

Headway Traffic & Transport Pty Ltd t/a Seca-Solution
 ABN: 86 617 026 178
 Level 1, 239 King Street, Newcastle, NSW 2300
 PO Box 3618 Wareemba NSW 2046
 (02) 4032 7979
 admin@secasolution.com.au

Palm Lake Resort
 PO Box 10479
 Southport QLD

Attn: Matilda Parer

Dear Matilda,

Re: 106 Forest Lane, Old Bar: Single Master Lot with Multi Dwelling Units Technical Note & SIDRA Modelling

Seca-Solution has been engaged by Palm Lake Works Pty Ltd to review the traffic and parking impacts of the proposed Stage 1 of the Lifestyle Village at 106 Forest Lane, Old Bar. Stage 1 of the development will consist of 204 dwellings, each with 2 parking spaces.

The following assessment has been completed with regard to the relevant requirements outlined in the Mid Coast Council (Greater Taree City Council) Development Control Plan 2010 (DCP) and the TfNSW Guide to Transport Impact Assessments.

Background and Existing Situation

The subject site is located at 106 Forest Lane, Old Bar as shown in **Figure 1**.

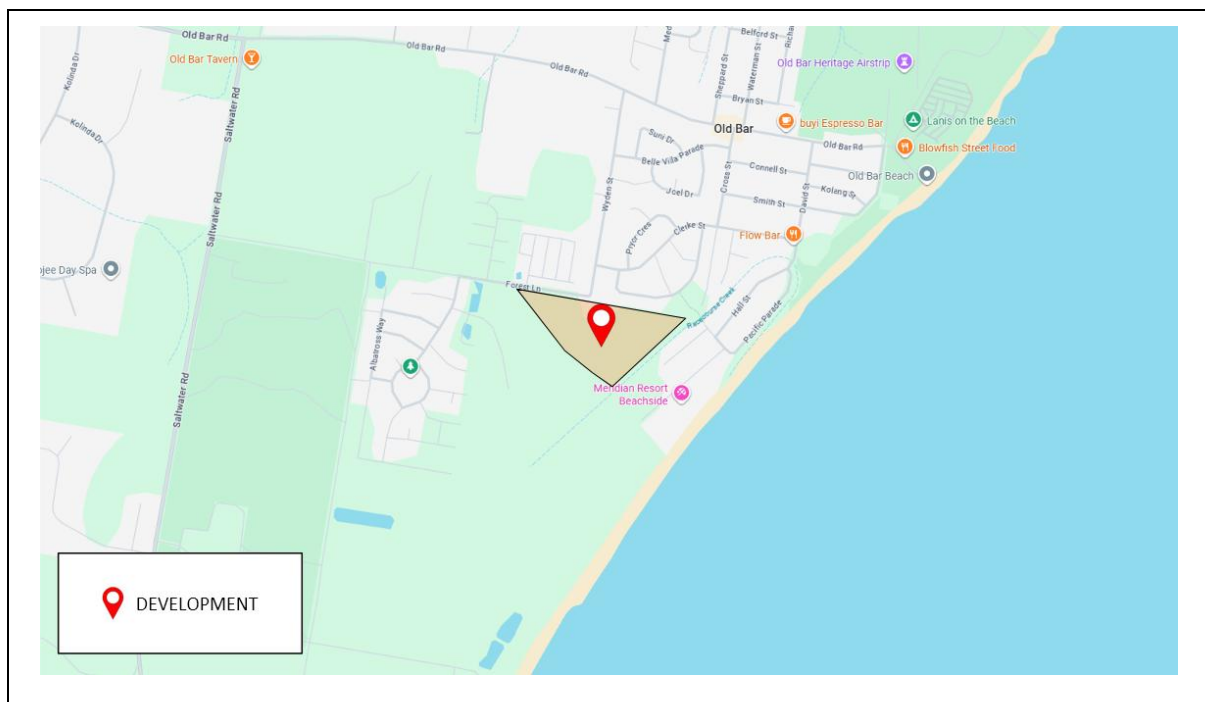


Figure 1: Site Location - Adapted from Google Maps

The development has been progressing since 2007. In 2007 a Traffic and Transport Report was prepared by Sinclair Knight Merz (SKM). This involved SIDRA modelling of key intersections within the study area, importantly including Forest Lane / Wyden Street and Forest Lane / Collector Road intersections.

In 2015, Better Transport Futures (BTF) completed a high-level traffic engineering review of the proposed development, and of the SKM report.

In 2022, Bitzios prepared Traffic Engineering Advice to reconsider the model prepared in the Traffic and Transport Report prepared by SKM and submitted as part of the 2007 approval documentation. The Bitzios advice formed part of MOD2022/0277. The Bitzios report focused on stages 2, 3 and 10 and did not consider actual dwelling numbers as they were not yet determined.

This report considers the extent of the Northern Precinct previously identified as Stage 2 (Stone) and Stage 3 (Jarberg North). The future western precinct was previously identified as Stage 10 (Jarberg West). This is detailed below in **Figure 2**. The Bitzios report considered that these stages would accommodate 195 lots.

