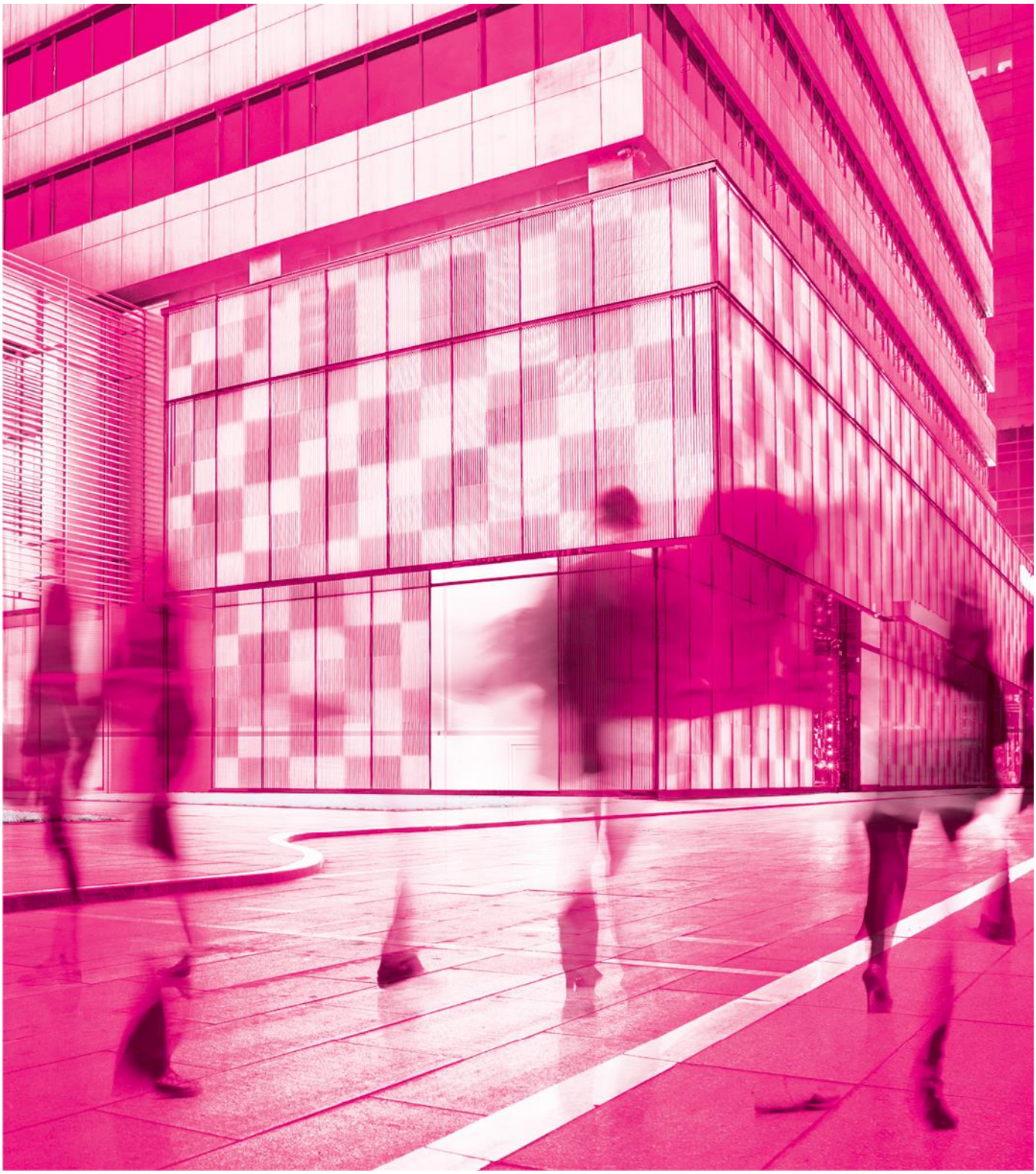

Traffic Impact Assessment;

Sealark Road, Callala Bay

For PRM Architects & Town Planners Pty Ltd

8 January 2024

parking;
traffic;
civil design;
wayfinding;

ptc.

Document Control

Sealark Road, Callala Bay, Traffic Impact Assessment

Issue	Date	Issue Details	Author	Reviewed	For the attention of
1	4/11/2019	Draft Issue	JJ/FL	AM	Patrick Mahedy
2	12/12/2019	Final Issue	JJ/FL	AM	Patrick Mahedy
3	05/03/2020	Final Issue (Revision)	JJ	AM	Patrick Mahedy
4	8/01/2024	Revised Lots	AM	AM	Patrick Mahedy

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Contents

1. Introduction

1.1 Project Summary

ptc. has been engaged by PRM Architects & Town Planners to prepare a Traffic and Parking Assessment to accompany a Planning Proposal (PP) to Shoalhaven City Council for the subdivision of the existing property known as Lot 5 DP 1225356 on Sealark Road, Callala Bay.

The location of the subject site is outlined in Figure 1.

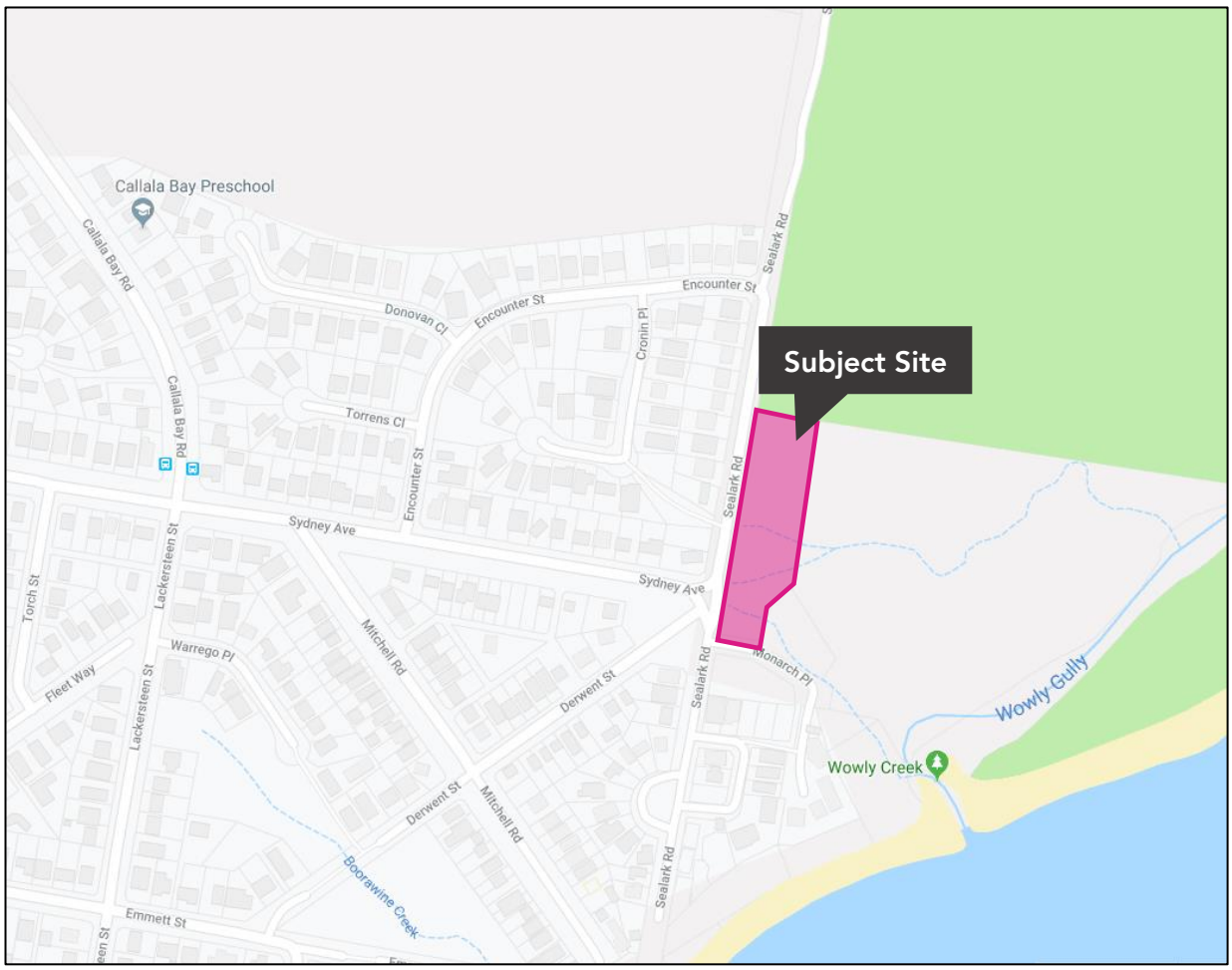


Figure 1 - Site Location

1.2 Purpose of this Report

This report presents the following considerations in relation to the Traffic and Parking assessment of the Proposal:

Section 2	A description of the road network serving the development property, and existing traffic volumes through key local intersections;
Section3	Assessment of the proposed parking provision in the context of the relevant planning control requirements;
Section 4	Determination of the traffic activity associated with the Planning Proposal, and the adequacy of the surrounding road network;
Section 5	Conclusion.

1.3 Site Context

The proposed site lies within an E3 Environmental Management zone and is surrounded by the following key features:

- A National Parks and Nature Reserves (E1) zone to the north, comprising of Wowly Gully;
- A Public Recreation (RE1) zone to the east, south-west and south, comprising of Boorawine Creek;
- The greater residential precinct, surrounding the site, comprising of typically General Residential (R1) and Low Density Residential (R2) zones.

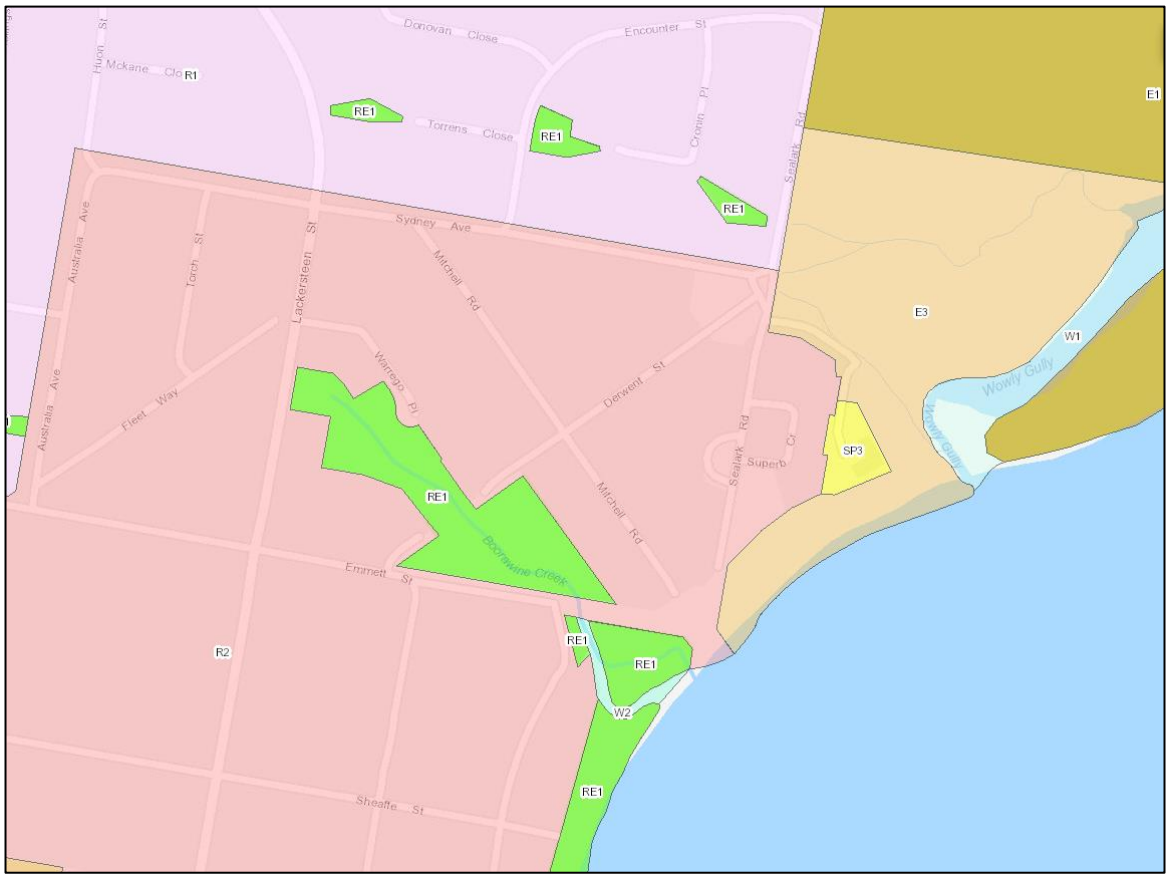


Figure 2 - Local Land Use Map (Source: NSW Planning Viewer)

1.4 Subject Site

The proposal relates to the following site:

- Lot No. 5, DP 1225356

Figure 3 - Aerial View of Subject Site & Surrounds (Source: Nearmap)

The property has a frontage of approximately 185m along Sealark Road. The site is currently unoccupied.

