208 VICTORIA ROAD, PUNCHBOWL

Traffic Impact Assessment

Prepared for:

FUTURE MASTERS

25 October 2023

The Transport Planning Partnership

208 VICTORIA ROAD, PUNCHBOWL

Traffic Impact Assessment

Client: FUTURE MASTERS

Version: V04

Date: 25 October 2023

TTPP Reference: 21325

Quality Record

Version	Date	Prepared by	Reviewed by	Approved by	Signature
V01	16/10/23	Oasika Faiz Hang Tran	Oasika Faiz	Ken Hollyoak	Ken Hollyoak
V02	18/10/23	Oasika Faiz Hang Tran	Oasika Faiz	Ken Hollyoak	Ken Hollyoak
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V04	25/10/23	Oasika Faiz Hang Tran	Oasika Faiz	Ken Hollyoak	

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1 Introduction

1.1 Background

A development application (DA) was approved for a proposed childcare development with capacity for 30 children and at-grade parking at 208 Victoria Road, Punchbowl.

A DA was previously submitted to Canterbury Bankstown Council (Council) to increase the number of children to 60 children and provide a basement car park, however, that scheme was not progressed.

The new DA is to be submitted, seeking an increase in the number of children to 76, and provide a basement car park to accommodate the additional child capacity. This Traffic Impact Assessment has been prepared to assess the traffic and parking impact of the proposed uplift and responds to Request for Information matters that was raised by Council on the previous discontinued DA.

1.2 Report Structure

The report assesses the traffic and parking implications of the proposed development and is set out as follows:

- Chapter 2 discusses the existing conditions including a description of the subject site.
- Chapter 3 provides a brief description of the proposed development.
- Chapter 4 assesses the proposed on-site parking provision and internal layout.
- Chapter 5 examines the traffic generation and its impact.
- Chapter 6 presents the conclusions of the assessment.

2 Existing Conditions

2.1 Site Description

The subject site is located within the local government area of Canterbury-Bankstown Council. The subject site of 1,031m^2 is currently occupied by a single residential dwelling, surrounded predominantly by residential properties.

The subject site is within land zoning R3 – Medium Density Residential area.

The location of the subject site is shown in Figure 2.1.

Figure 2.1: Site Locality

Source: NearMap (accessed 10 November 2021)

2.2 Road network

A brief description of the roads surrounding the subject site is presented as follows:

Victoria Street is a two-way undivided road running north-south between Punchbowl Road and Wiggs Road. There is a 50km/h speed limit restriction throughout the whole site. Parking is permitted on both sides of Victoria Road.

Wiggs Road is a two-way local road with one lane in each direction and is generally aligned in an east-west direction. The posted speed limit is 50km/h.

2.3 Public Transport Facilities

The subject site has access to public transport services. It is located within approximately 50m of the nearest bus stop and 1.7 kilometres from Punchbowl Station. Frequent bus services operate along Wiggs Road (Routes 940 and 945), providing connection to key origins and destinations from Bankstown to Hurstville.

A summary of existing peak hour services is shown in Table 1.

Table 1: Bus Routes and Associated Frequencies

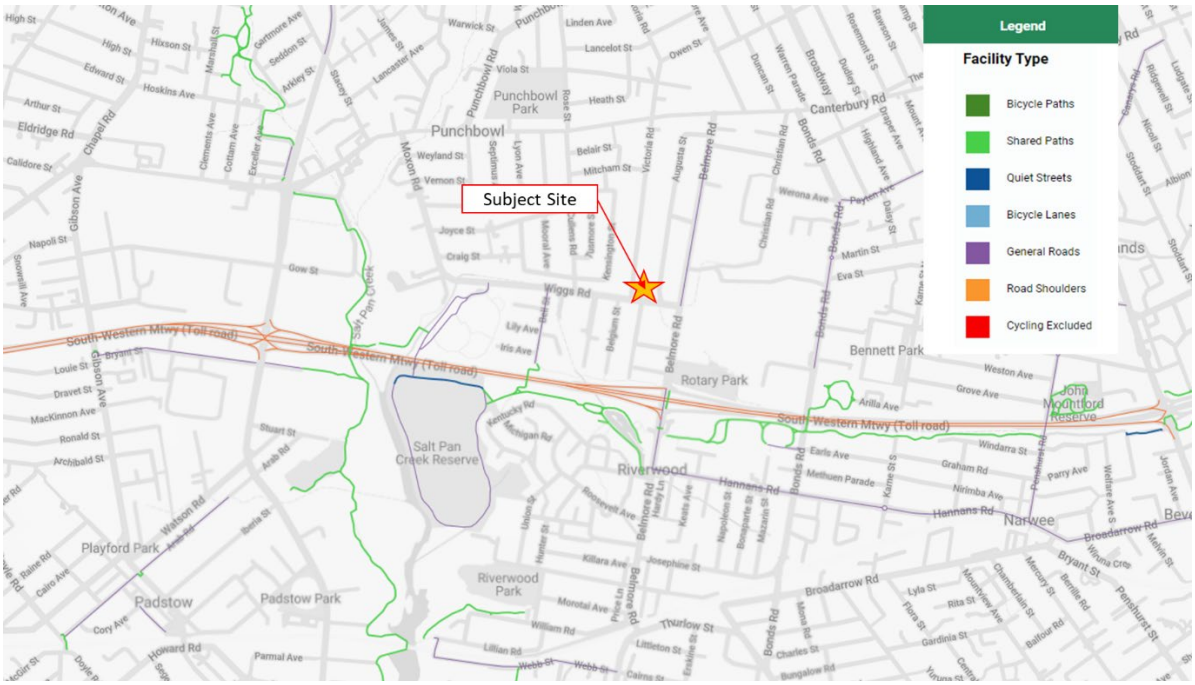
Route	Route Name	Weekday Services	Saturday/Sunday/Public Holidays Services
940	Bankstown to Hurstville via Riverwood	Every 30 mins	Every 1 hour
945	Bankstown to Hurstville via Mortdale	Every 20-30 mins	Every 30 minutes

2.4 Pedestrian and Cyclist Infrastructure

Footpaths are provided on both sides of Victoria Road and Wiggs Road.

There are limited cycling facilities available near the subject site. Cycling routes surrounding the site are shown in Figure 2.2.

