TRAFFIC AND PARKING IMPACT ASSESSMENT OF THE PROPOSED LAHC RESIDENTIAL DEVELOPMENT AT 38 - 40 JOHN T BELL DRIVE, MARYLAND

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

220409.01FB - 6 October 2022

Development Type: **LAHC Residential Development**

Site Address: **38 - 40 John T Bell Drive, Maryland**

Prepared for: **CKDS**

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Status	Issue	Prepared By	Checked By	Date
Draft	A	JC/DW	DF	2 June 2022
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Final	A	DW	DW	6 October 2022

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1 INTRODUCTION

M^CLaren Traffic Engineering was commissioned by *CKDS* to provide a traffic and parking impact assessment of the proposed LAHC Residential Development at 38 - 40 John T Bell Drive, Maryland 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 two-storey residential flat building containing 16 units comprising of:
    - Six (6) one-bedroom units;
    - Ten (10) two-bedroom units.
- An at-grade car parking area containing the provision of eight (8) car parking spaces with access via a two-way driveway from Matfen Close.

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 2.121* of the *SEPP (Transport and Infrastructure) 2021*. Accordingly, formal referral to Transport for NSW (TfNSW) is unnecessary and the application can be assessed by Newcastle Council officers accordingly.

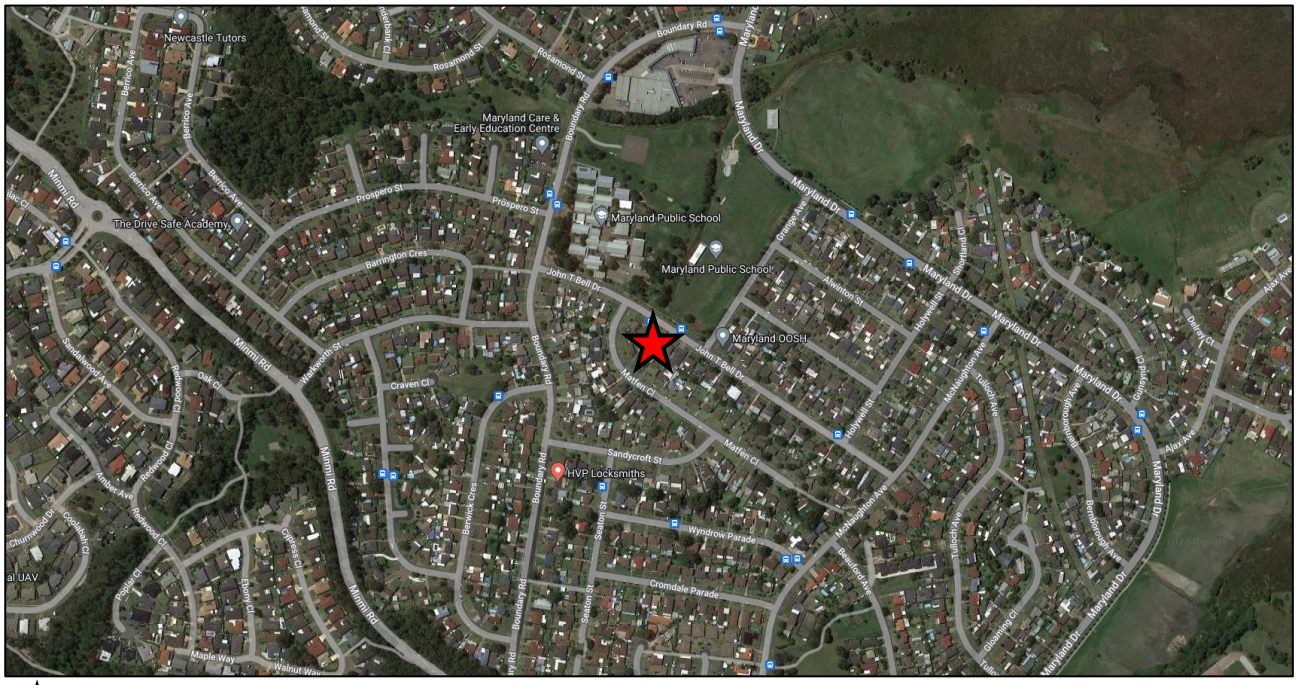
1.3 Site Description

The subject development involves the amalgamation of four (4) lots being 38 - 40 John T Bell Drive and 31 - 33 Maften Close. The sites are currently zoned *R2 – Low Density Residential* under the Newcastle Council LEP 2012 and are currently occupied by four (4) single storey residential dwellings. The site has two frontages, John T Bell Drive to the north and Matfen Close to the south.

The site is generally surrounded by low-density residential developments with Maryland Public School located approximately 150m to the north-west of the site and Maryland Shopping Centre located approximately 350m to the north of the site.

