

Traffic Impact Assessment

34-36 Light Street & 42 Walker Street, Casino (Stage C)

Proposed Residential Development

GT22053

Prepared for

Land & Housing Corporation (LAHC)

19 January 2024

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Document Information

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Architects	Brewster Murray
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Council	Richmond Valley Council
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1 Introduction

1.1 Background

This report has been prepared in respect to a proposed residential development scheme by LAHC for Stage C at 34-36 Light Street & 42 Walker Street, Casino (Figure 1-1).

Figure 1-1 Site



Source: Mecone (modified by Genesis Traffic)

The proposal is for 14 residential units with an associated at-grade carpark on the site.

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:

- AS2890.1 (Australian/NZ Standards, 2004)
- Development Control Plan (Richmond Valley Council, 2021)
- RMS Guide to Traffic Generating Developments, RTA, 2002
- State Environmental Planning Policy (Housing) 2021 (SEPP 2021)

2 Existing Conditions

2.1 Site and Surrounding Context

The site (Figure 2-1) is a consolidation of Lots C, D and E in DP35927, located at 34-36 Light Street & 42 Walker Street, Casino. It occupies a rectangular-shaped area of 2,109m² with a frontage of some 50m to Light Street and some 40m to Walker Street.

Figure 2-1 Site Context



Source: Sixmap (modified by Genesis Traffic)

Three (3) single-storey residential dwellings occupy the site at present, with vehicle accesses located at Light Street and Walker Street. Surrounding the site is predominantly low-density residential development and a recreation park in the south opposite the site. The site is also located 200m west of retail shops along Centre Street.

2.2 Road Network

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

Figure 2-2 Local Road Network



Source: TfNSW (modified by Genesis Traffic)

- Centre Street – A Classified State Road (MR 083) and an arterial road that traverses north-south between the Queensland border in the north and South Grafton in the south. Within the site, it is subject to 50km/h speed limit and comprises a single traffic lane in either direction.
- Light Street – An unclassified local road that traverses east-west between Whitworth Avenue in the east and Wooroowoolgan Street in the west. It comprises a single traffic lane in either direction and has a carriageway width of 10.5m.
- Walker Street – An unclassified local road that traverses north-south between two (2) cul-de-sacs. It comprises a single traffic lane in either direction with has a carriageway width of 5.5m.

2.3 Traffic Controls

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

- A Give Way priority control at the intersection of:
 - Light Street and Centre Street
 - Walker Street and Light Street
- The roundabout at the intersection of Centre Street and Hare Street

2.4 Public Transport Services

The site is served by several bus services operating in the locality. The nearest bus stop is located 220m (3 minutes walking distance) to the southwest on Centre Street. The bus stations provide Route 671 and 674 services on weekdays and no services are available on weekends.

2.5 Existing Traffic Conditions

Walker Street and Light Street carry local traffic movements predominantly and are observed to be generally free-flowing during peak periods. There is no apparent capacity constraint in the immediate surrounding road network during peak periods.



3 Proposed Development

It is proposed to demolish the existing buildings and outbuildings on the site, undertake earthworks to provide a level building platform on the site, and construct a two-storey building comprising:

- 14 apartments in the following composition:
 - 6 x one-bedroom units
 - 8 x two-bedroom units
- 11 x at-grade car parking spaces (including 2 accessible car parking spaces)

A new vehicle access will be provided at Walker Street.

Details of the proposed development are provided on the plans prepared by Brewster Murray, which accompany the Part 5 Application and are reproduced in part in **Attachment 1**.



4 Parking Assessment

4.1 Car Parking Requirements

SEPP Housing 2021 provides the relevant car parking criteria for this development. Reference is made to the non-discretionary development standards in Division 6, Residential development – relevant authorities (1)(f) HSEPP 2021, as follows:

(f) for development on land that is not in an accessible area—the development will result in the following number of parking spaces—

- (i) for each dwelling containing 1 bedroom—0.5 parking spaces,*
- (ii) for each dwelling containing 2 bedrooms—1 parking space,*
- (iii) for each dwelling containing at least 3 bedrooms—1.5 parking spaces.*

Having regard to the above, the proposal of 14 units indicates a minimum requirement of 11 parking spaces. Based on the above assessment, the proposal to provide 11 parking spaces satisfies the SEPP criteria.

5 Access and Circulation Design

5.1 Access Location

A new 5.5m wide driveway will be established on Walker Street to provide access to the new at-grade carpark. The access driveway has been designed in accordance with the AS2890.1 criteria (Table 5-1).

