



TRANSPORT AND TRAFFIC PLANNING ASSOCIATES

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Date: 2nd June 2025

Ref: 195/2023 (Rev B)

Mr. Alec Christofides

Project Manager

ADCO Construct

E: achristofides@adcoconstruct.com.au

Dear Alec

The Forest High School Project Proposed Modification 4 – Transport Statement

Modified Intersection Design

As a consequence of ongoing consultation with TfNSW and Council, the proposed modification entails retaining and upgrading the existing roundabout on Aquatic Drive / Allambie Road rather than replacing the existing roundabout with a signalised intersection as previously approved.

The primary reason for any upgrade is that the existing roundabout is not capable of accommodating the additional vehicular traffic arising from the additional background traffic growth in future years plus the additional traffic from the operation of the school when it reaches full student capacity.

However, an alternate design entailing upgrading the existing roundabout is capable of achieving the same or better traffic outcomes as signalisation, whilst minimising disturbance to utility infrastructure and reducing the timeframes associated with construction.

As shown in the following table, the proposed roundabout upgrade provides for an improvement over the existing situation whilst retaining the same lane arrangement as the approved signalised intersection design.

Intersection Arm	Summary of Intersection Attributes		Proposed Roundabout Upgrade
	Existing Roundabout	Approved Signalisation	
Northern Arm	1 southbound entry lane	2 southbound entry lanes (1 left-turn and 1 right-turn)	No Change from approved
Eastern Arm	1 northbound exit lane	1 northbound exit lane	No Change from approved
	1 westbound entry lane with on-street bicycle lane	2 westbound entry lanes (1 straight and 1 left-turn)	No Change from approved
	1 eastbound exit lane	1 eastbound exit lane	No Change from approved
Western Arm	2 eastbound entry lanes (1 straight and 1 left-turn)	2 eastbound entry lanes (1 straight and 1 left-turn)	No Change from approved
	1 westbound exit lane with on-street bicycle lane	1 westbound exit lane	No Change from approved

Note: Approved and Proposed Scenarios include relocation of the on-street bicycle lane on the southern side of Allambie Road to be an off-street shared path.

The proposed modified roundabout is shown in the context of the overall scheme for vehicles, pedestrians, cyclists and bikes in Appendix A.

Crossing Facilities

The proposed modified design also includes upgrading the temporary crossing on Aquatic Drive that was included in SSD-26876801-MOD-3 from an at-grade pedestrian crossing to a permanent raised pedestrian and bicycle crossing as shown on the civil drawings in Appendix A.

This new crossing will more effectively service the new bus stops on the northern side of Aquatic Drive and will provide a better connection to the existing and approved new shared paths on the western side of Allambie Drive to the north, and southern side of Aquatic Drive-Allambie Road to the south.

Reason for Modification

The involvement of TTPA in this project process has enabled a peer review of the earlier work undertaken by SCT and this has revealed 2 important issues, namely:

- the traffic modelling undertaken by SCT for the school development outcome (i.e. with the Bunnings development and 2031 background growth) showed that the existing roundabout control at the Allambie Road/Aquatic Drive intersection would fail with a LOS F (See Attachment B details). However, SCT did not undertake any assessment as to how the roundabout might be upgraded to achieve a satisfactory LOS.
- the traffic modelling undertaken by SCT for the school development outcome with the Allambie Road/Aquatic Drive intersection upgraded with the provision of traffic signals showed a LOS E outcome for the Aquatic Drive approach and a LOS F outcome for the right-turn on the northern approach of Allambie Road (See Attachment C details).

The SIDRA performance criteria for LOS E says, “at capacity, at signals will cause excessive delays.” This SIDRA modelling indicated queues on the Aquatic Drive approach extending for some 230m (See Appendix C details). This queuing would extend well back through the proposed bus stops and K&D parking areas in Aquatic Drive to the west of the intersection.

The fact is that provision of traffic signals (as distinct to a roundabout) invariably produces greater vehicle delays due to:

- the signal phasing and amber/all red periods
- the turning protection times provided for pedestrians

There is no ability to alter the intersection geometry to provide increased “capacity” for the traffic signal control or to alter the signal phasing arrangements.

TTPA and H&H undertook an assessment in regard to the ability to modify the existing intersection roundabout in order to achieve an acceptable LOS for the school development outcome. It was apparent that the limiting issue was the existing single lane approaches and that the roundabout geometry could readily be modified to provide 2 approach lane approaches.

