

Traffic Impact Assessment

1, 5-7 Gladys Avenue, Frenchs Forest

Proposed Residential Development

GT22059

Prepared for
Walsh Architects

21 February 2023



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Document Information

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Proposal	Proposed Residential Development
Architects	Walsh Architects,
Project Location	1, 5-7 Gladys Avenue, Frenchs Forest
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Version	Effective Date	Description of Revision	Prepared by	Reviewed by
1	09/02/2023	Draft	Lamone Ng	Bernard Lo
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1 Introduction

1.1 Background

This report has been prepared to accompany a Development Application to Northern Beaches Council for a proposed residential development at 1, 5-7 Gladys Avenue, Frenchs Forest (Figure 1-1).

Figure 1-1 Site



Source: Mecone (modified by Genesis Traffic)

The proposed development involves a 30-unit townhouse complex with an associated basement car park.

1.2 Scope of Works

The purpose of this report is to:

- describe the site and the proposed development scheme
- describe the road network serving the site and the prevailing traffic conditions
- assess the adequacy of the proposed parking provision
- assess the potential traffic implications
- assess the suitability of the proposed vehicle access, internal circulation and servicing arrangements



1.3 Reference Documents

Reference has been made to the following documents when preparing this report:

- AS2890 (Australian/NZ Standards, 2004)
- Warringah Development Control Plan (Northern Beaches Council, 2011)
- RMS Guide to Traffic Generating Developments, RTA, 2002





2 Existing Conditions

2.1 Site and Surrounding Context

The development site (Figure 2-1) is a consolidation of Lots 16 and 19 DP 25713 and Lots 171 and 172 in DP 849591, located at 1, 5-7 Gladys Avenue, Frenchs Forest. The site occupies an irregular-shaped area of 3,526m² and is bounded by Gladys Avenue to the north and west.

Figure 2-1 Site Context



Source: Nearmap (Modified by Genesis Traffic)

Four (4) single residential dwellings currently occupy the site, with vehicle accesses located at Gladys Avenue. Surrounding the site are predominantly residential developments. The Northern Beaches Hospital and The Forest High School are on the southern side of Frenchs Forest Road.

The subject site is located within the Frenchs Forest Town Centre - a new town centre accommodating multiple landuses including retail, medium and high-density residential blocks, and commercial zonings. An indicative layout plan published by the Northern Beaches Council in the Warringah DCP, G9 Frenchs Forest Town Centre is illustrated in Figure 2-2.



Figure 2-2 Indicative Layout Plan for Frenchs Forest Town Centre



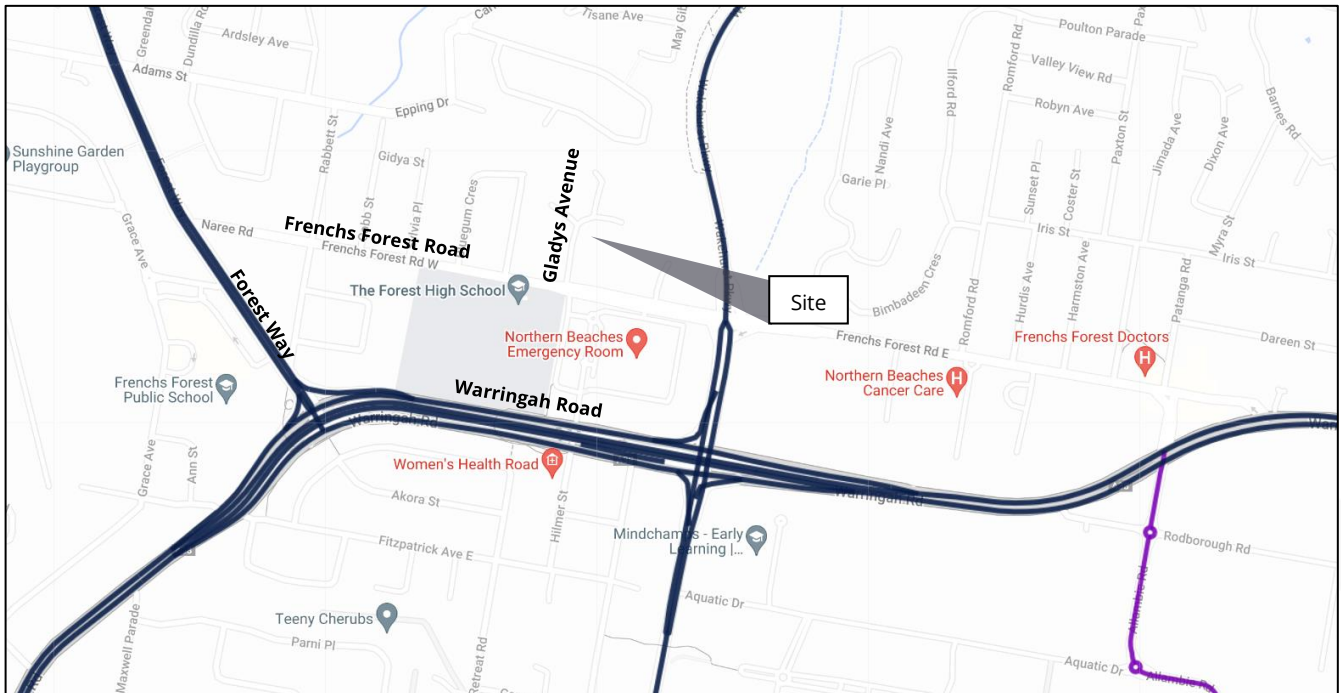
Source: Northern Beaches Council



2.2 Road Network

The road network serving the site area (Figure 2-3) comprises:

Figure 2-3 Road Network



Source: Mecone (modified by Genesis Traffic)

- Warringah Road – an east-west Classified Main Road (MR 328) connecting Pittwater Road in the east and Babbage Road in the west. It is subject to a 70km/h speed limit and generally consists of 3 traffic lanes in either direction on a divided carriageway. On-street parking is not permitted along the outer lanes in both directions.
- Frenchs Forest Road West – an east-west local road between Warringah Road in the east and Naree Road in the west. It is subject to a 50km/h speed limit near the site. At the intersection of Frenchs Forest Road and Gladys Avenue, Frenchs Forest Road consists of 2 eastbound lanes and 3 westbound lanes. The outer lanes operate as Bus Lanes.
- Gladys Avenue – a deadend cul-de-sac and a local road that connects to Frenchs Forest Road. It is subject to a 50km/h speed limit and permits a single traffic lane in either direction with a carriageway width of 7m. On-street parking is permitted along the western side of the street.

2.3 Traffic Controls

The traffic controls on the road system in the vicinity of the site comprise:

- the traffic control signal along Frenchs Forest Road (including the intersection at Gladys Avenue and Frenchs Forest Road)



- the Bus Lane at French Forest Road West between Wakehurst Parkway and Gladys Avenue
- the 40km/h School Zone speed restriction along Frenchs Forest Road between Gladys Avenue and Bluegum Crescent

2.4 Public Transport Services

The subject site is within walking distance (150m to the nearest bus stops at Frenchs Forest Road after Bantry Bay Road) of several bus services operating in the locality. These bus services are tabulated in Table 2-1.

Table 2-1 Bus Services Provision

Bus Line	Bus Route
141	Austlink to Manly via Frenchs Forest & Seaforth
155	Bayview Garden Village to Narrabeen and Frenchs Forest
160X	Dee Why to Chatswood via Frenchs Forest (Express Service)
166	Frenchs Forest to Manly via Dee Why Beach
193	Warringah Mall to Austlink via Frenchs Forest
280	Warringah Mall to Chatswood

2.5 Existing Traffic Conditions

Observations in the site's locality reveal some minor delays on Frenchs Forest Road during peak commuting periods however the intersection with Gladys Avenue operates satisfactorily. The arterial flow on Frenchs Forest Road West is managed by the SCATS coordinated signals along Frenchs Forest Road.