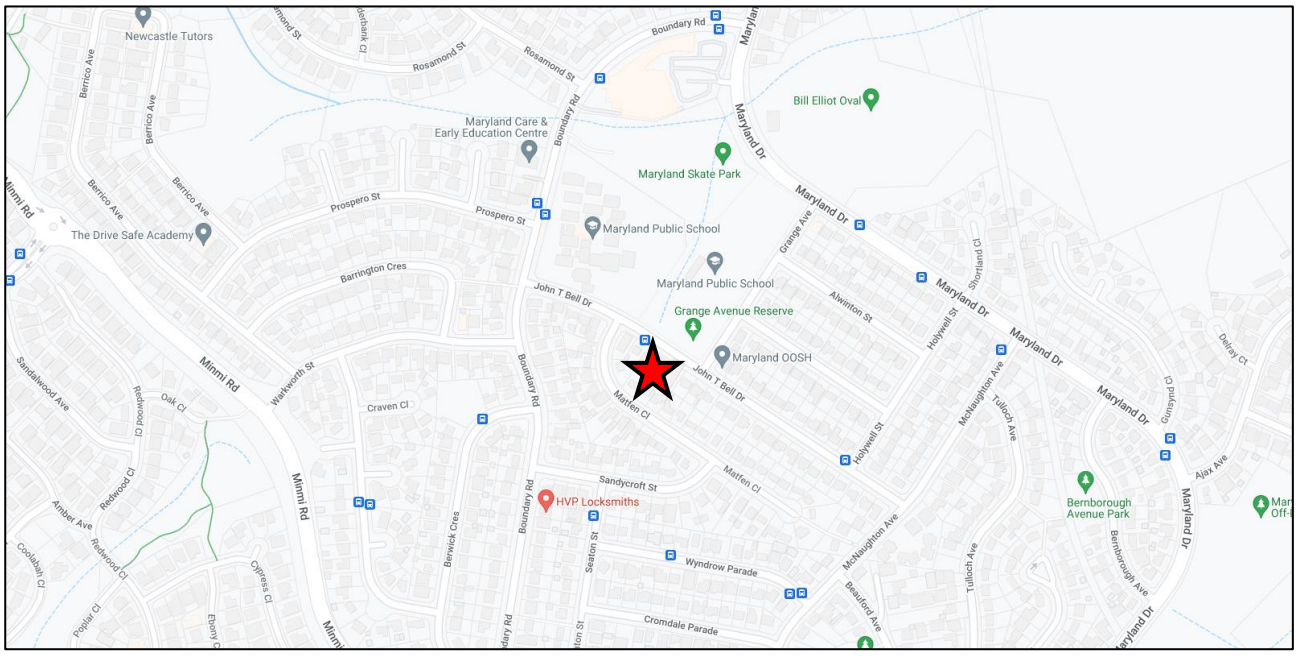
1.4 Site Context

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 within close vicinity of the site has characteristics as described in the following sub-sections.

2.1.1 Matfen Close

- Unclassified LOCAL Road;
- Approximately 9m wide two-way carriageway facilitating one traffic flow lane in each direction and kerbside parking on both sides of the road;
- Signposted 50km/h speed limit;
- 40km/h speed limit applies during school zone hours;
- Unrestricted kerbside parking permitted along both sides of the road.

2.1.2 John T Bell Drive

- Unclassified LOCAL Road;
- Approximately 12m wide two-way carriageway facilitating one traffic flow lane in each direction and kerbside parking on both sides of the road;
- Signposted 50km/h speed limit;
- 40km/h speed limit applies during school zone hours;
- Unrestricted kerbside parking permitted along both sides of the road.

2.1.3 Boundary Road

- Unclassified LOCAL Road;
- Approximately 12m wide two-way carriageway facilitating one traffic flow lane in each direction and kerbside parking on both sides of the road;
- Signposted 50km/h speed limit;
- 40km/h speed limit applies during school zone hours;
- Generally, unrestricted kerbside parking permitted on both sides of the road.

2.1.4 Grange Avenue

- Unclassified LOCAL Road;
- Approximately 10m wide two-way carriageway facilitating one traffic flow lane in each direction and kerbside parking on both sides of the road;
- Signposted 50km/h speed limit;
- 40km/h speed limit applies during school zone hours;
- Unrestricted kerbside parking permitted along both sides of the road.

2.2 Existing Traffic Management

- Priority controlled intersection of John T Bell Drive / Matfen Close.
- Priority controlled intersection of John T Bell Drive / Grange Avenue.
- Priority controlled intersection of John T Bell Drive / Boundary Road.
- School crossing located within John T Bell Drive along the frontage of Maryland Public School.

2.3 Public Transport

The subject site has access to existing bus stop (ID: 2287404) located on the northern side of John T Bell Drive at the site frontage. The bus stop services the existing bus routes 12 (Maryland to Merewether Beach via Wallsend and Newcastle Interchange) and 260 (Minmi to University of Newcastle via Fletcher, Maryland & Wallsend) provided by Newcastle Transport and Hunter Valley Buses, respectively.

