Road are local, unclassified roads that are used to provide vehicular and pedestrian access to frontage properties. Kerbside parking is generally permitted in both of these roads.

It is understood that Campbelltown Council is currently investigating the provision of a bridge connecting Broughton Street and Badgally Road over the rail line, which is currently under internal review by the Government. It is noted however that the approach ramps required in Badgally Road for a bridge over the railway would extend past the site, such that the traffic generated by the site would not have any access to the bridge. As such, the proposed bridge, if it proceeds, would have minimal effect on the traffic flows entering and exiting the site.



Key:

State Road

Regional Road

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ROAD HIERARCHY
FIGURE 3

Existing Traffic Controls

The existing traffic controls which apply to the road network in the vicinity of the site are illustrated on Figure 4. Key features of those traffic controls are:

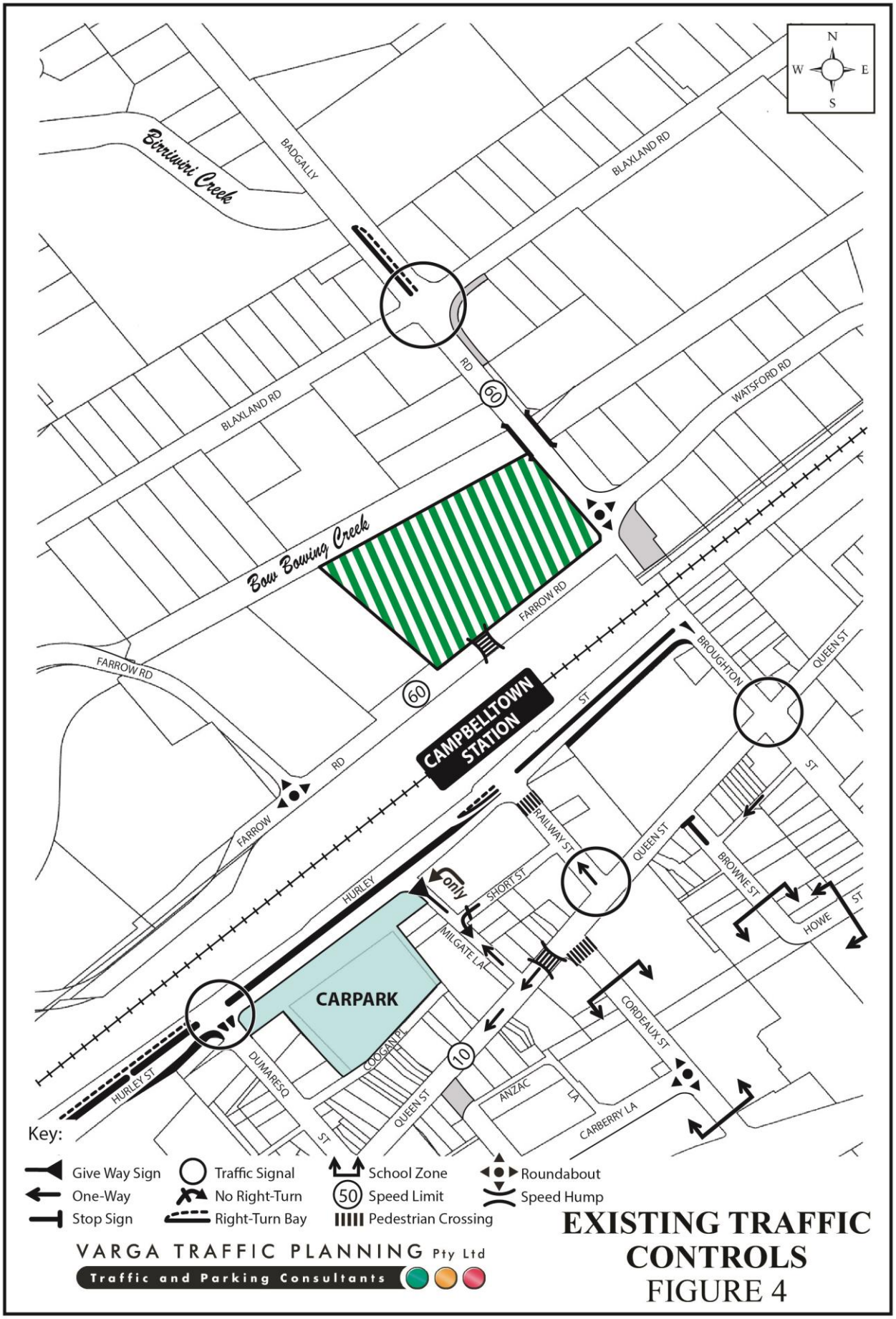
- a 60 km/h SPEED LIMIT which applies to Farrow Road and Badgally Road
- ROUNDABOUTS in Farrow Road where it intersects with Badgally Road / Watsford Road and where the road splits near the commuter car park
- TRAFFIC SIGNALS in Badgally Road where it intersects with Blaxland Road
- a NO RIGHT-TURN restriction in Badgally Road onto Blaxland Road
- a NO RIGHT-TURN restriction in Blaxland Road onto Badgally Road
- a RAISED PEDESTRIAN CROSSING towards the western end of the Farrow Road site frontage connecting to the Campbelltown Station.

Existing Public Transport Services

The existing public transport services available to the site are illustrated on Figure 5A and 5B.

The subject site is conveniently located immediately across the road from Campbelltown Railway Station, which services both the T8 Airport & South Line and also the intra-urban Southern Highlands Line (SHL).

The T8 Airport & South Line operates between Macarthur, Campbelltown, Turrella, Wolli Creek, International / Domestic Airports and the Sydney CBD, passing by major rail network interchanges at Glenfield and Sydenham. These services typically operate every 5-10 minutes during commuter peak periods and every 15 minutes at other times.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CORDEAUX ST
COOGAN PL
DUMARESQ
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HURLEY ST
QUEEN ST
ANZAC
LA
CARBERRY LA
ST
Key:
Give Way Sign
One-Way
Stop Sign
Traffic Signal
No Right-Turn
Right-Turn Bay
School Zone
50 Speed Limit
Pedestrian Crossing
Roundabout
Speed Hump
VARGA TRAFFIC PLANNING Pty Ltd
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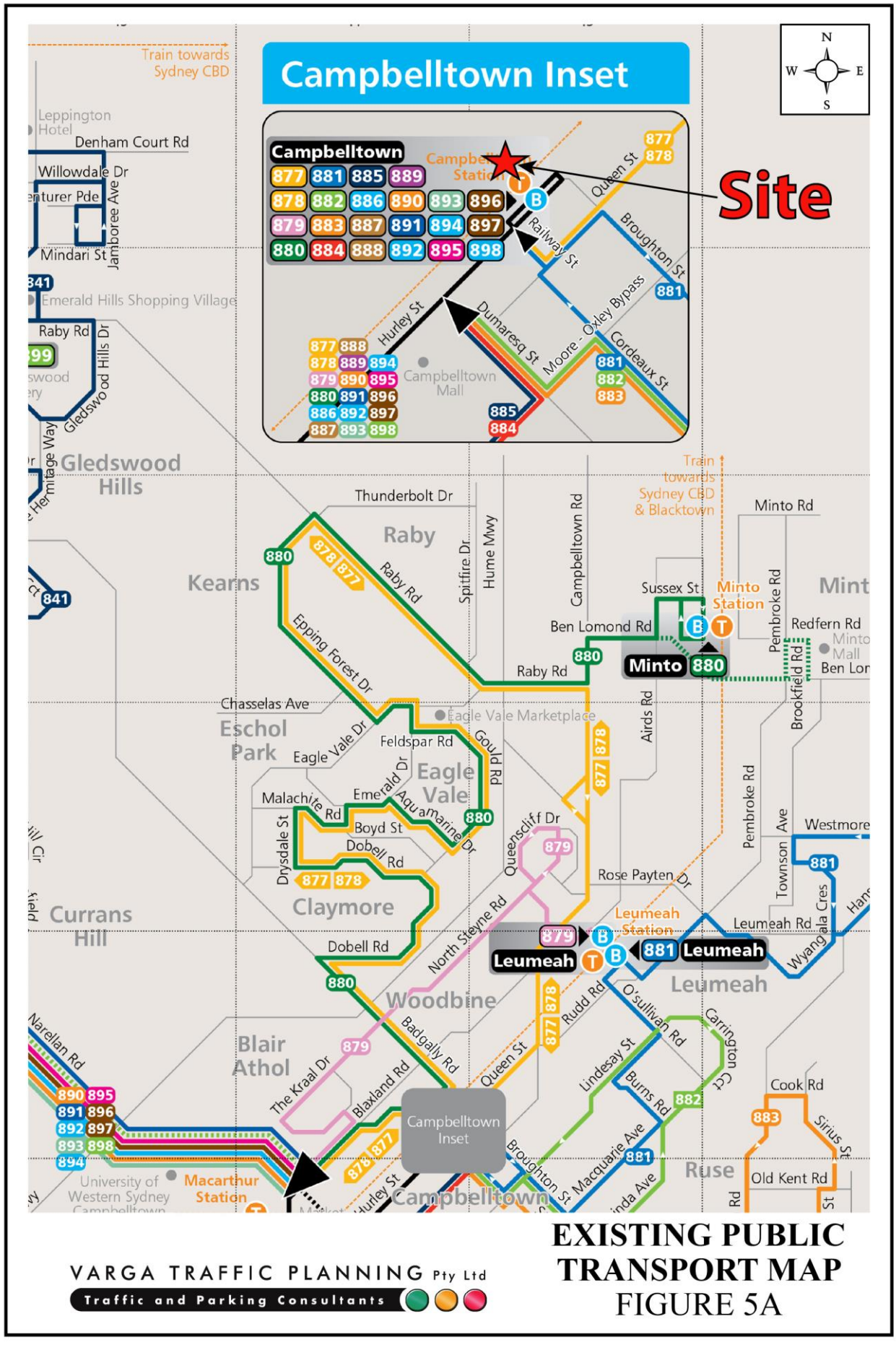
EXISTING TRAFFIC CONTROLS
FIGURE 4



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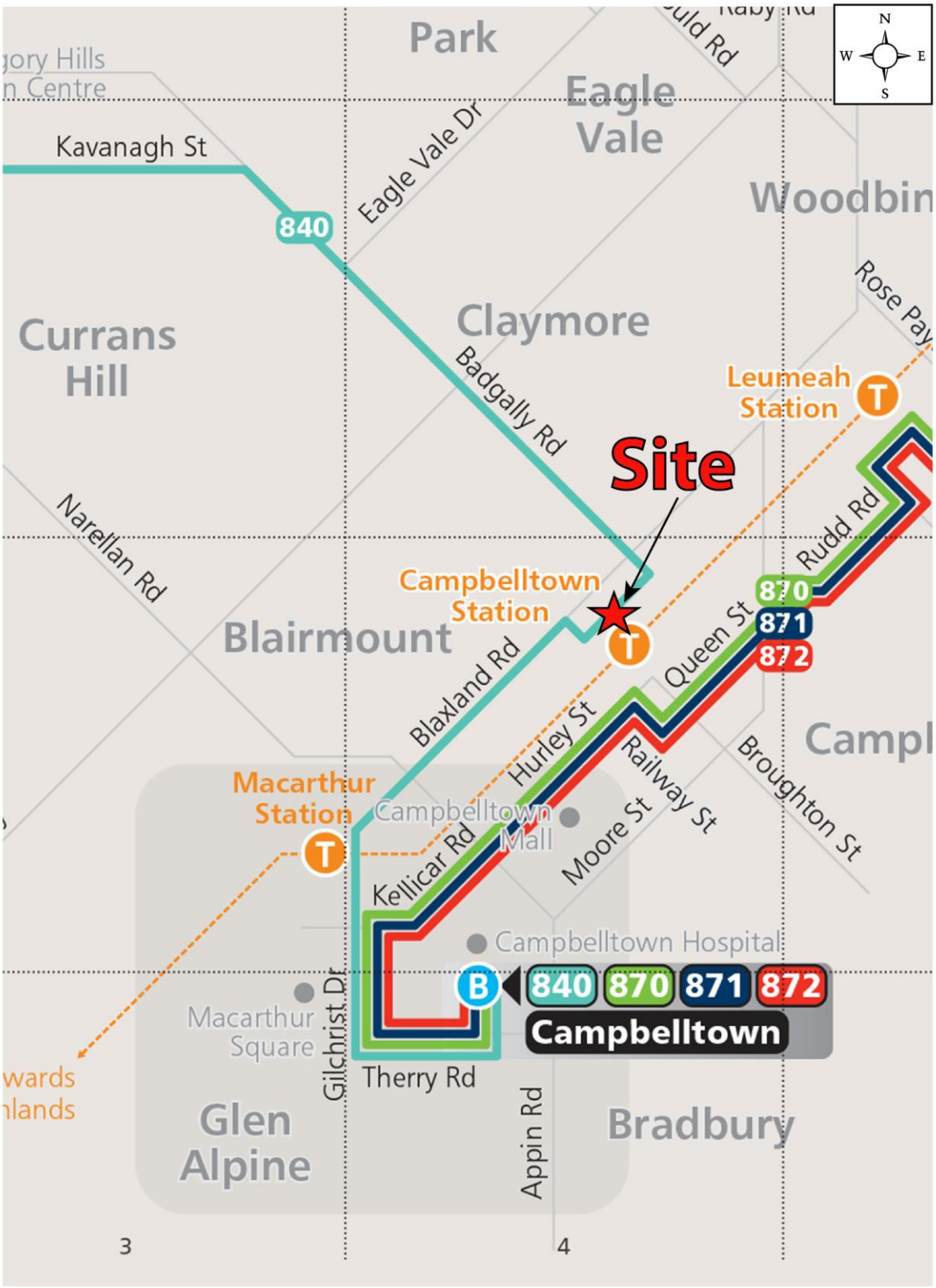
EXISTING PUBLIC TRANSPORT MAP
FIGURE 5A



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EXISTING PUBLIC TRANSPORT MAP
FIGURE 5B

In addition to the train services, there are a significant number of bus routes currently operate in Farrow Road and the Campbelltown Railway Station bus terminal, services include:

- route 840 (Oran Park to Campbelltown)
- route 890 (Campbelltown to Harrington Park via Narellan Vale & Narellan)
- route 890C (Camden to Campbelltown via Narellan)
- route 891 (Mount Annan to Campbelltown via Currans Hill)
- route 892 (Campbelltown to Mount Annan via Narellan Vale)
- route 893 (Narellan to Campbelltown via Elderslie & Spring Farm)
- route 894 (Bridgewater Estate to Campbelltown via Camden & Narellan)
- route 894X (Bridgewater Estate to Campbelltown via Camden bypass)
- route 895 (Campbelltown to Camden South via Camden)
- route 896 (Campbelltown to Oran Park via Gregory Hills)
- route 897 (Smeaton Grange to Campbelltown)
- route 877 (Campbelltown to Kearns via Eagle Vale & Eschol Park)
- route 878 (Kearns to Campbelltown via Eschol Park)
- route 879 (Leumeah to Campbelltown via Blair Athol)
- route 880 (Minto to Campbelltown via Kearns & Eagle Vale)
- route 882 (Campbelltown to Leumeah South)
- route 883 (Campbelltown to Ruse)
- route 883K (Kentlyn to Campbelltown via Ruse)
- route 884 (Campbelltown to Airds)
- route 884W (Wedderburn to Campbelltown via Airds)
- route 885 (Campbelltown to Bradbury St & Helens Park North)
- route 885A (Campbelltown to Bradbury via Airds)
- route 886 (Campbelltown to Glen Alpine)
- route 887 (Wollongong to Campbelltown via Appin)
- route 888 (Campbelltown to St Helens Park via Ambarvale & Rosemeadow)
- route 889 (Menangle to Campbelltown via Menangle Park)
- route 900 (Picton to Campbelltown via Narellan).

Accordingly, it is clear that the site is readily accessible by public transport services, and is therefore ideally located to reduce reliance on private car usage and to facilitate sustainable transport habits.

Existing Traffic Conditions

An indication of the existing traffic conditions on the road network in the vicinity of the site is provided by peak period traffic surveys undertaken as part of this traffic study on Tuesday 25th February 2020 between 6:30am-9:30am and 3:30pm-6:0pm.

The traffic surveys were undertaken at Badgally Road / Farrow Road intersection, Badgally Road / Blaxland Road intersection, Blaxland Road / Farrow Road / Watsford Road intersection and the roundabout in Farrow Road near the commuter car park.

The results of the traffic surveys are reproduced in full in Appendix A and reveal that:

- two-way traffic flows in Blaxland Road are typically in the order of 2,000 to 3,000 vehicle trips per hour (vph) during commuter peak hours

- two-way traffic flows in Badgally Road are typically in the order of 1,100 to 1,400 vph during commuter peak hours north of Blaxland Road, and typically in the order of 300 vph south of Blaxland Road passing the site frontage

- two-way traffic flows in The Kraal Drive are typically in the order of 1,000 vph during commuter peak hours

- two-way traffic flows in Farrow Road are typically in the order of 250 to 550 vph during commuter peak hours

- two-way traffic flows in Watsford Road are typically in the order of 150 vph during commuter peak hours.

Projected Traffic Generation

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

The *TDT 2013/04a* document specifies that it replaces those sections of the RMS *Guidelines* indicated, and that it must be followed when RMS is undertaken trip generation and/or parking demand assessments.

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

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

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

The RMS *Guidelines* do not nominate a traffic generation rate for small, local shops, referring only to major regional shopping centres incorporating supermarkets and department stores. For the purpose of this assessment therefore, the aforementioned traffic generation rates for *commercial premises* has been adopted in respect of the retail component of the development proposal.

Furthermore, the community component of the planning proposal is envisaged to provide leisure and recreational space for local residents living in the Campbelltown Centre that are within a walkable distance, and therefore could not be expected to attract or generate any appreciable amount of vehicular traffic.

Application of the above traffic generation rates and assumptions to the various components of the planning proposal yields a traffic generation potential of approximately 396 vph during the AM peak hour and approximately 309 vph during the PM peak hour as set out below:

Projected Total Future Traffic Generation Potential
of the Site as a Consequence of the Planning Proposal on the Subject Site

	AM	**PM**
Residential (1,565 apartments):	297.4 vph	234.8 vph
Commercial (4,481m^2):	71.7 vph	53.8 vph
Retail (1,684m^2):	26.9 vph	20.2 vph
TOTAL TRAFFIC GENERATION POTENTIAL:	**396.0 vph**	**308.8 vph**

That projected future level of traffic generation potential should however, be offset or *discounted* by the volume of traffic which could reasonably be expected to be generated by the existing development on the site, in order to determine the *nett increase* in traffic generation potential of the planning proposal.

Reference to the RMS *Guidelines* indicates that the existing 10,543m^2 warehouse has a traffic generation potential of approximately 105 vph during both the AM and PM peak hours.

Thus, the planning proposal could result in a *nett increase* in the traffic generation potential of the site of 291 vph in the AM peak hour, and 203 vph in the PM peak hour, as set out below:

Projected Nett Increase in Peak Hour Traffic Generation Potential as a Consequence of the Planning Proposal

	AM	**PM**
Projected Future Traffic Generation Potential:	396.0 vph	308.8 vph
Less Currently Approved Traffic Generation Potential:	-105.4 vph	-105.4 vph
NETT INCREASE IN TRAFFIC GENERATION POTENTIAL:	**290.6 vph**	**203.4 vph**

However, for the purposes a robust traffic assessment, it has been assumed that *all* of the projected future traffic flows of 396 vph in the AM peak hour and 309 vph in PM peak hour generated by both sites, will be *new* or *additional* to the existing traffic flows currently using the adjacent road network.

Traffic Implications - Road Network Capacity

The traffic implications of development proposals primarily concern the effects that any *additional* traffic flows may have on the operational performance of the nearby road network. Those effects can be assessed using the SIDRA program which is widely used by the RMS and many LGA's for this purpose. Criteria for evaluating the results of SIDRA analysis are reproduced in the following pages.

The results of the SIDRA capacity analysis of the key intersections are summarised below:

Badgally Road / The Kraal Drive / Farrow Road Intersection

- the intersection currently operates at *Level of Service "C"* and *"D"* under the existing traffic conditions with total average vehicle delays in the order of 36.2 to 47.1 seconds/vehicle

- under the projected future traffic demands expected to be generated by the planning proposal, the intersection will continue to operate satisfactorily at *existing Level of Service* with total average vehicle delays in the order of 37.9 to 48.9 seconds/vehicle

Badgally Road / Blaxland Road Intersection

- the intersection currently operates at *Level of Service "C"* under the existing traffic conditions with total average vehicle delays in the order of 34.8 to 39.3 seconds/vehicle

- under the projected future traffic demands expected to be generated by the planning proposal, the intersection will continue to operate satisfactorily at *existing Level of Service,* with total average vehicle delays in the order of 34.9 to 39.4 seconds/vehicle

Badgally Road / Farrow Road / Watsford Road Intersection

- the intersection currently operates at *Level of Service "A"* under the existing traffic conditions with total average vehicle delays in the order of 5.3 to 5.4 seconds/vehicle

- under the projected future traffic demands expected to be generated by the planning proposal, the intersection will continue to operate satisfactorily at *existing Level of Service,* with total average vehicle delays in the order of 6.3 to 7.0 seconds/vehicle

Farrow Road Roundabout (next to commuter car park)

- the intersection currently operates at *Level of Service "A"* under the existing traffic conditions with total average vehicle delays in the order of 6.5 to 7.3 seconds/vehicle

- under the projected future traffic demands expected to be generated by the planning proposal, the intersection will continue to operate satisfactorily at *existing Level of Service*, with total average vehicle delays in the order of 6.6 to 7.1 seconds/vehicle

SIDRA Modelling Results

Intersection	Key Indicators	Existing		Projected	
		AM	PM	AM	PM
Blaxland Rd, The Kraal Dr & Farrow Rd	LoS	C	D	C	D
	DoS	0.843	0.914	0.859	0.917
	Avg. Delay	36.2	47.1	37.9	48.9
Blaxland Rd & Badgally Rd	LoS	C	C	C	C
	DoS	0.936	0.896	0.936	0.896
	Avg. Delay	34.8	39.3	34.9	39.4
Badgally Rd, Farrow Rd & Watsford Rd	LoS	A	A	A	A
	DoS	0.277	0.126	0.396	0.172
	Avg. Delay	5.7	5.9	5.4	5.3
Farrow Rd Roundabout	LoS	A	A	A	A
	DoS	0.433	0.248	0.454	0.256
	Avg. Delay	6.5	7.3	6.6	7.1

LoS = Levels of Service
DoS = Degree of Saturation
Delay = Total average vehicle delay (seconds per vehicle)

The detailed SIDRA *movements summaries* are reproduced in full in Appendix B.