Gladys Avenue was observed to be generally free-flowing with no apparent capacity constraint. Nevertheless, it is observed that on-street parking demand is high on Gladys Avenue and that unauthorised parking occurs on the eastern side of the street.



3 Proposed Development

It is proposed to demolish the existing buildings and outbuildings on the site and undertake excavation to provide a basement car park and a level building platform. A townhouse complex will be constructed on the site accommodating 30 townhouses and a basement with 45 car parking spaces.

A new vehicle access will be provided at Gladys Avenue near the site's eastern boundary.

Details of the proposal are indicated in the architectural plans prepared by Walsh Architects, which accompany the submission and are reproduced in part in **Attachment 1**.





4 Parking Assessment

4.1 Car Parking Requirements

The Warringah DCP specifies the applicable car parking rates in Table 4-1.

Table 4-1 DCP Car Parking Rates

Development Type	Parking Rates (Maximum)	
Residential	One-bedroom	0.6 spaces per dwelling
	Two-bedroom	1 space per dwelling
	Three-bedroom	1.5 spaces per dwelling
	Visitors	0.1 space per dwelling
	Parking Rates (Minimum)	
Car Share Dedicated Space	2 spaces per 15 dwellings	

Application of the proposal using the above criteria would indicate the following requirements in Table 4-2.

Table 4-2 Number of Required Car Parking Spaces

Element	Requirement
1 x one-bedroom unit	0.6
5 x two-bedroom units	5
24 x three-bedroom units	36
Residential visitors (Maximum)	Maximum 3 spaces
Car Share Dedicated Space (Minimum)	Minimum 4 spaces

* The DCP requires numerical decimals to be rounded up to the next integer.

Accordingly, the development proposes the following provision to comply with the DCP's maximum and minimum criteria:

- 41 spaces for residents
- Nil for visitors
- 4 spaces for carshare



4.2 Motorcycle and Bicycle Parking Requirements

The Warringah DCP provides the applicable minimum parking rates in Table 4-3.

Table 4-3 Minimum Motorcycle and Bicycle Parking Rate

Element	Rates	Requirement
Motorcycle	0.5 spaces per dwelling	15
Bicycle	Residents	2 spaces per dwelling
	Visitors	0.25 spaces per dwelling

The proposal to provide 15 motorcycle spaces and 68 bicycle spaces meet the above criteria. It is noted that some motorcycle and bicycle spaces for residents will be provided within the individual enclosed garage.

4.3 Waringah DCP Parking Requirements

In addition to the above, the basement car park has been assessed against the Waringah DCP Part G9.6 Parking requirements. This assessment is tabulated in Table 4-4.

Table 4-4 Waringah DCP Part G9.6 Parking Requirements

Requirements	Compliance
1. For residential uses, parking rates shall be provided in accordance with Table 2, which specifies a maximum car parking rate for development and a minimum parking rate for more sustainable forms of transport.	Yes
2. For Precincts 01 to 04, parking rates shall be provided at a minimum of 4.7 spaces per 100m ² of gross leasable floor area (GLFA).	N/A
3. Car parking rates for all other uses are to comply with, Part H, Appendix 1 of Warringah DCP 2011. If no uses are identified Appendix 1, car parking rates are to be provided in accordance with the RTA Guide to Traffic Generating Developments (2002).	N/A (DCP per Table 2 described in Item 1 above)
4. Car parking that is required for retail premises and residential visitor spaces is to be accessible at all times.	N/A (No retail and resi. visitors parking provided)
5. Residential parking (excluding visitor parking) may be provided behind a secure access point/gate.	Yes
6. Privately allocated car spaces shall be located at the rear or lower levels of the basement.	Yes



<p>7. The provision of parking for people with disabilities must be provided at a rate of 3% of the required parking spaces.</p>	<p>Refer to BCA and Access Report</p>
<p>8. For non-residential development, at least 2 electric vehicle charging spaces or 2% of the parking spaces (whichever is greater) must be provided.</p>	<p>N/A (No non-resi. element proposed))</p>
<p>9. For non-residential development, car share spaces are to be provided at a rate of 1 per 200m² gross floor area.</p>	<p>N/A</p>
<p>10. Car share spaces are to be:</p> <ul style="list-style-type: none"> • Publicly accessible at all times; • Located in a convenient location; • Provided in a well-lit location that allows for casual surveillance; • Signed for car share use only; and • Where external, is to be adjacent to a street and integrated with the streetscape through appropriate landscaping. 	<p>No (See Note 1)</p>
<p>11. For residential and mixed-use development basement car parking areas are to include car wash bays for use by residents at the rate of 1 bay per 50 dwellings, up to a maximum of 4 spaces per building. The wash bay is to be adequately drained and connected to the sewer line.</p>	<p>N/A</p>
<p>12. Bicycle parking for residential uses may be located as part of an extended garage cage.</p>	<p>Yes</p>
<p>13. Bicycle parking shall be provided in accordance with Part C3(A) Bicycle Parking and End of Trip Facilities, Requirement 4 of Warringah DCP 2011.</p>	<p>Yes</p>
<p>14. End of trip facilities shall be provided in accordance with Part C3(A) Bicycle Parking and End of Trip Facilities, Requirements 5 and 6 of Warringah DCP 2011.</p>	<p>N/A EOTF not applicable to residential buildings</p>
<p>15. End of trip facilities shall provide an electric charging point for electric bicycles.</p>	<p>N/A</p>
<p>16. Properties are not eligible to apply for Residential Parking Permit Schemes as determined by the RMS Permit Parking Guidelines</p>	<p>N/A</p>



Note 1

The assessment notes that the proposed car share spaces (4) are provided in the basement car park. While they have been designed to be clearly delineated, located in a convenient, well-lit, and secure location, they are not necessarily 'publicly accessible at all times'. It is generally not advisable for publicly accessible car share facility to be located within residential basement car parks for security reasons. For obvious reasons, it is undesirable to 'invite' non-residents into an otherwise private residents' basement car park. Instead, a better design outcome is to allocate these type of facilities on-street and integrate with the streetscape.

4.4 Access and Internal Circulation

A detailed review of the parking access and arrangement has been undertaken to assess its conformance with the AS2890.1 design criteria. Details of a swept path analysis demonstrating the above are provided in **Attachment 2**.

Table 4-5 shows the minimum parking dimension in parking modules and access driveway requirements in accordance with the User Class 1A of AS2890.1.

Table 4-5 Parking Arrangement Requirement

Features	Requirement	Provision	Compliance	Notes
Access (AS2890.1:2004) - Category 1				
Access Width	3.0m - 5.5m (combined)	5.5m	Yes	
Location (Category 1)	6m from intersection tangent	N/A	Yes	
Sight Distance (50km/h)	Min 45m	Provided	Yes	
Sight Splays (Pedestrian)	2.5m x 2.0m	Provided	Yes	
Driveway / Ramp (AS2890.1:2004)				
Ramp Grade	Max 25% (1 in 4)	1 in 4	Yes	
Transitions	2.0m	2.0m	Yes	
Width (Two-way)	Min 5.5m	5.5m	Yes	
Kerbs	300mm wide	Provided	Yes	
Gradient for First 6m of Driveway	Max 5% (1 in 20)	1 in 20 @ 4m	No	See Note 1
Height Clearance	2.2m	>2.2m	Yes	
Parking Modules (AS2890.1:2004) - User Class 1A				
Car Space Dimension	5.4m long x 2.4m wide	5.4m long x 2.4m wide	Yes	
Motorcycle Space Dimension	2.5m long x 1.2m wide	2.5m long x 1.2m wide		
Door Clearance	300mm	300mm	Yes	



Aisle Width	5.8m	5.8m	Yes	
Height Clearance	2.2m	2.5m	Yes	
Gradient	Max 5% (1 in 20)	1 in 20	Yes	

Note 1

It is noted that the first 4m of the ramp is graded at 5%. This is less than the Australian Standards requirement of 6m.