Figure 2.2: Cycling Routes



Source: Cycleway Finder

3 Proposed Development

3.1 Approved Development

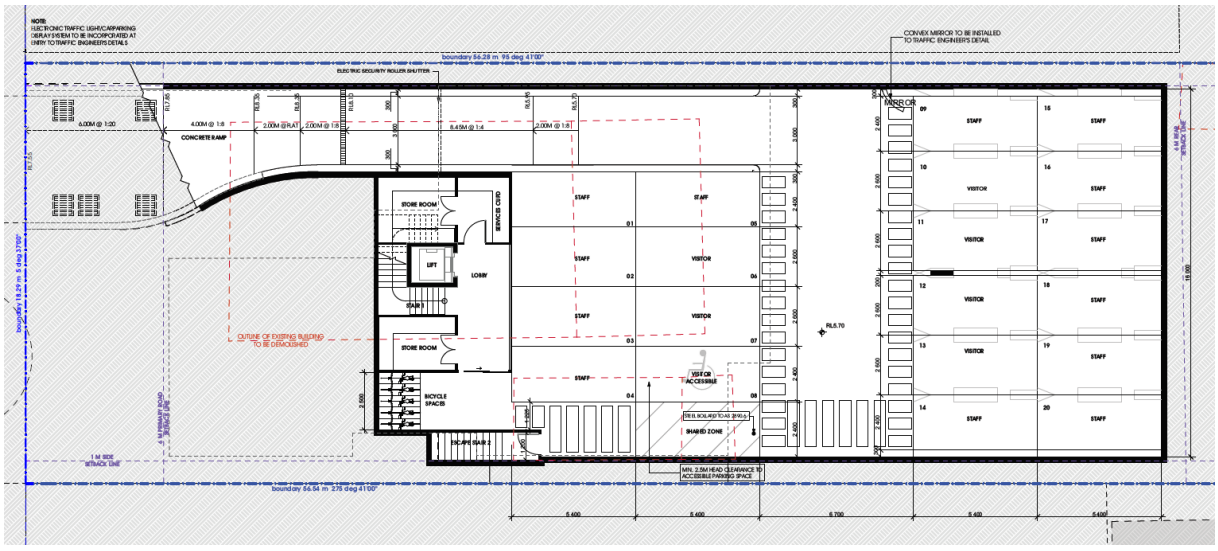
The site had previously been approved for a childcare with capacity for up to 30 children and six staff. A total of three off-street, at-grade car parking spaces were proposed, including one accessible space, and two bicycle storage cages were proposed.

In addition, P10 restrictions were approved for two car spaces along the frontage of the site, for the hours of 7:00-9:00am and 4:00-6:00pm.

3.2 Proposed Development

The revised proposal includes the provision for a capacity of up to 76 children and 14 staff members. A basement car park is proposed, comprising of 20 car parking spaces, including one accessible space, and five secure bicycle storage racks. A figure of the proposed basement floor plans is provided in Figure 3.1.

Figure 3.1: Proposed Plan



Source: DBG, October 2023

Access to the site will be through a new driveway, with restricted contraflow basement access. A waiting bay has been provided at the top of the ramp to enable passing opportunities for opposing movements.

The approved on-street P10 restrictions are to be retained.

4 Parking Assessment

4.1 Car Parking

Parking requirements for the site have been assessed against the Canterbury-Bankstown Development Control Plan 2023, which stipulates that "centre based child care facilities" should be provided parking at a rate of one space per four children and two additional car spaces for the exclusive use of any associated dwelling.

Therefore, the proposed capacity of 76 children is required a provision of 19 car spaces.

The basement provides 20 car parking spaces including 13 staff spaces and seven visitor spaces. In addition, the two on-street spaces restricted to P10 are to be retained giving a total provision of nine spaces for visitor drop off activity.

The site meets Canterbury DCP 2023 requirements for car parking.

4.2 Bicycle Parking

The DCP requires the provision of one bicycle space per 4 employees. For 14 staff, four bicycle spaces would be required. The basement provides five bicycle spaces, exceeding this requirement.

4.3 Waste Collection

Waste collection is proposed to be on-street, similar to surrounding residential developments and the current approval.

The basement car park and associated access arrangements have been reviewed for compliance with Australian Standard design requirements, namely AS2890.1:2004.

4.4 Car Park Design Review

4.4.1 Parking Dimensions

The proposed basement car park and associated access arrangements have been reviewed for compliance with Australian Standard design requirements, namely AS2890:2004.

The staff section of the car park is compliant with AS2890.1, as a Class 1A car parking facility (which have minimum dimensions of 2.4m wide by 5.4m long). The visitor parking bays are designed as Class 3 car parking spaces (which are 2.6m wide and 5.4m long). Accessible parking is compliant with AS2890.6 with a dimension of 2.4m wide by 5.4m long and an

adjoining shared area of equal dimensions. An aisle width of 7.0m is provided which exceeds the minimum aisle width requirement of 5.8m.

Ten staff parking spaces are provided as tandem parking spaces. An operational management plan is to be implemented on the site, which ensures that the spaces are 'blocked in' would be occupied first and vacated last. This is a common management measure applied at other childcare centres which provide tandem spaces for staff.

Bicycle parking is compliant with AS2890.3 minimum dimensions with a width of 0.5m and length of 1.8m.

The car parking dimensions are compliant with AS2890.1

4.4.2 Access and Ramps

The ramp into the basement car park complies with the requirements of a category 1 driveway. AS2890.1 requires that a Class 1 or 3 parking facility with less than 25 spaces and accessed off a local road, be provided with a category 1 driveway, which is required to be a minimum of 3.0m to 5.5m wide. However, where the connecting roadway is 30m or longer, the first 6m of the driveway must be 5.5m wide to enable passing opportunities.

On this basis, the proposed driveway is 5.5m wide kerb-to-kerb for the first 6m. Following this a 3.0m driveway is proposed to the basement, where a 7.0m wide aisle permits two-way flow within the car park.

The ramp grades are provided in accordance with a private car park with a maximum grade of 25% and maximum change in grades of 12.5%.

Swept paths for critical movements in/ out of the site, and within the basement, have been undertaken and provided in Appendix B.

The access and circulation arrangements are compliant with AS289.1 and is expected to operate satisfactorily.

4.4.3 Swept path analysis of car spaces

The Canterbury Development Control Plan 2012 (CDCP) requires swept path analysis of car parking and compliance with the following requirements:

- B1.4.1 C6 Provide on-site manoeuvring so that all vehicles enter and leave the site in a forward direction.
- B1.5.3 C4 Where a basement is proposed as part of the development, adequate manoeuvring area must be provided to allow vehicles exiting the site in a forward direction, reversing onto public roads is prohibited.

- B1.5.5 C1 A traffic manoeuvrability report, prepared by appropriately qualified transport consultants, is required:

  (a) For developments listed in Table B1.4; and

  (b) For any proposed development where Council requires an applicant to demonstrate that the turning movements of vehicles proposed to enter and leave a site are in accordance with Australian Standard – AS 2890.1.

  (Note: Table B1.4 includes a childcare centre)

Based on the above, swept path analysis has been undertaken at the last space of each aisle of the car park, which are typically the most difficult to access.

AS2890.1, which notes that the "parking space width is based on the B85 vehicle" (Clause B4.1, AS2890.1:2004) and that "most vehicles larger than the B85 vehicle will need to make a 3-point turn if the manoeuvring space is the minimum allowable. Some very large vehicles may need to make a 5-point turn." (Clause B4.8, AS2890.1:2004).

As such, swept path analysis has been undertaken using a B85 vehicle at each critical space which indicates that the car spaces can be accessed by a single or two point manoeuvre.

4.4.4 Traffic Management Systems

A traffic management system will be operated on-site to manage two-way vehicle access and the visitor parking demand.

Two-way flow along the ramp is to be managed by the following system:

- Flashing lights at the top and bottom of the ramp with signage stating "Caution. Traffic entering basement" or "Caution. Traffic exiting basement".
- A sensor at the bottom of the ramp will trigger the flashing light at the top of the ramp indicating that a car is driving up the ramp.
- Similarly a sensor at the top of the ramp will trigger the flashing light at the bottom of the ramp indicating that a car is driving down the ramp.

The system will assist vehicles with negotiating two-way access through the ramp by warning drivers of an approaching vehicles.

