

**TRAFFIC AND PARKING IMPACT ASSESSMENT OF
THE PROPOSED CHILD CARE CENTRE
AT 262 ABERGLASSLYN ROAD, ABERGLASSLYN**



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Transport Planning, Traffic Impact Assessments, Road Safety Audits, Expert Witness

Development Type: Child Care Centre
Site Address: 262 Aberglasslyn Road, Aberglasslyn
Prepared for: Greenscape Design
Document reference: 220390.01FB

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1 INTRODUCTION

McLaren Traffic Engineering was commissioned by Greenscape Design to provide a traffic and parking impact assessment of the proposed child care centre at 262 Aberglasslyn Road, Aberglasslyn as depicted in **Annexure A**.

1.1 **Description and Scale of Development**

The proposed development has the following characteristics relevant to traffic and parking:

- A child care centre accommodating 101 children and 18 staff members as per the following:
 - 36 children between 0-2 years old (staff assigned at 1 per 4 children, or 8 staff);
 - 25 children between 2-3 years old (staff assigned at 1 per 5 children, or 5 staff);
 - 40 children between 3-5 years old (staff assigned at 1 per 10 children, or 4 staff).
- An at-grade parking area with vehicular access via a proposed two-way driveway from Aberglasslyn Road, accommodating a total of 26 car spaces including:
 - 11 parent car spaces including one (1) accessible spaces;
 - 15 staff car spaces.

1.2 **State Environmental Planning Policy (Transport and Infrastructure) 2021**

The proposed development does not qualify as a traffic generating development with relevant size and/or capacity under *Clause 2.122* of the *SEPP (Transport and Infrastructure) 2021*. Accordingly, formal referral to Transport for NSW (TfNSW) is unnecessary and the application can be assessed by Maitland Council officers accordingly.

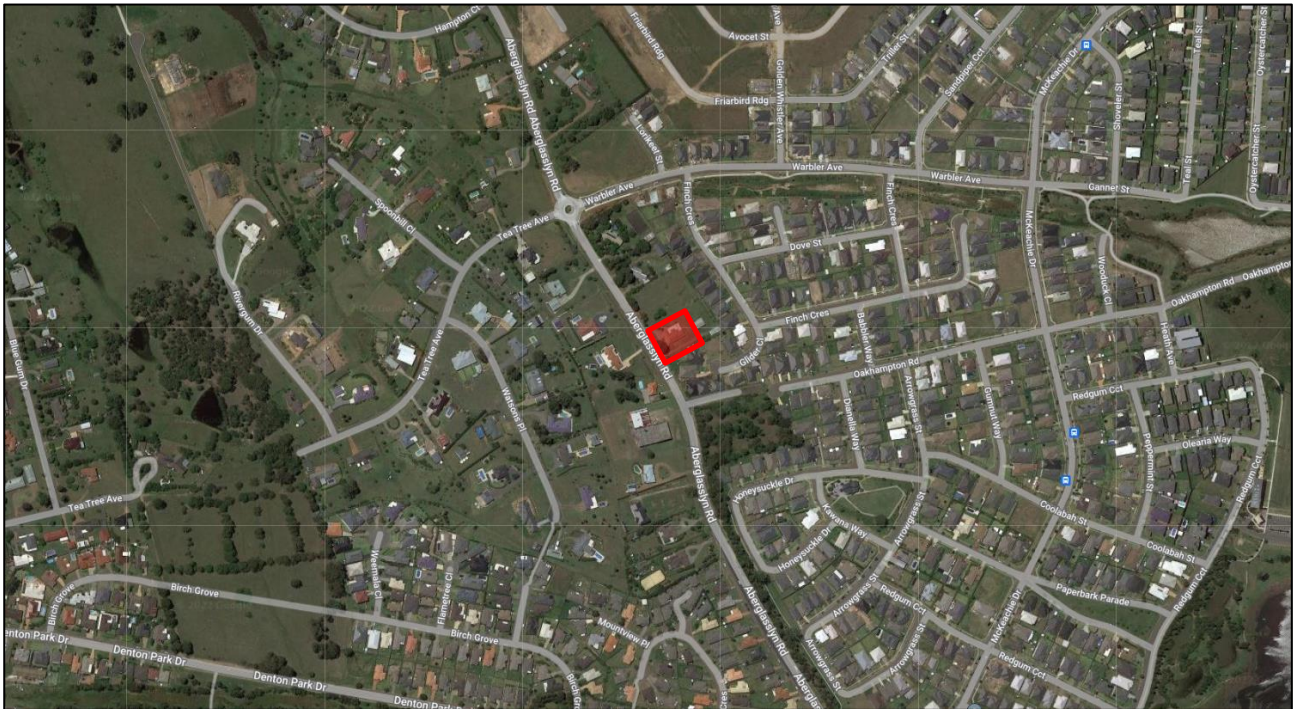
1.3 **Site Description**

The site is currently zoned *R1 – General Residential* under the *Maitland Council LEP 2011* and is currently occupied by a single residential dwelling on the southern side of the property. The site has a singular frontage to Aberglasslyn Road to the west.

The site is generally surrounded by residential dwellings in all directions, with large lot residential properties primarily on the western side of Aberglasslyn Road. Woolworths Aberglasslyn located approximately 600m to the south and McKeachies Sportsground located approximately 800m to the east of site.

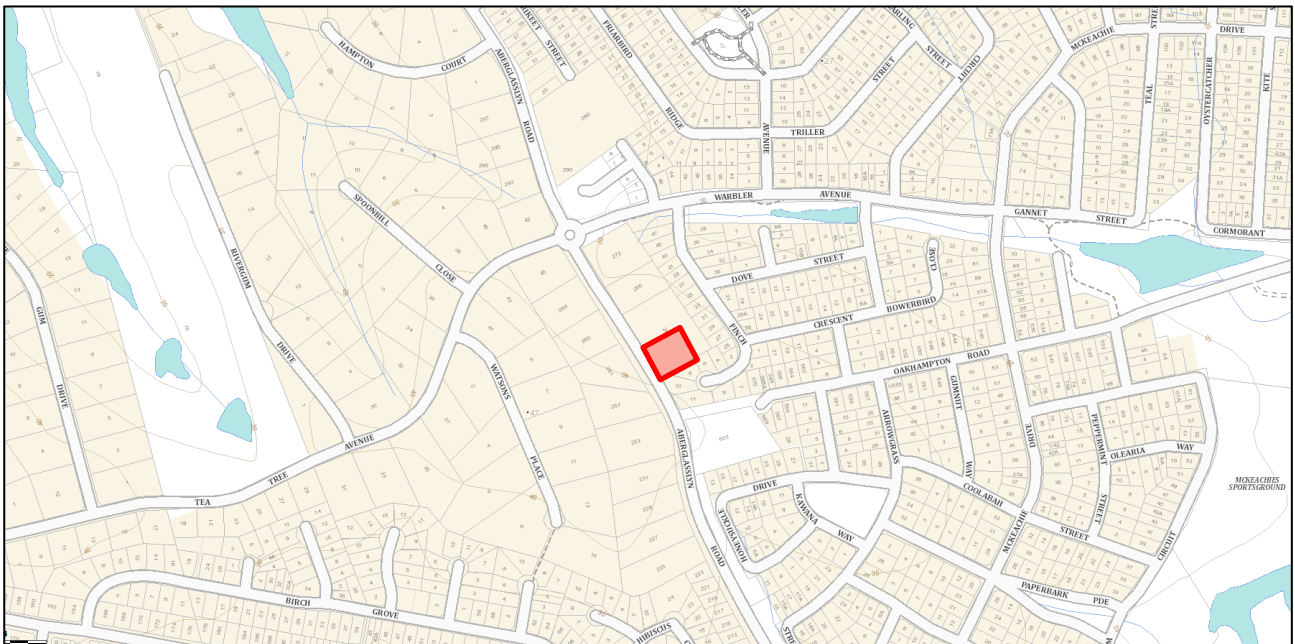
1.4 Site Context

The location of the site is shown on an aerial photo and a street map in **Figure 1** and **Figure 2** respectively.



 Site Location

FIGURE 1: SITE CONTEXT – AERIAL PHOTO



 Site Location

FIGURE 2: SITE CONTEXT – STREET MAP

2 EXISTING TRAFFIC AND PARKING CONDITIONS

2.1 Road Hierarchy

The road network servicing the site has characteristics as described in the following sub-sections.

2.1.1 Aberglasslyn Road

- Unclassified COLLECTOR Road;
- Approximately 11m wide two-way carriageway facilitating one (1) traffic flow lane in each direction;
- Signposted 60km/h speed limit;
- No formal kerbside parking permitted along both sides of the road.

2.1.2 Warbler Avenue

- Unclassified COLLECTOR Road;
- Approximately 11m wide two-way carriageway facilitating one (1) traffic flow lane in each direction and kerbside parking;
- Default 50km/h speed limit applies;
- Generally, unrestricted kerbside parking permitted along both sides of the road.

2.2 Existing Traffic Management

- Roundabout controlled intersection of Aberglasslyn Road / Warbler Avenue / Tea Tree Avenue;
- Roundabout controlled intersection of Aberglasslyn Road / Denton Park Drive / McKeachie Drive;
- “STOP” controlled intersection of Aberglasslyn Road / Oakhampton Road.

2.3 Existing Traffic Environment

Intersection traffic surveys were conducted at the intersections of Aberglasslyn Road / Warbler Avenue / Tea Tree Avenue and Aberglasslyn Road / Denton Park Drive / McKeachie Drive from 7:00 AM to 9:30 AM and 2:30 PM to 6:00 PM on Thursday 3 November 2022 representing a typical operating weekday. The full survey results are shown in **Annexure B** for reference.

2.3.1 Existing Road Performance

The performance of the surrounding intersections under the existing traffic conditions has been assessed using SIDRA INTERSECTION 9.0, **Table 1** summarises the resultant intersection performance data, with full SIDRA results reproduced in **Annexure C**.

TABLE 1: EXISTING INTERSECTION PERFORMANCES (SIDRA INTERSECTION 9.0)

Intersection	Peak Hour	Degree of Saturation ⁽¹⁾	Average Delay ⁽²⁾ (sec/veh)	Level of Service ⁽³⁾⁽⁴⁾	Control Type	Worst Movement
EXISTING PERFORMANCE						
Aberglasslyn Road / Tea Tree Avenue / Warbler Avenue	AM	0.07	5.7 (Worst: 12.1)	A (Worst: B)	Roundabout	UT from Aberglasslyn Road
	PM	0.11	5.7 (Worst: 10.7)	A (Worst: B)		UT from Aberglasslyn Road
Aberglasslyn Road / McKeachie Drive / Denton Park Drive	AM	0.38	6.2 (Worst: 11.7)	A (Worst: B)	Roundabout	UT from Aberglasslyn Road
	PM	0.45	6.9 (Worst: 12.1)	A (Worst: B)		UT from Aberglasslyn Road

Notes:

- (1) The Degree of Saturation is the ratio of demand to capacity for the most disadvantaged movement.
- (2) The average delay is the delay experienced on average by all vehicles. The value in brackets represents the delay to the most disadvantaged movement.
- (3) The Level of Service is a qualitative measure of performance describing operational conditions. There are six levels of service, designated from A to F, with A representing the best operational condition and level of service F the worst. The LoS of the intersection is shown in bold, and the LoS of the most disadvantaged movement is shown in brackets.
- (4) No overall Level of Service is provided for Give Way and Stop controlled intersections as the low delays associated with the dominant movements skew the average delay of the intersection. The Level of Service of the worst approach is an indicator of the operation of the intersection, with a worse Level of Service corresponding to long delays and reduced safety outcomes for that approach.