The design intent of the 6m storage bay is to enable a departing car to stand on a relatively level surface such that its driver can see a pedestrian on/near the frontage footpath. However, the design vehicle is not 6m long; the Australian Standards' largest design light vehicle (a B99) is only 5.2m long. A template of this vehicle is extracted from the AS2890.1 and reproduced overleaf.

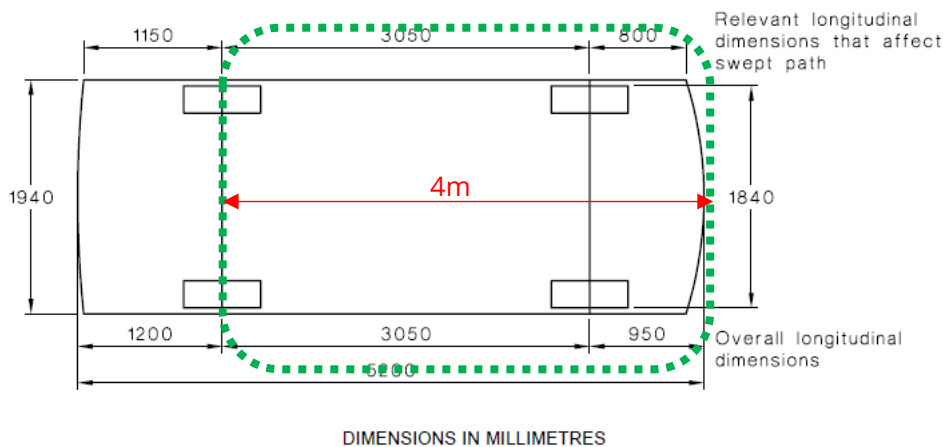
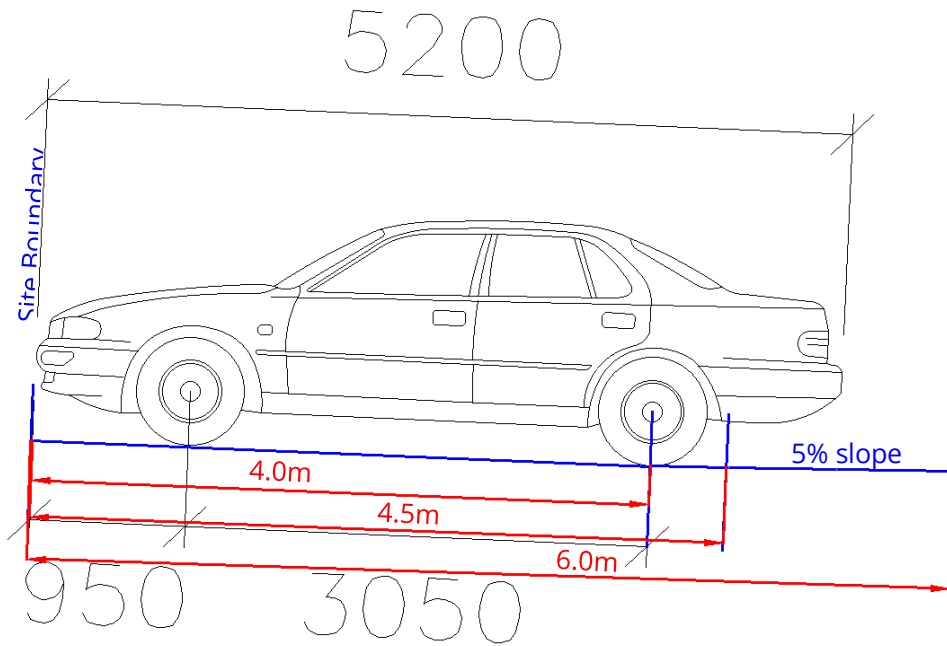


FIGURE B1 B99 (99.8TH PERCENTILE) VEHICLE

The B99 vehicle template indicates that the front of the car to the rear wheel is 4m long. On this basis, a 4m-long standing area will effectively allow a vehicle to stand on a uniform surface, as illustrated below:



Source: AutoTurn Standard AS2890.1 B99 template

Therefore, the provision of a 4m long ramp with a 5% grade will enable the departing driver's vehicle to stand on the same profile as it would on a 6m long ramp near the site boundary. Thus, the driver's sightlines towards pedestrians on/near the frontage footpath in both cases are comparable, and this meets the AS2890.1's design objective for pedestrian safety. It is noted that the majority of cars in Sydney metropolitan area is shorter than a B99 specification.



5 Servicing Arrangement

To be consistent with the surrounding development, the refuse collection will occur on-street along the site's eastern kerb frontage on Gladys Avenue. Any infrequent services such as deliveries, maintenance etc., will rely on the ample on-street parking within the vicinity of the site, as it is normal for small residential development of this nature.





6 Traffic Assessment

6.1 Existing Traffic Generation

The RMS Guide to Traffic Generating Development (RMSGTGD)¹ provides an average trip generation rate of 0.85 vehicle trips per hour (vtph) for low-density residential dwellings during peak hours.

Applying these trip rates to 4 existing dwellings would indicate a peak hour traffic generation outcome of 4 vtph.

6.2 Development Traffic Generation

The RMSGTGD provides a peak hour trip generation rate of 0.5-0.65 vtph for medium-density residential flat buildings. Application of the highest trip rate (0.65) to the 30 proposed townhouses would indicate a peak hour traffic generation outcome of 20 vtph during morning and evening peak hours.

6.3 Overall Traffic Generation and Distribution

Having regard to the above, the net traffic generation outcome during peak hours is calculated based on the following:

$$\begin{aligned}
 \text{Net Traffic} &= \text{Development Traffic} - \text{Existing Traffic} \\
 &= 20 \text{ vtph} - 4 \text{ vtph} \\
 &= 16 \text{ vtph}
 \end{aligned}$$

As demonstrated above, the projected traffic of the proposal will generate an additional 16 vtph on surrounding road network during peak periods, distributed as follows:

Table 6-1 Development Traffic Distribution

AM Peak		PM Peak	
In (20%)	Out (80%)	In (80%)	Out (20%)
3	13	13	3

Traffic generation of this order of magnitude is minor and is not expected to impose an adverse impact on the existing road network. The assessment concludes on this basis that the development traffic will not unduly impact the existing local road network.