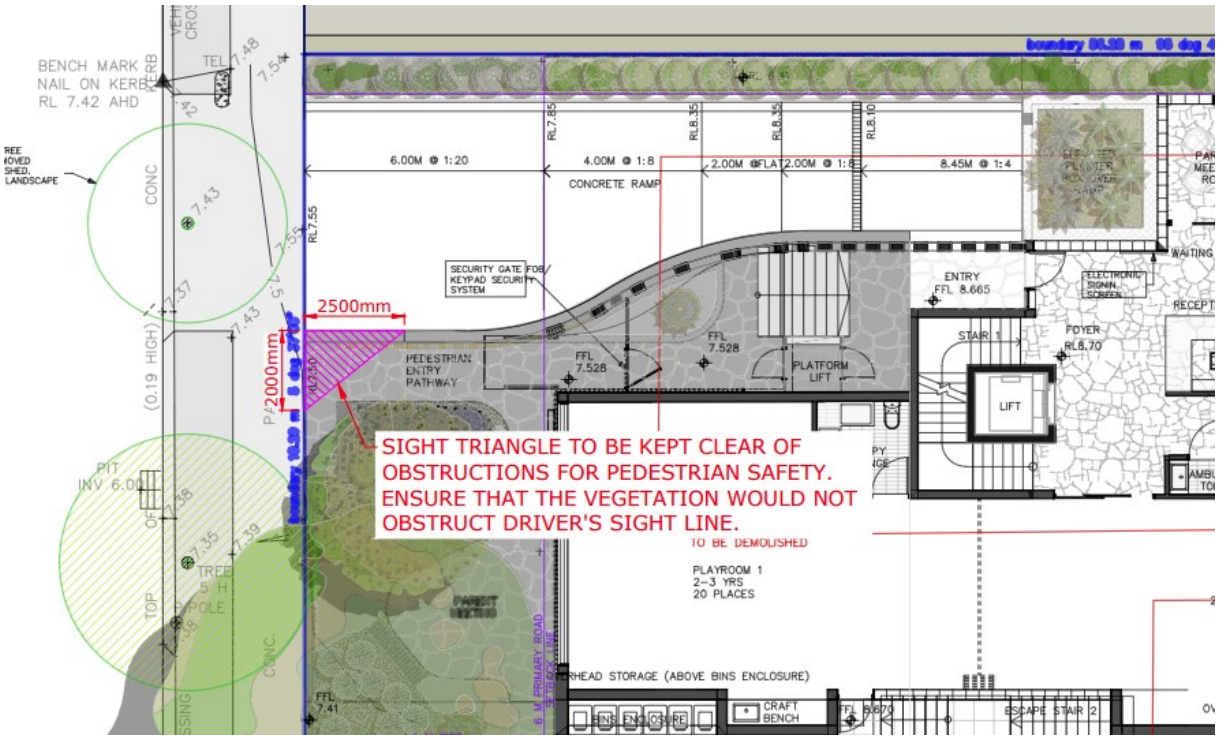
In addition, a smart parking system is to be implemented on-site which uses sensors to determine if a parking space is occupied and provides real-time information on a digital sign at the entrance on how many vacant car spaces are available. As a turning bay will not be provided for the site, it is proposed to implement this parking system to prevent visitors from entering when all spaces are occupied and needing to turn around within the car park.

A detailed plan is to be prepared prior to CC, with input from the manufacturer of the chosen traffic signal system.

4.4.5 Minimum Pedestrian Sight Triangle

AS2890.1:2004 requires that sight lines to pedestrians from the driveway be clear of obstacles in accordance with Figure 3.3 of AS2890.1. The layout includes a low stone wall that starts 2.5m from the site boundary, ensuring that the required sight triangle to pedestrians is available. This is shown in Figure 4.1.

Figure 4.1: Sight Triangle



5 Traffic Impact Assessment

Traffic generation rates for the proposed development have been assessed using the Transport for NSW (formerly Roads and Maritime Services) *Guide to Traffic Generating Developments 2002* (GTGD 2002) for a long-day childcare.

For a long-day child care, the GTGD 2002 rates are as follows:

- 0.8 veh/ children/ hr during the peak between 7:00AM and 9:00AM
- 0.3 veh/ children/ hr during the peak between 2:30PM – 4:00PM
- 0.7 veh/ children/ hr during the peak between 4:00PM – 6:00PM

Consequently, the approved development (30 children) generates:

- 24 veh/ hr during the peak between 7:00AM – 9:00AM
- 9 veh/ hr during the peak between 2:30PM – 4:00PM
- 21 veh/ children/ hr during the peak between 4:00PM – 6:00PM

Hence, the proposed development (76 children) generates:

- 61 veh/ hr during the peak between 7:00AM – 9:00AM
- 23 veh/ hr during the peak between 2:30PM – 4:00PM
- 53 veh/ children/ hr during the peak between 4:00PM – 6:00PM

The net change in generation would consequently be:

- +37 veh/hr during the peak between 7:00AM – 9:00AM
- +14 veh/ hr during the peak between 2:30PM – 4:00PM
- +32 veh/ hr during the peak between 4:00PM – 6:00PM

This indicates that the modified development would result in an increase of up to 34 vehicles per hour from the approved development.

This equates to one vehicle every 2 minutes which is low volume of traffic and is not expected to have any adverse impacts to the surrounding road network.

