



Traffic Impact Assessment

Tamworth Regional Aquatics Centre and Northern Inland Centre for Sport and Health (Stage 1)

13 August 2024

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1 Introduction

1.1 Background of Project

Tamworth Regional Council (Council) has two existing outdoor seasonal pools located within Tamworth; The Tamworth Olympic Swimming Pool (located in the Tamworth CBD) and the South & West Tamworth War Memorial Pool (located in South Tamworth). Both of these pools do not meet the current needs of the community as they are ageing facilities, with continually increasing maintenance and renewal costs.

A need has been identified for providing a year-round aquatic facility which meets the needs of a growing population. Following extensive community engagement in 2018, Council resolved to progress a regional aquatics centre (nominated as the Tamworth Regional Aquatic Centre (TRAC)) and a sporting excellence centre (nominated as the Northern Inland Centre of Sport and Health (NICSH)) at the Northern Inland Centre of Sporting Excellence (NICSE) which forms part of the wider Sports & Entertainment Precinct. The TRAC and NICSH are collectively referred to as the Facility.

Since then, business case studies and optioneering reports have been developed to compare a number of different site options within the Sports & Entertainment Precinct (Precinct). The recommended site is the Council-owned land immediately to the west of the Tamworth Regional Hockey Complex as the most suitable location for the Facility, based on a combination of:

- Integration within the NICSE precinct, including transport;
- Capital costs; and
- Ongoing cash flow (i.e., revenue / expenditure).

1.2 Purpose of Report

The purpose of this report is to ensure that the proposed Facility and its identified location is able to function appropriately in terms of transport requirements, and that the impact on the surrounding transport network is managed in an appropriate manner. This report will assess what transport infrastructure is required to be constructed in order to have a functional Facility which caters for a range of transport modes, and is attractive, easy and efficient for those visiting the Facility.

This report will focus on the following areas:

- Car parking (staff and visitors);
- Public transport;
- Active transport;
- Traffic generation;
- Waste collection & loading bays;
- Other surrounding developments (future); and
- Intersection modelling (SIDRA analysis).

2 Existing Conditions

The NICSE Precinct is located at the southern end of the urban Tamworth area. The NICSE is a 100Ha site and forms part of the wider 120Ha Sports & Entertainment Precinct. A number of established international, national and regional standard sporting facilities are already present within this area including:

- Australian Equine and Livestock Events Centre (AELEC);
- Tamworth Sports Dome;
- Tamworth Regional Entertainment and Conference Centre (TRECC);
- Tamworth Regional Hockey Complex;
- Tamworth Regional Athletics Centre;
- Tamworth Regional Cycling Centre; and
- Tamworth Regional Gymnastics Centre.

The NICSE Precinct is bounded by a retail area (Tamworth Homemakers) to the north, the New England Highway (Goonoo Goonoo Road) to the east, residential areas to the west, and a rural land to the south. A large portion of Tamworth's current population is located within a 4km radius to this area, and with further future zoned residential areas to the west, it will continue to attract a high volume of local, regional, state-wide and national visitors to the facilities.

Within the NICSE Masterplan (August 2022), a regional aquatics centre has been identified as a future project in the NICSE Precinct. A core component of achieving the wider NICSE vision is having a fully accessible aquatics facility which caters for a wide range of users, for current and future generations.

The functionality of the Precinct is heavily reliant upon transport, including car parking, pedestrian infrastructure and the road network. There are seven formalised off-street parking areas spread across the Precinct, totalling around 1150 parking spaces. Whilst each of these parking areas are primarily used by an individual facility, a number of the facilities utilise surrounding parking areas as overflow parking during large events – such as the TRECC and AELEC. This sharing of parking resources means that coordination of major events is required by facility managers to minimise the likelihood of parking spaces being exhausted. This currently works very well. A summary of the existing parking areas (green shaded), High Pedestrian Activity Zone (red lines) and pedestrian shared paths (orange lines) is shown in Figure 1.



Figure 1. Existing parking areas, HPAZ, and pedestrian shared paths in NICSE Precinct.

The majority of the NICSE Precinct is a 40km/hr High Pedestrian Activity Zone (HPAZ) which recognises the high number of pedestrians in the area. However, feedback and data suggest that the HPAZ is not functioning as designed and requires further assessment into what improvements can be made to facilitate the safer movement of pedestrians and reduce vehicle speeds.

The area identified for the proposed Facility is currently vacant grassland. It is noted that this area is flagged as an informal parking area for major events in the wider Sports & Entertainment Precinct, however this area has never been used as such. Instead, motorists choose to utilise formal and informal parking areas closer to their destination (primarily around TRECC and AELEC) rather than this location.

Peak and daily traffic vary greatly throughout the Precinct, from around 250 veh/day on Longyard Drive to 5100 veh/day on Greg Norman Drive. Unique to the Precinct compared to most areas of Tamworth, is similar or higher weekend traffic compared to weekday traffic. This is attributed to weekend sporting and entertainment events.

The approximate peak and daily traffic along with the 85th percentile speeds for various roads within the Precinct is shown below:

Table 1. Summary of traffic profile (2023 data) within NICSE Precinct.

Location	Traffic Volume (veh/hr)			ADT (Rounded)	Posted Speed Limit (km/hr)	85 th Percentile Speed (km/hr)
	Weekday AM	Weekday PM	Weekend Midday			
Greg Norman Drive <i>West of Ringers Road</i>	650	601	506	5100	50	55
Jack Smyth Drive <i>East of Ringers Road</i>	269	217	231	2300	40	55
Longyard Drive <i>West of Ringers Road</i>	20	15	35	250	40	54
Ringers Road <i>South of Greg Norman Drive</i>	138	555	527	2700	40	41
Greg Norman Drive <i>East of Ringers Road</i>	267	410	446	3400	50	54
Stockmans Way <i>North of Rodeo Drive</i>	40	77	114	650	40	53
Ringers Road <i>North of Jack Smyth Drive</i>	108	427	494	2500	40	53
Ringers Road <i>North of Greg Norman Drive</i>	268	448	529	4100	50	45
Ringers Road <i>West of Goonoo Goonoo Road</i>	478	503	597	5300	50	40

3 TRAC and NICS^H

The site plan (June 2024) for the proposed Facility is shown to the right, noting the following:

- Visitor car park at the front (accessed via a channelised right hand turn lane from Jack Smyth Drive);
- Staff car park at the rear (accessed via Longyard Drive);
- Bus parking and service vehicle access at the rear (accessed via Longyard Drive);
- Shared path connection running parallel to the facility on the eastern side, plus a connection to the Sports Dome (including a wombat crossing on Jack Smyth Drive); and

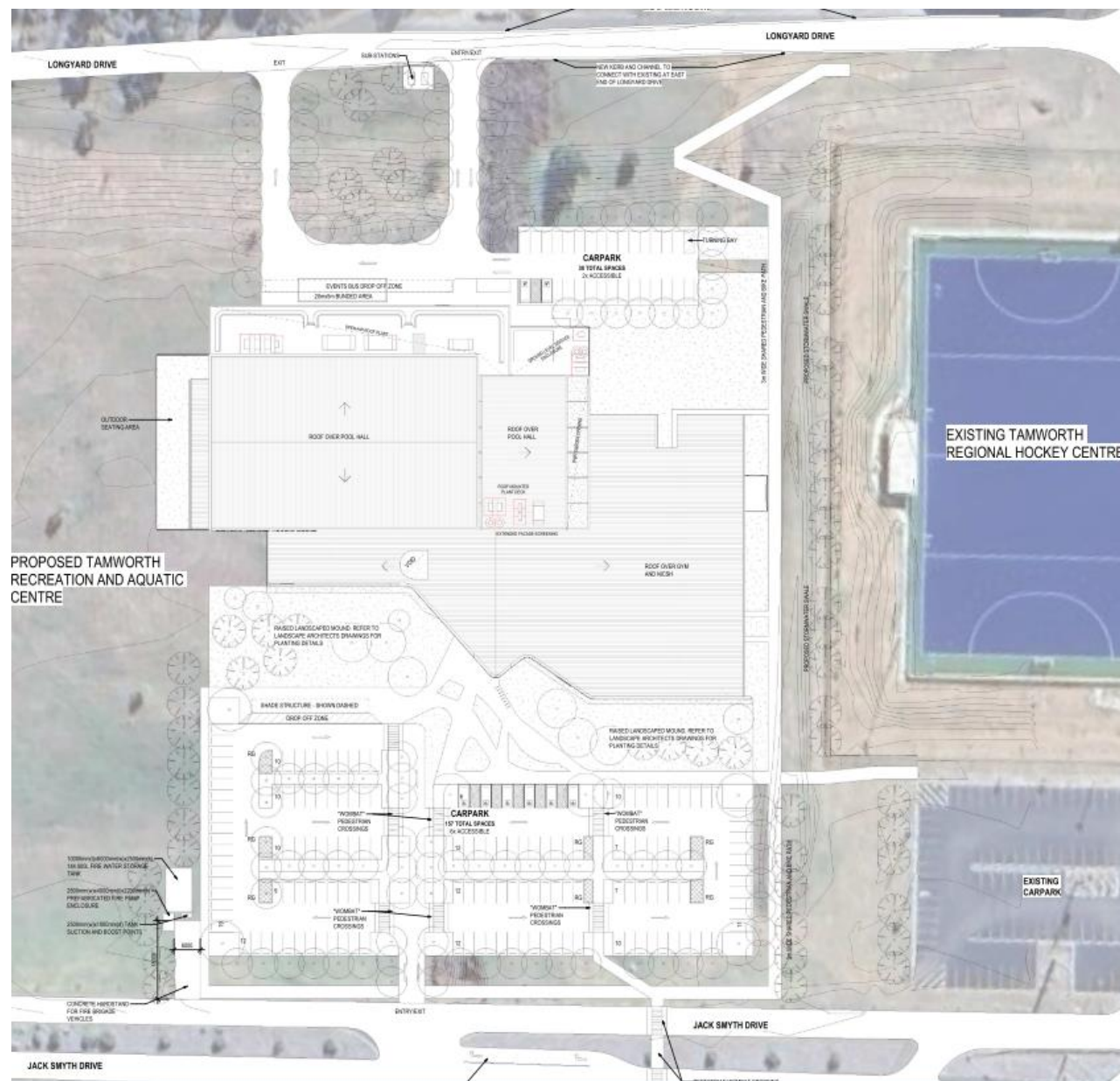


Figure 2. Current Tamworth Regional Aquatics Centre (TRAC) site plan (June 2024)