The Modification 3 scheme provided a temporary at-grade zebra pedestrian crossing with a dedicated bike lane some 50m west of the intersection and the Modification 4 scheme proposes a raised “wombat” crossing at this location with a single traffic lane restriction in each direction and shared footway provision for pedestrians and cyclists.

Traffic Modelling

SIDRA traffic modelling has been undertaken essentially utilising the 2031 FY Development traffic demand projections adopted by SCT.

SIDRA Modelling was undertaken with the provision of 2 lanes on all approaches and results for this are provided in Appendix D and summarised in the following:

	AM	PM
Overall		
LOS	A	A
AVD (sec's)	8.3	8.4
Aquatic Drive Approach		
LOS	A	A
Queue (m)	29.6	31.2

The modelling confirms that:

- the modified roundabout will operate quite satisfactorily for the future circumstance with some significant spare capacity
- the maximum queuing on the Aquatic Drive approach will be contained in the section between the intersection and the pedestrian crossing

Conclusion

The assessment undertaken for the proposed Modification 4 scheme for The Forest High School has demonstrated that the provision of a modified roundabout at the intersection of Allambie Road and Aquatic Drive will provide a preferable outcome to that of the previously proposed traffic signal-controlled intersection.

In particular, the provision for pedestrians to cross Aquatic Drive well away from the intersection presents significant benefits in removing all pedestrian crossing movements from the intersection (the majority of which would be school children). This is a significant safety improvement to pedestrian movements at a signalised intersection where there would be an interaction between the vehicle and pedestrian crossing movements and the inevitable, at times, errant behaviour of drivers or pedestrians.

Yours faithfully



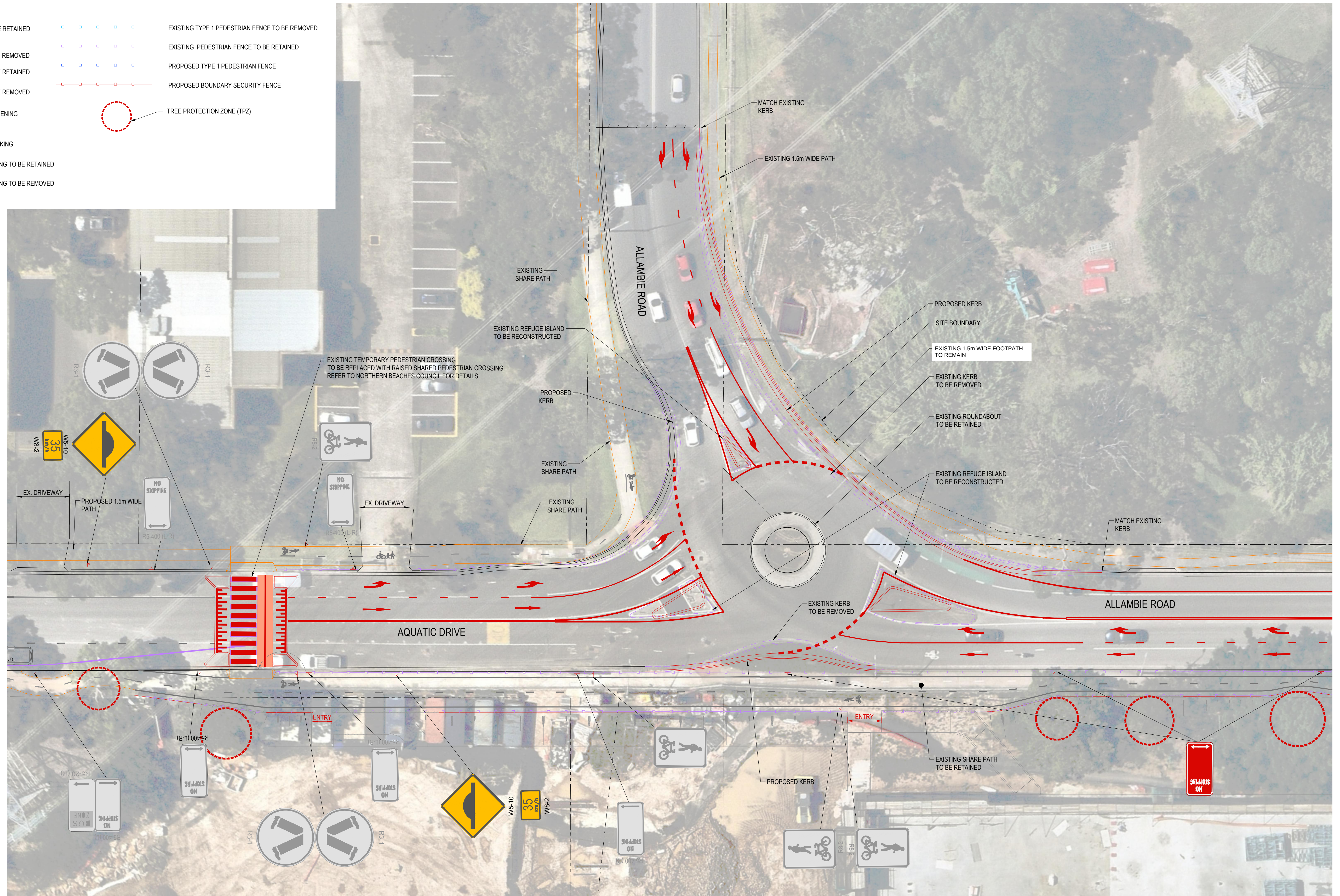
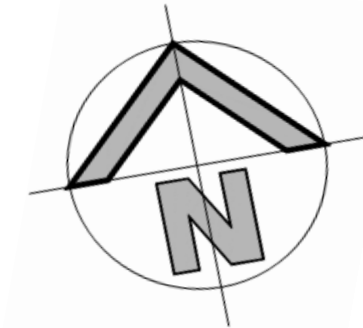
Ross Nettle
Director
Transport and Traffic Planning Associates