1.5 Planning Proposal

The Planning Proposal involves the subdivision the subject site to comprise two primary Lots divided by a road. Lot A will accommodate 12 Lots for single dwelling houses, while Lot B will accommodate two Lots for single dwellings (Lots B1 and B2) and a larger Loat (Lot B3) to accommodate a medium density residential building of approximately 10 units. It is noted that the current proposal is in relation to the subdivision of the existing property, hence there is no detailed yield schedule at this stage of the project, other than the number of dwellings as summarised below:

Table 1 - Yield Schedule

Component	No. of dwellings
Dwelling House (Lot A)	12
Dwelling House (B1)	1
Dwelling House (B2)	1
Medium Density Residential Building (Lot B3)	~10

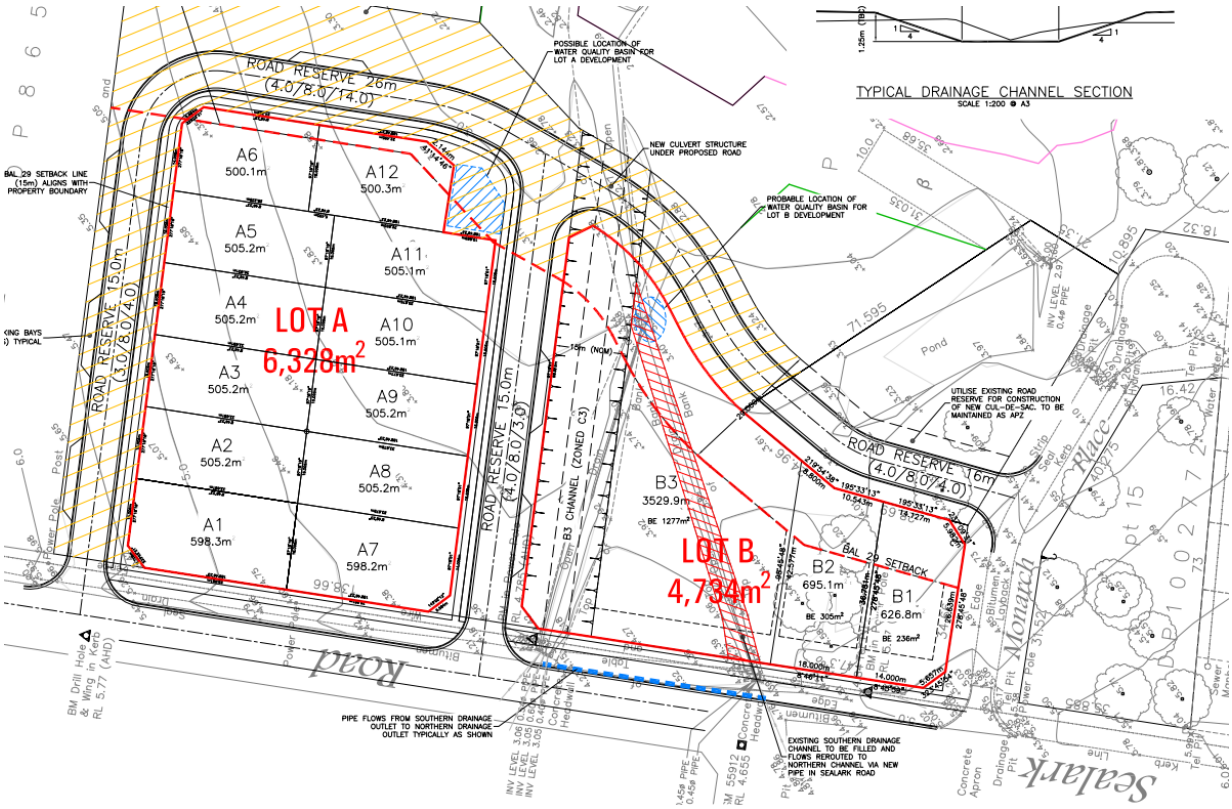


Figure 4 - Proposed subdivision / Lot layout

2. Existing Transport Facilities

2.1 Road Hierarchy

The site is located in the suburb of Callala Bay and is serviced by local roads managed by Shoalhaven City Council. There are no State Roads or Regional Roads within the vicinity of the site.

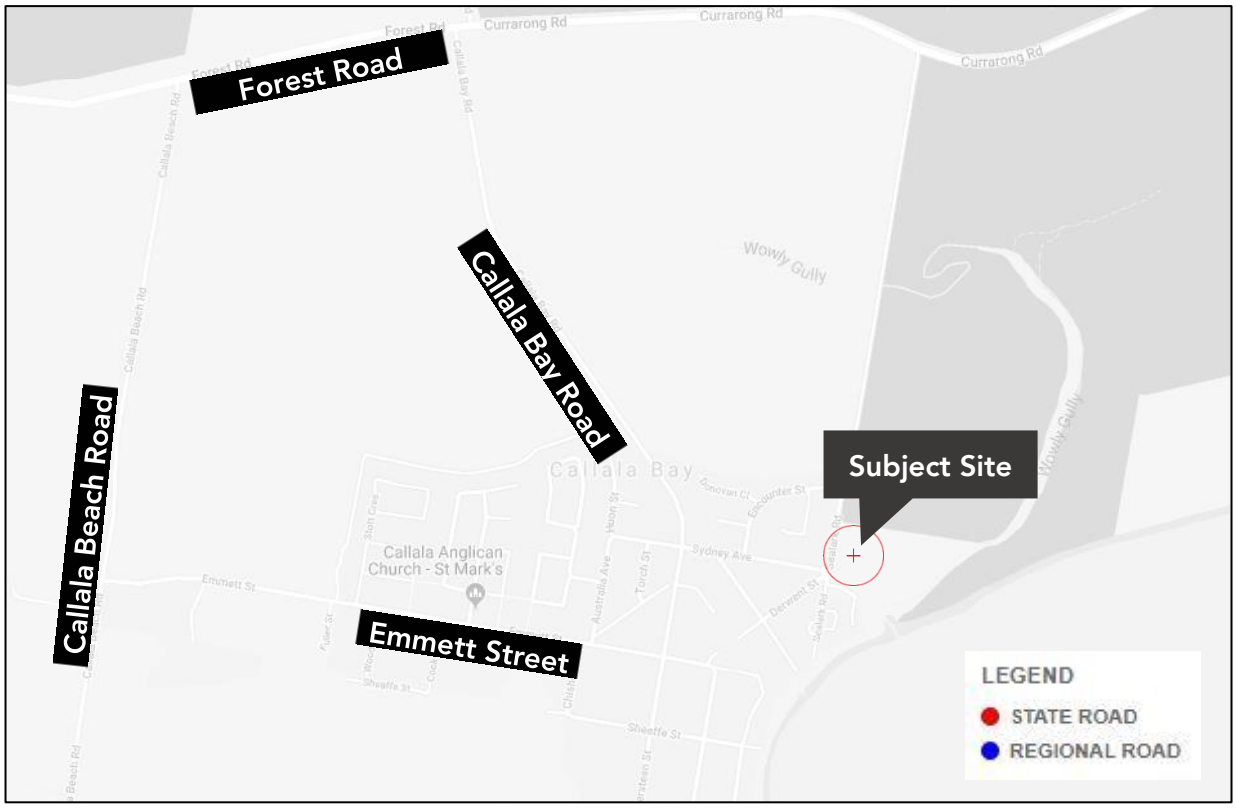


Figure 5 - Road Hierarchy (Source: RMS Road Hierarchy Review)

The NSW administrative road hierarchy comprises the following road classifications, which align with the generic road hierarchy as follows:

State Roads	- Freeways and Primary Arterials (RMS Managed)
Regional Roads	- Secondary or sub arterials (Council Managed, Part funded by the State)
Local Roads	- Collector and local access roads (Council Managed)

Table 2 - Sealark Road

Sealark Road	
Road Classification	Local Road
Alignment	North-South
Number of Lanes	1 lane in each direction
Carriageway Type	Undivided
Carriageway Width	7.5m
Speed Limit	50km/h
School Zone	No
Parking Controls	Unrestricted
Forms Site Frontage	Yes

Figure 6 - Sealark Road (Northbound towards Encounter Street)

Table 3 - Sydney Avenue

Sydney Avenue	
Road Classification	Local Road
Alignment	East – West
Number of Lanes	1 lane in each direction
Carriageway Type	Undivided
Carriageway Width	10.5m
Speed Limit	50km/h
School Zone	No
Parking Controls	Unrestricted
Forms Site Frontage	No

Figure 7 - Sydney Avenue (Eastbound towards Sealark Road)

Table 4 - Monarch Place

Monarch Place	
Road Classification	Local Road
Alignment	East-West
Number of Lanes	1 lane contraflow
Carriageway Type	Undivided
Carriageway Width	4.5m
Speed Limit	50km/h
School Zone	No
Parking Controls	No
Forms Site Frontage	No

Figure 8 - Monarch Place (Westbound towards Sealark Road)

Table 5 - Derwent Street

Derwent Street	
Road Classification	Local Road
Alignment	Northeast - Southwest
Number of Lanes	1 lane in each direction
Carriageway Type	Undivided
Carriageway Width	6.0m
Speed Limit	50km/h
School Zone	No
Parking Controls	No
Forms Site Frontage	No

Figure 9 - Derwent Street (North-Eastbound towards Sydney Avenue / Sealark Road intersection)

2.2 Public Transport

The locality has been assessed in the context of available forms of public transport that may be utilised by prospective residents. When defining accessibility, the NSW Guidelines to Walking & Cycling (2004) suggests that 400-800m is a comfortable walking distance.