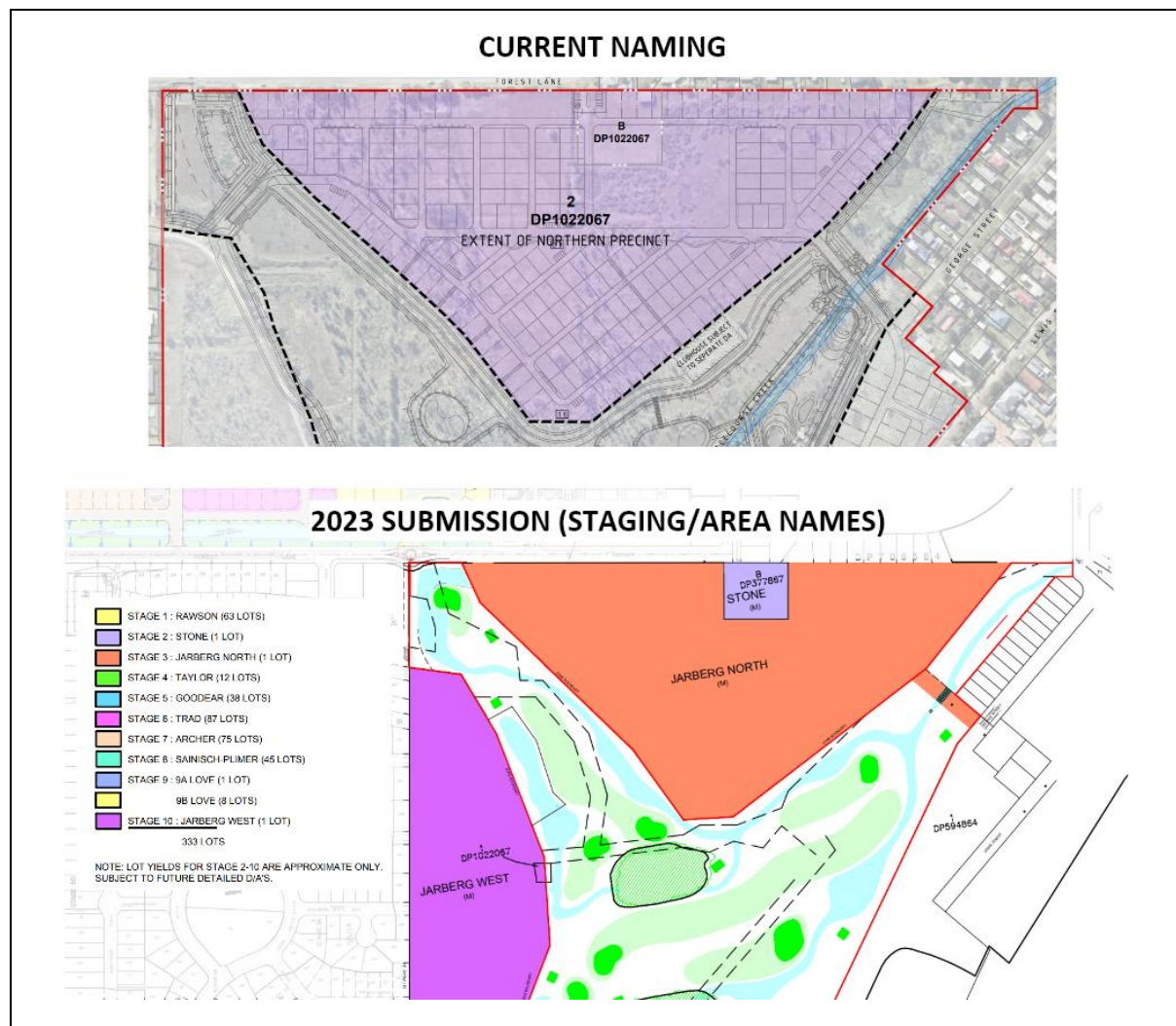


Figure 2: Previous and Current Area Naming and Stage

The now Northern Precinct proposes to provide a total of 204 lots. While the western precinct is not included as part of this application, it does see the potential doubling of lot yield from the same area. As such, on 17 February, MidCoast Council provided a Request for Information (RFI) for the proposal to provide additional information with relation to the potential traffic impacts. This included the assessment of Forest Lane and Wyden Street intersection and other intersections potentially impacted by the proposal.

Assumptions provided in the Bitzios Traffic Engineering Advice have been adopted for the catchment, distribution and trip generation for vehicle movements associated with the Northern Precinct. Vehicle access to the residences associated with the Northern Precinct will be via the intersection of Forest Lane and Wyden Street.

A site visit conducted on Monday 23 March 2026 verified the current conditions and extent of work completed through the area. As such, modelling has been limited to the proposed intersection of Forest Lane and Wyden Street as:

- The identified roundabout at Driftwood Boulevard and Forest Lane as part of the 2023 documentation has not been constructed.
- The total lot yield as detailed in the Bitzios report is nine less than that currently proposed, noting that the lot yield of the now Western Precinct (not included in the current application) will be considered as part of a future development application.
- Review of vehicle volumes on Forest Lane indicate that traffic volumes are well within the capacity of a collector street.

Summary of Surrounding Transport and Parking Infrastructure

Local Road Environment	Forest Lane provides local access to Old Bar Road via Saltwater Road or Wyden Street. It has a signposted speed limit of 50km/h within proximity of the single master lot with multi dwelling units and is not heavily trafficked. Traffic data collected indicate a weekday average of 1932 vehicles in both directions. Peak AM and PM volumes are below 250 vehicles per hour. Towards the eastern end of Forest Lane, it turns north and changes name to Wyden Street. Wyden Street is local road connecting Forest Lane with Old Bar Road providing access to Old Bar, Taree and the Pacific Highway. It has a signposted speed limit of 50km/h and as it connects with Forest Lane, is expected to carry similar vehicle volumes.
<u>AM</u> <u>PM</u>	
Crash History and Road Safety	A review of the Interactive Crash Statistics (www.roadsafety.transport.nsw.gov.au) indicates there have been no accidents along the site frontage or in the vicinity of the site during the five years 2020-2024. There has been one incident at the corner (L-junction) of Forest Lane and Wyden Street resulting in a non-casualty (towaway) crash at night. There is no history of reoccurring incidents at this location; however, with the access to be built it provides the opportunity to provide improved delineation of the L-junction.

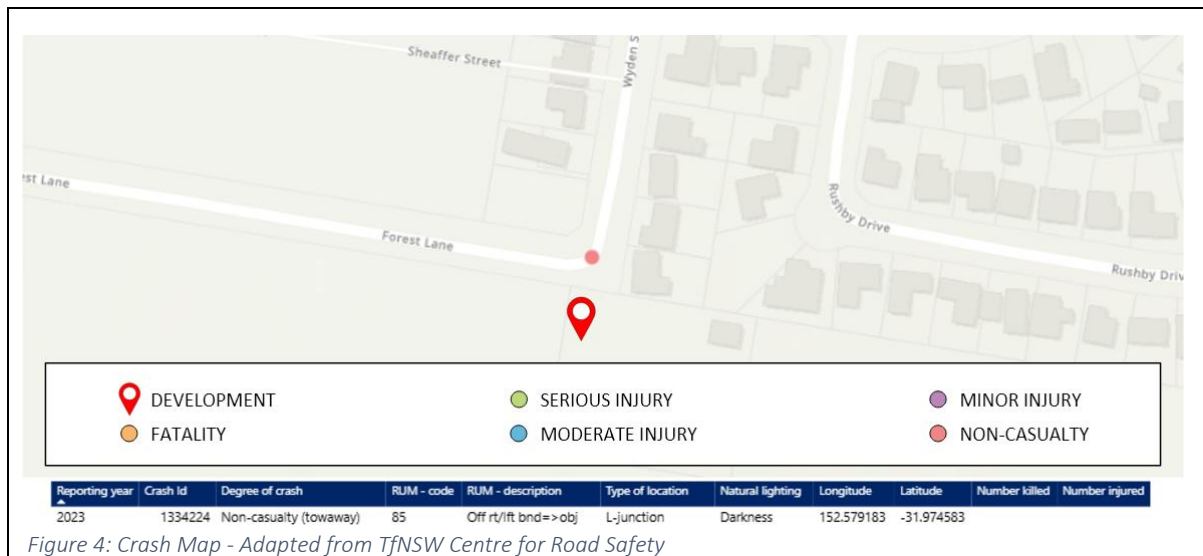


Figure 4: Crash Map - Adapted from TfNSW Centre for Road Safety

On-street Parking	On-street parking is permitted; however demand is low and no vehicles were observed to be parked on Forest Lane or Wyden Street. Parking restrictions in accordance with the NSW Road rules apply.
Public Transport	There is only one bus route that services Old Bar which provides a loop service to Taree. The loop service provides two morning and two afternoon services. These appear to also service local schools.