Appendix A



LEGEND

	EXISTING KERB TO BE RETAINED		EXISTING TYPE 1 PEDESTRIAN FENCE TO BE REMOVED
	PROPOSED KERB		EXISTING PEDESTRIAN FENCE TO BE RETAINED
	EXISTING KERB TO BE REMOVED		PROPOSED TYPE 1 PEDESTRIAN FENCE
	EXISTING PATH TO BE RETAINED		PROPOSED BOUNDARY SECURITY FENCE
	EXISTING PATH TO BE REMOVED		
	PROPOSED PATH WIDENING		TREE PROTECTION ZONE (TPZ)
	PROPOSED LINEMARKING		
	EXISTING LINEMARKING TO BE RETAINED		
	EXISTING LINEMARKING TO BE REMOVED		



PUBLIC DOMAIN PLAN - STAGE 2
SCALE: 1:250 @A1

ISSUED FOR APPROVAL

SURVEY INFORMATION SURVEYED BY C.M.S. SURVEYOURS PTY LIMITED DATUM: AHD ORIGIN OF LEVELS: SSM 9185, RL 127.659				Client ADCO Architect ARCHITECTUS This drawing and design remains the property of Henry & Hymas and may not be copied in whole or in part without the prior written approval of Henry & Hymas.				Project PROPOSED THE FOREST HIGH SCHOOL 187 ALLAMBIE ROAD, ALLAMBIE HEIGHTS, NSW Title PUBLIC DOMAIN PLANS STAGE 2		Drawn L.Caha Checked T.Dempsey Drawing number 231123_D2_SK108	Designed L.Caha Approved A.Francis Scale @A1 1:250	Original issue date JULY Revision 01
01	ISSUED FOR APPROVAL	LC	TD	27.05.2025								
REVISION	AMENDMENT	DRAWN	DESIGNED	DATE	REVISION	AMENDMENT	DRAWN	DESIGNED	DATE			

Appendix B



4.2.3.2 2031 full development without mitigation

The moderate mode share scenario was tested with the school population at the date of opening **without any of the proposed upgrades in this transport assessment**.

The traffic performance based on this option is shown in **Table 4-5**.

Table 4-5 Intersection performance for 2031 with background growth and development but no upgrades

Intersection	Intersection type	Volume (veh/H)	Degree of Saturation	Delay (sec)	95 th % queue (m)	LoS
AM peak 8.30-9.30am						
Allambie Rd / Warringah Rd	Signal	6,123	1.03	73.8	585.9	F
Allambie Rd / Rodborough Rd	Roundabout	2,639	1.12	129.2	248.5	F
Allambie Rd / Aquatic Dr	Roundabout	2,357	1.10	123.2	467.5	F
Allambie Rd / Mortain Ave	Signal	1,663	0.54	9.6	72.4	A
Allambie Rd / Fleurs St	Signal	1,579	0.42	4.9	48.8	A
PM peak 3.00-4.00pm						
Allambie Rd / Warringah Rd	Signal	6,392	1.00	67.8	473.4	E
Allambie Rd / Rodborough Rd	Roundabout	2,429	1.03	45.6	248.5	D
Allambie Rd / Aquatic Dr	Roundabout	2,513	1.19	190.4	571.6	F
Allambie Rd / Mortain Ave	Signal	1,782	0.51	6.8	77.3	A
Allambie Rd / Fleurs St	Signal	1,731	0.43	5.5	67.7	A