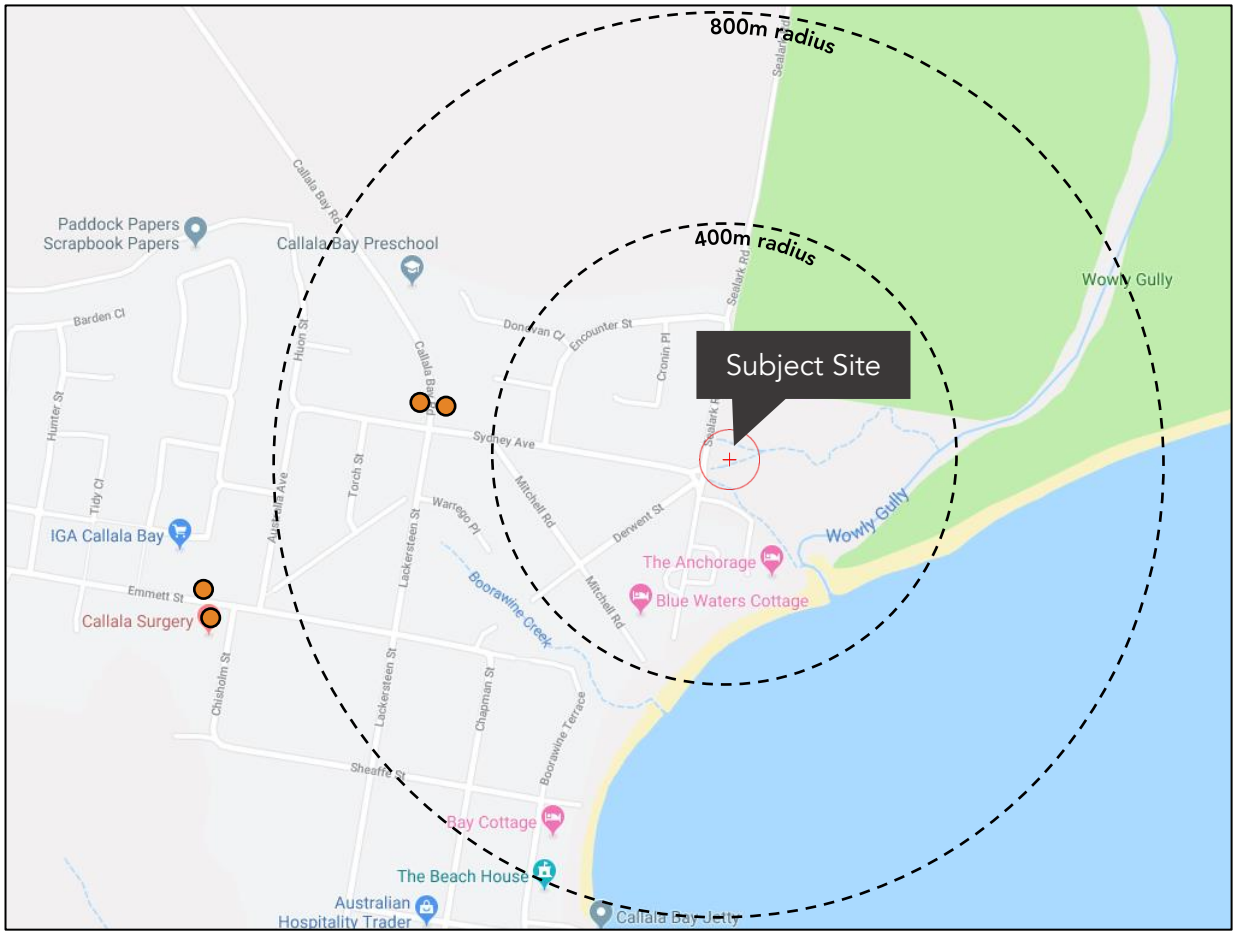


Figure 10 - Public Transport Accessibility (Bus Stops in orange)

2.2.1 Bus Services

As illustrated in Figure 10, there are limited services available within a comfortable walking distance. A summary of these routes is presented in Table 6 and displays the bus routes which service the site.

Table 6 - Bus Route Summary

Bus Route	Coverage (to and from)	Service Frequency
120	Callala and Currarong to Nowra via Myola	Mon-Fri: Three services available between 8:45am and 1:45pm Sat: No service available Sun: No service available
120	Nowra to Currarong and Callala via Myola	Mon-Fri: Three services available between 10am and 4pm Sat: No service available Sun: No service available

2.3 Active Transport

There is limited cycling infrastructure within the vicinity of the proposed development as illustrated in Figure 11, although the relatively low traffic activity opens the opportunity for riding on the local road network. The pedestrian amenity is also limited within the surrounding streets of the subject site with no footpath ramps or refuge islands for wheelchair users and parents with prams. However, this is typical of a rural town where traffic activity is minimal, and pedestrians are able to use the road network.

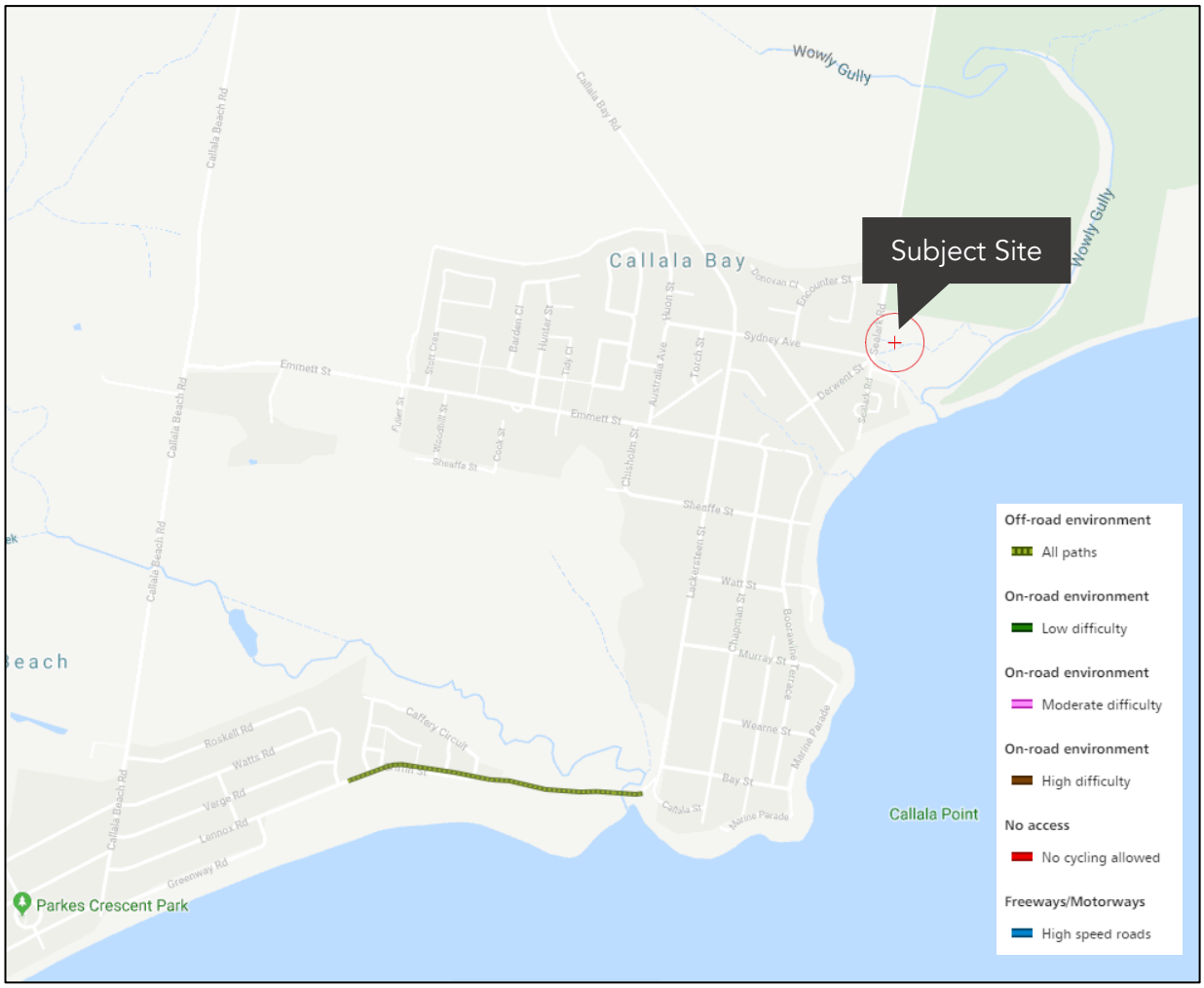


Figure 11 - Cycling paths (Source: RMS Cycleway Finder)

2.4 Surrounding Intersections

The following key intersections are located within the vicinity of the site:

- Derwent Street / Sealark Road / Sydney Avenue – Priority controlled intersection
- Callala Bay Road / Lackersteen Street / Sydney Avenue - Priority controlled intersection

2.5 Traffic Surveys

Traffic survey was undertaken at the above-mentioned intersections on Wednesday 14th August 2019, between 7:00am to 9:00am and 4:00pm to 6:00pm (non-school holiday period). These periods were selected in order to coincide with the morning and evening commuter peak periods.

The peak hour for the intersections of study has been determined as follows:

- Morning Peak: 8:00am to 9:00am
- Evening Peak: 4:00pm to 5:00pm

The survey results for the morning and evening peak periods are presented in Figure 12 and Figure 13.

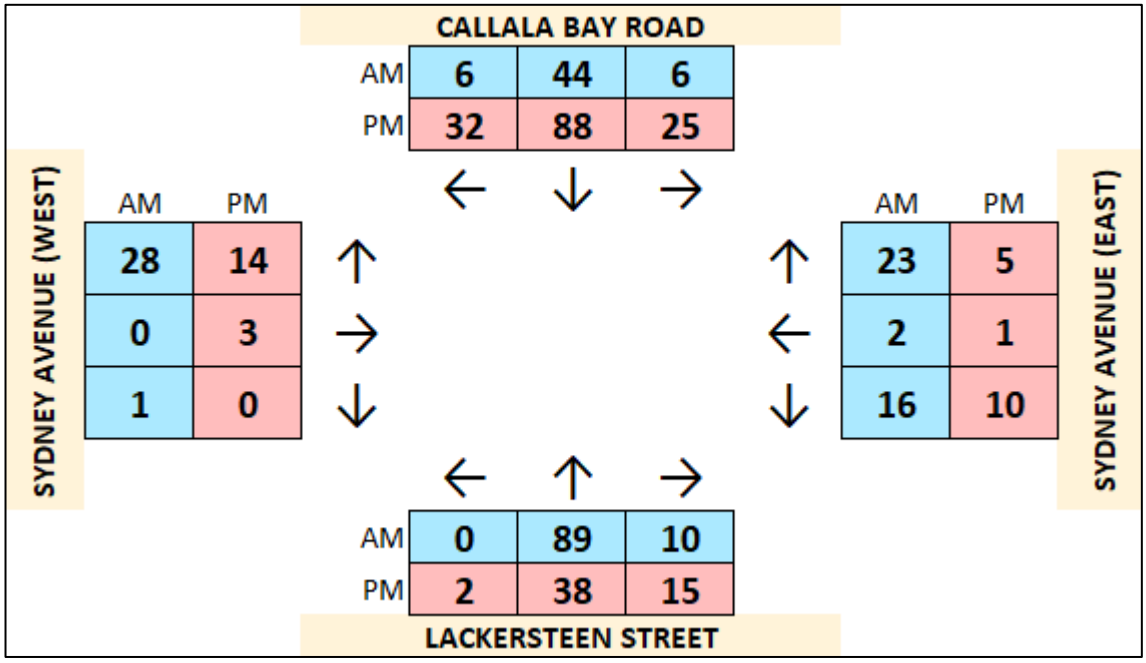


Figure 12 - Peak Hour Traffic Volumes at Callala Bay Road / Lackersteen Street / Sydney Avenue intersection

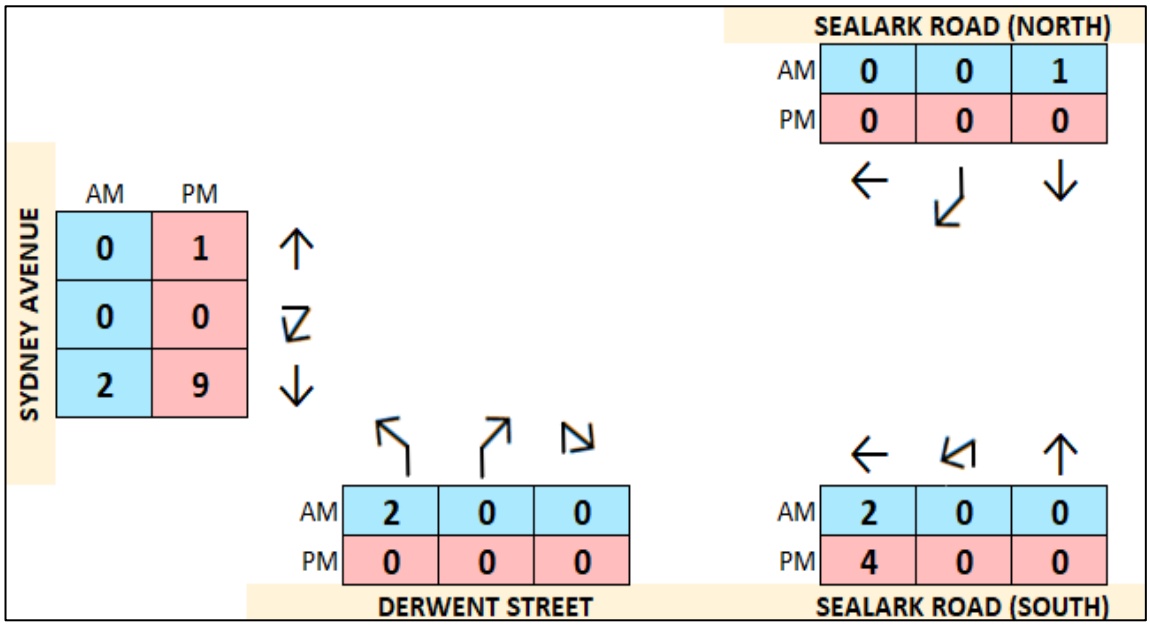


Figure 13 - Peak Hour Traffic Volumes at Derwent Street / Sealark Road / Sydney Avenue intersection

2.6 Seasonal Factor

It is acknowledged that the traffic volume within Callala Bay experiences significant fluctuations throughout the summer and winter periods. The fluctuation is generated by the increase in visitors and tourists visiting the town throughout the summer periods, due to its vicinity to the beach.