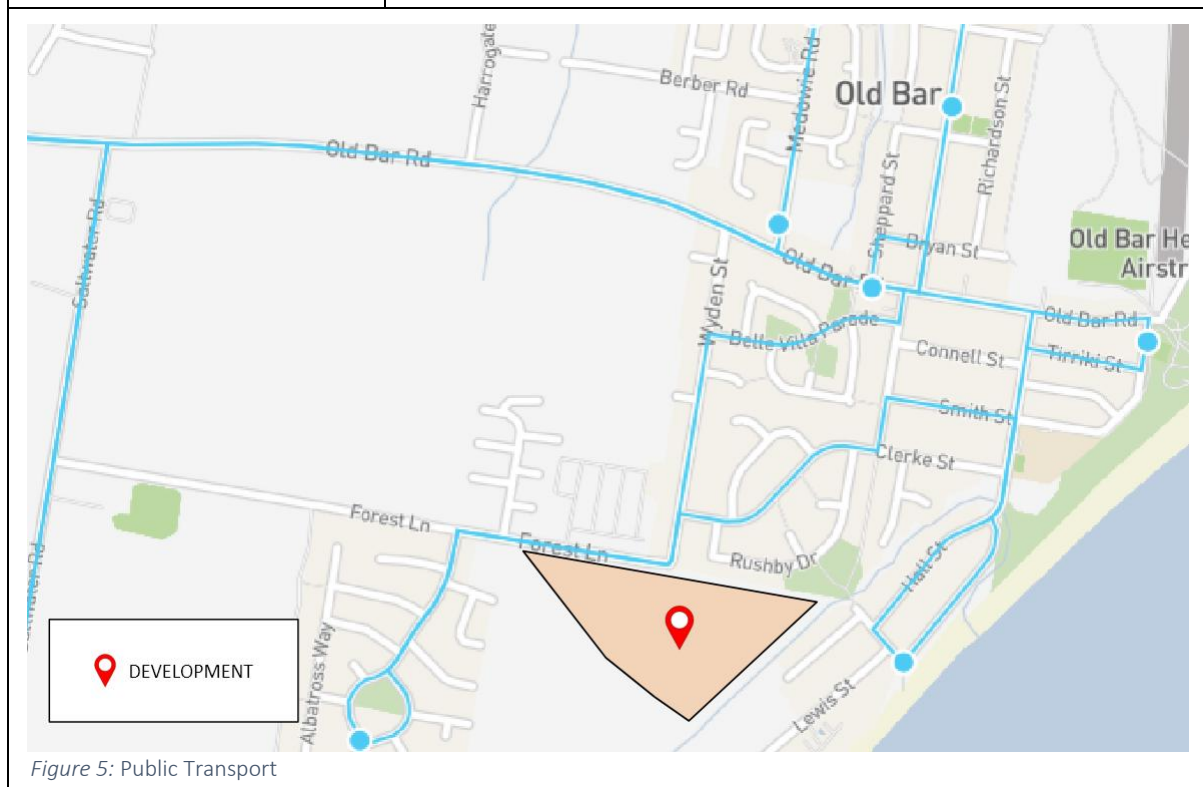


Figure 5: Public Transport

Pedestrian Facilities	Pedestrian facilities within the vicinity of the development are limited. Pedestrians utilise the road verge where a footpath is not available when accessing bus stops or walking within the local area.
Bicycle Facilities	Bicycle facilities within the vicinity of the development are limited. Road widths on Forest Lane and Wyden Street are amicable to cyclist usage, however, they are not signposted nor line marked. Additionally, the pavement within the vicinity of the proposed access is in poor conditions with heavy patching.



Proposed Development

Vehicle Access	Access to the master lot will be via the L-junction of Forest Lane and Wyden Street. Extending off Wyden Street access will accommodate vehicles, pedestrians and cyclists.
Trip Generation	Trip generation rates have been reviewed against the TfNSW Guide to Transport Impact Assessment. The new TfNSW guide superseded that which would have been used by Bitzios and SKM. The new guide does not provide a trip rate for Lifestyle Villages but does provide a trip rate for Housing for Seniors. In both the Bitzios and SKM traffic reports they considered that Lifestyle Villages in this location would have a similar trip generation per dwelling to that of seniors housing. • The SKM report identified a trip rate of 0.57 trips per dwelling. • The Bitzios report identified a trip rate of 0.4 trips per dwelling based on the superseded TfNSW Guide. We agree that this type of development would likely generate vehicle movements consistent with that of a senior living. The new TfNSW Guide provides a site peak trip rate of 0.44 vehicle trips per dwelling (vtd) with a PM peak rate of 0.23 vtd. As such, the trip rates have been based on the current peak trip rates where 205 lots would generate 90 vehicle trips. For the purposes of conservative modelling, the peak trip rates have been applied to the morning and PM peak periods. It is noted that in the TfNSW Guide it states that: <i>“Peak travel generally does not coincide with the morning network peak, although there is a closer correlation between evening site peaks and network peaks”</i> Where the PM peak for regional developments is 0.23 trips per dwelling.

	<table><tr><th>Land Use</th><th>Trip Rate</th><th>Trips</th></tr><tr><td>Housing for Seniors</td><td>0.44 vehicles per dwelling</td><td>90</td></tr></table> Table 1 Trip Generation	Land Use	Trip Rate	Trips	Housing for Seniors	0.44 vehicles per dwelling	90
Land Use	Trip Rate	Trips					
Housing for Seniors	0.44 vehicles per dwelling	90					
Trip Distribution	Trip distributions have been allocated as 50% north via Wyden Street and 50% west via Forest Lane. The distance to Taree or the Pacific Highway via Old Bar Road is practically identical and it is noted that some drivers may be accessing local shops within Old Bar. People travelling west may choose to avoid vehicles turning right at Old Bar Road and Wyden Street and choose to travel via Forest Lane, Saltwater Road and Old Bar Road. As future precincts are developed, these routes may change due to personal preference; however, based on the current and projected vehicle volumes, it is likely that intersections will continue to perform well.						

