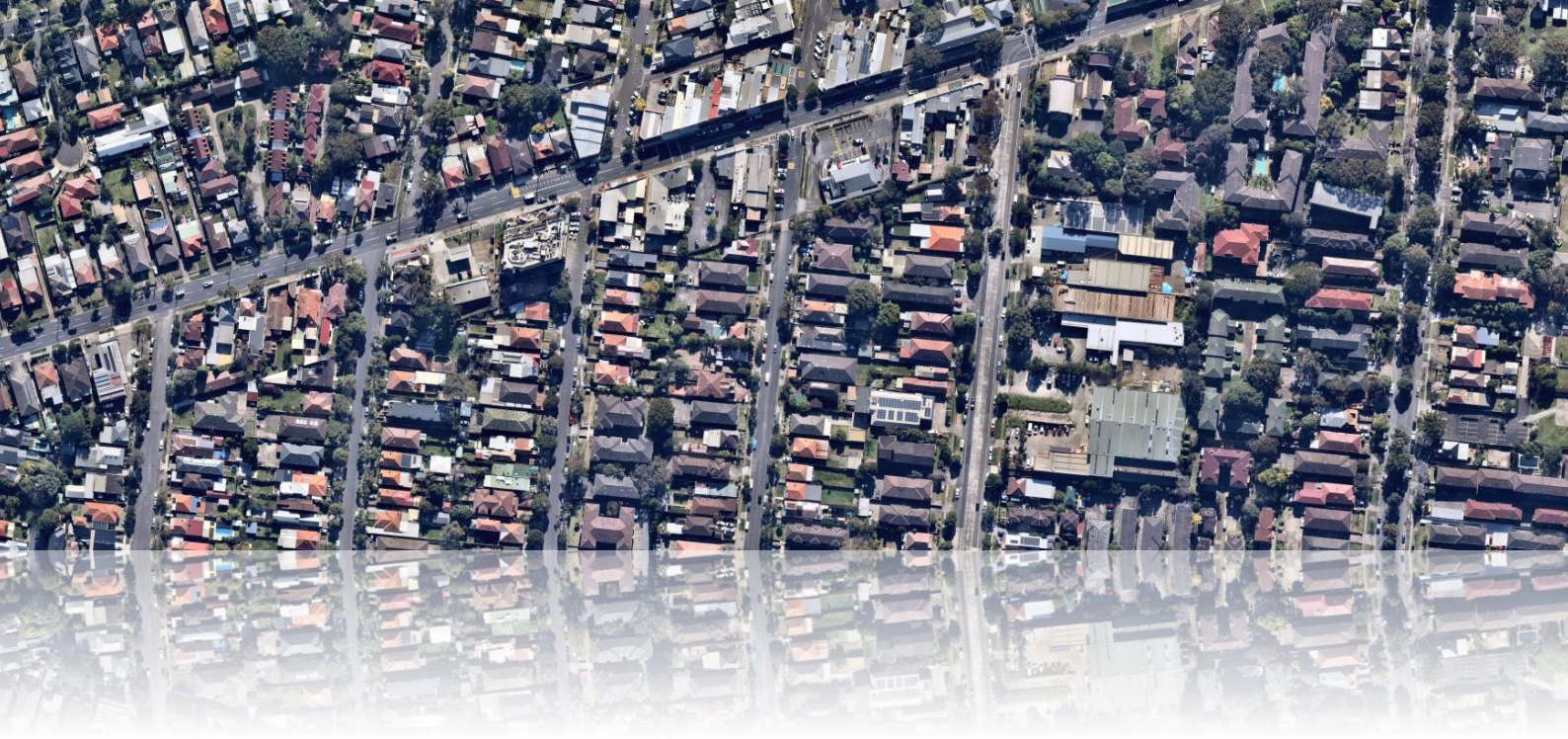

TRAFFIC AND PARKING IMPACT ASSESSMENT OF THE PROPOSED CHILD CARE CENTRE AT 9 DUNMORE STREET, CROYDON PARK

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220697.01FA - 9 April 2024

Development Type: **Child Care Centre**

Site Address: **9 Dunmore Street, Croydon Park**

Prepared for: **Ellis Studio**

Document reference: **220697.01FA**

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1 INTRODUCTION

M^CLaren Traffic Engineering was commissioned by *Ellis Studio* to provide a traffic and parking impact assessment of the proposed child care centre at 9 Dunmore Street, Croydon Park 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 32 children and 7 staff members as per the following:
    - 10 children between 0-2 years old (staff assigned at 1 per 4 children, or 3 staff);
    - 8 children between 2-3 years old (staff assigned at 1 per 5 children, or 2 staff);
    - 14 children between 3-5 years old (staff assigned at 1 per 10 children, or 2 staff);
- An at-grade parking area with vehicular access via a proposed two-way driveway from Dunmore Street, accommodating seven (**7**) car parking spaces including:
    - Three (3) visitor car parking spaces including one (1) accessible space;
    - Four (4) staff car parking spaces.
- One (1) visitor parking space is proposed on-street along the frontage.

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 Canterbury-Bankstown Council officers accordingly.

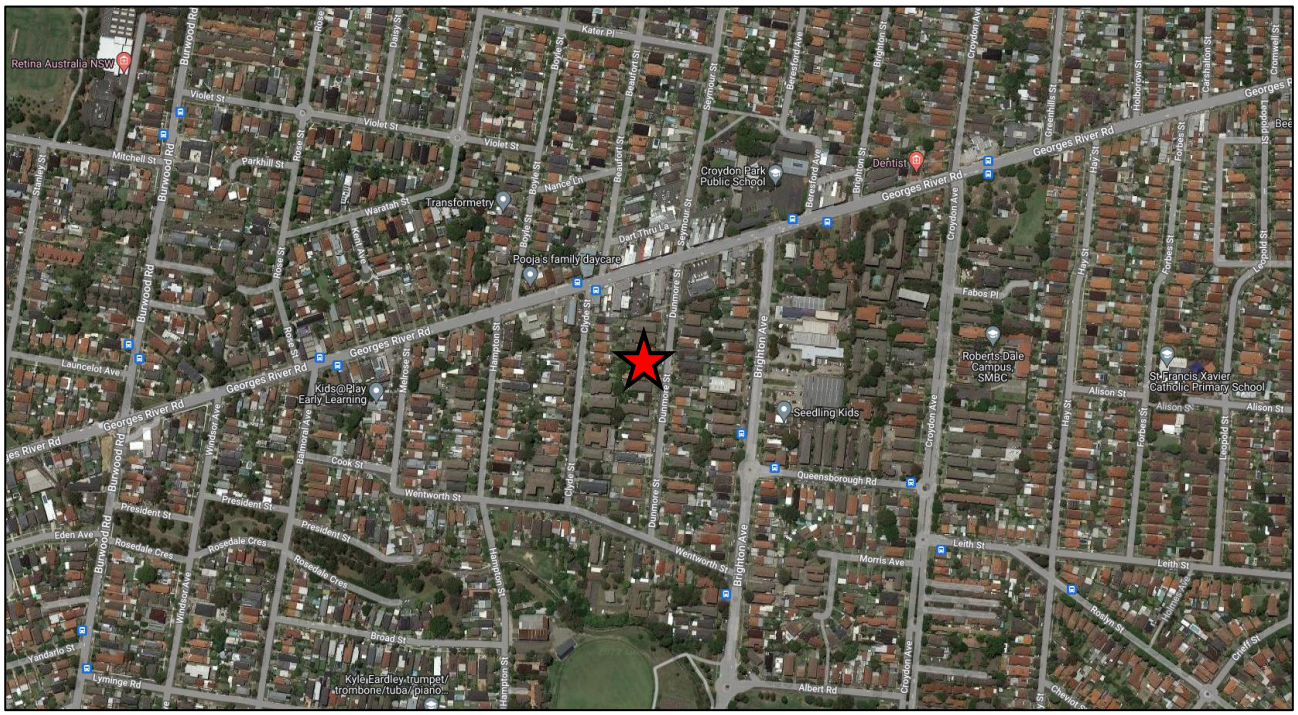
1.3 Site Description

The subject development involves a single lot currently zoned *R4 – High Density Residential* under the Canterbury-Bankstown Local Environmental Plan 2023 and is currently occupied by a single-storey residential dwelling.

The site has a single frontage to Dunmore Street to the east and is generally surrounded in all directions by various medium to high residential dwellings. The local town centre consisting of commercial and retail facilities is located approximately 150m to the north of the site along Georges River Road. Croydon Park Public School is located approximately 200m to the north of the site along Seymour Street.

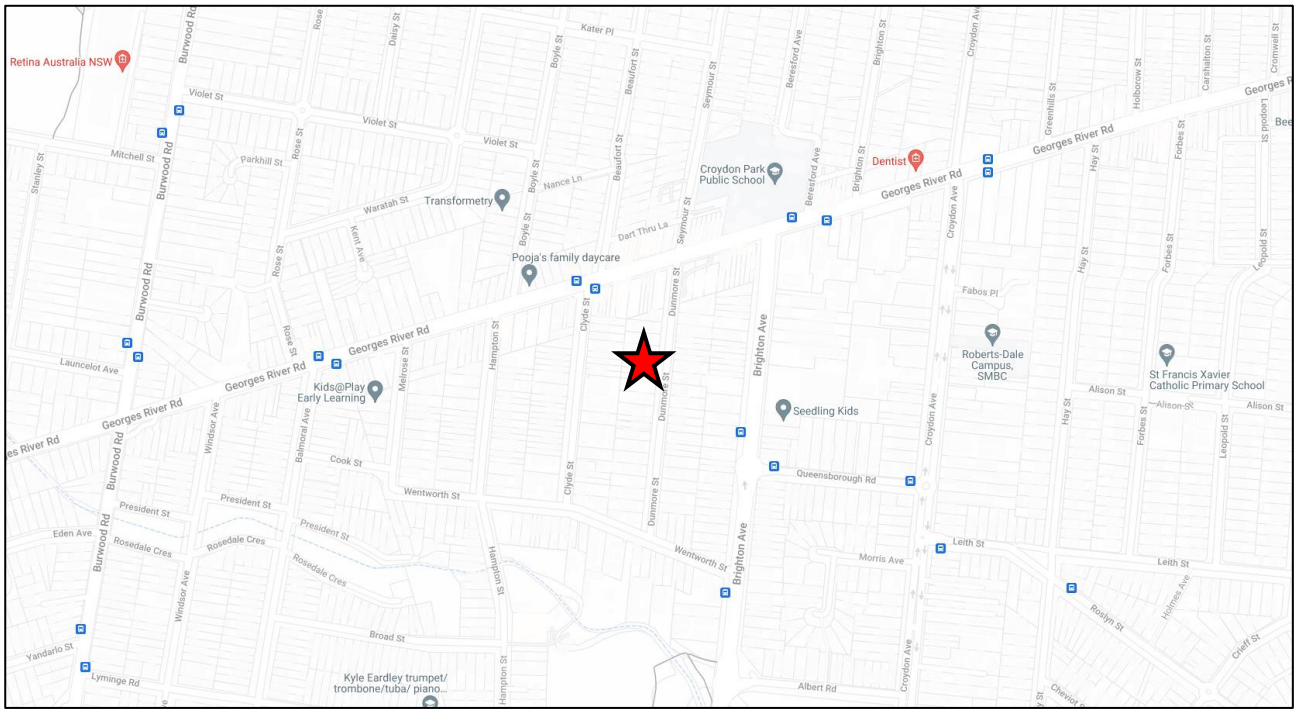
1.4 Site Context

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 Dunmore Street

- Unclassified LOCAL Road;
- Approximately 11m wide carriageway facilitating traffic flow in both directions and kerbside parking;
- Signposted 50km/h speed limit;
- Generally, unrestricted kerbside parking permitted along both sides of the road;
- Eleven (11) time-restricted *"2P 8:30am – 6:00pm Mon – Fri, 8:30am – 12:30pm Sat"* 90° angle rear to kerb parking spaces including two (2) signposted accessible parking spaces along the western side of the carriageway approximately 80m to the north of the site.

2.1.2 Georges River Road

- TfNSW Classified STATE Road (No. 549);
- Approximately 13m wide carriageway facilitating two (2) lanes of traffic flow in both directions;
- Signposted 60km/h speed limit;
- "CLEARWAY" restrictions apply between 6:00am – 10:00am Monday to Friday on the northern side and between 3:00pm – 7:00pm Monday to Friday on the southern side of the carriageway;
- Signposted *"1P 10:00am – 6:30pm Mon – Fri, 8:30am – 12:30pm Sat"* kerbside parking permitted on the northern side of the road;
- Signposted *"1P 8:30am – 3:00pm Mon – Fri, 8:30am – 12:30pm Sat"* kerbside parking permitted on the southern side of the road.

2.1.3 Wentworth Street

- Unclassified LOCAL Road;
- 12m wide carriageway facilitating traffic flow in both directions and kerbside parking;
- Default 50km/h speed limit applies;
- Unrestricted kerbside parking permitted along both sides of the road.

2.2 Existing Traffic Management

- 'Give Way' sign controlled intersection of Dunmore Street / Georges River Road / Seymour Street:
    - A pedestrian pavement treatment is located over Dunmore Street and Seymour Street near Georges River Road.
- Priority controlled intersection of Dunmore Street / Wentworth Street;
- Signposted 15km/h one lane slow point to the north of the site along Dunmore Street with landscaping on either side, restricting two-way passing of vehicles.

2.3 Existing Traffic Environment

Intersection traffic surveys were conducted at the intersections of Wentworth Street / Dunmore Road and Georges River Road / Dunmore Road / Seymour Street from 7:00am to 9:30am and 2:30pm to 6:00pm on Tuesday 20 August 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**.

The following considerations have been undertaken to ensure a realistic calibrated and validated model:

- Extra bunching in accordance with the SIDRA documentation due to the nearby signalised intersections.
- 100% of the left turn movement for north approach opposed by both eastbound lanes.
- A review of average delay times based upon video footage which is reproduced in **Annexure D** for reference:
    - The right turn volumes from the minor legs of Dunmore Street and Seymour Street onto Georges River Road are low and do not provide an adequate sample size for validation purposes and as such further calibration of these turn movements would not be appropriate. The left turn delays from the minor approaches have been validated against observed delays.

TABLE 1: EXISTING INTERSECTION PERFORMANCES (SIDRA INTERSECTION 9.1)

Intersection	Peak Hour	Degree of Saturation[1]	Average Delay[2] (sec/veh)	Level of Service[3][4]	Control Type	Worst Movement	95th Percentile Queue
EXISTING PERFORMANCE							
Dunmore Street / Wentworth Road	AM	0.18	1.2 (Worst: 9.7)	**NA** (Worst: A)	Give Way	RT from Dunmore Street	0.3 veh (1.9m) Wentworth Road
	PM	0.15	1.4 (Worst: 7.5)	**NA** (Worst: A)		RT from Dunmore Street	0.3 veh (2.0m) Wentworth Road
Georges River Road / Seymour Street / Dunmore Street	AM	0.48	4.1 (Worst: >70)	**NA** (Worst: F)	Give Way	RT from Dunmore Street	3.5 veh (25.5m) Georges River Road
	PM	0.39	2.3 (Worst: >70)	**NA** (Worst: F)		RT from Seymour Street	1.2 veh (8.5m) Georges River 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 intersection of Dunmore Street / Wentworth Road is currently performing at a high level of efficiency, with a worst movement level of service “A” in both the AM and PM peak hour periods. The worst movement level of service for the Georges River Road / Dunmore Street / Seymour Street intersection is a level of service “F”, for the through movement and right turn from Dunmore Street and Seymour Street. It should be noted that the left turn from Dunmore Street onto Georges River Road and right turn into Dunmore Street from Georges River Road currently operates at a level of service “A” and “B”, indicating low approach delays and additional spare capacity within this turn movement.

There is currently a low number of vehicles turning right onto Georges River Road from Dunmore Street or traveling through from Dunmore Street to Seymour Street. The low volume of through and right turn manoeuvres is indicative that for most drivers this movement is undesirable in terms of delays, risk, or both. It is likely that most drivers intending to travel east along Georges River Road would use an alternative route such as the signalised intersection of Brighton Avenue.