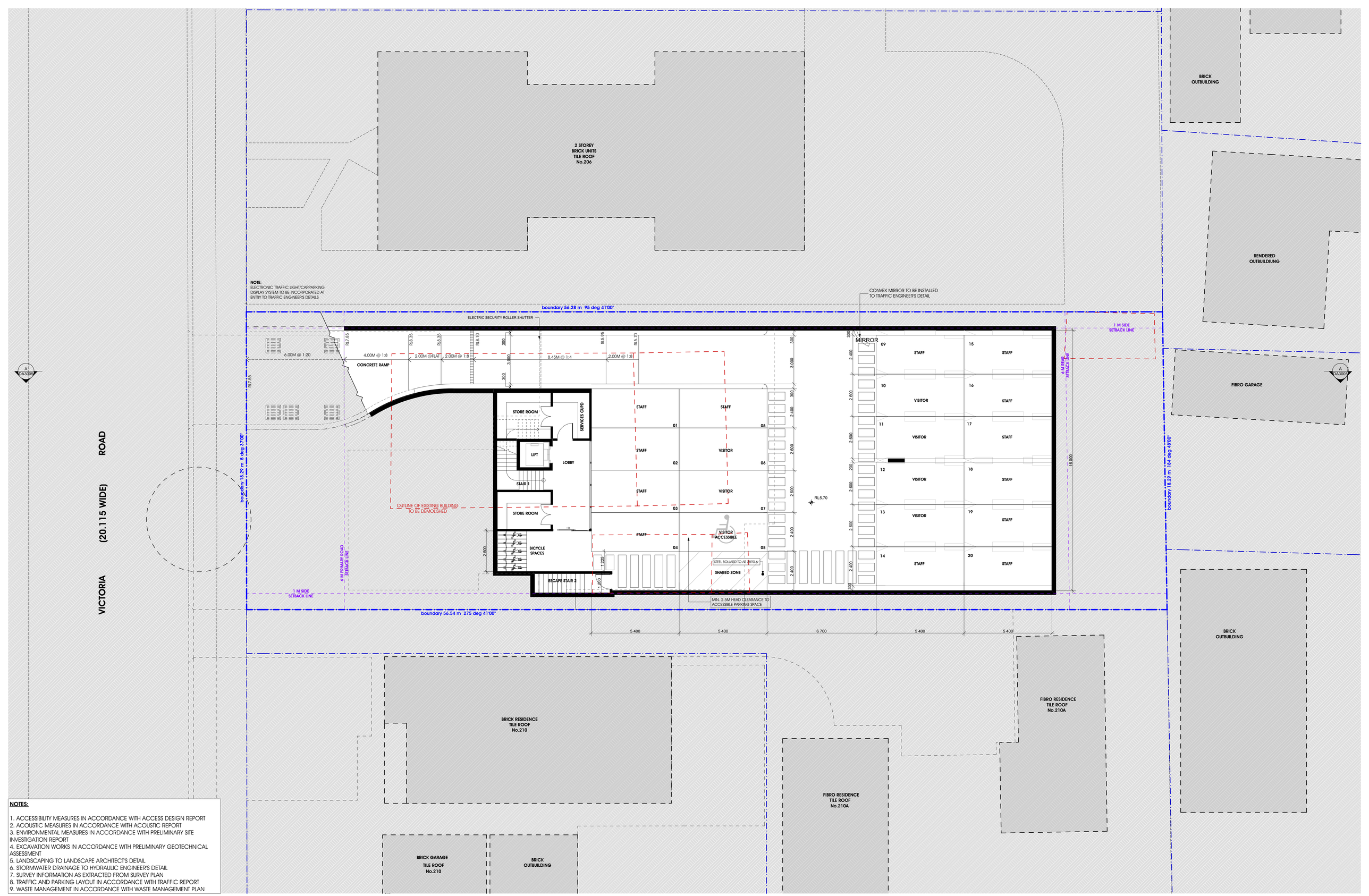
6 Summary and Conclusion

This transport impact assessment report relates to the proposed childcare development at 208 Victoria Road, Punchbowl. The key findings on the report includes:

- The proposed development application proposes to increase the capacity of the approved childcare centre from 30 children to 76 children.
- The proposed development is anticipated to generate an increase of 34 vehicle trips per hour from the approved development which is considered to be a minor volume of traffic.
- The proposed car parking provision and layout is compliant DCP requirements and Australian Standards for car parking. The traffic generation of the site is anticipated to be minor.

Appendix A

Architectural Plans



NOTES:

1. ACCESSIBILITY MEASURES IN ACCORDANCE WITH ACCESS DESIGN REPORT
2. ACOUSTIC MEASURES IN ACCORDANCE WITH ACOUSTIC REPORT
3. ENVIRONMENTAL MEASURES IN ACCORDANCE WITH PRELIMINARY SITE INVESTIGATION REPORT
4. EXCAVATION WORKS IN ACCORDANCE WITH PRELIMINARY GEOTECHNICAL ASSESSMENT
5. LANDSCAPING TO LANDSCAPE ARCHITECT'S DETAIL
6. STORMWATER DRAINAGE TO HYDRAULIC ENGINEER'S DETAIL
7. SURVEY INFORMATION AS EXTRACTED FROM SURVEY PLAN
8. TRAFFIC AND PARKING LAYOUT IN ACCORDANCE WITH TRAFFIC REPORT
9. WASTE MANAGEMENT IN ACCORDANCE WITH WASTE MANAGEMENT PLAN

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project
PROPOSED CHILDCARE CENTRE

address
208 VICTORIA RD, PUNCHBOWL
(LOT 48 IN DP 7136)

drawing
BASEMENT PLAN

client
FUTURE MASTERS

ABBREVIATION LEGEND

AFW	ALUMINIUM FRAMED WINDOW	CMR	COLORBOND METAL ROOF	FES	FIRE EXIT STAIR	L	LINEN	PS	PRIVACY SCREEN	RWT	RAINWATER TANK
ALF	ALFRESCO	COS	CHECK ON SITE	FFL	FINISHED FLOOR LEVEL	LC	LAUNDRY CHUTE	PBX	PLANTER BOX	S	STORAGE
AWN	AWNING	DP	DOWNPIPE	GB	GLASS BALUSTRADE	LDY	LAUNDRY	PDR	POWDER ROOM	SC	STONE CLADDING
B*	BEAM TO ENGINEER'S DETAILS	DW	DISHWASHER	GD	GARAGE DOOR	MB	METAL BALUSTRADE	PLB	PLANTER BED	SI	SECURITY INTERCOM
BDY	BOUNDARY LINE	D-W	DUMB WATER	GR	GRATE	MLV	METAL LOUVRES	POS	PRIVATE OPEN SPACE	SL	SKYLIGHT
BG	BOX GUTTER	EDB	ELECTRICAL DISTRIBUTION BOARD	GT	GATE	MWH	MAXIMUM WALL HEIGHT	PRG	PERGOLA	SK	UNDERBENCH MOUNTED SINK
BWK	BRICK WALL	ENS	ENSUITE	GLV	GLASS LOUVRES	NGL	NATURAL GROUND LINE	R	WARDROBE	TOW	TOP OF WALL
CB	COLORBOND	EX	EXISTING	GUT	GUTTER	OHS	OVERHEAD STORAGE	RL	REDUCED LEVEL		
CF	COLORBOND FENCE	F	FIXED	HOB	MAXIMUM HEIGHT OF BUILDING	OSD	ON-SITE STORMWATER DETENTION SYSTEM	RC	REINFORCED CONCRETE TO STRUCTURAL		
CL	COLUMN	FB	FACE BRICK	HWS	HOT WATER SYSTEM	P*	POST TO ENGINEER'S DETAILS		ENGINEERS DRAWINGS & DETAILS		
CR	CEMENT RENDER	FC	FIBRE CEMENT	INS	INSULATION TO BASIX REQUIREMENTS	PB	PLASTERBOARD LINING	RW	RETAINING WALL		
CFC	COMPRESSED FIBRE CEMENT	FW	FLOOR WASTE	KIT	KITCHEN	PG	PRIVACY GLAZING (TRANSLUCENT)	RWH	RAINWATER HEAD		