3.1 Estimated Traffic & Parking Generation

Visitor Car Parking

Via “Tamworth Regional Aquatic Centre and Northern Inland Centre of Sport and Health Business Case (November 2022) – Annexure 11”, it is estimated that the weekly cumulative patronage for the Facility is around 6,135 persons.

Conservatively assuming that 70% of this visitation is evenly spread across 4 days, and the remaining 30% of visitation is evenly spread across the other 3 days, this gives a “busier” day average of 1,074 persons visiting the Facility.

Assuming that these visitors are able to access the Facility across a 15hr period of the day (5am – 8pm), the following estimated patronage arrivals during each of these hour periods is shown in Table 2. It is also assumed that close to 50% of the daily facility use is concentrated across a 3hr period in the afternoon. As there is the potential for some fitness elements of the Facility to be open 24hrs a day, the limitation to a 15hr period will provide more conservative usage numbers.

Table 2. Estimated visitation and traffic generation profile for the proposed Facility

Time	% of Daily Visitors	No. Visitors	Persons		Traffic Generation (no. vehicles)		Cumulative Persons (2hr Stay)	Car Parking Demand
			In	Out	In	Out		
5:00AM	5%	54	54	0	25	0	54	25
6:00AM	2%	22	21	0	10	0	75	34
7:00AM	2%	22	21	54	10	25	42	19
8:00AM	2%	22	21	21	10	10	42	19
9:00AM	5%	54	54	21	25	10	75	34
10:00AM	3%	32	32	21	15	10	86	39
11:00AM	4%	43	43	54	20	25	75	34
12:00PM	5%	54	54	32	25	15	97	44
1:00PM	7%	75	75	43	34	20	129	59
2:00PM	9%	97	97	54	44	25	172	78
3:00PM	12%	129	129	75	59	34	226	103
4:00PM	20%	215	215	97	98	44	344	156
5:00PM	17%	183	183	129	83	59	398	181
6:00PM	4%	43	43	215	20	98	226	103
7:00PM	2%	22	21	183	10	83	64	29
8:00PM	1%	11	11	75	5	34	32	15
	100%	1074	1074	1074	488	488	Max Demand	181

Note: Above table conservatively assumes that the average length of stay is 2hrs (i.e., this is the worst-case for parking demand). It is also assumed there is an average of 2.2 persons per vehicle and that passenger vehicles conservatively account for 100% of trips to/from the Facility.

Overall, it is estimated that a worst-case “busier” parking demand for the Facility is around 180 parking spaces. It is expected that around 157 parking spaces will be provided at the front of the Facility (immediately west of the Tamworth Regional Hockey Complex car park), whilst existing overflow parking is available at the following locations:

Table 3. Overflow parking areas for proposed Tamworth Regional Aquatics Centre.

Location	No. Parking Spaces	Formal/Informal	Walking Distance to Aquatics Centre (m)
Tamworth Regional Hockey Complex	418	Formal	50
Tamworth Regional Sports Dome	175	Formal	100
Tamworth Netball	111	Formal	100
West of Facility	150	Informal	100
TOTAL	854		

Based on the estimated worst-case parking demand for the facility, it is expected that 150 parking spaces will be more than sufficient to cover the majority of days throughout the year, and when required, there are more than 850 overflow parking spaces within a short walk to the Facility. It is acknowledged that the identified overflow parking areas are often utilised by the other facilities in the Sports & Entertainment Precinct – however it is extremely rare that all of these parking spaces will be utilised at the same time, and even less chance given that the managers of each of these facilities meet regularly to minimise instances of clashes between large events.

Pedestrian and traffic calming devices will be installed throughout the visitor car park. This includes footpath, shared path and raised wombat type crossings as shown in Figure 3

These devices will allow safe access for pedestrians and cyclists to the Facility, and enable more equitable access through minimising grade changes (wombat crossings). Disabled parking will be located closest to the main entrance, along with a drop off zone which will be suitable for a (8.8m) mini-bus – typical of those utilised by community transport providers. Signage indicating the maximum vehicle length permitted in the car park will be provided at the entry, with larger vehicles (buses, garbage collection etc.) to utilise the rear car park for the Facility (discussed later in the report).

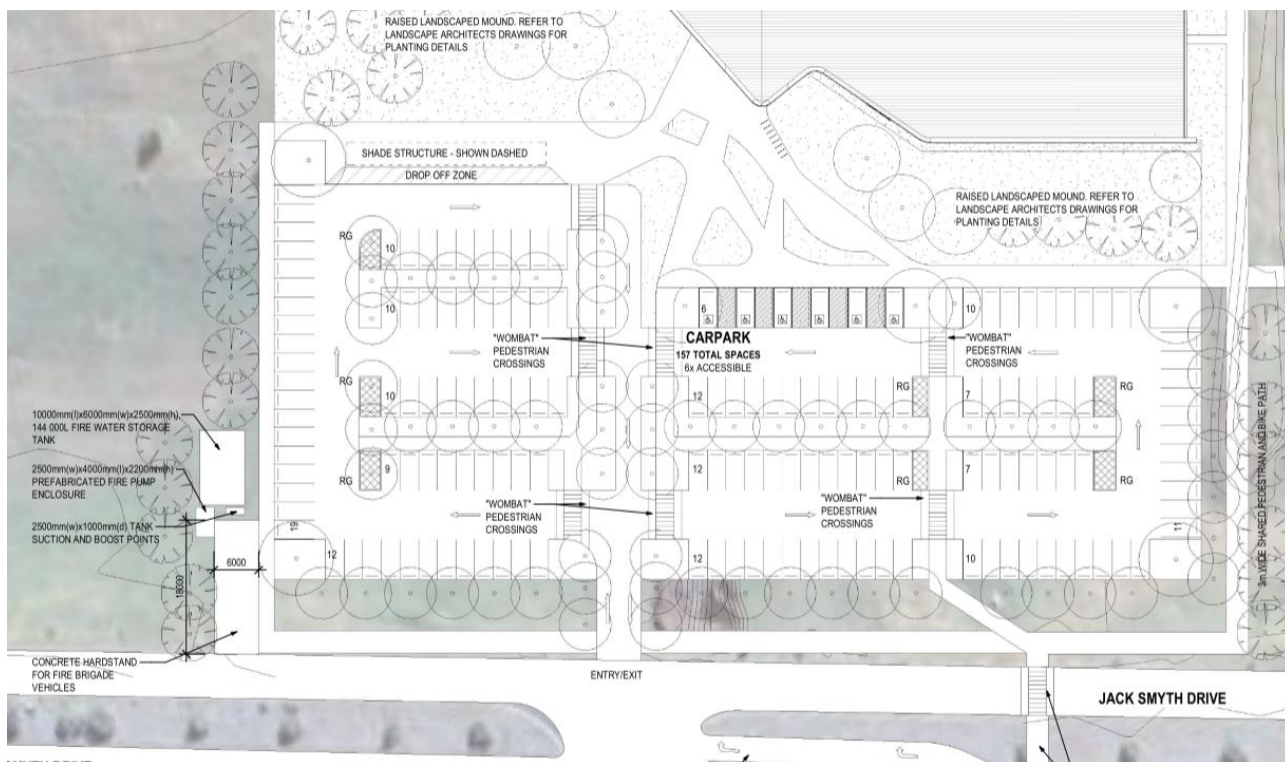


Figure 3. Proposed visitor car park for the Facility.

Traffic circulation throughout the car park will be one directional to the west and also to the east, with entering and exiting vehicles both utilising the same access point. This is a similar arrangement to what is found at the nearby Tamworth Sports Dome car park, and has the following benefits over a conventional two-way internal circulation:

- Allows much easier turning movements both into and out of parking spaces due to the effective aisle width being wider
- Minimises conflict points throughout the car park which makes it safer for motorists and pedestrians – particularly at pedestrian crossing points
- Minimises risk of blockages within the car park and on the adjoining road (Jack Smyth Drive)
- Allows pedestrians to walk more safely to a designated footpath / crossing facility as there is a wider effective buffer between vehicles and pedestrians

Staff Car Parking

Staff car parking will be located at the rear of the Facility, with access to this area exclusively via Longyard Drive. Staff for the Centre include:

- Lifeguards;
- Event marshals;
- Café workers;
- Admins;
- Cleaners;
- Personal trainers;
- Physiotherapists;
- Teaching staff; and
- Sporting consultants.