¹ NSW Government Roads and Traffic Authority 2002, Guide to Traffic Generating Developments



7 Conclusion

The traffic and parking assessment undertaken for the proposed residential development at 1, 5-7 Gladys Avenue, Frenchs Forest has concluded that:

- the traffic generation of the proposed development will not present any adverse traffic implications
- the proposed parking provision will comply with the Council's DCP criteria and will adequately serve the development
- the proposed access, internal circulation and parking arrangements will be appropriate to AS design criteria

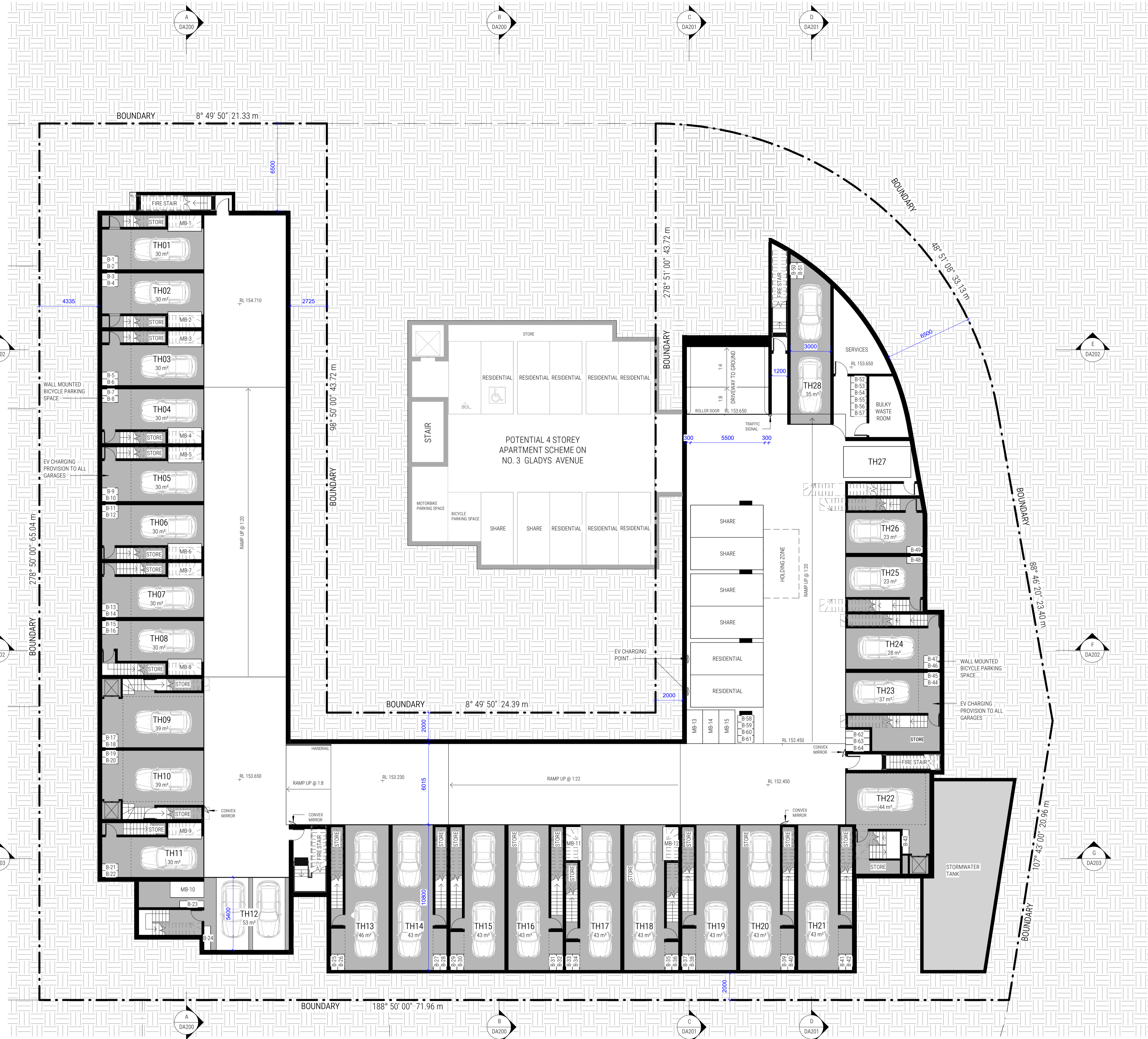




Attachment 1

Architectural Plans



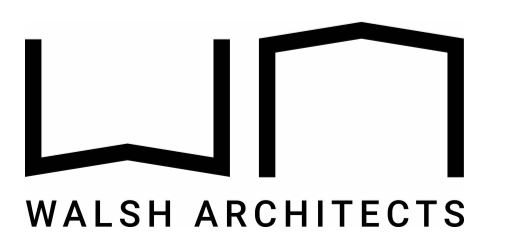


WARRINGAH DEVELOPMENT CONTROL PLAN PART G - 6 TABLE 2 - PARKING RATES FOR RESIDENTIAL USES

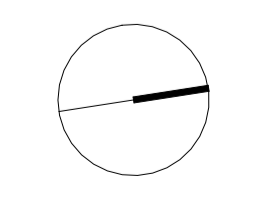
	MAXIMUM PARKING RATE
1 BEDROOM (INCLUDING STUDIO)	0.6 SPACE
2 BEDROOM	1 SPACE
3 BEDROOMS AND MORE	1.5 SPACES
VISITOR CAR PARKING	0.1 SPACES PER DWELLING
MINIMUM PARKING RATE	
CAR SHARE DELICATED SPACE	2 SPACES PER 15 DWELLINGS
ELECTRIC VEHICLE CHARGING SPACE	2% OF DWELLINGS OR 2 PER DEVELOPMENT (WHICH IS GREATER)
MOTORCYCLE PARKING	
MOTORCYCLE PARKING	0.5 SPACES PER DWELLING
BICYCLE PARKING	2 SPACES PER DWELLING
BICYCLE PARKING	
BICYCLE PARKING	0.25 SPACES PER DWELLING FOR VISITOR BICYCLE PARKING