T1

Tot9

LV100%

HV0%

T1

Wyden Street

HV0%

LV100%

Tot9

R2

Forest Lane

L2

T1

Tot36

LV100%

HV0%

L2

T1

Site Access

AM

T1

Tot36

LV100%

HV0%

T1

Wyden Street

HV0%

LV100%

Tot36

R2

Forest Lane

L2

T1

Tot9

LV100%

HV0%

L2

T1

Site Access

PM

Figure 7: AM/PM Trip Distribution

Figure 7: AM/PM Trip Distribution

Sidra Model	A Sidra model has been prepared in response to MidCoast Councils RFI to quantify the potential impact at the 10-year horizon period. Sidra models have been prepared for: - Completed Development 2028 with a background growth of 2% from the data collected. 10-year Horizon 2038 with background growth of 2%. The 2% background growth is considered conservative noting that: - Any further master lots with multi dwelling units will require additional assessment and the land development commenced in 2007 (19 years ago) and is not yet completed. - The number of residential dwellings serviced by Old Bar Road without roundabouts are greater than those servicing residences off Forest Lane. Results of the Sidra Model are as follows: - In the Completed Development scenario, reflecting the trips generated by the development, the intersection of Forest Lane, Wyden Street and the site access is expected to operate at Level of Service (LOS A) during both the morning and afternoon peak hour periods. The worst-performing movement is the right-turn from Forest Lane into the site, which is anticipated to experience average delays of 4.8 seconds in the morning peak hour and 5.1 seconds in the afternoon peak hour. The maximum 95th percentile queue length across all movements at the intersection is estimated to be 0.2 and 0.4 vehicles in the morning and afternoon peak hours, respectively. - Forecast future traffic conditions at the 10-year design horizon indicate negligible impacts with the intersection expected to continue operating at LOS A with marginal increases in delays and queue lengths of up to 0.1 seconds and 0.1 vehicles, respectively.
--------------------	--

Scenario	Degree of Saturation	Delay (seconds)	Level of Service	95% Back of Queue (vehicles)	95% Back of Queue (metres)																																
AM Peak																																					
Completed Development	0.085	4.8	A	0.2	1.7																																
10-Year Horizon	0.102	4.8	A	0.2	1.7																																
PM Peak																																					
Completed Development	0.091	5.1	A	0.4	3.2																																
10-Year Horizon	0.106	5.2	A	0.5	3.8																																
<i>Table 2 SIDRA Modelling Results</i>																																					
Mid-block Assessment	When considering the environmental capacity of Forest Lane and Wyden Street, the combined two-way traffic volumes, including additional trips generated by the development, are expected to remain below the maximum peak hour volume of 500 vehicles per hour for a collector street. <table> <tr> <th rowspan="2">Approach</th><th rowspan="2">Direction</th><th colspan="2">AM</th><th colspan="2">PM</th></tr> <tr> <th>2028</th><th>2038</th><th>2028</th><th>2038</th></tr> <tr> <td rowspan="2">Forest Lane</td><td>EB</td><td>152</td><td>183</td><td>158</td><td>185</td></tr> <tr> <td>WB</td><td>129</td><td>149</td><td>117</td><td>141</td></tr> <tr> <td rowspan="2">Wyden Street</td><td>NB</td><td>179</td><td>210</td><td>131</td><td>158</td></tr> <tr> <td>SB</td><td>102</td><td>122</td><td>144</td><td>168</td></tr> </table> <i>Table 3 Mid-block Volumes</i>					Approach	Direction	AM		PM		2028	2038	2028	2038	Forest Lane	EB	152	183	158	185	WB	129	149	117	141	Wyden Street	NB	179	210	131	158	SB	102	122	144	168
Approach	Direction	AM		PM																																	
		2028	2038	2028	2038																																
Forest Lane	EB	152	183	158	185																																
	WB	129	149	117	141																																
Wyden Street	NB	179	210	131	158																																
	SB	102	122	144	168																																
Sight Line Assessment	Sight lines have been assessed in accordance with Austroads/AS2890.1 AS2890.2 and comply providing over 100 metres in both directions.																																				



Figure 8: Sight Line Looking North



Figure 9: Sight Line Looking West

Parking Provision

Two parking spaces will be provided for each dwelling. This is consistent with MidCoast Council's DCP (Manning Region Part G – Car Parking and Access) which has a minimum parking rate of one space per dwelling house.

Public Transport	It is noted in the MOD2022/0277 consent Condition 19 that: <i>"A Bus Route Plan for the entire subdivision is to be submitted to Council for approval prior to the issue of the Engineering Construction Certificate for Stage 1 – sub-stage 1A.</i> <i>This plan is to be complied with throughout all stages, except stages 2, 3 and 10."</i> While now identified as the Northern Precinct, this area was previously identified as Stage 2 and Stage 3. As such, a bus route plan for the Northern Precinct is not required. The development will not have any negative impact to public transport.
------------------	---

Conclusion

Overall, the proposal can be supported in its current form with consideration of the impact to the local road network as vehicle volumes on Forest Lane at Wyden Street will be below the maximum environmental capacity of 500 vehicle per hour for collector streets.

It is noted that future stages may require further assessment of intersection and road network capacity to ensure that any network upgrades that may be required are done so at an appropriate time to ensure network capacity and safety is maintained.

Should you require any additional information please feel free to contact our office on 4032 7979.

Kind regards,



Michael Palamara
Director Traffic & Transport Engineer
Seca-Solution

Revision History

Issue	Date	Comments
0.01	20/04/2026	Issued as Draft
A.01	29/04/2026	Issued as Final
Prepared by:		Michael Palamara
Reviewed by:		Cathy Thomas
Approved by:		Michael Palamara
Date and Time Printed: 29/04/2026 2:04 PM		

Attachment 1: Traffic Data

TRANS TRAFFIC SURVEY

trafficsurvey.com.au

Site Forest Ln

Direction

Eastbound ▼

[Back to Site Summary Page](#)

Day Date	Monday 23/03/2026	Tuesday 24/03/2026	Wednesday 25/03/2026	Thursday 19/03/2026	Friday 20/03/2026	Saturday 21/03/2026	Sunday 22/03/2026	7 days		Weekday		Weekend	
								Total	Average	Total	Average	Total	Average
AM Peak	08:00	08:00	08:00	08:00	08:00	11:00	10:00	N/A	08:00	N/A	08:00	N/A	11:00
PM Peak	16:00	16:00	16:00	14:00	15:00	12:00	12:00	N/A	16:00	N/A	16:00	N/A	12:00
00:00	0	1	2	1	1	3	5	13	2	5	1	8	4
01:00	1	0	0	2	0	0	5	8	1	3	1	5	3
02:00	0	1	2	0	0	1	1	5	1	3	1	2	1
03:00	0	0	0	1	0	2	1	4	1	1	0	3	2
04:00	0	0	1	2	0	0	0	3	0	3	1	0	0
05:00	4	3	7	9	8	3	1	35	5	31	6	4	2
06:00	27	27	29	29	32	24	11	179	26	144	29	35	18
07:00	61	74	58	63	66	41	26	389	56	322	64	67	34
08:00	137	119	119	116	117	77	54	739	106	608	122	131	66
09:00	67	74	86	73	82	92	94	568	81	382	76	186	93
10:00	82	58	70	79	80	90	103	562	80	369	74	193	97
11:00	66	54	70	70	77	123	82	542	77	337	67	205	103
12:00	70	66	70	55	73	84	88	506	72	334	67	172	86
13:00	59	50	62	68	63	70	57	429	61	302	60	127	64
14:00	89	73	84	83	82	61	68	540	77	411	82	129	65
15:00	64	68	77	70	87	54	69	489	70	366	73	123	62
16:00	90	87	117	83	81	66	70	594	85	458	92	136	68
17:00	64	70	92	68	85	70	54	503	72	379	76	124	62
18:00	47	49	61	52	54	50	39	352	50	263	53	89	45
19:00	24	52	24	33	27	25	26	211	30	160	32	51	26
20:00	12	21	16	9	23	10	10	101	14	81	16	20	10
21:00	4	7	8	3	24	14	5	65	9	46	9	19	10
22:00	4	5	6	2	6	10	3	36	5	23	5	13	7
23:00	0	1	1	0	2	6	1	11	2	4	1	7	4
Total	972	960	1062	971	1070	976	873	6884	983	5035	1007	1849	925
% Heavy	9.26%	7.71%	8.38%	8.86%	8.04%	8.20%	7.22%	8.25%		8.44%		7.73%	