5.2 Access, Carpark and Circulation

Table 5-1 and Table 5-2 show the minimum parking dimension in parking modules and access driveway requirements in accordance with AS2890.1.

Table 5-1 Compliance Check against Off-street Car Parking (AS2890.1:2004)

Features	Requirement	Provision	Compliance	Notes
Access Driveways (Category 1)				
Access Width	(Category 1) 3.0m - 5.5m	5.5m	Yes	
Passing Provision	1 per 30m	1 per 17m	Yes	
Access Width for first 6m	6m long x 5.5m wide	Provided	Yes	
Sight Triangle (Pedestrian)	2.5m long x 2.0m wide	Provided	Yes	
First 6m Ramp Grade	Max 5% (1:20)	1:20	Yes	
Circulation Roadways / Ramp				
Ramp Grade	Max 25% (1:4)	1:20	Yes	
Transitions	Min 2.0m	>2.0m	Yes	
Grade Transitions	Max 12.5% (1:8)	<12.5%	Yes	
Roadways Width (One-way)	Min 3.0m	3.0m	Yes	
Clearance	300mm on both sides	Provided	Yes	
Headroom Clearance	Min 2.2m	N/A	Yes	Open Carpark
Parking Modules				
Car Space Dimension	User Class 1A 5.4m long x 2.4m wide	5.4m long x 2.4m wide	Yes	

Aisle Width	User Class 1A 5.8m	>5.8m	Yes	
Door Clearance	300mm	Provided	Yes	
Blind Aisle	Min 1.0m	Provided	Yes	
Height Clearance	Min 2.2m	N/A	Yes	
Gradient	Max 5% (1:20)	1:40	Yes	

Table 5-2 Compliance Check against Accessible Parking (AS2890.6:2022)

Features	Requirement	Provision	Yes	Notes
DDA Space Dimension	5.4m long x 2.4m wide	5.4m long x 2.4m wide	Yes	
DDA Shared Zone + Bollard	5.4m long x 2.4m wide	Bollard	Yes	
Height Clearance	2.5m	N/A	Yes	Open Carpark
Parking Space Gradient	Max 2.5% (1:40)	1:40	Yes	

In summary, the design provisions in relation to the access, parking circulation and arrangement generally comply with AS2890.1 and AS2890.6. A swept path analysis has been provided to demonstrate the satisfactory vehicle manoeuvres and circulation within the carpark. Details of a swept path analysis are provided in **Attachment 2**.

5.3 Servicing Arrangement

Consistent with the surrounding waste collection arrangement, refuse collection will occur on-street along the eastern kerb frontage of Walker Street. All loading activities related to deliveries, courier activity, maintenance etc. will rely on the ample on-street parking in the vicinity of the site.

6 Traffic Assessment

6.1 Existing Traffic Generation

The updated Technical Direction TDT 2013/04a¹ provides revised trip generation rates for low-density residential dwellings in regional areas. The relevant trip rates are as follows:

- 0.78 vtpd per dwelling during the morning peak hour
- 0.71 vtpd per dwelling during the evening peak hour

Application of these rates to the three (3) single dwellings would indicate a traffic outcome of three (3) vtpd during AM and PM peak periods.

6.2 Development Traffic Generation

The RMS Guide to Traffic Generating Development provides a peak hour traffic generation rate of 0.4-0.5 vtpd per dwelling for medium-density residential development. Application of this rate to 14 units would indicate a traffic outcome of seven (7) vtpd during peak hours.

6.3 Overall Traffic Generation and Distribution

Having regard to the above, the additional traffic generation outcome is calculated as follows:

$$\begin{aligned}\text{Additional Traffic Generation} &= \text{Development Traffic Generation} - \text{Existing Traffic Generation} \\ &= 7 \text{ vtpd} - 3 \text{ vtpd} \\ &= 4 \text{ vtpd}\end{aligned}$$

Based on the above, the proposal will likely result in the addition of four (4) vehicle movements per hour during peak periods. Traffic generation of this order of magnitude is not perceptible in this context of the existing road network. It is concluded that the development traffic will not unduly impact the surrounding road network.