CAR PARKING SPACE	REQUIRED
RESIDENTIAL:	41
VISITOR:	0
SHARED:	4

MOTORCYCLE & BICYCLE PARKING SPACE	REQUIRED
MOTORCYCLE:	15
BICYCLE (RESIDENTIAL):	60
BICYCLE (VISITOR):	8

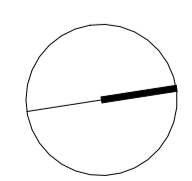


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REV NO. 7
DESCRIPTION: ISSUE FOR DA APPROVAL
REV DATE: 14.02.23

BASEMENT PLAN
SHEET NUMBER: DA100
REVISION: 7
SCALE @ A1: 1:150
1&S7 GLADYS AVENUE FRENCHS FOREST





C EAST-WEST SECTION C
DA201 1:100 @ A1



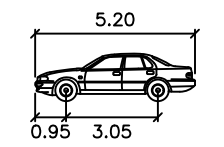
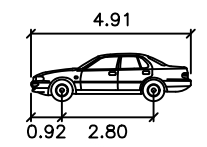
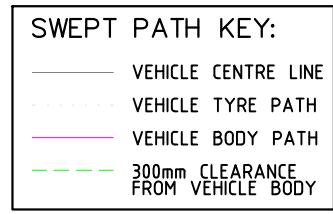
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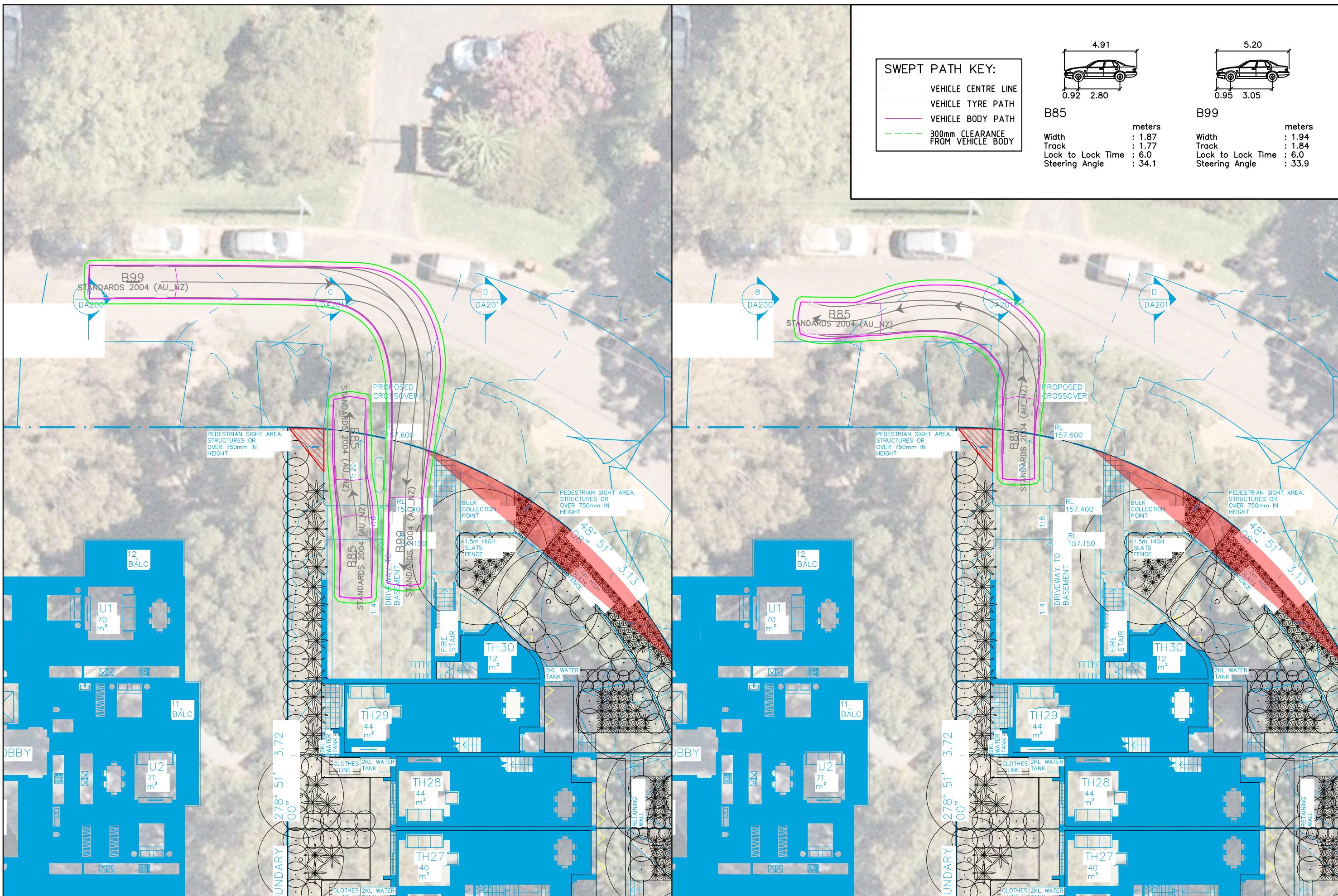
Attachment 2

Turning Path Assessments





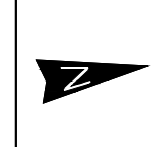
	B85	units	B99	units
Width	1.87	meters	1.94	meters
Track	1.77	meters	1.84	meters
Lock to Lock Time	6.0	seconds	6.0	seconds
Steering Angle	34.1	degrees	33.9	degrees



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 Plotted by GenesisTraffic

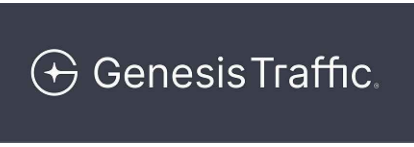
1-7 GLADYS AVENUE, FRENCHS FOREST
GROUND FLOOR
SWEPT PATH ASSESSMENT - B85 AND B99 ENTER AND EXIT THE SITE
 DRAWING REF NO. 22059-V1.5-SP SHEET NO. 01 OF 07 ISSUE DATE 21 February 2023

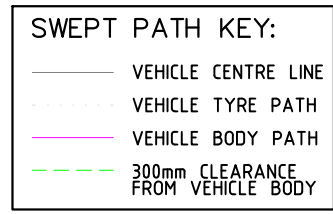
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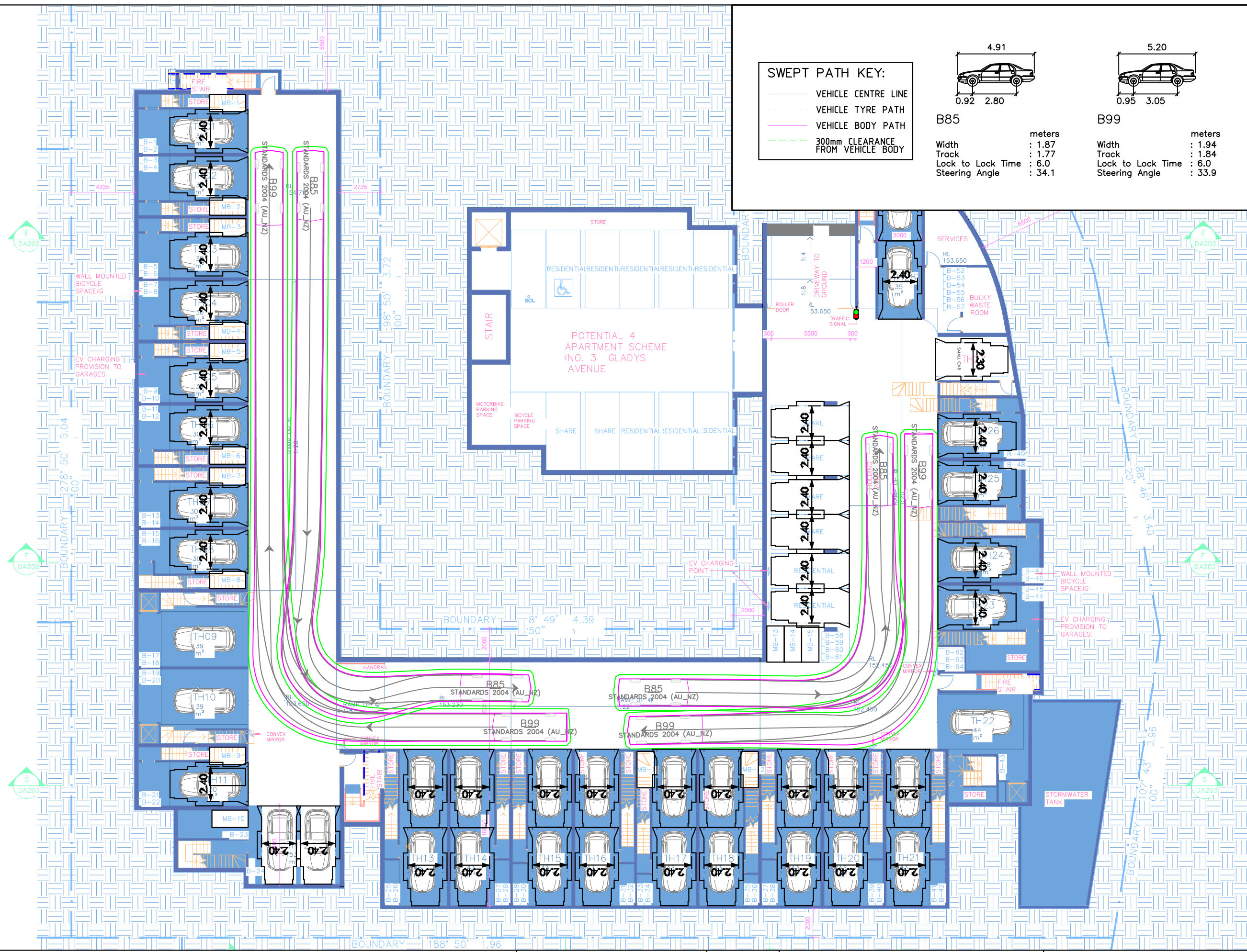
PRELIMINARY PLAN
 FOR DISCUSSION PURPOSES
 ONLY SUBJECT TO CHANGE
 WITHOUT NOTIFICATION

WARNING
 THE LOCATION OF UNDERGROUND SERVICES
 ARE APPROXIMATE ONLY
 THE EXACT LOCATION SHALL BE VERIFIED ON SITE.
 ALL EXISTING SERVICES SHOWN ARE NOT GUARANTEED.