Therefore, to conduct a more robust assessment of the traffic volume, the traffic data obtained via the traffic surveys was increased by applying a seasonal factor. there is limited data currently available on ther roads surrounding the site. Jervis Bay Road is the primary feeder road into the area and traffic volume data is recorded by RMS. Jervis Bay Road also carries sufficient traffic volumes to provide a sufficient sample size, therefore this data has been utilised to determine the seasonal factor.

The traffic volume data has been obtained via the RMS Traffic Volume Viewer to identify the variation in the traffic volume during the morning/afternoon peak throughout the different seasons. The morning and afternoon peak periods as identified in the RMS Traffic Volume Viewer are the following:

- Morning Peak Period: 6:00am to 10:00am
- Afternoon Peak Period: 3:00pm to 7:00pm

The obtained data were between the periods 2015 to 2018. The data is summarised in Table 7.

Table 7 - Summary of traffic volume – Jervis Bay Road

Year	Maximum Peak Traffic Volume	Minimum Peak Traffic Volume
2015	2,941	967
2016	3,401	1,062
2017	3,280	1,066
2018	5,441	909
TOTAL	**15,063**	**4,004**
SEASONAL FACTOR	**3.76**	

The above set of data was utilised to calculate the average seasonal factor. This factor was used to estimate the increase in traffic volume throughout the peak periods for the intersections of study. It is noted that due to the locality and nature of the subject site, it is anticipated that the increase in traffic volume during the peak season will only occur for light vehicles. Therefore, the seasonal factor was used to only increase the traffic volume of light vehicles and the volume for heavy vehicles were kept constant as observed during the survey.

In order to consider the worst-case scenario during the seasonal peak period, the average seasonal factor is applied to the analysis in this study. The estimated morning and evening peak traffic volumes post application of the calculated seasonal factor are presented in Figure 14 and Figure 15.

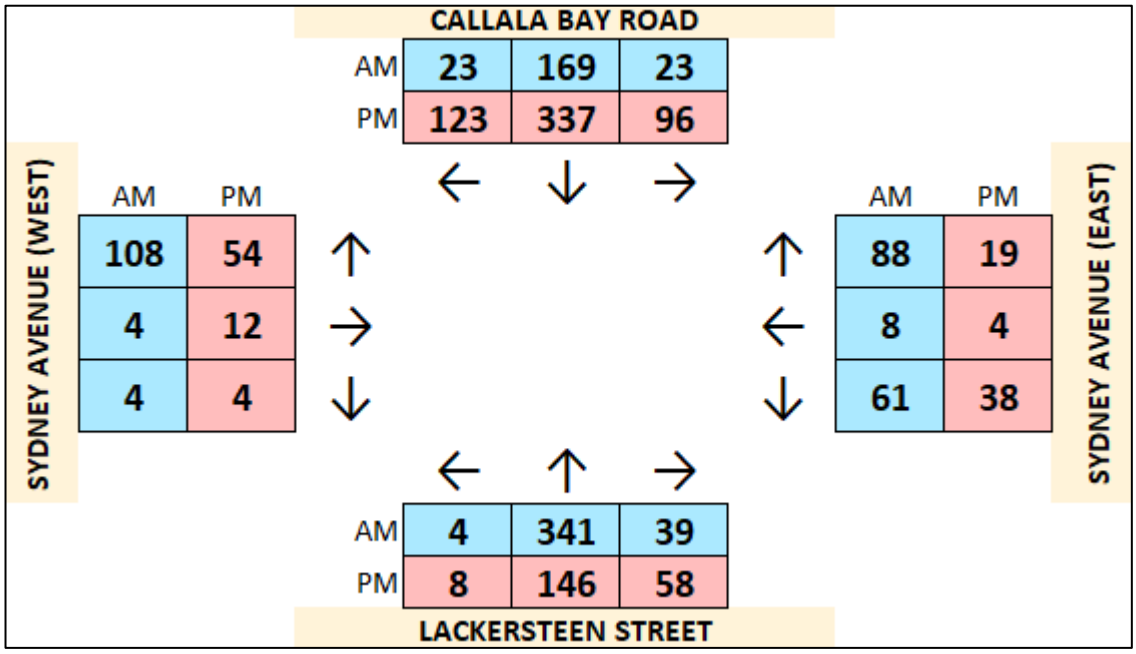


Figure 14 - Peak Hour Traffic Volumes at Callala Bay Road / Lackersteen Street / Sydney Avenue intersection

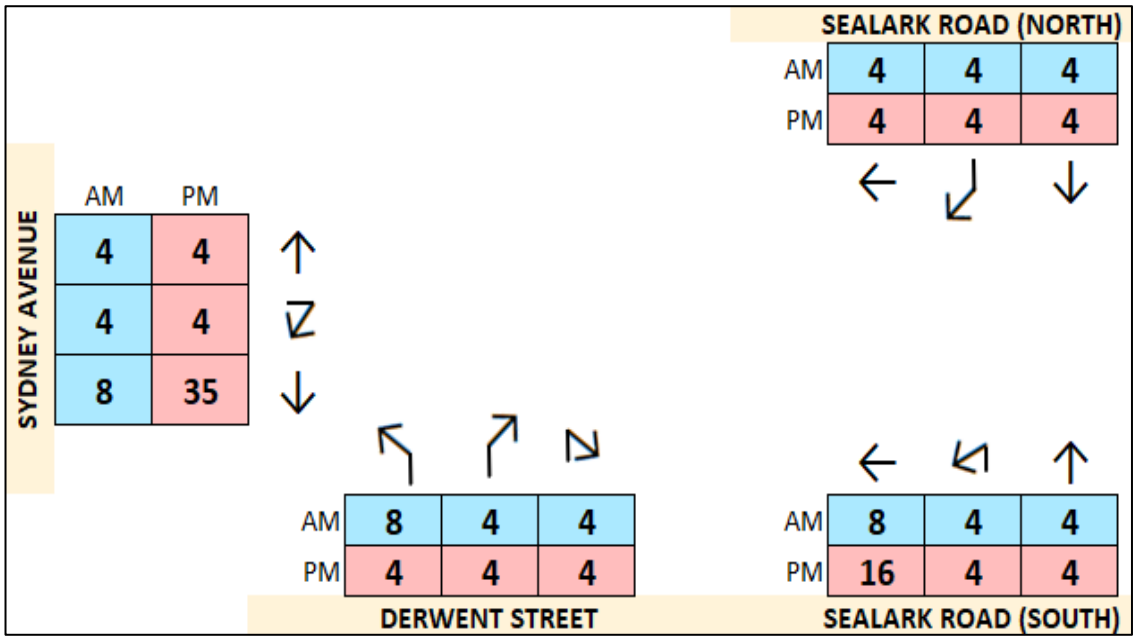


Figure 15 - Peak Hour Traffic Volumes at Derwent Street / Sealark Road / Sydney Avenue intersection

2.7 Site Observations

A site inspection was undertaken on Wednesday, 14th August 2019 throughout the survey periods for the Derwent Street / Sealark Road / Sydney Avenue intersection:

- The intersection is a priority-controlled intersection by local residents. The circulation lanes are utilised as two-way flow traffic lanes as shown in Figure 16.
- The intersection is utilised as an informal roundabout by visitors. This may be due to the existing island located in the middle of the intersection. This is shown in Figure 17and Figure 16.

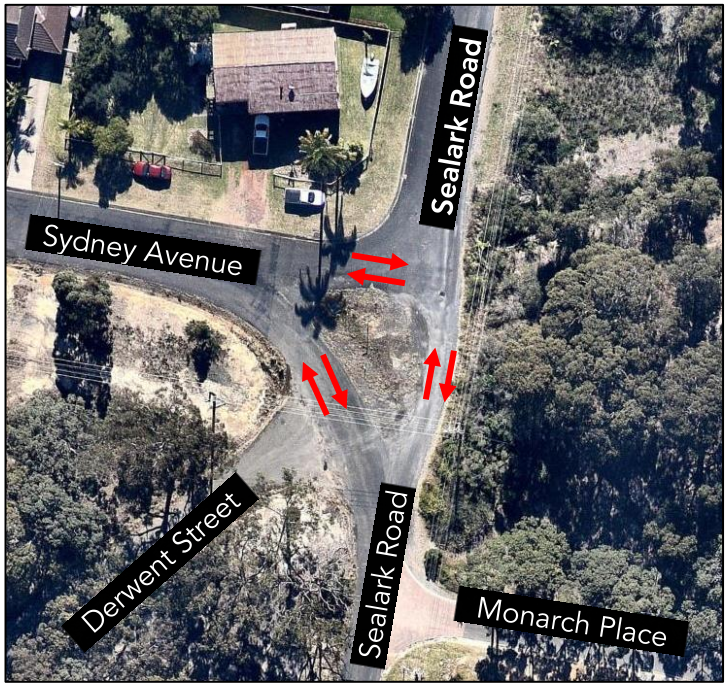


Figure 16 - Local Residents Intersection Utilisation – Priority Controlled

Figure 17 - Visitors Intersection Utilisation – Roundabout

3. Parking Assessment

The Planning Proposal is in relation to the subdivision of the existing Lot 5 located on Sealark Road, Callala Bay.

Therefore, as no definitive yield schedule has yet been established and the proposal is in relation to the subdivision of an existing lot, no detailed parking assessment has been conducted. However, each of the dwellings will be required to provide a parking space within each residential Lot, while parking for the units will need to be established during the DA stage. Visitor parking will be required at a rate of 0.5 spaces per unit and therefore an area within the subdivision will be set aside for this parking.

It is acknowledged that a parking assessment will be required upon the submission of a Development Application.

4. Traffic Assessment

The potential traffic generation associated with the proposed development has been estimated with reference to the following:

- RMS Guide to Traffic Generating Developments 2002 (RMS Guide)
- RMS Technical Direction 2013/04 (TDT)

The technical direction contains the most recent RMS survey data for various uses.

4.1 Existing Traffic Generation

The proposed subdivision of Lot 5 located on Sealark Road in Callala Bay is currently unoccupied with no existing infrastructure. Therefore, for the purpose of estimating the existing traffic generation it is assumed that no traffic is currently being generated from the subject site.