Source: SCT Consulting, 2021

Delay = worst movement for priority and roundabout controlled intersections and DoS = degree of saturation of worst movement

Without any mitigations, the network operates with significant delays and queuing:

- Allambie Road / Warringah Road operates at Level of Service F in the morning peak and E in the evening peak
- Allambie Road operates with significant congestion, including intersections with over 500m of queuing and delays exceeding 100 seconds.

Road upgrades are required to mitigate the impacts of the development.

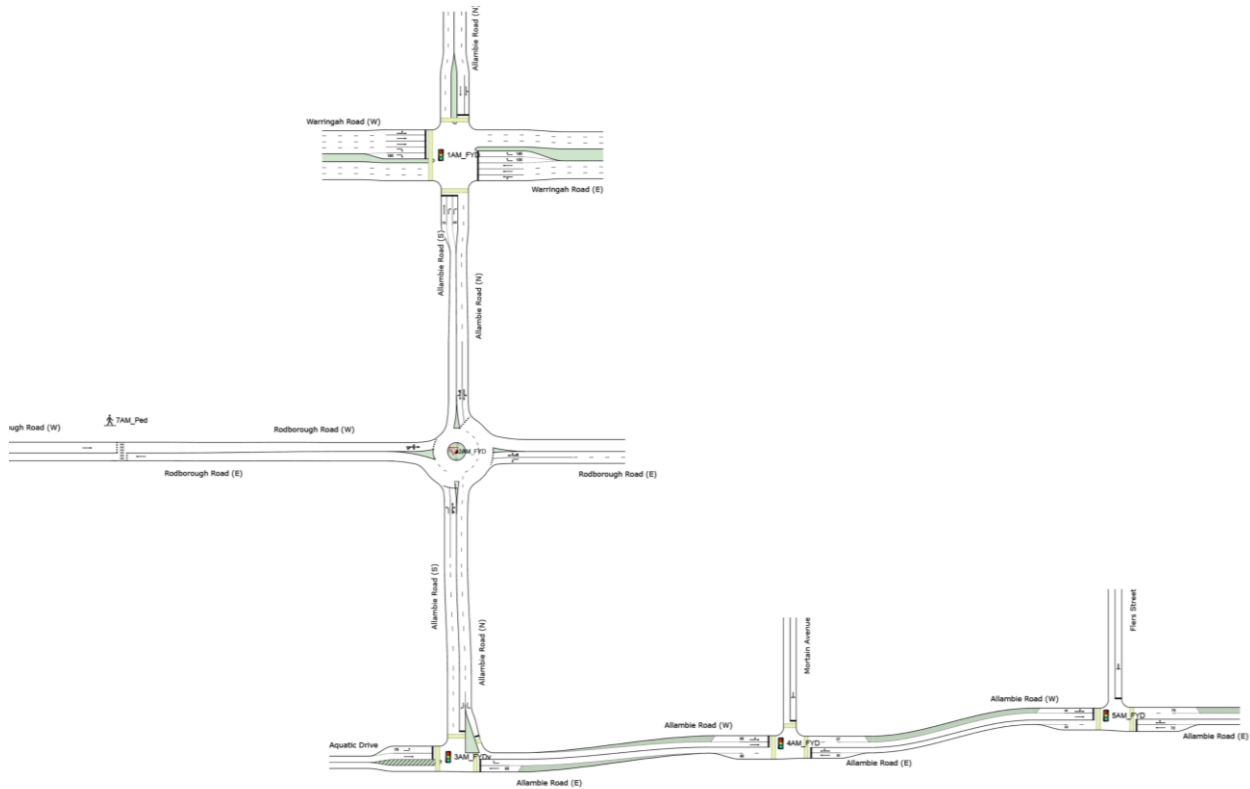
4.2.3.3 2031 full development with mitigation

The moderate mode share scenario was tested with the school population at the date of opening. Transport for NSW requested this scenario. The road network layout tested is shown in **Figure 4-7**. This includes the upgrades identified in **Table 3-7** and explained in **Section 3.2.1**.