	B85		B99	
	meters		meters	
Width	: 1.87		: 1.94	
Track	: 1.77		: 1.84	
Lock to Lock Time	: 6.0		: 6.0	
Steering Angle	: 34.1		: 33.9	



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1-7 GLADYS AVENUE, FRENCHS FOREST
BASEMENT
SWEPT PATH ASSESSMENT - B85 AND B99 PASSING
 DRAWING REF NO. 22059-V1.5-SP

SHEET NO. 02 OF 07

ISSUE DATE 21 February 2023

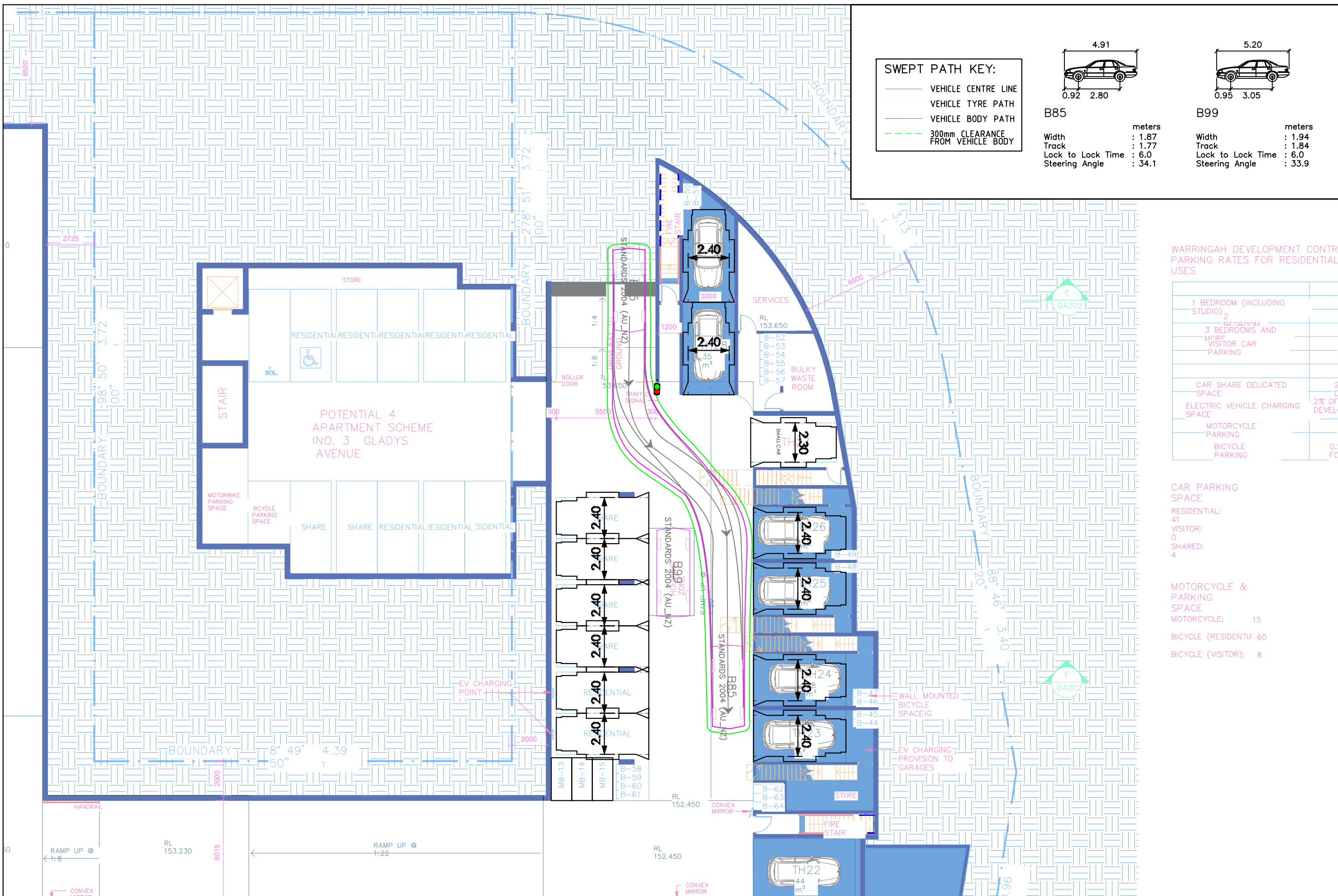
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PRELIMINARY PLAN
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 ONLY SUBJECT TO CHANGE
 WITHOUT NOTIFICATION

WARNING
 THE LOCATION OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY
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 ALL EXISTING SERVICES SHOWN ARE NOT GUARANTEED.





SWEPT PATH KEY:

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- - - 300mm CLEARANCE FROM VEHICLE BODY

Vehicle	Width (meters)	Track (meters)	Lock to Lock Time (meters)	Steering Angle (meters)
B85	4.91	2.80	6.0	34.1
B99	5.20	3.05	6.0	33.9

WARRAGAH DEVELOPMENT CONTRA PARKING RATES FOR RESIDENTIAL USES

1 BEDROOM (INCLUDING STUDIO)	2
2 BEDROOM	2
3 BEDROOMS AND MORE	2
VISITOR CAR PARKING	2
CAR SHARE DELICATED SPACE	2% OF DEVELOPMENT
ELECTRIC VEHICLE CHARGING SPACE	2% OF DEVELOPMENT
MOTORCYCLE PARKING	0.2
BICYCLE PARKING	0.2

CAR PARKING SPACE

RESIDENTIAL: 41
VISITOR: 0
SHARED: 4

MOTORCYCLE & PARKING SPACE

MOTORCYCLE: 15
BICYCLE (RESIDENTIAL): 60
BICYCLE (VISITOR): 8

6:\2023\22059-1-7 Gladys Avenue, Frenchs Forest\Drawings\22059-V1.5-SP.dwg
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1-7 GLADYS AVENUE, FRENCHS FOREST
BASEMENT
SWEPT PATH ASSESSMENT - B85 AND B99 PASSING
DRAWING REF NO. 22059-V1.5-SP