In summary, the SIDRA capacity analysis demonstrates that the planning proposal will not have any unacceptable traffic implications whereby the surrounding intersections are expected to continue to operate satisfactorily at existing levels of service, and as such, there are no road improvements or intersection upgrades required as a consequence of the planning proposal.

Criteria for Interpreting Results of Sidra Analysis

1. Level of Service (LOS)

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

2. Average Vehicle Delay (AVD)

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

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

3. Degree of Saturation (DS)

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

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

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

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

4. PARKING ASSESSMENT

Existing Kerbside Parking Restrictions

The existing kerbside parking restrictions which apply to the road network in the vicinity of the site are illustrated on Figure 6 and comprise:

- ¼ HOUR / 3 HOUR / ACESSIBLE PARKING restrictions in Farrow Road
- BUS ZONES at regular intervals in Farrow Road and Badgally Road
- 2 HOUR / UNRESTRICTED PARKING restrictions in Badgally Road.

Off-Street Parking Provisions

The off-street parking requirements applicable to the planning proposal are specified in *Campbelltown (Sustainable City) Development Control Plan 2015 – Volume 3 Deferred Areas DCP* document in the following terms:

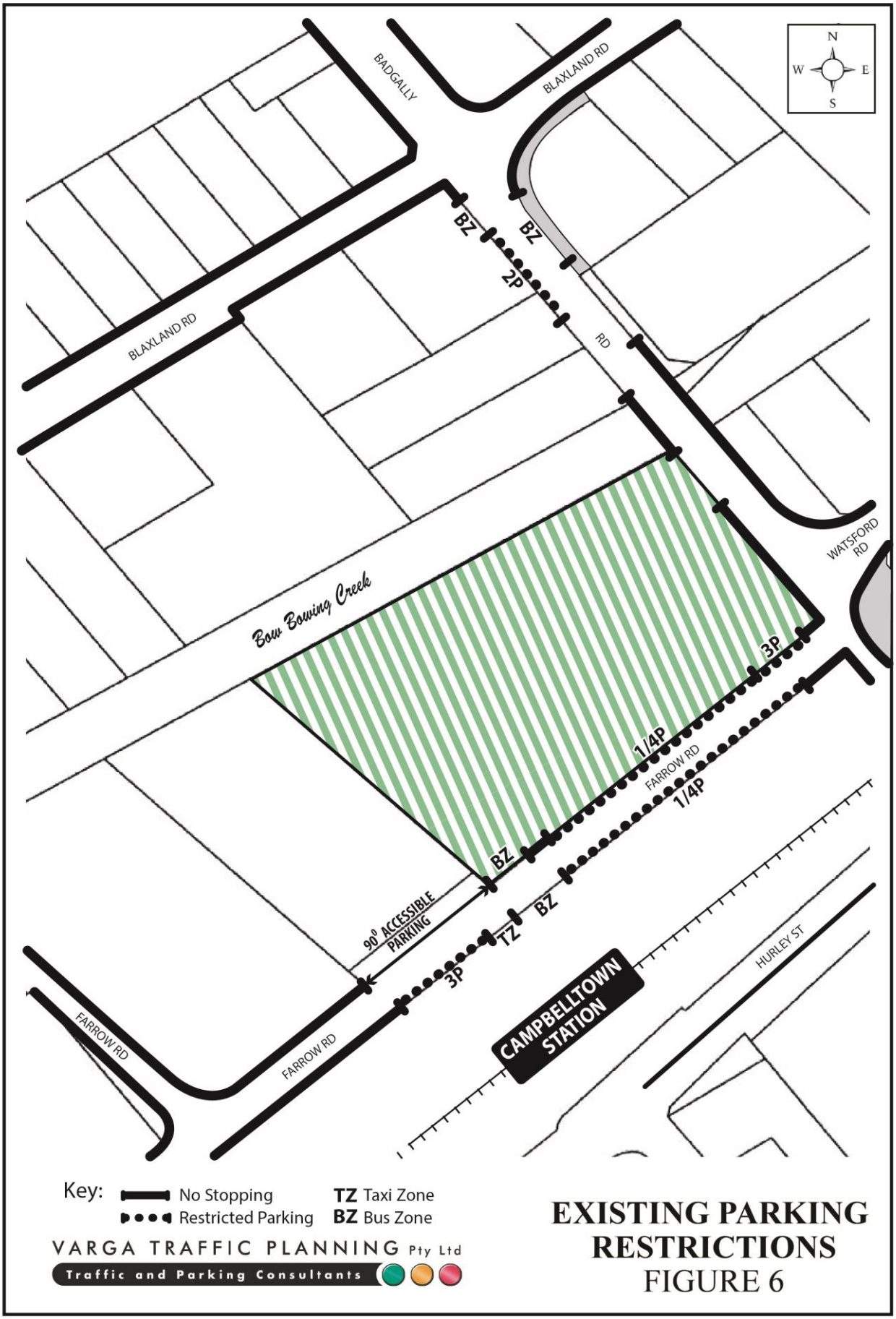
Clause 4.3 Residential Apartments

- Each dwelling shall be provided with a minimum of one car parking space, and
- An additional car parking space for every 4 dwellings (or part thereof), and
- An additional visitor car parking space for every 10 dwellings
- No required car parking space shall be in a stacked configuration
- Each development shall make provision for bicycle storage at a rate of 1 space per 5 dwellings within common property

Clause 4.4 Mixed Use Development

- In addition to residential car parking rates, the development shall provide one (1) car parking space per 25sqm of leasable floor space at ground level and one (1) car parking space per 35sqm of floor space at upper levels for all commercial / retail parts of the building

However, the subject site is located "within 800 metres" of a railway station in the Sydney metropolitan area (i.e. directly across from Campbelltown Railway Station), and therefore the residential component of the development is also subject to the parking requirements specified in the *State Environmental Planning Policy No 65 – Design Quality of Residential Flat Development (Amendment No 3), 2015* in the following terms: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FARROW RD
1/4P
BZ
90° ACCESSIBLE PARKING
3P
TZ
BZ
HURLEY ST
CAMPBELLTOWN STATION
FARROW RD
FARROW RD
Key:
No Stopping
Restricted Parking
TZ Taxi Zone
BZ Bus Zone
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EXISTING PARKING RESTRICTIONS
FIGURE 6

30 Standards that cannot be used to refuse development consent or modification of development consent

(1) If an application for the modification of a development consent or a development application for the carrying out of development to which this Policy applies satisfies the following design criteria, the consent authority must not refuse the application because of those matters:

a) if the car parking for the building will be equal to, or greater than, the recommended minimum amount of car parking specified in Part 3J of the Apartment Design Guide.

Reference is therefore made to the *Apartment Design Guide 2015, Section 3J – Bicycle and Car Parking* document which nominates the following car parking requirements:

Objective 3J-1
Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas

For development in the following locations:

- on sites that are within 800 metres of a railway station or light rail stop in the Sydney Metropolitan Area; or

- on land zoned, and sites within 400 metres of land zoned, B3 Commercial Core, B4 Mixed Use or equivalent in a nominated regional centre

the minimum car parking requirements for residents and visitors is set out in the Guide to Traffic Generating Developments, or the car parking requirement prescribed by the relevant council, whichever is less.

The car parking needs for a development must be provided off street.

Comparison therefore needs to be drawn between the off-street car parking requirements for residential flat buildings outlined in the Council's *DCP 2015* and also the RMS *Guidelines* to determine the *lesser* requirement. The relevant car parking rates outlined in the RMS *Guidelines* are reproduced below:

RMS Guidelines – High Density Residential Flat Buildings

0.4 spaces per 1 bedroom unit

0.7 spaces per 2 bedroom unit

1.2 spaces per 3 bedroom unit

1 space per 7 units for visitor parking

Whilst the cumulative number of parking spaces to be provided as part of the planning proposal is not yet known, it is clear that the above parking requirements can be satisfied with the provision of a number of basement parking levels, based on the concept architectural plans which have been prepared for the purposes of the Planning Proposal.

The geometric design layout of the future car parking facilities will ultimately be designed to comply with the relevant requirements specified in the Standards Australia publication *Parking Facilities Part 1 - Off-Street Car Parking AS2890.1:2004* and *Parking Facilities Part 6 - Off-Street Parking for People with Disabilities AS2890.6*.

Loading / Servicing Provisions

The proposed new development is expected to be serviced by a variety of light commercial vehicles and single rigid trucks.

The off-street loading / servicing facilities will ultimately be designed in accordance with Council requirements, and will be accommodate the swept turning path requirements of the largest vehicle to access the site, ensuring that they arrive and depart the site whilst travelling in forward gear at all times.

5. CONCLUSION

Based on the analysis and discussions presented within this report, the following conclusions are made:

- the planning proposal ascertain the permissible building height and Floor Space Ratio (FSR) of the site to facilitate a mixed-use development comprising seven (7) mixed-use residential apartment buildings, with height varying from 20 to 36 storeys, and FSR ranging from 4:1 to 5:1. It is estimated that the envisaged development on the site will provide:

  - 1,565 residential apartments

  - 4,481m^2 of commercial floor space

  - 1,684m^2 of retail floor space, and

  - 5,192m^2 of community space for local residents.

- the SIDRA capacity analysis of the four (4) nearby key intersections located in the vicinity of the site indicate that:

  - the projected additional traffic flows as a consequence of the planning proposal will not have any adverse effects on the operational performance of the intersection, and

  - no road improvements or intersection upgrades would be required as a consequence of the planning proposal

- the future car parking, motorcycle, bicycle and loading facilities are capable of being provided in accordance with Council, *SEPP 65* and the relevant Australian Standards requirements, with detailed design and assessment to be completed at DA stage

- the future vehicular access arrangements will be designed in accordance with Council and RMS requirements.

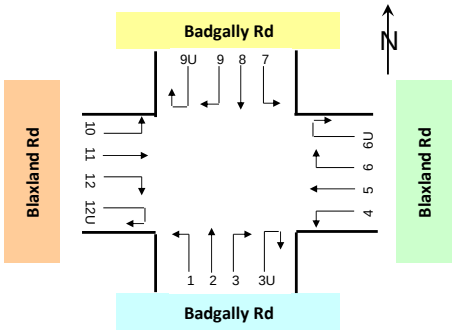
It is therefore reasonable to conclude that the planning proposal will not have any unacceptable implications in terms of road network capacity or off-street parking/loading requirements.

APPENDIX A

TRAFFIC SURVEY DATA

Job No.	: N5649
Client	: Varga Traffic Planning
Suburb	: Campbelltown
Location	: 1. Badgally Rd / Blaxland Rd
Day/Date	: Tue, 25th February 2020
Weather	: Fine
Description	: Classified Intersection Count
	: 15 mins Data

Classifications	**Class 1**	**Class 2**
	Lights	Heavies



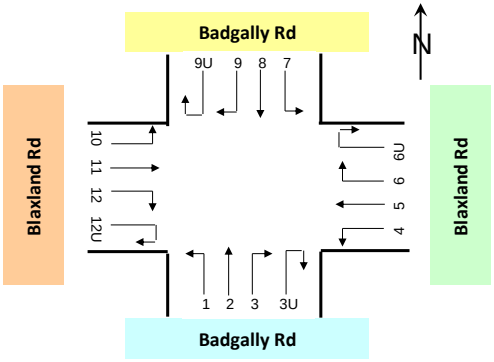
MATRIX Traffic and Transport Data

Approach	**Badgally Rd**												**Blaxland Rd**											
Direction	**Direction 1 (Left Turn)**			**Direction 2 (Through)**			**Direction 3 (Right Turn)**			**Direction 3U (U Turn)**			**Direction 4 (Left Turn)**			**Direction 5 (Through)**			**Direction 6 (Right Turn)**			**Direction 6U (U Turn)**		
Time Period	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**
6:30 to 6:45	10	0	**10**	12	1	**13**	1	2	**3**	0	0	**0**	5	0	**5**	38	10	**48**	16	6	**22**	0	0	**0**
6:45 to 7:00	14	0	**14**	11	1	**12**	4	0	**4**	0	0	**0**	1	0	**1**	45	9	**54**	27	3	**30**	0	0	**0**
7:00 to 7:15	17	0	**17**	13	1	**14**	10	1	**11**	0	0	**0**	3	1	**4**	50	8	**58**	20	5	**25**	0	0	**0**
7:15 to 7:30	28	1	**29**	20	2	**22**	8	0	**8**	0	0	**0**	5	0	**5**	63	7	**70**	30	6	**36**	0	0	**0**
7:30 to 7:45	16	0	**16**	12	0	**12**	8	1	**9**	0	0	**0**	11	0	**11**	60	11	**71**	26	2	**28**	0	0	**0**
7:45 to 8:00	16	1	**17**	19	5	**24**	15	0	**15**	0	0	**0**	5	0	**5**	94	8	**102**	41	8	**49**	0	0	**0**
8:00 to 8:15	15	0	**15**	11	2	**13**	6	0	**6**	0	0	**0**	8	0	**8**	100	11	**111**	27	3	**30**	0	0	**0**
8:15 to 8:30	6	1	**7**	18	3	**21**	9	0	**9**	0	0	**0**	9	0	**9**	76	6	**82**	55	4	**59**	0	0	**0**
8:30 to 8:45	10	0	**10**	6	1	**7**	5	0	**5**	0	0	**0**	10	0	**10**	115	8	**123**	46	3	**49**	0	0	**0**
8:45 to 9:00	6	0	**6**	17	2	**19**	5	0	**5**	0	0	**0**	4	0	**4**	109	13	**122**	56	7	**63**	0	0	**0**
9:00 to 9:15	5	1	**6**	9	1	**10**	4	2	**6**	0	0	**0**	5	0	**5**	136	9	**145**	53	7	**60**	0	0	**0**
9:15 to 9:30	7	0	**7**	7	2	**9**	6	2	**8**	0	0	**0**	10	1	**11**	107	5	**112**	37	6	**43**	0	0	**0**
AM Totals	**150**	**4**	**154**	**155**	**21**	**176**	**81**	**8**	**89**	**0**	**0**	**0**	**76**	**2**	**78**	**993**	**105**	**1,098**	**434**	**60**	**494**	**0**	**0**	**0**
15:30 to 15:45	15	0	**15**	17	1	**18**	4	1	**5**	0	0	**0**	6	0	**6**	192	6	**198**	73	3	**76**	0	0	**0**
15:45 to 16:00	21	1	**22**	32	0	**32**	5	0	**5**	0	0	**0**	8	0	**8**	183	2	**185**	59	2	**61**	0	0	**0**
16:00 to 16:15	13	0	**13**	26	2	**28**	3	0	**3**	0	0	**0**	5	0	**5**	208	7	**215**	53	3	**56**	0	0	**0**
16:15 to 16:30	15	2	**17**	12	2	**14**	10	1	**11**	0	0	**0**	8	0	**8**	179	3	**182**	56	2	**58**	0	0	**0**
16:30 to 16:45	15	0	**15**	32	2	**34**	7	2	**9**	0	0	**0**	7	0	**7**	197	4	**201**	65	3	**68**	0	0	**0**
16:45 to 17:00	13	0	**13**	21	1	**22**	4	1	**5**	0	0	**0**	8	0	**8**	189	3	**192**	48	4	**52**	0	0	**0**
17:00 to 17:15	11	1	**12**	27	1	**28**	10	1	**11**	0	0	**0**	7	1	**8**	216	6	**222**	82	2	**84**	0	0	**0**
17:15 to 17:30	17	0	**17**	41	1	**42**	10	0	**10**	0	0	**0**	7	0	**7**	200	1	**201**	84	2	**86**	0	0	**0**
17:30 to 17:45	36	0	**36**	48	2	**50**	13	1	**14**	0	0	**0**	8	0	**8**	220	5	**225**	63	2	**65**	0	0	**0**
17:45 to 18:00	11	0	**11**	21	2	**23**	0	0	**0**	0	0	**0**	3	0	**3**	193	3	**196**	49	0	**49**	0	0	**0**
18:00 to 18:15	31	0	**31**	27	2	**29**	6	0	**6**	0	0	**0**	1	0	**1**	151	3	**154**	46	2	**48**	0	0	**0**
18:15 to 18:30	25	0	**25**	39	3	**42**	2	0	**2**	0	0	**0**	6	0	**6**	151	2	**153**	37	1	**38**	0	0	**0**
PM Totals	**223**	**4**	**227**	**343**	**19**	**362**	**74**	**7**	**81**	**0**	**0**	**0**	**74**	**1**	**75**	**2,279**	**45**	**2,324**	**715**	**26**	**741**	**0**	**0**	**0**

Approach	Badgally Rd												Blaxland Rd											
Direction	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
6:30 to 6:45	24	5	**29**	59	1	**60**	48	3	**51**	0	0	**0**	25	5	**30**	127	7	**134**	0	0	**0**	0	0	**0**
6:45 to 7:00	34	4	**38**	48	2	**50**	71	8	**79**	0	0	**0**	36	1	**37**	161	6	**167**	0	0	**0**	0	0	**0**
7:00 to 7:15	44	7	**51**	60	2	**62**	42	4	**46**	0	0	**0**	19	4	**23**	165	7	**172**	0	0	**0**	0	0	**0**
7:15 to 7:30	40	4	**44**	51	0	**51**	53	5	**58**	0	0	**0**	36	2	**38**	183	6	**189**	0	0	**0**	0	0	**0**
7:30 to 7:45	43	3	**46**	31	2	**33**	49	6	**55**	0	0	**0**	43	3	**46**	200	5	**205**	0	0	**0**	0	0	**0**
7:45 to 8:00	47	4	**51**	27	0	**27**	66	0	**66**	0	0	**0**	38	5	**43**	187	8	**195**	0	0	**0**	0	0	**0**
8:00 to 8:15	56	5	**61**	22	0	**22**	67	8	**75**	0	0	**0**	71	4	**75**	179	13	**192**	0	0	**0**	0	0	**0**
8:15 to 8:30	35	2	**37**	17	1	**18**	71	8	**79**	0	0	**0**	53	2	**55**	172	12	**184**	0	0	**0**	0	0	**0**
8:30 to 8:45	44	5	**49**	10	1	**11**	93	6	**99**	0	0	**0**	48	4	**52**	181	12	**193**	0	0	**0**	0	0	**0**
8:45 to 9:00	41	6	**47**	11	2	**13**	95	0	**95**	0	0	**0**	45	3	**48**	191	8	**199**	0	0	**0**	0	0	**0**
9:00 to 9:15	50	5	**55**	15	2	**17**	68	5	**73**	0	0	**0**	60	4	**64**	147	6	**153**	0	0	**0**	0	0	**0**
9:15 to 9:30	54	1	**55**	5	3	**8**	99	2	**101**	0	0	**0**	41	4	**45**	132	11	**143**	0	0	**0**	0	0	**0**
AM Totals	**512**	**51**	**563**	**356**	**16**	**372**	**822**	**55**	**877**	**0**	**0**	**0**	**515**	**41**	**556**	**2,025**	**101**	**2,126**	**0**	**0**	**0**	**0**	**0**	**0**
15:30 to 15:45	39	4	**43**	8	4	**12**	77	2	**79**	0	0	**0**	95	4	**99**	145	3	**148**	0	0	**0**	0	0	**0**
15:45 to 16:00	50	4	**54**	14	3	**17**	71	6	**77**	0	0	**0**	58	4	**62**	135	12	**147**	0	0	**0**	0	0	**0**
16:00 to 16:15	46	1	**47**	11	2	**13**	92	3	**95**	0	0	**0**	63	0	**63**	128	3	**131**	0	0	**0**	0	0	**0**
16:15 to 16:30	55	2	**57**	8	1	**9**	84	1	**85**	0	0	**0**	80	3	**83**	124	6	**130**	0	0	**0**	0	0	**0**
16:30 to 16:45	51	2	**53**	13	1	**14**	76	4	**80**	0	0	**0**	83	1	**84**	120	2	**122**	0	0	**0**	0	0	**0**
16:45 to 17:00	53	2	**55**	15	0	**15**	68	2	**70**	0	0	**0**	92	4	**96**	127	4	**131**	0	0	**0**	0	0	**0**
17:00 to 17:15	69	1	**70**	16	3	**19**	93	1	**94**	0	0	**0**	90	0	**90**	115	5	**120**	0	0	**0**	0	0	**0**
17:15 to 17:30	47	2	**49**	4	1	**5**	76	0	**76**	0	0	**0**	101	0	**101**	145	3	**148**	0	0	**0**	0	0	**0**
17:30 to 17:45	49	2	**51**	5	1	**6**	87	1	**88**	0	0	**0**	69	1	**70**	105	3	**108**	0	0	**0**	0	0	**0**
17:45 to 18:00	41	1	**42**	24	1	**25**	64	1	**65**	0	0	**0**	94	1	**95**	103	3	**106**	0	0	**0**	0	0	**0**
18:00 to 18:15	43	1	**44**	11	1	**12**	66	4	**70**	0	0	**0**	82	0	**82**	104	1	**105**	0	0	**0**	0	0	**0**
18:15 to 18:30	36	0	**36**	19	1	**20**	78	1	**79**	0	0	**0**	60	3	**63**	95	4	**99**	0	0	**0**	0	0	**0**
PM Totals	**579**	**22**	**601**	**148**	**19**	**167**	**932**	**26**	**958**	**0**	**0**	**0**	**967**	**21**	**988**	**1,446**	**49**	**1,495**	**0**	**0**	**0**	**0**	**0**	**0**

Job No. : N5649
Client : Varga Traffic Planning
Suburb : Campbelltown
Location : 1. Badgally Rd / Blaxland Rd

Day/Date : Tue, 25th February 2020
Weather : Fine
Description : Classified Intersection Count
: Hourly Summary