It is expected that a staff-only car park of around 30 spaces will cater for the vast majority of staff on most days of the year. In the event that this car park is fully-occupied, overflow parking exists either in the visitor car park at the front of the Facility, or in the surrounding identified overflow parking areas such as the Tamworth Regional Hockey Complex.

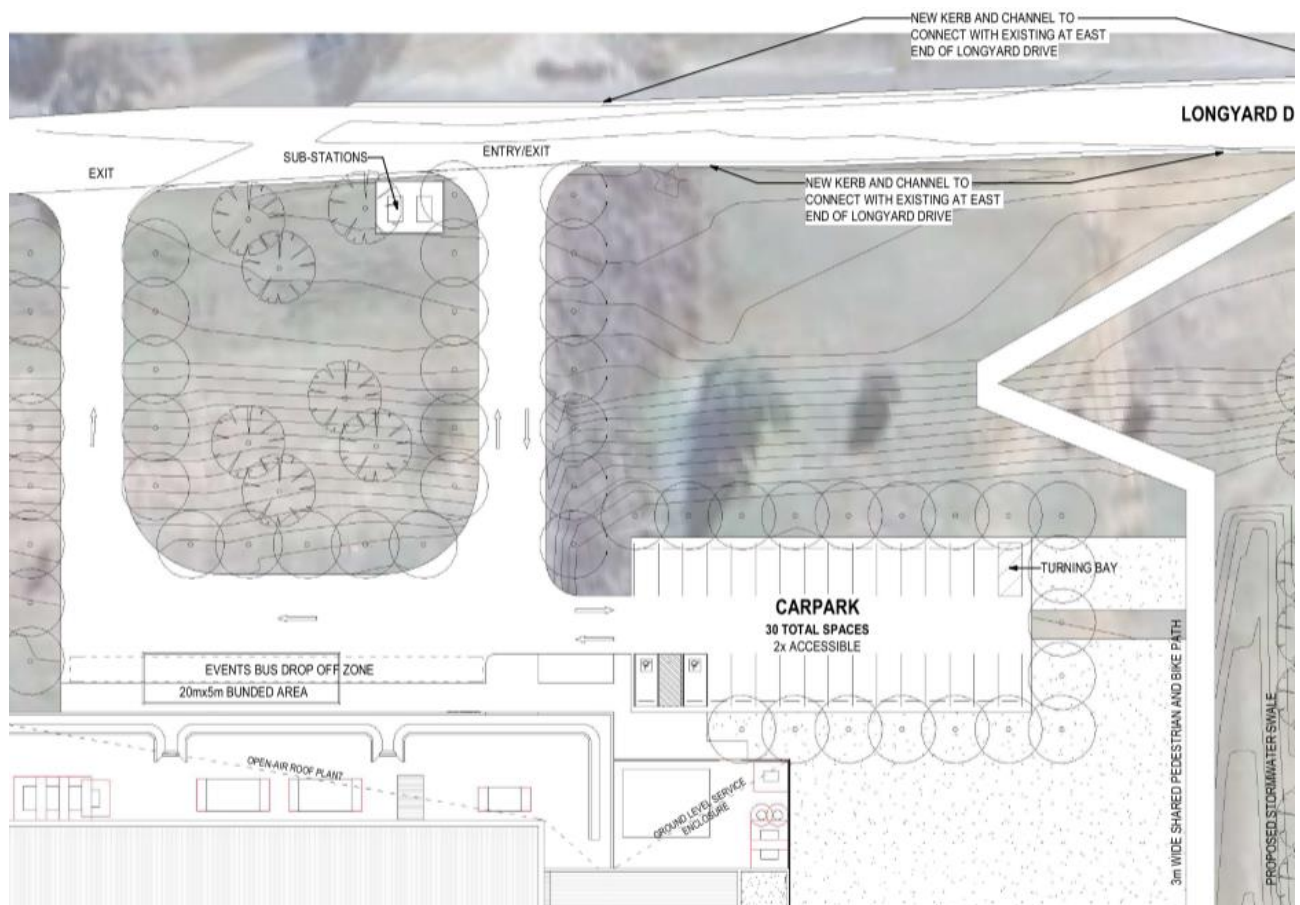


Figure 4. Staff car park and access for buses, and service vehicles.

Bus pickup and dropoff will also occur in this area.

Traffic Generation

The vast majority of traffic generation associated with the Facility will be at the front (accessed via Jack Smyth Drive) as this is where the visitor parking is located. Traffic associated with this area will be spread throughout the day but concentrated around an afternoon peak.

The rear of the Facility (accessed via Longyard Drive) is for staff parking and for bus pickup/dropoff. Traffic associated with this area will predominately be concentrated around AM and PM peaks – coinciding with typical work day hours. Bus arrivals and departures will be sporadic and mainly associated with large events such as swimming carnivals. Additional informal bus laydown areas are currently being explored at the rear of the Tamworth Regional Entertainment & Conference Centre (TRECC) which are able to be utilised by the wider Sports & Entertainment Precinct.

A summary of the estimated traffic generation for the visitor car park (accessed via Jack Smyth Drive) is provided below:

Table 4. Base and future traffic generation - visitor car park entry/exit.

Future Traffic - Visitor Car Park (Entry/Exit)							
Time	ADT	Hourly Peaks					
		AM		PM		Midday	
		In	Out	In	Out	In	Out
Weekday	976	25	10	83	59	34	20
Weekend	976	25	10	83	59	34	20

Similar to above, the estimated traffic generation for the staff car park and bus parking area (accessed via Longyard Drive) is provided in Table 5.

Table 5. Future traffic generation - staff and bus parking entry/exit.

Future Traffic - Longyard Drive							
Time	ADT	Hourly Peaks					
		AM		PM		Midday	
		In	Out	In	Out	In	Out
Weekday	75	24	6	14	22	4	5
Weekend	75	15	7	9	8	8	10

Interaction with State Road Network

With the main entrance to the Facility located on the local road network and more than 600m from Goonoo Goonoo Road (New England Highway), it is expected that there will be no observable/recordable impacts on the State Road network as a result of the Facility day-to-day operations.

Loading Bays

These are located on the northern side of the Facility and will be accessed via Longyard Drive. It is expected that the largest truck will be a Pantech courier truck primarily associated with replenishing stock for the café and transporting equipment.

Waste Collection

Waste collection will occur on the northern side of the Facility, with access via Longyard Drive. This area has no direct interactions with pedestrians or the public as the service area does not connect through to Jack Smyth Drive or the visitor car park.

Swept Paths

Three separate design vehicles have been used for swept path checks for the facility:

- 8.8m mini-bus / van for the visitor carpark and associated access off Jack Smyth Drive to accommodate community transport vehicles and ride share vehicles;

- 
- B99 design vehicles for the staff carpark and critical parking bays for both the visitor and staff car park; and
 - 14.5m bus for the rear access off Longyard Drive to accommodate public transport drop offs and larger delivery vehicles.

These swept paths have defined the driveway kerb returns and internal kerb lines around the carparks. These requirements are reflected within the drawings.

3.2 Other Future Changes within Sports & Entertainment Precinct

Connection to Arcadia Residential Development

It is likely that a connection from Rodeo Drive to the Arcadia (East) Residential Development area will occur at some stage in the future. This connection will increase traffic volumes along Jack Smyth Drive as the residential area continues to be developed. To accommodate the expected increased traffic, a minor intersection upgrade is proposed for the primary entry/exit of the Facility. This includes a channelised right hand turn lane for westbound vehicles accessing the visitor car park.

To assist with speed management on Jack Smyth Drive and pedestrian movements across Jack Smyth Drive, a wombat crossing across the road is proposed. This will connect other facilities in the broader Precinct, and also a potential overflow car park servicing the netball courts. This wombat crossing forms part of a wider plan to implement additional speed control and pedestrian safety devices in the High Pedestrian Activity Area (HPAA), and in particular Jack Smyth Drive (separate to this project).

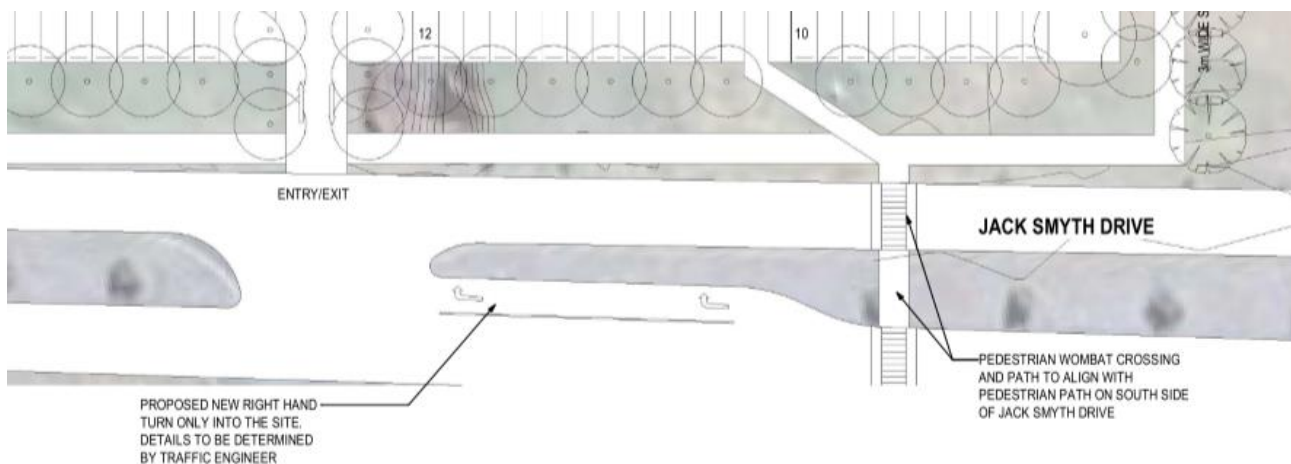


Figure 5. Intersection upgrade and traffic calming devices.