SHEET NO. 03 OF 07

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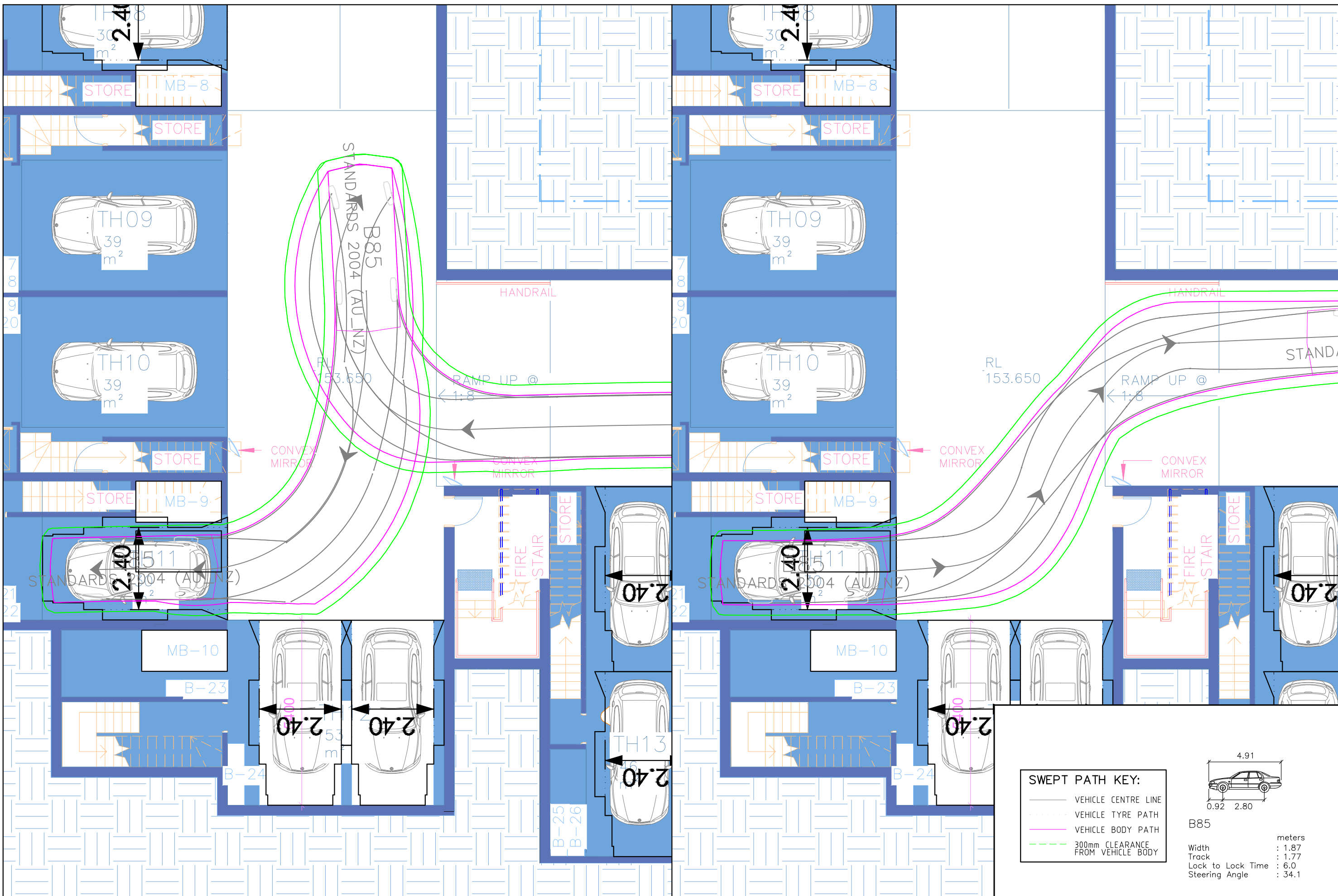
DESIGNED BY L.N.G
REVIEWED BY B.L.O
SCALE A3 1:###



PRELIMINARY PLAN
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ONLY SUBJECT TO CHANGE
WITHOUT NOTIFICATION

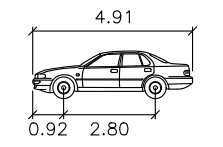
WARNING
THE LOCATION OF UNDERGROUND SERVICES
ARE APPROXIMATE ONLY
THE EXACT LOCATION SHALL BE DETERMINED ON SITE.
ALL EXISTING SERVICES SHOWN ARE NOT GUARANTEED.





SWEPT PATH KEY:

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY



B85

Width	: 1.87	meters
Track	: 1.77	
Lock to Lock Time	: 6.0	
Steering Angle	: 34.1	

6:\2023\2059 - 1-7 Gladys Avenue, Frenchs Forest\Drawings\22059-V1.5-SP.dwg
 Plotted by GenesisTraffic

1-7 GLADYS AVENUE, FRENCHS FOREST
BASEMENT
SWEPT PATH ASSESSMENT - B85 ENTER AND EXIT TH11
 DRAWING REF NO. 22059-V1.5-SP SHEET NO. 04 OF 07 ISSUE DATE 21 February 2023

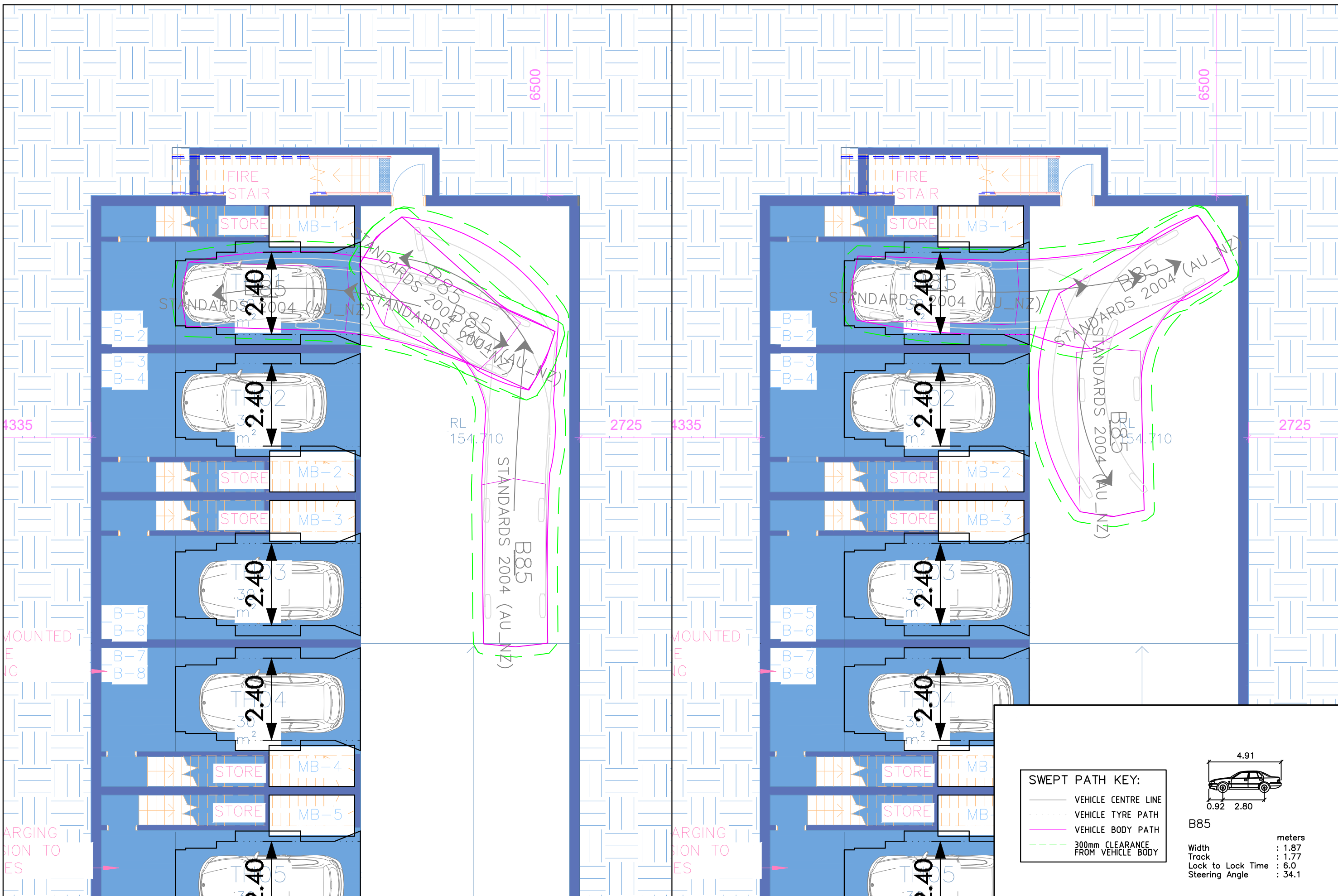
DESIGNED BY L.N.G REVIEWED BY B.L.O
 SCALE A3 0 10 20 1:100



PRELIMINARY PLAN
 FOR DISCUSSION PURPOSES
 ONLY SUBJECT TO CHANGE
 WITHOUT NOTIFICATION

WARNING
 THE LOCATION OF UNDERGROUND SERVICES
 ARE APPROXIMATE ONLY
 THE EXACT LOCATION SHALL BE VERIFIED ON SITE.
 ALL EXISTING SERVICES SHOWN ARE NOT GUARANTEED.