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

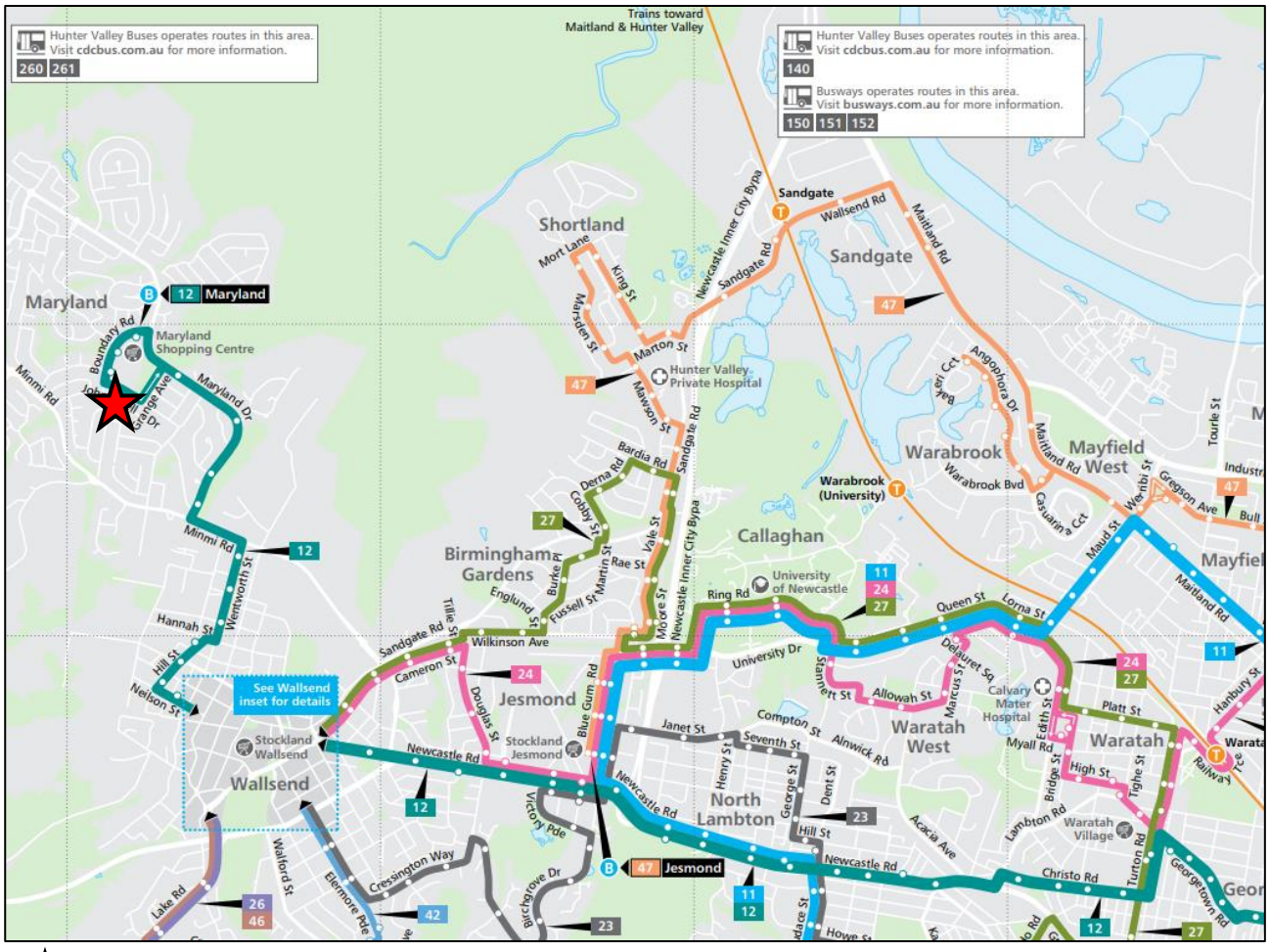


FIGURE 3: PUBLIC TRANSPORT NETWORK MAP

The frequency of buses that service the nearby bus stop (ID: 2287404) is shown in **Table 1**.

TABLE 1: BUS STOP 2287404 FREQUENCY

Time	Number of Services		
	Monday - Friday	Saturday	Sunday
6:00am – 7:00am	3		
7:00am – 8:00am	4		
8:00am – 9:00am	3	2	2
9:00am – 10:00am	4	2	2
10:00am – 11:00am	3	2	2
11:00am – 12:00am	3	2	2
12:00pm – 1:00pm	3	2	2
1:00pm – 2:00pm	3	2	2
2:00pm – 3:00 pm	2	1	2
3:00pm – 4:00pm	3	2	2
4:00pm – 5:00pm	5	2	2
5:00pm – 6:00pm	4	2	2
6:00pm – 7:00pm	3		
7:00pm – 8:00pm	4		
8:00pm – 9:00pm	2		

As shown, there are multiple bus services between 6:00AM - 9:00PM on weekdays and 8:00AM - 6:00PM on weekends.

2.4 Future Road and Infrastructure Upgrades

From Newcastle 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 SEPP Parking Requirement

Reference is made to the *State Environmental Planning Policy (Housing) 2021* hereinafter referred to as SEPP(H). The *SEPP(H) Division 6 Residential development – Land and Housing Corporation*, *Clause 42* provides the following car parking rate applicable to the proposal:

> ***Clause 42*** *Development may be carried out without consent*
>
> *(d) for development on land in an accessible area – the development will result in at least the following parking spaces -*
>
> *(i) for each dwelling containing 1 bedroom – 0.4 parking spaces,*
>
> *ii) for each dwelling containing 2 bedrooms – 0.5 parking spaces.*
>
> *iii) for each dwelling containing at least 3 bedrooms – 1 parking space*

An '*accessible area*' is defined under the SEPP (H) 2021 as follows:

> ***accessible area*** *means land that is within:*
>
> *(a) 800 metres walking distance of a public entrance to a railway station or a wharf from which a Sydney Ferries ferry service operates, or*
>
> *(b) 400 metres walking distance of a public entrance to a light rail station or, in the case of a light rail station with no entrance, 400 metres walking distance of a platform of the light rail station, or*
>
> *(c) 400 metres walking distance of a bus stop used by a regular bus service, within the meaning of the Passenger Transport Act 1990, that has at least 1 bus per hour servicing the bus stop between –*
>
> *i) 06.00 and 21.00 each day from Monday to Friday, both days inclusive, and*
>
> *ii) between 08.00 and 18.00 on each Saturday and Sunday.*

Sufficient evidence has been provided to indicate that the site is located within 400m walking distance of a bus stop serviced by regular buses by Newcastle Transport and Hunter Valley Buses as outlined in **Section 2.3**. Therefore, the development location satisfies the 'accessible area' criteria.

The proposed development is being conducted by the *NSW Land and Housing Corporation* (LAHC), in an accessible area. As such, the car parking requirements applicable to the proposal are summarised in **Table 2**.

TABLE 2: SEPP(H) PARKING REQUIREMENTS

Land Use	Type	Scale	Rate	Spaces Required	Spaces Provided
Residential development – Land and Housing Corporation	One-Bedroom Unit	6	0.4 spaces per unit	2.4	8
	Two-Bedroom Unit	10	0.5 space per unit	5	
Total	**-**	**-**	**-**	**8 (7.4)**	**8**

As shown, the proposed development requires the provision of eight (**8**) car parking spaces. The proposed development includes provision of eight (**8**) car parking spaces and therefore satisfies the requirements of the SEPP(H).

3.2 Parking for People with Disabilities

The proposed development does not include the provision of accessible dwellings and as such, the provision of nil (**0**) accessible parking spaces is acceptable.

3.3 Bicycle & Motorcycle Parking Requirements

The SEPP(H) does not require the provision of bicycle or motorcycle parking facilities for residential developments proposed by the Land and Housing Corporation. As such, the provision of nil (**0**) bicycle and motorcycle parking spaces is acceptable.

3.4 Servicing & Loading

The City of Newcastle Council's DCP and the SEPP(H) do not require loading / unloading facilities for residential developments. It is anticipated that waste collection will occur on-street by Council's waste collection services in a similar fashion to what is currently occurring for the existing site uses, with no requirement or provision for vehicles to load / unload within the site.

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*. 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 B** for reference.

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

- 5.5m wide two-way driveway facilitating access to Matfen Close;
- Minimum 6.2m wide parking aisles;
- Minimum 5.4m long, 2.4m wide spaces for residents;

- Parking module gradients not exceeding 5% in any direction.

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.

3.5.1 Variances from Standards

3.5.1.1 Passing at property boundary

It should be noted that the proposed driveway does not provide a 5.5m width for the first 6m into the property. However, the existing footpath along Matfen Close is offset approximately 1.5m from the property boundary. Therefore, if a vehicle had to wait upon entering the site for another vehicle to exit the single lane portion of the driveway the waiting vehicle would not obstruct the footpath or Matfen Close. Additionally, the likelihood of a vehicle having to wait for another vehicle is extremely low considering the low number of parking spaces being serviced by the driveway and the tidal nature of residential traffic flow. Therefore, the proposed driveway is supported.

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:

3.2.2 Medium density residential flat building

Smaller units and flats (up to two bedrooms)

Weekday peak hour vehicle trips = 0.4-0.5 per dwelling

Application of this rate to the proposed 16 dwellings results in a traffic generation of eight (8) vehicle trips in both the AM and PM peak hour periods. It is noted that this traffic generation is conservative as it does not take into account the reduced parking provision in line with the SEPP(H) requirements and also does not consider the traffic generation associated with the existing use of the site.

This level of traffic will have no adverse effect on any nearby intersections and can be readily accommodated within the existing road network with minimal impact in terms of traffic flow efficiency and road safety considerations.

It should be noted that the *Austroads Guide to Traffic Mgmt. Part 12: Integrated Transport Assessments for Developments Figure 5.1* outlines the following in relation to traffic impact of developments:

Likely impact of development:

Low Impact (<10 Trips): No Detailed Assessment Required

Moderate Impact (10-100 Trips): Traffic Impact Statement Required

High Impact (>100 Trips): Traffic Impact Assessment Required

Considering the above, the proposed development will generation less than 10 vehicle trips and is therefore likely to result in a low impact with no detailed assessment required.

Indeed, the computer models that are available to assess these impacts are not sensitive to such small changes and it may be concluded that the road network will operate with no change in the existing levels of service. In this regard, the proposed residential use of the site is a low-order traffic use and the proposed development is supportable in terms of its traffic impacts.

5 CONCLUSION

In view of the foregoing, the subject LAHC Residential Development proposal at 38 - 40 John T Bell Drive, Maryland (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 eight (**8**) car parking spaces within a proposed carpark, satisfying the SEPP(H) 2021 requirements.
- The SEPP(H) does not require the provision of bicycle or motorcycle parking facilities and nil (0) are provided.
- The parking areas of the site have been assessed against the relevant sections of *AS2890.1:2004* and have been found to satisfy the objectives of each standard. Swept path testing has been undertaken and is reproduced within **Annexure B**.
- The traffic generation of the proposed development is minimal when considering the existing traffic volumes in the local area and will not adversely affect the performance of nearby critical intersections or the existing road network, particularly in terms of Level of Service, traffic flow efficiency, residential amenity and road safety considerations.