As shown, the relevant intersections are currently performing at a high level of efficiency, with Level of Service “A” conditions in both the AM & PM peak hour periods. The Level of Service “A” performance is characterised by low approach delays and spare capacity.

2.4 Public Transport

The subject site has access to existing bus stop (ID: 2320327) located approximately 700m walking distance to the east of site on McKeachie Drive. The bus stop services existing bus route 186 (Rutherford to Aberglasslyn via Denton Park Drive (Loop Service)) provided by Hunter Valley Buses.

The location of the site subject to the surrounding public transport network is shown in Figure 3.

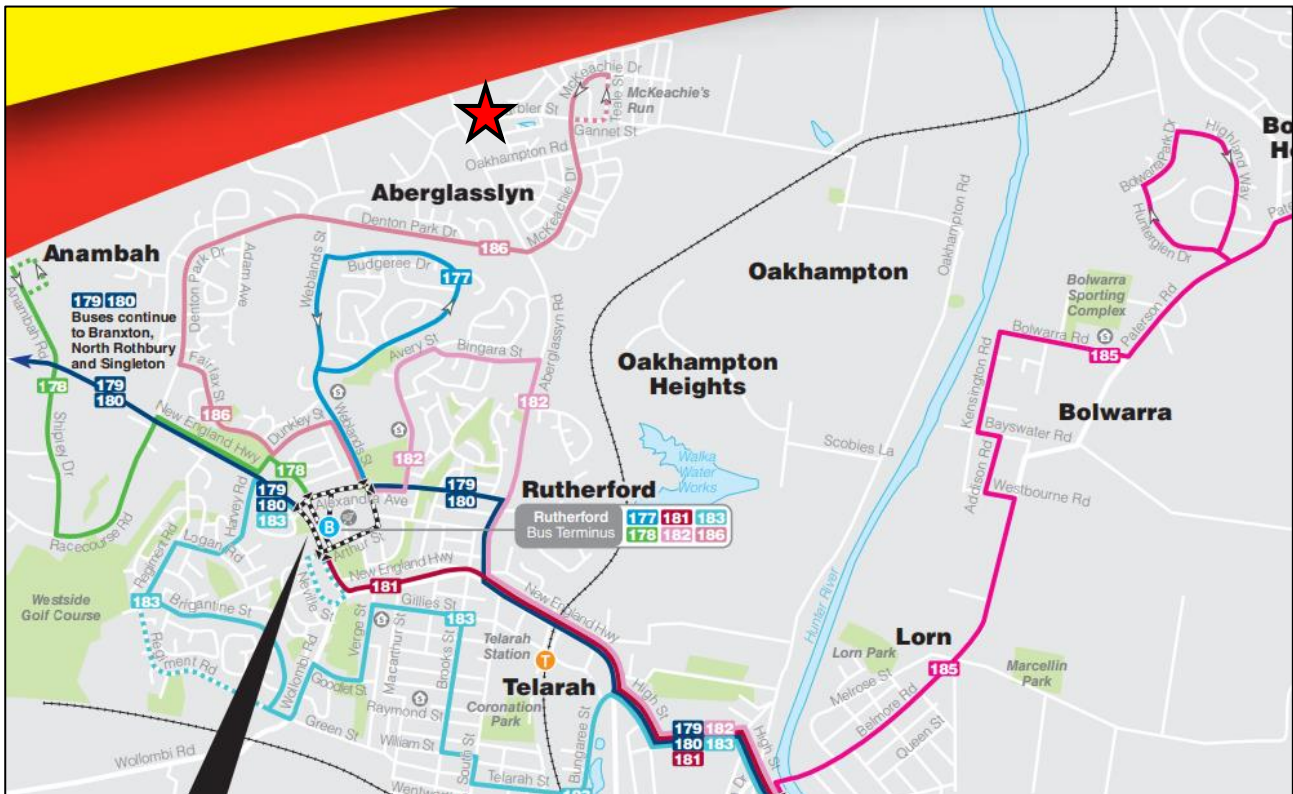


FIGURE 3: PUBLIC TRANSPORT NETWORK MAP

2.5 Future Road and Infrastructure Upgrades

From Maitland Council Development Application tracker and website, it appears that Aberglasslyn Road is currently undergoing upgrades to widen the carriageway and formalise kerbs and drainage along both sides of the road. The federal government has recently committed through its *Roads to Recovery Program* to an upgrade of Aberglasslyn Road north of Warbler Avenue, including rehabilitation or the road pavement and resealing, as well as widening the road to accommodate a 1m road shoulder. This work is expected to start in October 2022 and finish in May 2023.

There are no future planned road or public transport changes that will affect traffic conditions within the immediate vicinity of the subject site.

3 PARKING ASSESSMENT

3.1 Council Parking Requirement

Reference is made to the *Maitland Development Control Plan 2011 Part C – Design Guidelines* which designates the following parking rates applicable to the proposed development:

1.2 Calculation of Numbers

Where the calculation results in a fraction of a space, the total number of parking spaces required will be the next highest whole number.

Appendix A – Car Parking Requirements for Specific Land Uses

Childcare Centre

1 space per 4 children in attendance or there part of

Parking must be provided in a convenient location allowing safe movement of children to and from the centre

Table 2 presents the parking requirements of the proposal according to the Council’s above car parking rates.

TABLE 2: DCP PARKING RATES

Land Use	Scale	Rate	Spaces Required	Spaces Provided
Child Care Centre	101 Children	1 per 4 children	26	26

As shown, strict application of the DCP requires the provision of **26** car parking spaces. The proposed plans detail the provision of **26** car parking spaces, resulting in compliance with Council’s DCP parking requirements.

3.2 Parking for People with Disabilities

Maitland Council DCP states the following regarding accessible parking provision relevant to the proposed development:

In general, where 10 or more vehicle spaces are required, one designated parking space for people with disabilities is required per 100 (or part thereof) car spaces provided.

The proposed site requires **26** car parking spaces and as such the DCP requires the provision of one (**1**) accessible car parking space. The proposed car parking layout incorporates one (1) parking space for people with disabilities resulting in compliance with Council’s DCP requirements.

Further, reference is made to the *Table D3.5* of the *Building Code of Australia* (BCA) as part of the *National Construction Code 2019* (NCC) which categorises a child care centre as a

Class 9b building and therefore requires the provision of car parking for people with disabilities at a rate of:

Class 9b 1 space for every 50 carparking spaces or part thereof.

In accordance with the BCA requirements, one (1) car parking space for people with disabilities is to be provided. The proposed car parking layout details the provision of one (1) car parking space designed in accordance with AS2890.6:2022, complying with BCA requirements.

3.3 Bicycle & Motorcycle Parking Requirements

The Maitland Council DCP 2011 states the following regarding the bicycle parking provision relevant to the proposed development:

5. Bicycle Parking

Provision is to be made for cyclists via the installation of bicycle parking facilities in accordance with Australian Standard AS 2890.3-2015 – Bicycle Parking Facilities and the Austroads Guide to Traffic Engineering, Part 14, Bicycles: Second Edition.

The above technical documents do not provide a specific provision of bicycle parking for child care centres (or other similar land uses) and as such there no specified number of bicycle parking spaces required. It is however recommended that some staff bicycle parking is provided on-site to help encourage alternative travel modes.

The Maitland Council DCP 2011 does not require the provision of motorcycle parking. No motorcycle has been provided, satisfying Council's requirements.

3.4 Servicing & Loading

It is expected that all deliveries will be undertaken within the proposed car parking area outside peak drop off/ pick up times, under a plan of management if necessary. A van (standard B99 design vehicle) or similar can be accommodated within the car parking area, utilising vacant visitor spaces. This is common practice for child care centres and will not noticeably affect operation of the site. It is reiterated that deliveries and other arrivals of similar nature are low in frequency and can be easily managed.

It is expected that site will be serviced by Council's waste collection services from the Aberglasslyn Road frontage, similar to existing operations.

3.5 Car Park Design & Compliance

The car parking layout as depicted in **Annexure A**, has been assessed to achieve the relevant clauses and objectives of *AS2890.1:2004* and *AS2890.6:2022*. Any variances from standards are addressed in the following subsections including required changes, if any. Swept path testing has been undertaken and are reproduced within **Annexure D** for reference.

The proposed car parking and vehicular access design achieves the following:

- 6.2m wide two-way driveway facilitating access to Aberglasslyn Road;
- Minimum 6.2m wide parking aisles;
- Compliant ramp grades not exceeding 25% and no grade change greater than 12.5%;
- Minimum 5.4m long, 2.4m wide spaces for staff;
- Minimum 5.4m long, 2.6m wide spaces for parents / visitors;
- Minimum 5.4m long, 2.4m wide accessible spaces with adjacent associated 5.4m long, 2.4m wide shared space;
- Minimum headroom of 2.2m for general circulation and 2.5m headroom clearance provided over accessible and adaptable parking areas.

Whilst the plans have been assessed to comply with the relevant standards, it is usual and expected that a design certificate be required at the Construction Certificate stage to account for any changes following the development application.

4 TRAFFIC ASSESSMENT

The impact of the expected traffic generation levels associated with the subject proposal is discussed in the following sub-sections.

4.1 **Traffic Generation**

Traffic generation rates for the relevant land uses are provided in the *RTA Guide to Traffic Generating Developments (2002)* and recent supplements as adopted by Transport for NSW (TfNSW) and are as follows:

3.11.3 **Child care centres**

Long-day care

7.00-9.00am 0.8 peak vehicle trips per child

2.30-4.00pm 0.3 peak vehicle trips per child

4.00-6.00pm 0.7 peak vehicle trips per child

The resulting AM and PM peak hourly traffic generation is summarised in **Table 3**.

TABLE 3: ESTIMATED TRAFFIC GENERATION (COMBINED)

Use	Type	Scale	Peak	Generation Rate	Trips
Long-day care ⁽¹⁾	Child Care Centre	101 Children	AM	0.8 per child	81 (41 in, 40 out)
			PM	0.7 per child	71 (35 in, 36 out)

Notes:

(1) Assumes 50/50 inbound/outbound split.

As shown, the expected traffic generation associated with the proposed child care centre development is in the order of **81** vehicle trips in the AM peak hour (41 in, 40 out) and **71** vehicle trips in the PM peak hour (35 in, 36 out).

4.2 **Traffic Assignment**

The road network, traffic surveys and locations of residential areas surrounding the site have been assessed and the following traffic assignment has been assumed for all traffic to and from the site.