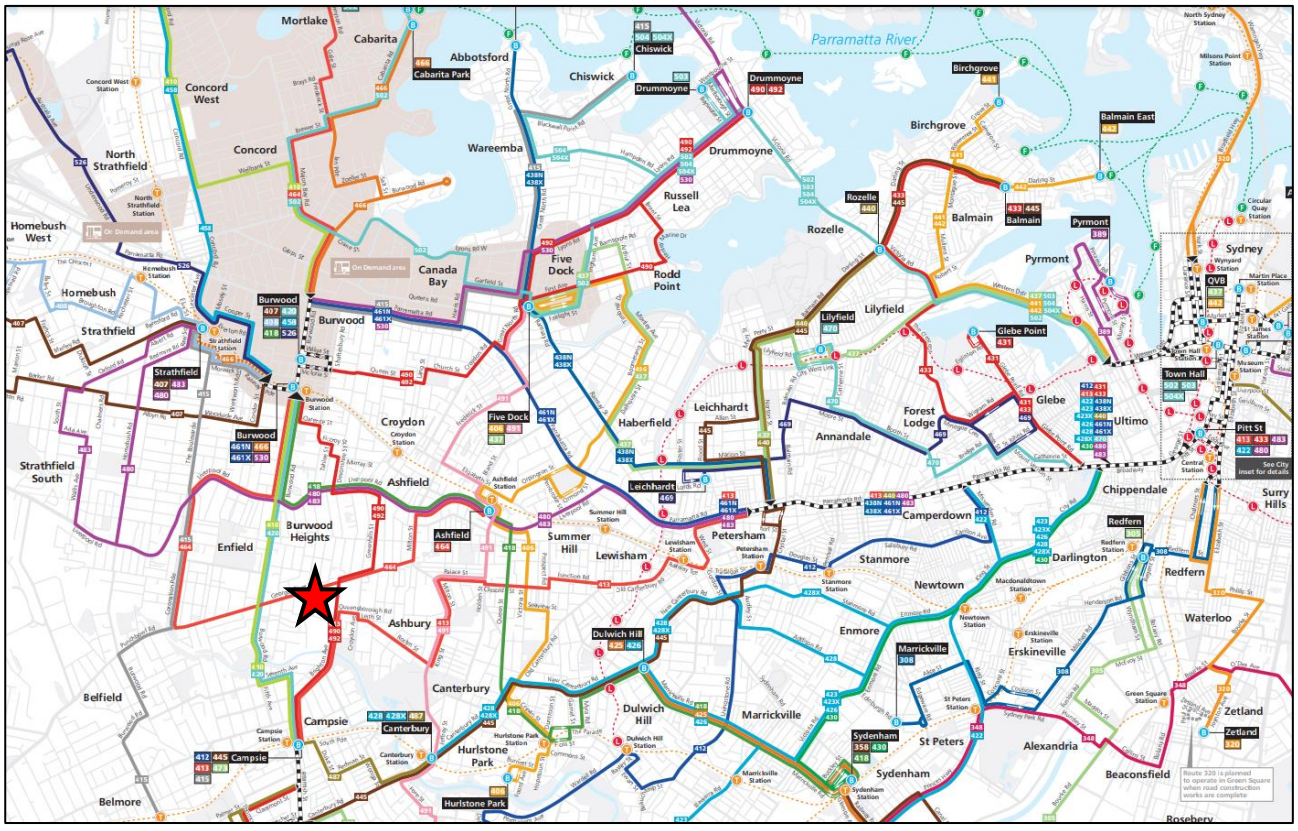
It should be noted that in some circumstances, with intersections controlled by give way and stop signs, simply examining the highest individual average delay can be misleading. The size of the movement with the highest average delay per vehicle should also be taken into account. Thus, for example, an intersection where all movements are operating at a level of service “A”, except one which is at level of service “E”, may not necessarily define the intersection level of service as “E” if that movement is of a relatively small traffic volume. That is, longer delays to a small number of vehicles may not justify upgrading an intersection unless a safety issue were also involved.

Based upon TfNSW Centre for Road Safety crash data available from their website, there has been five (5) crashes recorded between 2017 and 2021, with a copy of the crash statistics provided in **Annexure E**. As identified within the results of the SIDRA analysis summarised in **Table 1**, there are extended delays and limited turn volumes associated with the right turn movement. Considering that nil (0) of the five (5) crashes recorded involved a movement from Dunmore Street, intersection upgrades are not considered necessary, furthermore, it is expected that visitors leaving the proposed child care centre will not utilise the intersection for right turns due to the extended delays associated with the right turn movements.

2.4 Public Transport

The subject site has access to existing bus stop (ID: 213342) located approximately 270m walking distance to the north of the site on Georges River Road. The bus stop services existing bus route 464 (Mortlake to Ashfield), provided by Transit Systems. Additionally, the site has access to existing bus stop (ID: 213349) which is located approximately 350m walking distance south-east of the site on Brighton Avenue. The bus stop services existing bus route 413 (Campsie to Central Pitt Street), 490 (Hurstville to Drummoyne) and 492 (Rockdale to Drummoyne), provided by Transit Systems.

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



Site Location

FIGURE 3: PUBLIC TRANSPORT NETWORK MAP

2.5 Future Road and Infrastructure Upgrades

From Canterbury-Bankstown Council Development Application tracker and website, it appears that 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 *Canterbury-Bankstown Development Control Plan 2023* (CBDCP) *Chapter 3 – General Requirements* which designates the following parking rates applicable to the proposed development:

> ***Off-Street Parking Schedule***
>
> *Centre-based child care facilities*
>
> > *1 space per 4 children; and 2 additional car spaces for the exclusive use of any associated dwelling*
>
> ***Development controls***
>
> *In calculating the total number of car parking spaces required for development, these must be:*
>
> > *(a) rounded down if the fraction of the total calculation is less than half (0.5) a space; or*
> >
> > *(b) rounded up if the fraction of the total calculation is equal or more than half (0.5) a space…*

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	32 Children	1 per 4 children	8	8

As shown, strict application of the CBDCP requires the provision of eight (**8**) car parking spaces. The proposed plans detail the provision of seven (**7**) off-street car parking spaces and one (**1**) on-street car parking space along the frontage of the site, resulting in compliance with Council's DCP requirements.

3.2 Parking for People with Disabilities

The CBDCP does not outline car parking rates for people with disabilities applicable to this development. As such, reference is made to *Section D4D6* of the *Building Code of Australia* (BCA) as part of the *National Construction Code 2022* (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 accessible 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 Parking Requirement

Reference is made to the CBDCP which outlines the following requirements for bicycle parking spaces:

> *1 space per 4 staff*

Applying the above rates results in a total bicycle parking requirement of two (**2**) bicycle parking spaces. The plans do not detail bicycle parking facilities, however, there is ample storage area onsite to accommodate two (**2**) bicycles and should be conditioned accordingly.

3.4 Motorcycle Parking Requirement

The CBDCP does not require the provision of motorcycle parking. No motorcycle parking has been provided, satisfying Council requirements.

3.5 Servicing & Loading

The CBDCP does not specify any service facility requirements applicable to a child care centre. It is expected that all deliveries will be undertaken within the proposed car parking area within the available visitor parking 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. 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 Dunmore Street frontage, similar to neighbouring residential dwellings.

3.6 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*. Swept path testing has been undertaken and are reproduced within **Annexure F** for reference. A concept plan detailing required changes is presented in **Annexure G** for reference.

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

- 6.0m wide two-way driveway facilitating access to Dunmore Street;
- Minimum 5.8m wide parking aisles;
- 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

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.

3.7 Variations from Standards

3.7.1 Less than 1m width Blind Aisle Extension

In accordance with *AS2890.1:2004*, the end of a blind aisle is required to be extended beyond the last parking space by a minimum length of 1m. The proposed blind aisle provided has a blind aisle extension of 300mm which is less than the minimum 1m extension required by the standards.

It is widely understood that this requirement of the standards is intended to assist with vehicle access into and out of a parking space located at the end of the parking aisle. The end space is detailed to be signposted as "*Reverse In Only*" to assist with manoeuvring into the space. To assess the ability of vehicles to be able to access the end parking spaces, swept path testing has been undertaken of the affected spaces, with results reproduced in **Annexure F**. The swept path testing has been undertaken using the *Autoturn 11* software package with a design vehicle of an 85th percentile Australian light vehicle (B85) in accordance with *AS2890.1:2004*. The swept path testing results indicate that vehicles can successfully enter and exit the end space. Accordingly, the proposed variation from the standards is considered acceptable.

3.7.2 Gradient on approach to verge

The gradient immediately within the property boundary does not strictly comply with Clause 3.3 of AS2890.1:2004 but it is noted that the objective of Clause 3.3(a) is to minimise problems associated with pedestrians crossing the footpath and traffic exiting the site from the basement; in other words, to ensure that sight lines from vehicles to pedestrians are achieved along the frontage of the site and vice versa. The gradient from the car park to the property boundary is a downward slope at 12.5% for approximately 6m in length. This represents a change in level of approximately 0.75m from the car park to the verge and

hence a driver and a pedestrian in the verge would be able to see one another during the entire vehicular manoeuvring process, Additionally, vehicles exiting the site would be travelling at a low speed due to the geometry of the car and therefore, the variation from the standards is supported.

3.7.3 Undercarriage clearance

The change in grade from the proposed ramp driveway to the parking aisle is measured to be 15% (from 12.5% up to 2.5% down). While this more than the maximum 12.5% (1 in 8) change in grade for summit changes according to Clause 2.5.3 of *AS2890.1:2004*, the purpose of this requirement is to "prevent vehicles scraping or bottoming". To assess the ability of vehicles accessing the parking aisle without bottoming on this summit grade change, a ground clearance test has been conducted using the *Autoturn 11* software package with a design vehicle of an 99.8th percentile Australian light vehicle (B99) in accordance with *AS2890.1:2004*. The ground clearance test results are presented in **Figure 4** and indicate vehicles successfully clear the summit grade change and therefore the proposed variation is considered acceptable.

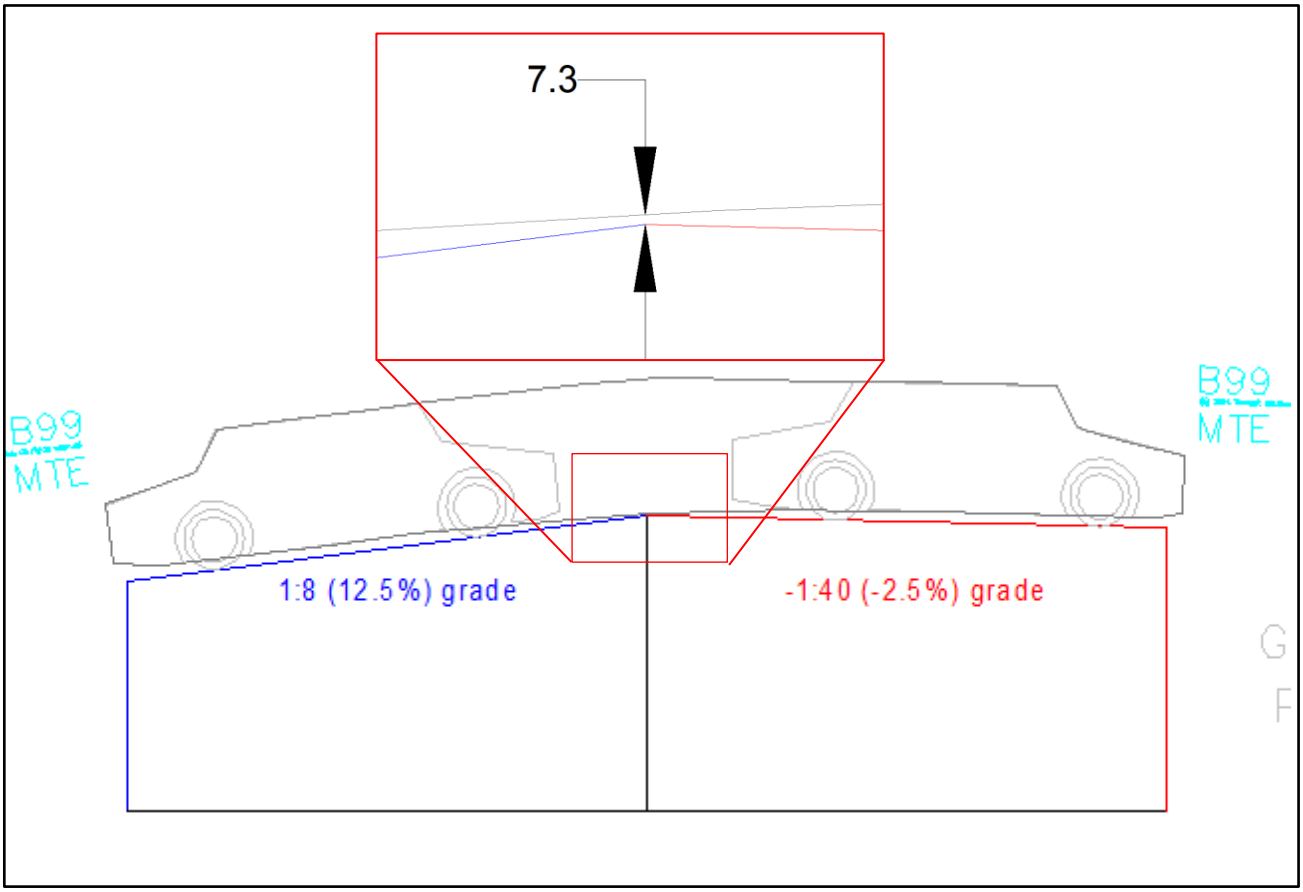


FIGURE 4: CLEARANCE FOR CHANGE IN GRADE FROM 1:8 (12.5%) TO -1:40 (-2.5%)

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*
>
> *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

Use	Scale	Peak	Generation Rate	Trips(1)
Long-day care	32 Children	AM	0.8 per child	26 (13 in, 13 out)
		PM	0.7 per child	22 (11 in, 11 out)

Notes:
(1) 50/50 inbound/outbound split.

As shown, the expected traffic generation associated with the proposed development is in the order of **26** vehicle trips in the AM peak period (13 in, 13 out) and **22** vehicle trips in the PM peak period (11 in, 11 out).

4.2 Traffic Assignment

The road network, traffic surveys and locations of residential areas surrounding the site have been assessed and the traffic assignment assumed for all traffic to and from the site is shown in **Figure 4** and **Figure 5**.

As outlined in **Section 2.3.1**, considering the existing performance of the right turn movement from Dunmore Street onto Georges River Road it is expected that parents would generally not opt to undertake this turn movement, due to the extended delays experienced, opting to otherwise use the Brighton Avenue signalised intersection to turn right, if required.