Active Transport Improvements

As discussed previously, a number of active transport improvements are proposed for the wider Sports & Entertainment Precinct. These improvements include:

- Wombat crossing points at regular intervals along Jack Smyth Drive and other roads within the Precinct;
- Expansion of shared path network across the wider Sports & Entertainment Precinct;
- Improved lighting;
- Tree plantings;
- CCTV improvements;
- Water refill stations; and
- Seating & shelters.

These improvements will enable people to move more easily and safely throughout the Precinct, and further enable the likelihood that people may choose alternate transport modes to access the Facility. Other benefits include enabling easier access to/from overflow parking areas (when they are required to be used).



It is to be noted that all improvements listed above are outside the current scope of works and are not necessary to ensure the facility operates appropriately, however they will greatly enhance the useability, safety, functionality and amenity of the wider Precinct.

Future Stage(s) of the Facility

Any future stage(s) of the proposed Aquatics Centre will be subject to a review of the existing Traffic Impact Assessment to ensure the facility suitability manages private vehicle traffic and other transport modes.

4 SIDRA Intersection Analysis

4.1 Assumptions

- Nominal conservative annual growth rate of 2% over a 7-year period applied to base traffic (which encompasses the first few operational years after the Facility is estimated to open in mid-2026);
- Expected that this annual growth rate conservatively encompasses a wide range of growth in the area including increased use of other sporting facilities, residential development (Arcadia) and other surrounding developments – noting that not all of this growth will directly impact traffic around the Facility entry/exit points;
- Traffic origin/destination splits for entry/exit points are heavily focused in the easterly direction i.e. to/from the primary Tamworth urban area;
- Traffic count data is from 2023; and
- As per the proposed layout (refer Figure 2), the entrance and exit on Longyard Drive for staff/bus use has been assessed separately.

4.2 Results Summary

For each intersection, the following peak times were assessed:

Table 6. Intersection peaks modelled in SIDRA.

Intersection	Type	Weekday			Weekend		
		AM	PM	Midday	AM	PM	Midday
Visitor Car Park & Jack Smyth Drive	Entry & Exit	✓	✓	N/A	N/A	N/A	✓
Aquatics Staff & Longyard Drive	Entry	✓	✓				✓
	Exit	✓	✓				✓

The weekday midday peak and weekend AM/PM peaks were not assessed as the traffic volumes were considered non-critical based on their low values.

Detailed SIDRA outputs are provided in “

Appendix A – SIDRA Outputs”. These include traffic volumes and Level of Service (LOS) outputs. Summary outputs for each of the intersections assessed are outlined in Table 7, Table 8 and Table 9. These outputs assess LOS and Degree of Saturation (DOS) for each of the approaches and peak cases.

Table 7. Performance summary - Visitor Car Park & Jack Smyth Drive.

Visitor Car Park & Jack Smyth Drive			
Peak	Approach	LOS	DOS
AM	West	A	0.02
	East	A	0.03
	North	A	0.01
PM	West	A	0.03
	East	A	0.13
	North	A	0.05
Midday (Weekend)	West	A	0.05
	East	A	0.07
	North	A	0.04
Note: Above assumes conservative future aquatics traffic generation volumes + 2% annual growth on all approaches for a 7-year horizon			

Table 8. Performance summary - Facility Staff / Bus Exit & Longyard Drive.

Aquatics Staff / Bus Exit & Longyard Drive			
Peak	Approach	LOS	DOS
AM	West	A	0.00
	East	A	0.01
	North	A	0.01
PM	West	A	0.00
	East	A	0.01
	North	A	0.03
Midday (Weekend)	West	A	0.02
	East	A	0.01
	North	A	0.03
Note: Above assumes conservative future aquatics traffic generation volumes + 2% annual growth on all approaches for a 7-year horizon			

Table 9. Performance summary - Facility Staff / Bus Entry & Longyard Drive.

Aquatics Staff / Bus Entry & Longyard Drive			
Peak	Approach	LOS	DOS
AM	West	A	0.01
	East	A	0.03
PM	West	A	0.02
	East	A	0.02
Midday (Weekend)	West	A	0.04
	East	A	0.02
Note: Above assumes conservative future aquatics traffic generation volumes + 2% annual growth on all approaches for a 7-year horizon			

Each of the intersections assessed are expected to function with minimal issue, even with conservative growth rates applied. The same is expected for intersections outside of the study area.

No intersection treatments/upgrades are proposed as a result of the Facility.

5 Active & Public Transport Considerations

5.1 Active Transport

A continual shared path connection exists from the Tamworth Sports Dome through to Greg Norman Drive, then follows Goonoo Goonoo Road to Scott Road, then finally to the Tamworth CBD. This path allows residents in East Tamworth, Calala and areas of Hillvue / South Tamworth to access the Sports & Entertainment Precinct via an off-road path suitable for bicycles and pedestrians. As part of the Facility, a new shared path is proposed along the eastern boundary adjacent to the Hockey Complex and the new service road. This path will connect Longyard Drive with Jack Smyth Drive and enable more efficient access to the Facility for the majority of the population catchment. The path will be separated from the new service road with a vegetation buffer, ensuring that the risk of pedestrians and service vehicles interacting is reduced – along with the benefit of providing a shaded pathway as the vegetation matures.

A new shared path will also be provided along the northern side of Jack Smyth Drive fronting the Facility visitor car park. This path will connect to a raised wombat crossing of Jack Smyth Drive, enabling pedestrians to cross safely between overflow parking areas at Tamworth Netball and the Tamworth Regional Sports Dome.

Separate to this project, a new shared path is also proposed along the southern edge of Longyard Drive from The Ringers Road to the new Facility shared path. It is expected that the construction of this will occur at a similar time to the Facility shared path. This path will further enable pedestrian and cyclist access throughout the Precinct.

A bicycle storage area will be provided at the front of the Facility, along with a water refill station.

Figure 6 shows the existing (orange lines) and proposed (yellow lines) shared paths within the Sports & Entertainment Precinct. Wombat crossings have also been identified throughout the Precinct to reduce vehicle speeds and enable safer movements of pedestrians/cyclists.



Figure 6. Existing and proposed pedestrian infrastructure for wider Sports & Entertainment Precinct.

5.2 Public Transport

There is currently one regular public bus service which runs from the Tamworth CBD via South Tamworth to the Sports & Entertainment Precinct. This bus turns around at the Jack Smyth Drive / The Ringers Road roundabout. It is expected that there will be patrons on this bus route who will be users of the Facility. Over time there may exist the need to modify the current bus route to make it easier for users of the Facility to use public transport options.

Bus providers associated with events/carnivals at the Facility will be able to utilise a designated pickup/dropoff point at the rear (northern end) of the Facility (via Longyard Drive). Limited bus parking will also be provided in the same area, with the opportunity for buses to utilise further long-stay bus parking at the rear of the TRECC (proposed for future construction and is not part of this project).

6 Conclusion / Recommendations

Based on the proposed location and transport features of the Facility, it is expected that the Facility will have minimal impact on the surrounding transport network. To further reduce impacts and manage the traffic generated by the Facility, the following infrastructure will be provided as part of the Facility construction:

- Visitor car parking which caters for the large majority of everyday use, with the option to utilise nearby overflow parking areas during peak event days;
- Staff car parking which caters for the large majority of everyday use;
- Bus pickup/dropoff area and parking area;
- New channelised right hand turn for vehicles entering the facility on Jack Smyth Drive (required for likely future residential traffic increase not for current facility needs);
- Pedestrian shared path provided to connect Longyard Drive with Jack Smyth Drive (to the west of the Tamworth Regional Hockey Complex), and providing a pedestrian wombat crossing on Jack Smyth Drive – connecting to the Tamworth Sports Dome and Netball Car Park; and
- Formalised kerb and gutter on Longyard drive up to the entry/exit of the northern Facility access.