4.2 Development Traffic Generation

The rates from the TDT were adopted to estimate the potential traffic generated by the proposed development. These rates have been summarised below:

- Dwelling Houses: 0.71 trips per dwelling in AM Peak
  0.78 trips per dwelling in PM Peak
- Medium Density Residential Flat Buildings: 0.5 trips per dwelling in AM Peak
  0.5 trips per dwelling in PM Peak

Applying the above rates to the proposed development results in the following traffic activity as outlined in Table 8 and Table 9.

Table 8 - Development Trip Generation

Time	Period	Vehicle Trip Rate	No. Dwellings	Trips
DWELLING HOUSES				
AM Peak	Peak Hour	0.71 trips / dwelling	14	10 (9.94)
PM Peak	Peak Hour	0.78 trips / dwelling	14	11 (10.92)
MEDIUM DENSITY RESIDENTIAL FLAT BUILDINGS				
AM Peak	Peak Hour	0.5 trips / dwelling	10	5
PM Peak	Peak Hour	0.5 trips / dwelling	10	5

Table 9 - Net Traffic Generation

	AM Peak	PM Peak
Existing Peak Hour Trips	0	0
Development Peak Hour Trips	15	16
Net Peak Hour Trips	**+15**	**+16**

The preliminary assessment indicates that the proposed development is anticipated to generate approximately 15 vehicular trips and 16 vehicular trips in the AM and PM peak hours respectively. This represents approximately one trip every three minutes. This is a minor increase in traffic volume which would fall within typical daily fluctuations of traffic in the locality.

Nevertheless, traffic surveys and SIDRA modelling have been undertaken to assess the traffic circumstances of the existing scenarios. Details are provided in the following sections.

4.3 Development Traffic Distribution

The following assumptions have been made to determine the assignment of the additional trips generated by the proposed development:

Considering that the proposed development is residential, it is assumed that in the AM Peak 80% of trips are outbound and 20% are inbound whilst during the PM Peak, 30% of trips are outbound and 70% are inbound;

- Outbound Traffic Distribution
    - 80% of outbound vehicles will be northbound along Callala Bay Road, westbound along Forest Road and onto Princes Highway. The route can be utilised to travel southbound towards Jervis Bay or northbound towards Nowra which are major employment hubs;
    - 20% of outbound vehicles will be southbound via Lackersteen Street and westbound Emmett Street, towards Callala Bay town centre.
- Inbound Traffic Distribution
    - 80% of inbound vehicles will be from the north via Forest Road and Callala Bay Road;
    - 20% of inbound vehicles will be from the south via Lackersteen Street.

These assumptions have been represented in Figure 18 and Figure 19.

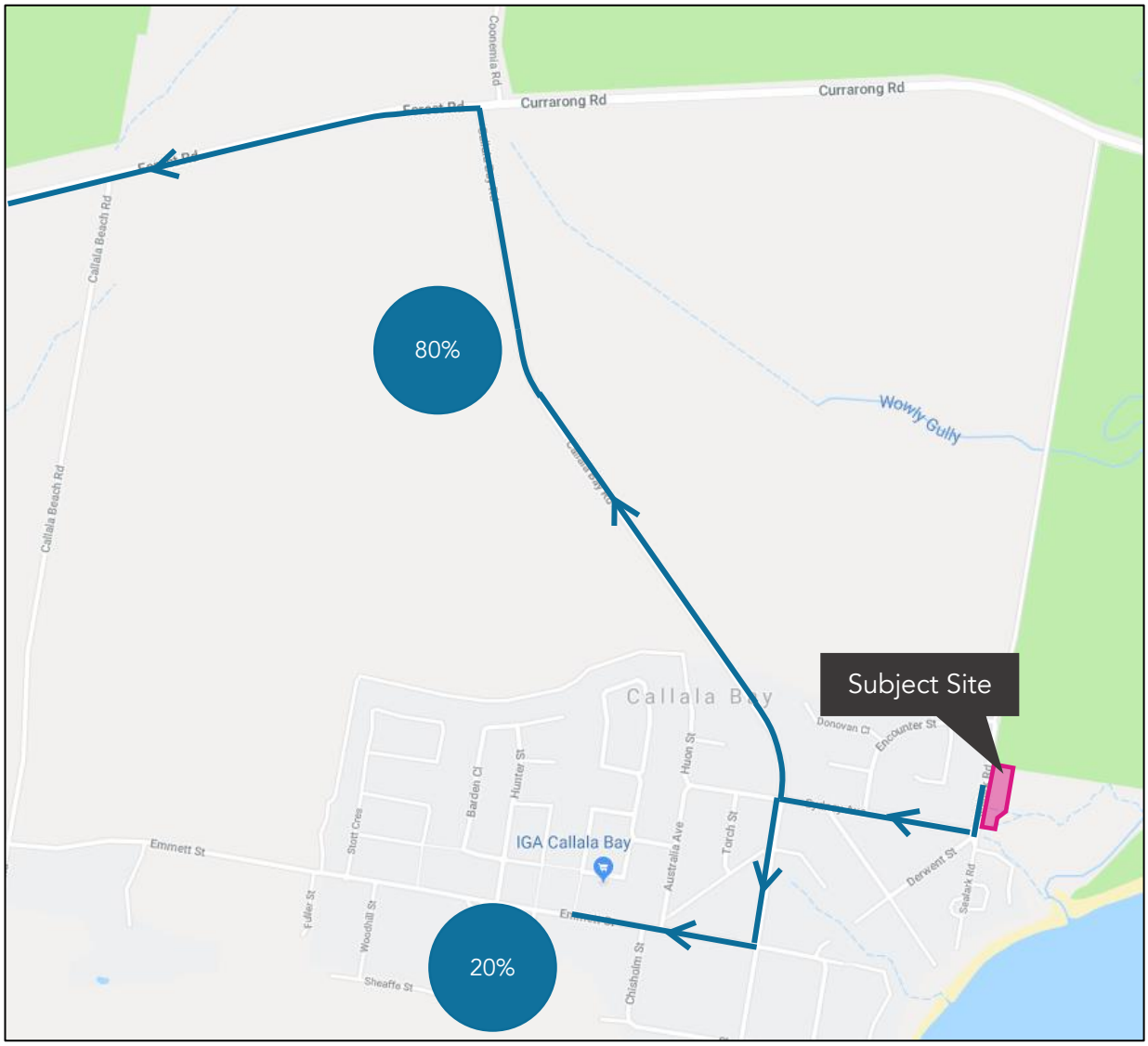


Figure 18 – Peak Outbound Traffic Distribution

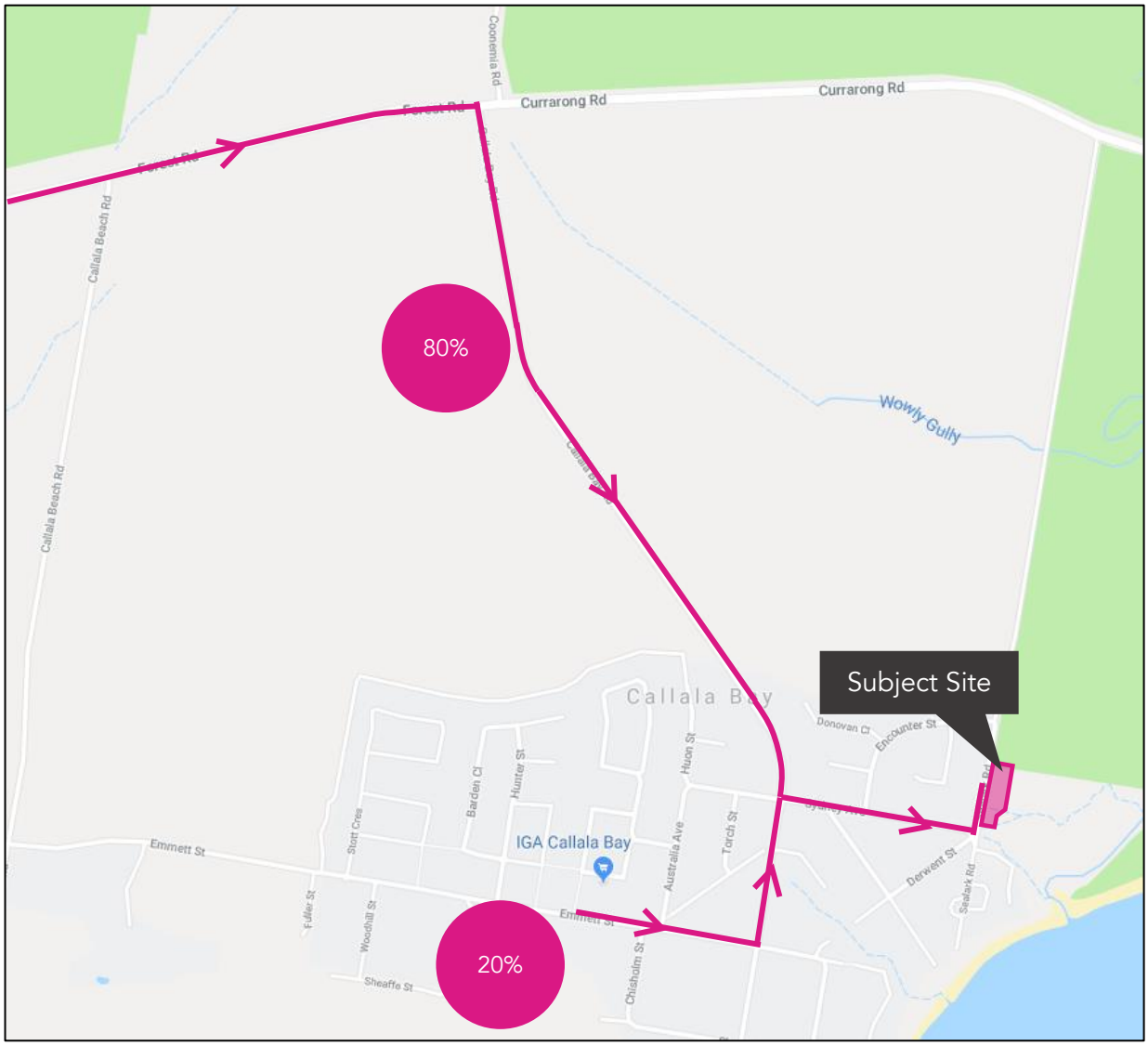


Figure 19 - Peak Inbound Traffic Distribution

4.4 SIDRA Analysis

The surveyed intersections have been modelled with SIDRA Intersection 8.0 software, a micro-analytical tool for individual intersections and whole-network modelling. The models are based on the traffic survey data presented in Section 2.5. SIDRA provides several performance indicators, outline below:

- Degree of Saturation – The total usage of the intersection expressed as a factor of 1 with 1 representing 100% use/saturation. (e.g. 0.8=80% saturation)
- Average Delay- The average delay encountered by all vehicles passing through the intersection. It is often important to review the average delay of each approach as a side road could have a long delay time, while the large free flowing major traffic will provide an overall low average delay.
- Level of Service (LoS) - This is a categorization of average delay, intended for simple reference. The RMS adopts the following bands:

- 95% Queue Lengths (Q95) – is defined to be the queue length in metres that has only a 5-percent probability of being exceeded during the analysis time period. It transforms the average delay into measurable distance units.

Level of Service is a good indicator of overall performance for individual intersections, with each level summarised in Table 10.

Table 10 - Level of Service Definitions

Level of Service	Average Delay (secs/vehicle)	Traffic Signals, Roundabout	Give Way & Stop Signs
A	**<14**	**Good operation**	
B	**15 to 28**	**Good with acceptable delays & spare capacity**	**Acceptable delays & spare capacity**
C	**29 to 42**	**Satisfactory**	**Satisfactory, but accident study required**
D	**43 to 56**	**Operating near capacity**	**Near capacity & accident study required**
E	**57 to 70**	**At capacity. At signals, incidents would cause excessive delays. Roundabouts require other control mode**	**At capacity, requires other control mode**
F	**>70**	**Extra capacity required**	**Extreme delay, major treatment required**

A SIDRA analysis has been completed for the two key intersections based upon survey data collected on 14th August 2019 (which lies outside the school holiday period):

- Derwent Street & Sealark Road & Sydney Avenue
- Callala Bay Road & Lackersteen Street & Sydney Avenue

The output of the full movement summary from SIDRA are provided in Attachment 2.