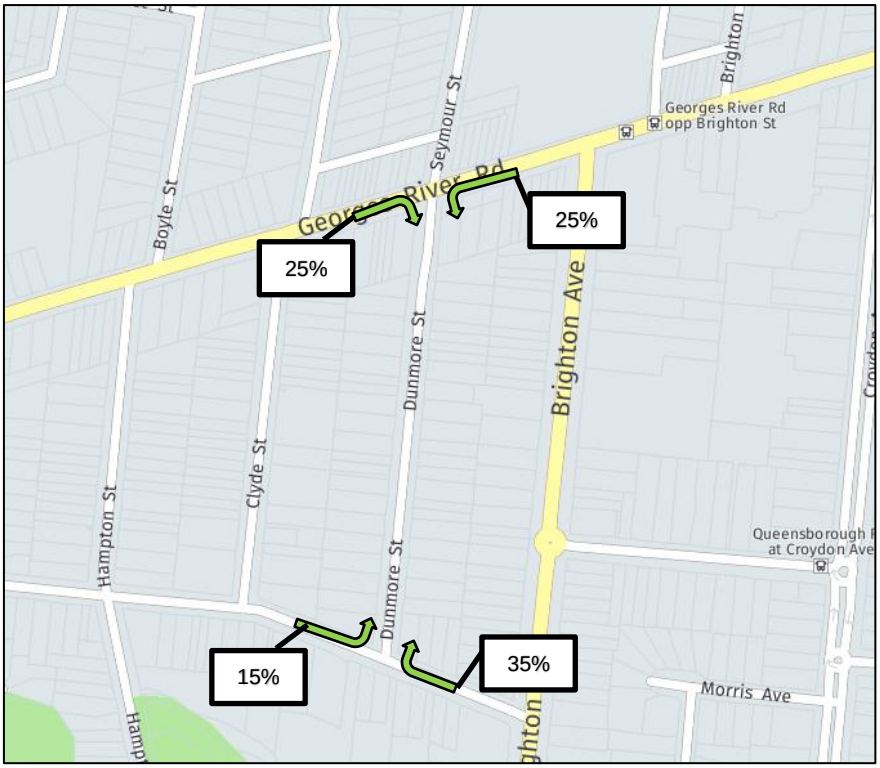


FIGURE 5: TRIP DISTRIBUTION – INBOUND

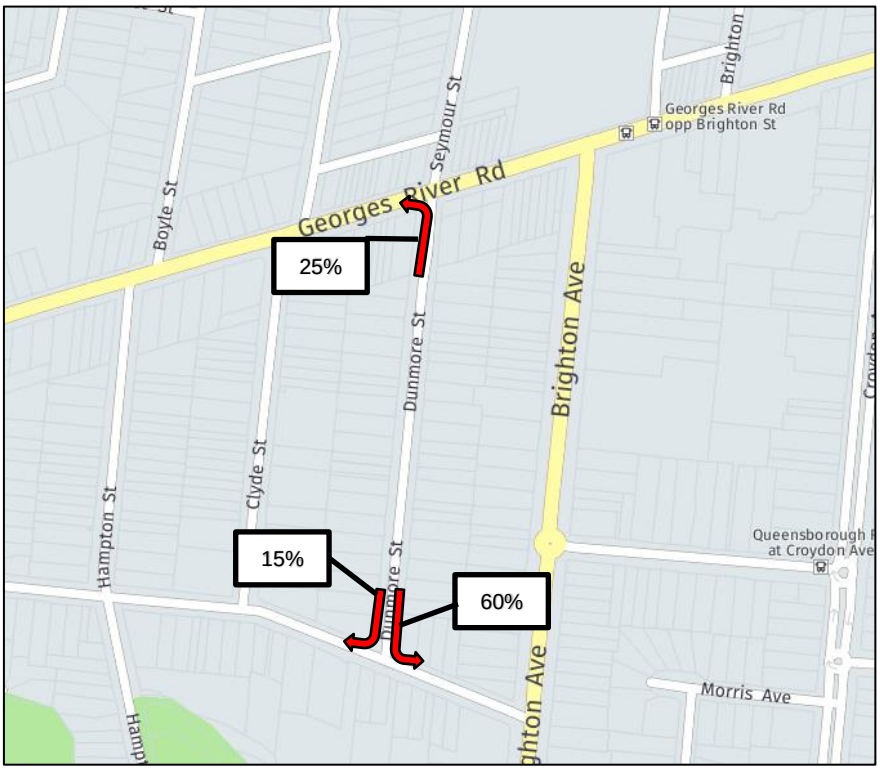


FIGURE 6: TRIP DISTRIBUTION – OUTBOUND

4.3 Traffic Impact

The traffic generation outlined in **Section 4.1** & **4.2** above has been added to the existing traffic volumes recorded. SIDRA INTERSECTION 9.1 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 9.1)

Intersection	Peak Hour	Degree of Saturation[1]	Average Delay[2] (sec/veh)	Level of Service[3][4]	Control Type	Worst Movement	95th Percentile Queue
EXISTING PERFORMANCE							
Dunmore Street / Wentworth Road	AM	0.18	1.2 (Worst: 9.7)	**NA** (Worst: A)	Give Way	RT from Dunmore Street	0.3 veh (1.9m) Wentworth Road
	PM	0.15	1.4 (Worst: 7.5)	**NA** (Worst: A)		RT from Dunmore Street	0.3 veh (2.0m) Wentworth Road
Georges River Road / Seymour Street / Dunmore Street	AM	0.48	4.1 (Worst: >70)	**NA** (Worst: F)	Give Way	RT from Dunmore Street	3.5 veh (25.5m) Georges River Road
	PM	0.39	2.3 (Worst: >70)	**NA** (Worst: F)		RT from Seymour Street	1.2 veh (8.5m) Seymour Street
FUTURE (POST DEVELOPMENT) PERFORMANCE							
Dunmore Street / Wentworth Road	AM	0.19	1.3 (Worst: 9.4)	**NA** (Worst: A)	Give Way	RT from Dunmore Street	0.3 veh (2.2m) Wentworth Road
	PM	0.15	1.5 (Worst: 7.6)	**NA** (Worst: A)		RT from Dunmore Street	0.3 veh (2.2m) Wentworth Road
Georges River Road / Seymour Street / Dunmore Street	AM	0.48	4.1 (Worst: >70)	**NA** (Worst: F)	Give Way	RT from Dunmore Street	3.6 veh (26.0m) Georges River Road
	PM	0.40	2.5 (Worst: >70)	**NA** (Worst: F)		RT from Seymour Street	1.3 veh (9.2m) Seymour Street

NOTES: Refer to **Table 1**.

As shown, the intersection of Dunmore Street / Wentworth Road and Georges River Road / Dunmore Street / Seymour Street all retain the same worst overall level of service under future conditions, indicating that there will be no adverse impact on the existing road network as a result of the proposed development.

It should be noted that the turning movements impacted by the proposed development all retain the same level of service “A” or “B” conditions under the future scenario indicating additional spare capacity.

4.4 Residential Amenity

Increased traffic volumes along residential roads have the potential to impact some aspects of the amenity of residents in low-density residential neighbourhoods. Over certain traffic thresholds, the ability for aged or impaired persons to cross the road and the ability for children to play safely in the street are reduced and the ambient road noise becomes noticeable to residents. The *RTA Guide to Traffic Generating Developments 2002* (RTA Guide) as adopted by TfNSW, suggests that the environmental goal thresholds for local streets is **200** vehicles per hour and that ideally local streets should not exceed **300** vehicles per hour.

The traffic generated by the site will travel to and from the centre via the residential roads Wentworth Street and Dunmore Street. The existing and future peak hourly traffic volumes along these roads have been considered, as summarised in **Table 5**.

TABLE 5: RESIDENTIAL AMENITY - PEAK HOUR TRAFFIC FLOWS

Street	Existing (1)(2)		Future (5)	
	AM	PM	AM	PM
Wentworth Street (3)	634	506	646	517
Dunmore Street (4)	117	135	133	150

Notes (1) Taken from intersection surveys reproduced within **Annexure B**.
(2) Highest two-way traffic flow along subject road in any hour within the survey period. Not necessarily the intersection peak.
(3) AM and PM two-way peak occurs at 7:45am – 845am and 5:00pm - 6:00pm respectively.
(4) AM and PM two-way peak occurs at 8:30am – 9:30am and 3:00pm – 4:00pm respectively.
(5) Future equals existing two-way traffic flow plus traffic generation and assignment as determined in **Section 4.1 & 4.2**.

As shown in the above table, the two-way peak hour flows of Dunmore Street under the future scenario remain significantly below the 200 vehicle per hour environmental goal threshold suggested in the RTA Guide thresholds for local roads. Therefore, it is concluded that residential amenity will not be adversely affected along Dunmore Street by the relatively minor increases in two-way trips.

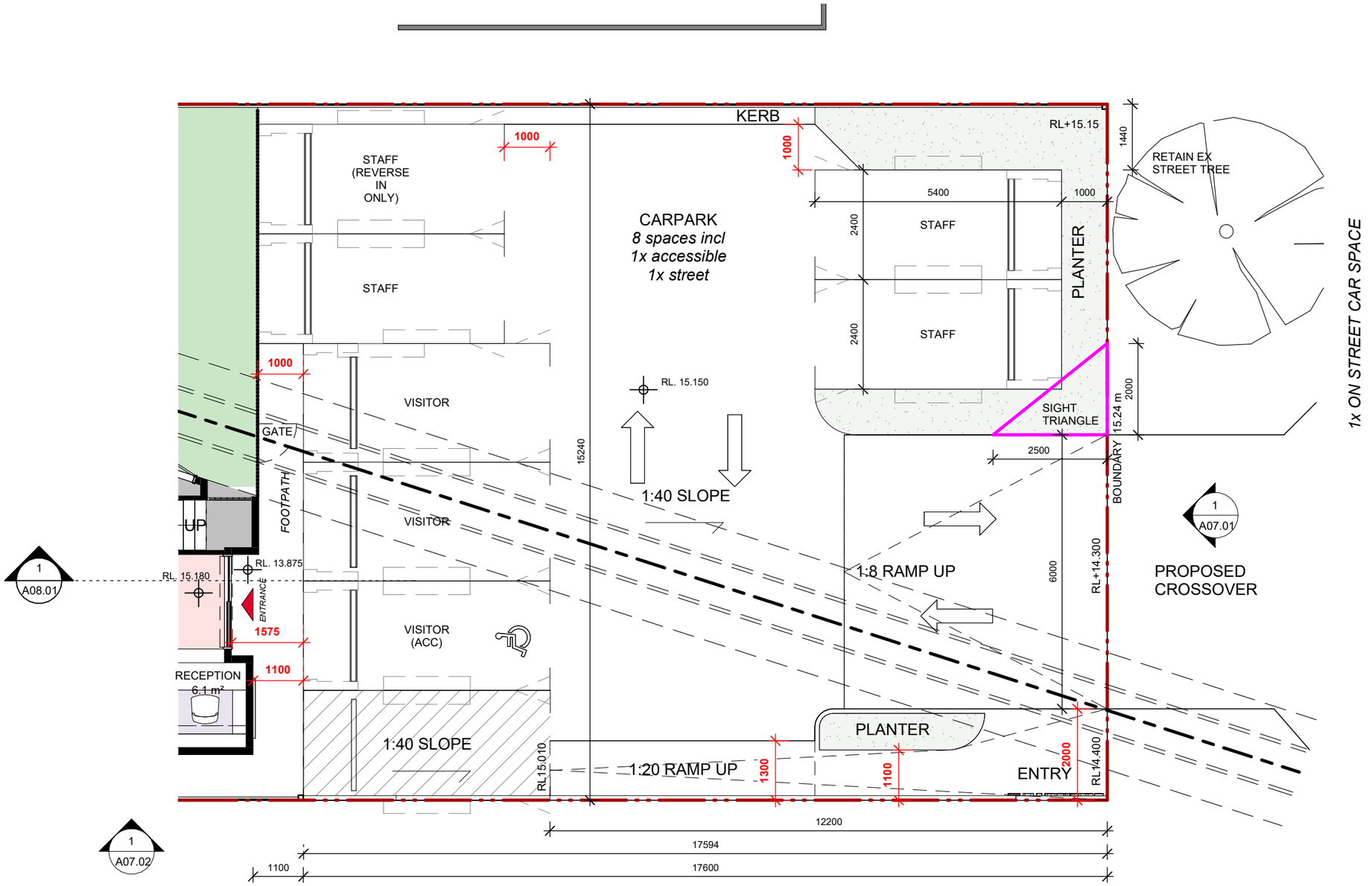
Wentworth Street is currently operating above the suggested 300 vehicles per hour threshold outlined within the RTA Guide. The proposed development is anticipated to increase the traffic within the peak hour along Wentworth Street by approximately 2% which is very minor and expected to already occur within day-to-day fluctuations. Wentworth Street has an approximate 12m wide carriageway facilitating one (1) travel lane in each direction and kerbside parking such that it provides a forgiving environment for drivers travelling along the road due to the wide nature of the road. Nevertheless, the proposed minor increase in traffic as a result of the proposed development will not adversely impact the residential amenity of Wentworth Street above the existing operation of the road.

5 CONCLUSION

In view of the foregoing, the subject child care centre proposal at 9 Dunmore Street, Croydon Park (as depicted in **Annexure A**) has been assessed 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 seven (**7**) off-street car parking spaces and one (**1**) on-street car parking space along the frontage of the site, satisfying the relevant controls applicable to the development, including Council's DCP requirements.
    - It is recommended that the parent on-street car parking space be signposted as 10-minute parking between 7:00am to 9:00am and 4:00pm to 6:00pm.
- Council's DCP requires the provision of two (**2**) bicycle parking spaces. Whilst these have not been provided in plans, there is ample storage space to store up to two (**2**) staff bicycles.
- 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 F** with required changes in **Annexure G**.
- The traffic generation of the proposed development has been estimated to be some **26** trips in the AM peak period (13 in, 13 out) and **22** trips in the PM peak period (11 in, 11 out). The impacts of the traffic generation have been modelled using SIDRA INTERSECTION 9.1, 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
(1 SHEET)



NOT FOR CONSTRUCTION

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PO Box 117 Oyster Bay 2225
Amy Ellis, Architect NSW #10545

ABN 73 653 929 385

Client:
PROPOSED CHILDCARE CTR

Address:
9 DUNMORE ST
CROYDON PARK

Rev	Date	Description
1	22.02.24	DEVELOPMENT APPLICATION

0 1 2 3 4 5 m
1:100

Title:
Car Park Plan

Drawing no:
A03.00

Revision:
1

Project no: 1117
Scale: 1 : 100 @ A3

ANNEXURE B: TRAFFIC SURVEY DATA
(2 SHEETS)

TRANS TRAFFIC SURVEY

TURNING MOVEMENT SURVEY trafficsurvey.com.au

Intersection of Wentworth St and Dunmore St, Croydon

GPS -33.898847, 151.106901

Date:	Tue 30/08/22
Weather:	Fine
Suburban:	Croydon Park
Customer:	McLaren

North:	Dunmore St
East:	Wentworth St
South:	N/A
West:	Wentworth St

Survey Period	AM:	7:00 AM-9:30 AM
	PM:	2:30 PM-6:00 PM
Traffic Peak	AM:	7:45 AM-8:45 AM
	PM:	5:00 PM-6:00 PM

All Vehicles

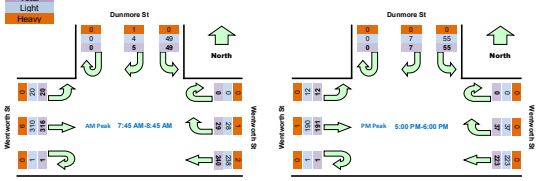
Time		North Approach Dunmore St			East Approach Wentworth St			West Approach Wentworth St			Hourly Total	
Period Start	Period End	U	R	L	U	R	WB	U	EB	L	Hour	Peak
7:00	7:15	0	0	12	0	5	28	0	36	1	452	
7:15	7:30	0	1	14	0	10	40	0	39	4	535	
7:30	7:45	0	2	9	1	7	39	0	43	2	597	
7:45	8:00	0	3	11	0	12	62	1	66	4	660	Peak
8:00	8:15	0	1	17	0	5	60	0	80	2	615	
8:15	8:30	0	0	9	0	5	61	0	89	6	559	
8:30	8:45	0	1	12	0	7	57	0	81	8	482	
8:45	9:00	0	2	17	0	3	46	0	43	3		
9:00	9:15	0	4	16	0	11	38	0	37	3		
9:15	9:30	0	2	16	0	8	33	0	30	4		
14:30	14:45	0	1	12	0	10	52	0	42	3	493	
14:45	15:00	0	6	13	0	8	48	0	40	3	514	
15:00	15:15	0	7	15	0	10	45	0	30	3	520	
15:15	15:30	0	0	20	1	9	57	1	53	4	518	
15:30	15:45	0	4	17	0	10	59	0	46	5	506	
15:45	16:00	0	1	17	1	10	41	0	51	3	484	
16:00	16:15	0	4	7	0	6	49	0	39	3	461	
16:15	16:30	0	2	11	0	7	65	0	45	3	469	
16:30	16:45	0	1	13	0	7	52	0	46	0	491	
16:45	17:00	0	3	11	0	4	38	0	44	1	517	
17:00	17:15	0	0	11	0	6	46	0	50	3	526	Peak
17:15	17:30	0	4	20	0	11	61	0	58	1		
17:30	17:45	0	1	11	0	8	73	1	46	5		
17:45	18:00	0	2	13	0	12	43	0	37	3		

Peak Time		North Approach Dunmore St			East Approach Wentworth St			West Approach Wentworth St			Peak
Period Start	Period End	U	R	L	U	R	WB	U	EB	L	total
7:45	8:45	0	5	49	0	29	240	1	316	20	660
17:00	18:00	0	7	55	0	37	223	1	191	12	526

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.