wall legend

NOTES
- unless noted otherwise, all RL's shown on this drawing indicate top of structural elements such as slabs, walls, parapets, roofs etc. floor/roof finishes, insulation, waterproof membranes, screed and tiles are required to be laid on top, above the indicated RL's
- do not scale drawing
- builder to check all dimensions on site before commencing works. any discrepancies (not limited to dimensions) found are to be brought to the attention of design & building group as soon as possible
- builder to ensure all relevant clauses of the National Construction Code (NCC)(BCA) and applicable Australian Standards are met
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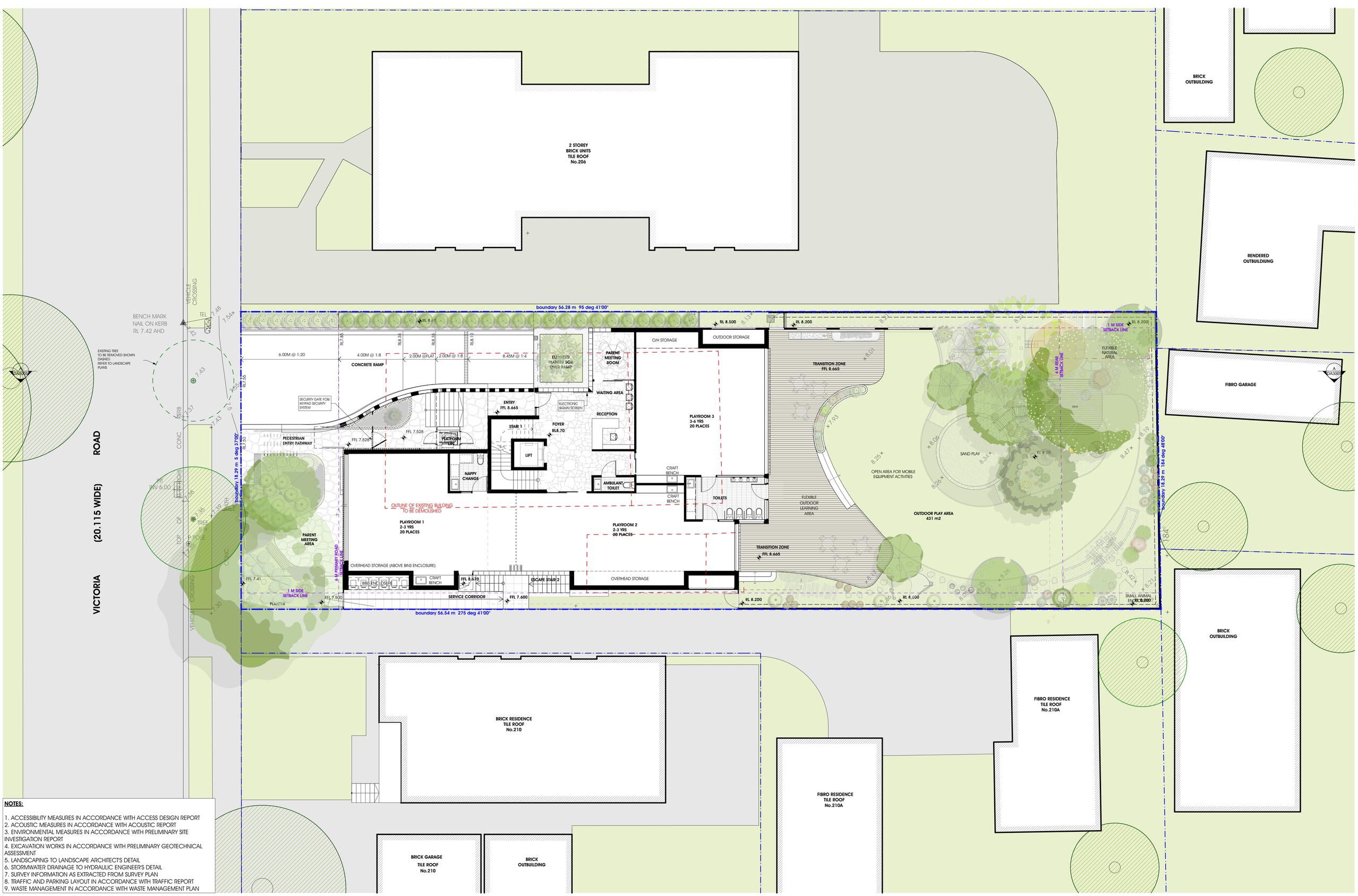
issue	revision description	date
A	ISSUED FOR DEVELOPMENT APPLICATION	04/08/2023

NOTE: ALL STRUCTURAL ELEMENTS SUBJECT TO CHANGE AS DETERMINED BY STRUCTURAL ENGINEER AND DETAILED AT CC STAGE

SCALE BAR 1:200 2m 4m 6m 8m 10m; 1:100 1m 2m 3m 5m

DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION

date (first issue)	04/08/2023
scale	1:100@ A1
project number	2021 - 13
drawing number	**DA2002**
issue	A
drawn	IM/GR checked AG/JA



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drawing
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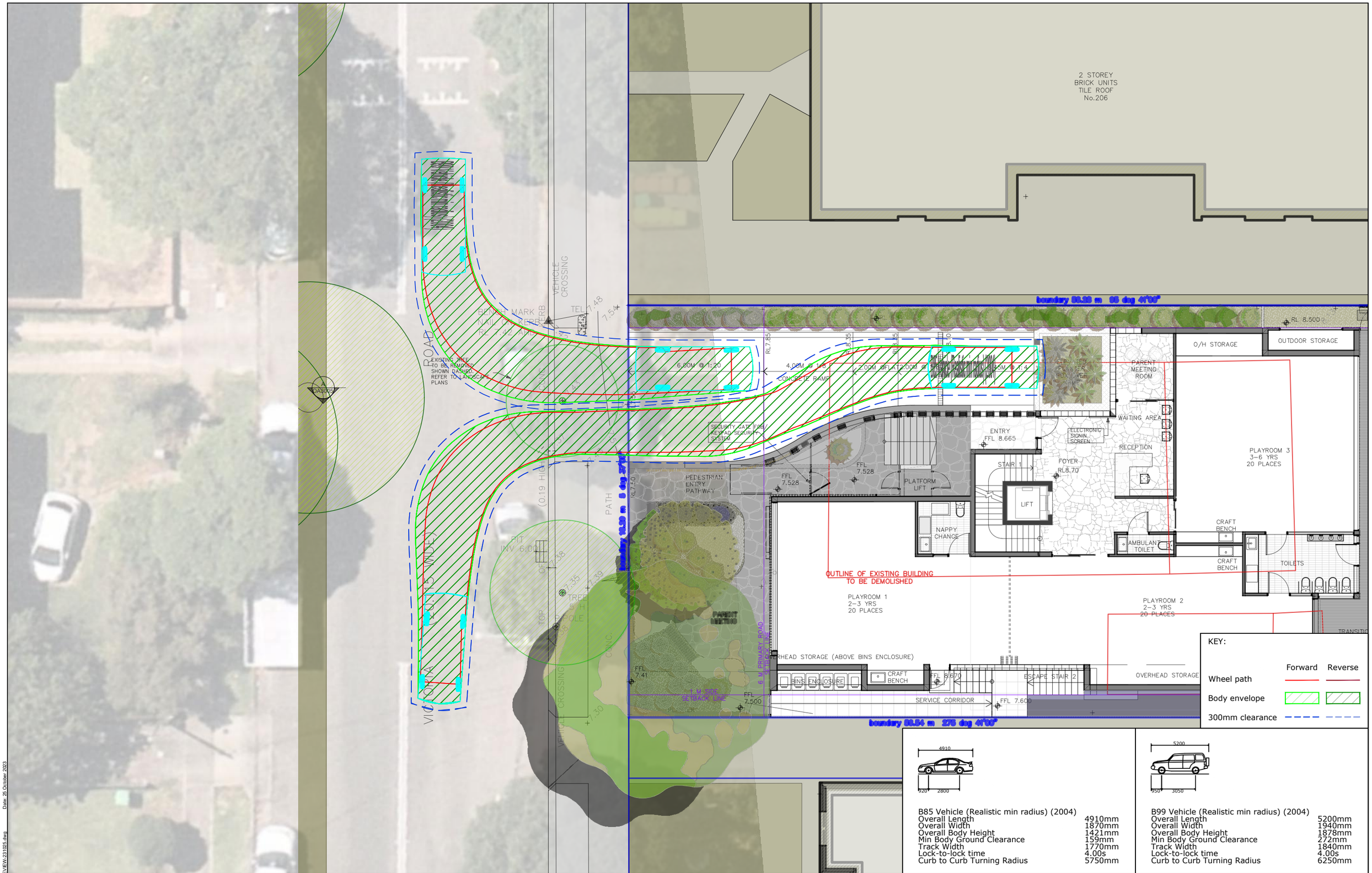
DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION

date (first issue)	04/08/2023
scale	1:100@ A1
project number	2021 - 13
drawing number	**DA2003**
issue	A
drawn	checked