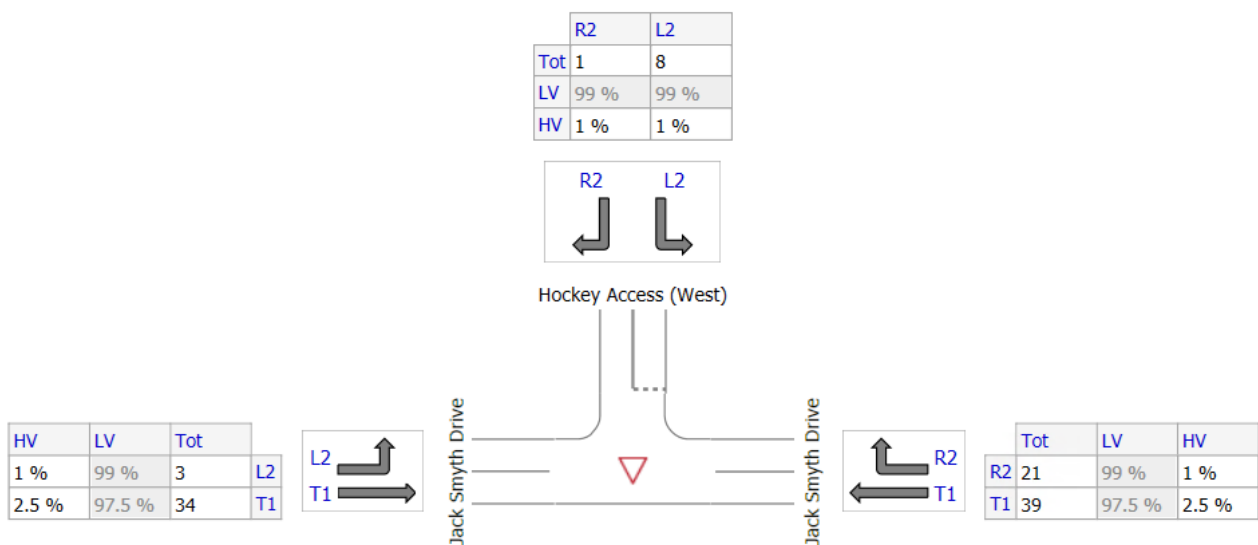
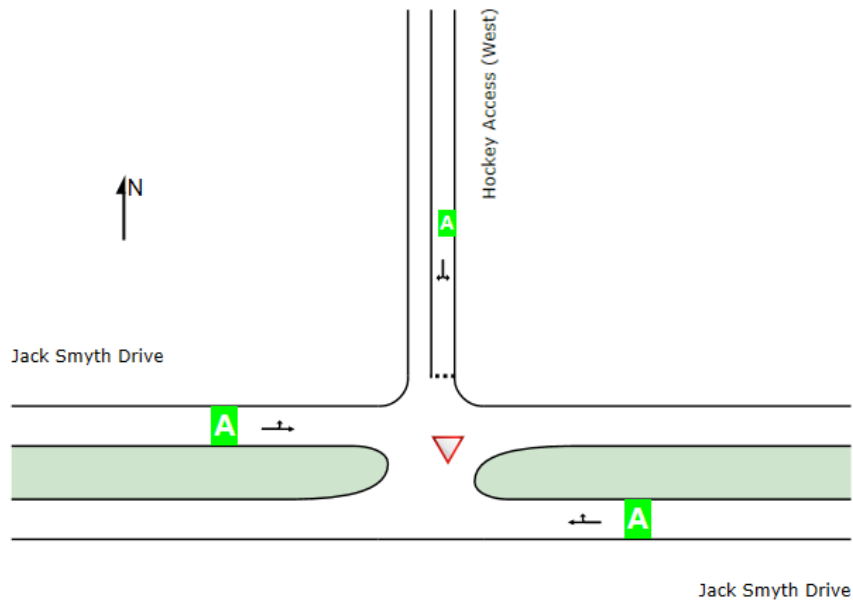
Appendix A – SIDRA Outputs

Visitor Car Park Entry/Exit

AM (Weekday)

New Site
 Site Category: (None)
 Give-Way (Two-Way)
 Design Life Analysis (Final Year): Results for 7 years

LOS	Approaches			Intersection
	East NA (TWSC)	North A	West NA (TWSC)	NA (TWSC)



	Approaches			Intersection
	East	North	West	
LOS	NA (TWSC)	A	NA (TWSC)	NA (TWSC)

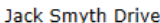


Diagram showing two L-shaped blocks, R2 and L2, with arrows indicating their movement directions.

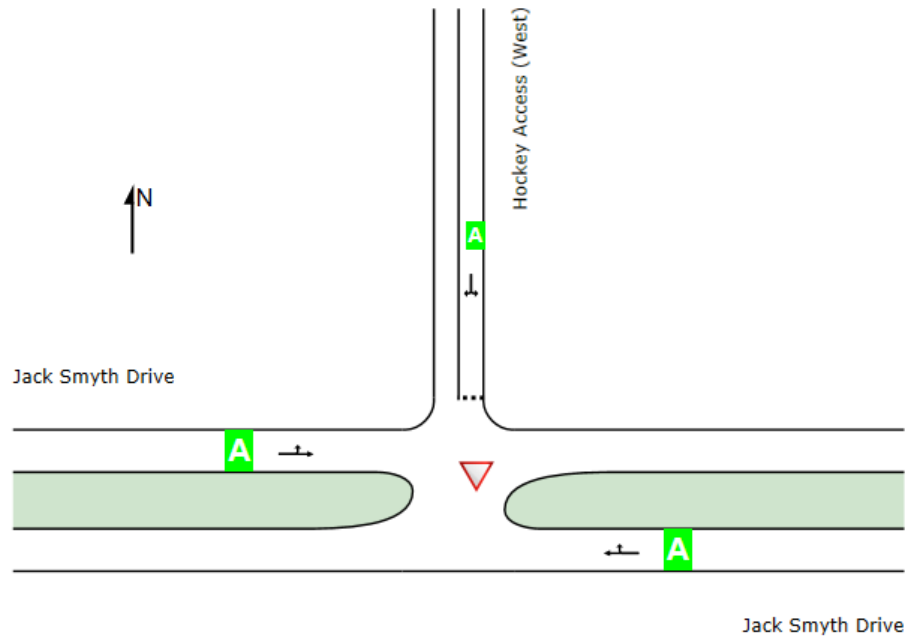
▽

	Tot	L
R2	80	9
T1	185	9

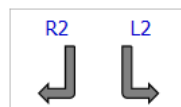
Midday (Weekend)

New Site
 Site Category: (None)
 Give-Way (Two-Way)
 Design Life Analysis (Final Year): Results for 7 years

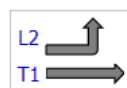
LOS	Approaches			Intersection
	East NA (TWSC)	North A	West NA (TWSC)	
				NA (TWSC)



	R2	L2
Tot	4	39
LV	99 %	99 %
HV	1 %	1 %



HV	LV	Tot	
1 %	99 %	4	L2
2.5 %	97.5 %	88	T1



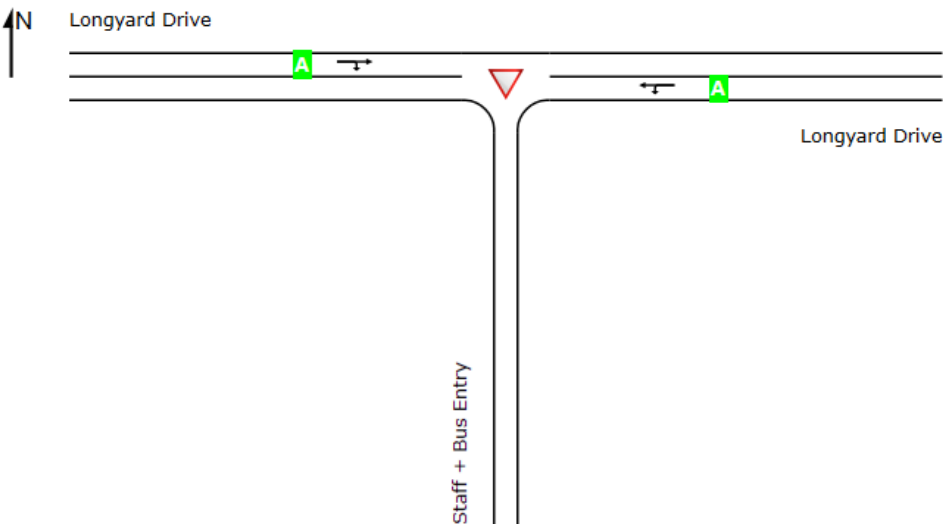
	Tot	LV	HV
R2	45	99 %	1 %
T1	85	97.5 %	2.5 %

Staff Car Park Entry

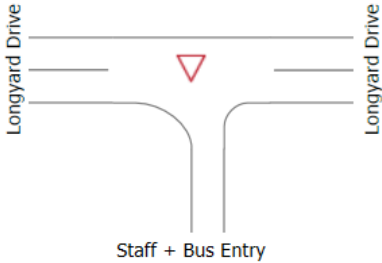
AM (Weekday)

New Site
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 7 years

LOS	Approaches		Intersection
	East	West	
	NA	NA	NA (TWSC)
	(TWSC)	(TWSC)	



HV	LV	Tot	
10 %	90 %	15	T1
2.5 %	97.5 %	1	R2

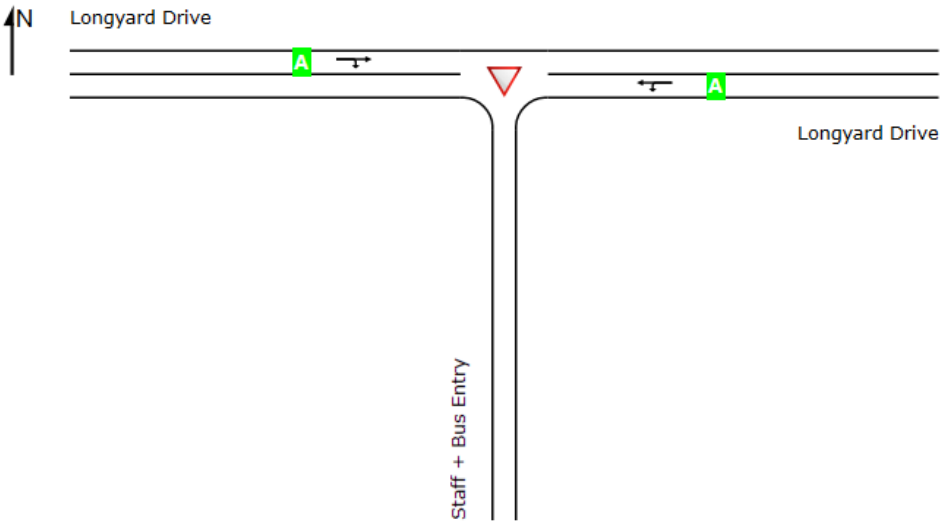


	Tot	LV	HV
T1	15	97.5 %	2.5 %
L2	23	90 %	10 %

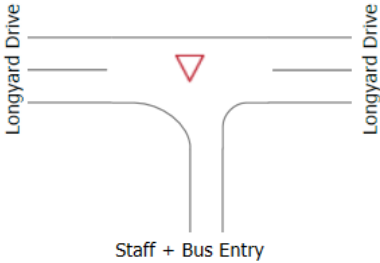
PM (Weekday)