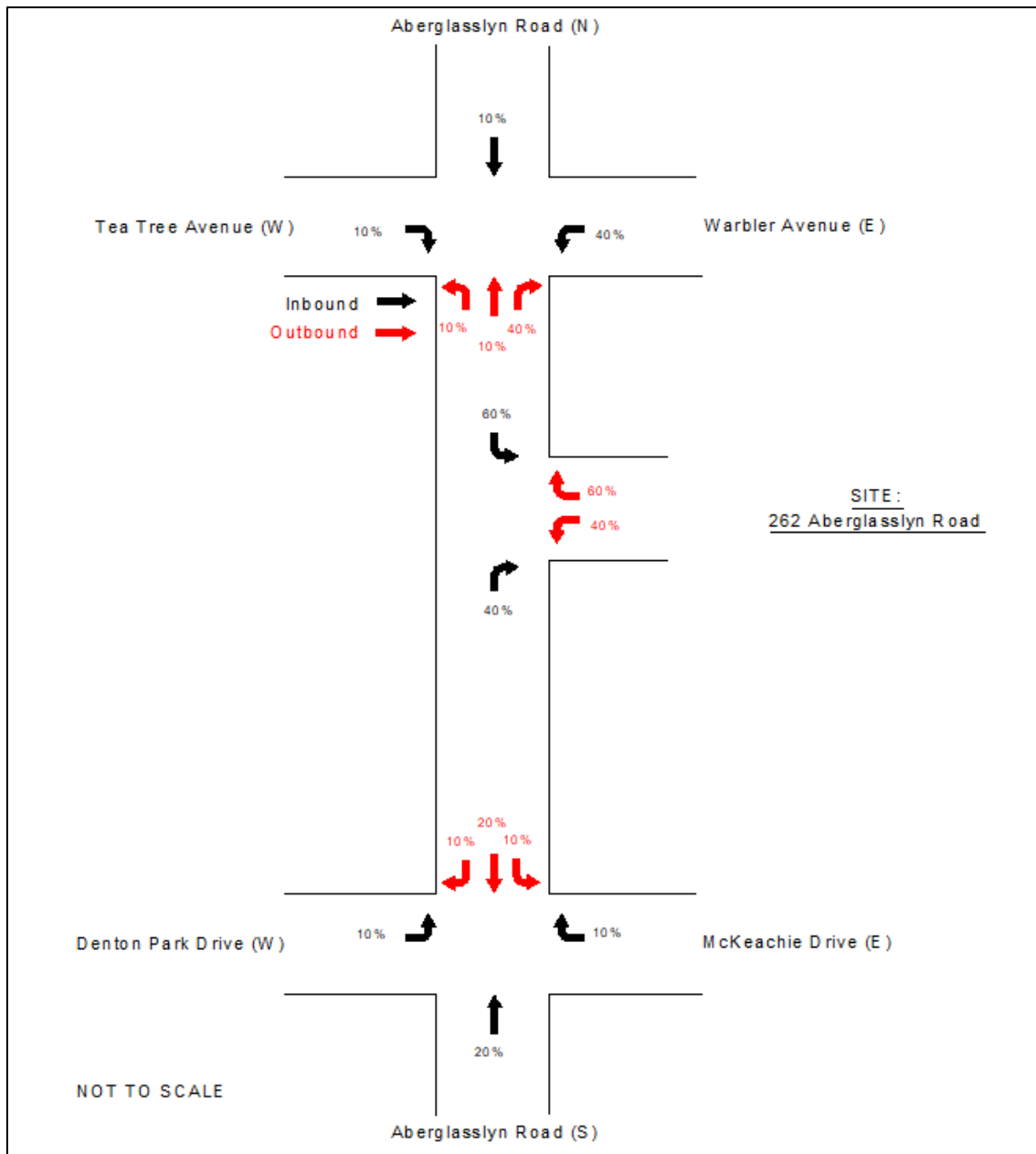


FIGURE 4: TRIP DISTRIBUTION

4.3 Traffic Impact

The traffic generation of the child care centre outlined in **Section 4.1** and distribution outlined in **Section 4.2** above has been added to the existing traffic volumes recorded. SIDRA INTERSECTION 9.0 was used to assess the intersections performance. The purpose of this assessment is to compare the existing intersection operations to the future scenario under the increased traffic load. The results of this assessment are shown in **Table 4**.

TABLE 4: INTERSECTION PERFORMANCE (SIDRA INTERSECTION 9.0)

Intersection	Peak Hour	Degree of Saturation ⁽¹⁾	Average Delay ⁽²⁾ (sec/veh)	Level of Service ⁽³⁾⁽⁴⁾	Control Type	Worst Movement
EXISTING PERFORMANCE						
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Aberglasslyn Road / McKeachie Drive / Denton Park Drive	AM	0.38	6.2 (Worst: 11.7)	A (Worst: B)	Roundabout	UT from Aberglasslyn Road
	PM	0.45	6.9 (Worst: 12.1)	A (Worst: B)		UT from Aberglasslyn Road
FUTURE (POST DEVELOPMENT) PERFORMANCE						
Aberglasslyn Road / Tea Tree Avenue / Warbler Avenue	AM	0.09	5.9 (Worst: 12.3)	A (Worst: B)	Roundabout	UT from Aberglasslyn Road
	PM	0.13	5.8 (Worst: 10.7)	A (Worst: B)		UT from Aberglasslyn Road
Aberglasslyn Road / McKeachie Drive / Denton Park Drive	AM	0.39	6.3 (Worst: 11.8)	A (Worst: B)	Roundabout	UT from Aberglasslyn Road
	PM	0.46	7 (Worst: 12.2)	A (Worst: B)		UT from Aberglasslyn Road

NOTES: Refer to Table 1.

As shown, the intersection of Aberglasslyn Road / Tea Tree Avenue / Warbler Avenue and Aberglasslyn Road / McKeachie Drive / Denton Park Drive all retain the same overall level of service under future conditions with minimal delays and additional capacity, indicating that there will be negligible impact on the existing road network as a result of the proposed development.

5 CONCLUSION

In view of the foregoing, the subject child care centre proposal at 262 Aberglasslyn Road, Aberglasslyn (as depicted in **Annexure A**) is fully supportable in terms of its traffic and parking impacts. The following outcomes of this traffic impact assessment are relevant to note:

- The proposal includes the provision of **26** car parking spaces within a proposed carpark, comprised of **11** for parent / visitor use and **15** for staff use, satisfying the relevant controls applicable to the development, including Council's DCP requirements.
- Council's DCP does require an unspecified provision of bicycle parking spaces. It is recommended that some bicycle parking spaces are provided on the site.
- Council's DCP does not require the provision of motorcycle parking facilities.
- The parking areas of the site have been assessed against the relevant sections of *AS2890.1:2004* and *AS2890.6:2022* and have been found to satisfy the objectives of each standard. Swept path testing has been undertaken and is reproduced within **Annexure D**.
- The traffic generation of the proposed child care centre component on the site has been estimated to be some **81** vehicle trips in the AM peak hour period (41 in, 40 out) and **71** trips in the PM peak hour period (35 in, 36 out). The impacts of the traffic generation have been modelled using SIDRA INTERSECTION 9.0, indicating that there will be no detrimental impact to the performance of the intersections as a result of the generated traffic.



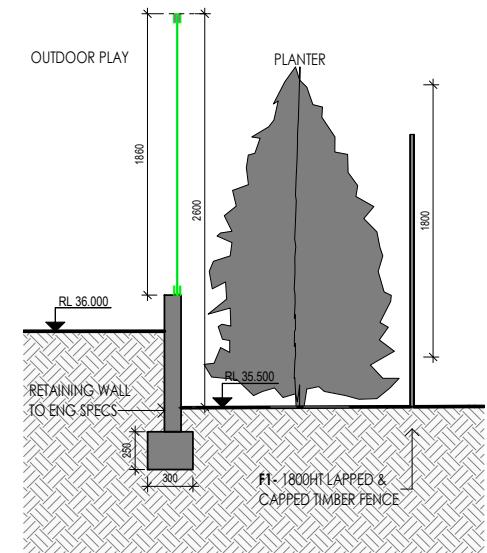
**ANNEXURE A: PROPOSED PLANS
(3 SHEETS)**



1 BASEMENT PLAN

1:100

F3- 2600 HIGH ACOUSTIC BALUSTRADE REFER TO ACOUSTIC REPORT



2 ACOUSTIC FENCE

1:25

ABERGLASSLYN ROAD

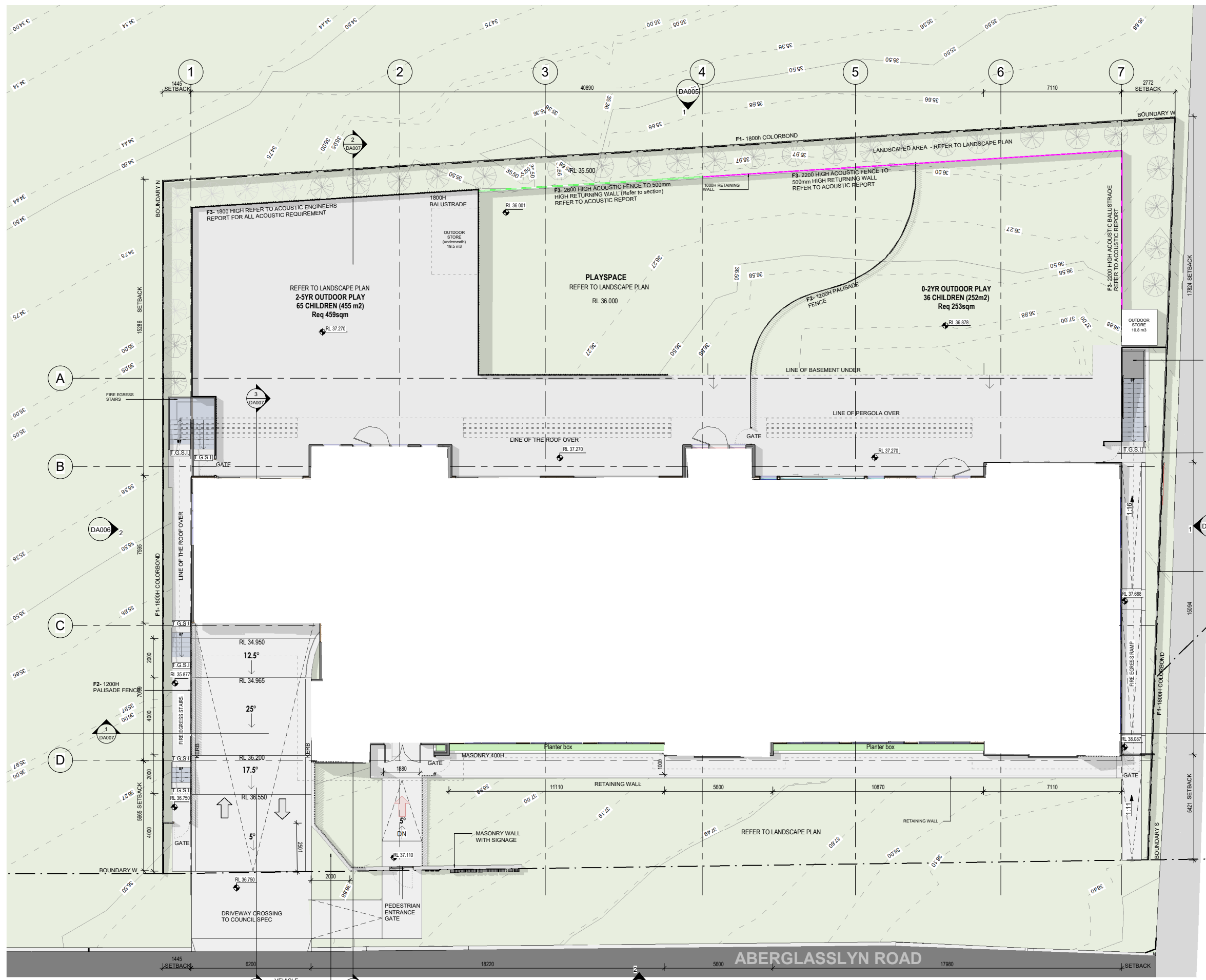
ALL PLANS TO BE PRINTED IN COLOUR
 - ALL BUILDING WORK TO COMPLY WITH BCA AND AS CODES AND RELEVANT AUTHORITIES REQUIREMENTS.
 - ALL STEEL, CONCRETE AND TIMBER WORK TO BE IN ACCORDANCE WITH STRUCTURAL ENGINEERS SPECIFICATIONS AND RELEVANT SAA CODES.
 - LARGER SCALE DRAWINGS TAKE PRECEDENCE OVER SMALLER.
 - ALL DIMENSIONS TO BE CONFIRMED ON SITE. CONTACT THE ARCHITECT IF ANY DOUBT OR DISCREPANCY ARISES.
 - READ FIGURED DIMENSIONS IN PREFERENCE TO SCALING.