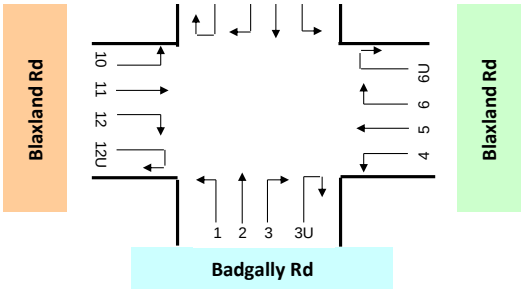
MATRIX Traffic and Transport Data

Approach	Badgally Rd												Blaxland Rd											
Direction	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
6:30 to 7:30	69	1	**70**	56	5	**61**	23	3	**26**	0	0	**0**	14	1	**15**	196	34	**230**	93	20	**113**	0	0	**0**
6:45 to 7:45	75	1	**76**	56	4	**60**	30	2	**32**	0	0	**0**	20	1	**21**	218	35	**253**	103	16	**119**	0	0	**0**
7:00 to 8:00	77	2	**79**	64	8	**72**	41	2	**43**	0	0	**0**	24	1	**25**	267	34	**301**	117	21	**138**	0	0	**0**
7:15 to 8:15	75	2	**77**	62	9	**71**	37	1	**38**	0	0	**0**	29	0	**29**	317	37	**354**	124	19	**143**	0	0	**0**
7:30 to 8:30	53	2	**55**	60	10	**70**	38	1	**39**	0	0	**0**	33	0	**33**	330	36	**366**	149	17	**166**	0	0	**0**
7:45 to 8:45	47	2	**49**	54	11	**65**	35	0	**35**	0	0	**0**	32	0	**32**	385	33	**418**	169	18	**187**	0	0	**0**
8:00 to 9:00	37	1	**38**	52	8	**60**	25	0	**25**	0	0	**0**	31	0	**31**	400	38	**438**	184	17	**201**	0	0	**0**
8:15 to 9:15	27	2	**29**	50	7	**57**	23	2	**25**	0	0	**0**	28	0	**28**	436	36	**472**	210	21	**231**	0	0	**0**
8:30 to 9:30	28	1	**29**	39	6	**45**	20	4	**24**	0	0	**0**	29	1	**30**	467	35	**502**	192	23	**215**	0	0	**0**
AM Totals	**150**	**4**	**154**	**155**	**21**	**176**	**81**	**8**	**89**	**0**	**0**	**0**	**76**	**2**	**78**	**993**	**105**	**1,098**	**434**	**60**	**494**	**0**	**0**	**0**
15:30 to 16:30	64	3	**67**	87	5	**92**	22	2	**24**	0	0	**0**	27	0	**27**	762	18	**780**	241	10	**251**	0	0	**0**
15:45 to 16:45	64	3	**67**	102	6	**108**	25	3	**28**	0	0	**0**	28	0	**28**	767	16	**783**	233	10	**243**	0	0	**0**
16:00 to 17:00	56	2	**58**	91	7	**98**	24	4	**28**	0	0	**0**	28	0	**28**	773	17	**790**	222	12	**234**	0	0	**0**
16:15 to 17:15	54	3	**57**	92	6	**98**	31	5	**36**	0	0	**0**	30	1	**31**	781	16	**797**	251	11	**262**	0	0	**0**
16:30 to 17:30	56	1	**57**	121	5	**126**	31	4	**35**	0	0	**0**	29	1	**30**	802	14	**816**	279	11	**290**	0	0	**0**
16:45 to 17:45	77	1	**78**	137	5	**142**	37	3	**40**	0	0	**0**	30	1	**31**	825	15	**840**	277	10	**287**	0	0	**0**
17:00 to 18:00	75	1	**76**	137	6	**143**	33	2	**35**	0	0	**0**	25	1	**26**	829	15	**844**	278	6	**284**	0	0	**0**
17:15 to 18:15	95	0	**95**	137	7	**144**	29	1	**30**	0	0	**0**	19	0	**19**	764	12	**776**	242	6	**248**	0	0	**0**
17:30 to 18:30	103	0	**103**	135	9	**144**	21	1	**22**	0	0	**0**	18	0	**18**	715	13	**728**	195	5	**200**	0	0	**0**
PM Totals	**223**	**4**	**227**	**343**	**19**	**362**	**74**	**7**	**81**	**0**	**0**	**0**	**74**	**1**	**75**	**2,279**	**45**	**2,324**	**715**	**26**	**741**	**0**	**0**	**0**

Approach	Badgally Rd												Blaxland Rd											
Direction	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
6:30 to 7:30	142	20	**162**	218	5	**223**	214	20	**234**	0	0	**0**	116	12	**128**	636	26	**662**	0	0	**0**	0	0	**0**
6:45 to 7:45	161	18	**179**	190	6	**196**	215	23	**238**	0	0	**0**	134	10	**144**	709	24	**733**	0	0	**0**	0	0	**0**
7:00 to 8:00	174	18	**192**	169	4	**173**	210	15	**225**	0	0	**0**	136	14	**150**	735	26	**761**	0	0	**0**	0	0	**0**
7:15 to 8:15	186	16	**202**	131	2	**133**	235	19	**254**	0	0	**0**	188	14	**202**	749	32	**781**	0	0	**0**	0	0	**0**
7:30 to 8:30	181	14	**195**	97	3	**100**	253	22	**275**	0	0	**0**	205	14	**219**	738	38	**776**	0	0	**0**	0	0	**0**
7:45 to 8:45	182	16	**198**	76	2	**78**	297	22	**319**	0	0	**0**	210	15	**225**	719	45	**764**	0	0	**0**	0	0	**0**
8:00 to 9:00	176	18	**194**	60	4	**64**	326	22	**348**	0	0	**0**	217	13	**230**	723	45	**768**	0	0	**0**	0	0	**0**
8:15 to 9:15	170	18	**188**	53	6	**59**	327	19	**346**	0	0	**0**	206	13	**219**	691	38	**729**	0	0	**0**	0	0	**0**
8:30 to 9:30	189	17	**206**	41	8	**49**	355	13	**368**	0	0	**0**	194	15	**209**	651	37	**688**	0	0	**0**	0	0	**0**
AM Totals	**512**	**51**	**563**	**356**	**16**	**372**	**822**	**55**	**877**	**0**	**0**	**0**	**515**	**41**	**556**	**2,025**	**101**	**2,126**	**0**	**0**	**0**	**0**	**0**	**0**
15:30 to 16:30	190	11	**201**	41	10	**51**	324	12	**336**	0	0	**0**	296	11	**307**	532	24	**556**	0	0	**0**	0	0	**0**
15:45 to 16:45	202	9	**211**	46	7	**53**	323	14	**337**	0	0	**0**	284	8	**292**	507	23	**530**	0	0	**0**	0	0	**0**
16:00 to 17:00	205	7	**212**	47	4	**51**	320	10	**330**	0	0	**0**	318	8	**326**	499	15	**514**	0	0	**0**	0	0	**0**
16:15 to 17:15	228	7	**235**	52	5	**57**	321	8	**329**	0	0	**0**	345	8	**353**	486	17	**503**	0	0	**0**	0	0	**0**
16:30 to 17:30	220	7	**227**	48	5	**53**	313	7	**320**	0	0	**0**	366	5	**371**	507	14	**521**	0	0	**0**	0	0	**0**
16:45 to 17:45	218	7	**225**	40	5	**45**	324	4	**328**	0	0	**0**	352	5	**357**	492	15	**507**	0	0	**0**	0	0	**0**
17:00 to 18:00	206	6	**212**	49	6	**55**	320	3	**323**	0	0	**0**	354	2	**356**	468	14	**482**	0	0	**0**	0	0	**0**
17:15 to 18:15	180	6	**186**	44	4	**48**	293	6	**299**	0	0	**0**	346	2	**348**	457	10	**467**	0	0	**0**	0	0	**0**
17:30 to 18:30	169	4	**173**	59	4	**63**	295	7	**302**	0	0	**0**	305	5	**310**	407	11	**418**	0	0	**0**	0	0	**0**
PM Totals	**579**	**22**	**601**	**148**	**19**	**167**	**932**	**26**	**958**	**0**	**0**	**0**	**967**	**21**	**988**	**1,446**	**49**	**1,495**	**0**	**0**	**0**	**0**	**0**	**0**

Client : Varga Traffic Planning
Suburb : Campbelltown
Location : 1. Badgally Rd / Blaxland Rd

Day/Date : Tue, 25th February 2020
Weather : Fine
Description : Classified Intersection Count
: Peak Hour Summary



MATRIX Traffic and Transport Data

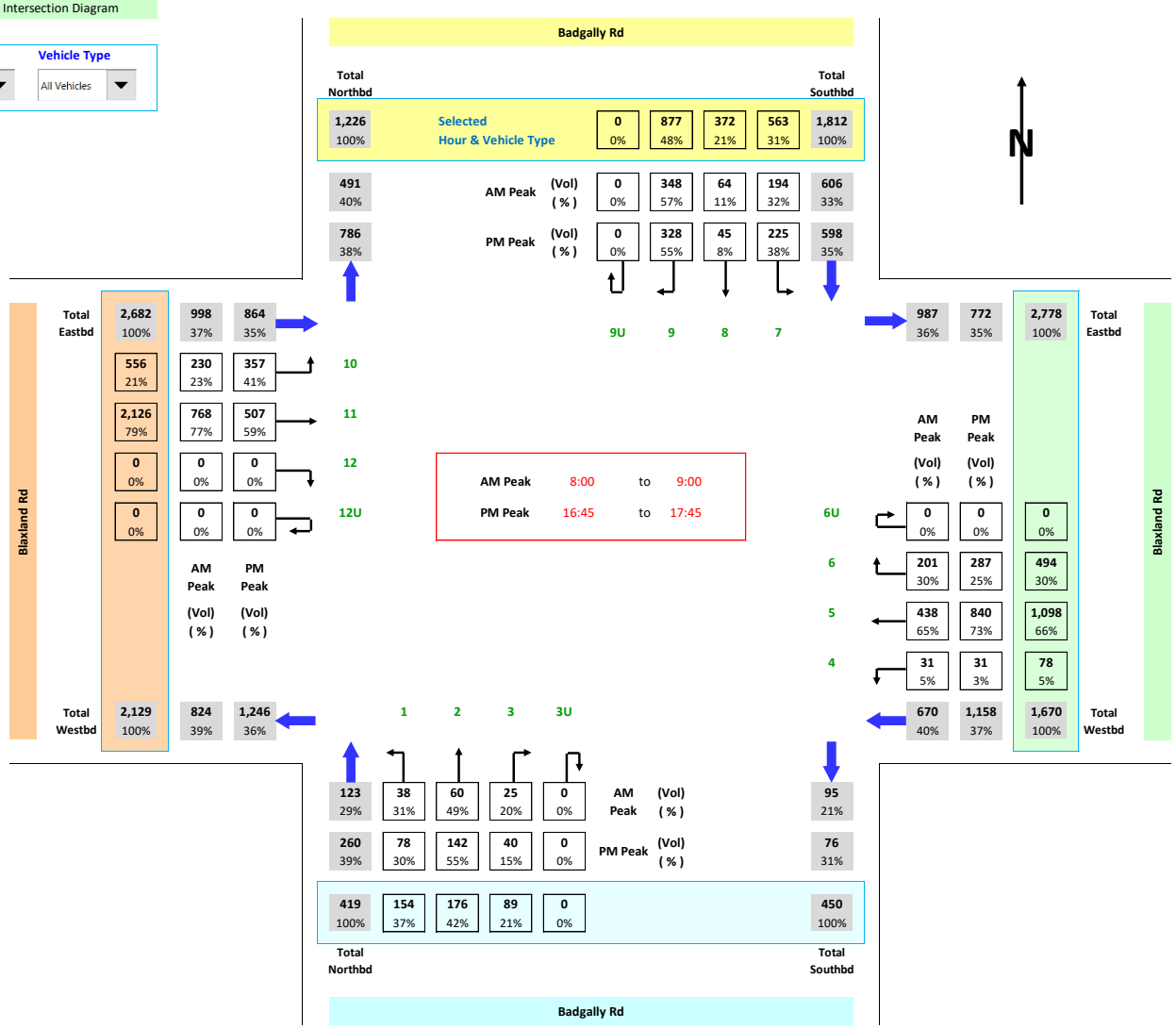
	Approach	Badgally Rd			Blaxland Rd			Badgally Rd			Blaxland Rd			Grand Total
	Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	
AM	8:00 to 9:00	114	9	**123**	615	55	**670**	562	44	**606**	940	58	**998**	2,397
PM	16:45 to 17:45	251	9	**260**	1,132	26	**1,158**	582	16	**598**	844	20	**864**	2,880

Approach	Badgally Rd			Blaxland Rd			Badgally Rd			Blaxland Rd			Grand Total
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	
6:30 to 7:30	148	9	**157**	303	55	**358**	574	45	**619**	752	38	**790**	1,924
6:45 to 7:45	161	7	**168**	341	52	**393**	566	47	**613**	843	34	**877**	2,051
7:00 to 8:00	182	12	**194**	408	56	**464**	553	37	**590**	871	40	**911**	2,159
7:15 to 8:15	174	12	**186**	470	56	**526**	552	37	**589**	937	46	**983**	2,284
7:30 to 8:30	151	13	**164**	512	53	**565**	531	39	**570**	943	52	**995**	2,294
7:45 to 8:45	136	13	**149**	586	51	**637**	555	40	**595**	929	60	**989**	2,370
8:00 to 9:00	114	9	**123**	615	55	**670**	562	44	**606**	940	58	**998**	2,397
8:15 to 9:15	100	11	**111**	674	57	**731**	550	43	**593**	897	51	**948**	2,383
8:30 to 9:30	87	11	**98**	688	59	**747**	585	38	**623**	845	52	**897**	2,365
AM Totals	**386**	**33**	**419**	**1,503**	**167**	**1,670**	**1,690**	**122**	**1,812**	**2,540**	**142**	**2,682**	6,583
15:30 to 16:30	173	10	**183**	1,030	28	**1,058**	555	33	**588**	828	35	**863**	2,692
15:45 to 16:45	191	12	**203**	1,028	26	**1,054**	571	30	**601**	791	31	**822**	2,680
16:00 to 17:00	171	13	**184**	1,023	29	**1,052**	572	21	**593**	817	23	**840**	2,669
16:15 to 17:15	177	14	**191**	1,062	28	**1,090**	601	20	**621**	831	25	**856**	2,758
16:30 to 17:30	208	10	**218**	1,110	26	**1,136**	581	19	**600**	873	19	**892**	2,846
16:45 to 17:45	251	9	**260**	1,132	26	**1,158**	582	16	**598**	844	20	**864**	2,880
17:00 to 18:00	245	9	**254**	1,132	22	**1,154**	575	15	**590**	822	16	**838**	2,836
17:15 to 18:15	261	8	**269**	1,025	18	**1,043**	517	16	**533**	803	12	**815**	2,660
17:30 to 18:30	259	10	**269**	928	18	**946**	523	15	**538**	712	16	**728**	2,481
PM Totals	**640**	**30**	**670**	**3,068**	**72**	**3,140**	**1,659**	**67**	**1,726**	**2,413**	**70**	**2,483**	8,019

Job No. : N5649
Client : Varga Traffic Planning
Suburb : Campbelltown
Location : 1. Badgally Rd / Blaxland Rd

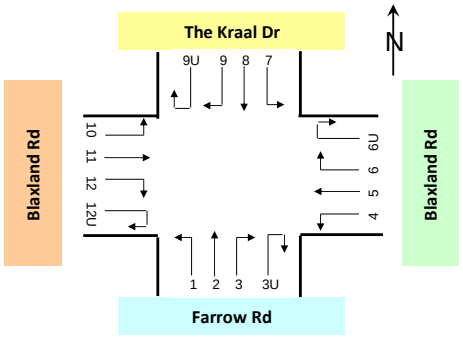
Day/Date : Tue, 25th February 2020
Weather : Fine
Description : Classified Intersection Count
: Intersection Diagram

Hour Starting AM Totals
Vehicle Type All Vehicles



Job No.	: N5649
Client	: Varga Traffic Planning
Suburb	: Campbelltown
Location	: 2. Blaxland Rd / The Kraal Dr / Farrow Rd
Day/Date	: Tue, 25th February 2020
Weather	: Fine
Description	: Classified Intersection Count
	: 15 mins Data

Classifications	**Class 1**	**Class 2**
	Lights	Heavies



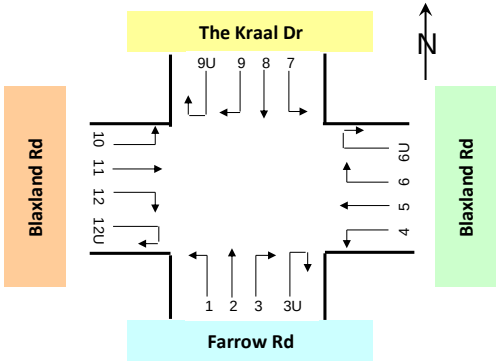
MATRIX Traffic and Transport Data

Approach	**Farrow Rd**												**Blaxland Rd**											
Direction	**Direction 1 (Left Turn)**			**Direction 2 (Through)**			**Direction 3 (Right Turn)**			**Direction 3U (U Turn)**			**Direction 4 (Left Turn)**			**Direction 5 (Through)**			**Direction 6 (Right Turn)**			**Direction 6U (U Turn)**		
Time Period	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**
6:30 to 6:45	7	0	**7**	8	0	**8**	1	3	**4**	0	0	**0**	3	1	**4**	101	11	**112**	3	1	**4**	0	0	**0**
6:45 to 7:00	22	0	**22**	9	0	**9**	3	0	**3**	0	0	**0**	2	0	**2**	112	21	**133**	3	0	**3**	0	0	**0**
7:00 to 7:15	17	2	**19**	6	1	**7**	5	0	**5**	0	0	**0**	4	0	**4**	94	10	**104**	6	0	**6**	0	0	**0**
7:15 to 7:30	18	1	**19**	4	0	**4**	1	0	**1**	0	0	**0**	3	3	**6**	126	10	**136**	6	1	**7**	0	0	**0**
7:30 to 7:45	11	0	**11**	9	0	**9**	4	1	**5**	0	0	**0**	1	1	**2**	111	15	**126**	4	0	**4**	0	0	**0**
7:45 to 8:00	14	2	**16**	7	1	**8**	2	1	**3**	0	0	**0**	4	0	**4**	156	6	**162**	8	0	**8**	0	0	**0**
8:00 to 8:15	17	1	**18**	10	0	**10**	0	0	**0**	0	0	**0**	2	2	**4**	158	14	**172**	9	0	**9**	0	0	**0**
8:15 to 8:30	11	2	**13**	3	1	**4**	1	0	**1**	0	0	**0**	5	4	**9**	144	11	**155**	5	1	**6**	0	0	**0**
8:30 to 8:45	12	1	**13**	4	1	**5**	0	1	**1**	0	0	**0**	3	1	**4**	194	10	**204**	5	2	**7**	0	0	**0**
8:45 to 9:00	13	2	**15**	0	0	**0**	1	1	**2**	0	0	**0**	0	1	**1**	209	17	**226**	8	0	**8**	0	0	**0**
9:00 to 9:15	10	6	**16**	2	0	**2**	4	2	**6**	0	0	**0**	1	2	**3**	194	12	**206**	13	0	**13**	0	0	**0**
9:15 to 9:30	10	3	**13**	2	1	**3**	0	0	**0**	0	0	**0**	3	0	**3**	189	6	**195**	14	1	**15**	1	0	**1**
AM Totals	**162**	**20**	**182**	**64**	**5**	**69**	**22**	**9**	**31**	**0**	**0**	**0**	**31**	**15**	**46**	**1,788**	**143**	**1,931**	**84**	**6**	**90**	**1**	**0**	**1**
15:30 to 15:45	32	2	**34**	9	0	**9**	1	3	**4**	0	0	**0**	2	1	**3**	253	8	**261**	22	1	**23**	0	0	**0**
15:45 to 16:00	25	2	**27**	11	0	**11**	4	0	**4**	0	0	**0**	2	3	**5**	250	7	**257**	17	0	**17**	0	0	**0**
16:00 to 16:15	43	3	**46**	13	0	**13**	5	0	**5**	0	0	**0**	2	0	**2**	291	8	**299**	18	2	**20**	0	0	**0**
16:15 to 16:30	37	2	**39**	8	0	**8**	1	2	**3**	0	0	**0**	2	0	**2**	252	6	**258**	12	0	**12**	0	0	**0**
16:30 to 16:45	53	2	**55**	9	0	**9**	3	0	**3**	0	0	**0**	1	1	**2**	289	5	**294**	23	0	**23**	1	0	**1**
16:45 to 17:00	58	0	**58**	6	0	**6**	4	0	**4**	0	0	**0**	3	0	**3**	226	6	**232**	33	0	**33**	0	0	**0**
17:00 to 17:15	92	3	**95**	15	1	**16**	1	1	**2**	0	0	**0**	1	0	**1**	277	5	**282**	26	1	**27**	0	0	**0**
17:15 to 17:30	68	1	**69**	15	0	**15**	4	1	**5**	0	0	**0**	6	0	**6**	275	1	**276**	31	0	**31**	0	0	**0**
17:30 to 17:45	129	1	**130**	16	0	**16**	2	0	**2**	0	0	**0**	3	1	**4**	304	4	**308**	23	1	**24**	0	0	**0**
17:45 to 18:00	52	1	**53**	10	1	**11**	1	0	**1**	0	0	**0**	1	0	**1**	242	4	**246**	22	1	**23**	0	0	**0**
18:00 to 18:15	97	1	**98**	11	0	**11**	7	0	**7**	0	0	**0**	2	0	**2**	219	1	**220**	25	0	**25**	0	0	**0**
18:15 to 18:30	63	3	**66**	12	0	**12**	4	0	**4**	0	0	**0**	4	1	**5**	247	4	**251**	20	0	**20**	0	0	**0**
PM Totals	**749**	**21**	**770**	**135**	**2**	**137**	**37**	**7**	**44**	**0**	**0**	**0**	**29**	**7**	**36**	**3,125**	**59**	**3,184**	**272**	**6**	**278**	**1**	**0**	**1**