New Site
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 7 years

LOS	Approaches		Intersection
	East	West	
	NA (TWSC)	NA (TWSC)	NA (TWSC)



HV	LV	Tot	
10 %	90 %	33	T1
2.5 %	97.5 %	1	R2



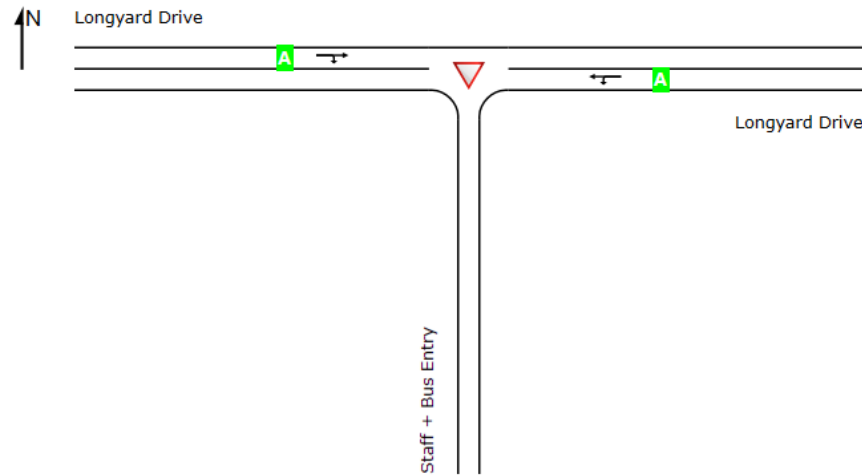
	Tot	LV	HV
T1	8	97.5 %	2.5 %
L2	22	90 %	10 %



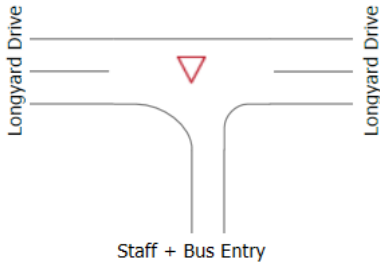
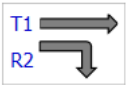
Midday (Weekend)

New Site
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 7 years

LOS	Approaches		Intersection
	East	West	
	NA	NA	NA (TWSC)
	(TWSC)	(TWSC)	



HV	LV	Tot	
10 %	90 %	55	T1
2.5 %	97.5 %	1	R2



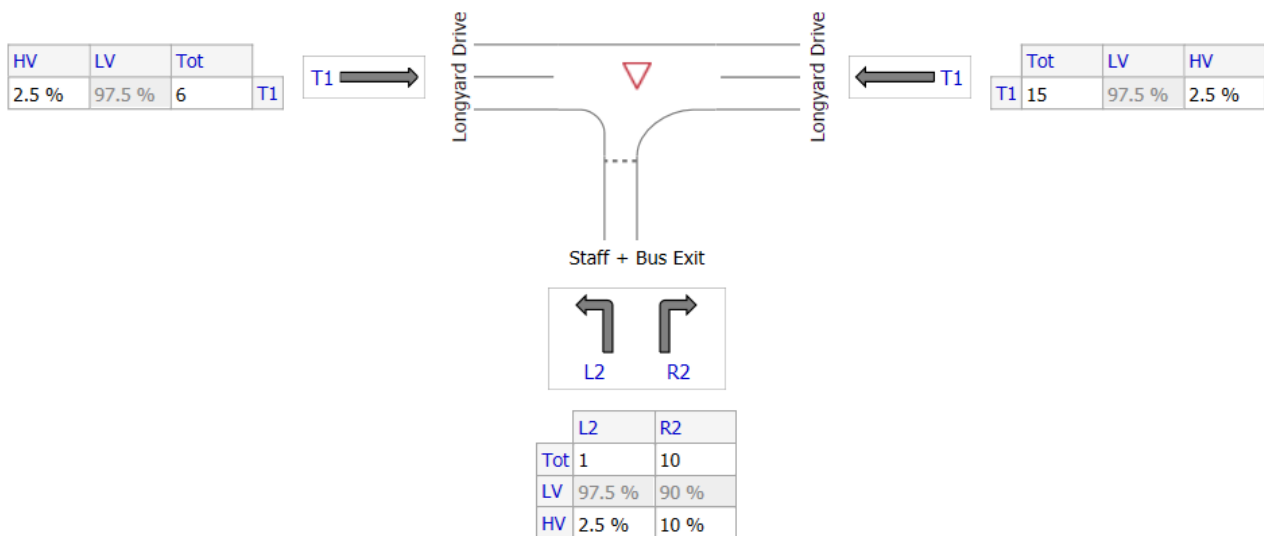
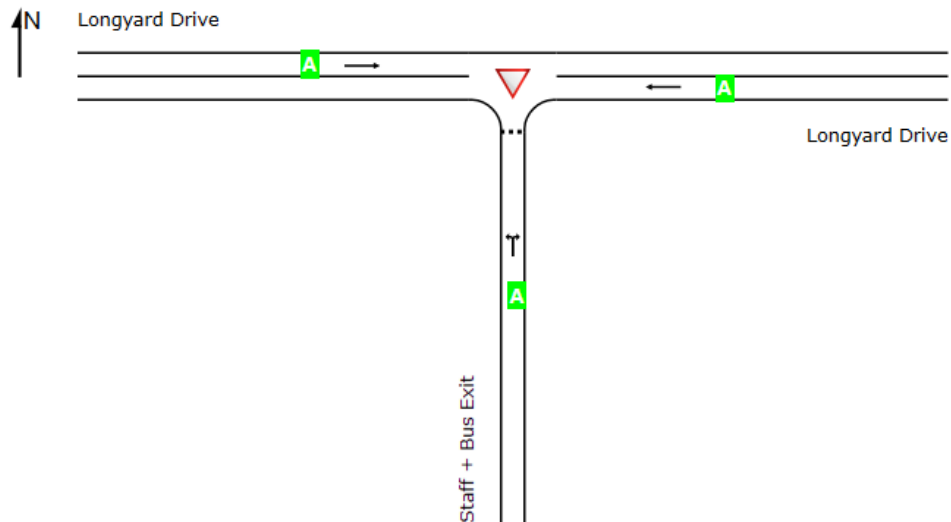
	Tot	LV	HV
T1	11	97.5 %	2.5 %
L2	18	90 %	10 %

Staff Car Park Exit

AM (Weekday)

New Site
 Site Category: (None)
 Give-Way (Two-Way)
 Design Life Analysis (Final Year): Results for 7 years