1-7 GLADYS AVENUE, FRENCHS FOREST
 BASEMENT
 SWEEP PATH ASSESSMENT - B85 ENTER AND EXIT TH01
 DRAWING REF NO. 22059-V1.5-SP SHEET NO. 05 OF 07

ISSUE DATE 21 February 2023

DESIGNED BY L.N.G. REVIEWED BY B.L.O.
 SCALE A3 0 10 20 1:100



PRELIMINARY PLAN
 FOR DISCUSSION PURPOSES
 ONLY SUBJECT TO CHANGE
 WITHOUT NOTIFICATION

WARNING
 THE LOCATION OF UNDERGROUND SERVICES
 ARE APPROXIMATE ONLY
 THE EXACT LOCATION SHALL BE DETERMINED ON SITE.
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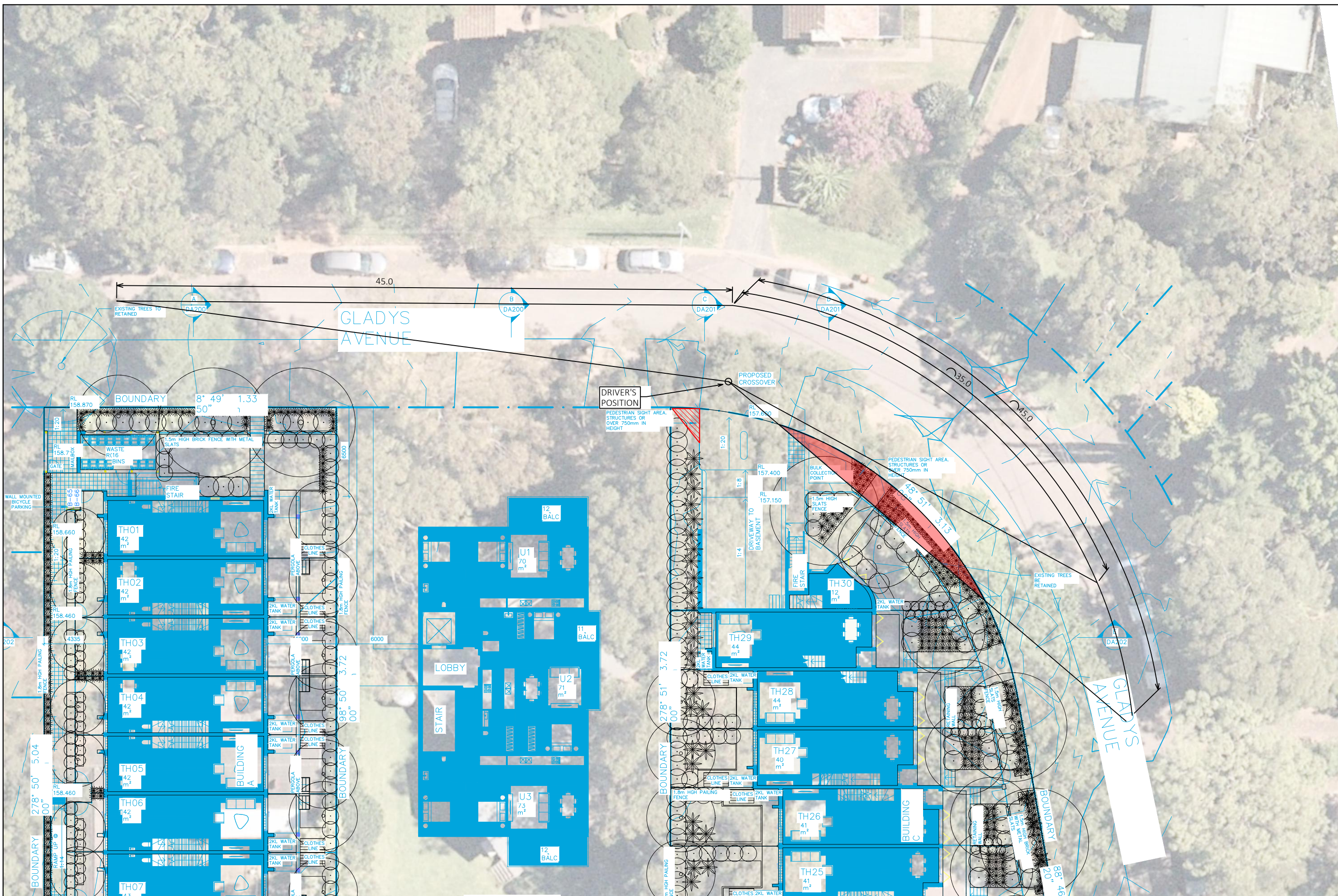
SWEPT PATH KEY:

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- - - - 300mm CLEARANCE FROM VEHICLE BODY

B85

Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.1

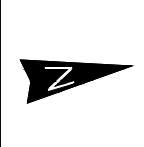
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 Plotted by GenesisTraffic



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 Plotted by GenesisTraffic

1-7 GLADYS AVENUE, FRENCHS FOREST
GROUND FLOOR
SIGHT SPY FOR PEDESTRIAN AND SIGHT LINE FOR TRAFFIC ON GLADYS AVENUE
 DRAWING REF NO. 22059-V1.5-SP SHEET NO. 06 OF 07 ISSUE DATE 21 February 2023

DESIGNED BY: L.N.G. REVIEWED BY: B.L.O.
 SCALE: A3 0 2.5 5.0 1:250



PRELIMINARY PLAN
 FOR DISCUSSION PURPOSES
 ONLY SUBJECT TO CHANGE
 WITHOUT NOTIFICATION

WARNING
 THE LOCATION OF UNDERGROUND SERVICES
 ARE APPROXIMATE ONLY
 THE EXACT LOCATION SHALL BE OPENED UP ON SITE.
 ALL EXISTING SERVICES SHOULD BE NOT GUARANTEED.



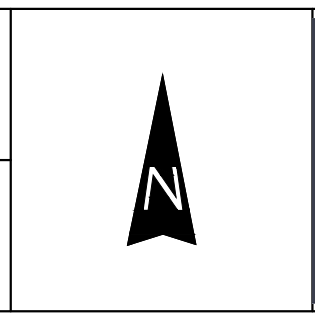


1-7 GLADYS AVENUE, FRENCHS FOREST
 PROPOSED RESIDENTIAL DEVELOPMENT
 GROUND CLEARANCE TEST
 DRAWING REF NO. 22059-V1.5-SP SHEET NO. 07 OF 07 ISSUE DATE 21 February 2023

DESIGNED BY: LNG REVIEWED BY: B.L.O.
 SCALE: A3 0 2.0 4.0 1:200

PRELIMINARY PLAN
 FOR DISCUSSION PURPOSES
 ONLY SUBJECT TO CHANGE
 WITHOUT NOTIFICATION

WARNING
 THE LOCATIONS OF UNDERGROUND SERVICES
 ARE APPROXIMATE ONLY.
 THE EXACT LOCATIONS SHALL BE PROVIDED ON SITE.
 ALL ALERTING SERVICES SHOWN ARE NOT GUARANTEED.



Plotted by Genesis Traffic
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