As mentioned in Section 4.6, the Derwent Street / Sealark Road / Sydney Avenue intersection is currently being utilised in various methods dependent on the user. Therefore, the analysis was conducted for a scenario where the intersection is being utilised the following:

- Scenario 1 - Priority controlled intersection
- Scenario 2 - Roundabout

The SIDRA results for the peak traffic volume are summarised in Table 11 below.

Table 11 - Summary of Existing and Future Traffic Conditions

Intersection	Time	Period	Level of Service	Degree of Saturation (v/c)	Average Delay (secs)	95% Queue Length (m)
Derwent Street / Sealark Road / Sydney Avenue (Scenario 1)	AM Peak	Existing	A	0.011	5.4	0.3
		Development	A	0.023	5.4	0.5
	PM Peak	Existing	A	0.024	5.4	0.4
		Development	A	0.032	5.5	0.4
Derwent Street / Sealark Road / Sydney Avenue (Scenario 2)	AM Peak	Existing	A	0.014	7.4	0.5
		Development	A	0.023	7.5	0.9
	PM Peak	Existing	A	0.034	7.5	1.1
		Development	A	0.045	7.5	1.5
Callala Bay Road / Sydney Avenue	AM Peak	Existing	B	0.309	15.4	9.2
		Development	B	0.342	15.9	10.8
	PM Peak	Existing	B	0.303	17.5	8.8
		Development	B	0.308	17.6	9.0

4.5 Traffic Impact Summary

In light of the above assessment, it is anticipated that the proposed development will have minor impact on the existing road network. The development is likely to generate 18 additional trips and 19 additional trips in the AM and PM peak hours respectively.

This is considered a minor increase which can be accommodated by the existing local road network without causing noticeable impacts on key intersections and existing road conditions.

5. Conclusion

ptc. has been engaged by PRM Architects & Town Planners to prepare a Traffic and Parking Assessment to accompany a Development Application (DA) to Shoalhaven City Council for the subdivision of the existing property known as Lot 5 DP 1225356 on Sealark Road, Callala Bay.

The proposed development will be comprised of low and medium density residential developments.

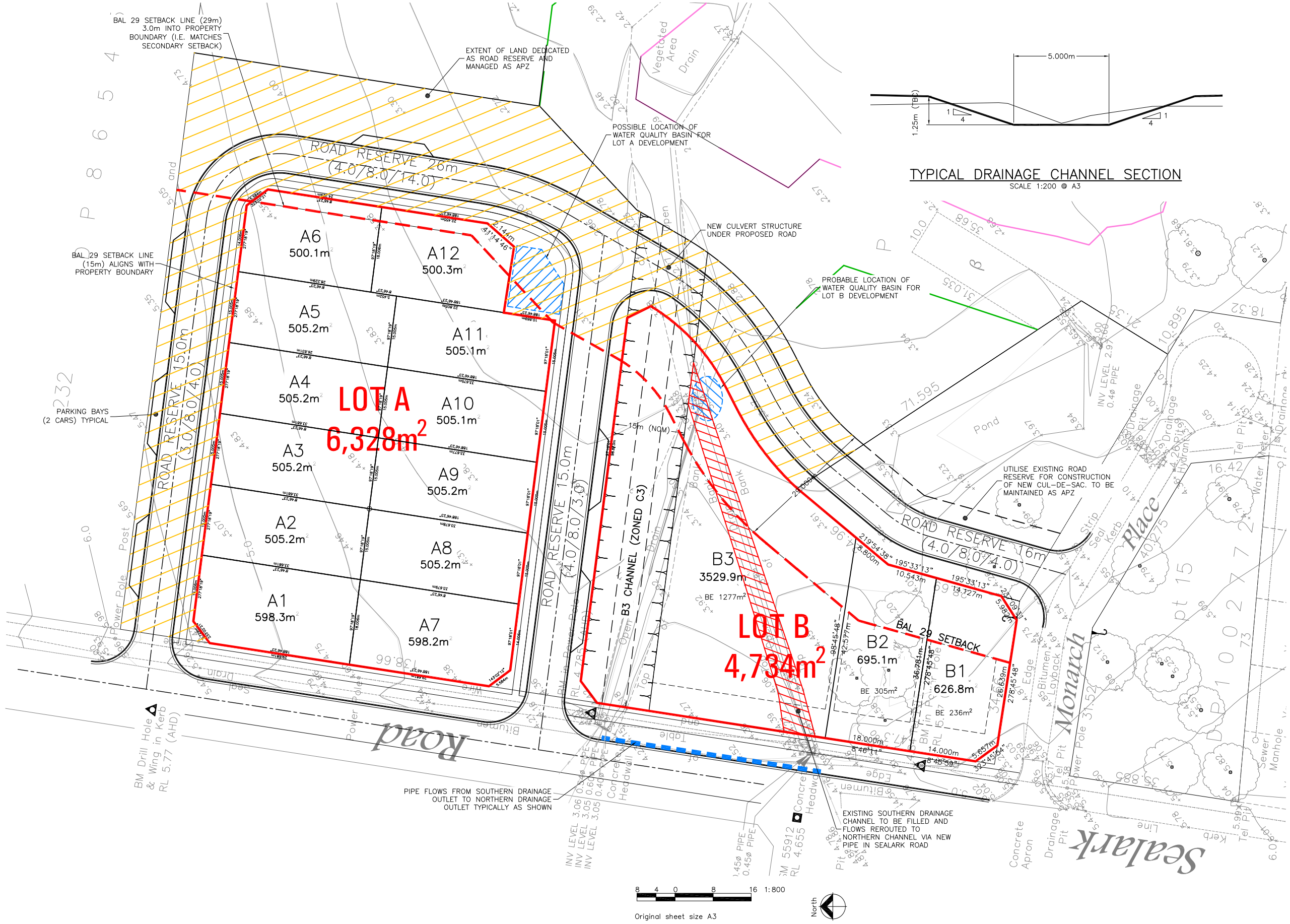
The potential traffic generation of the subject site has been reviewed with reference to the most recent RMS survey data. The review indicates that the proposed development will lead to a net increase in peak hour traffic generation of 15 and 16 vehicular trips in the AM and PM peaks respectively.

The intersection traffic count was undertaken throughout the winter period. It is acknowledged that the suburb experiences significant fluctuation in traffic volume between the summer and winter periods. Therefore, to estimate the existing traffic volume throughout the summer period, a seasonal factor was calculated utilising the traffic volume obtained for a similar site, Jervis Bay Road. Therefore, taking the increased traffic volume into consideration, the SIDRA analysis indicates that the proposed development will have minimal impact on the performance of the existing local road network.

In the context of parking, the proposal is in relation to the subdivision of the existing Lot 5. Each dwelling will be provided with a dedicated parking space, while an area of visitor parking will also be provided at a rate of 0.5 spaces per dwelling. Considering the above, the proposed development is endorsed in the context of traffic.

Attachment 1- Architectural Plans

OPTION C2



TYPICAL DRAINAGE CHANNEL SECTION
SCALE 1:200 @ A3

ISSUE	DESCRIPTION	DATE
1	FOR INFORMATION	27/11/23

FOR PLANNING PROPOSAL
NOT FOR CONSTRUCTION

SCALES	ORIGINAL
1:800	A3

CLIENT: HARE BAY CONSORTIA

SURVEYOR:	ALLEN PRICE
DATUM:	AHD
AZIMUTH:	GDA 94, MGA56
DRAWN:	AB
DESIGNED:	AB
DESIGNED DATE:	OCT '20
CHECKED:	AB

footprint
sustainable engineering
a. 15 meehan drive
kiama downs nsw 2533
p. 02 4237 6770
f. 02 4237 8962

LOT 5 SEALARK ROAD, CALLALA BAY
PLANNING PROPOSAL
PRELIMINARY CIVIL DESIGN
PRELIMINARY SUBDIVISION LAYOUT - OPTION C2

DRAWING NO. 1861-SK06
ISSUE. 1
SHEET 1 OF 1

Attachment 2 - SIDRA Outputs

MOVEMENT SUMMARY

Site: 101 [Existing AM - Sydney Ave / Sealark Rd Intersection]

New Site
Site Category: (None)
Giveway / Yield (Two-Way)

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: Sealark Road South												
1b	L3	4	0.0	0.011	5.4	LOS A	0.0	0.3	0.03	0.51	0.03	42.0
1	L2	8	0.0	0.011	4.6	LOS A	0.0	0.3	0.03	0.51	0.03	41.4
2	T1	4	0.0	0.011	3.6	LOS A	0.0	0.3	0.03	0.51	0.03	42.1
Approach		17	0.0	0.011	4.5	LOS A	0.0	0.3	0.03	0.51	0.03	41.7
North: Sealark Road North												
8	T1	5	20.0	0.011	3.8	LOS A	0.0	0.3	0.06	0.46	0.06	41.2
9a	R1	4	0.0	0.011	3.4	LOS A	0.0	0.3	0.06	0.46	0.06	44.5
9	R2	4	0.0	0.011	4.7	LOS A	0.0	0.3	0.06	0.46	0.06	43.2
Approach		14	7.7	0.011	3.9	LOS A	0.0	0.3	0.06	0.46	0.06	42.9
West: Sydney Avenue												
10	L2	4	0.0	0.009	4.6	LOS A	0.0	0.0	0.00	0.56	0.00	43.0
12	R2	8	0.0	0.009	4.6	LOS A	0.0	0.0	0.00	0.56	0.00	40.5
12b	R3	4	0.0	0.009	5.2	LOS A	0.0	0.0	0.00	0.56	0.00	42.1
Approach		17	0.0	0.009	4.7	NA	0.0	0.0	0.00	0.56	0.00	41.6
SouthWest: Derwent Street												
30b	L3	8	0.0	0.011	5.4	LOS A	0.0	0.3	0.05	0.54	0.05	43.2
30a	L1	4	0.0	0.011	3.7	LOS A	0.0	0.3	0.05	0.54	0.05	42.4
32b	R3	4	0.0	0.011	5.3	LOS A	0.0	0.3	0.05	0.54	0.05	39.6
Approach		17	0.0	0.011	5.0	LOS A	0.0	0.3	0.05	0.54	0.05	42.2
All Vehicles		64	1.6	0.011	4.6	NA	0.0	0.3	0.03	0.52	0.03	42.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
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 [Existing PM - Sydney Ave / Sealark Rd Intersection]

New Site
Site Category: (None)
Giveway / Yield (Two-Way)

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: Sealark Road South												
1b	L3	4	0.0	0.016	5.4	LOS A	0.1	0.4	0.03	0.51	0.03	41.9
1	L2	17	0.0	0.016	4.6	LOS A	0.1	0.4	0.03	0.51	0.03	41.4
2	T1	4	0.0	0.016	3.7	LOS A	0.1	0.4	0.03	0.51	0.03	42.1
Approach		25	0.0	0.016	4.6	LOS A	0.1	0.4	0.03	0.51	0.03	41.6
North: Sealark Road North												
8	T1	4	0.0	0.010	3.7	LOS A	0.0	0.2	0.12	0.46	0.12	42.5
9a	R1	4	0.0	0.010	3.6	LOS A	0.0	0.2	0.12	0.46	0.12	44.2
9	R2	4	0.0	0.010	4.8	LOS A	0.0	0.2	0.12	0.46	0.12	42.9
Approach		13	0.0	0.010	4.0	LOS A	0.0	0.2	0.12	0.46	0.12	43.2
West: Sydney Avenue												
10	L2	4	0.0	0.024	4.6	LOS A	0.0	0.0	0.00	0.55	0.00	43.1
12	R2	37	0.0	0.024	4.6	LOS A	0.0	0.0	0.00	0.55	0.00	40.6
12b	R3	4	0.0	0.024	5.2	LOS A	0.0	0.0	0.00	0.55	0.00	42.2
Approach		45	0.0	0.024	4.6	NA	0.0	0.0	0.00	0.55	0.00	41.0
SouthWest: Derwent Street												
30b	L3	4	0.0	0.009	5.4	LOS A	0.0	0.2	0.08	0.54	0.08	43.2
30a	L1	4	0.0	0.009	3.8	LOS A	0.0	0.2	0.08	0.54	0.08	42.4
32b	R3	4	0.0	0.009	5.4	LOS A	0.0	0.2	0.08	0.54	0.08	39.6
Approach		13	0.0	0.009	4.9	LOS A	0.0	0.2	0.08	0.54	0.08	41.9
All Vehicles		96	0.0	0.024	4.6	NA	0.1	0.4	0.03	0.53	0.03	41.6