IM/GR AG/JA

Appendix B

Swept Path Analysis



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	OF	KH	25/10/23

ttpp transport planning

PROJECT

208 VICTORIA ROAD, PUNCHBOWL

TITLE

AS2890.1 B99 AND B85 VEHICLE SWEPT PATH
GROUND FLOOR

DWG No. 21325CAD010
FIGURE 3

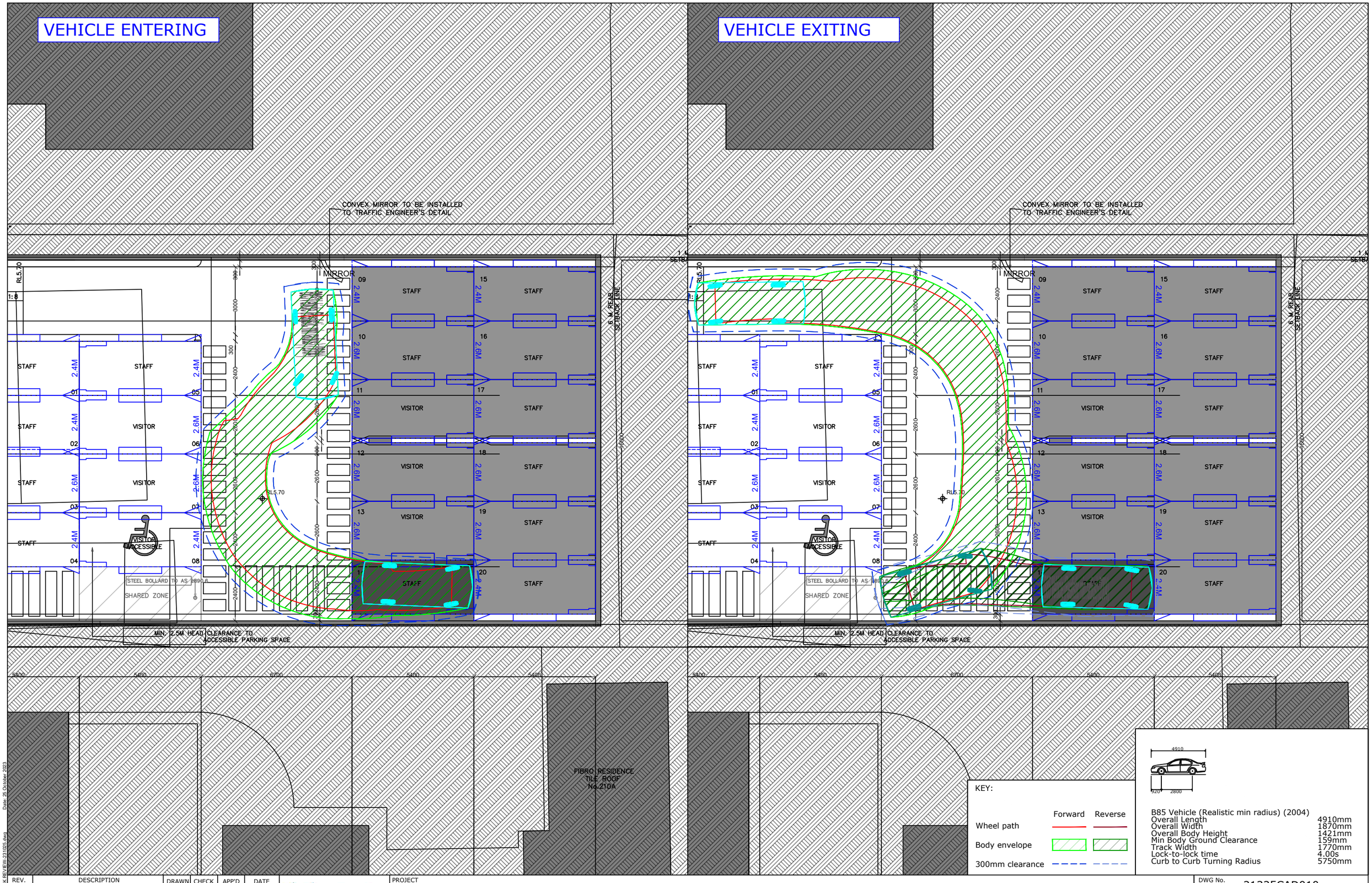
DATE STAMP 25 OCTOBER 2023

PROJECT No. 21325 | SCALE 1:150 @A3 | REV. A

Filename: 21325CAD010-CAR PARK REVIEW-231025.dwg Date: 25 October 2023

VEHICLE ENTERING

VEHICLE EXITING



KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

B85 Vehicle (Realistic min radius) (2004)

Overall Length	4910mm
Overall Width	1870mm
Overall Body Height	1421mm
Min Body Ground Clearance	159mm
Track Width	1770mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	5750mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	OF	KH	25/10/23