TRANS TRAFFIC SURVEY

 trafficsurvey.com.au

Site Forest Ln

Direction ▼[Back to Site Summary Page](#)

Day Date	Monday 23/03/2026	Tuesday 24/03/2026	Wednesday 25/03/2026	Thursday 19/03/2026	Friday 20/03/2026	Saturday 21/03/2026	Sunday 22/03/2026	7 days		Weekday		Weekend	
								Total	Average	Total	Average	Total	Average
AM Peak	09:00	08:00	08:00	08:00	09:00	09:00	10:00	N/A	09:00	N/A	08:00	N/A	09:00
PM Peak	16:00	17:00	16:00	15:00	15:00	16:00	16:00	N/A	16:00	N/A	16:00	N/A	16:00
00:00	0	0	1	1	1	0	3	6	1	3	1	3	2
01:00	1	0	0	1	0	2	4	8	1	2	0	6	3
02:00	0	1	1	0	0	2	0	4	1	2	0	2	1
03:00	0	0	0	0	0	3	0	3	0	0	0	3	2
04:00	1	2	2	3	4	0	0	12	2	12	2	0	0
05:00	3	5	2	4	4	3	1	22	3	18	4	4	2
06:00	16	16	19	18	26	16	11	122	17	95	19	27	14
07:00	46	34	52	47	43	42	14	278	40	222	44	56	28
08:00	70	75	84	75	64	41	62	471	67	368	74	103	52
09:00	89	66	78	54	74	82	77	520	74	361	72	159	80
10:00	56	54	75	54	62	81	80	462	66	301	60	161	81
11:00	64	71	74	71	54	81	70	485	69	334	67	151	76
12:00	51	69	93	69	87	70	54	493	70	369	74	124	62
13:00	68	62	62	56	63	57	68	436	62	311	62	125	63
14:00	58	51	57	59	58	62	68	413	59	283	57	130	65
15:00	89	89	92	104	100	58	65	597	85	474	95	123	62
16:00	101	99	104	96	90	82	70	642	92	490	98	152	76
17:00	78	103	79	78	90	69	59	556	79	428	86	128	64
18:00	59	48	64	58	44	43	39	355	51	273	55	82	41
19:00	29	47	35	41	36	36	23	247	35	188	38	59	30
20:00	13	18	22	19	29	26	14	141	20	101	20	40	20
21:00	3	7	12	4	14	14	6	60	9	40	8	20	10
22:00	4	5	4	5	10	9	2	39	6	28	6	11	6
23:00	2	1	2	3	2	6	0	16	2	10	2	6	3
Total	901	923	1014	920	955	885	790	6388	913	4713	943	1675	838
% Heavy	8.55%	7.69%	8.28%	9.24%	9.32%	7.01%	5.82%	8.05%		8.61%		6.45%	

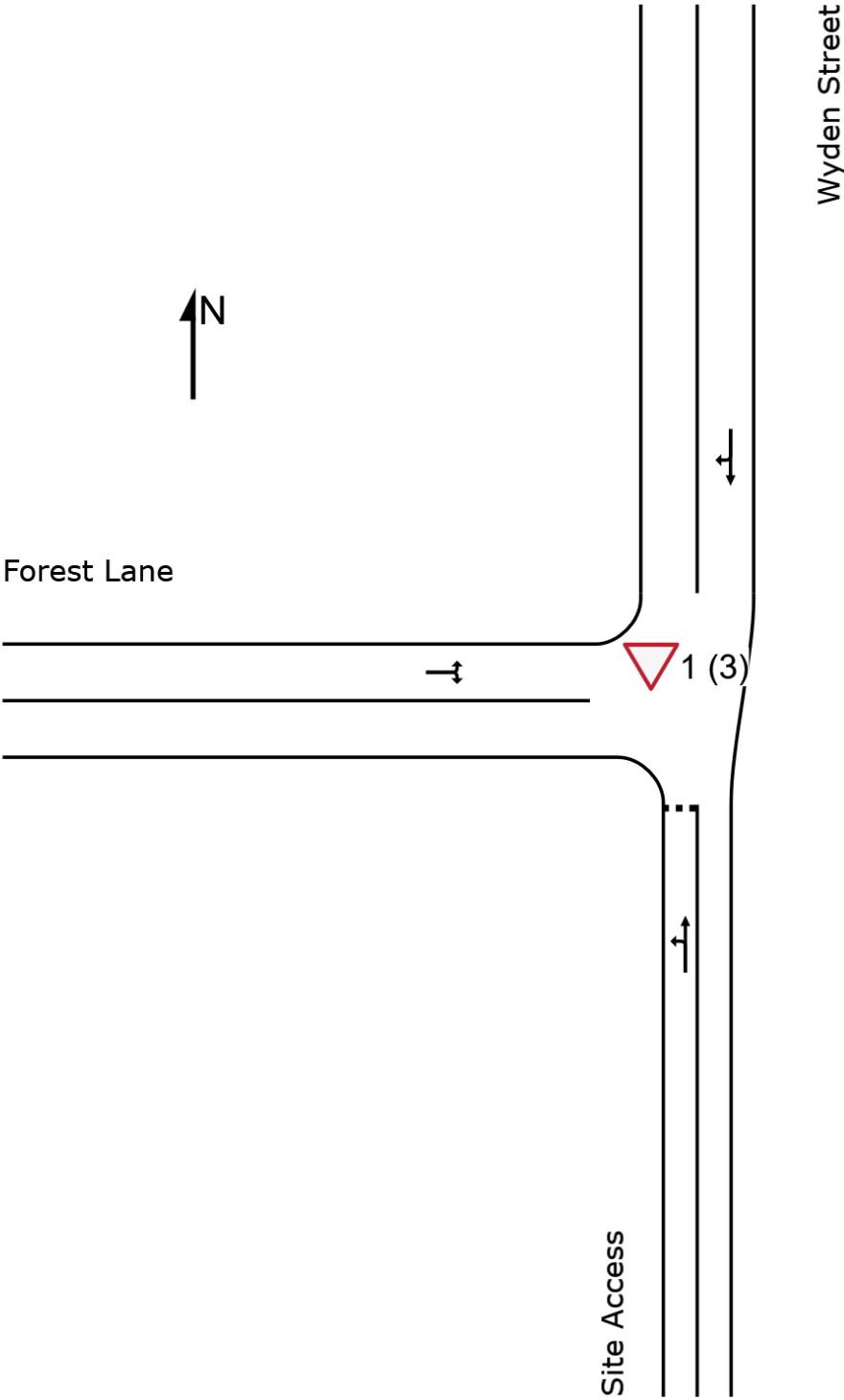
Attachment 2: Sidra Model Outputs

SITE LAYOUT

 **Site: [1 (3)] Forest Lane - Wyden Street - AM - 2028 WD**
(Folder1)

NA
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



SIDRA INTERSECTION 10.0 | Copyright © 2000-2025 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: HEADWAY TRAFFIC AND TRANSPORT | Licence: NETWORK / 1PC | Created: Monday, 20 April 2026 1:00:44 PM