Graphic

Total
Light
Heavy



Light Vehicles

Time		North Approach Dunmore St			East Approach Wentworth St			West Approach Wentworth St		
Period Start	Period End	U	R	L	U	R	WB	U	EB	L
7:00	7:15	0	0	12	0	5	27	0	35	1
7:15	7:30	0	1	14	0	10	40	0	37	4
7:30	7:45	0	2	9	1	7	38	0	43	2
7:45	8:00	0	3	11	0	12	62	1	64	4
8:00	8:15	0	1	17	0	5	58	0	78	2
8:15	8:30	0	0	9	0	4	61	0	88	6
8:30	8:45	0	0	12	0	7	57	0	80	8
8:45	9:00	0	2	17	0	3	45	0	43	3
9:00	9:15	0	4	16	0	10	38	0	37	3
9:15	9:30	0	2	15	0	7	33	0	30	4
14:30	14:45	0	1	12	0	10	50	0	41	3
14:45	15:00	0	5	13	0	8	48	0	39	3
15:00	15:15	0	7	15	0	10	43	0	28	3
15:15	15:30	0	0	20	1	9	57	1	53	4
15:30	15:45	0	4	17	0	10	59	0	46	4
15:45	16:00	0	1	17	1	10	39	0	51	3
16:00	16:15	0	4	7	0	6	49	0	38	3
16:15	16:30	0	2	10	0	7	61	0	44	3
16:30	16:45	0	1	13	0	7	51	0	44	0
16:45	17:00	0	3	10	0	4	38	0	44	1
17:00	17:15	0	0	11	0	6	46	0	50	3
17:15	17:30	0	4	20	0	11	61	0	58	1
17:30	17:45	0	1	11	0	8	73	1	46	5
17:45	18:00	0	2	13	0	12	43	0	36	3

Peak Time		North Approach Dunmore St			East Approach Wentworth St			West Approach Wentworth St			Peak
Period Start	Period End	U	R	L	U	R	WB	U	EB	L	total
7:45	8:45	0	4	49	0	28	238	1	310	20	650
17:00	18:00	0	7	55	0	37	223	1	190	12	525

Heavy Vehicles

Time		North Approach Dunmore St			East Approach Wentworth St			West Approach Wentworth St		
Period Start	Period End	U	R	L	U	R	WB	U	EB	L
7:00	7:15	0	0	0	0	0	1	0	1	0
7:15	7:30	0	0	0	0	0	0	0	2	0
7:30	7:45	0	0	0	0	0	1	0	0	0
7:45	8:00	0	0	0	0	0	0	0	2	0
8:00	8:15	0	0	0	0	0	2	0	2	0
8:15	8:30	0	0	0	0	1	0	0	1	0
8:30	8:45	0	1	0	0	0	0	0	1	0
8:45	9:00	0	0	0	0	0	1	0	0	0
9:00	9:15	0	0	0	0	1	0	0	0	0
9:15	9:30	0	0	1	0	1	0	0	0	0
14:30	14:45	0	0	0	0	0	2	0	1	0
14:45	15:00	0	1	0	0	0	0	0	1	0
15:00	15:15	0	0	0	0	0	2	0	2	0
15:15	15:30	0	0	0	0	0	0	0	0	0
15:30	15:45	0	0	0	0	0	0	0	0	1
15:45	16:00	0	0	0	0	0	2	0	0	0
16:00	16:15	0	0	0	0	0	0	0	1	0
16:15	16:30	0	0	1	0	0	4	0	1	0
16:30	16:45	0	0	0	0	0	1	0	2	0
16:45	17:00	0	0	1	0	0	0	0	0	0
17:00	17:15	0	0	0	0	0	0	0	0	0
17:15	17:30	0	0	0	0	0	0	0	0	0
17:30	17:45	0	0	0	0	0	0	0	0	0
17:45	18:00	0	0	0	0	0	0	0	1	0

Peak Time		North Approach Dunmore St			East Approach Wentworth St			West Approach Wentworth St			Peak
Period Start	Period End	U	R	L	U	R	WB	U	EB	L	total
7:45	8:45	0	1	0	0	1	2	0	6	0	10
17:00	18:00	0	0	0	0	0	0	0	1	0	1

TRANS TRAFFIC SURVEY

trafficsurvey.com.au

TURNING MOVEMENT SURVEY

Intersection of Georges River Rd and Seymour St, Croydon Park

GPS	-33.895591, 151.107310
Date:	Tue 30/08/22
Weather:	Fine
Suburban:	Croydon Park
Customer:	McLaren

North:	Seymour St
East:	Georges River Rd
South:	Dunmore St
West:	Georges River Rd

Survey	AM:	7:00 AM-9:30 AM
Period	PM:	2:30 PM-6:00 PM
Traffic	AM:	7:45 AM-8:45 AM
Peak	PM:	5:00 PM-6:00 PM

All Vehicles

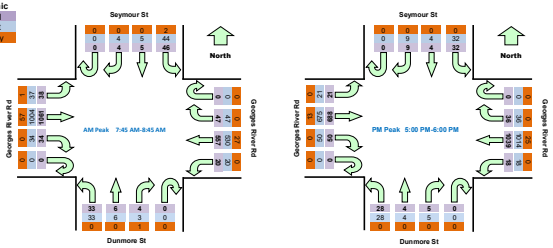
Time		North Approach Seymour St				East Approach Georges River Rd				South Approach Dunmore St				West Approach Georges River Rd				Hourly Total	
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
7:00	7:15	0	2	1	8	0	6	90	5	0	2	0	6	0	5	250	5	1750	
7:15	7:30	0	2	0	7	0	8	132	6	0	2	1	5	0	6	254	4	1845	
7:30	7:45	0	1	0	7	0	11	123	2	0	1	4	4	0	5	279	7	1828	
7:45	8:00	0	1	1	7	0	12	143	7	0	0	2	9	0	8	303	6	1855	Peak
8:00	8:15	0	1	0	7	0	16	133	7	0	3	0	8	0	11	280	9	1778	
8:15	8:30	0	0	2	10	0	9	130	3	0	0	0	6	0	6	235	9	1716	
8:30	8:45	0	2	2	22	0	10	151	3	0	1	4	10	0	9	243	14	1685	
8:45	9:00	0	0	2	14	0	18	131	9	0	2	0	3	0	13	221	9		
9:00	9:15	0	2	2	11	0	17	132	8	0	2	1	7	0	15	208	8		
9:15	9:30	0	3	6	7	0	7	111	5	0	2	3	6	0	11	212	6		
14:30	14:45	0	2	1	8	0	7	181	5	0	3	0	9	0	12	149	7	1697	
14:45	15:00	0	2	2	12	0	16	193	7	0	4	2	6	0	11	140	11	1771	
15:00	15:15	0	2	6	22	0	8	225	6	0	0	3	5	0	14	128	5	1832	
15:15	15:30	0	1	0	12	2	7	291	2	0	1	1	3	0	14	145	4	1859	
15:30	15:45	0	2	3	4	0	8	260	3	0	1	0	11	0	17	146	3	1825	
15:45	16:00	0	3	0	7	0	12	251	6	0	0	1	13	0	17	155	2	1862	
16:00	16:15	0	1	0	12	0	5	267	3	0	1	0	6	0	11	142	3	1854	
16:15	16:30	0	2	1	4	1	6	261	2	0	3	1	2	0	12	151	3	1891	
16:30	16:45	0	1	1	11	0	8	258	6	0	5	0	5	0	10	187	3	1917	
16:45	17:00	0	1	1	9	1	8	258	2	0	1	0	8	0	8	160	2	1917	
17:00	17:15	0	2	1	12	0	4	256	5	0	1	0	6	0	15	181	5	1934	Peak
17:15	17:30	0	2	1	5	0	10	240	6	0	1	1	5	0	14	185	5		
17:30	17:45	0	2	1	5	0	11	289	5	0	2	1	7	0	11	158	3		
17:45	18:00	0	3	1	10	0	11	254	2	0	1	2	10	0	10	164	8		

Peak Time		North Approach Seymour St				East Approach Georges River Rd				South Approach Dunmore St				West Approach Georges River Rd				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
7:45	8:45	0	4	5	46	0	47	557	20	0	4	6	33	0	34	1061	38	1855
17:00	18:00	0	9	4	32	0	36	1039	18	0	5	4	28	0	50	688	21	1934

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.

Graphic

Total
Light
Heavy



Light Vehicles

Time		North Approach Seymour St				East Approach Georges River Rd				South Approach Dunmore St				West Approach Georges River Rd			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	1	1	7	0	6	81	5	0	2	0	6	0	5	228	4
7:15	7:30	0	2	0	7	0	7	125	6	0	2	1	5	0	6	244	4
7:30	7:45	0	1	0	7	0	11	117	2	0	1	4	4	0	5	266	7
7:45	8:00	0	1	1	6	0	12	133	7	0	0	2	9	0	8	284	6
8:00	8:15	0	1	0	6	0	16	129	7	0	3	0	8	0	11	261	9
8:15	8:30	0	0	2	10	0	9	126	3	0	0	0	6	0	6	223	8
8:30	8:45	0	2	2	22	0	10	142	3	0	0	4	10	0	9	236	14
8:45	9:00	0	0	2	14	0	17	125	9	0	2	0	3	0	12	209	9
9:00	9:15	0	2	2	11	0	16	124	8	0	1	1	7	0	15	189	8
9:15	9:30	0	3	6	7	0	7	105	5	0	2	3	6	0	10	196	6
14:30	14:45	0	2	1	8	0	7	171	5	0	3	0	9	0	12	140	7
14:45	15:00	0	1	2	12	0	15	180	7	0	4	2	6	0	11	130	10
15:00	15:15	0	2	6	22	0	8	214	6	0	0	3	5	0	14	124	5
15:15	15:30	0	1	0	12	2	7	276	2	0	1	1	3	0	14	141	4
15:30	15:45	0	2	3	4	0	8	241	3	0	1	0	11	0	16	136	3
15:45	16:00	0	3	0	7	0	11	237	6	0	0	1	13	0	17	151	2
16:00	16:15	0	1	0	12	0	5	254	3	0	1	0	6	0	11	136	3
16:15	16:30	0	2	1	4	1	6	256	2	0	3	1	2	0	11	148	3
16:30	16:45	0	1	1	11	0	8	249	6	0	5	0	5	0	10	184	3
16:45	17:00	0	1	1	9	1	8	251	2	0	1	0	8	0	7	158	2
17:00	17:15	0	2	1	12	0	4	253	5	0	1	0	6	0	15	176	5
17:15	17:30	0	2	1	5	0	10	234	6	0	1	1	5	0	14	182	5
17:30	17:45	0	2	1	5	0	11	282	5	0	2	1	7	0	11	155	3
17:45	18:00	0	3	1	10	0	11	245	2	0	1	2	10	0	10	162	8

Peak Time		North Approach Seymour St				East Approach Georges River Rd				South Approach Dunmore St				West Approach Georges River Rd				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
7:45	8:45	0	4	5	44	0	47	530	20	0	3	6	33	0	34	1004	37	1767
17:00	18:00	0	9	4	32	0	36	1014	18	0	5	4	28	0	50	675	21	1896

Heavy Vehicles

Time		North Approach Seymour St				East Approach Georges River Rd				South Approach Dunmore St				West Approach Georges River Rd			
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L
7:00	7:15	0	1	0	1	0	0	9	0	0	0	0	0	0	0	22	1
7:15	7:30	0	0	0	0	0	1	7	0	0	0	0	0	0	0	10	0
7:30	7:45	0	0	0	0	0	0	6	0	0	0	0	0	0	0	13	0
7:45	8:00	0	0	0	1	0	0	10	0	0	0	0	0	0	0	19	0
8:00	8:15	0	0	0	1	0	0	4	0	0	0	0	0	0	0	19	0
8:15	8:30	0	0	0	0	0	0	4	0	0	0	0	0	0	0	12	1
8:30	8:45	0	0	0	0	0	0	9	0	0	1	0	0	0	0	7	0
8:45	9:00	0	0	0	0	0	1	6	0	0	0	0	0	0	1	12	0
9:00	9:15	0	0	0	0	0	1	8	0	0	1	0	0	0	0	19	0
9:15	9:30	0	0	0	0	0	0	6	0	0	0	0	0	0	1	16	0
14:30	14:45	0	0	0	0	0	0	10	0	0	0	0	0	0	0	9	0
14:45	15:00	0	1	0	0	0	1	13	0	0	0	0	0	0	0	10	1
15:00	15:15	0	0	0	0	0	0	11	0	0	0	0	0	0	0	4	0
15:15	15:30	0	0	0	0	0	0	15	0	0	0	0	0	0	0	4	0
15:30	15:45	0	0	0	0	0	0	19	0	0	0	0	0	0	1	10	0
15:45	16:00	0	0	0	0	0	1	14	0	0	0	0	0	0	0	4	0
16:00	16:15	0	0	0	0	0	0	13	0	0	0	0	0	0	0	6	0
16:15	16:30	0	0	0	0	0	0	5	0	0	0	0	0	0	1	3	0
16:30	16:45	0	0	0	0	0	0	9	0	0	0	0	0	0	0	3	0
16:45	17:00	0	0	0	0	0	0	7	0	0	0	0	0	0	1	2	0
17:00	17:15	0	0	0	0	0	0	3	0	0	0	0	0	0	0	5	0
17:15	17:30	0	0	0	0	0	0	6	0	0	0	0	0	0	0	3	0
17:30	17:45	0	0	0	0	0	0	7	0	0	0	0	0	0	0	3	0
17:45	18:00	0	0	0	0	0	0	9	0	0	0	0	0	0	0	2	0

Peak Time		North Approach Seymour St				East Approach Georges River Rd				South Approach Dunmore St				West Approach Georges River Rd				Peak
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	total
7:45	8:45	0	0	0	2	0	0	27	0	0	1	0	0	0	0	57	1	88
17:00	18:00	0	0	0	0	0	0	25	0	0	0	0	0	0	0	13	0	38

ANNEXURE C: SIDRA RESULTS
(8 SHEETS)

MOVEMENT SUMMARY

Site: 2 [(FutPM) Dunmore Street / Georges River Road / Seymour Street (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.2.202

Future PM Peak Period
Dunmore Street / Georges River Road / Seymour Street
Job No. 220780
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Dunmore Street (S)															
1	L2	All MCs	33	0.0	33	0.0	0.261	10.5	LOS A	0.9	6.2	0.86	0.93	0.98	39.2
2	T1	All MCs	4	0.0	4	0.0	0.261	78.4	LOS F	0.9	6.2	0.86	0.93	0.98	39.4
3	R2	All MCs	5	0.0	5	0.0	0.261	110.2	LOS F	0.9	6.2	0.86	0.93	0.98	39.1
Approach			42	0.0	42	0.0	0.261	29.7	LOS C	0.9	6.2	0.86	0.93	0.98	39.2
East: Georges River Road (E)															
4	L2	All MCs	22	0.0	22	0.0	0.316	5.6	LOS A	0.0	0.0	0.00	0.02	0.00	57.1
5	T1	All MCs	1094	2.4	1094	2.4	0.316	0.1	LOS A	0.5	3.8	0.06	0.09	0.06	59.2
6	R2	All MCs	38	0.0	38	0.0	0.316	19.0	LOS B	0.5	3.8	0.14	0.17	0.14	56.2
Approach			1154	2.3	1154	2.3	0.316	0.8	NA	0.5	3.8	0.06	0.09	0.06	59.0
North: Seymour Street (N)															
7	L2	All MCs	34	0.0	34	0.0	0.397	16.7	LOS B	1.3	9.2	0.91	1.02	1.13	34.6
8	T1	All MCs	4	0.0	4	0.0	0.397	81.5	LOS F	1.3	9.2	0.91	1.02	1.13	34.8
9	R2	All MCs	9	0.0	9	0.0	0.397	115.1	LOS F	1.3	9.2	0.91	1.02	1.13	34.5
Approach			47	0.0	47	0.0	0.397	42.2	LOS C	1.3	9.2	0.91	1.02	1.13	34.6
West: Georges River Road (W)															
10	L2	All MCs	22	0.0	22	0.0	0.388	5.7	LOS A	0.0	0.0	0.00	0.02	0.00	57.1
11	T1	All MCs	724	1.9	724	1.9	0.388	0.1	LOS A	0.0	0.0	0.00	0.02	0.00	59.6
12	R2	All MCs	56	0.0	56	0.0	0.116	12.5	LOS A	0.4	3.1	0.70	0.87	0.70	48.0
Approach			802	1.7	802	1.7	0.388	1.2	NA	0.4	3.1	0.05	0.08	0.05	58.5
All Vehicles			2045	2.0	2045	2.0	0.397	2.5	NA	1.3	9.2	0.09	0.13	0.10	57.3