Approach	The Kraal Dr												Blaxland Rd											
Direction	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
6:30 to 6:45	13	1	**14**	42	0	**42**	18	2	**20**	0	0	**0**	69	2	**71**	156	8	**164**	148	2	**150**	0	0	**0**
6:45 to 7:00	10	1	**11**	30	0	**30**	59	5	**64**	0	0	**0**	62	3	**65**	197	10	**207**	151	0	**151**	0	0	**0**
7:00 to 7:15	15	0	**15**	14	1	**15**	38	4	**42**	0	0	**0**	69	2	**71**	158	8	**166**	105	3	**108**	0	0	**0**
7:15 to 7:30	13	2	**15**	14	1	**15**	36	1	**37**	0	0	**0**	71	2	**73**	238	8	**246**	96	0	**96**	0	0	**0**
7:30 to 7:45	13	0	**13**	17	0	**17**	48	3	**51**	0	0	**0**	91	2	**93**	237	5	**242**	69	2	**71**	0	0	**0**
7:45 to 8:00	19	0	**19**	8	1	**9**	82	1	**83**	0	0	**0**	117	3	**120**	262	10	**272**	40	4	**44**	0	0	**0**
8:00 to 8:15	19	0	**19**	11	0	**11**	108	1	**109**	0	0	**0**	120	2	**122**	221	14	**235**	42	1	**43**	2	0	**2**
8:15 to 8:30	15	0	**15**	2	2	**4**	101	3	**104**	0	0	**0**	101	4	**105**	243	19	**262**	33	1	**34**	1	0	**1**
8:30 to 8:45	16	1	**17**	5	0	**5**	102	3	**105**	0	0	**0**	104	2	**106**	193	14	**207**	35	2	**37**	1	0	**1**
8:45 to 9:00	17	2	**19**	3	0	**3**	85	2	**87**	0	0	**0**	86	4	**90**	248	9	**257**	32	3	**35**	2	0	**2**
9:00 to 9:15	9	0	**9**	5	0	**5**	81	1	**82**	0	0	**0**	99	6	**105**	181	8	**189**	17	0	**17**	0	0	**0**
9:15 to 9:30	22	0	**22**	6	0	**6**	73	1	**74**	0	0	**0**	80	1	**81**	158	12	**170**	19	2	**21**	0	0	**0**
AM Totals	**181**	**7**	**188**	**157**	**5**	**162**	**831**	**27**	**858**	**0**	**0**	**0**	**1,069**	**33**	**1,102**	**2,492**	**125**	**2,617**	**787**	**20**	**807**	**6**	**0**	**6**
15:30 to 15:45	12	0	**12**	5	0	**5**	104	3	**107**	0	0	**0**	117	1	**118**	215	3	**218**	19	2	**21**	0	0	**0**
15:45 to 16:00	13	0	**13**	8	0	**8**	81	2	**83**	0	0	**0**	118	1	**119**	185	11	**196**	25	0	**25**	1	0	**1**
16:00 to 16:15	21	0	**21**	6	0	**6**	118	3	**121**	0	0	**0**	85	1	**86**	167	3	**170**	20	4	**24**	0	0	**0**
16:15 to 16:30	11	1	**12**	12	0	**12**	94	3	**97**	0	0	**0**	102	3	**105**	182	6	**188**	19	4	**23**	0	0	**0**
16:30 to 16:45	14	1	**15**	0	0	**0**	86	0	**86**	0	0	**0**	97	1	**98**	193	1	**194**	18	1	**19**	0	0	**0**
16:45 to 17:00	22	0	**22**	5	0	**5**	81	3	**84**	0	0	**0**	95	1	**96**	177	11	**188**	16	3	**19**	0	0	**0**
17:00 to 17:15	16	0	**16**	5	0	**5**	95	1	**96**	0	0	**0**	101	2	**103**	183	3	**186**	20	3	**23**	0	0	**0**
17:15 to 17:30	39	0	**39**	6	0	**6**	84	1	**85**	0	0	**0**	99	1	**100**	196	5	**201**	26	1	**27**	0	0	**0**
17:30 to 17:45	11	0	**11**	7	0	**7**	83	1	**84**	0	0	**0**	93	1	**94**	150	5	**155**	21	2	**23**	0	0	**0**
17:45 to 18:00	18	1	**19**	9	0	**9**	71	1	**72**	0	0	**0**	124	0	**124**	171	4	**175**	23	2	**25**	0	0	**0**
18:00 to 18:15	16	0	**16**	10	0	**10**	79	1	**80**	0	0	**0**	76	1	**77**	167	2	**169**	27	2	**29**	0	0	**0**
18:15 to 18:30	14	0	**14**	6	0	**6**	78	0	**78**	0	0	**0**	79	0	**79**	138	5	**143**	26	1	**27**	0	0	**0**
PM Totals	**207**	**3**	**210**	**79**	**0**	**79**	**1,054**	**19**	**1,073**	**0**	**0**	**0**	**1,186**	**13**	**1,199**	**2,124**	**59**	**2,183**	**260**	**25**	**285**	**1**	**0**	**1**

Job No. : N5649
Client : Varga Traffic Planning
Suburb : Campbelltown
Location : 2. Blaxland Rd / The Kraal Dr / Farrow Rd

Day/Date : Tue, 25th February 2020
Weather : Fine
Description : Classified Intersection Count
: Hourly Summary



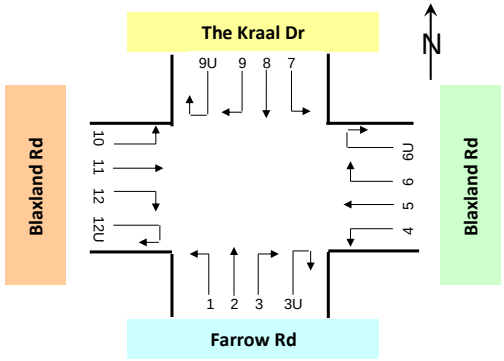
MATRIX Traffic and Transport Data

Approach	Farrow Rd												Blaxland Rd											
Direction	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
6:30 to 7:30	64	3	**67**	27	1	**28**	10	3	**13**	0	0	**0**	12	4	**16**	433	52	**485**	18	2	**20**	0	0	**0**
6:45 to 7:45	68	3	**71**	28	1	**29**	13	1	**14**	0	0	**0**	10	4	**14**	443	56	**499**	19	1	**20**	0	0	**0**
7:00 to 8:00	60	5	**65**	26	2	**28**	12	2	**14**	0	0	**0**	12	4	**16**	487	41	**528**	24	1	**25**	0	0	**0**
7:15 to 8:15	60	4	**64**	30	1	**31**	7	2	**9**	0	0	**0**	10	6	**16**	551	45	**596**	27	1	**28**	0	0	**0**
7:30 to 8:30	53	5	**58**	29	2	**31**	7	2	**9**	0	0	**0**	12	7	**19**	569	46	**615**	26	1	**27**	0	0	**0**
7:45 to 8:45	54	6	**60**	24	3	**27**	3	2	**5**	0	0	**0**	14	7	**21**	652	41	**693**	27	3	**30**	0	0	**0**
8:00 to 9:00	53	6	**59**	17	2	**19**	2	2	**4**	0	0	**0**	10	8	**18**	705	52	**757**	27	3	**30**	0	0	**0**
8:15 to 9:15	46	11	**57**	9	2	**11**	6	4	**10**	0	0	**0**	9	8	**17**	741	50	**791**	31	3	**34**	0	0	**0**
8:30 to 9:30	45	12	**57**	8	2	**10**	5	4	**9**	0	0	**0**	7	4	**11**	786	45	**831**	40	3	**43**	1	0	**1**
AM Totals	**162**	**20**	**182**	**64**	**5**	**69**	**22**	**9**	**31**	**0**	**0**	**0**	**31**	**15**	**46**	**1,788**	**143**	**1,931**	**84**	**6**	**90**	**1**	**0**	**1**
15:30 to 16:30	137	9	**146**	41	0	**41**	11	5	**16**	0	0	**0**	8	4	**12**	1,046	29	**1,075**	69	3	**72**	0	0	**0**
15:45 to 16:45	158	9	**167**	41	0	**41**	13	2	**15**	0	0	**0**	7	4	**11**	1,082	26	**1,108**	70	2	**72**	1	0	**1**
16:00 to 17:00	191	7	**198**	36	0	**36**	13	2	**15**	0	0	**0**	8	1	**9**	1,058	25	**1,083**	86	2	**88**	1	0	**1**
16:15 to 17:15	240	7	**247**	38	1	**39**	9	3	**12**	0	0	**0**	7	1	**8**	1,044	22	**1,066**	94	1	**95**	1	0	**1**
16:30 to 17:30	271	6	**277**	45	1	**46**	12	2	**14**	0	0	**0**	11	1	**12**	1,067	17	**1,084**	113	1	**114**	1	0	**1**
16:45 to 17:45	347	5	**352**	52	1	**53**	11	2	**13**	0	0	**0**	13	1	**14**	1,082	16	**1,098**	113	2	**115**	0	0	**0**
17:00 to 18:00	341	6	**347**	56	2	**58**	8	2	**10**	0	0	**0**	11	1	**12**	1,098	14	**1,112**	102	3	**105**	0	0	**0**
17:15 to 18:15	346	4	**350**	52	1	**53**	14	1	**15**	0	0	**0**	12	1	**13**	1,040	10	**1,050**	101	2	**103**	0	0	**0**
17:30 to 18:30	341	6	**347**	49	1	**50**	14	0	**14**	0	0	**0**	10	2	**12**	1,012	13	**1,025**	90	2	**92**	0	0	**0**
PM Totals	**749**	**21**	**770**	**135**	**2**	**137**	**37**	**7**	**44**	**0**	**0**	**0**	**29**	**7**	**36**	**3,125**	**59**	**3,184**	**272**	**6**	**278**	**1**	**0**	**1**

Approach	The Kraal Dr												Blaxland Rd											
Direction	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
6:30 to 7:30	51	4	**55**	100	2	**102**	151	12	**163**	0	0	**0**	271	9	**280**	749	34	**783**	500	5	**505**	0	0	**0**
6:45 to 7:45	51	3	**54**	75	2	**77**	181	13	**194**	0	0	**0**	293	9	**302**	830	31	**861**	421	5	**426**	0	0	**0**
7:00 to 8:00	60	2	**62**	53	3	**56**	204	9	**213**	0	0	**0**	348	9	**357**	895	31	**926**	310	9	**319**	0	0	**0**
7:15 to 8:15	64	2	**66**	50	2	**52**	274	6	**280**	0	0	**0**	399	9	**408**	958	37	**995**	247	7	**254**	2	0	**2**
7:30 to 8:30	66	0	**66**	38	3	**41**	339	8	**347**	0	0	**0**	429	11	**440**	963	48	**1,011**	184	8	**192**	3	0	**3**
7:45 to 8:45	69	1	**70**	26	3	**29**	393	8	**401**	0	0	**0**	442	11	**453**	919	57	**976**	150	8	**158**	4	0	**4**
8:00 to 9:00	67	3	**70**	21	2	**23**	396	9	**405**	0	0	**0**	411	12	**423**	905	56	**961**	142	7	**149**	6	0	**6**
8:15 to 9:15	57	3	**60**	15	2	**17**	369	9	**378**	0	0	**0**	390	16	**406**	865	50	**915**	117	6	**123**	4	0	**4**
8:30 to 9:30	64	3	**67**	19	0	**19**	341	7	**348**	0	0	**0**	369	13	**382**	780	43	**823**	103	7	**110**	3	0	**3**
AM Totals	**181**	**7**	**188**	**157**	**5**	**162**	**831**	**27**	**858**	**0**	**0**	**0**	**1,069**	**33**	**1,102**	**2,492**	**125**	**2,617**	**787**	**20**	**807**	**6**	**0**	**6**
15:30 to 16:30	57	1	**58**	31	0	**31**	397	11	**408**	0	0	**0**	422	6	**428**	749	23	**772**	83	10	**93**	1	0	**1**
15:45 to 16:45	59	2	**61**	26	0	**26**	379	8	**387**	0	0	**0**	402	6	**408**	727	21	**748**	82	9	**91**	1	0	**1**
16:00 to 17:00	68	2	**70**	23	0	**23**	379	9	**388**	0	0	**0**	379	6	**385**	719	21	**740**	73	12	**85**	0	0	**0**
16:15 to 17:15	63	2	**65**	22	0	**22**	356	7	**363**	0	0	**0**	395	7	**402**	735	21	**756**	73	11	**84**	0	0	**0**
16:30 to 17:30	91	1	**92**	16	0	**16**	346	5	**351**	0	0	**0**	392	5	**397**	749	20	**769**	80	8	**88**	0	0	**0**
16:45 to 17:45	88	0	**88**	23	0	**23**	343	6	**349**	0	0	**0**	388	5	**393**	706	24	**730**	83	9	**92**	0	0	**0**
17:00 to 18:00	84	1	**85**	27	0	**27**	333	4	**337**	0	0	**0**	417	4	**421**	700	17	**717**	90	8	**98**	0	0	**0**
17:15 to 18:15	84	1	**85**	32	0	**32**	317	4	**321**	0	0	**0**	392	3	**395**	684	16	**700**	97	7	**104**	0	0	**0**
17:30 to 18:30	59	1	**60**	32	0	**32**	311	3	**314**	0	0	**0**	372	2	**374**	626	16	**642**	97	7	**104**	0	0	**0**
PM Totals	**207**	**3**	**210**	**79**	**0**	**79**	**1,054**	**19**	**1,073**	**0**	**0**	**0**	**1,186**	**13**	**1,199**	**2,124**	**59**	**2,183**	**260**	**25**	**285**	**1**	**0**	**1**

Job No. : N5649
Client : Varga Traffic Planning
Suburb : Campbelltown
Location : 2. Blaxland Rd / The Kraal Dr / Farrow Rd

Day/Date : Tue, 25th February 2020
Weather : Fine
Description : Classified Intersection Count
: Peak Hour Summary



MATRIX Traffic and Transport Data

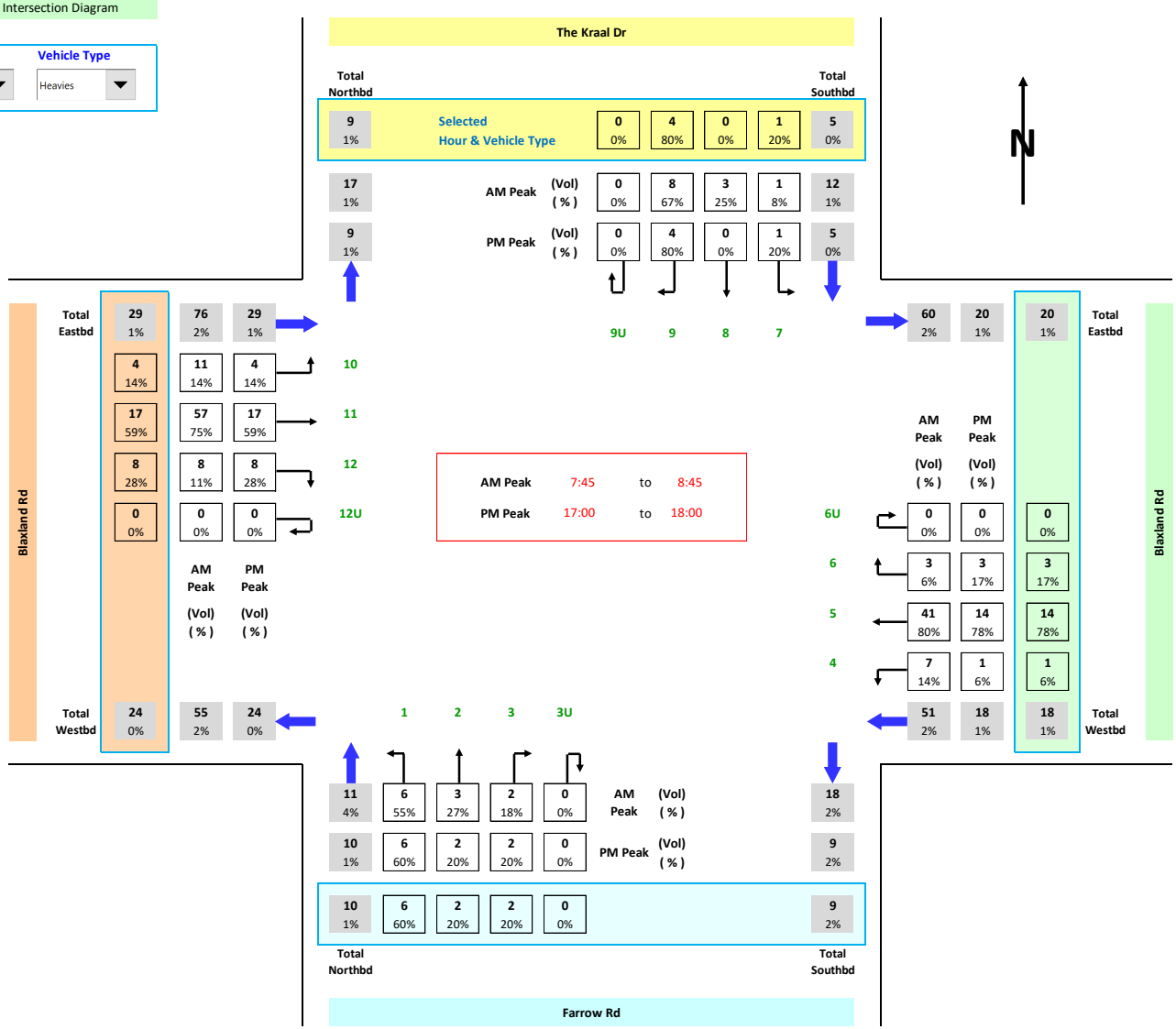
	Approach	Farrow Rd			Blaxland Rd			The Kraal Dr			Blaxland Rd			Grand Total
	Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	
AM	7:45 to 8:45	81	11	**92**	693	51	**744**	488	12	**500**	1,515	76	**1,591**	**2,927**
PM	17:00 to 18:00	405	10	**415**	1,211	18	**1,229**	444	5	**449**	1,207	29	**1,236**	**3,329**

Approach	Farrow Rd			Blaxland Rd			The Kraal Dr			Blaxland Rd			Grand Total
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	
6:30 to 7:30	101	7	**108**	463	58	**521**	302	18	**320**	1,520	48	**1,568**	**2,517**
6:45 to 7:45	109	5	**114**	472	61	**533**	307	18	**325**	1,544	45	**1,589**	**2,561**
7:00 to 8:00	98	9	**107**	523	46	**569**	317	14	**331**	1,553	49	**1,602**	**2,609**
7:15 to 8:15	97	7	**104**	588	52	**640**	388	10	**398**	1,606	53	**1,659**	**2,801**
7:30 to 8:30	89	9	**98**	607	54	**661**	443	11	**454**	1,579	67	**1,646**	**2,859**
7:45 to 8:45	81	11	**92**	693	51	**744**	488	12	**500**	1,515	76	**1,591**	**2,927**
8:00 to 9:00	72	10	**82**	742	63	**805**	484	14	**498**	1,464	75	**1,539**	**2,924**
8:15 to 9:15	61	17	**78**	781	61	**842**	441	14	**455**	1,376	72	**1,448**	**2,823**
8:30 to 9:30	58	18	**76**	834	52	**886**	424	10	**434**	1,255	63	**1,318**	**2,714**
AM Totals	**248**	**34**	**282**	**1,904**	**164**	**2,068**	**1,169**	**39**	**1,208**	**4,354**	**178**	**4,532**	**8,090**
15:30 to 16:30	189	14	**203**	1,123	36	**1,159**	485	12	**497**	1,255	39	**1,294**	**3,153**
15:45 to 16:45	212	11	**223**	1,160	32	**1,192**	464	10	**474**	1,212	36	**1,248**	**3,137**
16:00 to 17:00	240	9	**249**	1,153	28	**1,181**	470	11	**481**	1,171	39	**1,210**	**3,121**
16:15 to 17:15	287	11	**298**	1,146	24	**1,170**	441	9	**450**	1,203	39	**1,242**	**3,160**
16:30 to 17:30	328	9	**337**	1,192	19	**1,211**	453	6	**459**	1,221	33	**1,254**	**3,261**
16:45 to 17:45	410	8	**418**	1,208	19	**1,227**	454	6	**460**	1,177	38	**1,215**	**3,320**
17:00 to 18:00	405	10	**415**	1,211	18	**1,229**	444	5	**449**	1,207	29	**1,236**	**3,329**
17:15 to 18:15	412	6	**418**	1,153	13	**1,166**	433	5	**438**	1,173	26	**1,199**	**3,221**
17:30 to 18:30	404	7	**411**	1,112	17	**1,129**	402	4	**406**	1,095	25	**1,120**	**3,066**
PM Totals	**921**	**30**	**951**	**3,427**	**72**	**3,499**	**1,340**	**22**	**1,362**	**3,571**	**97**	**3,668**	**9,480**

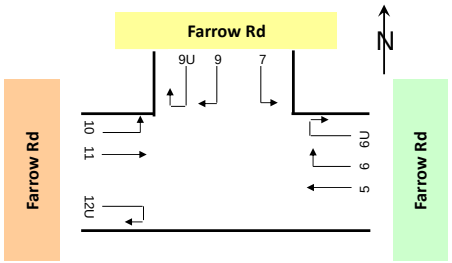
Job No. : N5649
Client : Varga Traffic Planning
Suburb : Campbelltown
Location : 2. Blaxland Rd / The Kraal Dr / Farrow Rd

Day/Date : Tue, 25th February 2020
Weather : Fine
Description : Classified Intersection Count
: Intersection Diagram

Hour Starting	Vehicle Type
17:00	Heavies



Job No.	: N5649
Client	: Varga Traffic Planning
Suburb	: Campbelltown
Location	: 3. Farrow Rd / Farrow Rd
Day/Date	: Tue, 25th February 2020
Weather	: Fine
Description	: Classified Intersection Count
	: 15 mins Data



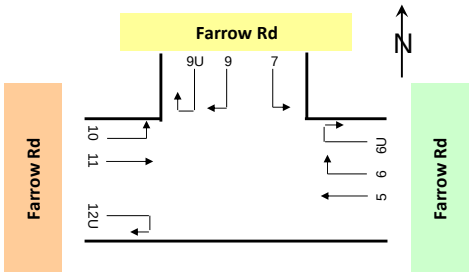
Classifications	**Class 1**	**Class 2**
	Lights	Heavies

Approach		**Farrow Rd**								
Direction		**Direction 5 (Through)**			**Direction 6 (Right Turn)**			**Direction 6U (U Turn)**		
Time Period		**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**
6:30	to 6:45	4	0	**4**	23	2	**25**	8	0	**8**
6:45	to 7:00	9	0	**9**	38	0	**38**	2	0	**2**
7:00	to 7:15	2	0	**2**	25	3	**28**	13	0	**13**
7:15	to 7:30	6	0	**6**	19	1	**20**	11	0	**11**
7:30	to 7:45	2	0	**2**	22	0	**22**	11	0	**11**
7:45	to 8:00	4	0	**4**	22	3	**25**	13	1	**14**
8:00	to 8:15	2	0	**2**	27	1	**28**	8	0	**8**
8:15	to 8:30	7	1	**8**	13	3	**16**	6	0	**6**
8:30	to 8:45	2	0	**2**	12	2	**14**	3	0	**3**
8:45	to 9:00	3	1	**4**	9	4	**13**	4	0	**4**
9:00	to 9:15	1	0	**1**	17	3	**20**	1	0	**1**
9:15	to 9:30	1	0	**1**	10	3	**13**	6	0	**6**
AM Totals		**43**	**2**	**45**	**237**	**25**	**262**	**86**	**1**	**87**
15:30	to 15:45	0	0	**0**	33	4	**37**	8	0	**8**
15:45	to 16:00	0	0	**0**	36	3	**39**	9	0	**9**
16:00	to 16:15	0	0	**0**	51	2	**53**	7	0	**7**
16:15	to 16:30	0	1	**1**	38	1	**39**	2	0	**2**
16:30	to 16:45	0	0	**0**	59	2	**61**	4	0	**4**
16:45	to 17:00	0	0	**0**	58	0	**58**	4	0	**4**
17:00	to 17:15	0	0	**0**	101	4	**105**	9	0	**9**
17:15	to 17:30	2	0	**2**	72	1	**73**	7	0	**7**
17:30	to 17:45	1	0	**1**	120	1	**121**	6	0	**6**
17:45	to 18:00	0	0	**0**	67	1	**68**	4	0	**4**
18:00	to 18:15	0	0	**0**	88	2	**90**	4	0	**4**
18:15	to 18:30	0	0	**0**	58	2	**60**	8	0	**8**
PM Totals		**3**	**1**	**4**	**781**	**23**	**804**	**72**	**0**	**72**