Project: C:\Users\JacobCarreon\SECA SOLUTION PTY LTD\Projects - SECA Files\P3371 - PLW - Northern Precinct Multi Dwelling RFI\2.
Deliverables\0.01 - Draft\P3371 SIDRA Model.sipx

MOVEMENT SUMMARY

▼ Site: [1 (3)] Forest Lane - Wyden Street - AM - 2028 WD
(Folder1)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

NA
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand		Arrival		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop of Rate	Number of Cycles to Depart	Aver. Speed
			Flows		Flows					[Veh. Dist]					
			[Total HV]	%	[Total HV]	%				veh	m				veh
South: Site Access															
1	L2	All MCs	38	0.0	38	0.0	0.062	4.2	LOS A	0.2	1.7	0.25	0.49	0.25	46.3
2	T1	All MCs	38	0.0	38	0.0	0.062	3.9	LOS A	0.2	1.7	0.25	0.49	0.25	44.0
Approach			76	0.0	76	0.0	0.062	4.0	LOS A	0.2	1.7	0.25	0.49	0.25	45.5
North: Wyden Street															
8	T1	All MCs	9	0.0	9	0.0	0.056	0.0	LOS A	0.0	0.0	0.00	0.48	0.00	45.4
9	R2	All MCs	98	9.0	98	9.0	0.056	4.7	LOS A	0.0	0.0	0.00	0.48	0.00	47.3
Approach			107	8.2	107	8.2	0.056	4.2	NA	0.0	0.0	0.00	0.48	0.00	47.2
West: Forest Lane															
10	L2	All MCs	151	9.0	151	9.0	0.085	4.7	LOS A	0.1	0.5	0.03	0.52	0.03	47.1
12	R2	All MCs	9	0.0	9	0.0	0.085	4.8	LOS A	0.1	0.5	0.03	0.52	0.03	46.0
Approach			160	8.5	160	8.5	0.085	4.7	NA	0.1	0.5	0.03	0.52	0.03	47.0
All Vehicles			343	6.5	343	6.5	0.085	4.4	NA	0.2	1.7	0.07	0.50	0.07	46.9

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: [1 (5)] Forest Lane - Wyden Street - AM - 2038 WD
(Folder1)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

NA
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop of Rate	Number of Cycles to Depart	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				km/h
South: Site Access															
1	L2	All MCs	38	0.0	38	0.0	0.065	4.2	LOS A	0.2	1.7	0.29	0.50	0.29	46.3
2	T1	All MCs	38	0.0	38	0.0	0.065	4.2	LOS A	0.2	1.7	0.29	0.50	0.29	43.9
Approach			76	0.0	76	0.0	0.065	4.2	LOS A	0.2	1.7	0.29	0.50	0.29	45.4
North: Wyden Street															
8	T1	All MCs	9	0.0	9	0.0	0.067	0.0	LOS A	0.0	0.0	0.00	0.49	0.00	45.3
9	R2	All MCs	119	9.0	119	9.0	0.067	4.7	LOS A	0.0	0.0	0.00	0.49	0.00	47.3
Approach			128	8.3	128	8.3	0.067	4.3	NA	0.0	0.0	0.00	0.49	0.00	47.2
West: Forest Lane															
10	L2	All MCs	183	9.0	183	9.0	0.102	4.7	LOS A	0.1	0.5	0.03	0.52	0.03	47.1
12	R2	All MCs	9	0.0	9	0.0	0.102	4.8	LOS A	0.1	0.5	0.03	0.52	0.03	46.0
Approach			193	8.6	193	8.6	0.102	4.7	NA	0.1	0.5	0.03	0.52	0.03	47.0
All Vehicles			397	6.9	397	6.9	0.102	4.5	NA	0.2	1.7	0.07	0.51	0.07	46.9

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akcelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: [1 (4)] Forest Lane - Wyden Street - PM - 2028 WD
(Folder1)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

NA
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop of Cycles Rate to Depart	Number of Cycles	Aver. Speed
			[Total HV]	[Total HV]	[Total HV]	[Total HV]				[Veh. veh	Dist] m				km/h
			veh/h	%	veh/h	%	v/c	sec							
South: Site Access															
1	L2	All MCs	9	0.0	9	0.0	0.016	4.2	LOS A	0.1	0.4	0.27	0.48	0.27	46.3
2	T1	All MCs	9	0.0	9	0.0	0.016	4.0	LOS A	0.1	0.4	0.27	0.48	0.27	44.0
Approach			19	0.0	19	0.0	0.016	4.1	LOS A	0.1	0.4	0.27	0.48	0.27	45.5
North: Wyden Street															
8	T1	All MCs	38	0.0	38	0.0	0.088	0.1	LOS A	0.4	3.2	0.12	0.38	0.12	45.7
9	R2	All MCs	114	9.0	114	9.0	0.088	4.8	LOS A	0.4	3.2	0.12	0.38	0.12	47.4
Approach			152	6.7	152	6.8	0.088	3.6	NA	0.4	3.2	0.12	0.38	0.12	47.2
West: Forest Lane															
10	L2	All MCs	128	9.0	128	9.0	0.091	4.8	LOS A	0.2	1.8	0.14	0.52	0.14	46.9
12	R2	All MCs	38	0.0	38	0.0	0.091	5.1	LOS A	0.2	1.8	0.14	0.52	0.14	45.8
Approach			166	6.9	166	6.9	0.091	4.9	NA	0.2	1.8	0.14	0.52	0.14	46.7
All Vehicles			337	6.5	337	6.5	0.091	4.3	NA	0.4	3.2	0.14	0.46	0.14	46.9

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: [1 (6)] Forest Lane - Wyden Street - PM - 2038 WD
(Folder1)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