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

MOVEMENT SUMMARY

Site: 101 [Existing AM - Sydney Ave / Callala Bay Rd Intersection]

New Site
Site Category: (None)
Stop (Two-Way)

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: Lackersteen Street												
1	L2	4	0.0	0.224	6.2	LOS A	0.4	2.6	0.09	0.07	0.09	48.1
2	T1	361	0.6	0.224	0.1	LOS A	0.4	2.6	0.09	0.07	0.09	73.1
3	R2	42	2.5	0.224	6.3	LOS A	0.4	2.6	0.09	0.07	0.09	48.1
Approach		407	0.8	0.224	0.8	NA	0.4	2.6	0.09	0.07	0.09	71.8
East: Sydney Avenue East												
4	L2	64	0.0	0.309	8.9	LOS A	1.3	9.2	0.48	0.96	0.56	27.7
5	T1	9	11.1	0.309	14.1	LOS A	1.3	9.2	0.48	0.96	0.56	26.7
6	R2	94	1.1	0.309	15.4	LOS B	1.3	9.2	0.48	0.96	0.56	40.2
Approach		167	1.3	0.309	12.9	LOS A	1.3	9.2	0.48	0.96	0.56	36.9
North: Callala Bay Road												
7	L2	27	11.5	0.119	8.0	LOS A	0.3	1.9	0.15	0.41	0.15	61.9
8	T1	179	0.6	0.119	3.4	LOS A	0.3	1.9	0.15	0.41	0.15	63.7
9	R2	24	0.0	0.119	8.4	LOS A	0.3	1.9	0.15	0.41	0.15	62.4
Approach		231	1.8	0.119	4.5	NA	0.3	1.9	0.15	0.41	0.15	63.3
West: Sydney Avenue West												
10	L2	116	1.8	0.136	8.5	LOS A	0.5	3.8	0.46	0.91	0.46	43.8
11	T1	4	0.0	0.136	12.4	LOS A	0.5	3.8	0.46	0.91	0.46	33.7
12	R2	4	0.0	0.136	14.0	LOS A	0.5	3.8	0.46	0.91	0.46	33.8
Approach		124	1.7	0.136	8.8	LOS A	0.5	3.8	0.46	0.91	0.46	43.5
All Vehicles		929	1.2	0.309	5.0	NA	1.3	9.2	0.22	0.43	0.24	57.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
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 [Existing PM - Sydney Ave / Callala Bay Rd Intersection]

New Site
Site Category: (None)
Stop (Two-Way)

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: Lackersteen Street												
1	L2	8	0.0	0.140	6.4	LOS A	0.6	4.0	0.33	0.19	0.33	39.4
2	T1	154	0.0	0.140	0.9	LOS A	0.6	4.0	0.33	0.19	0.33	65.1
3	R2	61	0.0	0.140	6.5	LOS A	0.6	4.0	0.33	0.19	0.33	39.5
Approach		223	0.0	0.140	2.7	NA	0.6	4.0	0.33	0.19	0.33	60.4
East: Sydney Avenue East												
4	L2	40	0.0	0.108	9.1	LOS A	0.4	2.6	0.51	0.92	0.51	26.9
5	T1	4	0.0	0.108	13.6	LOS A	0.4	2.6	0.51	0.92	0.51	26.4
6	R2	20	0.0	0.108	16.3	LOS B	0.4	2.6	0.51	0.92	0.51	49.7
Approach		64	0.0	0.108	11.6	LOS A	0.4	2.6	0.51	0.92	0.51	37.0
North: Callala Bay Road												
7	L2	101	0.0	0.303	7.4	LOS A	1.3	8.8	0.20	0.43	0.20	61.0
8	T1	356	0.3	0.303	3.4	LOS A	1.3	8.8	0.20	0.43	0.20	62.1
9	R2	129	0.0	0.303	7.6	LOS A	1.3	8.8	0.20	0.43	0.20	60.9
Approach		586	0.2	0.303	5.0	NA	1.3	8.8	0.20	0.43	0.20	61.6
West: Sydney Avenue West												
10	L2	58	1.8	0.094	8.1	LOS A	0.3	2.5	0.31	0.89	0.31	50.7
11	T1	13	0.0	0.094	14.4	LOS A	0.3	2.5	0.31	0.89	0.31	28.1
12	R2	5	20.0	0.094	17.5	LOS B	0.3	2.5	0.31	0.89	0.31	27.4
Approach		76	2.8	0.094	9.8	LOS A	0.3	2.5	0.31	0.89	0.31	47.4
All Vehicles		949	0.3	0.303	5.3	NA	1.3	8.8	0.26	0.44	0.26	58.6

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

MOVEMENT SUMMARY

Site: 101v [Existing PM - Sydney Ave / Sealark Rd Intersection - Conversion]

New Site
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
South: Sealark Road South												
1b	L3	4	0.0	0.020	4.4	LOS A	0.1	0.7	0.09	0.48	0.09	40.7
1	L2	17	0.0	0.020	4.0	LOS A	0.1	0.7	0.09	0.48	0.09	41.3
2	T1	4	0.0	0.020	3.7	LOS A	0.1	0.7	0.09	0.48	0.09	42.6
Approach		25	0.0	0.020	4.0	LOS A	0.1	0.7	0.09	0.48	0.09	41.4
North: Sealark Road North												
8	T1	4	0.0	0.011	3.9	LOS A	0.1	0.4	0.18	0.54	0.18	40.4
9a	R1	4	0.0	0.011	6.2	LOS A	0.1	0.4	0.18	0.54	0.18	41.4
9	R2	4	0.0	0.011	6.9	LOS A	0.1	0.4	0.18	0.54	0.18	41.9
Approach		13	0.0	0.011	5.7	LOS A	0.1	0.4	0.18	0.54	0.18	41.3
West: Sydney Avenue												
10	L2	4	0.0	0.034	4.1	LOS A	0.2	1.1	0.07	0.61	0.07	40.7
12	R2	37	0.0	0.034	6.7	LOS A	0.2	1.1	0.07	0.61	0.07	39.2
12b	R3	4	0.0	0.034	7.4	LOS A	0.2	1.1	0.07	0.61	0.07	41.4
Approach		45	0.0	0.034	6.5	LOS A	0.2	1.1	0.07	0.61	0.07	39.6
SouthWest: Derwent Street												
30b	L3	4	0.0	0.010	4.5	LOS A	0.1	0.4	0.13	0.53	0.13	41.4
30a	L1	4	0.0	0.010	3.5	LOS A	0.1	0.4	0.13	0.53	0.13	42.4
32b	R3	4	0.0	0.010	7.5	LOS A	0.1	0.4	0.13	0.53	0.13	40.8
Approach		13	0.0	0.010	5.1	LOS A	0.1	0.4	0.13	0.53	0.13	41.6
All Vehicles		96	0.0	0.034	5.6	LOS A	0.2	1.1	0.10	0.56	0.10	40.6

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.

MOVEMENT SUMMARY

Site: 101v [Existing AM - Sydney Ave / Sealark Rd Intersection - Roundabout]

New Site
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
South: Sealark Road South												
1b	L3	4	0.0	0.013	4.4	LOS A	0.1	0.5	0.09	0.47	0.09	40.7
1	L2	8	0.0	0.013	4.0	LOS A	0.1	0.5	0.09	0.47	0.09	41.3
2	T1	4	0.0	0.013	3.7	LOS A	0.1	0.5	0.09	0.47	0.09	42.6
Approach		17	0.0	0.013	4.0	LOS A	0.1	0.5	0.09	0.47	0.09	41.4
North: Sealark Road North												
8	T1	5	20.0	0.012	3.9	LOS A	0.1	0.4	0.10	0.55	0.10	39.3
9a	R1	4	0.0	0.012	6.0	LOS A	0.1	0.4	0.10	0.55	0.10	41.7
9	R2	4	0.0	0.012	6.7	LOS A	0.1	0.4	0.10	0.55	0.10	42.2
Approach		14	7.7	0.012	5.4	LOS A	0.1	0.4	0.10	0.55	0.10	41.0
West: Sydney Avenue												
10	L2	4	0.0	0.013	4.1	LOS A	0.1	0.4	0.07	0.60	0.07	40.9
12	R2	8	0.0	0.013	6.7	LOS A	0.1	0.4	0.07	0.60	0.07	39.5
12b	R3	4	0.0	0.013	7.4	LOS A	0.1	0.4	0.07	0.60	0.07	41.7
Approach		17	0.0	0.013	6.2	LOS A	0.1	0.4	0.07	0.60	0.07	40.5
SouthWest: Derwent Street												
30b	L3	8	0.0	0.014	4.5	LOS A	0.1	0.5	0.10	0.53	0.10	41.7
30a	L1	4	0.0	0.014	3.4	LOS A	0.1	0.5	0.10	0.53	0.10	42.7
32b	R3	4	0.0	0.014	7.4	LOS A	0.1	0.5	0.10	0.53	0.10	41.1
Approach		17	0.0	0.014	4.9	LOS A	0.1	0.5	0.10	0.53	0.10	41.8
All Vehicles		64	1.6	0.014	5.1	LOS A	0.1	0.5	0.09	0.54	0.09	41.2

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.

MOVEMENT SUMMARY

Site: 101 [Development AM - Sydney Ave / Sealark Rd Intersection]

New Site
Site Category: (None)
Giveway / Yield (Two-Way)

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: Sealark Road South												
1b	L3	4	0.0	0.011	5.4	LOS A	0.0	0.3	0.03	0.51	0.03	42.0
1	L2	8	0.0	0.011	4.6	LOS A	0.0	0.3	0.03	0.51	0.03	41.4
2	T1	4	0.0	0.011	3.6	LOS A	0.0	0.3	0.03	0.51	0.03	42.1
Approach		17	0.0	0.011	4.5	LOS A	0.0	0.3	0.03	0.51	0.03	41.7
North: Sealark Road North												
8	T1	5	20.0	0.023	3.8	LOS A	0.1	0.5	0.08	0.52	0.08	42.0
9a	R1	4	0.0	0.023	3.5	LOS A	0.1	0.5	0.08	0.52	0.08	45.3
9	R2	19	0.0	0.023	5.4	LOS A	0.1	0.5	0.08	0.52	0.08	45.6
Approach		28	3.7	0.023	4.8	LOS A	0.1	0.5	0.08	0.52	0.08	45.0
West: Sydney Avenue												
10	L2	8	0.0	0.011	4.8	LOS A	0.0	0.0	0.00	0.56	0.00	44.1
12	R2	8	0.0	0.011	4.8	LOS A	0.0	0.0	0.00	0.56	0.00	41.3
12b	R3	4	0.0	0.011	5.4	LOS A	0.0	0.0	0.00	0.56	0.00	43.1
Approach		21	0.0	0.011	4.9	NA	0.0	0.0	0.00	0.56	0.00	42.9
SouthWest: Derwent Street												
30b	L3	8	0.0	0.011	5.4	LOS A	0.0	0.3	0.05	0.55	0.05	43.2
30a	L1	4	0.0	0.011	3.7	LOS A	0.0	0.3	0.05	0.55	0.05	42.4
32b	R3	4	0.0	0.011	5.3	LOS A	0.0	0.3	0.05	0.55	0.05	39.6
Approach		17	0.0	0.011	5.0	LOS A	0.0	0.3	0.05	0.55	0.05	42.2
All Vehicles		83	1.3	0.023	4.8	NA	0.1	0.5	0.04	0.53	0.04	43.3