FOR	ISSUE	DATE	AMENDMENT	FOR	ISSUE	DATE	AMENDMENT	DRAFTING
DA	A	7 DEC 2022						DRAWN: JO
								CHECKED: DB
								APPROVED: DB

ABERGLASSLYN ROAD CHILDCARE
BASEMENT
GREENSCAPE DESIGN & ASSOCIATES
 SUITE 107 LEVEL 1, 53-59 GREAT BUCKINGHAM ST, REDFERN, NSW
 INFO@GREENSCAPEDESIGN.COM.AU

Scale: As indicated @A1
 Date: 07/12/22
 Project Number: 220404 Drawing Number: DA002 Rev:



- AREAS**
- 0-2YR INDOOR PLAY (16 Places) LNDY
 - 0-2YR INDOOR PLAY (20 Places) MEETING
 - 2-3YR INDOOR PLAY (25 Places) OFFICE
 - 3-5YR INDOOR PLAY (20 Places) PWD
 - BINS SERVICES
 - BOTTLE PREP STAFF
 - COT WC
 - KITCHEN WC/NAPPY
 - LIFT

LEGEND - WALL TYPE

W1-	230 EXTERNAL WALL TO STRUCTURAL FRL -/- 110 MM BRICK EXTERNAL 70 MM TIMBER STRUCTURE INTERNAL 10MM PLASTERBOARD MOISTURE RESISTANT PB PAINT FINISH
W2-	178 EXTERNAL WALL TO STRUCTURAL FRL -/- 110 MM MASONRY + WALL LINING PLASTERBOARD 68 MM - TIMBER STRUCTURE - EXTERNAL SIMIL WOOD
W3-	90 INTERNAL WALL NON - LOAD BEARING FRL -/- 13MM MOISTURE RESISTANT PB PAINT FINISH U.O. 64MM STEEL STUD U.O SIZE 13MM MOISTURE RESISTANT PB PAINT FINISH U.O.
W4-	278 EXTERNAL WALL 270 MM CONCRETE BLOCK

CHILD CARE AREA AND OCCUPATION CALCULATIONS

Age Group	No. of Kids	Req. Indoor	Prop. Indoor	Req. Outdoor	Prop. Outdoor	RMS Staff	RMS Parking
0-2	36	117m ²	127m ²	252m ²	253m ²	9	9
2-3	25	81.25m ²	81.25m ²	7.5m ²	7.5m ²	5	6
3-5	40	130m ²	134m ²	455m ²	458m ²	4	10
TOTAL	10	328.25m²	342.25m²	707m²	711m²	18	25

JUNIOR SANITARY FACILITIES

Required:	1 toilet per 15 children over 2 yrs old.	Proposed:	4 (for 65 children)	Complies:	Yes
Required:	1 basin per 15 children over 2 yrs old.	Proposed:	4 (for 65 children)	Complies:	Yes
Required:	Shower	Proposed:	Ground Floor	Complies:	Yes

NAPPY CHANGE

Required for children under 3 yrs old	Proposed:	Complies:	yes
Required for children under 3 yrs old	Proposed:	Complies:	yes

ADULT SANITARY FACILITIES

Required for 10 staff	Proposed:	Complies:	Yes
1 unisex facility	Proposed:	Complies:	Yes

LAUNDRY

Required for children under 3 yrs old.	Proposed:	Complies:	yes
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FOOD PREP / KITCHEN

Required for children under 3 yrs old.	Proposed:	Complies:	yes
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BOTTLE PREP AREA

Required for children under 3 yrs old.	Proposed:	Complies:	yes
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CHILD CARE REQ STORAGE CALCULATIONS - TOTAL (GF)

Age Group	No. of Kids	Req. Indoor	Prop. Indoor	Req. Outdoor	Prop. Outdoor
GF 0-2	36	7.2m ²	12.35m ²	10.8m ²	10.8m ²
GF 2-3	25	5m ²	7.20m ²	7.5m ²	7.5m ²
GF 3-5	40	8m ²	8.00m ²	12m ²	12m ²
TOTAL	101	20.2m²	27.55m²	30.3m²	30.3m²

CHILD CARE AREA AND OCCUPATION CALCULATIONS - TOTAL (GF)

Age Group	No. of Kids	Req. Indoor	Prop. Indoor	Req. Outdoor	Prop. Outdoor	RMS Staff	RMS Parking
GF 101	101	328.25m ²	342.25m ²	707m ²	711m ²	18	25
TOTAL	101	328.25m²	342.25m²	707m²	711m²	18	25

CAR PARK

STAFF	15	DROPP OFF	10	DISABLED PARKING	1	TOTAL	26
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AREA

Hard Surface	1235m ²	Landscape Deep Soil	65.01%	665m ²	34.92%
Building	45.32% Not Built	54.67%	863m ²	45.32% Not Built	54.67%
Basement	35.03% Not Built	64.96%	667m ²	35.03% Not Built	64.96%
Ground Floor	667m ²	Land 1237m ²			

- FENCE LEGEND**
- F1- 1800H COLORBOND
 - F2- 1200H PALISADE FENCE
 - F3- 1800 HIGH ACOUSTIC BALUSTRADE REFER TO ACOUSTIC REPORT
 - F3- 2200 HIGH ACOUSTIC FENCE TO 500mm HIGH RETURNING WALL - REFER TO ACOUSTIC REPORT
 - F3- 2600 HIGH ACOUSTIC FENCE TO 500mm HIGH RETURNING WALL (Refer to section) REFER TO ACOUSTIC REPORT
- NOTE:**
- DIMENSION HTS ABOVE SURFACE LEVEL
 - PAINT AND DRESS BOTH SIDES, LIGHT NEUTRAL FINISH

1 GROUND FLOOR
1:100

ALL PLANS TO BE PRINTED IN COLOUR

- ALL BUILDING WORK TO COMPLY WITH BCA AND AS CODES AND RELEVANT AUTHORITIES REQUIREMENTS.
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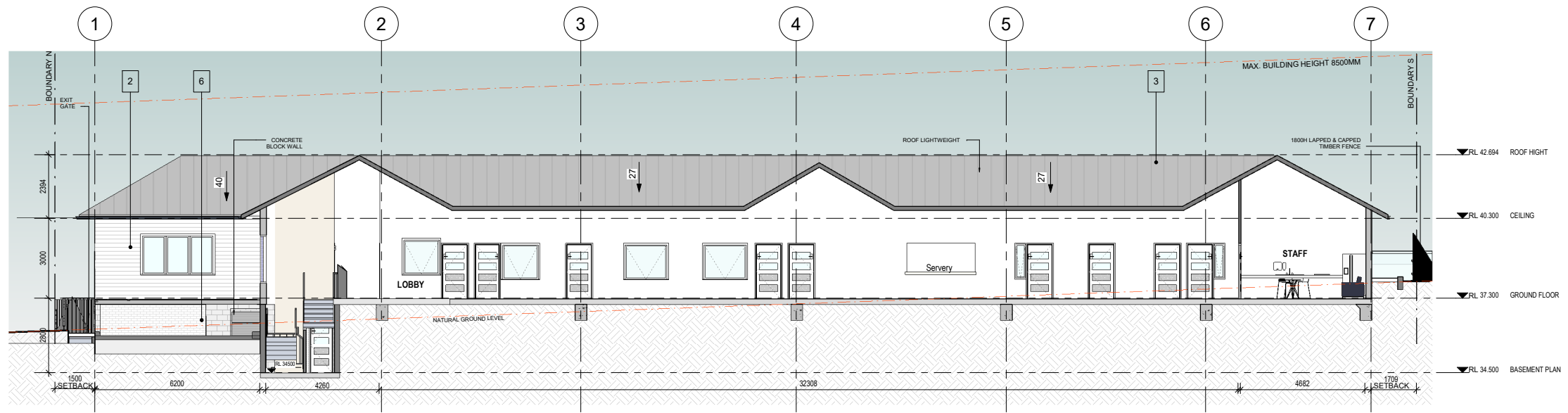
FOR	ISSUE	DATE	AMENDMENT	FOR	ISSUE	DATE	AMENDMENT	DRAFTING
DA	A	7 DEC 2022						JO
								DB
								DB