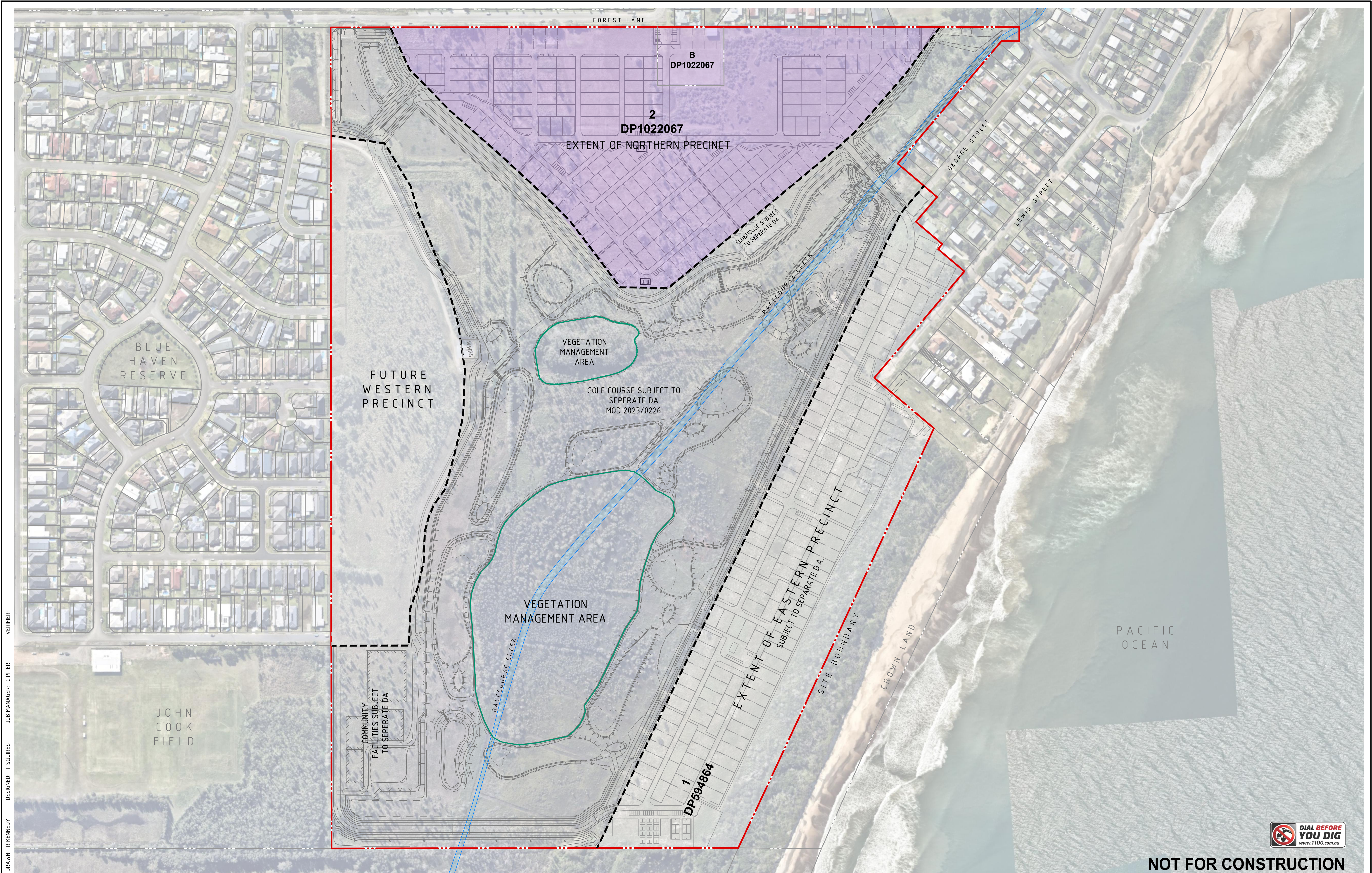
NA
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop of Cycles Rate to Depart	Number of Cycles	Aver. Speed
			[Total HV]		[Total HV]					[Veh. veh	Dist] m				
			veh/h	%	veh/h	%									
South: Site Access															
1	L2	All MCs	9	0.0	9	0.0	0.017	4.3	LOS A	0.1	0.4	0.30	0.49	0.30	46.3
2	T1	All MCs	9	0.0	9	0.0	0.017	4.2	LOS A	0.1	0.4	0.30	0.49	0.30	43.9
Approach			19	0.0	19	0.0	0.017	4.3	LOS A	0.1	0.4	0.30	0.49	0.30	45.4
North: Wyden Street															
8	T1	All MCs	38	0.0	38	0.0	0.103	0.1	LOS A	0.5	3.8	0.12	0.40	0.12	45.5
9	R2	All MCs	139	9.0	139	9.0	0.103	4.8	LOS A	0.5	3.8	0.12	0.40	0.12	47.4
Approach			177	7.1	177	7.1	0.103	3.8	NA	0.5	3.8	0.12	0.40	0.12	47.2
West: Forest Lane															
10	L2	All MCs	157	9.0	157	9.0	0.106	4.8	LOS A	0.3	1.9	0.13	0.53	0.13	46.9
12	R2	All MCs	38	0.0	38	0.0	0.106	5.2	LOS A	0.3	1.9	0.13	0.53	0.13	45.8
Approach			195	7.2	195	7.2	0.106	4.9	NA	0.3	1.9	0.13	0.53	0.13	46.7
All Vehicles			391	6.8	391	6.8	0.106	4.4	NA	0.5	3.8	0.14	0.47	0.14	46.9

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akcelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.



Attachment 3: Proposed Site Plan

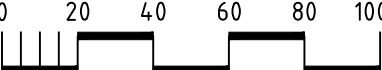


VERIFIER:
JOB MANAGER: CHIPER
DESIGNED: T SQUIRES
DRAWN: R KENNEDY

REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE	CLIENT
1	ISSUED FOR REVIEW	RK		CP	09.10.24	 DRAWING NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED
2	ISSUED FOR REVIEW	RK		CP	10.10.24	
3	ISSUED FOR REVIEW	RK		CP	31.10.24	
4	ISSUED FOR REVIEW	RK		CP	08.05.25	