ANNEXURE A: PROPOSED PLANS
(1 SHEET)

1 Site Plan - Ground
SCALE 1:350 @ A3

P.O.S.	Private Open Space
RL	Reduced Level
RWT	Rain Water Tank
BG	Box Gutter
FB1	Face Brickwork Type 1
FB2	Face Brickwork Type 2
LC1	Lightweight Cladding - Prefinished Board
GB	Glazed Aluminium Balsutrade - Obscure
MRS	Metal Roof Sheeting
MRC	Metal Roof Capping/Flashing
EG	Eaves Gutter
DP	Downpipe
FEN1	Fence Type 1 - Vertical Slat
SCR	Privacy Screen - Vertical Slat
LB	Letterbox

SITE IS FLOOD AFFECTED AS PER BMT FLOOD BEHAVIOUR REPORT DATED 17th MARCH 2021.

Part 5 Activity Submission

CKDS Architecture | Planning | Interiors
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issue	description	date	verified
02	For Client Review	1/2/2022	02
03	For Client Review	28/2/2022	03
04	For Client Review	3/3/2022	04
05	For Client Review	27/4/2022	05
06	Issue for Information	26/5/2022	06
07	Issue for Review	8/6/2022	07
08	Issue for Review	12/7/2022	08
09	Draft Part 5 Activity Submission	19/7/2022	09
A	Part 5 Activity Submission	21/7/2022	A
B	Part 5 Activity Submission	26/8/2022	B

key plan — North Point

consultants
Civil/Structural Engineers: Northrop Consulting Engineers 1/215 Pacific Hwy, Charlestown NSW 2290 (02) 4943 1777
Electrical Engineer: Electrical Projects Australia 386 Maitland Rd, Mayfield NSW 2304 (02) 4967 5999
Landscape Architects: Xeriscapes 1/28 Adelaide Street, East Gosford NSW 2250 (02) 4302 0477
Hydraulic Engineer: McCalliums PFCA 5/35 Smith St, Charlestown NSW 2290 (02) 4946 2633

clients: Land & Housing Corporation — NSW GOVERNMENT Planning & Environment

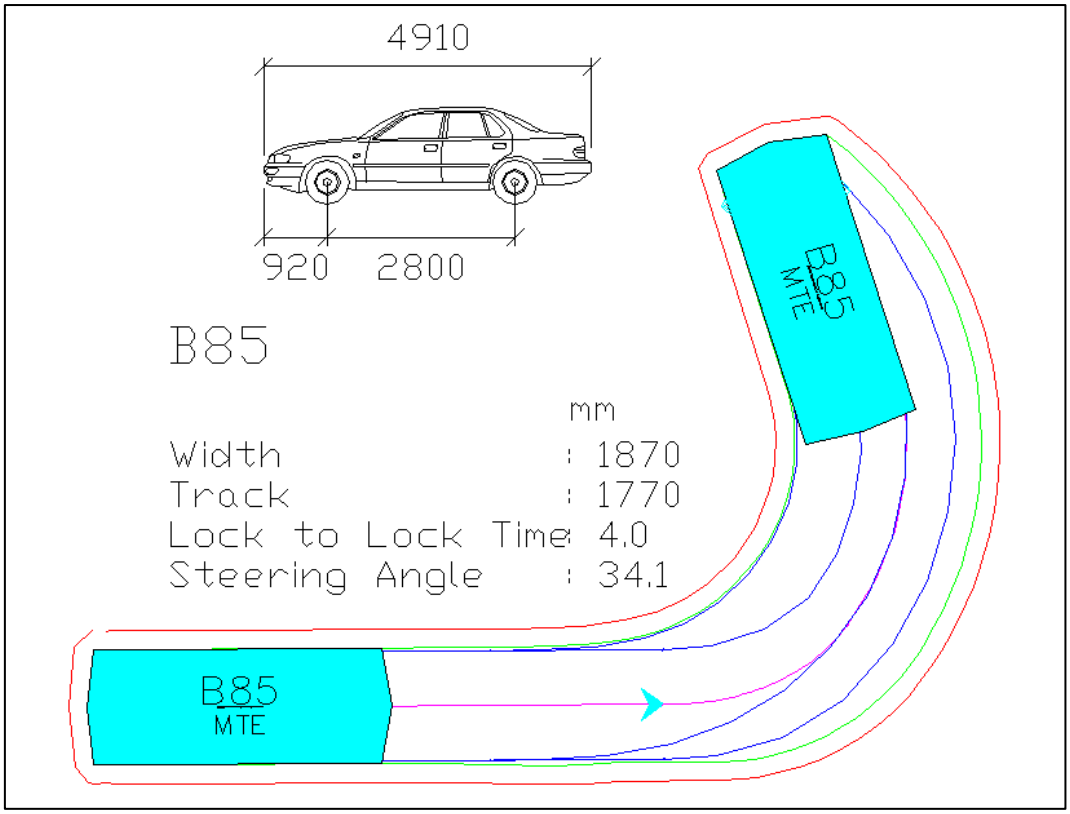
project: LAHC Maryland Development - BGWY7
38, 40 John T Bell Dr & 31, 33 Matfen Cl
Lot 111, 112, 116, 117/-/DP253956
Maryland NSW 2287