ABERGLASSLYN ROAD CHILDCARE

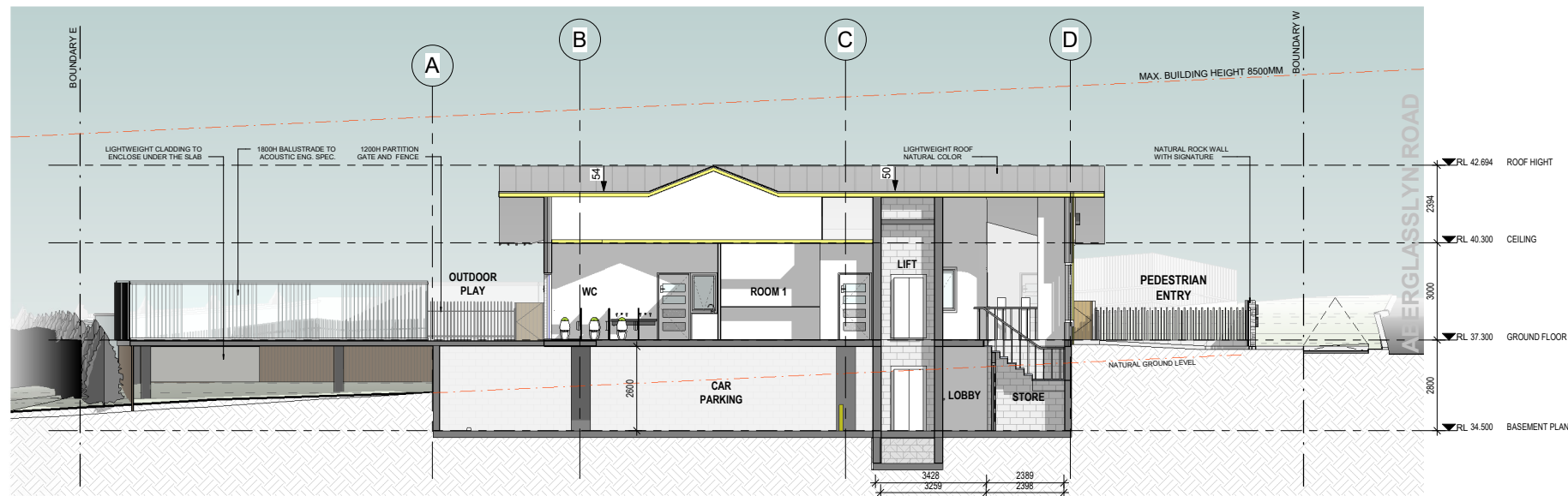
GROUND FLOOR PLAN

GREENSCAPE DESIGN & ASSOCIATES
SUITE 107 LEVEL 1, 53-59 GREAT BUCKINGHAM ST, REDFERN, NSW
INFO@GREENSCAPEDESIGN.COM.AU

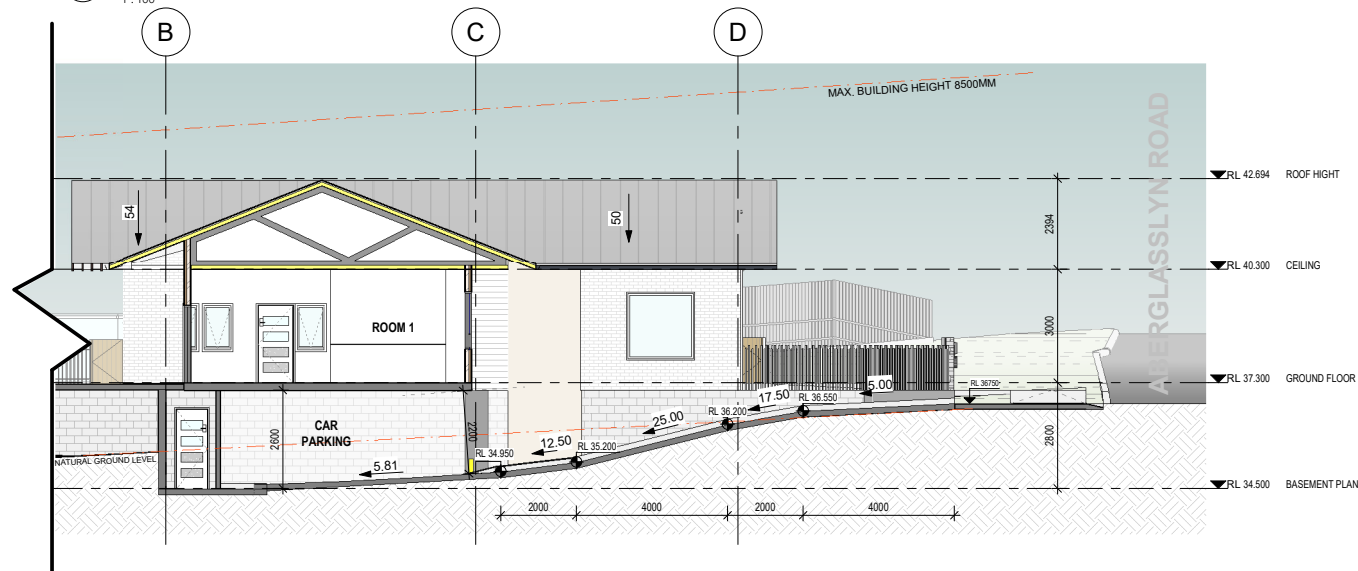
Scale: 1:100 @A1
Date: 07/12/22
Project Number: 220404 Drawing Number: DA003 Rev:



1 ALONG SECTION
1:100



2 CROSS SECTION
1:100



3 DRIVE WAY SECTION
1:100

ALL PLANS TO BE PRINTED IN COLOUR
 - ALL BUILDING WORK TO COMPLY WITH BCA AND AS CODES AND RELEVANT AUTHORITIES REQUIREMENTS.
 - ALL STEEL, CONCRETE AND TIMBER WORK TO BE IN ACCORDANCE WITH STRUCTURAL ENGINEERS SPECIFICATIONS AND RELEVANT SAA CODES.
 - LARGER SCALE DRAWINGS TAKE PRECEDENCE OVER SMALLER.
 - ALL DIMENSIONS TO BE CONFIRMED ON SITE. CONTACT THE ARCHITECT IF ANY DOUBT OR DISCREPANCY ARISES.
 - READ FIGURED DIMENSIONS IN PREFERENCE TO SCALING.



FOR	ISSUE	DATE	AMENDMENT	FOR	ISSUE	DATE	AMENDMENT	DRAFTING
DA	A	7 DEC 2022						DRAWN: JO
								CHECKED: DB
								APPROVED: DB

ABERGLASSLYN ROAD CHILDCARE
SECTIONS
 GREENSCAPE DESIGN & ASSOCIATES
 SUITE 107 LEVEL 1, 53-59 GREAT BUCKINGHAM ST, REDFERN, NSW
 INFO@GREENSCAPEDESIGN.COM.AU

Scale: 1:100 @A1
 Date: 07/12/22
 Project Number: 220404 Drawing Number: DA007 Rev:



**ANNEXURE B: TRAFFIC SURVEY DATA
(2 SHEETS)**



**ANNEXURE C: SIDRA RESULTS
(8 SHEETS)**

MOVEMENT SUMMARY

Site: 01 [EX AM Aberglasslyn Rd / Tea Tree Ave (Site Folder: Existing)]

Aberglasslyn Road / Tea Tree Avenue
 Existing Conditions
 AM Peak Period
 Site Category: (None)
 Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	[HV] veh/h	[Total veh/h	[HV] %				[Veh. veh	[Dist] m				
South: Aberglasslyn Road (S)														
1	L2	12	0	13	0.0	0.069	4.6	LOS A	0.3	2.5	0.18	0.59	0.18	48.6
2	T1	14	4	15	28.6	0.069	5.2	LOS A	0.3	2.5	0.18	0.59	0.18	52.3
3	R2	52	2	55	3.8	0.069	8.5	LOS A	0.3	2.5	0.18	0.59	0.18	49.4
3u	U	3	0	3	0.0	0.069	10.3	LOS B	0.3	2.5	0.18	0.59	0.18	53.5
Approach		81	6	85	7.4	0.069	7.4	LOS A	0.3	2.5	0.18	0.59	0.18	49.9
East: Warbler Avenue (E)														
4	L2	49	3	52	6.1	0.073	3.6	LOS A	0.4	2.6	0.16	0.43	0.16	50.0
5	T1	38	1	40	2.6	0.073	3.7	LOS A	0.4	2.6	0.16	0.43	0.16	47.8
6	R2	3	1	3	33.3	0.073	7.6	LOS A	0.4	2.6	0.16	0.43	0.16	49.6
Approach		90	5	95	5.6	0.073	3.8	LOS A	0.4	2.6	0.16	0.43	0.16	49.0
North: Aberglasslyn Road (N)														
7	L2	2	0	2	0.0	0.022	4.7	LOS A	0.1	0.8	0.23	0.52	0.23	49.0
8	T1	14	0	15	0.0	0.022	5.0	LOS A	0.1	0.8	0.23	0.52	0.23	53.7
9	R2	7	0	7	0.0	0.022	8.6	LOS A	0.1	0.8	0.23	0.52	0.23	49.9
9u	U	2	2	2	100.0	0.022	12.1	LOS B	0.1	0.8	0.23	0.52	0.23	50.0
Approach		25	2	26	8.0	0.022	6.6	LOS A	0.1	0.8	0.23	0.52	0.23	51.9
West: Tea Tree Avenue (W)														
10	L2	1	0	1	0.0	0.024	3.8	LOS A	0.1	0.8	0.22	0.51	0.22	48.8
11	T1	12	0	13	0.0	0.024	3.8	LOS A	0.1	0.8	0.22	0.51	0.22	46.6
12	R2	13	1	14	7.7	0.024	7.5	LOS A	0.1	0.8	0.22	0.51	0.22	49.2
12u	U	1	1	1	100.0	0.024	10.4	LOS B	0.1	0.8	0.22	0.51	0.22	45.6
Approach		27	2	28	7.4	0.024	5.8	LOS A	0.1	0.8	0.22	0.51	0.22	47.9
All Vehicles		223	15	235	6.7	0.073	5.7	LOS A	0.4	2.6	0.18	0.50	0.18	49.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: SIDRA Roundabout LOS.
 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 (Geometric Delay is included).
 Queue Model: SIDRA Standard.
 Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 01 [EX PM Aberglasslyn Rd / Tea Tree Ave (Site Folder: Existing)]

Aberglasslyn Road / Tea Tree Avenue
 Existing Conditions
 PM Peak Period
 Site Category: (None)
 Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Aberglasslyn Road (S)														
1	L2	20	1	21	5.0	0.108	4.6	LOS A	0.5	3.9	0.16	0.57	0.16	48.9
2	T1	41	0	43	0.0	0.108	4.8	LOS A	0.5	3.9	0.16	0.57	0.16	53.6
3	R2	75	2	79	2.7	0.108	8.5	LOS A	0.5	3.9	0.16	0.57	0.16	49.8
3u	U	3	1	3	33.3	0.108	10.7	LOS B	0.5	3.9	0.16	0.57	0.16	52.5
Approach		139	4	146	2.9	0.108	6.9	LOS A	0.5	3.9	0.16	0.57	0.16	50.8
East: Warbler Avenue (E)														
4	L2	35	0	37	0.0	0.053	3.6	LOS A	0.3	1.8	0.18	0.44	0.18	50.0
5	T1	24	0	25	0.0	0.053	3.7	LOS A	0.3	1.8	0.18	0.44	0.18	47.7
6	R2	5	0	5	0.0	0.053	7.3	LOS A	0.3	1.8	0.18	0.44	0.18	50.7
Approach		64	0	67	0.0	0.053	3.9	LOS A	0.3	1.8	0.18	0.44	0.18	49.2
North: Aberglasslyn Road (N)														
7	L2	3	0	3	0.0	0.035	5.0	LOS A	0.2	1.1	0.28	0.52	0.28	49.2
8	T1	25	0	26	0.0	0.035	5.2	LOS A	0.2	1.1	0.28	0.52	0.28	53.8
9	R2	10	0	11	0.0	0.035	8.8	LOS A	0.2	1.1	0.28	0.52	0.28	50.1
9u	U	1	0	1	0.0	0.035	10.6	LOS B	0.2	1.1	0.28	0.52	0.28	54.2
Approach		39	0	41	0.0	0.035	6.3	LOS A	0.2	1.1	0.28	0.52	0.28	52.4
West: Tea Tree Avenue (W)														
10	L2	19	1	20	5.3	0.060	4.1	LOS A	0.3	2.1	0.29	0.48	0.29	49.2
11	T1	36	1	38	2.8	0.060	4.1	LOS A	0.3	2.1	0.29	0.48	0.29	47.1
12	R2	11	0	12	0.0	0.060	7.6	LOS A	0.3	2.1	0.29	0.48	0.29	50.0
12u	U	1	0	1	0.0	0.060	9.3	LOS A	0.3	2.1	0.29	0.48	0.29	47.6
Approach		67	2	71	3.0	0.060	4.8	LOS A	0.3	2.1	0.29	0.48	0.29	48.1
All Vehicles		309	6	325	1.9	0.108	5.7	LOS A	0.5	3.9	0.21	0.52	0.21	50.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: SIDRA Roundabout LOS.
 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 (Geometric Delay is included).
 Queue Model: SIDRA Standard.
 Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 02 [EX AM Aberglasslyn Rd / Denton Park Dr (Site Folder: Existing)]