Appendix C



Figure 4-7 Transport network infrastructure with development



Source: SCT Consulting using SIDRA Network 9.0, 2022

The traffic performance based on this option is shown in **Table 4-6**.

Table 4-6 Intersection performance for 2031 with background growth, development, and upgrades

Intersection	Intersection type	Volume (veh/H)	Degree of Saturation	Delay (sec)	95 th % queue (m)	LoS
AM peak 8.30-9.30am						
Allambie Rd / Warringah Rd	Signal	6,123	1.0	76.1	539	F
Allambie Rd / Rodborough Rd	Roundabout	2,639	0.88	20.0	48	B
Allambie Rd / Aquatic Dr	Signal	2,350	0.93	49.0	230	D
Allambie Rd / Mortain Ave	Signal	1,663	0.57	9.7	84	A
Allambie Rd / Fleurs St	Signal	1,579	0.44	5.0	56	A
Rodborough zebra crossing	Priority	462	0.72	6.3	70	A
PM peak 3.00-4.00pm						
Allambie Rd / Warringah Rd	Signal	6,392	1.0	67.8	473	E
Allambie Rd / Rodborough Rd	Roundabout	2,429	0.92	28.3	56	B
Allambie Rd / Aquatic Dr	Signal	1,782	0.90	41.7	289	C
Allambie Rd / Mortain Ave	Signal	1,731	0.61	7.4	106	A
Allambie Rd / Fleurs St	Signal	2,357	0.55	5.8	86	B
Rodborough zebra crossing	Priority	333	0.50	4.9	24	A

Source: SCT Consulting, 2021

Delay = worst movement for priority and roundabout controlled intersections and DoS = degree of saturation of worst movement

MOVEMENT SUMMARY

Site: 3AM_FYDv [ALL_AQU_31_AM_FYD_UPG-Peak Spread
(Site Folder: AM_FYD_Infrastructure Upgrade-Peak Spread)]

Network: N101
[AM_FYD_UPG (Network
Folder: AM_FYD_Infrastructure
Upgrade-Peak Spread)]

830-930 AM

Site Category: (None)

Signals: EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 150 seconds (Site Practical Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total	HV]	[Total	HV]				[Veh. veh	Dist] m				
		veh/h	%	veh/h	%									
East: Allambie Road (E)														
5	T1	267	1.1	267	1.1	0.293	11.0	LOS A	7.1	50.2	0.40	0.56	0.40	42.9
6	R2	436	3.9	436	3.9	*0.667	43.5	LOS D	23.6	170.3	0.90	0.96	0.90	27.3
Approach		703	2.8	703	2.8	0.667	31.1	LOS C	23.6	170.3	0.71	0.81	0.71	34.1
North: Allambie Road (N)														
7	L2	594	5.0	594	5.0	0.655	34.0	LOS C	31.3	228.7	0.79	0.83	0.79	18.6
9	R2	312	1.9	312	1.9	*0.927	90.4	LOS F	26.8	190.8	1.00	0.98	1.32	19.0
Approach		906	3.9	906	3.9	0.927	53.4	LOS D	31.3	228.7	0.86	0.88	0.98	18.8
West: Aquatic Drive														
10	L2	436	1.6	436	1.6	*0.921	67.6	LOS E	32.4	229.7	0.83	0.94	1.10	19.5
11	T1	305	1.6	305	1.6	0.864	50.3	LOS D	19.4	137.6	0.75	0.81	0.96	23.1
Approach		741	1.6	741	1.6	0.921	60.4	LOS E	32.4	229.7	0.80	0.89	1.04	20.9
All Vehicles		2350	2.9	2350	2.9	0.927	49.0	LOS D	32.4	229.7	0.80	0.86	0.92	23.9

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

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
					[Ped ped	Dist] m					
		ped/h	sec						sec	m	m/sec
East: Allambie Road (E)											
P2	Full	421	70.4	LOS F	1.8	1.8	0.98	0.98	233.1	211.6	0.91
North: Allambie Road (N)											
P3	Full	105	69.4	LOS F	0.4	0.4	0.96	0.96	231.7	211.0	0.91
P3B	Slip/ Bypass	421	70.4	LOS F	1.8	1.8	0.98	0.98	227.3	204.0	0.90
West: Aquatic Drive											
P4	Full	105	69.4	LOS F	0.4	0.4	0.96	0.96	234.6	214.7	0.92
All Pedestrians		1053	70.2	LOS F	1.8	1.8	0.97	0.97	230.8	208.8	0.90