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

MOVEMENT SUMMARY

Site: 101 [(ExAM) Dunmore Street / Wentworth Road (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.2.202

Existing AM Peak Period
Dunmore Street / Wentworth Road
Job No. 220607
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Wentworth Road (E)															
5	T1	All MCs	253	0.8	253	0.8	0.156	0.0	LOS A	0.3	1.9	0.12	0.14	0.12	58.9
6	R2	All MCs	31	3.4	31	3.4	0.156	9.1	LOS A	0.3	1.9	0.12	0.14	0.12	56.0
Approach			283	1.1	283	1.1	0.156	1.0	NA	0.3	1.9	0.12	0.14	0.12	58.6
North: Dunmore Street (N)															
7	L2	All MCs	52	0.0	52	0.0	0.052	6.7	LOS A	0.2	1.4	0.40	0.62	0.40	51.7
9	R2	All MCs	5	20.0	5	20.0	0.052	9.7	LOS A	0.2	1.4	0.40	0.62	0.40	50.6
Approach			57	1.9	57	1.9	0.052	7.0	LOS A	0.2	1.4	0.40	0.62	0.40	51.6
West: Wentworth Road (W)															
10	L2	All MCs	21	0.0	21	0.0	0.184	5.6	LOS A	0.0	0.0	0.00	0.04	0.00	57.1
11	T1	All MCs	333	1.9	333	1.9	0.184	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	59.6
Approach			354	1.8	354	1.8	0.184	0.4	NA	0.0	0.0	0.00	0.04	0.00	59.4
All Vehicles			694	1.5	694	1.5	0.184	1.2	NA	0.3	1.9	0.08	0.13	0.08	58.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

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

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [(ExAM) Dunmore Street / Georges River Road / Seymour Street (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.2.202

Existing AM Peak Period
Dunmore Street / Georges River Road / Seymour Street
Job No. 220780
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Dunmore Street (S)															
1	L2	All MCs	35	0.0	35	0.0	0.328	10.4	LOS A	0.9	6.3	0.90	0.94	1.07	39.4
2	T1	All MCs	6	0.0	6	0.0	0.328	57.1	LOS E	0.9	6.3	0.90	0.94	1.07	39.7
3	R2	All MCs	4	25.0	4	25.0	0.328	141.6	LOS F	0.9	6.3	0.90	0.94	1.07	38.7
Approach			45	2.3	45	2.3	0.328	29.1	LOS C	0.9	6.3	0.90	0.94	1.07	39.4
East: Georges River Road (E)															
4	L2	All MCs	21	0.0	21	0.0	0.475	7.5	LOS A	3.5	25.5	0.30	0.34	0.43	51.9
5	T1	All MCs	586	4.8	586	4.8	0.475	1.9	LOS A	3.5	25.5	0.30	0.34	0.43	53.9
6	R2	All MCs	49	0.0	49	0.0	0.475	64.6	LOS E	3.5	25.5	0.30	0.34	0.43	51.8
Approach			657	4.3	657	4.3	0.475	6.8	NA	3.5	25.5	0.30	0.34	0.43	53.7
North: Seymour Street (N)															
7	L2	All MCs	48	4.3	48	4.3	0.253	14.6	LOS B	0.9	6.2	0.86	0.97	0.96	42.2
8	T1	All MCs	5	0.0	5	0.0	0.253	53.8	LOS D	0.9	6.2	0.86	0.97	0.96	42.6
9	R2	All MCs	4	0.0	4	0.0	0.253	77.3	LOS F	0.9	6.2	0.86	0.97	0.96	42.3
Approach			58	3.6	58	3.6	0.253	22.8	LOS B	0.9	6.2	0.86	0.97	0.96	42.3
West: Georges River Road (W)															
10	L2	All MCs	40	2.6	40	2.6	0.325	5.7	LOS A	0.0	0.0	0.00	0.04	0.00	56.9
11	T1	All MCs	1117	5.4	1117	5.4	0.325	0.1	LOS A	0.5	3.9	0.05	0.08	0.05	59.3
12	R2	All MCs	36	0.0	36	0.0	0.325	15.0	LOS B	0.5	3.9	0.11	0.13	0.11	56.3
Approach			1193	5.1	1193	5.1	0.325	0.7	NA	0.5	3.9	0.05	0.08	0.05	59.1
All Vehicles			1953	4.7	1953	4.7	0.475	4.1	NA	3.5	25.5	0.18	0.22	0.23	55.9

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

MOVEMENT SUMMARY

Site: 101 [(ExPM) Dunmore Street / Wentworth Road (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.2.202

Existing PM Peak Period
Dunmore Street / Wentworth Road
Job No. 220607
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Wentworth Road (E)															
5	T1	All MCs	235	0.0	235	0.0	0.147	0.0	LOS A	0.3	2.0	0.11	0.13	0.11	58.8
6	R2	All MCs	39	0.0	39	0.0	0.147	7.2	LOS A	0.3	2.0	0.11	0.13	0.11	56.1
Approach			274	0.0	274	0.0	0.147	1.0	NA	0.3	2.0	0.11	0.13	0.11	58.4
North: Dunmore Street (N)															
7	L2	All MCs	58	0.0	58	0.0	0.051	6.2	LOS A	0.2	1.4	0.30	0.57	0.30	52.0
9	R2	All MCs	7	0.0	7	0.0	0.051	7.5	LOS A	0.2	1.4	0.30	0.57	0.30	51.7
Approach			65	0.0	65	0.0	0.051	6.3	LOS A	0.2	1.4	0.30	0.57	0.30	52.0
West: Wentworth Road (W)															
10	L2	All MCs	13	0.0	13	0.0	0.110	5.6	LOS A	0.0	0.0	0.00	0.04	0.00	57.2
11	T1	All MCs	201	0.5	201	0.5	0.110	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	59.6
Approach			214	0.5	214	0.5	0.110	0.4	NA	0.0	0.0	0.00	0.04	0.00	59.5
All Vehicles			553	0.2	553	0.2	0.147	1.4	NA	0.3	2.0	0.09	0.15	0.09	57.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

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

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [(ExPM) Dunmore Street / Georges River Road / Seymour Street (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.2.202

Existing PM Peak Period
Dunmore Street / Georges River Road / Seymour Street
Job No. 220780
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Dunmore Street (S)															
1	L2	All MCs	29	0.0	29	0.0	0.237	10.0	LOS A	0.8	5.6	0.85	0.92	0.95	39.5
2	T1	All MCs	4	0.0	4	0.0	0.237	71.6	LOS F	0.8	5.6	0.85	0.92	0.95	39.8
3	R2	All MCs	5	0.0	5	0.0	0.237	100.2	LOS F	0.8	5.6	0.85	0.92	0.95	39.5
Approach			39	0.0	39	0.0	0.237	28.9	LOS C	0.8	5.6	0.85	0.92	0.95	39.6
East: Georges River Road (E)															
4	L2	All MCs	19	0.0	19	0.0	0.314	5.6	LOS A	0.0	0.0	0.00	0.02	0.00	57.2
5	T1	All MCs	1094	2.4	1094	2.4	0.314	0.1	LOS A	0.5	3.9	0.06	0.09	0.06	59.2
6	R2	All MCs	38	0.0	38	0.0	0.314	18.8	LOS B	0.5	3.9	0.14	0.17	0.14	56.2
Approach			1151	2.3	1151	2.3	0.314	0.8	NA	0.5	3.9	0.06	0.09	0.06	59.1
North: Seymour Street (N)															
7	L2	All MCs	34	0.0	34	0.0	0.363	15.2	LOS B	1.2	8.5	0.90	1.01	1.09	35.9
8	T1	All MCs	4	0.0	4	0.0	0.363	74.3	LOS F	1.2	8.5	0.90	1.01	1.09	36.1
9	R2	All MCs	9	0.0	9	0.0	0.363	104.3	LOS F	1.2	8.5	0.90	1.01	1.09	35.8
Approach			47	0.0	47	0.0	0.363	38.3	LOS C	1.2	8.5	0.90	1.01	1.09	35.9
West: Georges River Road (W)															
10	L2	All MCs	22	0.0	22	0.0	0.388	5.7	LOS A	0.0	0.0	0.00	0.02	0.00	57.1
11	T1	All MCs	724	1.9	724	1.9	0.388	0.1	LOS A	0.0	0.0	0.00	0.02	0.00	59.6
12	R2	All MCs	53	0.0	53	0.0	0.109	12.4	LOS A	0.4	2.8	0.69	0.87	0.69	48.0
Approach			799	1.7	799	1.7	0.388	1.1	NA	0.4	2.8	0.05	0.07	0.05	58.6
All Vehicles			2036	2.0	2036	2.0	0.388	2.3	NA	1.2	8.5	0.09	0.12	0.10	57.5

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

MOVEMENT SUMMARY

Site: 101 [(FutAM) Dunmore Street / Wentworth Road (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.2.202

Future AM Peak Period
Dunmore Street / Wentworth Road
Job No. 220607
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Wentworth Road (E)															
5	T1	All MCs	253	0.8	253	0.8	0.160	0.0	LOS A	0.3	2.2	0.14	0.16	0.14	58.8
6	R2	All MCs	36	2.9	36	2.9	0.160	9.0	LOS A	0.3	2.2	0.14	0.16	0.14	55.9
Approach			288	1.1	288	1.1	0.160	1.1	NA	0.3	2.2	0.14	0.16	0.14	58.4
North: Dunmore Street (N)															
7	L2	All MCs	60	0.0	60	0.0	0.062	6.7	LOS A	0.2	1.7	0.40	0.63	0.40	51.7
9	R2	All MCs	7	14.3	7	14.3	0.062	9.4	LOS A	0.2	1.7	0.40	0.63	0.40	50.8
Approach			67	1.6	67	1.6	0.062	7.0	LOS A	0.2	1.7	0.40	0.63	0.40	51.6
West: Wentworth Road (W)															
10	L2	All MCs	23	0.0	23	0.0	0.185	5.6	LOS A	0.0	0.0	0.00	0.04	0.00	57.1
11	T1	All MCs	333	1.9	333	1.9	0.185	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	59.5
Approach			356	1.8	356	1.8	0.185	0.4	NA	0.0	0.0	0.00	0.04	0.00	59.4
All Vehicles			712	1.5	712	1.5	0.185	1.3	NA	0.3	2.2	0.09	0.15	0.09	58.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

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

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [(FutAM) Dunmore Street / Georges River Road / Seymour Street (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.2.202

Future AM Peak Period
Dunmore Street / Georges River Road / Seymour Street
Job No. 220780
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Dunmore Street (S)															
1	L2	All MCs	38	0.0	38	0.0	0.335	10.4	LOS A	0.9	6.5	0.90	0.94	1.08	39.9
2	T1	All MCs	6	0.0	6	0.0	0.335	57.9	LOS E	0.9	6.5	0.90	0.94	1.08	40.2
3	R2	All MCs	4	25.0	4	25.0	0.335	141.8	LOS F	0.9	6.5	0.90	0.94	1.08	39.1
Approach			48	2.2	48	2.2	0.335	28.0	LOS B	0.9	6.5	0.90	0.94	1.08	39.9
East: Georges River Road (E)															
4	L2	All MCs	24	0.0	24	0.0	0.476	7.5	LOS A	3.6	26.0	0.30	0.35	0.43	51.8
5	T1	All MCs	586	4.8	586	4.8	0.476	2.0	LOS A	3.6	26.0	0.30	0.35	0.43	53.8
6	R2	All MCs	49	0.0	49	0.0	0.476	65.5	LOS E	3.6	26.0	0.30	0.35	0.43	51.7
Approach			660	4.3	660	4.3	0.476	6.9	NA	3.6	26.0	0.30	0.35	0.43	53.6
North: Seymour Street (N)															
7	L2	All MCs	48	4.3	48	4.3	0.255	14.7	LOS B	0.9	6.2	0.86	0.97	0.96	42.2
8	T1	All MCs	5	0.0	5	0.0	0.255	54.4	LOS D	0.9	6.2	0.86	0.97	0.96	42.5
9	R2	All MCs	4	0.0	4	0.0	0.255	78.4	LOS F	0.9	6.2	0.86	0.97	0.96	42.2
Approach			58	3.6	58	3.6	0.255	22.9	LOS B	0.9	6.2	0.86	0.97	0.96	42.2
West: Georges River Road (W)															
10	L2	All MCs	40	2.6	40	2.6	0.327	5.7	LOS A	0.0	0.0	0.00	0.04	0.00	56.9
11	T1	All MCs	1117	5.4	1117	5.4	0.327	0.1	LOS A	0.6	4.3	0.06	0.09	0.06	59.2
12	R2	All MCs	39	0.0	39	0.0	0.327	15.0	LOS B	0.6	4.3	0.12	0.14	0.12	56.3
Approach			1196	5.1	1196	5.1	0.327	0.7	NA	0.6	4.3	0.06	0.09	0.06	59.0
All Vehicles			1962	4.7	1962	4.7	0.476	4.1	NA	3.6	26.0	0.18	0.22	0.24	55.8

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

MOVEMENT SUMMARY

Site: 101 [(FutPM) Dunmore Street / Wentworth Road (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.2.202

Future PM Peak Period
Dunmore Street / Wentworth Road
Job No. 220607
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Wentworth Road (E)															
5	T1	All MCs	235	0.0	235	0.0	0.150	0.0	LOS A	0.3	2.2	0.12	0.15	0.12	58.7
6	R2	All MCs	43	0.0	43	0.0	0.150	7.2	LOS A	0.3	2.2	0.12	0.15	0.12	56.0
Approach			278	0.0	278	0.0	0.150	1.1	NA	0.3	2.2	0.12	0.15	0.12	58.2
North: Dunmore Street (N)															
7	L2	All MCs	65	0.0	65	0.0	0.059	6.2	LOS A	0.2	1.6	0.30	0.57	0.30	52.0
9	R2	All MCs	9	0.0	9	0.0	0.059	7.6	LOS A	0.2	1.6	0.30	0.57	0.30	51.7
Approach			75	0.0	75	0.0	0.059	6.3	LOS A	0.2	1.6	0.30	0.57	0.30	51.9
West: Wentworth Road (W)															
10	L2	All MCs	15	0.0	15	0.0	0.111	5.6	LOS A	0.0	0.0	0.00	0.04	0.00	57.1
11	T1	All MCs	201	0.5	201	0.5	0.111	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	59.6
Approach			216	0.5	216	0.5	0.111	0.4	NA	0.0	0.0	0.00	0.04	0.00	59.4
All Vehicles			568	0.2	568	0.2	0.150	1.5	NA	0.3	2.2	0.10	0.16	0.10	57.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

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

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

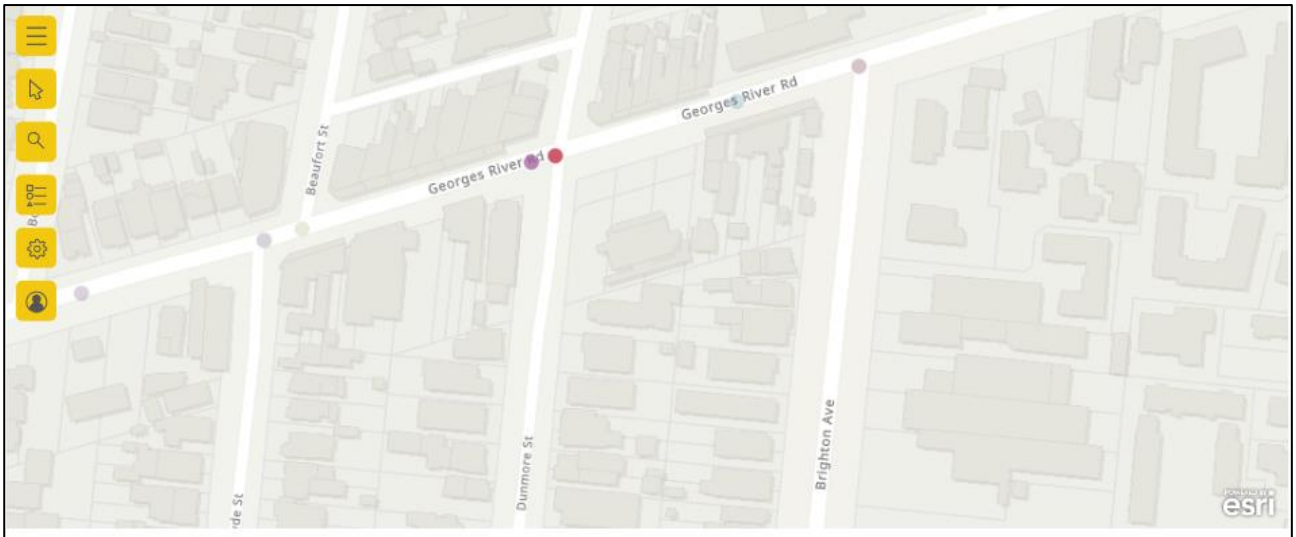
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