Aberglasslyn Road / Denton Park Drive
 Existing Conditions
 AM Peak Period
 Site Category: (None)
 Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Aberglasslyn Road (S)														
1	L2	124	1	131	0.8	0.329	5.3	LOS A	2.2	15.5	0.46	0.62	0.46	48.7
2	T1	66	6	69	9.1	0.329	5.7	LOS A	2.2	15.5	0.46	0.62	0.46	53.1
3	R2	169	5	178	3.0	0.329	9.8	LOS A	2.2	15.5	0.46	0.62	0.46	49.8
3u	U	4	0	4	0.0	0.329	11.7	LOS B	2.2	15.5	0.46	0.62	0.46	54.1
Approach		363	12	382	3.3	0.329	7.5	LOS A	2.2	15.5	0.46	0.62	0.46	50.0
East: McKeachie Drive (E)														
4	L2	269	6	283	2.2	0.382	4.3	LOS A	2.6	18.3	0.47	0.53	0.47	49.6
5	T1	134	5	141	3.7	0.382	4.3	LOS A	2.6	18.3	0.47	0.53	0.47	47.4
6	R2	13	0	14	0.0	0.382	8.4	LOS A	2.6	18.3	0.47	0.53	0.47	50.5
6u	U	15	0	16	0.0	0.382	10.2	LOS B	2.6	18.3	0.47	0.53	0.47	48.3
Approach		431	11	454	2.6	0.382	4.6	LOS A	2.6	18.3	0.47	0.53	0.47	48.9
North: Aberglasslyn Road (N)														
7	L2	7	0	7	0.0	0.101	6.1	LOS A	0.5	4.0	0.53	0.62	0.53	48.8
8	T1	62	4	65	6.5	0.101	6.5	LOS A	0.5	4.0	0.53	0.62	0.53	53.3
9	R2	21	3	22	14.3	0.101	11.0	LOS B	0.5	4.0	0.53	0.62	0.53	49.8
Approach		90	7	95	7.8	0.101	7.5	LOS A	0.5	4.0	0.53	0.62	0.53	52.1
West: Denton Park Drive (W)														
10	L2	10	2	11	20.0	0.202	5.0	LOS A	1.2	8.4	0.49	0.61	0.49	47.9
11	T1	95	4	100	4.2	0.202	4.7	LOS A	1.2	8.4	0.49	0.61	0.49	46.3
12	R2	93	0	98	0.0	0.202	8.8	LOS A	1.2	8.4	0.49	0.61	0.49	49.3
12u	U	4	0	4	0.0	0.202	10.5	LOS B	1.2	8.4	0.49	0.61	0.49	47.2
Approach		202	6	213	3.0	0.202	6.7	LOS A	1.2	8.4	0.49	0.61	0.49	47.8
All Vehicles		1086	36	1143	3.3	0.382	6.2	LOS A	2.6	18.3	0.48	0.58	0.48	49.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: SIDRA Roundabout LOS.
 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 (Geometric Delay is included).
 Queue Model: SIDRA Standard.
 Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 02 [EX PM Aberglasslyn Rd / Denton Park Dr (Site Folder: Existing)]

Aberglasslyn Road / Denton Park Drive
 Existing Conditions
 PM Peak Period
 Site Category: (None)
 Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Aberglasslyn Road (S)														
1	L2	131	2	138	1.5	0.451	5.6	LOS A	3.3	23.5	0.55	0.65	0.55	48.3
2	T1	100	2	105	2.0	0.451	5.9	LOS A	3.3	23.5	0.55	0.65	0.55	52.9
3	R2	264	1	278	0.4	0.451	10.1	LOS B	3.3	23.5	0.55	0.65	0.55	49.5
3u	U	2	0	2	0.0	0.451	12.1	LOS B	3.3	23.5	0.55	0.65	0.55	53.6
Approach		497	5	523	1.0	0.451	8.1	LOS A	3.3	23.5	0.55	0.65	0.55	49.8
East: McKeachie Drive (E)														
4	L2	229	5	241	2.2	0.368	4.1	LOS A	2.5	17.7	0.44	0.53	0.44	49.3
5	T1	123	3	129	2.4	0.368	4.1	LOS A	2.5	17.7	0.44	0.53	0.44	47.2
6	R2	27	0	28	0.0	0.368	8.3	LOS A	2.5	17.7	0.44	0.53	0.44	50.3
6u	U	45	0	47	0.0	0.368	10.0	LOS B	2.5	17.7	0.44	0.53	0.44	48.1
Approach		424	8	446	1.9	0.368	5.0	LOS A	2.5	17.7	0.44	0.53	0.44	48.6
North: Aberglasslyn Road (N)														
7	L2	11	1	12	9.1	0.111	7.5	LOS A	0.6	4.5	0.62	0.68	0.62	48.4
8	T1	61	3	64	4.9	0.111	7.6	LOS A	0.6	4.5	0.62	0.68	0.62	52.9
9	R2	16	0	17	0.0	0.111	11.7	LOS B	0.6	4.5	0.62	0.68	0.62	49.6
Approach		88	4	93	4.5	0.111	8.3	LOS A	0.6	4.5	0.62	0.68	0.62	51.7
West: Denton Park Drive (W)														
10	L2	30	0	32	0.0	0.299	5.8	LOS A	1.9	13.7	0.66	0.71	0.66	48.1
11	T1	141	6	148	4.3	0.299	6.0	LOS A	1.9	13.7	0.66	0.71	0.66	46.1
12	R2	83	3	87	3.6	0.299	10.1	LOS B	1.9	13.7	0.66	0.71	0.66	48.9
12u	U	2	0	2	0.0	0.299	11.8	LOS B	1.9	13.7	0.66	0.71	0.66	46.9
Approach		256	9	269	3.5	0.299	7.4	LOS A	1.9	13.7	0.66	0.71	0.66	47.2
All Vehicles		1265	26	1332	2.1	0.451	6.9	LOS A	3.3	23.5	0.54	0.62	0.54	49.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: SIDRA Roundabout LOS.
 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 (Geometric Delay is included).
 Queue Model: SIDRA Standard.
 Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 01 [FU AM Aberglasslyn Rd / Tea Tree Ave (Site Folder: Future - 101 children scale)]

Aberglasslyn Road / Tea Tree Avenue
 Future Conditions
 AM Peak Period
 Site Category: (None)
 Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Aberglasslyn Road (S)														
1	L2	17	0	18	0.0	0.091	4.6	LOS A	0.5	3.3	0.18	0.59	0.18	49.8
2	T1	19	4	20	21.1	0.091	5.1	LOS A	0.5	3.3	0.18	0.59	0.18	52.5
3	R2	72	2	76	2.8	0.091	8.5	LOS A	0.5	3.3	0.18	0.59	0.18	50.5
3u	U	3	0	3	0.0	0.091	10.3	LOS B	0.5	3.3	0.18	0.59	0.18	53.5
Approach		111	6	117	5.4	0.091	7.4	LOS A	0.5	3.3	0.18	0.59	0.18	50.8
East: Warbler Avenue (E)														
4	L2	67	3	71	4.5	0.088	4.0	LOS A	0.4	3.2	0.18	0.44	0.18	50.7
5	T1	38	1	40	2.6	0.088	3.7	LOS A	0.4	3.2	0.18	0.44	0.18	48.4
6	R2	3	1	3	33.3	0.088	7.6	LOS A	0.4	3.2	0.18	0.44	0.18	50.2
Approach		108	5	114	4.6	0.088	4.0	LOS A	0.4	3.2	0.18	0.44	0.18	49.8
North: Aberglasslyn Road (N)														
7	L2	2	0	2	0.0	0.026	4.9	LOS A	0.1	0.9	0.26	0.52	0.26	49.1
8	T1	18	0	19	0.0	0.026	5.1	LOS A	0.1	0.9	0.26	0.52	0.26	53.7
9	R2	7	0	7	0.0	0.026	8.7	LOS A	0.1	0.9	0.26	0.52	0.26	49.9
9u	U	2	2	2	100.0	0.026	12.3	LOS B	0.1	0.9	0.26	0.52	0.26	50.0
Approach		29	2	31	6.9	0.026	6.5	LOS A	0.1	0.9	0.26	0.52	0.26	52.1
West: Tea Tree Avenue (W)														
10	L2	1	0	1	0.0	0.028	3.9	LOS A	0.1	1.0	0.26	0.53	0.26	49.1
11	T1	12	0	13	0.0	0.028	3.9	LOS A	0.1	1.0	0.26	0.53	0.26	46.9
12	R2	17	1	18	5.9	0.028	7.9	LOS A	0.1	1.0	0.26	0.53	0.26	49.5
12u	U	1	1	1	100.0	0.028	10.6	LOS B	0.1	1.0	0.26	0.53	0.26	45.9
Approach		31	2	33	6.5	0.028	6.3	LOS A	0.1	1.0	0.26	0.53	0.26	48.3
All Vehicles		279	15	294	5.4	0.091	5.9	LOS A	0.5	3.3	0.20	0.52	0.20	50.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: SIDRA Roundabout LOS.
 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 (Geometric Delay is included).
 Queue Model: SIDRA Standard.
 Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 01 [FU PM Aberglasslyn Rd / Tea Tree Ave (Site Folder: Future - 101 children scale)]

Aberglasslyn Road / Tea Tree Avenue
 Future Conditions
 PM Peak Period
 Site Category: (None)
 Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Aberglasslyn Road (S)														
1	L2	24	1	25	4.2	0.125	4.6	LOS A	0.6	4.6	0.16	0.57	0.16	49.6
2	T1	45	0	47	0.0	0.125	4.8	LOS A	0.6	4.6	0.16	0.57	0.16	53.5
3	R2	90	2	95	2.2	0.125	8.4	LOS A	0.6	4.6	0.16	0.57	0.16	50.4
3u	U	3	1	3	33.3	0.125	10.7	LOS B	0.6	4.6	0.16	0.57	0.16	52.5
Approach		162	4	171	2.5	0.125	6.9	LOS A	0.6	4.6	0.16	0.57	0.16	51.2
East: Warbler Avenue (E)														
4	L2	54	0	57	0.0	0.068	4.0	LOS A	0.3	2.4	0.20	0.46	0.20	50.9
5	T1	24	0	25	0.0	0.068	3.7	LOS A	0.3	2.4	0.20	0.46	0.20	48.5
6	R2	5	0	5	0.0	0.068	7.3	LOS A	0.3	2.4	0.20	0.46	0.20	51.7
Approach		83	0	87	0.0	0.068	4.1	LOS A	0.3	2.4	0.20	0.46	0.20	50.3
North: Aberglasslyn Road (N)														
7	L2	3	0	3	0.0	0.039	5.1	LOS A	0.2	1.3	0.30	0.53	0.30	49.2
8	T1	29	0	31	0.0	0.039	5.3	LOS A	0.2	1.3	0.30	0.53	0.30	53.8
9	R2	10	0	11	0.0	0.039	8.9	LOS A	0.2	1.3	0.30	0.53	0.30	50.0
9u	U	1	0	1	0.0	0.039	10.7	LOS B	0.2	1.3	0.30	0.53	0.30	54.2
Approach		43	0	45	0.0	0.039	6.3	LOS A	0.2	1.3	0.30	0.53	0.30	52.5
West: Tea Tree Avenue (W)														
10	L2	19	1	20	5.3	0.065	4.2	LOS A	0.3	2.3	0.31	0.50	0.31	49.3
11	T1	36	1	38	2.8	0.065	4.2	LOS A	0.3	2.3	0.31	0.50	0.31	47.1
12	R2	15	0	16	0.0	0.065	8.1	LOS A	0.3	2.3	0.31	0.50	0.31	50.1
12u	U	1	0	1	0.0	0.065	9.4	LOS A	0.3	2.3	0.31	0.50	0.31	47.7
Approach		71	2	75	2.8	0.065	5.1	LOS A	0.3	2.3	0.31	0.50	0.31	48.3
All Vehicles		359	6	378	1.7	0.125	5.8	LOS A	0.6	4.6	0.22	0.52	0.22	50.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: SIDRA Roundabout LOS.
 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 (Geometric Delay is included).
 Queue Model: SIDRA Standard.
 Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 02 [FU AM Aberglasslyn Rd / Denton Park Dr (Site Folder: Future - 101 children scale)]