Approach	Farrow Rd									Farrow Rd								
Direction	Direction 7 (Left Turn)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
6:30 to 6:45	150	2	**152**	13	0	**13**	20	0	**20**	0	1	**1**	0	0	**0**	0	0	**0**
6:45 to 7:00	109	1	**110**	21	0	**21**	69	0	**69**	0	0	**0**	0	0	**0**	0	0	**0**
7:00 to 7:15	106	4	**110**	17	0	**17**	3	0	**3**	1	0	**1**	0	0	**0**	0	0	**0**
7:15 to 7:30	109	1	**110**	6	0	**6**	1	0	**1**	0	0	**0**	1	1	**2**	0	0	**0**
7:30 to 7:45	79	3	**82**	6	0	**6**	0	0	**0**	3	0	**3**	0	0	**0**	0	0	**0**
7:45 to 8:00	55	5	**60**	2	0	**2**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**
8:00 to 8:15	47	2	**49**	3	1	**4**	2	0	**2**	1	0	**1**	3	0	**3**	0	0	**0**
8:15 to 8:30	36	5	**41**	1	0	**1**	1	0	**1**	0	1	**1**	0	0	**0**	0	0	**0**
8:30 to 8:45	38	1	**39**	3	1	**4**	1	0	**1**	1	0	**1**	2	0	**2**	0	0	**0**
8:45 to 9:00	27	3	**30**	3	0	**3**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**
9:00 to 9:15	23	0	**23**	1	0	**1**	0	0	**0**	0	0	**0**	1	2	**3**	0	0	**0**
9:15 to 9:30	25	2	**27**	2	0	**2**	3	0	**3**	0	0	**0**	0	0	**0**	0	0	**0**
AM Totals	**804**	**29**	**833**	**78**	**2**	**80**	**100**	**0**	**100**	**6**	**2**	**8**	**9**	**3**	**12**	**0**	**0**	**0**
15:30 to 15:45	32	2	**34**	0	1	**1**	0	0	**0**	4	0	**4**	3	0	**3**	0	0	**0**
15:45 to 16:00	32	1	**33**	1	0	**1**	1	0	**1**	2	0	**2**	0	0	**0**	0	0	**0**
16:00 to 16:15	22	4	**26**	0	0	**0**	1	0	**1**	10	0	**10**	8	0	**8**	0	0	**0**
16:15 to 16:30	36	4	**40**	0	0	**0**	0	0	**0**	4	0	**4**	1	0	**1**	0	0	**0**
16:30 to 16:45	17	2	**19**	0	0	**0**	0	0	**0**	5	0	**5**	3	0	**3**	0	0	**0**
16:45 to 17:00	20	3	**23**	1	0	**1**	0	0	**0**	7	0	**7**	2	0	**2**	0	0	**0**
17:00 to 17:15	19	2	**21**	0	0	**0**	1	0	**1**	5	0	**5**	2	0	**2**	0	0	**0**
17:15 to 17:30	39	2	**41**	1	0	**1**	1	0	**1**	6	0	**6**	3	0	**3**	0	0	**0**
17:30 to 17:45	27	2	**29**	1	0	**1**	2	0	**2**	7	0	**7**	2	0	**2**	0	0	**0**
17:45 to 18:00	33	2	**35**	0	0	**0**	0	0	**0**	2	0	**2**	2	0	**2**	0	0	**0**
18:00 to 18:15	35	2	**37**	1	0	**1**	0	0	**0**	6	0	**6**	0	0	**0**	0	0	**0**
18:15 to 18:30	34	2	**36**	0	0	**0**	1	0	**1**	8	0	**8**	3	0	**3**	0	0	**0**
PM Totals	**346**	**28**	**374**	**5**	**1**	**6**	**7**	**0**	**7**	**66**	**0**	**66**	**29**	**0**	**29**	**0**	**0**	**0**

Job No. : N5649
Client : Varga Traffic Planning
Suburb : Campbelltown
Location : 3. Farrow Rd / Farrow Rd

Day/Date : Tue, 25th February 2020
Weather : Fine
Description : Classified Intersection Count
: Hourly Summary



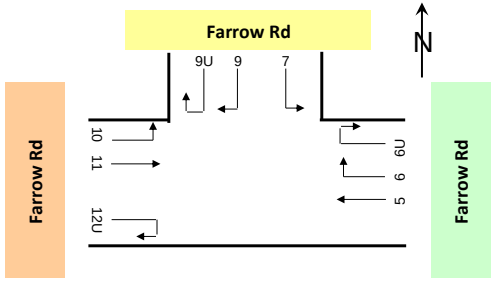
MATRIX Traffic and Transport Data

Approach		Farrow Rd								
Direction		Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
6:30	7:30	21	0	**21**	105	6	**111**	34	0	**34**
6:45	7:45	19	0	**19**	104	4	**108**	37	0	**37**
7:00	8:00	14	0	**14**	88	7	**95**	48	1	**49**
7:15	8:15	14	0	**14**	90	5	**95**	43	1	**44**
7:30	8:30	15	1	**16**	84	7	**91**	38	1	**39**
7:45	8:45	15	1	**16**	74	9	**83**	30	1	**31**
8:00	9:00	14	2	**16**	61	10	**71**	21	0	**21**
8:15	9:15	13	2	**15**	51	12	**63**	14	0	**14**
8:30	9:30	7	1	**8**	48	12	**60**	14	0	**14**
AM Totals		**43**	**2**	**45**	**237**	**25**	**262**	**86**	**1**	**87**
15:30	16:30	0	1	**1**	158	10	**168**	26	0	**26**
15:45	16:45	0	1	**1**	184	8	**192**	22	0	**22**
16:00	17:00	0	1	**1**	206	5	**211**	17	0	**17**
16:15	17:15	0	1	**1**	256	7	**263**	19	0	**19**
16:30	17:30	2	0	**2**	290	7	**297**	24	0	**24**
16:45	17:45	3	0	**3**	351	6	**357**	26	0	**26**
17:00	18:00	3	0	**3**	360	7	**367**	26	0	**26**
17:15	18:15	3	0	**3**	347	5	**352**	21	0	**21**
17:30	18:30	1	0	**1**	333	6	**339**	22	0	**22**
PM Totals		**3**	**1**	**4**	**781**	**23**	**804**	**72**	**0**	**72**

Approach	Farrow Rd									Farrow Rd								
Direction	Direction 7 (Left Turn)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
6:30 to 7:30	474	8	**482**	57	0	**57**	93	0	**93**	1	1	**2**	1	1	**2**	0	0	**0**
6:45 to 7:45	403	9	**412**	50	0	**50**	73	0	**73**	4	0	**4**	1	1	**2**	0	0	**0**
7:00 to 8:00	349	13	**362**	31	0	**31**	4	0	**4**	4	0	**4**	2	1	**3**	0	0	**0**
7:15 to 8:15	290	11	**301**	17	1	**18**	3	0	**3**	4	0	**4**	5	1	**6**	0	0	**0**
7:30 to 8:30	217	15	**232**	12	1	**13**	3	0	**3**	4	1	**5**	4	0	**4**	0	0	**0**
7:45 to 8:45	176	13	**189**	9	2	**11**	4	0	**4**	2	1	**3**	6	0	**6**	0	0	**0**
8:00 to 9:00	148	11	**159**	10	2	**12**	4	0	**4**	2	1	**3**	6	0	**6**	0	0	**0**
8:15 to 9:15	124	9	**133**	8	1	**9**	2	0	**2**	1	1	**2**	4	2	**6**	0	0	**0**
8:30 to 9:30	113	6	**119**	9	1	**10**	4	0	**4**	1	0	**1**	4	2	**6**	0	0	**0**
AM Totals	**804**	**29**	**833**	**78**	**2**	**80**	**100**	**0**	**100**	**6**	**2**	**8**	**9**	**3**	**12**	**0**	**0**	**0**
15:30 to 16:30	122	11	**133**	1	1	**2**	2	0	**2**	20	0	**20**	12	0	**12**	0	0	**0**
15:45 to 16:45	107	11	**118**	1	0	**1**	2	0	**2**	21	0	**21**	12	0	**12**	0	0	**0**
16:00 to 17:00	95	13	**108**	1	0	**1**	1	0	**1**	26	0	**26**	14	0	**14**	0	0	**0**
16:15 to 17:15	92	11	**103**	1	0	**1**	1	0	**1**	21	0	**21**	8	0	**8**	0	0	**0**
16:30 to 17:30	95	9	**104**	2	0	**2**	2	0	**2**	23	0	**23**	10	0	**10**	0	0	**0**
16:45 to 17:45	105	9	**114**	3	0	**3**	4	0	**4**	25	0	**25**	9	0	**9**	0	0	**0**
17:00 to 18:00	118	8	**126**	2	0	**2**	4	0	**4**	20	0	**20**	9	0	**9**	0	0	**0**
17:15 to 18:15	134	8	**142**	3	0	**3**	3	0	**3**	21	0	**21**	7	0	**7**	0	0	**0**
17:30 to 18:30	129	8	**137**	2	0	**2**	3	0	**3**	23	0	**23**	7	0	**7**	0	0	**0**
PM Totals	**346**	**28**	**374**	**5**	**1**	**6**	**7**	**0**	**7**	**66**	**0**	**66**	**29**	**0**	**29**	**0**	**0**	**0**

Job No. : N5649
Client : Varga Traffic Planning
Suburb : Campbelltown
Location : 3. Farrow Rd / Farrow Rd

Day/Date : Tue, 25th February 2020
Weather : Fine
Description : Classified Intersection Count
: Peak Hour Summary



MATRIX Traffic and Transport Data

	Approach		Farrow Rd			Farrow Rd			Farrow Rd			Grand Total
	Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	
AM	6:30	to 7:30	160	6	**166**	624	8	**632**	2	2	**4**	**802**
PM	17:00	to 18:00	389	7	**396**	124	8	**132**	29	0	**29**	**557**

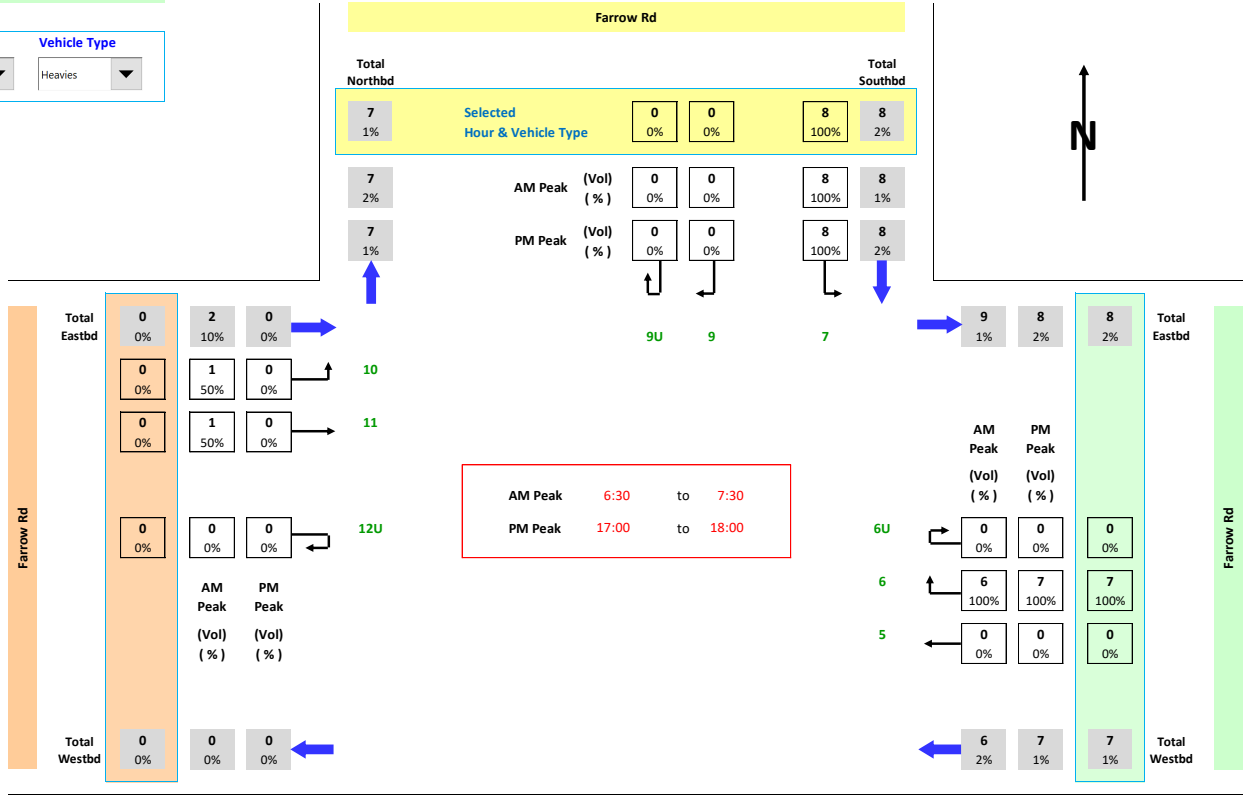
Approach		Farrow Rd			Farrow Rd			Farrow Rd			Grand Total
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	
6:30	to 7:30	160	6	**166**	624	8	**632**	2	2	**4**	**802**
6:45	to 7:45	160	4	**164**	526	9	**535**	5	1	**6**	**705**
7:00	to 8:00	150	8	**158**	384	13	**397**	6	1	**7**	**562**
7:15	to 8:15	147	6	**153**	310	12	**322**	9	1	**10**	**485**
7:30	to 8:30	137	9	**146**	232	16	**248**	8	1	**9**	**403**
7:45	to 8:45	119	11	**130**	189	15	**204**	8	1	**9**	**343**
8:00	to 9:00	96	12	**108**	162	13	**175**	8	1	**9**	**292**
8:15	to 9:15	78	14	**92**	134	10	**144**	5	3	**8**	**244**
8:30	to 9:30	69	13	**82**	126	7	**133**	5	2	**7**	**222**
AM Totals		**366**	**28**	**394**	**982**	**31**	**1,013**	**15**	**5**	**20**	**1,427**
15:30	to 16:30	184	11	**195**	125	12	**137**	32	0	**32**	**364**
15:45	to 16:45	206	9	**215**	110	11	**121**	33	0	**33**	**369**
16:00	to 17:00	223	6	**229**	97	13	**110**	40	0	**40**	**379**
16:15	to 17:15	275	8	**283**	94	11	**105**	29	0	**29**	**417**
16:30	to 17:30	316	7	**323**	99	9	**108**	33	0	**33**	**464**
16:45	to 17:45	380	6	**386**	112	9	**121**	34	0	**34**	**541**
17:00	to 18:00	389	7	**396**	124	8	**132**	29	0	**29**	**557**
17:15	to 18:15	371	5	**376**	140	8	**148**	28	0	**28**	**552**
17:30	to 18:30	356	6	**362**	134	8	**142**	30	0	**30**	**534**
PM Totals		**856**	**24**	**880**	**358**	**29**	**387**	**95**	**0**	**95**	**1,362**

Job No. : N5649
Client : Varga Traffic Planning
Suburb : Campbelltown
Location : 3. Farrow Rd / Farrow Rd

Day/Date : Tue, 25th February 2020
Weather : Fine
Description : Classified Intersection Count
: Intersection Diagram

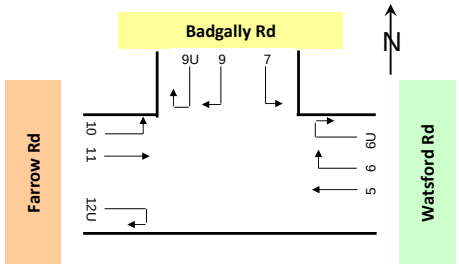
MATRIX Traffic and Transport Data

Hour Starting 17:00 **Vehicle Type** Heavies



Job No.	: N5649
Client	: Varga Traffic Planning
Suburb	: Campbelltown
Location	: 4. Farrow Rd / Badgally Rd / Watsford Rd
Day/Date	: Tue, 25th February 2020
Weather	: Fine
Description	: Classified Intersection Count
	: 15 mins Data

Classifications	**Class 1**	**Class 2**
	Lights	Heavies



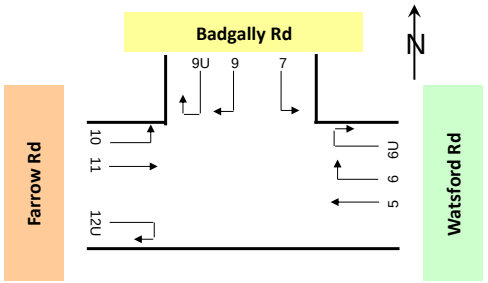
MATRIX Traffic and Transport Data

Approach	**Watsford Rd**								
Direction	**Direction 5 (Through)**			**Direction 6 (Right Turn)**			**Direction 6U (U Turn)**		
Time Period	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**
6:30 to 6:45	4	0	**4**	0	0	**0**	0	0	**0**
6:45 to 7:00	9	0	**9**	1	0	**1**	0	0	**0**
7:00 to 7:15	5	0	**5**	4	0	**4**	0	0	**0**
7:15 to 7:30	4	0	**4**	3	1	**4**	0	0	**0**
7:30 to 7:45	5	0	**5**	6	0	**6**	1	0	**1**
7:45 to 8:00	5	0	**5**	7	0	**7**	2	0	**2**
8:00 to 8:15	9	1	**10**	5	0	**5**	1	0	**1**
8:15 to 8:30	9	1	**10**	2	0	**2**	1	0	**1**
8:30 to 8:45	4	1	**5**	5	1	**6**	0	0	**0**
8:45 to 9:00	7	1	**8**	5	0	**5**	1	0	**1**
9:00 to 9:15	8	1	**9**	5	1	**6**	1	0	**1**
9:15 to 9:30	10	0	**10**	6	0	**6**	0	0	**0**
AM Totals	**79**	**5**	**84**	**49**	**3**	**52**	**7**	**0**	**7**
15:30 to 15:45	18	0	**18**	14	2	**16**	2	0	**2**
15:45 to 16:00	12	0	**12**	6	0	**6**	0	0	**0**
16:00 to 16:15	14	0	**14**	4	0	**4**	1	0	**1**
16:15 to 16:30	15	1	**16**	6	1	**7**	1	0	**1**
16:30 to 16:45	15	0	**15**	12	1	**13**	1	0	**1**
16:45 to 17:00	9	0	**9**	4	0	**4**	2	0	**2**
17:00 to 17:15	35	0	**35**	15	0	**15**	0	0	**0**
17:15 to 17:30	18	0	**18**	6	0	**6**	0	0	**0**
17:30 to 17:45	19	0	**19**	14	0	**14**	0	0	**0**
17:45 to 18:00	6	0	**6**	3	0	**3**	0	0	**0**
18:00 to 18:15	8	0	**8**	11	2	**13**	1	0	**1**
18:15 to 18:30	13	0	**13**	9	0	**9**	0	0	**0**
PM Totals	**182**	**1**	**183**	**104**	**6**	**110**	**8**	**0**	**8**

Approach	Badgally Rd									Farrow Rd								
Direction	Direction 7 (Left Turn)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
6:30 to 6:45	6	0	**6**	41	2	**43**	2	0	**2**	28	1	**29**	4	1	**5**	10	1	**11**
6:45 to 7:00	5	1	**6**	24	1	**25**	0	0	**0**	57	1	**58**	26	0	**26**	9	0	**9**
7:00 to 7:15	4	1	**5**	29	1	**30**	2	0	**2**	79	2	**81**	24	0	**24**	10	1	**11**
7:15 to 7:30	9	0	**9**	22	0	**22**	2	0	**2**	75	2	**77**	35	0	**35**	10	0	**10**
7:30 to 7:45	18	0	**18**	21	2	**23**	4	0	**4**	46	3	**49**	30	0	**30**	12	1	**13**
7:45 to 8:00	10	0	**10**	23	0	**23**	1	0	**1**	37	3	**40**	18	1	**19**	10	1	**11**
8:00 to 8:15	3	0	**3**	16	0	**16**	0	0	**0**	29	2	**31**	18	1	**19**	8	0	**8**
8:15 to 8:30	7	1	**8**	10	1	**11**	0	0	**0**	26	3	**29**	16	0	**16**	8	1	**9**
8:30 to 8:45	7	0	**7**	8	1	**9**	1	0	**1**	17	2	**19**	16	0	**16**	4	0	**4**
8:45 to 9:00	2	0	**2**	4	2	**6**	1	0	**1**	12	1	**13**	20	0	**20**	5	1	**6**
9:00 to 9:15	4	0	**4**	8	2	**10**	1	0	**1**	12	3	**15**	9	0	**9**	0	0	**0**
9:15 to 9:30	9	1	**10**	3	2	**5**	0	1	**1**	14	2	**16**	4	0	**4**	2	0	**2**
AM Totals	**84**	**4**	**88**	**209**	**14**	**223**	**14**	**1**	**15**	**432**	**25**	**457**	**220**	**3**	**223**	**88**	**6**	**94**
15:30 to 15:45	5	0	**5**	11	4	**15**	1	0	**1**	21	2	**23**	7	0	**7**	4	0	**4**
15:45 to 16:00	4	0	**4**	8	3	**11**	2	0	**2**	37	0	**37**	12	1	**13**	4	0	**4**
16:00 to 16:15	8	0	**8**	12	1	**13**	2	0	**2**	25	2	**27**	10	0	**10**	13	0	**13**
16:15 to 16:30	8	0	**8**	8	1	**9**	1	0	**1**	23	4	**27**	3	1	**4**	7	1	**8**
16:30 to 16:45	4	1	**5**	10	1	**11**	5	0	**5**	21	2	**23**	6	0	**6**	7	0	**7**
16:45 to 17:00	10	0	**10**	14	0	**14**	0	0	**0**	22	2	**24**	6	0	**6**	3	0	**3**
17:00 to 17:15	6	0	**6**	19	3	**22**	1	0	**1**	20	2	**22**	4	0	**4**	10	1	**11**
17:15 to 17:30	3	0	**3**	7	1	**8**	0	0	**0**	42	1	**43**	5	0	**5**	12	0	**12**
17:30 to 17:45	10	0	**10**	13	1	**14**	1	0	**1**	52	1	**53**	2	0	**2**	9	0	**9**
17:45 to 18:00	5	0	**5**	20	1	**21**	1	0	**1**	17	2	**19**	8	0	**8**	7	1	**8**
18:00 to 18:15	3	0	**3**	10	1	**11**	0	0	**0**	40	1	**41**	8	0	**8**	13	1	**14**
18:15 to 18:30	3	0	**3**	20	1	**21**	0	0	**0**	40	2	**42**	5	0	**5**	10	0	**10**
PM Totals	**69**	**1**	**70**	**152**	**18**	**170**	**14**	**0**	**14**	**360**	**21**	**381**	**76**	**2**	**78**	**99**	**4**	**103**