CLIENT
 DRAWING NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED

ARCHITECT
 THE COPYRIGHT OF THIS DRAWING REMAINS WITH NORTHROP CONSULTING ENGINEERS PTY LTD

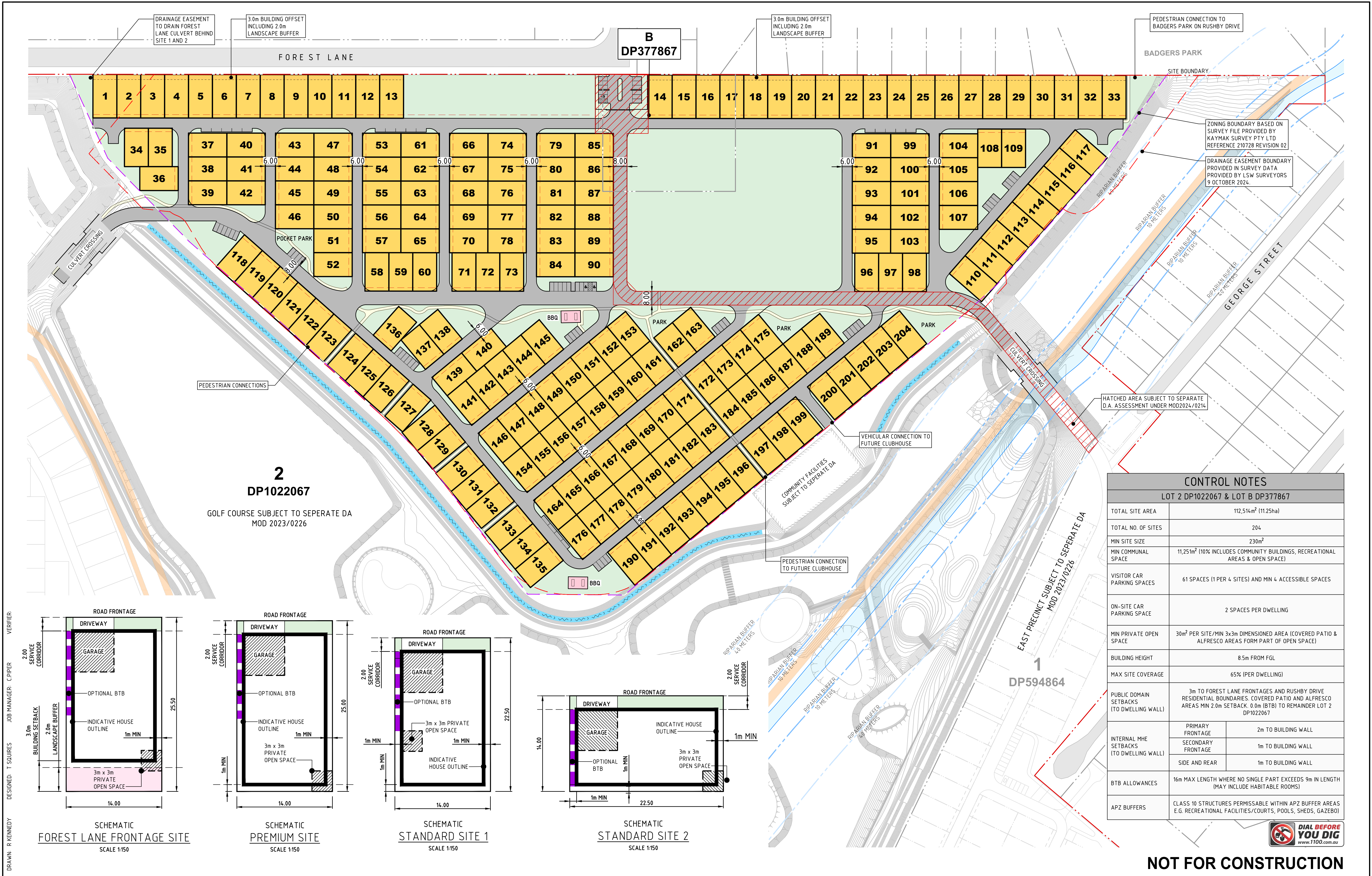
SCALE
1:2000@A1 

NORTHROP
Newcastle Level 1, 215 Pacific Hwy, Charlestown NSW 2290 Ph (02) 4943 1777 Email newcastle@northrop.com.au ABN 81 094 433 100

PROJECT
106 & 142 FOREST LANE & LOT 1 LEWIS STREET 2 DP1022067, B DP1022067, 1 DP594864

DRAWING TITLE
D.A. DRAWINGS PACKAGE SITE CONTEXT PLAN NORTHERN PRECINCT

JOB NUMBER
NL223154
DRAWING NUMBER
MP-NP02.01
REVISION
4
DRAWING SHEET SIZE = A1



CONTROL NOTES		
LOT 2 DP1022067 & LOT B DP377867		
TOTAL SITE AREA	112,514m ² (11.25ha)	
TOTAL NO. OF SITES	204	
MIN SITE SIZE	230m ²	
MIN COMMUNAL SPACE	11,251m ² (10% INCLUDES COMMUNITY BUILDINGS, RECREATIONAL AREAS & OPEN SPACE)	
VISITOR CAR PARKING SPACES	61 SPACES (1 PER 4 SITES) AND MIN 4 ACCESSIBLE SPACES	
ON-SITE CAR PARKING SPACE	2 SPACES PER DWELLING	
MIN PRIVATE OPEN SPACE	30m ² PER SITE/MIN 3x3m DIMENSIONED AREA (COVERED PATIO & ALFRESCO AREAS FORM PART OF OPEN SPACE)	
BUILDING HEIGHT	8.5m FROM FGL	
MAX SITE COVERAGE	65% (PER DWELLING)	
PUBLIC DOMAIN SETBACKS (TO DWELLING WALL)	3m TO FOREST LANE FRONTAGES AND RUSHBY DRIVE RESIDENTIAL BOUNDARIES. COVERED PATIO AND ALFRESCO AREAS MIN 2.0m SETBACK. 0.0m (BTB) TO REMAINDER LOT 2 DP1022067	
INTERNAL MHE SETBACKS (TO DWELLING WALL)	PRIMARY FRONTAGE	2m TO BUILDING WALL
	SECONDARY FRONTAGE	1m TO BUILDING WALL
	SIDE AND REAR	1m TO BUILDING WALL
BTB ALLOWANCES	16m MAX LENGTH WHERE NO SINGLE PART EXCEEDS 9m IN LENGTH (MAY INCLUDE HABITABLE ROOMS)	
APZ BUFFERS	CLASS 10 STRUCTURES PERMISSABLE WITHIN APZ BUFFER AREAS E.G. RECREATIONAL FACILITIES/COURTS, POOLS, SHEDS, GAZEBO	



NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE	CLIENT	ARCHITECT	SCALE	ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE COMMENCING WORK. NORTHROP ACCEPTS NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR SCALE OF DRAWINGS TRANSFERRED ELECTRONICALLY. THIS DRAWING MAY HAVE BEEN PREPARED USING COLOUR, AND MAY BE INCOMPLETE IF COPIED TO BLACK & WHITE.	NORTHROP	Level 1, 215 Pacific Hwy, Charlestown NSW 2290 Ph (02) 4943 1777 Email newcastle@northrop.com.au ABN 81 094 433 100	PROJECT	106 & 142 FOREST LANE & LOT 1 LEWIS STREET 2 DP1022067, B DP1022067, 1 DP594864	DRAWING TITLE	D.A. DRAWINGS PACKAGE SITE PLAN NORTHERN PRECINCT	JOB NUMBER	NL223154	DRAWING NUMBER	MP-NP03.01	REVISION	7
2	ISSUED FOR REVIEW	RK		CP	15.10.24																
3	ISSUED FOR REVIEW	RK		CP	21.10.24																
4	ISSUED FOR REVIEW	RK		CP	31.10.24																
5	ISSUED FOR REVIEW	RK		CP	08.05.24																
6	ISSUED FOR REVIEW	RK		CP	15.05.25																
7	ISSUED FOR REVIEW	RK		CP	26.05.25																