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

MOVEMENT SUMMARY

Site: 101v [Development AM - Sydney Ave / Sealark Rd Intersection - Roundabout]

New Site
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
South: Sealark Road South												
1b	L3	4	0.0	0.014	4.5	LOS A	0.1	0.5	0.14	0.47	0.14	40.4
1	L2	8	0.0	0.014	4.1	LOS A	0.1	0.5	0.14	0.47	0.14	41.0
2	T1	4	0.0	0.014	3.8	LOS A	0.1	0.5	0.14	0.47	0.14	42.3
Approach		17	0.0	0.014	4.1	LOS A	0.1	0.5	0.14	0.47	0.14	41.2
North: Sealark Road North												
8	T1	5	20.0	0.023	3.9	LOS A	0.1	0.9	0.10	0.60	0.10	39.9
9a	R1	4	0.0	0.023	6.0	LOS A	0.1	0.9	0.10	0.60	0.10	42.2
9	R2	19	0.0	0.023	7.5	LOS A	0.1	0.9	0.10	0.60	0.10	44.2
Approach		28	3.7	0.023	6.6	LOS A	0.1	0.9	0.10	0.60	0.10	43.2
West: Sydney Avenue												
10	L2	8	0.0	0.017	4.5	LOS A	0.1	0.5	0.07	0.59	0.07	42.8
12	R2	8	0.0	0.017	6.7	LOS A	0.1	0.5	0.07	0.59	0.07	40.5
12b	R3	4	0.0	0.017	7.4	LOS A	0.1	0.5	0.07	0.59	0.07	42.6
Approach		21	0.0	0.017	6.0	LOS A	0.1	0.5	0.07	0.59	0.07	42.0
SouthWest: Derwent Street												
30b	L3	8	0.0	0.014	4.5	LOS A	0.1	0.5	0.15	0.52	0.15	41.5
30a	L1	4	0.0	0.014	3.5	LOS A	0.1	0.5	0.15	0.52	0.15	42.5
32b	R3	4	0.0	0.014	7.5	LOS A	0.1	0.5	0.15	0.52	0.15	40.9
Approach		17	0.0	0.014	5.0	LOS A	0.1	0.5	0.15	0.52	0.15	41.6
All Vehicles		83	1.3	0.023	5.6	LOS A	0.1	0.9	0.11	0.55	0.11	42.2

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.

MOVEMENT SUMMARY

Site: 101 [Development AM - Sydney Ave / Callala Bay Rd Intersection]

New Site
Site Category: (None)
Stop (Two-Way)

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: Lackersteen Street												
1	L2	4	0.0	0.224	6.3	LOS A	0.4	2.6	0.09	0.07	0.09	48.0
2	T1	361	0.6	0.224	0.1	LOS A	0.4	2.6	0.09	0.07	0.09	73.1
3	R2	43	2.4	0.224	6.3	LOS A	0.4	2.6	0.09	0.07	0.09	48.0
Approach		408	0.8	0.224	0.9	NA	0.4	2.6	0.09	0.07	0.09	71.7
East: Sydney Avenue East												
4	L2	67	0.0	0.342	9.2	LOS A	1.5	10.8	0.49	0.97	0.61	27.1
5	T1	9	11.1	0.342	14.5	LOS A	1.5	10.8	0.49	0.97	0.61	26.1
6	R2	105	1.0	0.342	15.9	LOS B	1.5	10.8	0.49	0.97	0.61	40.3
Approach		182	1.2	0.342	13.4	LOS A	1.5	10.8	0.49	0.97	0.61	36.9
North: Callala Bay Road												
7	L2	31	10.3	0.120	7.8	LOS A	0.3	2.0	0.15	0.41	0.15	51.1
8	T1	179	0.6	0.120	3.4	LOS A	0.3	2.0	0.15	0.41	0.15	63.5
9	R2	24	0.0	0.120	8.4	LOS A	0.3	2.0	0.15	0.41	0.15	62.3
Approach		234	1.8	0.120	4.5	NA	0.3	2.0	0.15	0.41	0.15	61.4
West: Sydney Avenue West												
10	L2	116	1.8	0.136	8.5	LOS A	0.5	3.8	0.46	0.91	0.46	43.8
11	T1	4	0.0	0.136	12.4	LOS A	0.5	3.8	0.46	0.91	0.46	33.7
12	R2	4	0.0	0.136	14.1	LOS A	0.5	3.8	0.46	0.91	0.46	33.8
Approach		124	1.7	0.136	8.8	LOS A	0.5	3.8	0.46	0.91	0.46	43.5
All Vehicles		948	1.2	0.342	5.2	NA	1.5	10.8	0.23	0.44	0.25	56.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
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 [Development PM - Sydney Ave / Sealark Rd Intersection]

New Site
Site Category: (None)
Giveway / Yield (Two-Way)

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: Sealark Road South												
1b	L3	4	0.0	0.016	5.4	LOS A	0.1	0.4	0.03	0.51	0.03	42.0
1	L2	17	0.0	0.016	4.6	LOS A	0.1	0.4	0.03	0.51	0.03	41.4
2	T1	4	0.0	0.016	3.7	LOS A	0.1	0.4	0.03	0.51	0.03	42.1
Approach		25	0.0	0.016	4.6	LOS A	0.1	0.4	0.03	0.51	0.03	41.6
North: Sealark Road North												
8	T1	4	0.0	0.014	3.7	LOS A	0.0	0.3	0.14	0.48	0.14	42.9
9a	R1	4	0.0	0.014	3.6	LOS A	0.0	0.3	0.14	0.48	0.14	44.6
9	R2	8	0.0	0.014	5.3	LOS A	0.0	0.3	0.14	0.48	0.14	44.3
Approach		17	0.0	0.014	4.5	LOS A	0.0	0.3	0.14	0.48	0.14	44.1
West: Sydney Avenue												
10	L2	20	0.0	0.032	4.8	LOS A	0.0	0.0	0.00	0.56	0.00	44.4
12	R2	37	0.0	0.032	4.8	LOS A	0.0	0.0	0.00	0.56	0.00	41.6
12b	R3	4	0.0	0.032	5.5	LOS A	0.0	0.0	0.00	0.56	0.00	43.5
Approach		61	0.0	0.032	4.9	NA	0.0	0.0	0.00	0.56	0.00	42.8
SouthWest: Derwent Street												
30b	L3	4	0.0	0.009	5.4	LOS A	0.0	0.2	0.08	0.54	0.08	43.2
30a	L1	4	0.0	0.009	3.8	LOS A	0.0	0.2	0.08	0.54	0.08	42.4
32b	R3	4	0.0	0.009	5.4	LOS A	0.0	0.2	0.08	0.54	0.08	39.6
Approach		13	0.0	0.009	4.9	LOS A	0.0	0.2	0.08	0.54	0.08	41.9
All Vehicles		116	0.0	0.032	4.7	NA	0.1	0.4	0.03	0.54	0.03	42.7

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

MOVEMENT SUMMARY

Site: 101v [Development PM - Sydney Ave / Sealark Rd Intersection]

New Site
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
South: Sealark Road South												
1b	L3	4	0.0	0.020	4.5	LOS A	0.1	0.8	0.10	0.47	0.10	40.6
1	L2	17	0.0	0.020	4.0	LOS A	0.1	0.8	0.10	0.47	0.10	41.2
2	T1	4	0.0	0.020	3.7	LOS A	0.1	0.8	0.10	0.47	0.10	42.5
Approach		25	0.0	0.020	4.0	LOS A	0.1	0.8	0.10	0.47	0.10	41.3
North: Sealark Road North												
8	T1	4	0.0	0.014	3.9	LOS A	0.1	0.5	0.18	0.56	0.18	40.7
9a	R1	4	0.0	0.014	6.2	LOS A	0.1	0.5	0.18	0.56	0.18	41.7
9	R2	8	0.0	0.014	7.4	LOS A	0.1	0.5	0.18	0.56	0.18	43.2
Approach		17	0.0	0.014	6.2	LOS A	0.1	0.5	0.18	0.56	0.18	42.3
West: Sydney Avenue												
10	L2	20	0.0	0.045	4.8	LOS A	0.2	1.5	0.07	0.60	0.07	43.4
12	R2	37	0.0	0.045	6.7	LOS A	0.2	1.5	0.07	0.60	0.07	40.5
12b	R3	4	0.0	0.045	7.4	LOS A	0.2	1.5	0.07	0.60	0.07	42.6
Approach		61	0.0	0.045	6.1	LOS A	0.2	1.5	0.07	0.60	0.07	41.7
SouthWest: Derwent Street												
30b	L3	4	0.0	0.010	4.5	LOS A	0.1	0.4	0.14	0.53	0.14	41.4
30a	L1	4	0.0	0.010	3.5	LOS A	0.1	0.4	0.14	0.53	0.14	42.4
32b	R3	4	0.0	0.010	7.5	LOS A	0.1	0.4	0.14	0.53	0.14	40.8
Approach		13	0.0	0.010	5.2	LOS A	0.1	0.4	0.14	0.53	0.14	41.6
All Vehicles		116	0.0	0.045	5.6	LOS A	0.2	1.5	0.10	0.56	0.10	41.7

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.

MOVEMENT SUMMARY

Site: 101 [Development PM - Sydney Ave / Callala Bay Rd Intersection]

New Site
Site Category: (None)
Stop (Two-Way)

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: Lackersteen Street												
1	L2	8	0.0	0.144	6.5	LOS A	0.6	4.2	0.34	0.19	0.34	39.2
2	T1	154	0.0	0.144	1.0	LOS A	0.6	4.2	0.34	0.19	0.34	64.9
3	R2	64	0.0	0.144	6.6	LOS A	0.6	4.2	0.34	0.19	0.34	39.3
Approach		226	0.0	0.144	2.8	NA	0.6	4.2	0.34	0.19	0.34	60.1
East: Sydney Avenue East												
4	L2	41	0.0	0.126	9.1	LOS A	0.4	3.0	0.53	0.93	0.53	26.5
5	T1	4	0.0	0.126	13.7	LOS A	0.4	3.0	0.53	0.93	0.53	26.1
6	R2	25	0.0	0.126	16.6	LOS B	0.4	3.0	0.53	0.93	0.53	48.2
Approach		71	0.0	0.126	12.1	LOS A	0.4	3.0	0.53	0.93	0.53	37.4
North: Callala Bay Road												
7	L2	112	0.0	0.308	7.3	LOS A	1.3	9.0	0.20	0.43	0.20	60.8
8	T1	356	0.3	0.308	3.4	LOS A	1.3	9.0	0.20	0.43	0.20	61.9
9	R2	129	0.0	0.308	7.6	LOS A	1.3	9.0	0.20	0.43	0.20	60.7
Approach		597	0.2	0.308	5.1	NA	1.3	9.0	0.20	0.43	0.20	61.4
West: Sydney Avenue West												
10	L2	58	1.8	0.094	8.1	LOS A	0.3	2.5	0.31	0.89	0.31	50.7
11	T1	13	0.0	0.094	14.7	LOS B	0.3	2.5	0.31	0.89	0.31	28.0
12	R2	5	20.0	0.094	17.6	LOS B	0.3	2.5	0.31	0.89	0.31	27.4
Approach		76	2.8	0.094	9.9	LOS A	0.3	2.5	0.31	0.89	0.31	47.4
All Vehicles		969	0.3	0.308	5.4	NA	1.3	9.0	0.26	0.45	0.26	58.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
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.