ANNEXURE D: TRAFFIC SURVEY VIDEO CALIBRATION RESULTS
(1 SHEET)

	Time Entry			Time Exit					
Vehicle	HR	M	S	HR	M	S	Delay (s)	Turning Movement	Position in Queue
1	7	45	58	7	46	5	7	Left	1
2	7	50	0	7	50	40	40	Left	1
3	7	50	40	7	50	46	6	Left	1
4	7	53	16	7	53	20	4	Left	1
5	7	53	52	7	53	57	5	Left	1
6	7	54	11	7	55	57	106	Through	1
7	7	54	30	7	56	32	122	Through	2
8	7	56	25	7	56	33	8	Left	1
9	7	56	33	7	56	36	3	Left	1
10	7	57	46	7	57	49	3	Left	1
11	7	59	4	7	59	9	5	Left	1
12	8	0	4	8	0	9	5	Left	1
13	8	0	9	8	0	17	8	Left	1
14	8	1	3	8	1	7	4	Left	1
15	8	1	14	8	1	17	3	Left	1
16	8	2	49	8	3	27	38	Right	1
17	8	3	26	8	3	40	14	Right	1
18	8	4	26	8	4	48	22	Left	1
19	8	5	9	8	5	23	14	Left	1
20	8	6	9	8	6	12	3	Left	1
21	8	6	17	8	6	48	31	Left	1
22	8	9	44	8	10	26	42	Right	1
23	8	17	55	8	18	4	9	Left	1
24	8	21	25	8	21	28	3	Left	1
25	8	21	35	8	21	48	13	Left	1
26	8	23	28	8	23	48	20	Left	1
27	8	23	48	8	23	54	6	Left	1
28	8	27	8	8	27	16	8	Left	1
29	8	30	49	8	30	56	7	Through	1
30	8	31	1	8	31	6	5	Left	1
31	8	31	15	8	31	33	18	Left	1
32	8	31	32	8	31	43	11	Through	1
33	8	31	48	8	31	58	10	Left	1
34	8	34	3	8	34	8	5	Left	1
35	8	34	48	8	35	14	26	Through	1
36	8	35	40	8	35	50	10	Left	1
37	8	39	6	8	39	10	4	Left	1
38	8	39	22	8	39	28	6	Left	1
39	8	39	42	8	40	31	49	Through	1
40	8	41	22	8	41	28	6	Left	1
41	8	42	22	8	42	35	13	Left	1
42	8	43	8	8	44	14	66	Right	1
43	8	44	52	8	44	56	4	Left	1
PM PEAK START									
1	17	3	51	17	3	55	4	Left	1
2	17	5	39	17	5	43	4	Left	1
3	17	9	28	17	9	43	15	Left	1
4	17	10	50	17	11	3	13	Left	1
5	17	12	9	17	12	15	6	Left	1
6	17	14	38	17	14	42	4	Left	1
7	17	14	42	17	14	54	12	Right	1
8	17	20	34	17	20	58	24	Through	1
9	17	20	58	17	21	4	6	Right	1
10	17	22	25	17	23	22	57	Left	1
11	17	24	35	17	24	53	18	Left	1
12	17	26	59	17	27	12	13	Left	1
13	17	27	48	17	27	52	4	Left	1
14	17	28	11	17	28	15	4	Left	1
15	17	31	41	17	31	46	5	Left	1
16	17	34	30	17	35	2	32	Left	1
17	17	35	37	17	36	16	39	Left	1
18	17	38	17	17	38	43	26	Right	1
19	17	38	45	17	38	53	8	Left	1
20	17	39	11	17	39	16	5	Left	1
21	17	40	55	17	41	2	7	Right	1
22	17	41	0	17	41	6	6	Left	1
23	17	41	46	17	41	50	4	Through	1
24	17	42	44	17	42	54	10	Left	1
25	17	46	8	17	46	42	34	Through	1
26	17	47	31	17	47	34	3	Left	1
27	17	49	26	17	49	30	4	Left	1
28	17	50	16	17	50	38	22	Left	1
29	17	52	3	17	52	8	5	Left	1
30	17	54	5	17	54	19	14	Left	1
31	17	54	27	17	54	45	18	Through	1
32	17	54	51	17	54	57	6	Left	1
33	17	57	59	17	58	19	20	Left	1
34	17	58	19	17	58	31	12	Left	1
35	17	58	37	17	58	45	8	Right	1
36	17	58	45	17	58	49	4	Left	1
37	17	59	15	17	59	27	12	Left	1

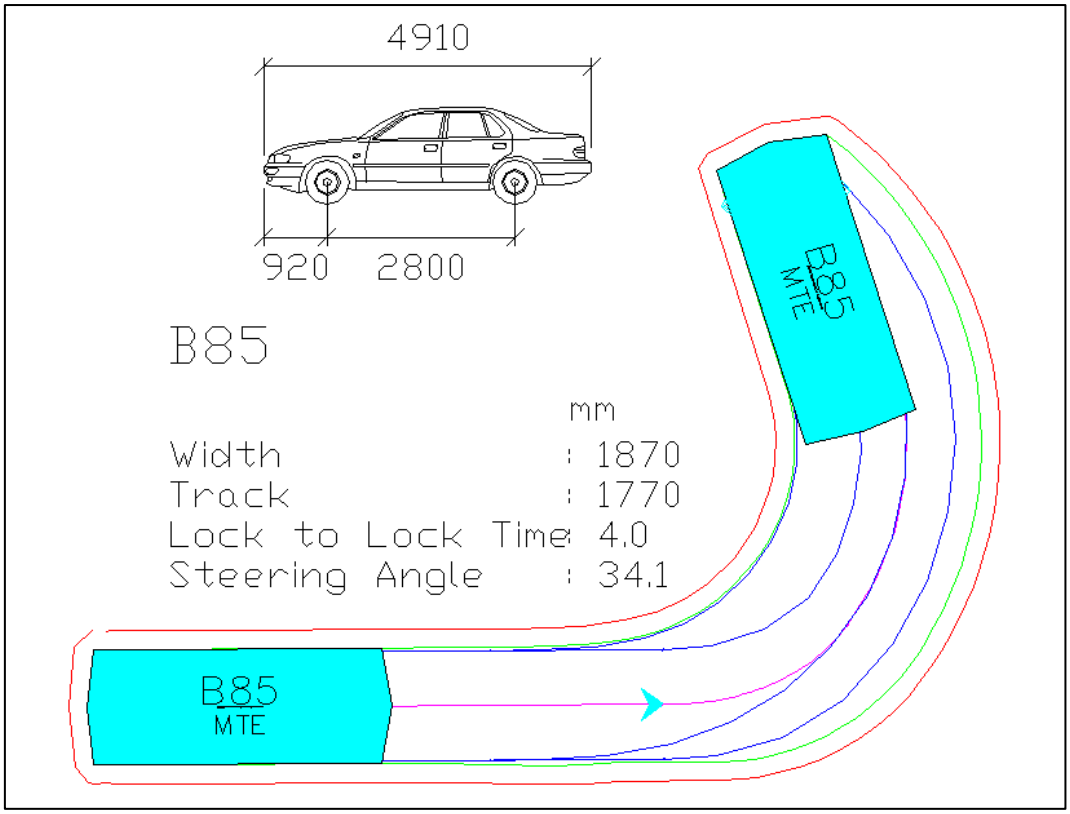
Dunmore Street Delay

ANNEXURE E: TFNSW CENTRE FOR ROAD SAFETY CRASH DATA AT GEORGES RIVER ROAD / DUNMORE STREET / SEYMOUR STREET
(1 SHEET)

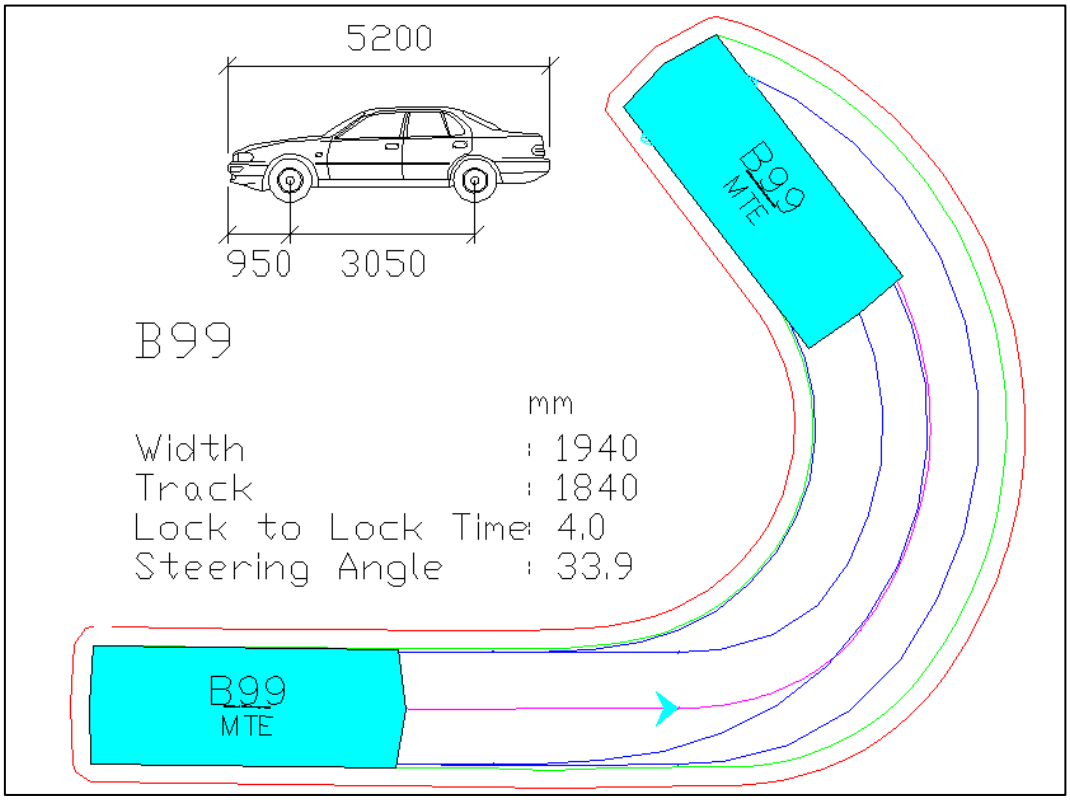


Reporting year	Crash Id	Degree of crash	RUM - code	RUM - description	Type of location	Natural lighting	Longitude	Latitude	Number killed	Number injured
2018	1191223	Minor/Other Injury	30	Rear end	X-intersection	Daylight	151.107180	-33.895641		1
2020	1233526	Moderate Injury	21	Right through	X-intersection	Daylight	151.107284	-33.895616		1
2020	1247415	Minor/Other Injury	21	Right through	X-intersection	Daylight	151.107284	-33.895616		1
2020	1248508	Moderate Injury	10	Cross traffic	X-intersection	Darkness	151.107284	-33.895616		1
2021	1274552	Non-casualty (towaway)	81	Off left/rt bnd=>obj	X-intersection	Darkness	151.107284	-33.895616		

ANNEXURE F: SWEPT PATH TESTING
(9 SHEETS)



AUSTRALIAN STANDARD 85TH PERCENTILE SIZE VEHICLE (B85)

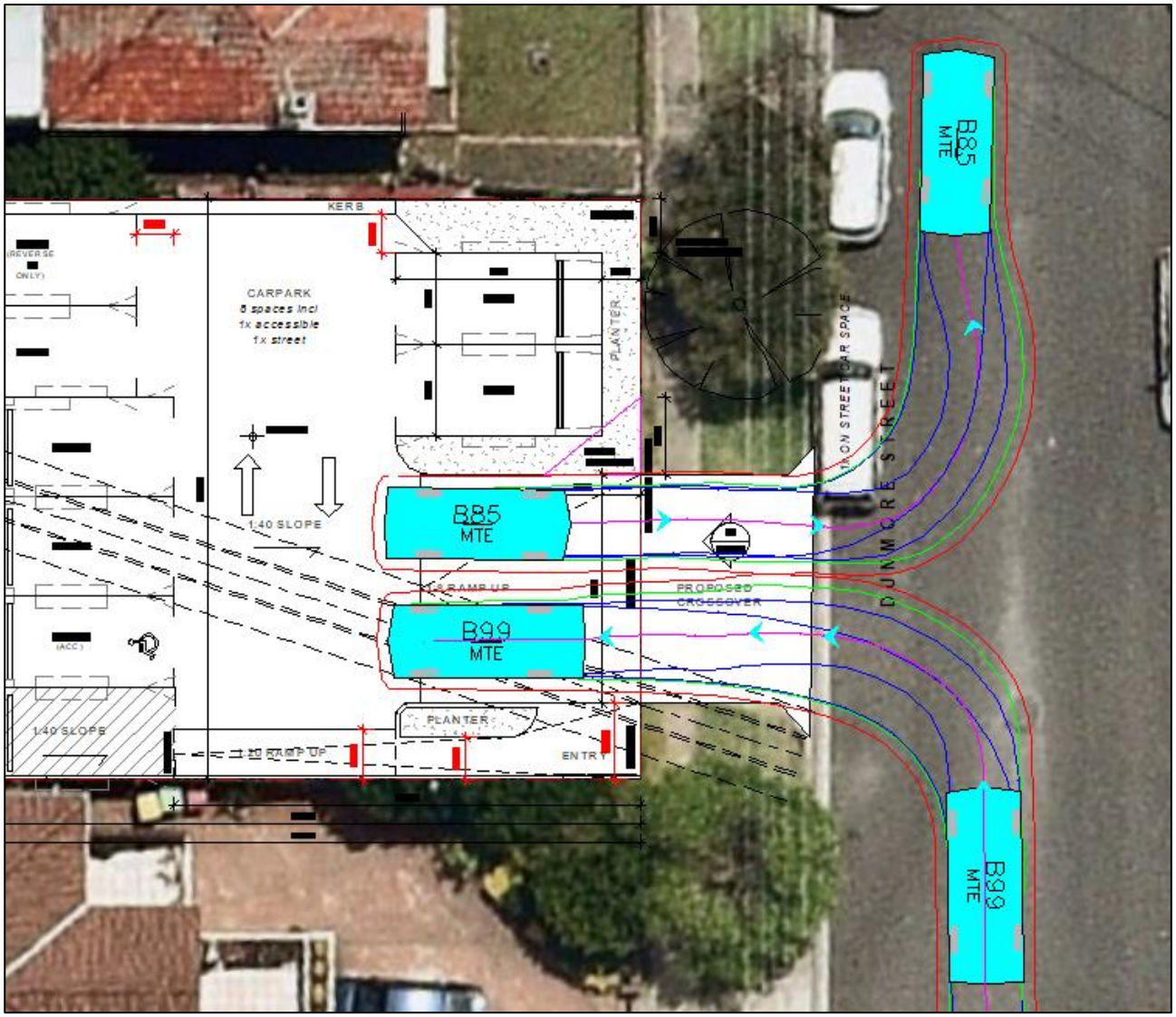


AUSTRALIAN STANDARD 99.8TH PERCENTILE SIZE VEHICLE (B99)