Aberglasslyn Road / Denton Park Drive
 Future Conditions
 AM Peak Period
 Site Category: (None)
 Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Aberglasslyn Road (S)														
1	L2	124	1	131	0.8	0.341	5.3	LOS A	2.3	16.3	0.48	0.62	0.48	48.7
2	T1	76	6	80	7.9	0.341	5.7	LOS A	2.3	16.3	0.48	0.62	0.48	53.1
3	R2	169	5	178	3.0	0.341	9.9	LOS A	2.3	16.3	0.48	0.62	0.48	49.8
3u	U	4	0	4	0.0	0.341	11.8	LOS B	2.3	16.3	0.48	0.62	0.48	54.1
Approach		373	12	393	3.2	0.341	7.6	LOS A	2.3	16.3	0.48	0.62	0.48	50.1
East: McKeachie Drive (E)														
4	L2	269	6	283	2.2	0.392	4.4	LOS A	2.6	18.9	0.49	0.55	0.49	49.5
5	T1	134	5	141	3.7	0.392	4.5	LOS A	2.6	18.9	0.49	0.55	0.49	47.4
6	R2	17	0	18	0.0	0.392	8.9	LOS A	2.6	18.9	0.49	0.55	0.49	50.5
6u	U	15	0	16	0.0	0.392	10.3	LOS B	2.6	18.9	0.49	0.55	0.49	48.3
Approach		435	11	458	2.5	0.392	4.8	LOS A	2.6	18.9	0.49	0.55	0.49	48.8
North: Aberglasslyn Road (N)														
7	L2	12	0	13	0.0	0.121	6.1	LOS A	0.6	4.8	0.53	0.63	0.53	50.4
8	T1	71	4	75	5.6	0.121	6.5	LOS A	0.6	4.8	0.53	0.63	0.53	53.3
9	R2	26	3	27	11.5	0.121	11.0	LOS B	0.6	4.8	0.53	0.63	0.53	50.5
Approach		109	7	115	6.4	0.121	7.5	LOS A	0.6	4.8	0.53	0.63	0.53	52.3
West: Denton Park Drive (W)														
10	L2	14	2	15	14.3	0.208	5.3	LOS A	1.2	8.8	0.51	0.62	0.51	48.1
11	T1	95	4	100	4.2	0.208	4.8	LOS A	1.2	8.8	0.51	0.62	0.51	46.4
12	R2	93	0	98	0.0	0.208	8.8	LOS A	1.2	8.8	0.51	0.62	0.51	49.3
12u	U	4	0	4	0.0	0.208	10.6	LOS B	1.2	8.8	0.51	0.62	0.51	47.3
Approach		206	6	217	2.9	0.208	6.8	LOS A	1.2	8.8	0.51	0.62	0.51	47.8
All Vehicles		1123	36	1182	3.2	0.392	6.3	LOS A	2.6	18.9	0.49	0.59	0.49	49.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: SIDRA Roundabout LOS.
 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 (Geometric Delay is included).
 Queue Model: SIDRA Standard.
 Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 02 [FU PM Aberglasslyn Rd / Denton Park Dr (Site Folder: Future - 101 children scale)]

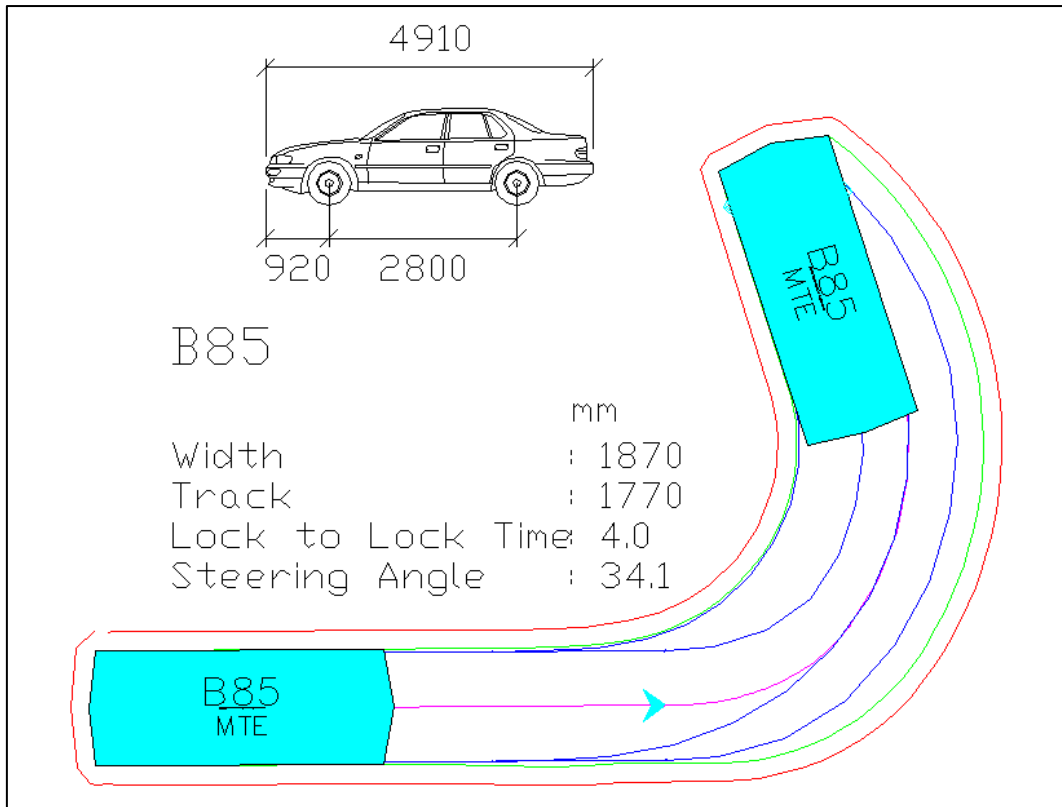
Aberglasslyn Road / Denton Park Drive
 Future Conditions
 PM Peak Period
 Site Category: (None)
 Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h]	[HV] veh/h	[Total veh/h]	[HV] %				[Veh. veh]	[Dist] m				
South: Aberglasslyn Road (S)														
1	L2	131	2	138	1.5	0.463	5.7	LOS A	3.5	24.4	0.56	0.66	0.56	48.3
2	T1	109	2	115	1.8	0.463	6.0	LOS A	3.5	24.4	0.56	0.66	0.56	52.8
3	R2	264	1	278	0.4	0.463	10.2	LOS B	3.5	24.4	0.56	0.66	0.56	49.5
3u	U	2	0	2	0.0	0.463	12.2	LOS B	3.5	24.4	0.56	0.66	0.56	53.6
Approach		506	5	533	1.0	0.463	8.1	LOS A	3.5	24.4	0.56	0.66	0.56	49.9
East: McKeachie Drive (E)														
4	L2	229	5	241	2.2	0.376	4.2	LOS A	2.5	18.1	0.46	0.54	0.46	49.3
5	T1	123	3	129	2.4	0.376	4.2	LOS A	2.5	18.1	0.46	0.54	0.46	47.2
6	R2	31	0	33	0.0	0.376	8.6	LOS A	2.5	18.1	0.46	0.54	0.46	50.2
6u	U	45	0	47	0.0	0.376	10.1	LOS B	2.5	18.1	0.46	0.54	0.46	48.1
Approach		428	8	451	1.9	0.376	5.2	LOS A	2.5	18.1	0.46	0.54	0.46	48.6
North: Aberglasslyn Road (N)														
7	L2	15	1	16	6.7	0.130	7.4	LOS A	0.7	5.3	0.63	0.69	0.63	49.3
8	T1	69	3	73	4.3	0.130	7.6	LOS A	0.7	5.3	0.63	0.69	0.63	52.9
9	R2	20	0	21	0.0	0.130	11.7	LOS B	0.7	5.3	0.63	0.69	0.63	50.3
Approach		104	4	109	3.8	0.130	8.4	LOS A	0.7	5.3	0.63	0.69	0.63	51.8
West: Denton Park Drive (W)														
10	L2	35	0	37	0.0	0.308	6.1	LOS A	2.0	14.3	0.67	0.72	0.67	48.2
11	T1	141	6	148	4.3	0.308	6.1	LOS A	2.0	14.3	0.67	0.72	0.67	46.1
12	R2	83	3	87	3.6	0.308	10.3	LOS B	2.0	14.3	0.67	0.72	0.67	48.9
12u	U	2	0	2	0.0	0.308	11.9	LOS B	2.0	14.3	0.67	0.72	0.67	47.0
Approach		261	9	275	3.4	0.308	7.5	LOS A	2.0	14.3	0.67	0.72	0.67	47.2
All Vehicles		1299	26	1367	2.0	0.463	7.0	LOS A	3.5	24.4	0.56	0.63	0.56	49.0

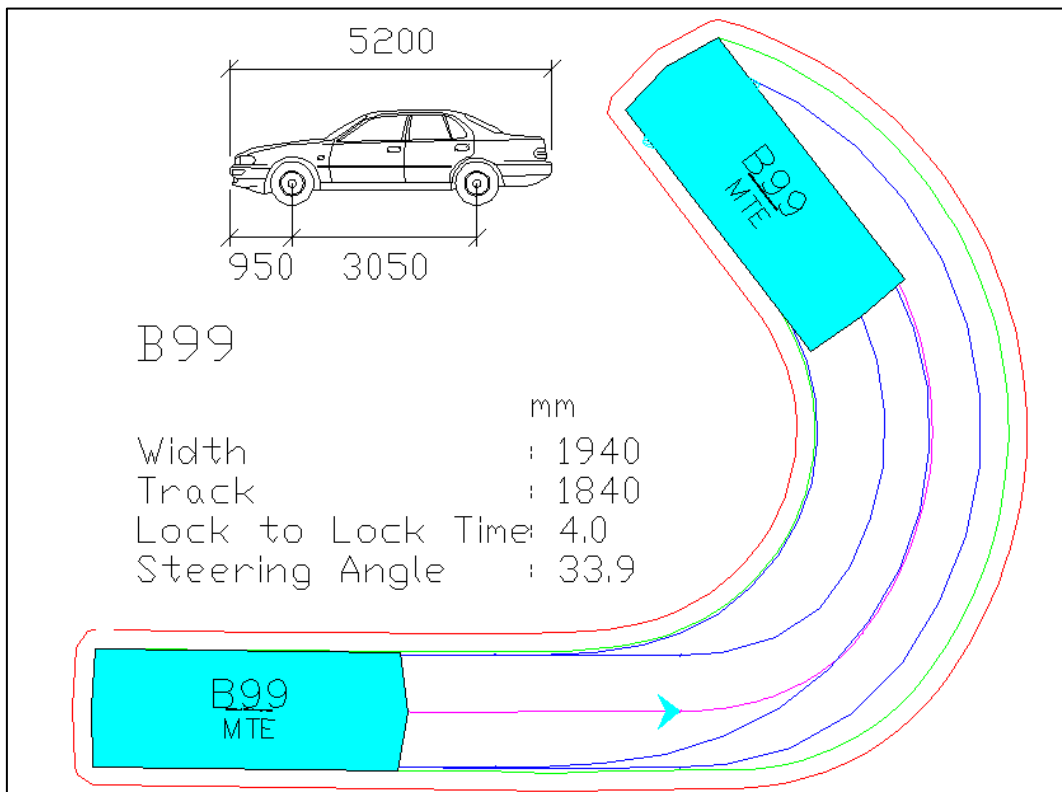
Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
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 Intersection and Approach LOS values are based on average delay for all vehicle movements.
 Roundabout Capacity Model: SIDRA Standard.
 Delay Model: SIDRA Standard (Geometric Delay is included).
 Queue Model: SIDRA Standard.
 Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