ttpp transport planning

PROJECT

208 VICTORIA ROAD, PUNCHBOWL

TITLE

SWEPT PATH ANALYSIS - BASEMENT LEVEL
AS2890.1 4.9m B85 VEHICLE

DWG No. 21325CAD010
FIGURE 4

DATE STAMP 25 OCTOBER 2023

PROJECT No.	SCALE	REV.
21325	1:150 @A3	A

Date: 25 October 2023

Filename: 21325CAD010-CAR PARK REVIEW-231025.dwg

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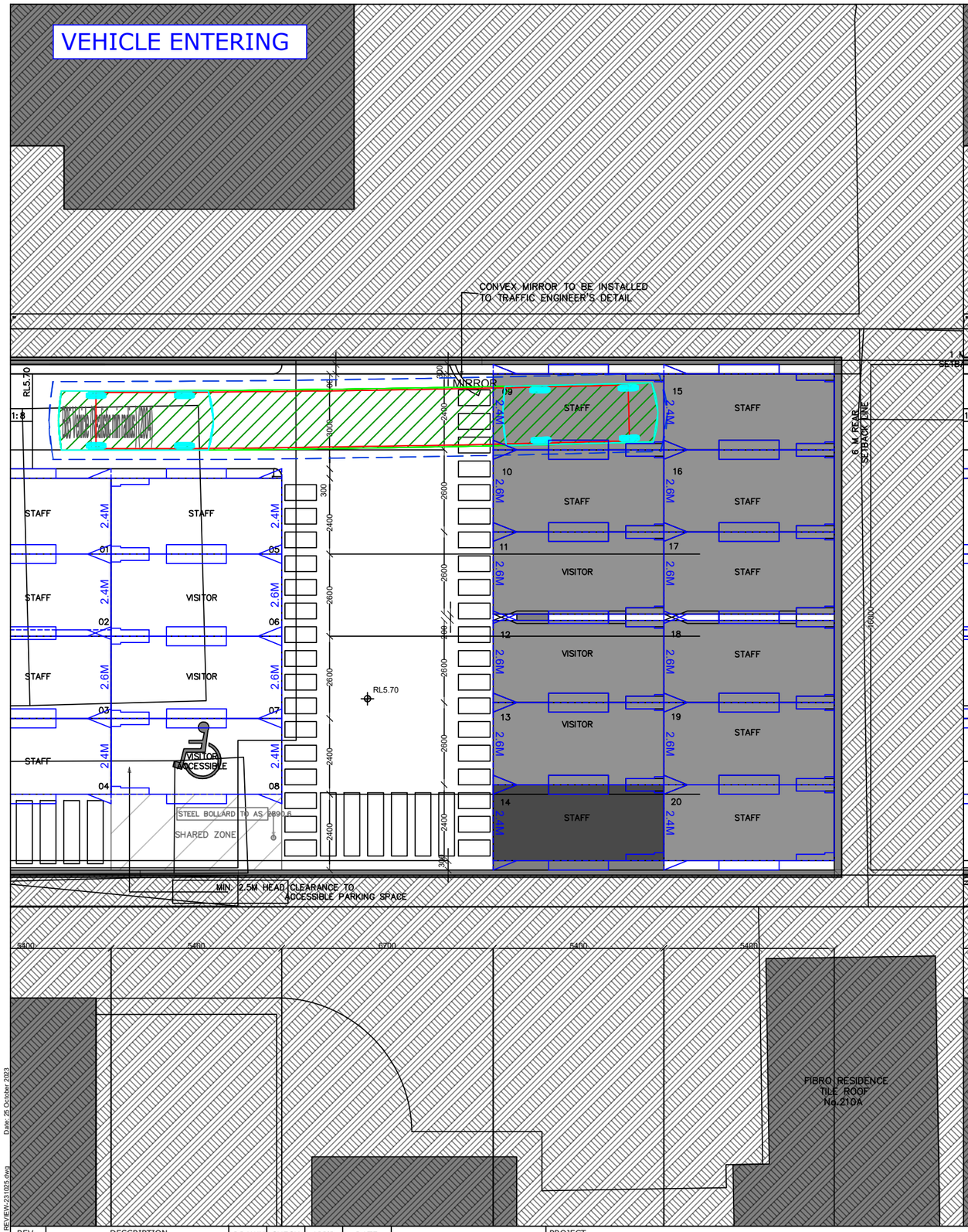
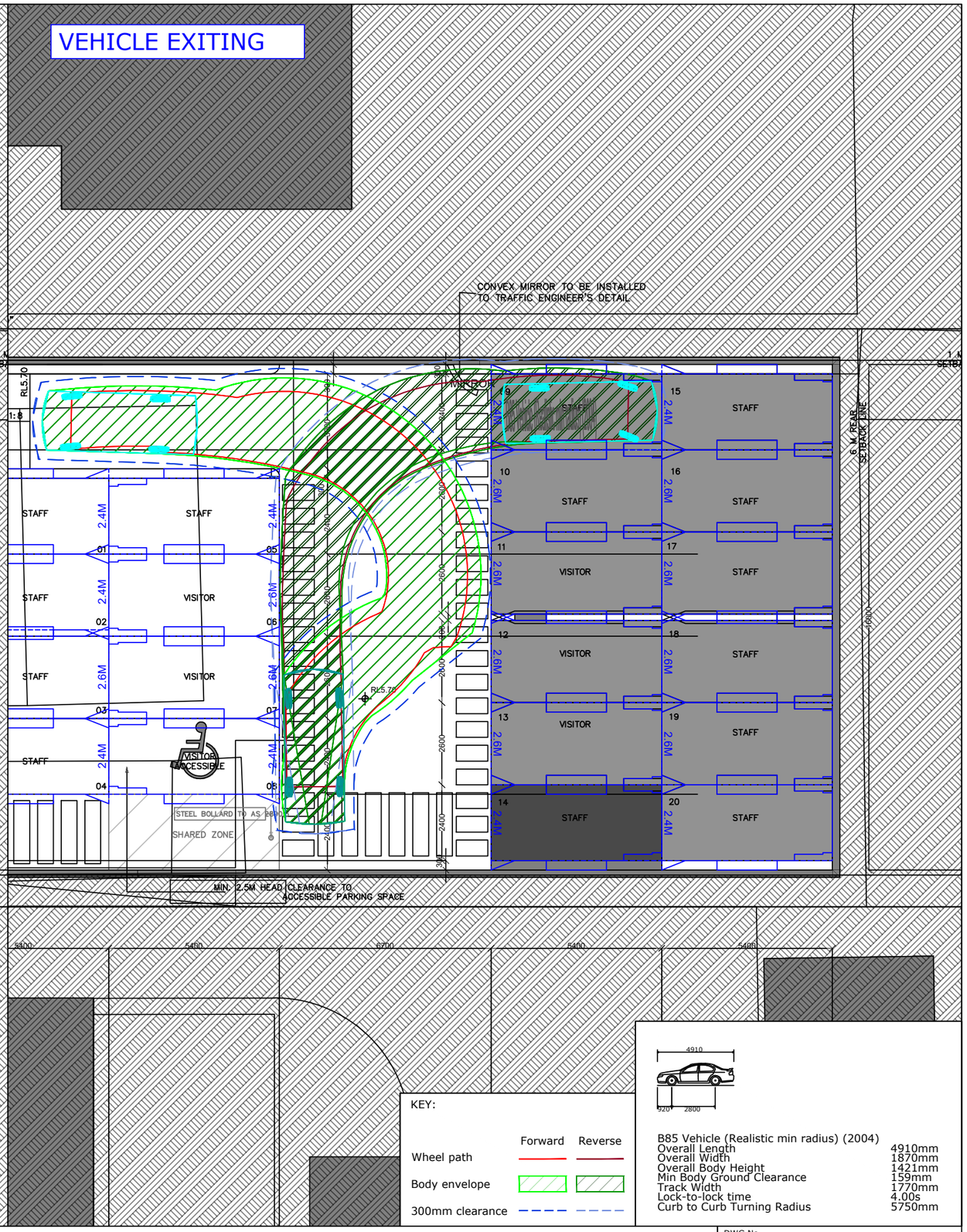


VEHICLE EXITING



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208 VICTORIA ROAD, PUNCHBOWL