drawing title: Site Plan(s)
Site Plan - Ground

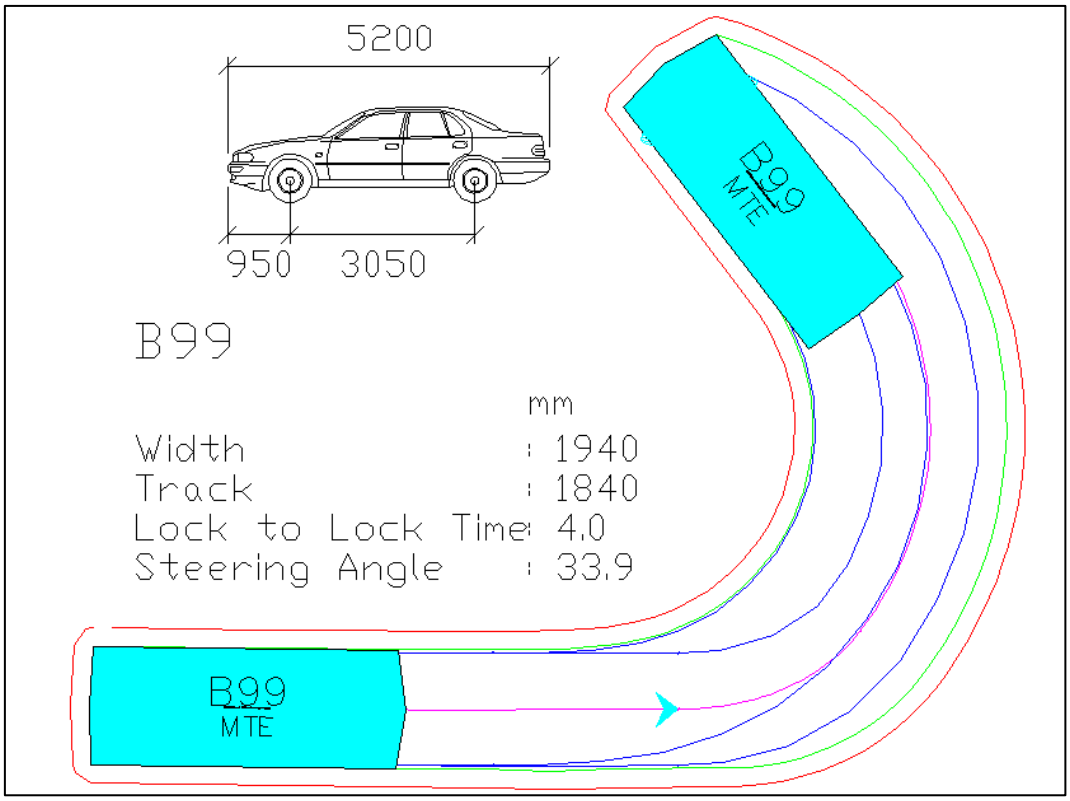
drawing scale	drawn	verified	date
AS SHOWN		SC	26/8/2022

project # 20126 — drawing # A-1001 — issue B

ANNEXURE B: SWEPT PATH TESTING
(4 SHEETS)