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 3PM_FYD [ALL AQU 31 PM_FYD UPG Peak Spread
(Site Folder: PM_FYD_Infrastructure Upgrade-Peak Spread)]

Network: N101
[PM_FYD_UPG (Network
Folder: PM_FYD_Infrastructure
Upgrade-Peak Spread)]

3-4 PM

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 130 seconds (Network Practical Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total HV] veh/h %	[Total HV] veh/h %	[Veh. veh	Dist] m									
East: Allambie Road (E)														
5	T1	223	1.9	223	1.9	0.239	8.8	LOS A	4.7	33.1	0.36	0.54	0.36	43.8
6	R2	426	4.4	426	4.4	* 0.637	37.0	LOS C	19.7	142.9	0.88	0.94	0.88	29.7
Approach		649	3.6	649	3.6	0.637	27.3	LOS B	19.7	142.9	0.70	0.80	0.70	35.5
North: Allambie Road (N)														
7	L2	743	2.1	742	2.1	0.824	36.5	LOS C	40.6	289.3	0.92	0.89	0.94	17.6
9	R2	248	1.7	248	1.7	* 0.893	76.9	LOS F	17.8	126.7	1.00	0.96	1.31	20.7
Approach		992	2.0	990 ^{N1}	2.0	0.893	46.6	LOS D	40.6	289.3	0.94	0.91	1.03	19.1
West: Aquatic Drive														
10	L2	452	3.3	452	3.3	* 0.896	55.3	LOS D	28.4	204.2	0.84	0.93	1.08	21.9
11	T1	264	2.0	264	2.0	0.790	35.5	LOS C	13.0	92.3	0.73	0.71	0.86	27.4
Approach		716	2.8	716	2.8	0.896	48.0	LOS D	28.4	204.2	0.80	0.85	1.00	23.7
All Vehicles		2357	2.7	2355 ^{N1}	2.7	0.896	41.7	LOS C	40.6	289.3	0.83	0.86	0.93	25.2

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

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

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

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		[Ped ped	Dist] m					
East: Allambie Road (E)											
P2	Full	421	60.2	LOS F	1.5	1.5	0.97	0.97	223.0	211.6	0.95
North: Allambie Road (N)											
P3	Full	105	59.4	LOS E	0.4	0.4	0.96	0.96	221.7	211.0	0.95
P3B	Slip/ Bypass	421	60.2	LOS F	1.5	1.5	0.97	0.97	217.1	204.0	0.94
West: Aquatic Drive											
P4	Full	105	59.4	LOS E	0.4	0.4	0.96	0.96	224.6	214.7	0.96
All Pedestrians		1053	60.0	LOS F	1.5	1.5	0.97	0.97	220.7	208.8	0.95

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

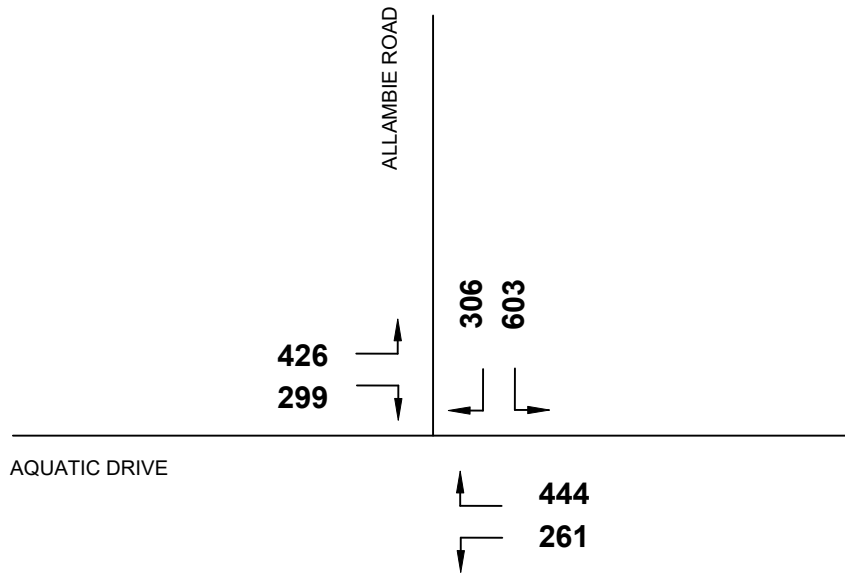
Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