TITLE

SWEPT PATH ANALYSIS - BASEMENT LEVEL
AS2890.1 4.9m B85 VEHICLE

DWG No. 21325CAD010 FIGURE 6

DATE STAMP 25 OCTOBER 2023

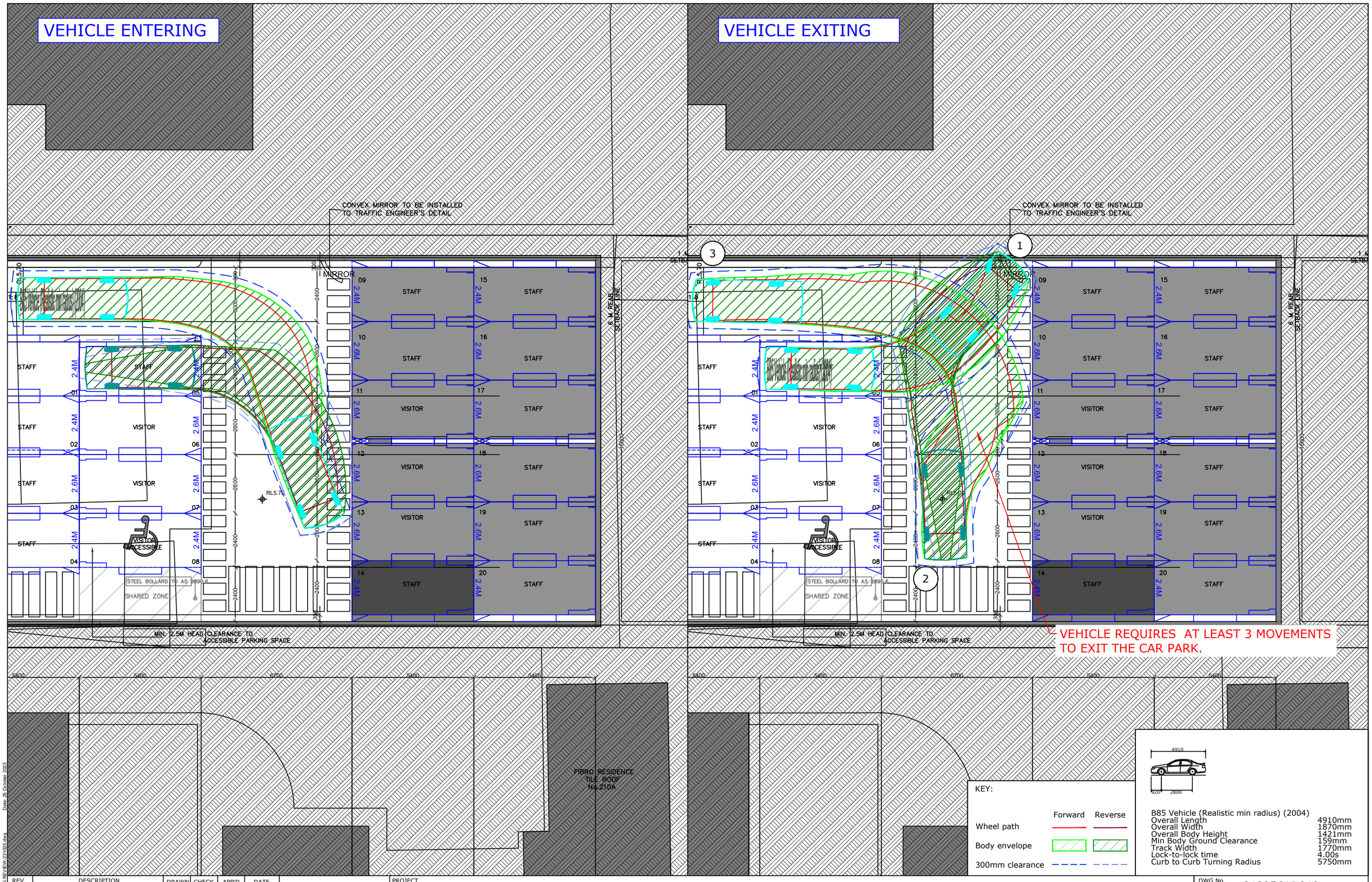
PROJECT No.	SCALE	REV.
21325	1:150 @A3	A

Date: 25 October 2023

Filename: 21325CAD010-CAR PARK REVIEW-231025.dwg

VEHICLE ENTERING

VEHICLE EXITING



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	OF	KH	25/10/23

ttpp transport planning

PROJECT

208 VICTORIA ROAD, PUNCHBOWL

TITLE

SWEPT PATH ANALYSIS - BASEMENT LEVEL
AS2890.1 4.9m B85 VEHICLE

DWG No. 21325CAD010
FIGURE 7

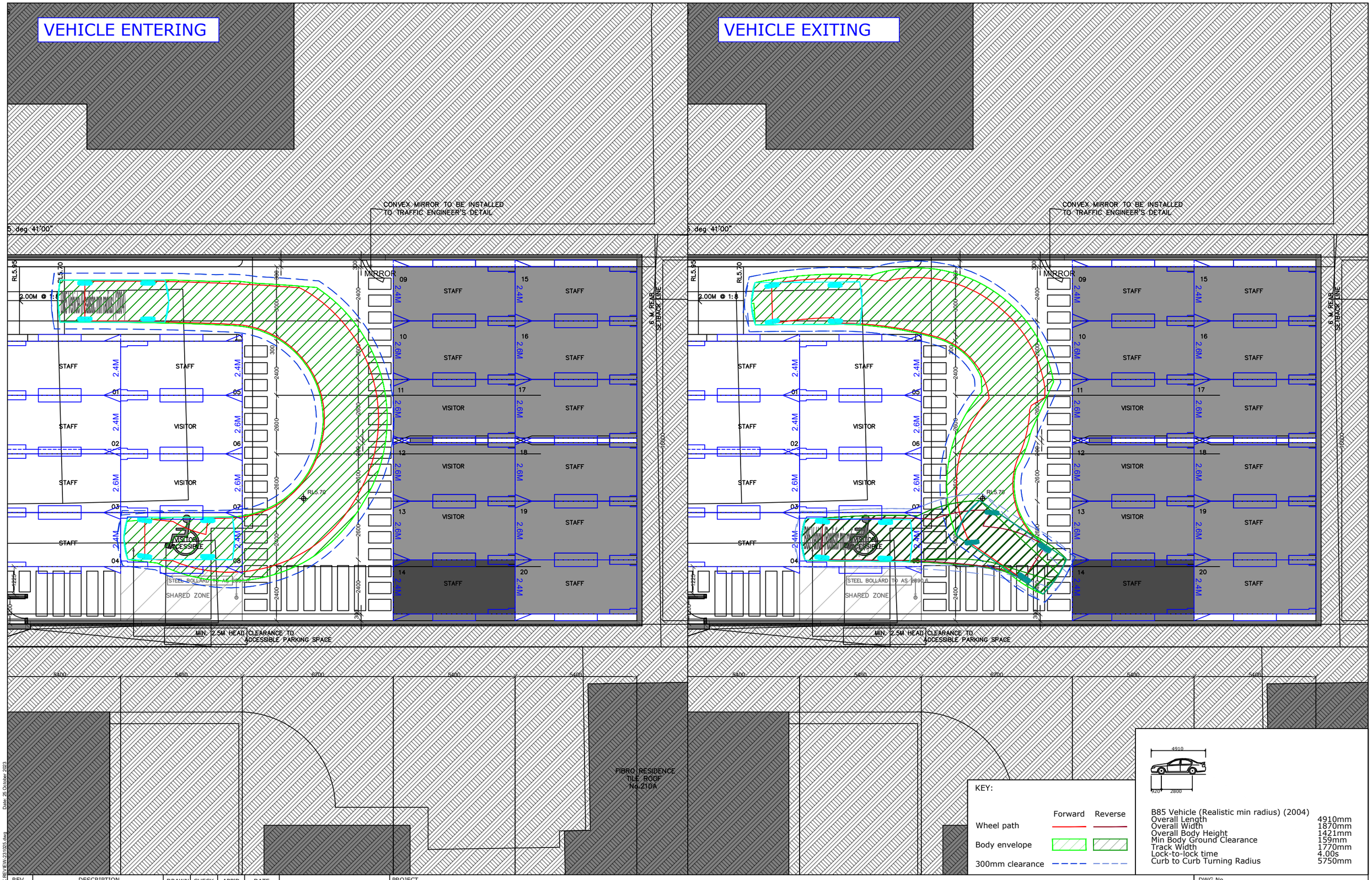
DATE STAMP 25 OCTOBER 2023

PROJECT No.	SCALE	REV.
21325	1:150 @A3	A

Filename: 21325CAD010-CAR PARK REVIEW-231025.dwg
Date: 25 October 2023

VEHICLE ENTERING

VEHICLE EXITING



KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

B85 Vehicle (Realistic min radius) (2004)

Overall Length	4910mm
Overall Width	1870mm
Overall Body Height	1421mm
Min Body Ground Clearance	159mm
Track Width	1770mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	5750mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	OF	KH	25/10/23

ttpp transport planning

PROJECT

208 VICTORIA ROAD, PUNCHBOWL

TITLE

SWEPT PATH ANALYSIS - BASEMENT LEVEL
AS2890.1 4.9m B85 VEHICLE

DWG No. 21325CAD010
FIGURE 8

DATE STAMP 25 OCTOBER 2023

PROJECT No.	SCALE	REV.
21325	1:150 @A3	A

Date: 25 October 2023

Filename: 21325CAD010-CAR PARK REVIEW-231025.dwg

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