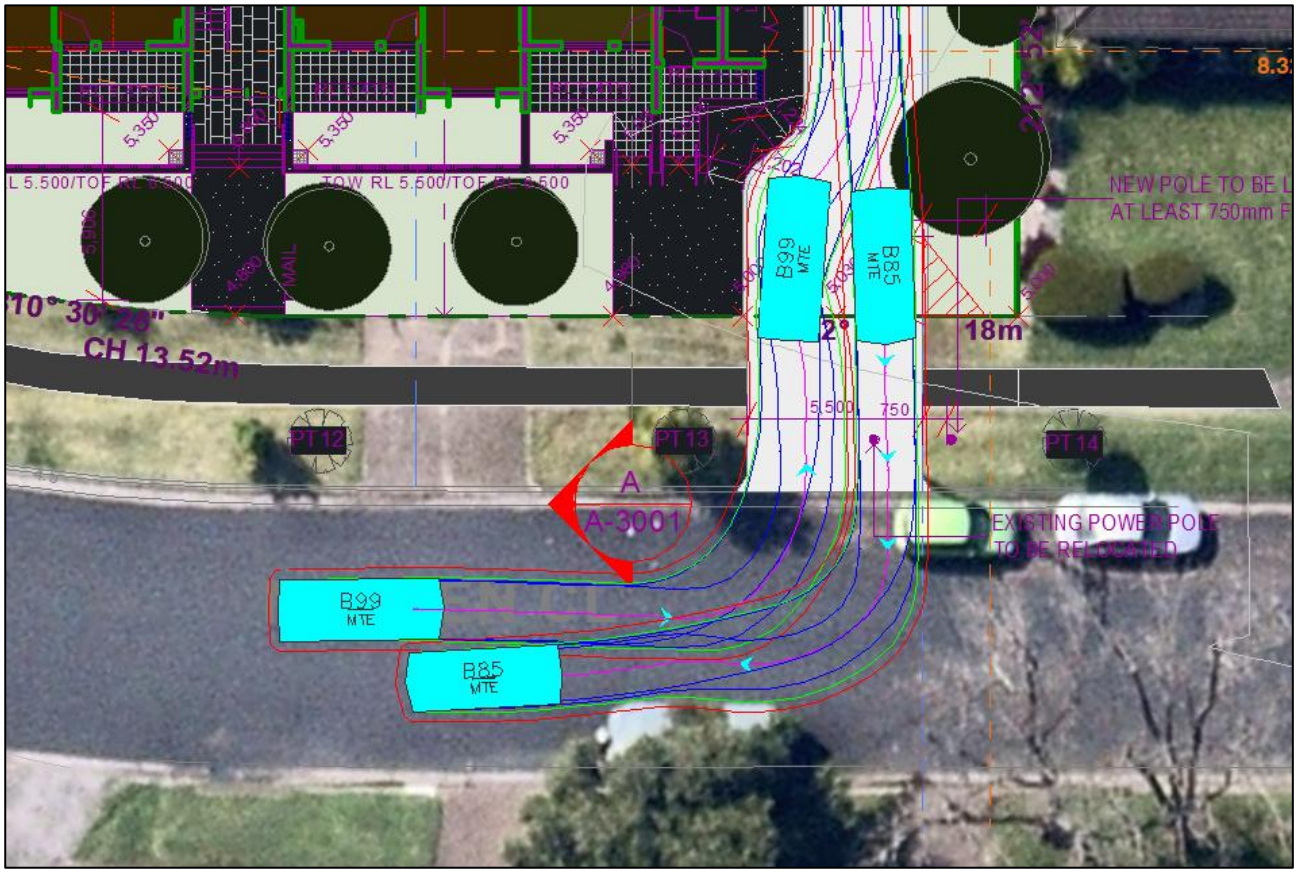


AUSTRALIAN STANDARD 85TH PERCENTILE SIZE VEHICLE (B85)