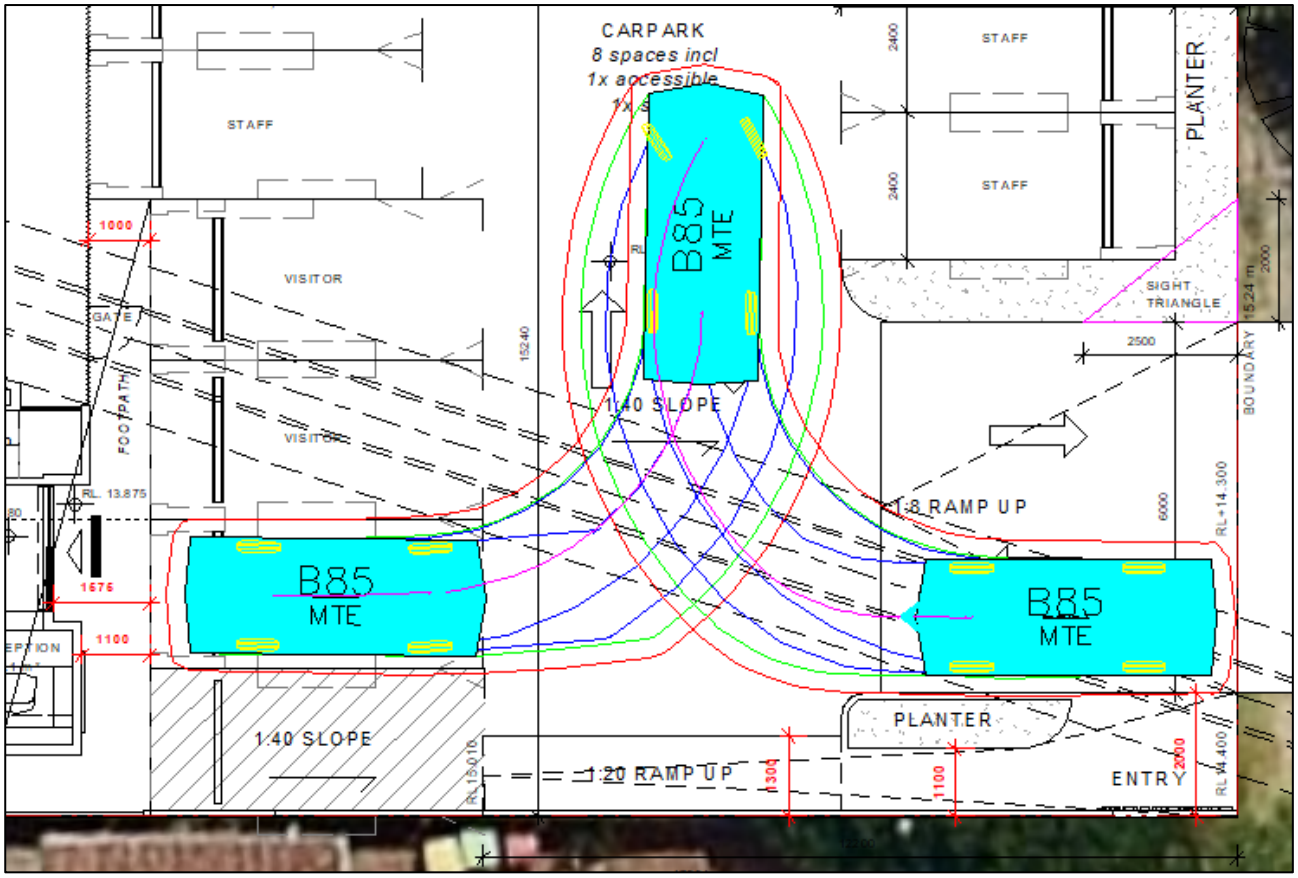
Blue – Tyre Path

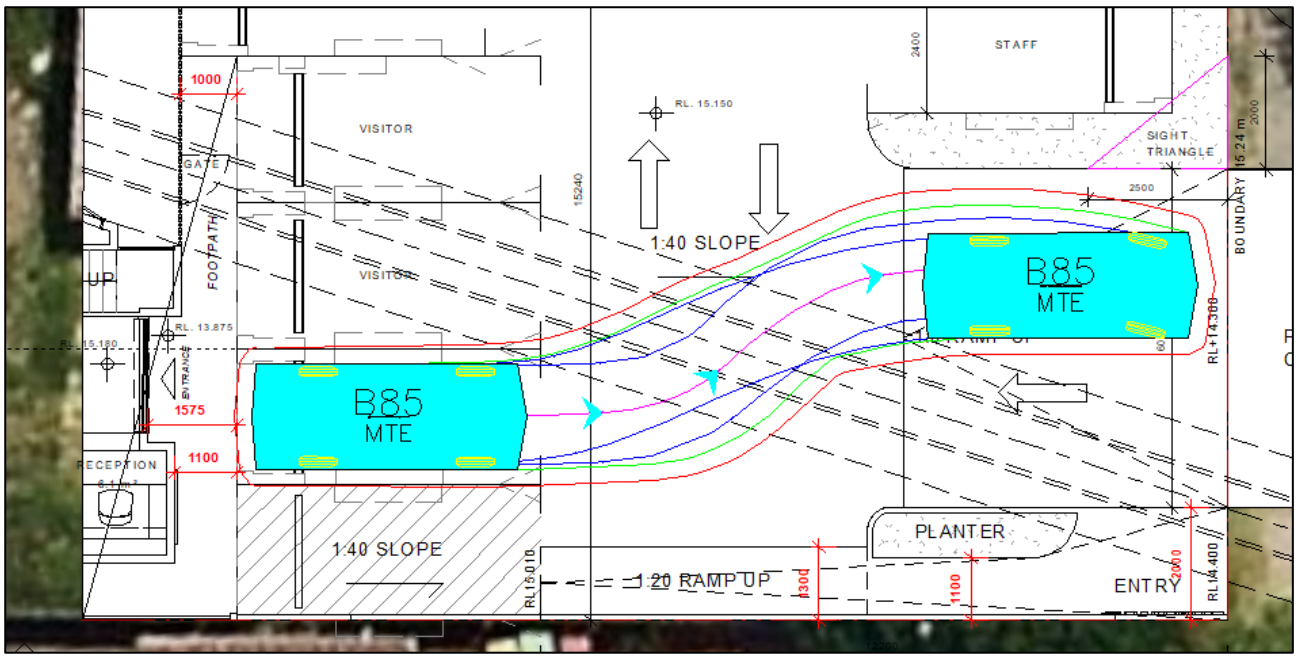
Green – Vehicle Body

Red – 300mm Clearance



B99 Passing B85 at Site Driveway
SUCCESSFUL

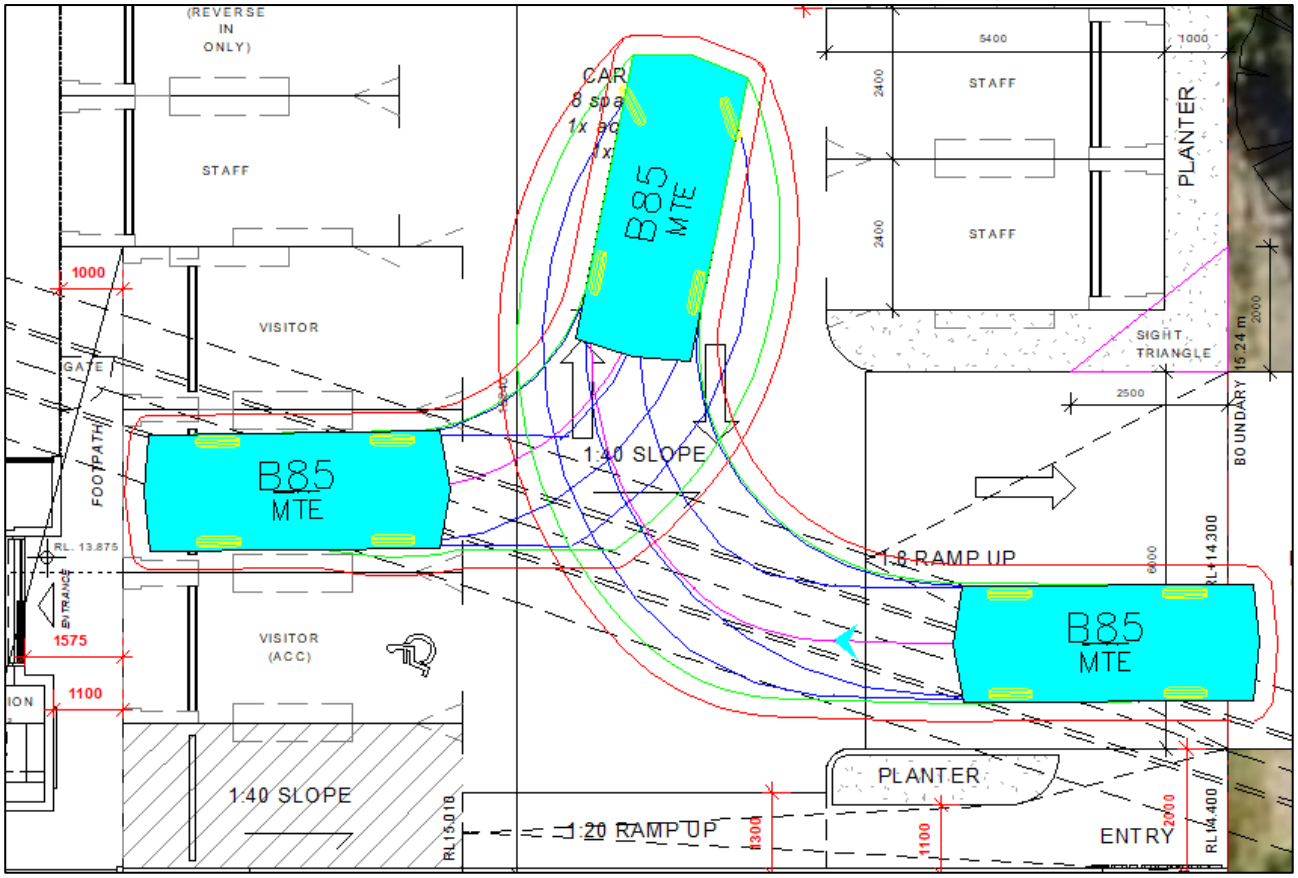


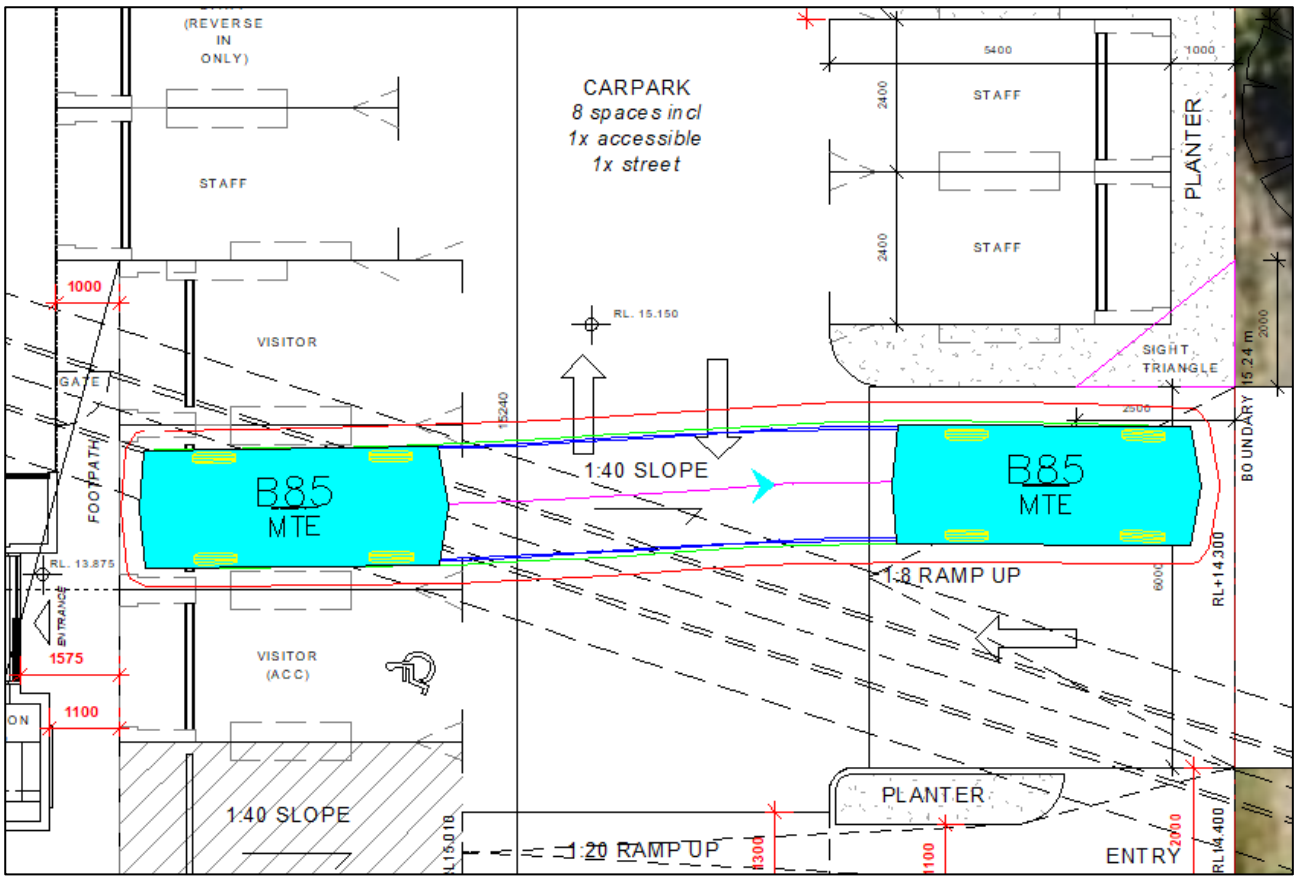


B85 Entry / Exit from Visitor Space 1

2 Manoeuvres REVERSE IN / 1 Manoeuvre FORWARD OUT

SUCCESSFUL

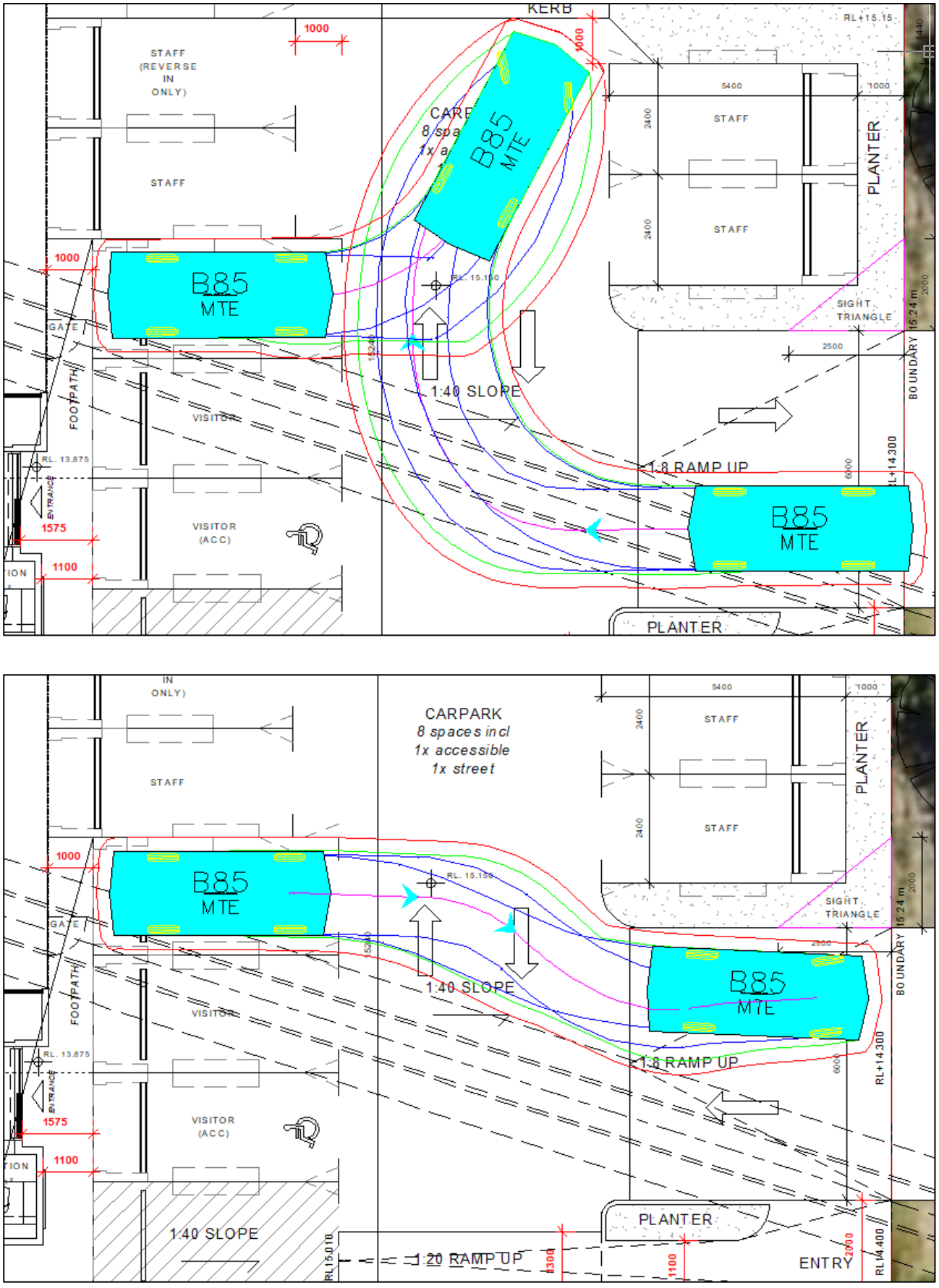




B85 Entry / Exit from Visitor Space 2

2 Manoeuvres REVERSE IN / 1 Manoeuvre FORWARD OUT

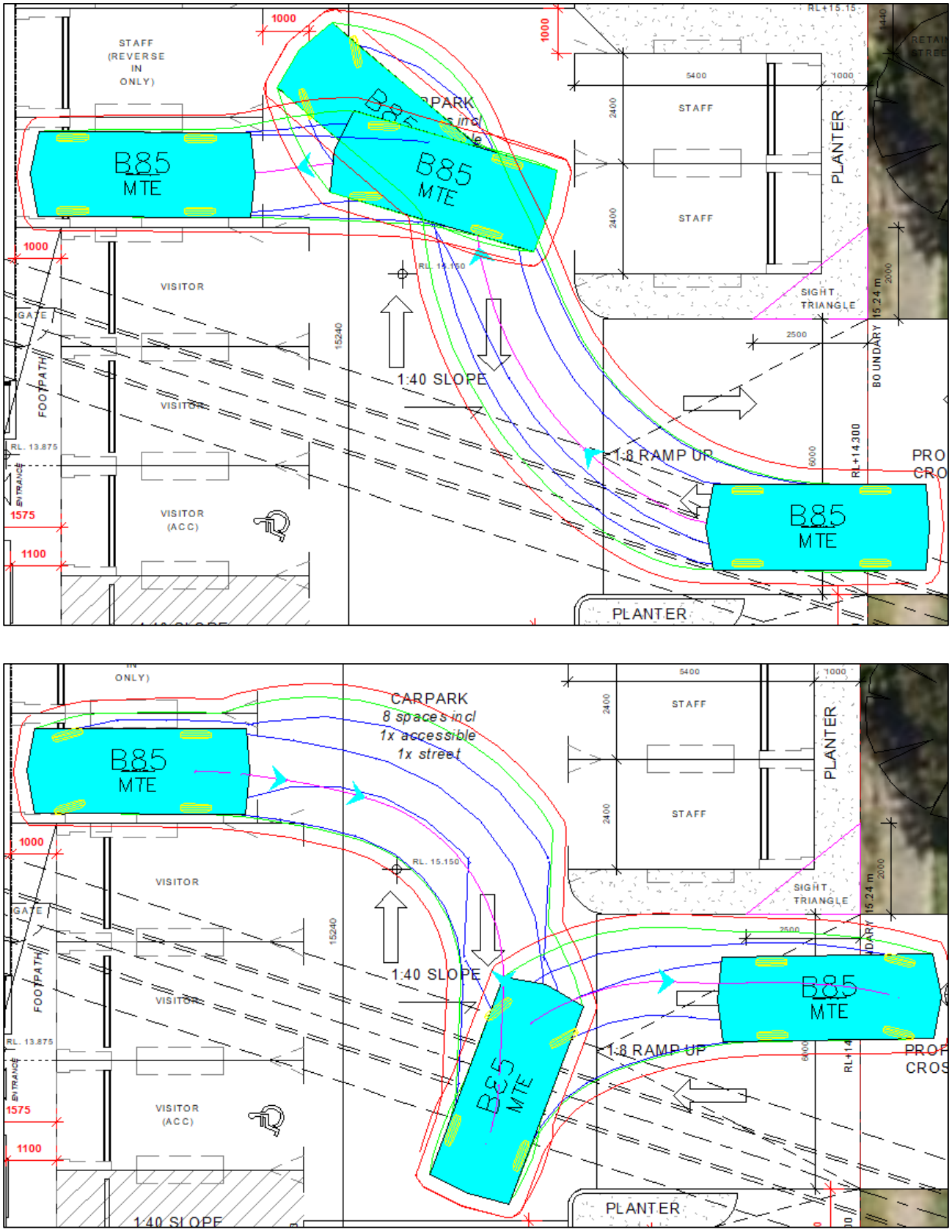
SUCCESSFUL



B85 Entry / Exit from Visitor Space 3