**ANNEXURE D: SWEEP PATH TESTING
(3 SHEETS)**

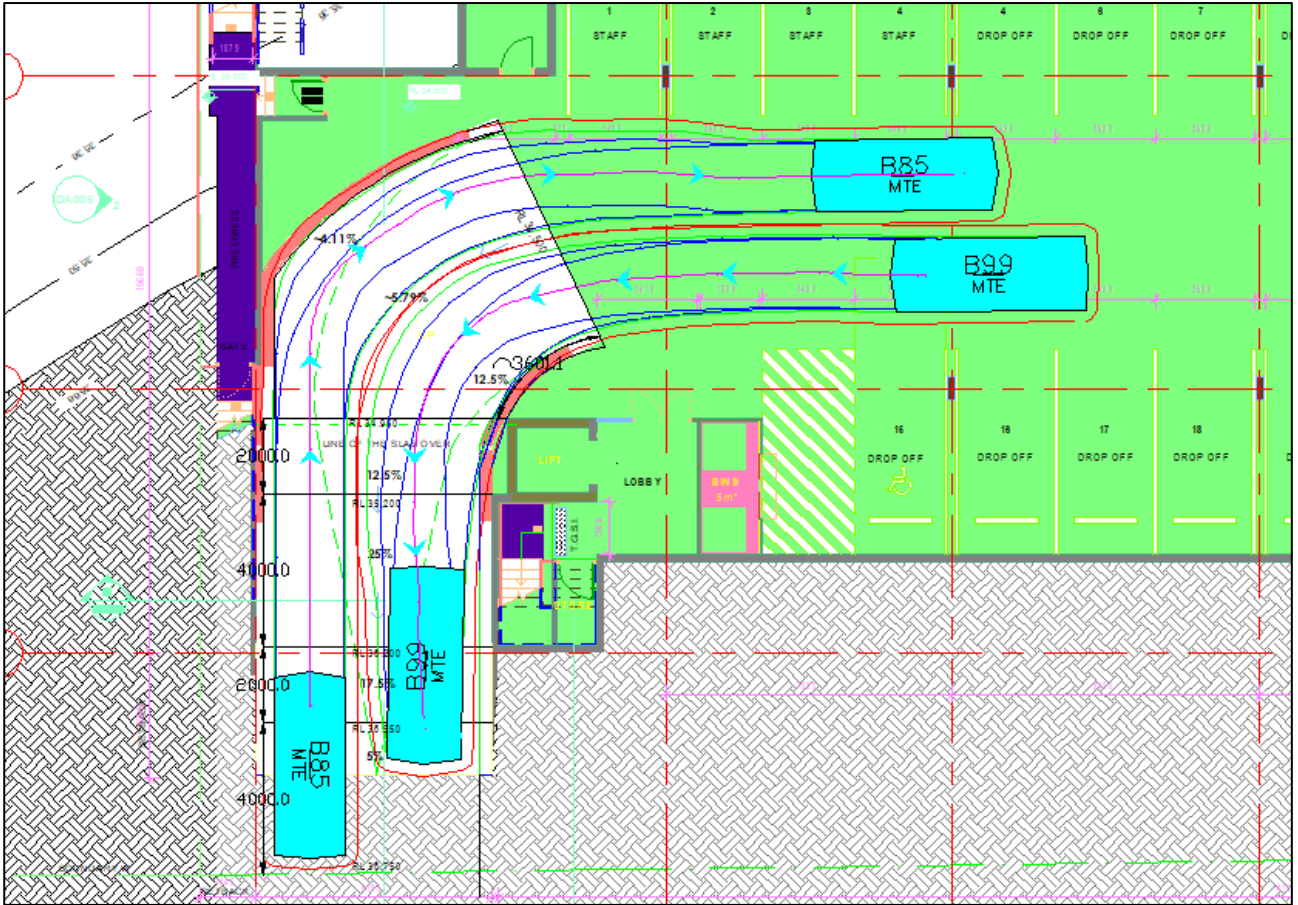


AUSTRALIAN STANDARD 85TH PERCENTILE SIZE VEHICLE (B85)

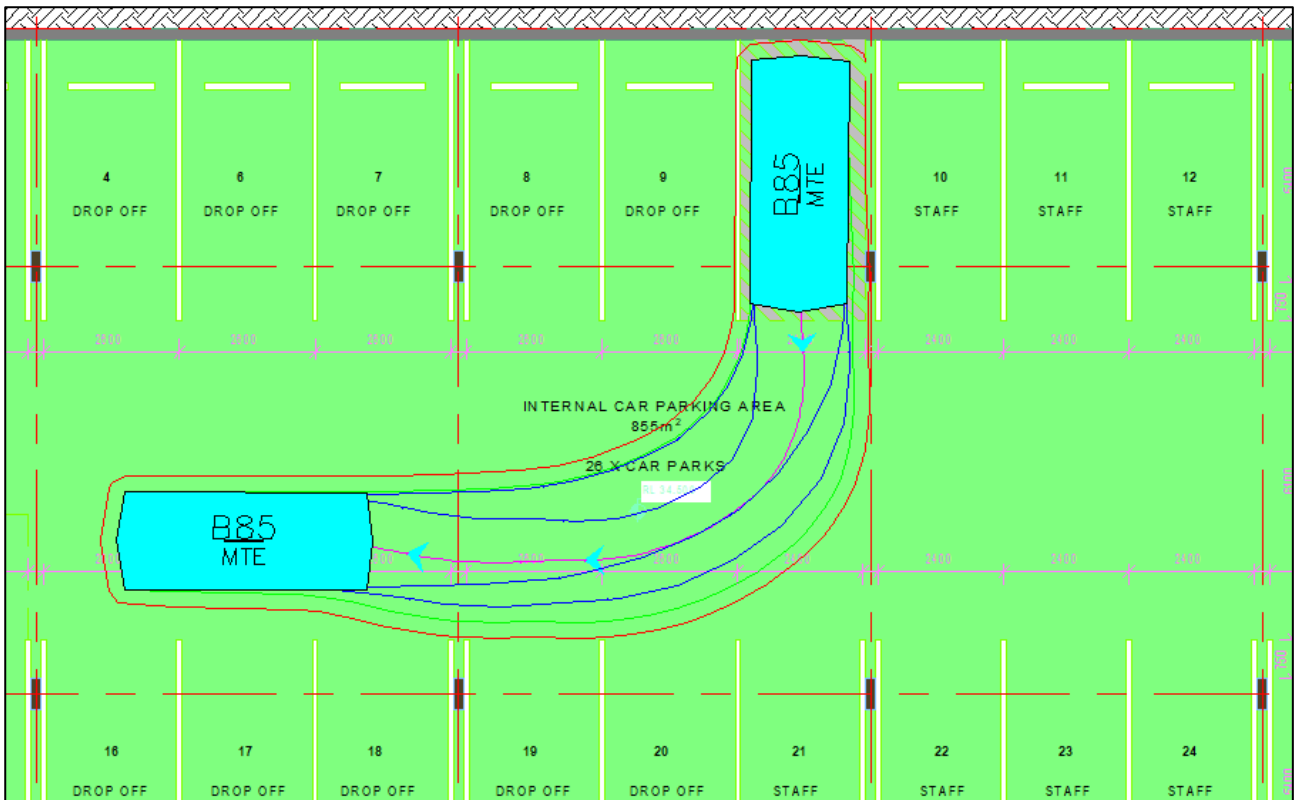
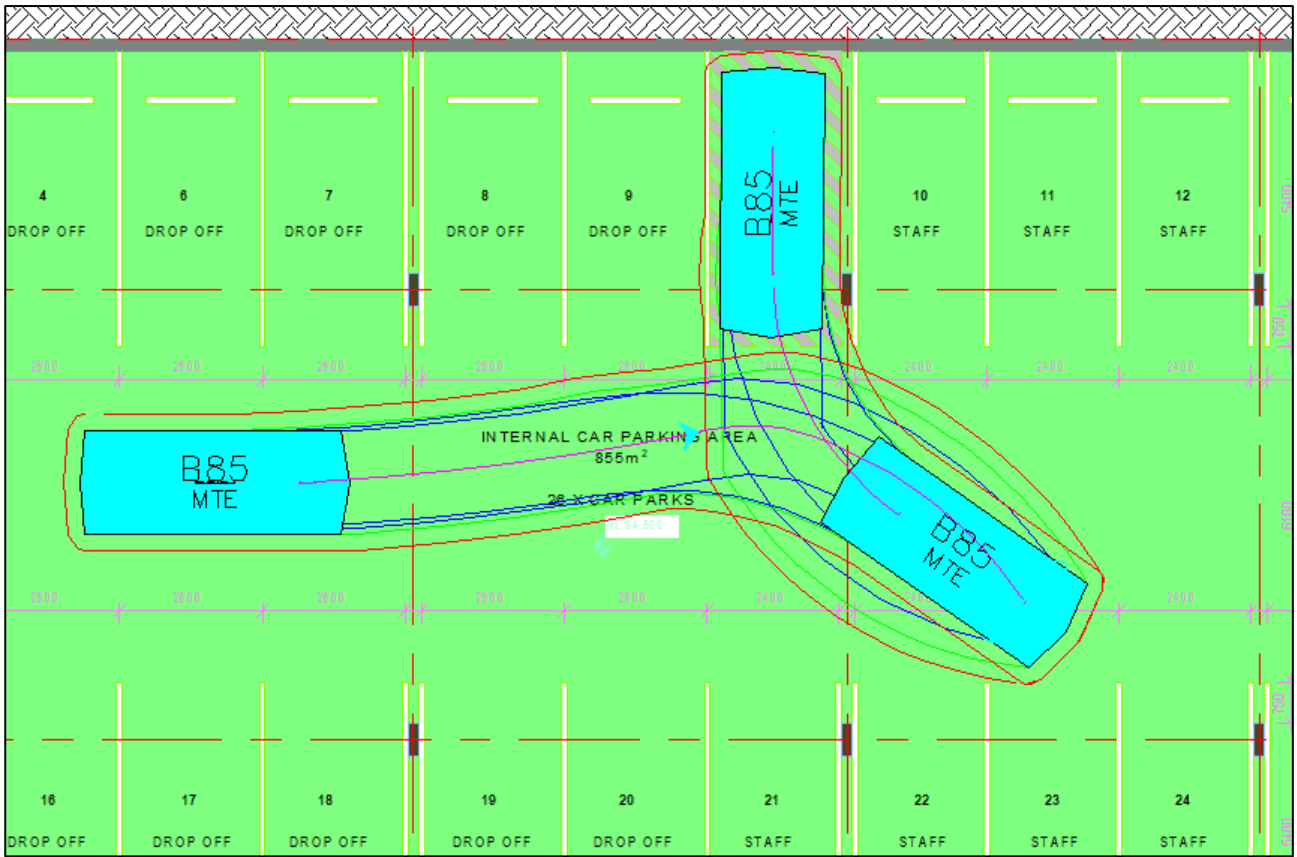


AUSTRALIAN STANDARD 99.8TH PERCENTILE SIZE VEHICLE (B99)

Blue – Tyre Path
 Green – Vehicle Body
 Red – 300mm Clearance
 Tested @ 5-km/h



**B85 PASSING B99 ON RAMP AND AT BOUNDARY
Successful**



B85 ENTRY / EXIT FROM TURNING BAY
Successful