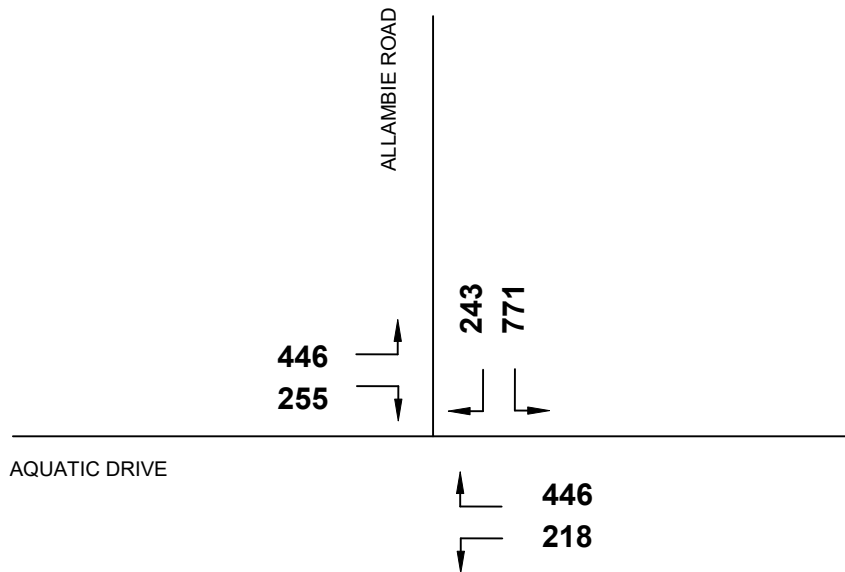
Appendix D



AM
8.0 - 9.0

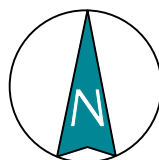


PM
2.30 - 3.30



LEGEND

- Base 2021
- School 2021 (-)
- Background 2031 (+)
- School 2031 (+)
- Bunnings 2031 (+)

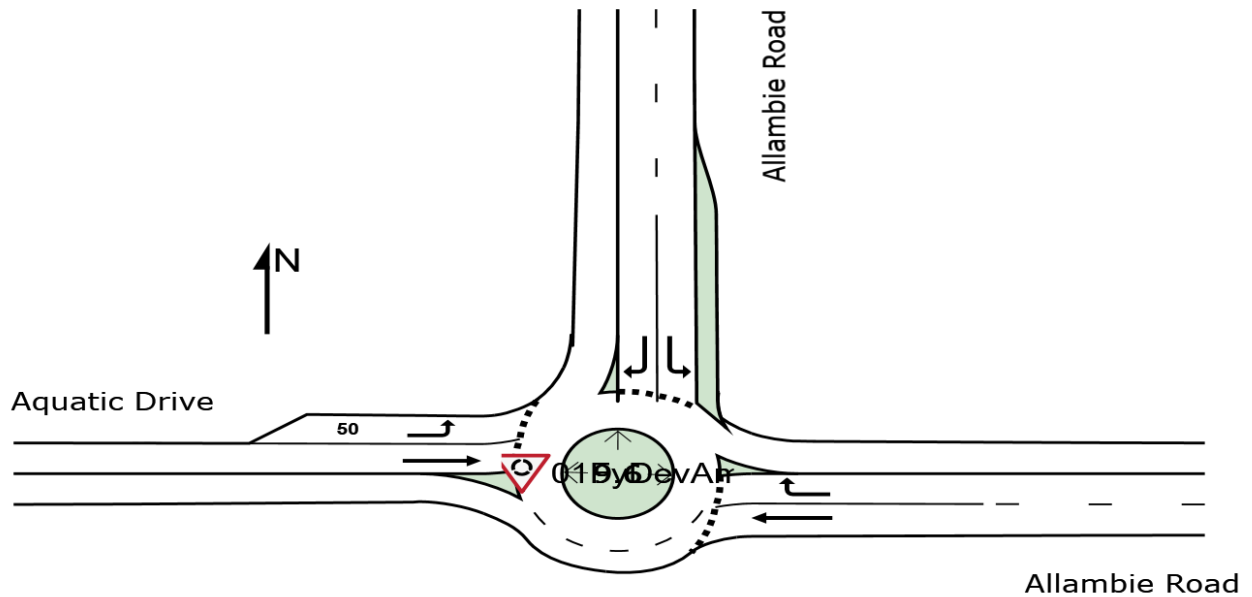


SITE LAYOUT

 **Site: [01FyDevAm] Allambie Road & Aquatic Drive AM PEAK**
(2031 FY Development)

Forest High School
Site Category: Road Corridor Upgrades
Roundabout
Site Scenario: 1 | Local Volumes