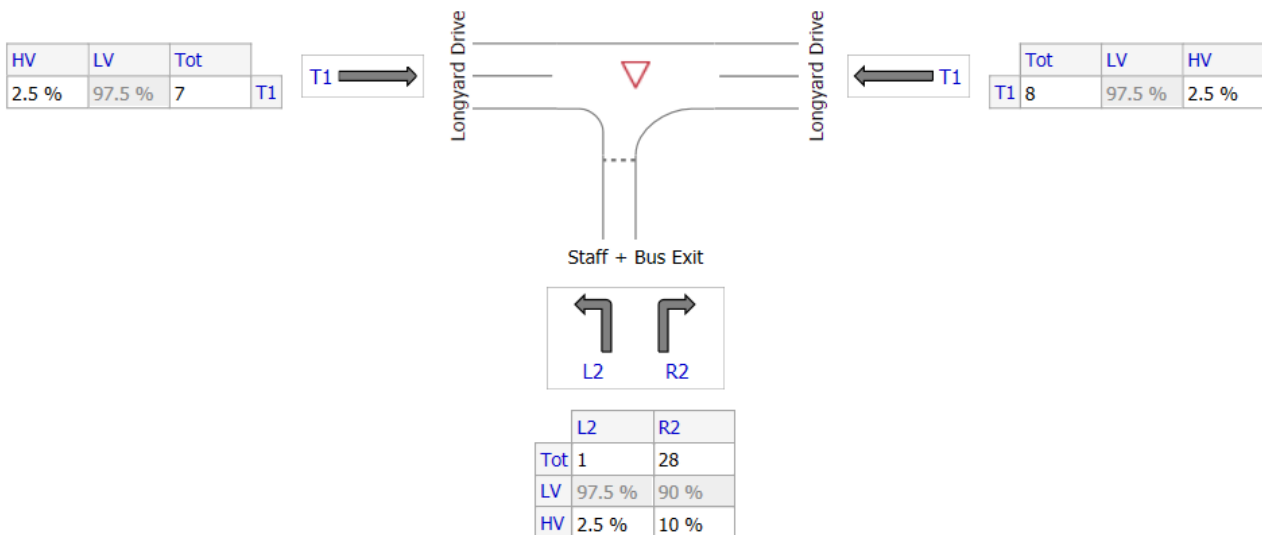
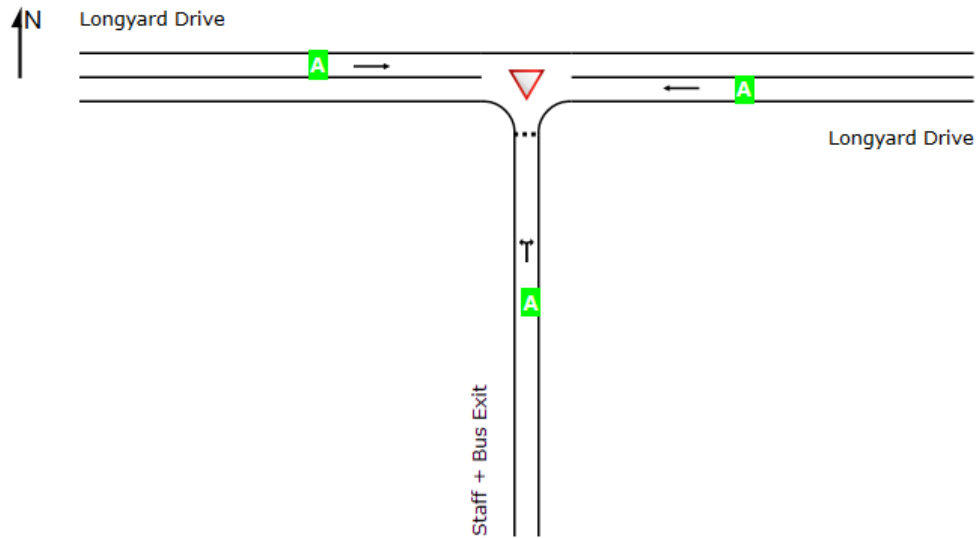
LOS	Approaches			Intersection
	South	East	West	
	A	NA (TWSC)	NA (TWSC)	NA (TWSC)



PM (Weekday)

New Site
 Site Category: (None)
 Give-Way (Two-Way)
 Design Life Analysis (Final Year): Results for 7 years

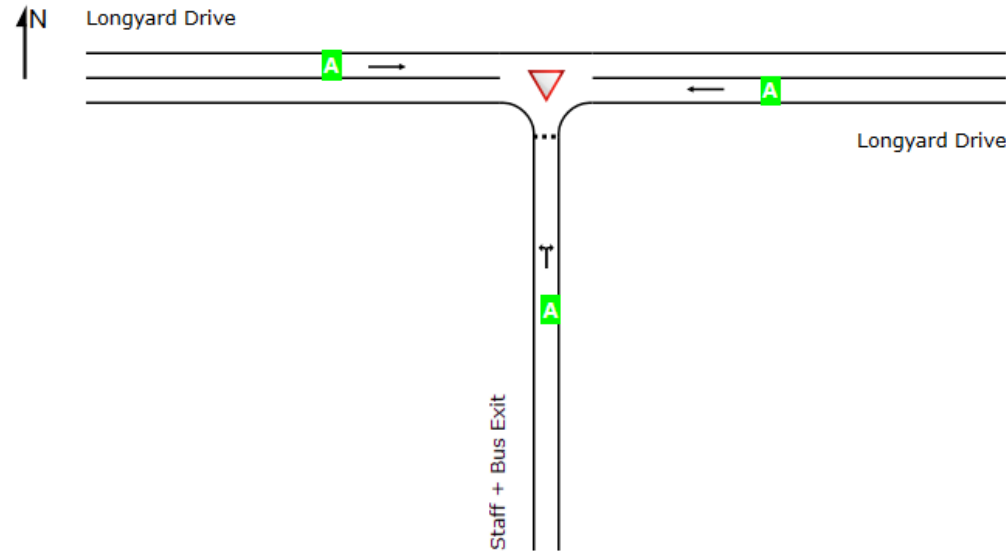
LOS	Approaches			Intersection
	South	East	West	
	A	NA (TWSC)	NA (TWSC)	NA (TWSC)



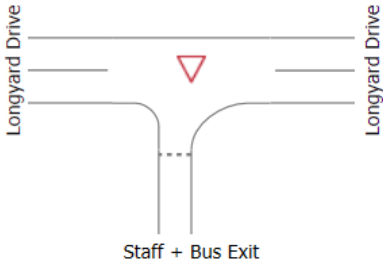
Midday (Weekend)

New Site
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 7 years

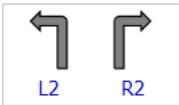
LOS	Approaches			Intersection
	South	East	West	
	A	NA (TWSC)	NA (TWSC)	NA (TWSC)