Job No. : N5649
Client : Varga Traffic Planning
Suburb : Campbelltown
Location : 4. Farrow Rd / Badgally Rd / Watsford Rd

Day/Date : Tue, 25th February 2020
Weather : Fine
Description : Classified Intersection Count
: Hourly Summary



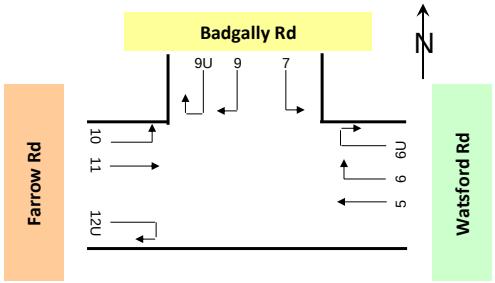
MATRIX Traffic and Transport Data

Approach		Watsford Rd								
Direction		Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
6:30 to 7:30		22	0	**22**	8	1	**9**	0	0	**0**
6:45 to 7:45		23	0	**23**	14	1	**15**	1	0	**1**
7:00 to 8:00		19	0	**19**	20	1	**21**	3	0	**3**
7:15 to 8:15		23	1	**24**	21	1	**22**	4	0	**4**
7:30 to 8:30		28	2	**30**	20	0	**20**	5	0	**5**
7:45 to 8:45		27	3	**30**	19	1	**20**	4	0	**4**
8:00 to 9:00		29	4	**33**	17	1	**18**	3	0	**3**
8:15 to 9:15		28	4	**32**	17	2	**19**	3	0	**3**
8:30 to 9:30		29	3	**32**	21	2	**23**	2	0	**2**
AM Totals		**79**	**5**	**84**	**49**	**3**	**52**	**7**	**0**	**7**
15:30 to 16:30		59	1	**60**	30	3	**33**	4	0	**4**
15:45 to 16:45		56	1	**57**	28	2	**30**	3	0	**3**
16:00 to 17:00		53	1	**54**	26	2	**28**	5	0	**5**
16:15 to 17:15		74	1	**75**	37	2	**39**	4	0	**4**
16:30 to 17:30		77	0	**77**	37	1	**38**	3	0	**3**
16:45 to 17:45		81	0	**81**	39	0	**39**	2	0	**2**
17:00 to 18:00		78	0	**78**	38	0	**38**	0	0	**0**
17:15 to 18:15		51	0	**51**	34	2	**36**	1	0	**1**
17:30 to 18:30		46	0	**46**	37	2	**39**	1	0	**1**
PM Totals		**182**	**1**	**183**	**104**	**6**	**110**	**8**	**0**	**8**

Approach	Badgally Rd									Farrow Rd								
Direction	Direction 7 (Left Turn)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
6:30 to 7:30	24	2	**26**	116	4	**120**	6	0	**6**	239	6	**245**	89	1	**90**	39	2	**41**
6:45 to 7:45	36	2	**38**	96	4	**100**	8	0	**8**	257	8	**265**	115	0	**115**	41	2	**43**
7:00 to 8:00	41	1	**42**	95	3	**98**	9	0	**9**	237	10	**247**	107	1	**108**	42	3	**45**
7:15 to 8:15	40	0	**40**	82	2	**84**	7	0	**7**	187	10	**197**	101	2	**103**	40	2	**42**
7:30 to 8:30	38	1	**39**	70	3	**73**	5	0	**5**	138	11	**149**	82	2	**84**	38	3	**41**
7:45 to 8:45	27	1	**28**	57	2	**59**	2	0	**2**	109	10	**119**	68	2	**70**	30	2	**32**
8:00 to 9:00	19	1	**20**	38	4	**42**	2	0	**2**	84	8	**92**	70	1	**71**	25	2	**27**
8:15 to 9:15	20	1	**21**	30	6	**36**	3	0	**3**	67	9	**76**	61	0	**61**	17	2	**19**
8:30 to 9:30	22	1	**23**	23	7	**30**	3	1	**4**	55	8	**63**	49	0	**49**	11	1	**12**
AM Totals	**84**	**4**	**88**	**209**	**14**	**223**	**14**	**1**	**15**	**432**	**25**	**457**	**220**	**3**	**223**	**88**	**6**	**94**
15:30 to 16:30	25	0	**25**	39	9	**48**	6	0	**6**	106	8	**114**	32	2	**34**	28	1	**29**
15:45 to 16:45	24	1	**25**	38	6	**44**	10	0	**10**	106	8	**114**	31	2	**33**	31	1	**32**
16:00 to 17:00	30	1	**31**	44	3	**47**	8	0	**8**	91	10	**101**	25	1	**26**	30	1	**31**
16:15 to 17:15	28	1	**29**	51	5	**56**	7	0	**7**	86	10	**96**	19	1	**20**	27	2	**29**
16:30 to 17:30	23	1	**24**	50	5	**55**	6	0	**6**	105	7	**112**	21	0	**21**	32	1	**33**
16:45 to 17:45	29	0	**29**	53	5	**58**	2	0	**2**	136	6	**142**	17	0	**17**	34	1	**35**
17:00 to 18:00	24	0	**24**	59	6	**65**	3	0	**3**	131	6	**137**	19	0	**19**	38	2	**40**
17:15 to 18:15	21	0	**21**	50	4	**54**	2	0	**2**	151	5	**156**	23	0	**23**	41	2	**43**
17:30 to 18:30	21	0	**21**	63	4	**67**	2	0	**2**	149	6	**155**	23	0	**23**	39	2	**41**
PM Totals	**69**	**1**	**70**	**152**	**18**	**170**	**14**	**0**	**14**	**360**	**21**	**381**	**76**	**2**	**78**	**99**	**4**	**103**

Job No. : N5649
Client : Varga Traffic Planning
Suburb : Campbelltown
Location : 4. Farrow Rd / Badgally Rd / Watsford Rd

Day/Date : Tue, 25th February 2020
Weather : Fine
Description : Classified Intersection Count
: Peak Hour Summary



MATRIX Traffic and Transport Data

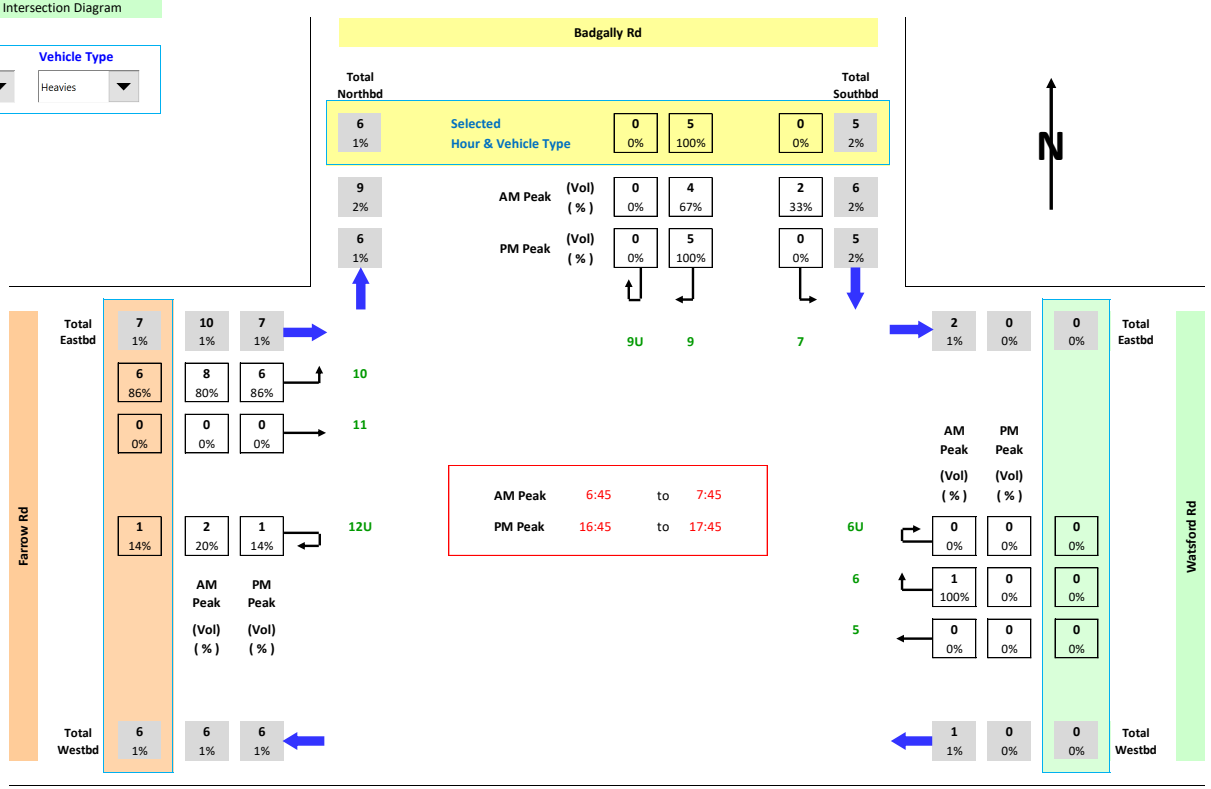
	Approach		Watsford Rd			Badgally Rd			Farrow Rd			Grand Total
	Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	
AM	6:45	to 7:45	38	1	**39**	140	6	**146**	413	10	**423**	**608**
PM	16:45	to 17:45	122	0	**122**	84	5	**89**	187	7	**194**	**405**

Approach		Watsford Rd			Badgally Rd			Farrow Rd			Grand Total
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	
6:30	to 7:30	30	1	**31**	146	6	**152**	367	9	**376**	**559**
6:45	to 7:45	38	1	**39**	140	6	**146**	413	10	**423**	**608**
7:00	to 8:00	42	1	**43**	145	4	**149**	386	14	**400**	**592**
7:15	to 8:15	48	2	**50**	129	2	**131**	328	14	**342**	**523**
7:30	to 8:30	53	2	**55**	113	4	**117**	258	16	**274**	**446**
7:45	to 8:45	50	4	**54**	86	3	**89**	207	14	**221**	**364**
8:00	to 9:00	49	5	**54**	59	5	**64**	179	11	**190**	**308**
8:15	to 9:15	48	6	**54**	53	7	**60**	145	11	**156**	**270**
8:30	to 9:30	52	5	**57**	48	9	**57**	115	9	**124**	**238**
AM Totals		**135**	**8**	**143**	**307**	**19**	**326**	**740**	**34**	**774**	**1,243**
15:30	to 16:30	93	4	**97**	70	9	**79**	166	11	**177**	**353**
15:45	to 16:45	87	3	**90**	72	7	**79**	168	11	**179**	**348**
16:00	to 17:00	84	3	**87**	82	4	**86**	146	12	**158**	**331**
16:15	to 17:15	115	3	**118**	86	6	**92**	132	13	**145**	**355**
16:30	to 17:30	117	1	**118**	79	6	**85**	158	8	**166**	**369**
16:45	to 17:45	122	0	**122**	84	5	**89**	187	7	**194**	**405**
17:00	to 18:00	116	0	**116**	86	6	**92**	188	8	**196**	**404**
17:15	to 18:15	86	2	**88**	73	4	**77**	215	7	**222**	**387**
17:30	to 18:30	84	2	**86**	86	4	**90**	211	8	**219**	**395**
PM Totals		**294**	**7**	**301**	**235**	**19**	**254**	**535**	**27**	**562**	**1,117**

Job No. : N5649
Client : Varga Traffic Planning
Suburb : Campbelltown
Location : 4. Farrow Rd / Badgally Rd / Watsford Rd

Day/Date : Tue, 25th February 2020
Weather : Fine
Description : Classified Intersection Count
: Intersection Diagram

Hour Starting	Vehicle Type
16:45	Heavies



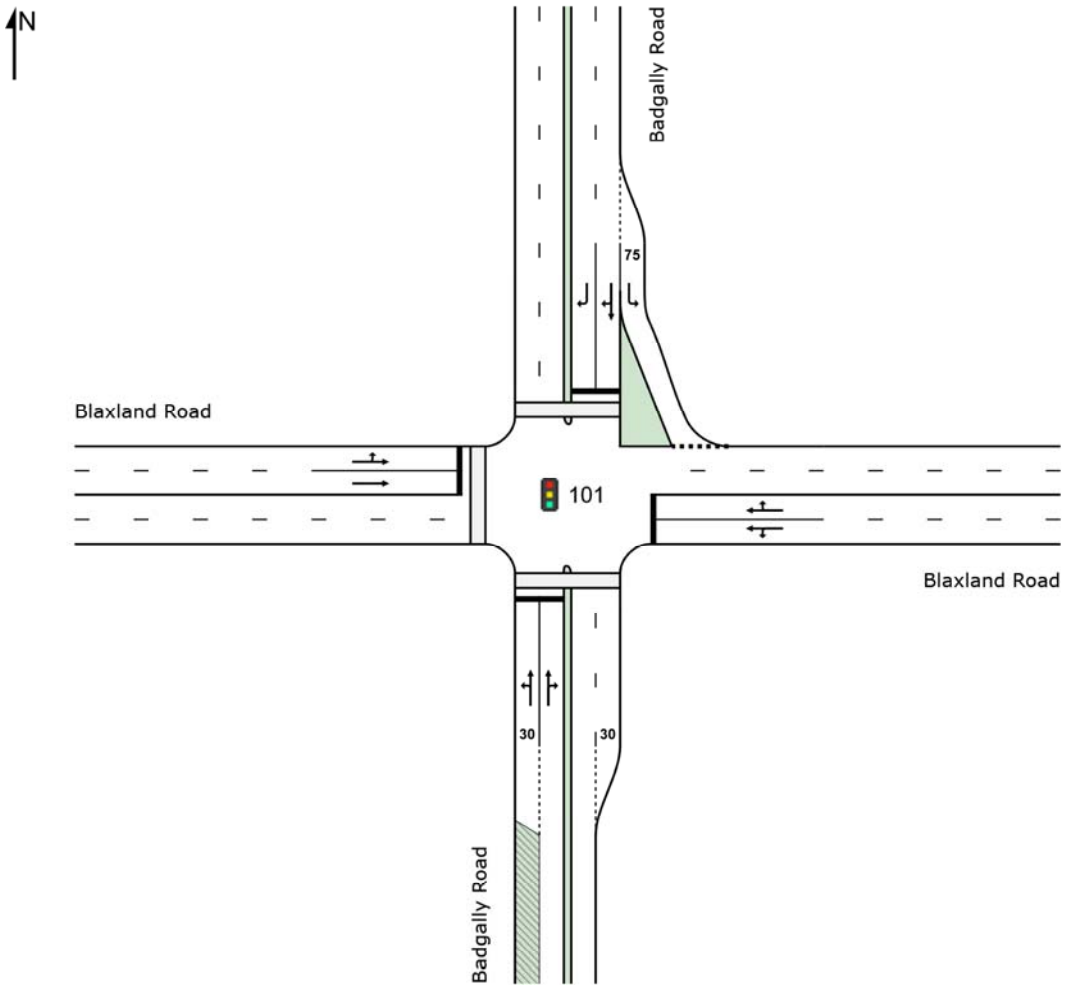
APPENDIX B

SIDRA RESULTS

SITE LAYOUT

Site: 101 [Existing AM]

Blaxland Road & Badgally Road Intersection
Site Category: (None)
Signals - Fixed Time Isolated



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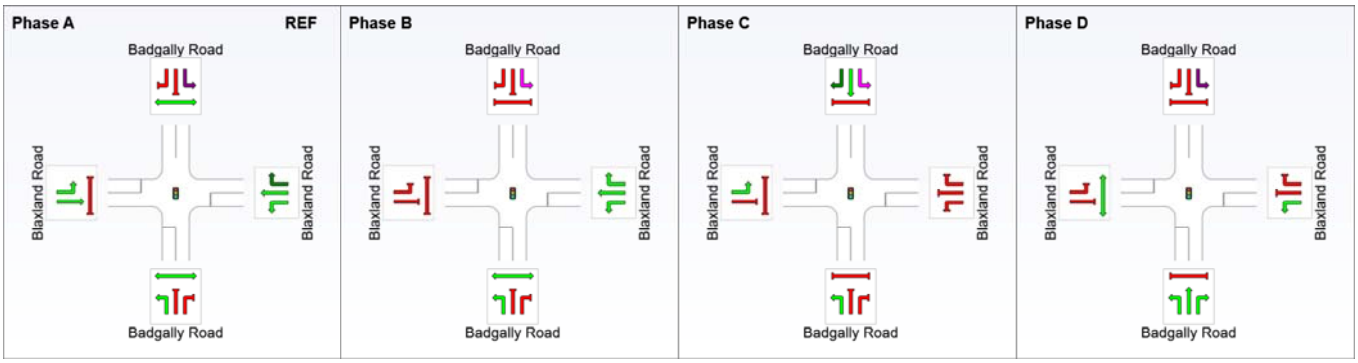
Organisation: VARGA TRAFFIC PLANNING | Created: Tuesday, 3 March, 2020 8:46:21 AM
Project: Z:\DATA\Data\Jobs01\Jobs\20work\20067Y_2FarrowRdCampbelltown\SIDRA\200228\BlaxlandRd_BadgallyRd.sip8

INPUT PHASE SEQUENCE

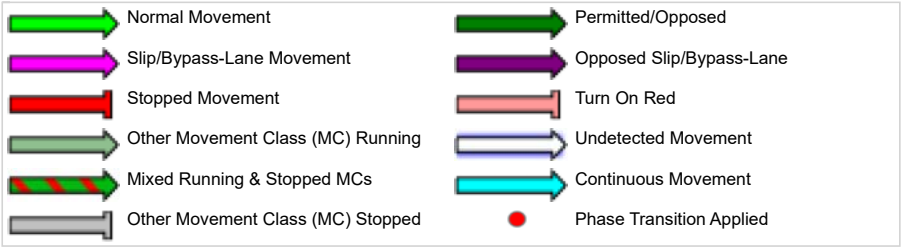
Site: 101 [Existing AM]

Blaxland Road & Badgally Road Intersection
Site Category: (None)
Signals - Fixed Time Isolated

Phase Sequence: TCS Plan
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase



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MOVEMENT SUMMARY

Site: 101 [Existing AM]

Blaxland Road & Badgally Road Intersection
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 103 seconds (Site Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Badgally Road												
1	L2	38	2.6	0.284	44.8	LOS D	3.0	22.1	0.94	0.74	0.94	34.7
2	T1	60	13.3	0.284	43.4	LOS D	3.0	22.1	0.95	0.74	0.95	34.1
3	R2	25	0.0	0.284	53.0	LOS D	2.7	19.8	0.96	0.74	0.96	32.4
Approach		123	7.3	0.284	45.8	LOS D	3.0	22.1	0.95	0.74	0.95	33.9
East: Blaxland Road												
4	L2	31	0.0	0.545	26.2	LOS B	16.4	123.1	0.75	0.68	0.75	43.7
5	T1	438	8.7	0.545	20.7	LOS B	16.4	123.1	0.75	0.68	0.75	44.6
6	R2	201	8.5	0.936	81.0	LOS F	13.3	99.9	1.00	1.24	2.08	25.5
Approach		670	8.2	0.936	39.0	LOS C	16.4	123.1	0.83	0.85	1.15	36.4
North: Badgally Road												
7	L2	194	9.3	0.200	11.8	LOS A	3.4	26.0	0.44	0.68	0.44	49.4
8	T1	64	6.2	0.538	36.6	LOS C	9.3	68.8	0.92	0.80	0.92	36.1
9	R2	348	6.3	0.538	42.2	LOS C	9.3	68.8	0.92	0.81	0.92	35.0
Approach		606	7.3	0.538	31.9	LOS C	9.3	68.8	0.76	0.77	0.76	38.8
West: Blaxland Road												
10	L2	230	5.7	0.752	35.1	LOS C	21.2	156.0	0.94	0.88	1.10	38.5
11	T1	768	5.9	0.752	31.7	LOS C	22.4	164.8	0.94	0.86	1.02	39.1
Approach		998	5.8	0.752	32.4	LOS C	22.4	164.8	0.94	0.87	1.03	39.0
All Vehicles		2397	6.9	0.936	34.8	LOS C	22.4	164.8	0.87	0.83	0.99	37.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
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 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
P1	South Full Crossing	50	45.8	LOS E	0.1	0.1	0.94	0.94
P3	North Full Crossing	50	45.8	LOS E	0.1	0.1	0.94	0.94
P4	West Full Crossing	50	45.8	LOS E	0.1	0.1	0.94	0.94
All Pedestrians		150	45.8	LOS E			0.94	0.94

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.