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



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Project: T:\WORK23\MISC\195 - ALLAMBIE ROAD AND AQUATIC DRIVE, ALLAMBIE HEIGHTS\MODEL\Mod 02JUN25.sipx

MOVEMENT SUMMARY

 **Site: [01FyDevAm] Allambie Road & Aquatic Drive AM PEAK**
(2031 FY Development)
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Forest High School
Site Category: Road Corridor Upgrades
Roundabout
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]	%	v/c	sec		[Veh.]	Dist]				km/h
East: Allambie Road															
5	T1	All MCs	275	2.0	275	2.0	0.309	7.4	LOS A	2.1	14.8	0.61	0.62	0.61	49.3
6	R2	All MCs	467	2.0	467	2.0	0.428	10.3	LOS A	3.3	23.7	0.65	0.68	0.65	47.7
Approach			742	2.0	742	2.0	0.428	9.2	LOS A	3.3	23.7	0.64	0.66	0.64	48.5
North: Allambie Road															
7	L2	All MCs	635	2.0	635	2.0	0.579	7.8	LOS A	5.6	40.2	0.78	0.65	0.80	49.5
9	R2	All MCs	322	2.0	322	2.0	0.380	10.9	LOS A	2.8	19.9	0.69	0.68	0.69	44.7
Approach			957	2.0	957	2.0	0.579	8.8	LOS A	5.6	40.2	0.75	0.66	0.76	47.5
West: Aquatic Drive															
10	L2	All MCs	448	2.0	448	2.0	0.477	6.7	LOS A	4.2	29.6	0.83	0.65	0.83	39.2
11	T1	All MCs	315	2.0	315	2.0	0.402	6.6	LOS A	3.1	22.3	0.80	0.64	0.80	43.0
Approach			763	2.0	763	2.0	0.477	6.6	LOS A	4.2	29.6	0.82	0.65	0.82	41.0
All Vehicles			2462	2.0	2462	2.0	0.579	8.3	LOS A	5.6	40.2	0.74	0.65	0.74	45.2

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.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout 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: [01FyDevPm] Allambie Road & Aquatic Drive PM PEAK**
(2031 FY Development)
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Forest High School
Site Category: Road Corridor Upgrades
Roundabout
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]	%	v/c	sec		[Veh.]	Dist]				km/h
East: Allambie Road															
5	T1	All MCs	229	2.0	229	2.0	0.251	6.9	LOS A	1.6	11.5	0.54	0.58	0.54	49.4
6	R2	All MCs	469	2.0	469	2.0	0.399	9.7	LOS A	3.1	21.8	0.58	0.65	0.58	47.9
Approach			699	2.0	699	2.0	0.399	8.8	LOS A	3.1	21.8	0.56	0.63	0.56	48.6
North: Allambie Road															
7	L2	All MCs	812	2.0	812	2.0	0.695	8.6	LOS A	8.8	62.6	0.84	0.67	0.91	48.7
9	R2	All MCs	256	2.0	256	2.0	0.336	11.0	LOS A	2.3	16.6	0.65	0.67	0.65	44.7
Approach			1067	2.0	1067	2.0	0.695	9.1	LOS A	8.8	62.6	0.80	0.67	0.85	47.5
West: Aquatic Drive															
10	L2	All MCs	469	2.0	469	2.0	0.496	6.9	LOS A	4.4	31.2	0.83	0.66	0.84	39.1
11	T1	All MCs	268	2.0	268	2.0	0.357	6.7	LOS A	2.6	18.7	0.77	0.63	0.77	43.0
Approach			738	2.0	738	2.0	0.496	6.8	LOS A	4.4	31.2	0.81	0.65	0.82	40.7
All Vehicles			2504	2.0	2504	2.0	0.695	8.4	LOS A	8.8	62.6	0.74	0.65	0.76	45.2

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.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout 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.