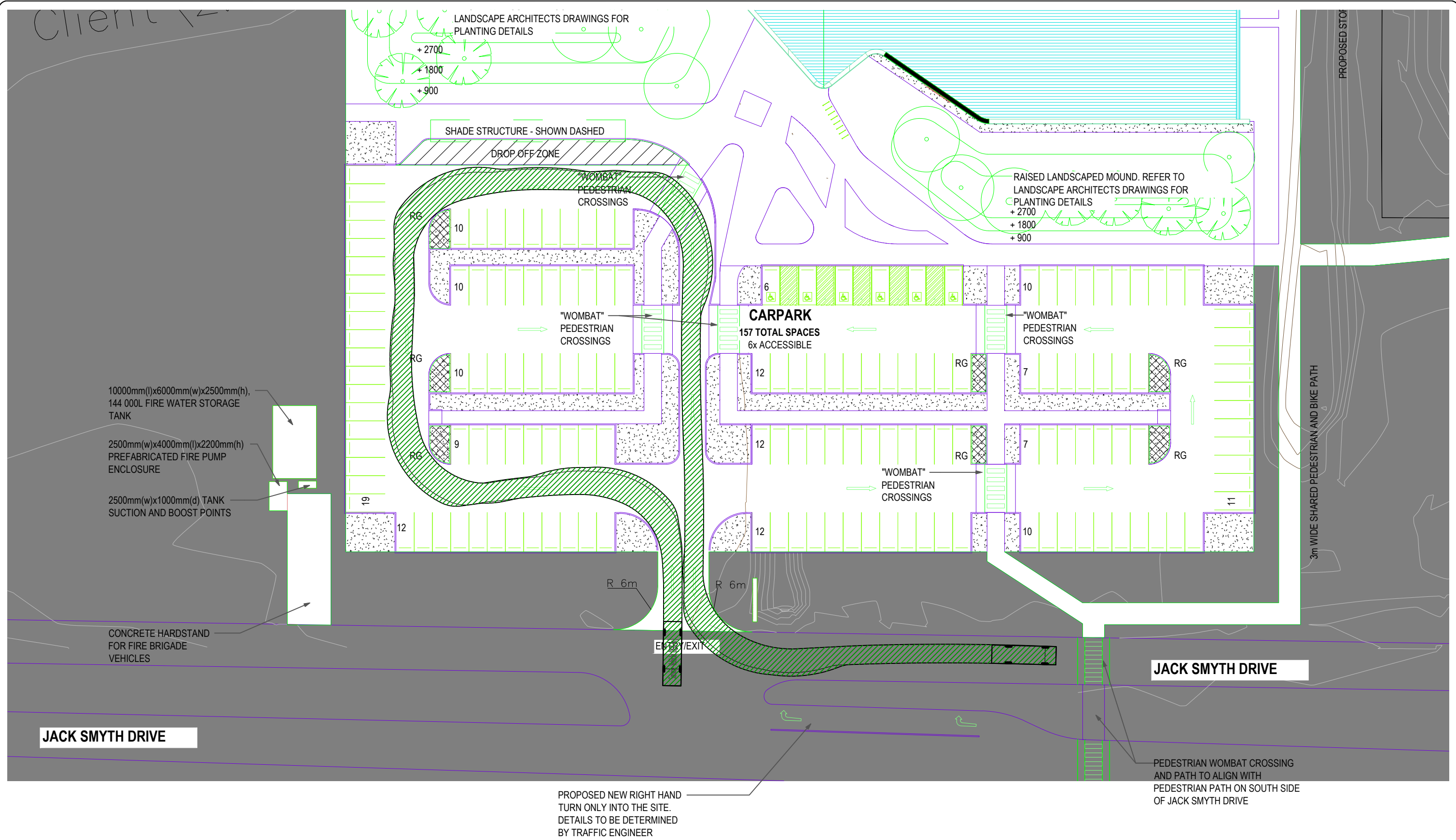
HV	LV	Tot	
2.5 %	97.5 %	24	T1



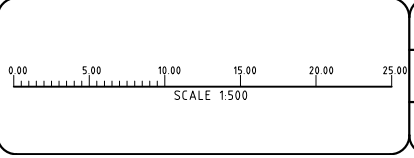
Tot	LV	HV	
11	97.5 %	2.5 %	T1



	L2	R2
Tot	1	33
LV	97.5 %	90 %
HV	2.5 %	10 %



REV	DATE	DESCRIPTION
#	#	#
#	#	#
#	#	#
#	#	#
#	#####	#####

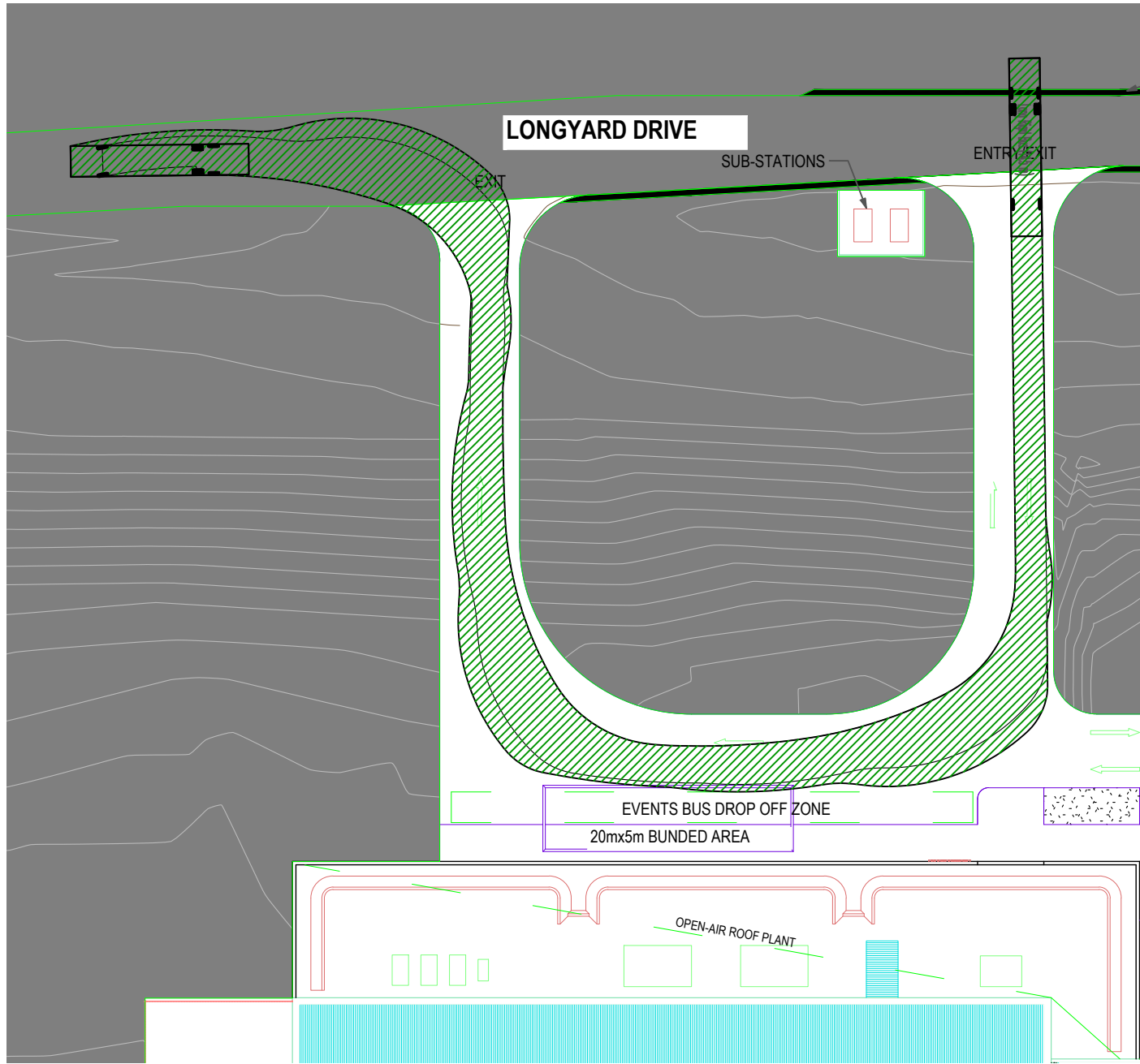


CHECKED: DESIGNER	DATE:
CHECKED: SENIOR DESIGN & PROJECT ENGINEER	DATE:
CHECKED: CLIENT REPRESENTATIVE	DATE:

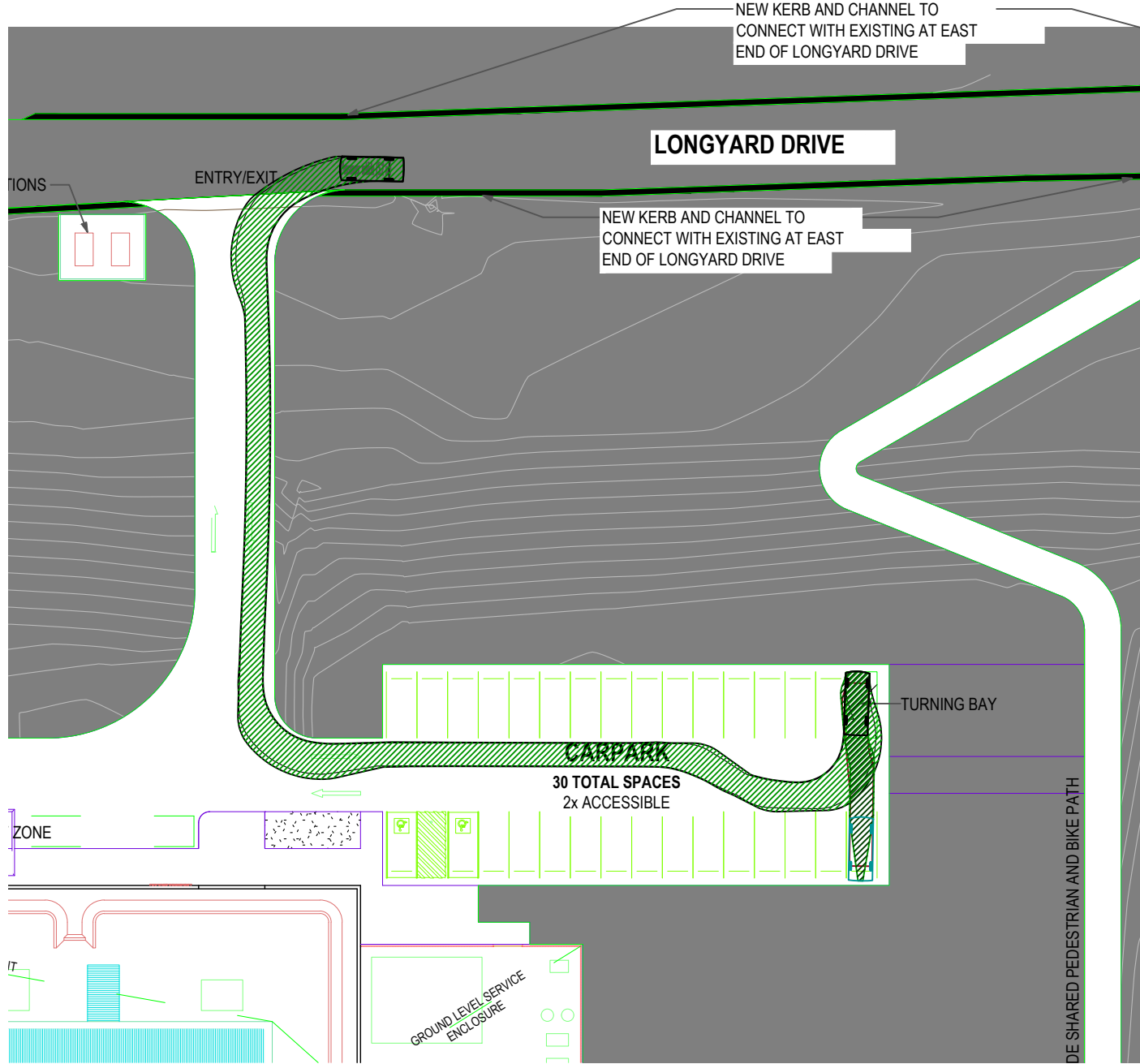
AQUATIC CENTRE LONGYARD DRIVE 8.8m SWEEP PATH			
SURVEYED: ####	CLIENT REP: ####	DESIGNED: ####	JOB NO: DSJN####

TAMWORTH REGIONAL COUNCIL
SURVEY AND DESIGN DRAWING MANUAL (UPDATE IN BLOCK)

DATUM	SCALES AS SHOWN
A.H.D.	DRAWING NO.
A3	XXXX-003



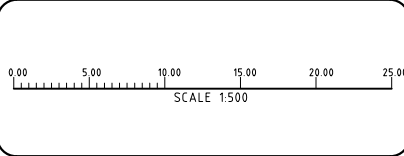
14.5m BUS SWEPT PATH
SCALE: 1:500 AT A3



B99 5.2m PASSENGER VEHICLE
SWEPT PATH
SCALE: 1:500 AT A3



REV	DATE	DESCRIPTION



CHECKED: DESIGNER	DATE:
CHECKED: SENIOR DESIGN & PROJECT ENGINEER	DATE:
CHECKED: CLIENT REPRESENTATIVE	DATE:

AQUATIC CENTRE LONGYARD DRIVE SWEPT PATH			
SURVEYED: ####	CLIENT REP: ####	DESIGNED: ####	JOB NO: DSJN####

TAMWORTH REGIONAL COUNCIL
SURVEY AND DESIGN DRAWING MANUAL (UPDATE IN BLOCK)

DATUM	SCALES AS SHOWN
A.H.D.	DRAWING NO.
A3	XXXX-004