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MOVEMENT SUMMARY

Site: 101 [Existing PM]

Blaxland Road & Badgally Road Intersection
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 101 seconds (Site Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Badgally Road												
1	L2	78	1.3	0.580	45.5	LOS D	6.4	45.8	0.98	0.79	0.98	34.6
2	T1	142	3.5	0.580	44.5	LOS D	6.4	45.8	0.99	0.79	0.99	33.9
3	R2	40	7.5	0.580	54.0	LOS D	5.8	42.0	1.00	0.79	1.01	32.3
Approach		260	3.5	0.580	46.3	LOS D	6.4	45.8	0.99	0.79	0.99	33.8
East: Blaxland Road												
4	L2	31	3.2	0.814	30.7	LOS C	33.4	237.5	0.91	0.86	0.94	41.5
5	T1	840	1.8	0.814	27.5	LOS B	33.4	237.5	0.92	0.88	1.03	41.1
6	R2	287	3.5	0.814	51.4	LOS D	17.3	124.2	1.00	1.09	1.68	32.6
Approach		1158	2.2	0.814	33.5	LOS C	33.4	237.5	0.94	0.93	1.19	38.6
North: Badgally Road												
7	L2	225	3.1	0.204	10.7	LOS A	3.6	25.7	0.42	0.67	0.42	50.3
8	T1	45	11.1	0.550	38.8	LOS C	8.4	60.8	0.94	0.81	0.94	35.1
9	R2	328	1.2	0.550	44.3	LOS D	8.4	60.8	0.94	0.81	0.94	34.3
Approach		598	2.7	0.550	31.3	LOS C	8.4	60.8	0.74	0.76	0.74	39.1
West: Blaxland Road												
10	L2	357	1.4	0.896	48.7	LOS D	22.4	159.3	1.00	1.07	1.47	33.2
11	T1	507	3.0	0.896	51.9	LOS D	22.7	162.7	1.00	1.09	1.38	32.2
Approach		864	2.3	0.896	50.6	LOS D	22.7	162.7	1.00	1.08	1.42	32.6
All Vehicles		2880	2.5	0.896	39.3	LOS C	33.4	237.5	0.92	0.93	1.15	36.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
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 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
P1	South Full Crossing	50	44.8	LOS E	0.1	0.1	0.94	0.94
P3	North Full Crossing	50	44.8	LOS E	0.1	0.1	0.94	0.94
P4	West Full Crossing	50	44.8	LOS E	0.1	0.1	0.94	0.94
All Pedestrians		150	44.8	LOS E			0.94	0.94

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.

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MOVEMENT SUMMARY

Site: 101 [Proposed AM]

Blaxland Road & Badgally Road Intersection
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 103 seconds (Site Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Badgally Road												
1	L2	72	1.4	0.316	42.7	LOS D	4.1	29.9	0.92	0.75	0.92	35.1
2	T1	60	13.3	0.316	43.5	LOS D	4.1	29.9	0.95	0.75	0.95	34.0
3	R2	25	0.0	0.316	53.2	LOS D	3.0	22.2	0.96	0.74	0.96	32.4
Approach		157	5.7	0.316	44.7	LOS D	4.1	29.9	0.94	0.75	0.94	34.2
East: Blaxland Road												
4	L2	31	0.0	0.545	26.2	LOS B	16.4	123.1	0.75	0.68	0.75	43.7
5	T1	438	8.7	0.545	20.7	LOS B	16.4	123.1	0.75	0.68	0.75	44.6
6	R2	201	8.5	0.936	81.0	LOS F	13.3	99.9	1.00	1.24	2.08	25.5
Approach		670	8.2	0.936	39.0	LOS C	16.4	123.1	0.83	0.85	1.15	36.4
North: Badgally Road												
7	L2	194	9.3	0.200	11.8	LOS A	3.4	26.0	0.44	0.68	0.44	49.4
8	T1	64	6.2	0.538	36.6	LOS C	9.3	68.8	0.92	0.80	0.92	36.1
9	R2	348	6.3	0.538	42.2	LOS C	9.3	68.8	0.92	0.81	0.92	35.0
Approach		606	7.3	0.538	31.9	LOS C	9.3	68.8	0.76	0.77	0.76	38.8
West: Blaxland Road												
10	L2	230	5.7	0.752	35.1	LOS C	21.2	156.0	0.94	0.88	1.10	38.5
11	T1	768	5.9	0.752	31.7	LOS C	22.4	164.8	0.94	0.86	1.02	39.1
Approach		998	5.8	0.752	32.4	LOS C	22.4	164.8	0.94	0.87	1.03	39.0
All Vehicles		2431	6.8	0.936	34.9	LOS C	22.4	164.8	0.87	0.83	0.99	37.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
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 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
P1	South Full Crossing	50	45.8	LOS E	0.1	0.1	0.94	0.94
P3	North Full Crossing	50	45.8	LOS E	0.1	0.1	0.94	0.94
P4	West Full Crossing	50	45.8	LOS E	0.1	0.1	0.94	0.94
All Pedestrians		150	45.8	LOS E			0.94	0.94

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.

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MOVEMENT SUMMARY

Site: 101 [Proposed PM]

Blaxland Road & Badgally Road Intersection
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 101 seconds (Site Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Badgally Road												
1	L2	91	1.1	0.596	45.8	LOS D	6.9	49.1	0.99	0.79	0.99	34.4
2	T1	142	3.5	0.596	44.9	LOS D	6.9	49.1	0.99	0.80	1.01	33.8
3	R2	40	7.5	0.596	54.2	LOS D	5.9	43.3	1.00	0.80	1.02	32.3
Approach		273	3.3	0.596	46.6	LOS D	6.9	49.1	0.99	0.80	1.00	33.7
East: Blaxland Road												
4	L2	31	3.2	0.814	30.7	LOS C	33.4	237.5	0.91	0.86	0.94	41.5
5	T1	840	1.8	0.814	27.5	LOS B	33.4	237.5	0.92	0.88	1.03	41.1
6	R2	287	3.5	0.814	51.4	LOS D	17.3	124.2	1.00	1.09	1.68	32.6
Approach		1158	2.2	0.814	33.5	LOS C	33.4	237.5	0.94	0.93	1.19	38.6
North: Badgally Road												
7	L2	225	3.1	0.204	10.7	LOS A	3.6	25.7	0.42	0.67	0.42	50.3
8	T1	45	11.1	0.550	38.8	LOS C	8.4	60.8	0.94	0.81	0.94	35.1
9	R2	328	1.2	0.550	44.3	LOS D	8.4	60.8	0.94	0.81	0.94	34.3
Approach		598	2.7	0.550	31.3	LOS C	8.4	60.8	0.74	0.76	0.74	39.1
West: Blaxland Road												
10	L2	357	1.4	0.896	48.7	LOS D	22.4	159.3	1.00	1.07	1.47	33.2
11	T1	507	3.0	0.896	51.9	LOS D	22.7	162.7	1.00	1.09	1.38	32.2
Approach		864	2.3	0.896	50.6	LOS D	22.7	162.7	1.00	1.08	1.42	32.6
All Vehicles		2893	2.5	0.896	39.4	LOS C	33.4	237.5	0.92	0.93	1.15	36.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
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 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
P1	South Full Crossing	50	44.8	LOS E	0.1	0.1	0.94	0.94
P3	North Full Crossing	50	44.8	LOS E	0.1	0.1	0.94	0.94
P4	West Full Crossing	50	44.8	LOS E	0.1	0.1	0.94	0.94
All Pedestrians		150	44.8	LOS E			0.94	0.94

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.

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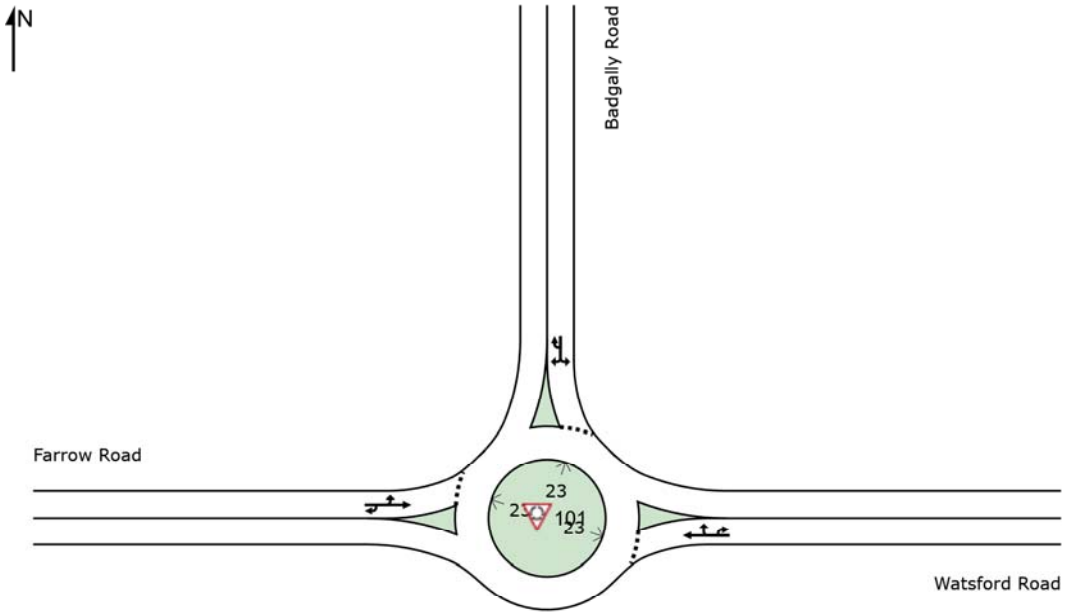
SITE LAYOUT

Site: 101 [Existing AM]

Farrow Road, Watsford Road & Badgally Road Roundabout
Site Category: (None)
Roundabout



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Organisation: VARGA TRAFFIC PLANNING | Created: Friday, 28 February, 2020 3:21:39 PM
Project: Z:\DATA\Data\Jobs01\Jobs\20work\20067Y_2FarrowRdCampbelltown\SIDRA\200228\BadgallyRd_FarrowRd.sip8

MOVEMENT SUMMARY

Site: 101 [Existing AM]

Farrow Road, Watsford Road & Badgally Road Roundabout
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
East: Watsford Road												
5	T1	23	0.0	0.033	4.5	LOS A	0.2	1.1	0.31	0.52	0.31	54.4
6	R2	16	6.3	0.033	9.6	LOS A	0.2	1.1	0.31	0.52	0.31	54.2
6u	U	1	0.0	0.033	11.7	LOS A	0.2	1.1	0.31	0.52	0.31	55.5
Approach		40	2.5	0.033	6.7	LOS A	0.2	1.1	0.31	0.52	0.31	54.4
North: Badgally Road												
7	L2	40	5.0	0.126	4.6	LOS A	0.6	4.7	0.33	0.60	0.33	51.8
9	R2	104	3.8	0.126	9.7	LOS A	0.6	4.7	0.33	0.60	0.33	53.1
9u	U	8	0.0	0.126	11.7	LOS A	0.6	4.7	0.33	0.60	0.33	54.3
Approach		152	3.9	0.126	8.4	LOS A	0.6	4.7	0.33	0.60	0.33	52.9
West: Farrow Road												
10	L2	273	2.9	0.277	3.9	LOS A	1.7	12.3	0.13	0.46	0.13	54.7
11	T1	115	0.0	0.277	4.0	LOS A	1.7	12.3	0.13	0.46	0.13	56.3
12u	U	45	4.4	0.277	11.1	LOS A	1.7	12.3	0.13	0.46	0.13	57.3
Approach		433	2.3	0.277	4.6	LOS A	1.7	12.3	0.13	0.46	0.13	55.4
All Vehicles		625	2.7	0.277	5.7	LOS A	1.7	12.3	0.19	0.50	0.19	54.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
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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MOVEMENT SUMMARY

Site: 101 [Existing PM]

Farrow Road, Watsford Road & Badgally Road Roundabout
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
East: Watsford Road												
5	T1	23	0.0	0.029	4.2	LOS A	0.1	1.0	0.23	0.50	0.23	54.8
6	R2	14	0.0	0.029	9.2	LOS A	0.1	1.0	0.23	0.50	0.23	54.8
6u	U	1	0.0	0.029	11.4	LOS A	0.1	1.0	0.23	0.50	0.23	55.9
Approach		38	0.0	0.029	6.3	LOS A	0.1	1.0	0.23	0.50	0.23	54.8
North: Badgally Road												
7	L2	29	0.0	0.067	3.9	LOS A	0.3	2.3	0.17	0.57	0.17	52.8
9	R2	58	8.6	0.067	9.2	LOS A	0.3	2.3	0.17	0.57	0.17	53.8
9u	U	2	0.0	0.067	11.2	LOS A	0.3	2.3	0.17	0.57	0.17	55.2
Approach		89	5.6	0.067	7.5	LOS A	0.3	2.3	0.17	0.57	0.17	53.5
West: Farrow Road												
10	L2	142	4.2	0.126	3.8	LOS A	0.7	4.8	0.09	0.50	0.09	54.4
11	T1	17	0.0	0.126	3.9	LOS A	0.7	4.8	0.09	0.50	0.09	56.0
12u	U	35	2.9	0.126	11.1	LOS A	0.7	4.8	0.09	0.50	0.09	57.1
Approach		194	3.6	0.126	5.1	LOS A	0.7	4.8	0.09	0.50	0.09	55.0
All Vehicles		321	3.7	0.126	5.9	LOS A	0.7	4.8	0.13	0.52	0.13	54.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
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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MOVEMENT SUMMARY

Site: 101 [Proposed AM]

Farrow Road, Watsford Road & Badgally Road Roundabout
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
East: Watsford Road												
5	T1	121	0.0	0.113	4.6	LOS A	0.6	4.3	0.34	0.47	0.34	55.2
6	R2	16	6.3	0.113	9.7	LOS A	0.6	4.3	0.34	0.47	0.34	55.0
6u	U	1	0.0	0.113	11.7	LOS A	0.6	4.3	0.34	0.47	0.34	56.4
Approach		138	0.7	0.113	5.2	LOS A	0.6	4.3	0.34	0.47	0.34	55.2
North: Badgally Road												
7	L2	40	5.0	0.146	5.6	LOS A	0.8	5.7	0.50	0.67	0.50	51.4
9	R2	104	3.8	0.146	10.7	LOS A	0.8	5.7	0.50	0.67	0.50	52.6
9u	U	8	0.0	0.146	12.8	LOS A	0.8	5.7	0.50	0.67	0.50	53.8
Approach		152	3.9	0.146	9.5	LOS A	0.8	5.7	0.50	0.67	0.50	52.4
West: Farrow Road												
10	L2	273	2.9	0.396	3.9	LOS A	2.9	20.3	0.15	0.43	0.15	54.8
11	T1	315	0.0	0.396	4.0	LOS A	2.9	20.3	0.15	0.43	0.15	56.3
12u	U	45	4.4	0.396	11.2	LOS A	2.9	20.3	0.15	0.43	0.15	57.4
Approach		633	1.6	0.396	4.4	LOS A	2.9	20.3	0.15	0.43	0.15	55.7
All Vehicles		923	1.8	0.396	5.4	LOS A	2.9	20.3	0.24	0.48	0.24	55.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
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: 101 [Proposed PM]

Farrow Road, Watsford Road & Badgally Road Roundabout
Site Category: (None)
Roundabout

Movement Performance - Vehicles

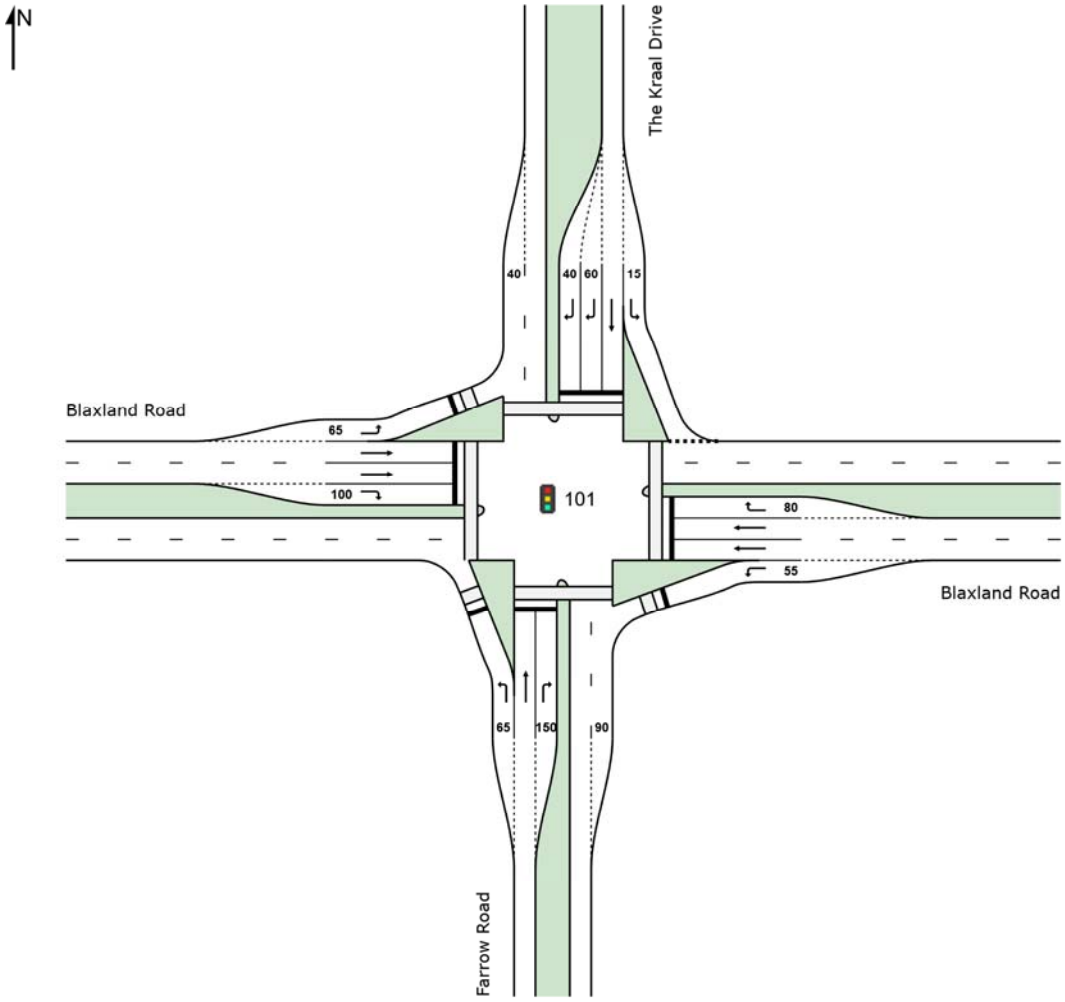
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Watsford Road												
5	T1	180	0.0	0.146	4.3	LOS A	0.8	5.4	0.26	0.43	0.26	55.8
6	R2	14	0.0	0.146	9.3	LOS A	0.8	5.4	0.26	0.43	0.26	55.8
6u	U	1	0.0	0.146	11.4	LOS A	0.8	5.4	0.26	0.43	0.26	57.0
Approach		195	0.0	0.146	4.7	LOS A	0.8	5.4	0.26	0.43	0.26	55.8
North: Badgally Road												
7	L2	29	0.0	0.073	4.3	LOS A	0.3	2.6	0.28	0.58	0.28	52.5
9	R2	58	8.6	0.073	9.5	LOS A	0.3	2.6	0.28	0.58	0.28	53.5
9u	U	2	0.0	0.073	11.5	LOS A	0.3	2.6	0.28	0.58	0.28	54.9
Approach		89	5.6	0.073	7.9	LOS A	0.3	2.6	0.28	0.58	0.28	53.2
West: Farrow Road												
10	L2	142	4.2	0.172	3.8	LOS A	1.0	6.8	0.09	0.47	0.09	54.7
11	T1	92	0.0	0.172	3.9	LOS A	1.0	6.8	0.09	0.47	0.09	56.2
12u	U	35	2.9	0.172	11.1	LOS A	1.0	6.8	0.09	0.47	0.09	57.3
Approach		269	2.6	0.172	4.8	LOS A	1.0	6.8	0.09	0.47	0.09	55.5
All Vehicles		553	2.2	0.172	5.3	LOS A	1.0	6.8	0.18	0.47	0.18	55.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
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.