2 Manoeuvres REVERSE IN / 1 Manoeuvre FORWARD OUT

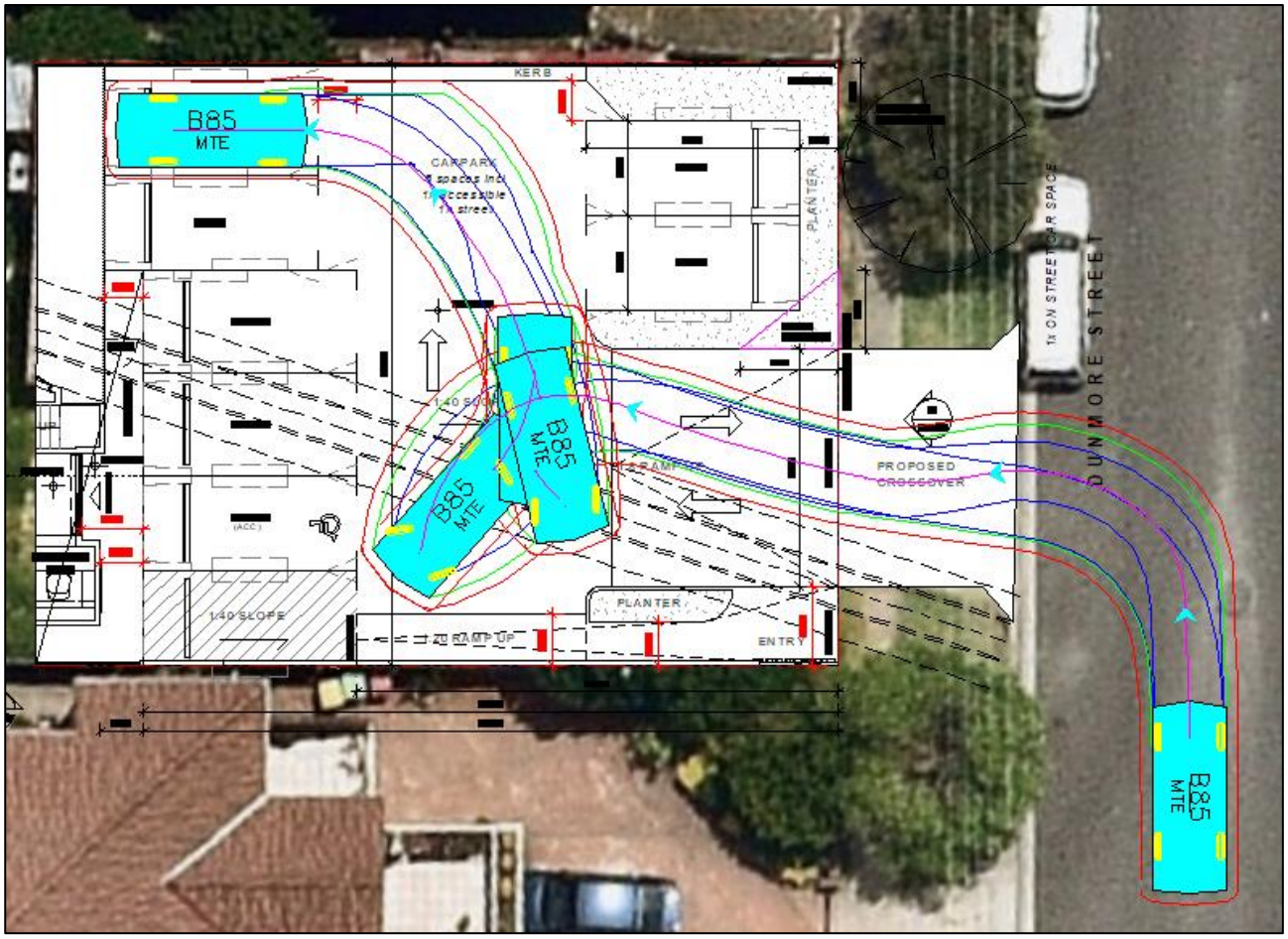
SUCCESSFUL

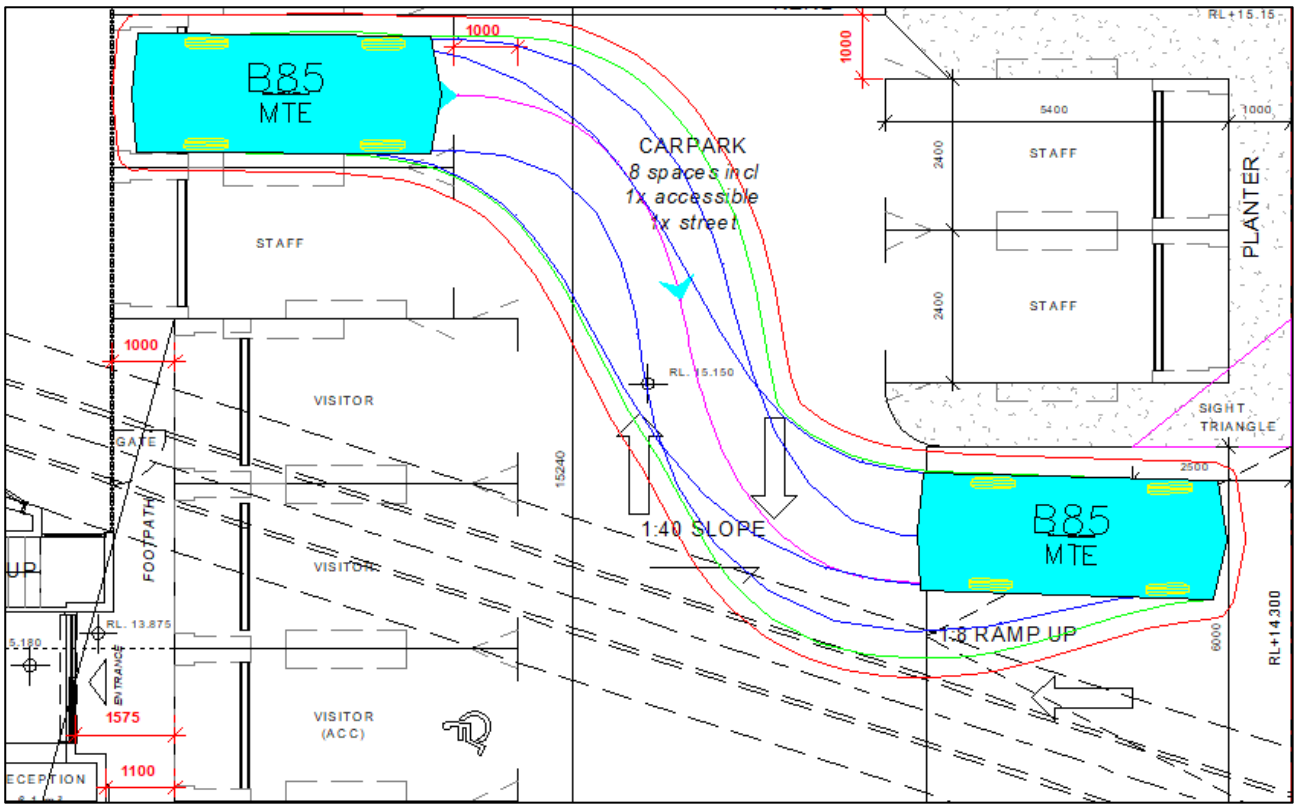


B85 Entry / Exit from Staff Space 1

3 Manoeuvres FORWARD IN / 2 Manoeuvres REVERSE OUT

SUCCESSFUL

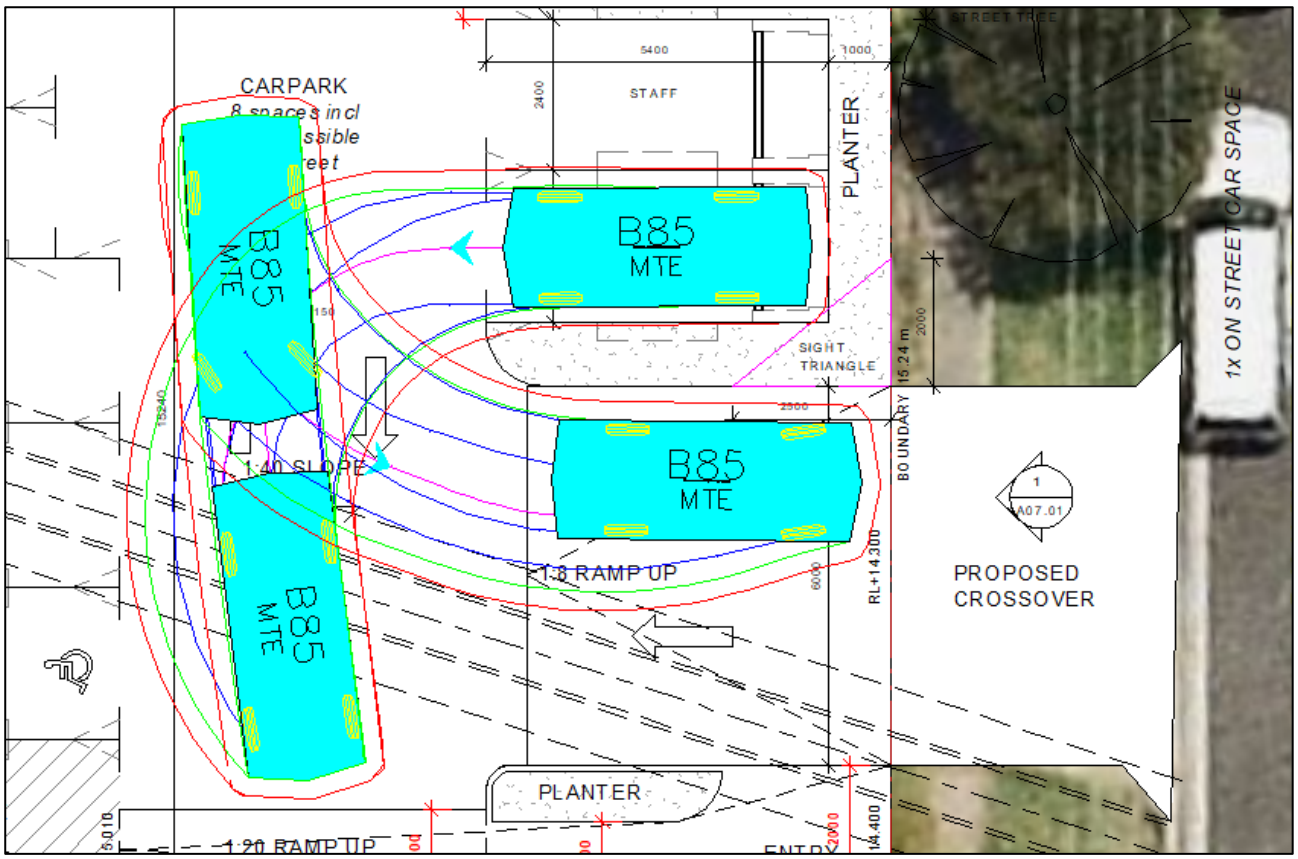




B85 Entry / Exit from Staff Space 2

4 Manoeuvres REVERSE IN / 1 Manoeuvre FORWARD OUT

SUCCESSFUL



B85 Entry / Exit from Staff Space 3

2 Manoeuvres REVERSE IN / 3 Manoeuvres FORWARD OUT

SUCCESSFUL

B85 Entry / Exit from Staff Space 5

3 Manoeuvres FORWARD IN / 2 Manoeuvres REVERSE OUT

SUCCESSFUL