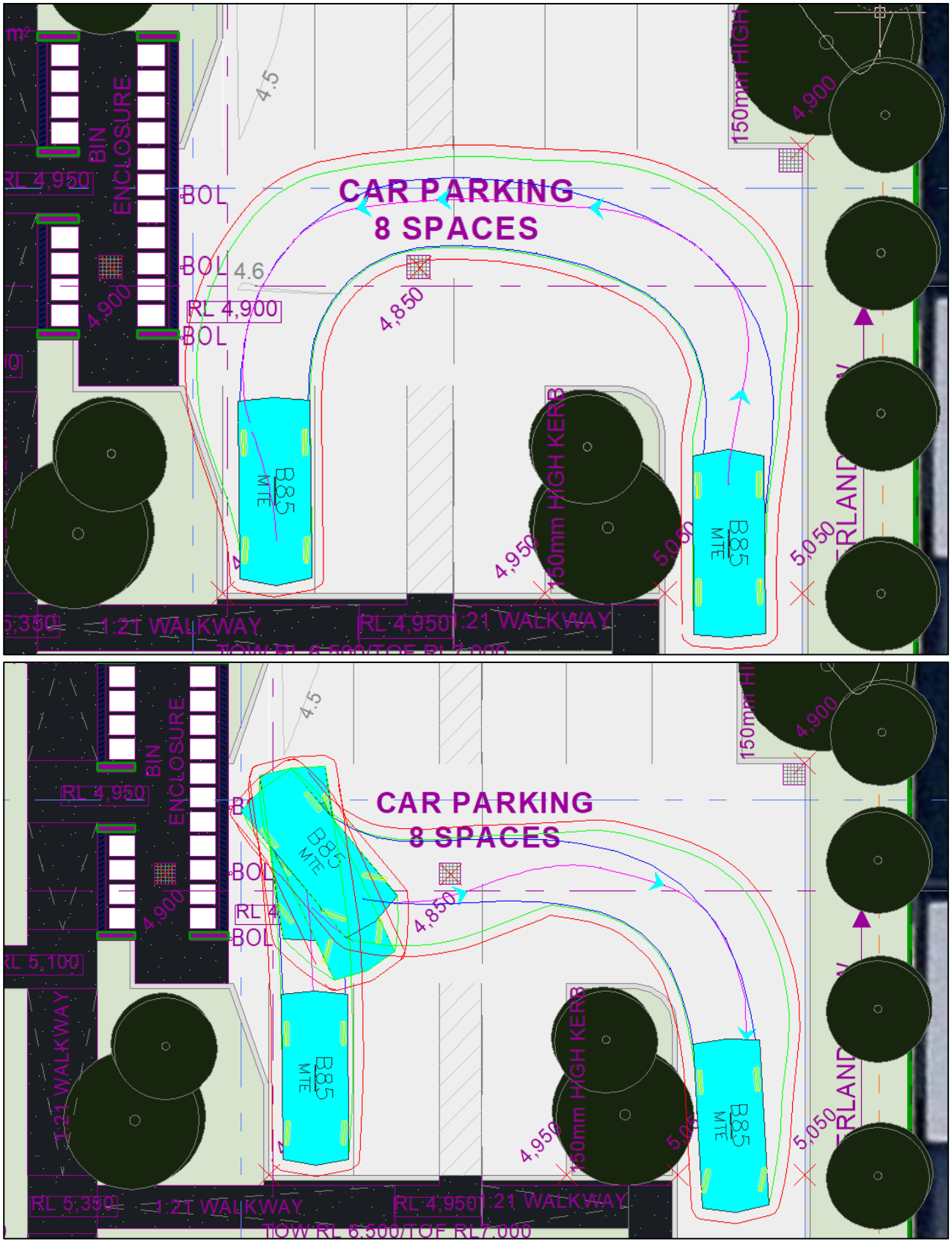


AUSTRALIAN STANDARD 99.8TH PERCENTILE SIZE VEHICLE (B99)

Blue – Tyre Path
Green – Vehicle Body
Red – 300mm Clearance

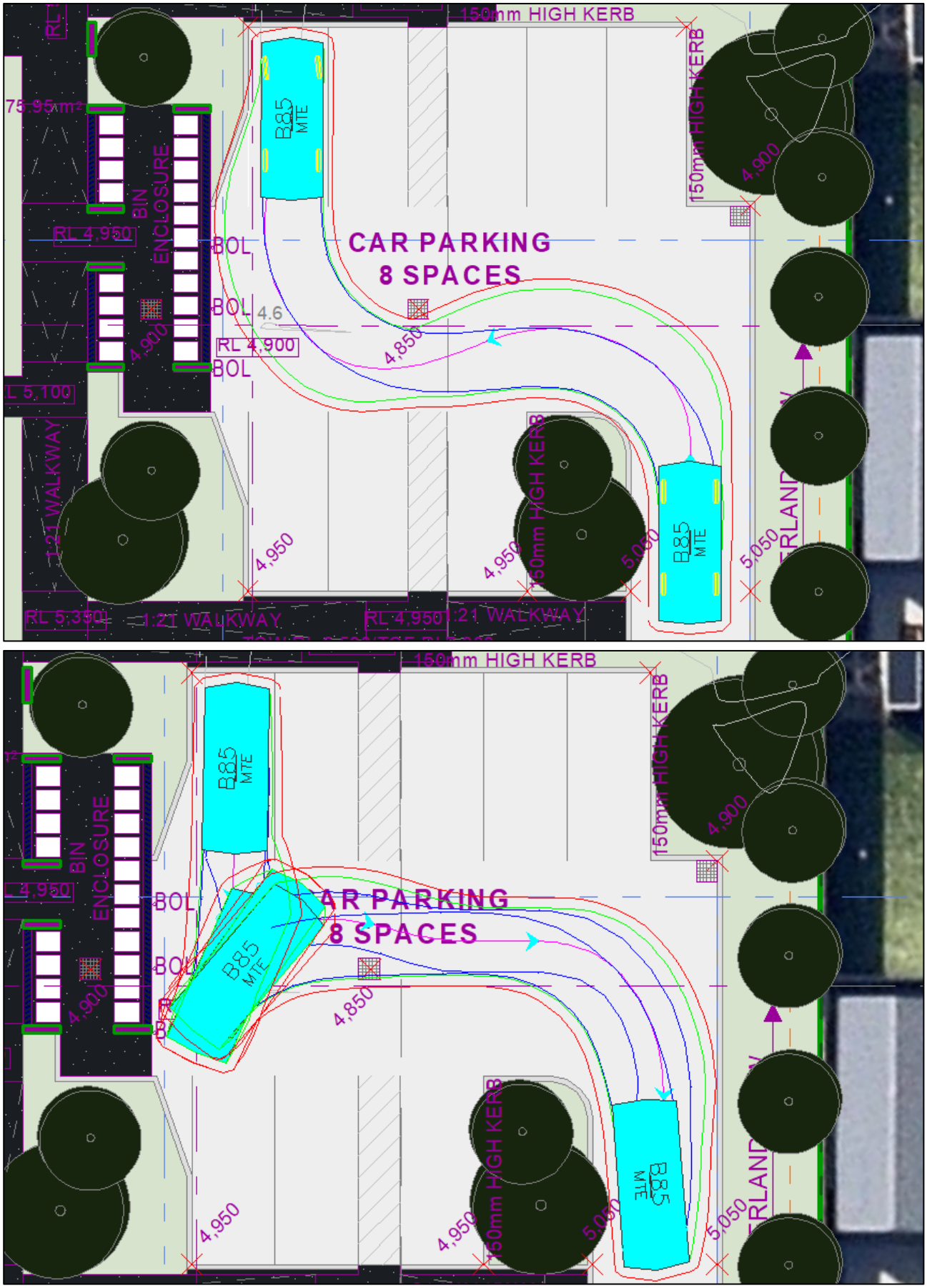


B85 PASSING B99 AT SITE DRIVEWAY
Successful



B85 ENTRY AND EXIT SOUTHERN END CAR PARKING SPACE

Successful – 1 manoeuvre FORWARD IN, 4 manoeuvres REVERSE OUT



B85 ENTRY AND EXIT NORTHERN END CAR PARKING SPACE

Successful – 1 manoeuvre FORWARD IN, 4 manoeuvres REVERSE OUT