SITE LAYOUT

Site: 101 [Existing AM]

Blaxland Road, Farrow Road & The Kraal Drive Intersection
Site Category: (None)
Signals - Fixed Time Isolated

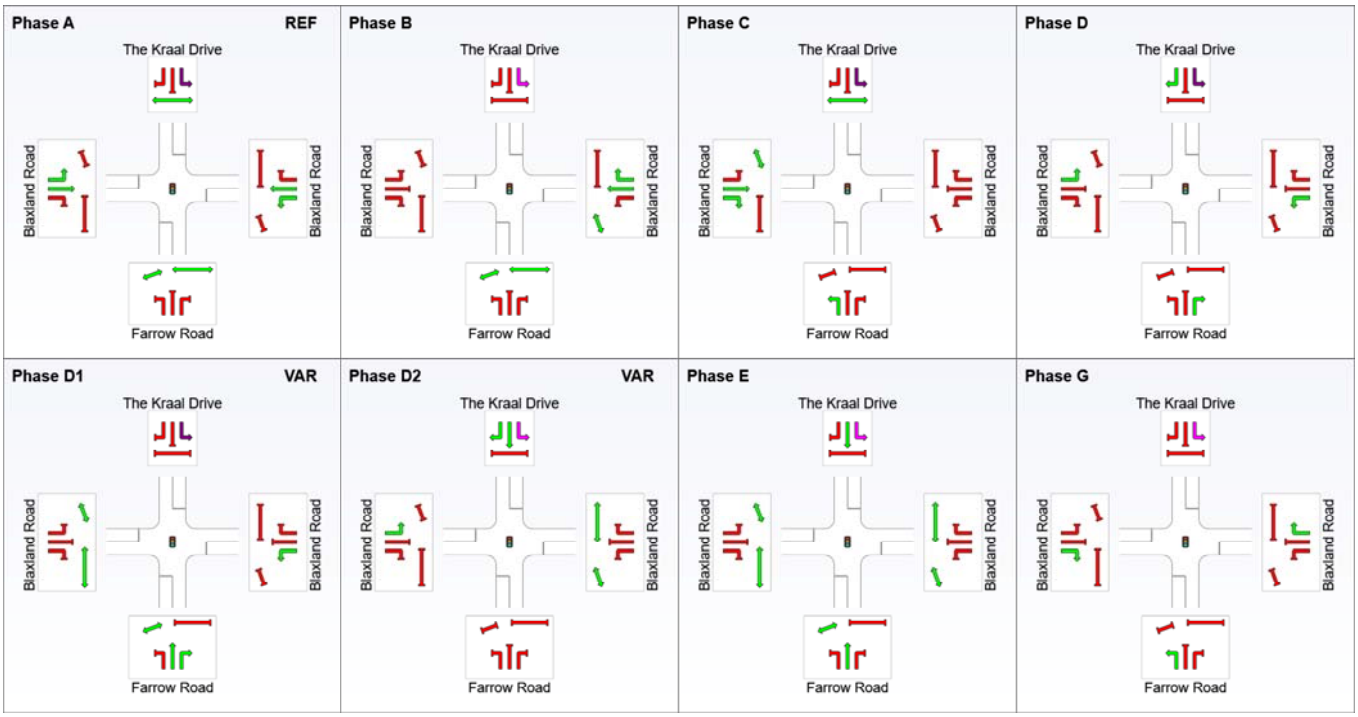


INPUT PHASE SEQUENCE

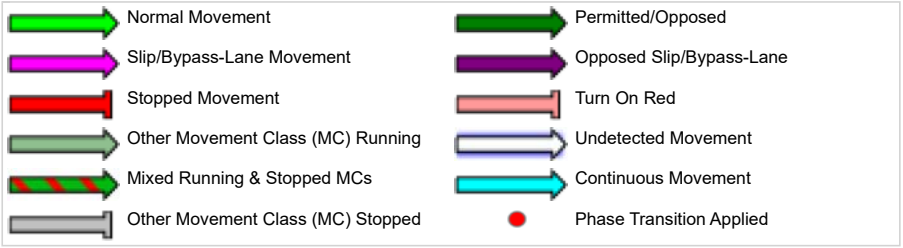
Site: 101 [Existing AM]

Blaxland Road, Farrow Road & The Kraal Drive Intersection
Site Category: (None)
Signals - Fixed Time Isolated

Phase Sequence: TCS
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D, D1*, D2*, E, G
Movement Class: All Movement Classes



REF: Reference Phase
VAR: Variable Phase



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MOVEMENT SUMMARY

Site: 101 [Existing AM]

Blaxland Road, Farrow Road & The Kraal Drive Intersection
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 125 seconds (Site Optimum Cycle Time - Minimum Delay)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Movement Performance - Vehicles

Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Farrow Road												
1	L2	60	10.0	0.288	34.6	LOS C	1.8	13.9	0.95	0.74	0.95	37.9
2	T1	27	11.1	0.116	52.7	LOS D	1.5	11.3	0.92	0.67	0.92	32.3
3	R2	5	40.0	0.048	66.5	LOS E	0.3	2.8	0.96	0.65	0.96	28.2
Approach		92	12.0	0.288	41.7	LOS C	1.8	13.9	0.94	0.72	0.94	35.4
East: Blaxland Road												
4	L2	21	33.3	0.042	21.8	LOS B	0.5	4.7	0.70	0.67	0.70	43.2
5	T1	693	5.9	0.518	33.6	LOS C	16.7	122.7	0.84	0.73	0.84	38.8
6	R2	30	10.0	0.180	37.0	LOS C	1.1	8.3	0.95	0.71	0.95	36.9
Approach		744	6.9	0.518	33.4	LOS C	16.7	122.7	0.84	0.72	0.84	38.8
North: The Kraal Drive												
7	L2	70	1.4	0.064	12.2	LOS A	1.3	9.6	0.39	0.64	0.39	49.4
8	T1	29	10.3	0.076	42.7	LOS D	1.4	10.8	0.84	0.62	0.84	35.4
9	R2	401	2.0	0.843	68.8	LOS E	13.0	92.8	1.00	0.95	1.27	28.0
Approach		500	2.4	0.843	59.4	LOS E	13.0	92.8	0.90	0.88	1.12	30.2
West: Blaxland Road												
10	L2	453	2.4	0.597	21.3	LOS B	11.9	84.7	0.83	0.82	0.83	44.0
11	T1	976	5.8	0.836	32.6	LOS C	25.7	189.3	0.96	0.91	1.07	39.2
12	R2	158	5.1	0.735	38.4	LOS C	5.4	39.4	1.00	0.84	1.11	36.2
Approach		1587	4.8	0.836	30.0	LOS C	25.7	189.3	0.93	0.88	1.00	40.1
All Vehicles		2923	5.1	0.843	36.2	LOS C	25.7	189.3	0.90	0.83	0.98	37.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
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 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
P1	South Full Crossing	50	56.8	LOS E	0.2	0.2	0.95	0.95
P1B	South Slip/Bypass Lane Crossing	50	25.6	LOS C	0.1	0.1	0.91	0.91
P2	East Full Crossing	50	56.8	LOS E	0.2	0.2	0.95	0.95
P2B	East Slip/Bypass Lane Crossing	50	25.6	LOS C	0.1	0.1	0.91	0.91
P3	North Full Crossing	50	35.7	LOS D	0.1	0.1	0.91	0.91
P4	West Full Crossing	50	56.8	LOS E	0.2	0.2	0.95	0.95
P4B	West Slip/Bypass Lane Crossing	50	27.5	LOS C	0.1	0.1	0.91	0.91
All Pedestrians		350	40.7	LOS E			0.93	0.93

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.

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MOVEMENT SUMMARY

Site: 101 [Existing PM]

Blaxland Road, Farrow Road & The Kraal Drive Intersection
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 145 seconds (Site Optimum Cycle Time - Minimum Delay)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Movement Performance - Vehicles

Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Farrow Road												
1	L2	347	1.7	0.914	55.2	LOS D	17.9	127.0	1.00	1.00	1.32	31.3
2	T1	58	3.4	0.245	62.6	LOS E	3.8	27.1	0.94	0.72	0.94	29.7
3	R2	10	20.0	0.081	74.8	LOS F	0.7	5.6	0.96	0.68	0.96	26.6
Approach		415	2.4	0.914	56.7	LOS E	17.9	127.0	0.99	0.95	1.26	31.0
East: Blaxland Road												
4	L2	12	8.3	0.020	23.3	LOS B	0.3	2.4	0.69	0.65	0.69	42.9
5	T1	1112	1.3	0.885	57.6	LOS E	43.1	304.6	0.99	0.99	1.13	31.0
6	R2	105	2.9	0.418	39.3	LOS C	4.2	30.2	0.96	0.77	0.96	36.1
Approach		1229	1.5	0.885	55.7	LOS D	43.1	304.6	0.98	0.97	1.11	31.4
North: The Kraal Drive												
7	L2	85	1.2	0.072	8.6	LOS A	1.2	8.3	0.26	0.62	0.26	51.9
8	T1	27	0.0	0.084	54.9	LOS D	1.6	11.3	0.88	0.64	0.88	31.7
9	R2	337	1.2	0.902	89.0	LOS F	13.5	95.7	1.00	1.01	1.44	24.3
Approach		449	1.1	0.902	71.7	LOS F	13.5	95.7	0.85	0.91	1.18	27.4
West: Blaxland Road												
10	L2	421	1.0	0.602	25.6	LOS B	13.3	94.1	0.86	0.82	0.86	41.9
11	T1	717	2.4	0.501	25.8	LOS B	15.7	112.0	0.82	0.71	0.82	42.2
12	R2	98	8.2	0.270	32.6	LOS C	3.2	24.2	0.88	0.76	0.88	38.4
Approach		1236	2.3	0.602	26.3	LOS B	15.7	112.0	0.84	0.75	0.84	41.8
All Vehicles		3329	1.9	0.914	47.1	LOS D	43.1	304.6	0.91	0.88	1.04	33.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
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 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
P1	South Full Crossing	50	66.8	LOS F	0.2	0.2	0.96	0.96
P1B	South Slip/Bypass Lane Crossing	50	30.6	LOS D	0.1	0.1	0.92	0.92
P2	East Full Crossing	50	66.8	LOS F	0.2	0.2	0.96	0.96
P2B	East Slip/Bypass Lane Crossing	50	30.6	LOS D	0.1	0.1	0.92	0.92
P3	North Full Crossing	50	40.8	LOS E	0.1	0.1	0.92	0.92
P4	West Full Crossing	50	66.8	LOS F	0.2	0.2	0.96	0.96
P4B	West Slip/Bypass Lane Crossing	50	35.1	LOS D	0.1	0.1	0.92	0.92
All Pedestrians		350	48.2	LOS E			0.94	0.94

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.

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MOVEMENT SUMMARY

Site: 101 [Proposed AM]

Blaxland Road, Farrow Road & The Kraal Drive Intersection
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 125 seconds (Site Optimum Cycle Time - Minimum Delay)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Movement Performance - Vehicles

Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Farrow Road												
1	L2	94	6.4	0.413	34.6	LOS C	2.9	21.2	0.96	0.77	0.96	38.0
2	T1	27	11.1	0.116	52.7	LOS D	1.5	11.3	0.92	0.67	0.92	32.3
3	R2	5	40.0	0.048	66.5	LOS E	0.3	2.8	0.96	0.65	0.96	28.2
Approach		126	8.7	0.413	39.7	LOS C	2.9	21.2	0.95	0.74	0.95	36.1
East: Blaxland Road												
4	L2	21	33.3	0.043	22.3	LOS B	0.5	4.7	0.71	0.67	0.71	42.9
5	T1	727	5.6	0.555	34.8	LOS C	18.0	131.8	0.86	0.75	0.86	38.3
6	R2	30	10.0	0.166	36.4	LOS C	1.1	8.2	0.94	0.71	0.94	37.1
Approach		778	6.6	0.555	34.6	LOS C	18.0	131.8	0.86	0.74	0.86	38.3
North: The Kraal Drive												
7	L2	70	1.4	0.064	12.6	LOS A	1.4	9.8	0.39	0.64	0.39	49.2
8	T1	29	10.3	0.076	42.7	LOS D	1.4	10.8	0.84	0.62	0.84	35.4
9	R2	401	2.0	0.843	68.8	LOS E	13.0	92.8	1.00	0.95	1.27	28.0
Approach		500	2.4	0.843	59.4	LOS E	13.0	92.8	0.91	0.88	1.12	30.2
West: Blaxland Road												
10	L2	453	2.4	0.608	21.8	LOS B	12.2	86.9	0.84	0.82	0.84	43.8
11	T1	976	5.8	0.859	36.1	LOS C	27.2	200.2	0.97	0.95	1.12	37.8
12	R2	191	4.2	0.827	41.9	LOS C	7.0	50.9	1.00	0.91	1.24	35.0
Approach		1620	4.7	0.859	32.8	LOS C	27.2	200.2	0.94	0.91	1.06	38.9
All Vehicles		3024	5.0	0.859	37.9	LOS C	27.2	200.2	0.91	0.85	1.01	36.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
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 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
P1	South Full Crossing	50	56.8	LOS E	0.2	0.2	0.95	0.95
P1B	South Slip/Bypass Lane Crossing	50	25.6	LOS C	0.1	0.1	0.91	0.91
P2	East Full Crossing	50	56.8	LOS E	0.2	0.2	0.95	0.95
P2B	East Slip/Bypass Lane Crossing	50	25.6	LOS C	0.1	0.1	0.91	0.91
P3	North Full Crossing	50	35.7	LOS D	0.1	0.1	0.91	0.91
P4	West Full Crossing	50	56.8	LOS E	0.2	0.2	0.95	0.95
P4B	West Slip/Bypass Lane Crossing	50	27.5	LOS C	0.1	0.1	0.91	0.91
All Pedestrians		350	40.7	LOS E			0.93	0.93

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.

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MOVEMENT SUMMARY

Site: 101 [Proposed PM]

Blaxland Road, Farrow Road & The Kraal Drive Intersection
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 140 seconds (Site Optimum Cycle Time - Minimum Delay)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Movement Performance - Vehicles

Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
South: Farrow Road												
1	L2	360	1.7	0.915	54.1	LOS D	18.1	128.2	1.00	1.00	1.33	31.6
2	T1	58	3.4	0.250	61.0	LOS E	3.6	26.3	0.95	0.72	0.95	30.1
3	R2	10	20.0	0.054	66.0	LOS E	0.6	5.1	0.92	0.68	0.92	28.5
Approach		428	2.3	0.915	55.3	LOS D	18.1	128.2	0.99	0.96	1.27	31.3
East: Blaxland Road												
4	L2	12	8.3	0.019	21.1	LOS B	0.3	2.1	0.66	0.65	0.66	44.0
5	T1	1125	1.2	0.917	65.2	LOS E	45.8	324.3	1.00	1.07	1.23	29.1
6	R2	105	2.9	0.404	37.9	LOS C	4.1	29.4	0.95	0.77	0.95	36.6
Approach		1242	1.4	0.917	62.5	LOS E	45.8	324.3	0.99	1.04	1.20	29.7
North: The Kraal Drive												
7	L2	85	1.2	0.073	8.7	LOS A	1.2	8.3	0.26	0.62	0.26	51.8
8	T1	27	0.0	0.114	59.5	LOS E	1.7	11.6	0.92	0.67	0.92	30.5
9	R2	337	1.2	0.901	86.6	LOS F	13.1	92.8	1.00	1.01	1.45	24.7
Approach		449	1.1	0.901	70.2	LOS E	13.1	92.8	0.86	0.92	1.19	27.8
West: Blaxland Road												
10	L2	421	1.0	0.627	25.9	LOS B	13.1	92.5	0.88	0.83	0.88	41.8
11	T1	717	2.4	0.512	25.5	LOS B	15.3	109.3	0.83	0.72	0.83	42.4
12	R2	150	5.3	0.391	32.0	LOS C	4.9	35.6	0.90	0.78	0.90	38.7
Approach		1288	2.3	0.627	26.4	LOS B	15.3	109.3	0.86	0.76	0.86	41.7
All Vehicles		3407	1.8	0.917	48.9	LOS D	45.8	324.3	0.92	0.91	1.08	33.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
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 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
P1	South Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P1B	South Slip/Bypass Lane Crossing	50	29.4	LOS C	0.1	0.1	0.92	0.92
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P2B	East Slip/Bypass Lane Crossing	50	29.4	LOS C	0.1	0.1	0.92	0.92
P3	North Full Crossing	50	38.6	LOS D	0.1	0.1	0.92	0.92
P4	West Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P4B	West Slip/Bypass Lane Crossing	50	33.8	LOS D	0.1	0.1	0.92	0.92
All Pedestrians		350	46.3	LOS E			0.93	0.93

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.

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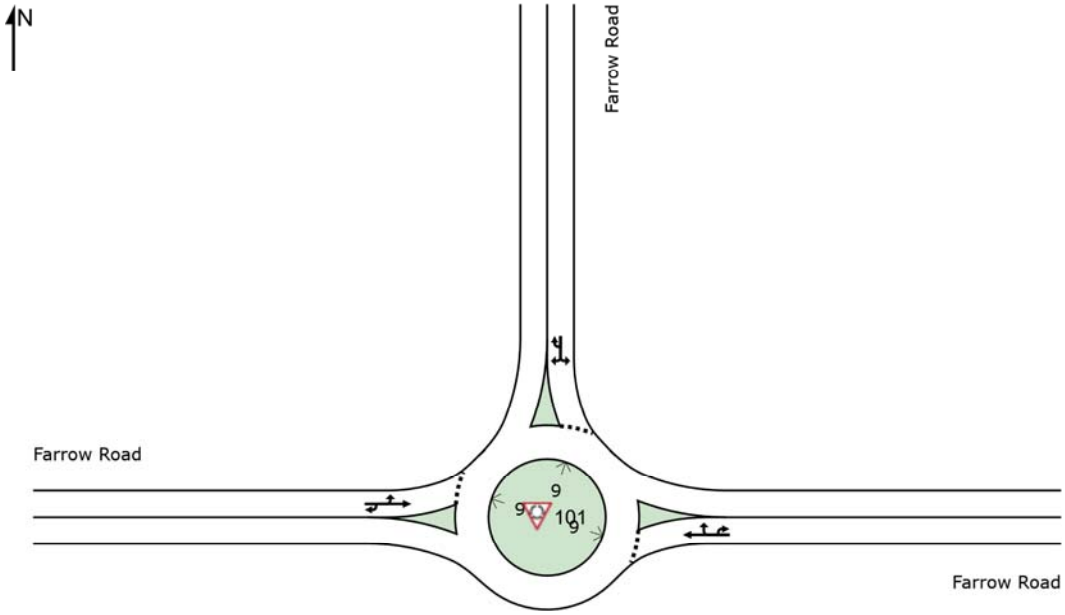
SITE LAYOUT

Site: 101 [Existing AM]

Farrow Road Roundabout
Site Category: (None)
Roundabout



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Organisation: VARGA TRAFFIC PLANNING | Created: Friday, 28 February, 2020 3:06:43 PM
Project: Z:\DATA\Data\Jobs01\Jobs\20work\20067Y_2FarrowRdCampbelltown\SIDRA\200228\FarrowRd_Roundabout.sip8

MOVEMENT SUMMARY

Site: 101 [Existing AM]

Farrow Road Roundabout
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
East: Farrow Road												
5	T1	21	0.0	0.152	5.6	LOS A	0.8	5.7	0.34	0.64	0.34	51.7
6	R2	111	5.4	0.152	8.8	LOS A	0.8	5.7	0.34	0.64	0.34	51.2
6u	U	34	0.0	0.152	10.3	LOS A	0.8	5.7	0.34	0.64	0.34	51.9
Approach		166	3.6	0.152	8.7	LOS A	0.8	5.7	0.34	0.64	0.34	51.4
North: Farrow Road												
7	L2	482	1.7	0.433	5.0	LOS A	3.4	23.8	0.21	0.55	0.21	52.6
9	R2	57	0.0	0.433	8.1	LOS A	3.4	23.8	0.21	0.55	0.21	53.2
9u	U	93	0.0	0.433	9.6	LOS A	3.4	23.8	0.21	0.55	0.21	53.7
Approach		632	1.3	0.433	6.0	LOS A	3.4	23.8	0.21	0.55	0.21	52.8
West: Farrow Road												
10	L2	2	50.0	0.006	7.1	LOS A	0.0	0.3	0.41	0.55	0.41	49.7
11	T1	2	50.0	0.006	7.0	LOS A	0.0	0.3	0.41	0.55	0.41	50.8
12u	U	1	0.0	0.006	10.5	LOS A	0.0	0.3	0.41	0.55	0.41	52.5
Approach		5	40.0	0.006	7.7	LOS A	0.0	0.3	0.41	0.55	0.41	50.7
All Vehicles		803	2.0	0.433	6.5	LOS A	3.4	23.8	0.24	0.57	0.24	52.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
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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MOVEMENT SUMMARY

Site: 101 [Existing PM]

Farrow Road Roundabout
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
East: Farrow Road												
5	T1	3	0.0	0.248	4.8	LOS A	1.4	10.3	0.06	0.65	0.06	52.4
6	R2	367	1.9	0.248	7.9	LOS A	1.4	10.3	0.06	0.65	0.06	51.9
6u	U	26	0.0	0.248	9.4	LOS A	1.4	10.3	0.06	0.65	0.06	52.5
Approach		396	1.8	0.248	8.0	LOS A	1.4	10.3	0.06	0.65	0.06	52.0
North: Farrow Road												
7	L2	126	6.3	0.102	5.0	LOS A	0.5	3.7	0.14	0.53	0.14	53.2
9	R2	2	0.0	0.102	8.0	LOS A	0.5	3.7	0.14	0.53	0.14	53.9
9u	U	4	0.0	0.102	9.6	LOS A	0.5	3.7	0.14	0.53	0.14	54.5
Approach		132	6.1	0.102	5.2	LOS A	0.5	3.7	0.14	0.53	0.14	53.2
West: Farrow Road												
10	L2	20	0.0	0.033	6.9	LOS A	0.2	1.1	0.49	0.60	0.49	52.2
11	T1	9	0.0	0.033	6.8	LOS A	0.2	1.1	0.49	0.60	0.49	53.1
12u	U	1	0.0	0.033	11.5	LOS A	0.2	1.1	0.49	0.60	0.49	53.2
Approach		30	0.0	0.033	7.0	LOS A	0.2	1.1	0.49	0.60	0.49	52.5
All Vehicles		558	2.7	0.248	7.3	LOS A	1.4	10.3	0.10	0.62	0.10	52.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
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.

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MOVEMENT SUMMARY

Site: 101 [Proposed AM]

Farrow Road Roundabout
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
East: Farrow Road												
5	T1	21	0.0	0.181	5.6	LOS A	1.0	7.0	0.35	0.64	0.35	51.7
6	R2	145	4.1	0.181	8.8	LOS A	1.0	7.0	0.35	0.64	0.35	51.2
6u	U	34	0.0	0.181	10.3	LOS A	1.0	7.0	0.35	0.64	0.35	51.8
Approach		200	3.0	0.181	8.7	LOS A	1.0	7.0	0.35	0.64	0.35	51.4
North: Farrow Road												
7	L2	515	1.6	0.454	5.0	LOS A	3.6	25.7	0.22	0.55	0.22	52.7
9	R2	57	0.0	0.454	8.1	LOS A	3.6	25.7	0.22	0.55	0.22	53.2
9u	U	93	0.0	0.454	9.7	LOS A	3.6	25.7	0.22	0.55	0.22	53.7
Approach		665	1.2	0.454	5.9	LOS A	3.6	25.7	0.22	0.55	0.22	52.9
West: Farrow Road												
10	L2	2	50.0	0.006	7.3	LOS A	0.0	0.3	0.44	0.56	0.44	49.6
11	T1	2	50.0	0.006	7.3	LOS A	0.0	0.3	0.44	0.56	0.44	50.6
12u	U	1	0.0	0.006	10.7	LOS A	0.0	0.3	0.44	0.56	0.44	52.4
Approach		5	40.0	0.006	8.0	LOS A	0.0	0.3	0.44	0.56	0.44	50.5
All Vehicles		870	1.8	0.454	6.6	LOS A	3.6	25.7	0.25	0.57	0.25	52.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
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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MOVEMENT SUMMARY

Site: 101 [Proposed PM]

Farrow Road Roundabout
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	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	Aver. No. Cycles	Average Speed km/h
East: Farrow Road												
5	T1	3	0.0	0.256	4.8	LOS A	1.5	10.7	0.06	0.65	0.06	52.4
6	R2	380	1.8	0.256	7.9	LOS A	1.5	10.7	0.06	0.65	0.06	51.9
6u	U	26	0.0	0.256	9.4	LOS A	1.5	10.7	0.06	0.65	0.06	52.5
Approach		409	1.7	0.256	8.0	LOS A	1.5	10.7	0.06	0.65	0.06	52.0
North: Farrow Road												
7	L2	178	4.5	0.138	5.0	LOS A	0.7	5.2	0.15	0.53	0.15	53.3
9	R2	2	0.0	0.138	8.0	LOS A	0.7	5.2	0.15	0.53	0.15	54.0
9u	U	4	0.0	0.138	9.6	LOS A	0.7	5.2	0.15	0.53	0.15	54.5
Approach		184	4.3	0.138	5.1	LOS A	0.7	5.2	0.15	0.53	0.15	53.3
West: Farrow Road												
10	L2	20	0.0	0.033	6.9	LOS A	0.2	1.1	0.49	0.60	0.49	52.2
11	T1	9	0.0	0.033	6.9	LOS A	0.2	1.1	0.49	0.60	0.49	53.0
12u	U	1	0.0	0.033	11.6	LOS A	0.2	1.1	0.49	0.60	0.49	53.1
Approach		30	0.0	0.033	7.1	LOS A	0.2	1.1	0.49	0.60	0.49	52.5
All Vehicles		623	2.4	0.256	7.1	LOS A	1.5	10.7	0.11	0.61	0.11	52.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
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