¹ NSW Government Roads and Maritime Services 2013, Guide to Traffic Generating Developments: Updated traffic surveys

7 Conclusion

The Traffic and Parking assessment undertaken in respect of the proposed residential development at 34-36 Light Street & 42 Walker Street, Casino has concluded that:

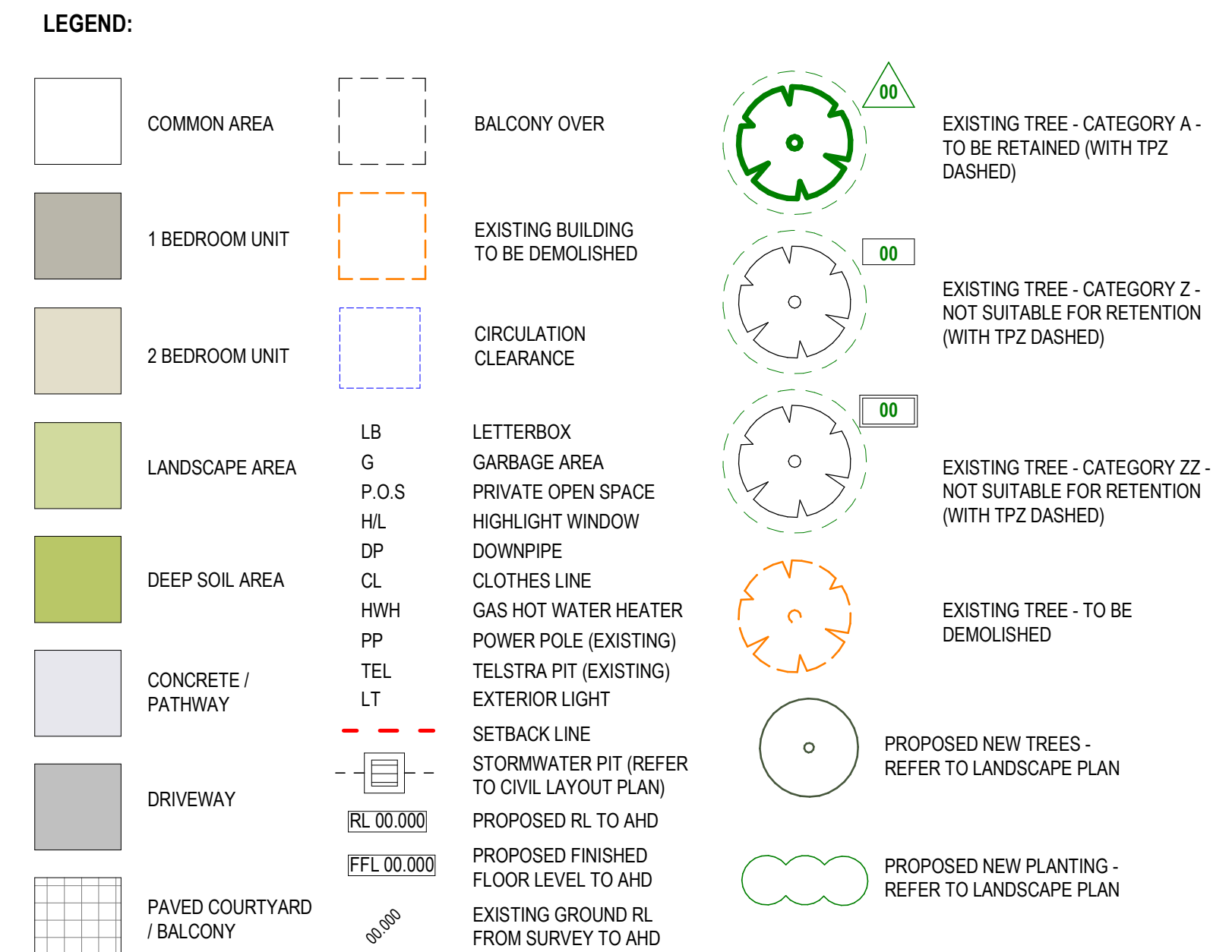
- the traffic generation of the proposed development will not present any adverse traffic implications
- the proposed parking provision will comply with the SEPP criteria and will adequately serve the development
- the proposed access, internal circulation and parking arrangements will be appropriate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



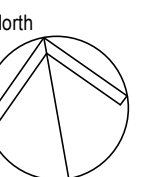


Attachment 1

Architectural Plans



A large, mature avocado tree with dense green foliage stands in a grassy residential yard. The tree is positioned in front of a white house on the left and a red house on the right. A chain-link fence runs across the foreground, partially obscuring the base of the tree. The sky is clear and blue.





Attachment 2

Turning Path Assessment



34-36 LIGHT STREET & 42 WALKER STREET, CASINO
LAHC - PROPOSED RESIDENTIAL DEVELOPMENT
COMPLIANCE CHECK

DRAWING REF NO. GT22053-V1.2-SP

SHEET NO. 01 OF 05

ISSUE DATE 19 January 2024

DESIGNED BY
L.N.G.

REVIEWED BY
B.L.O.

SCALE
A3

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1:200



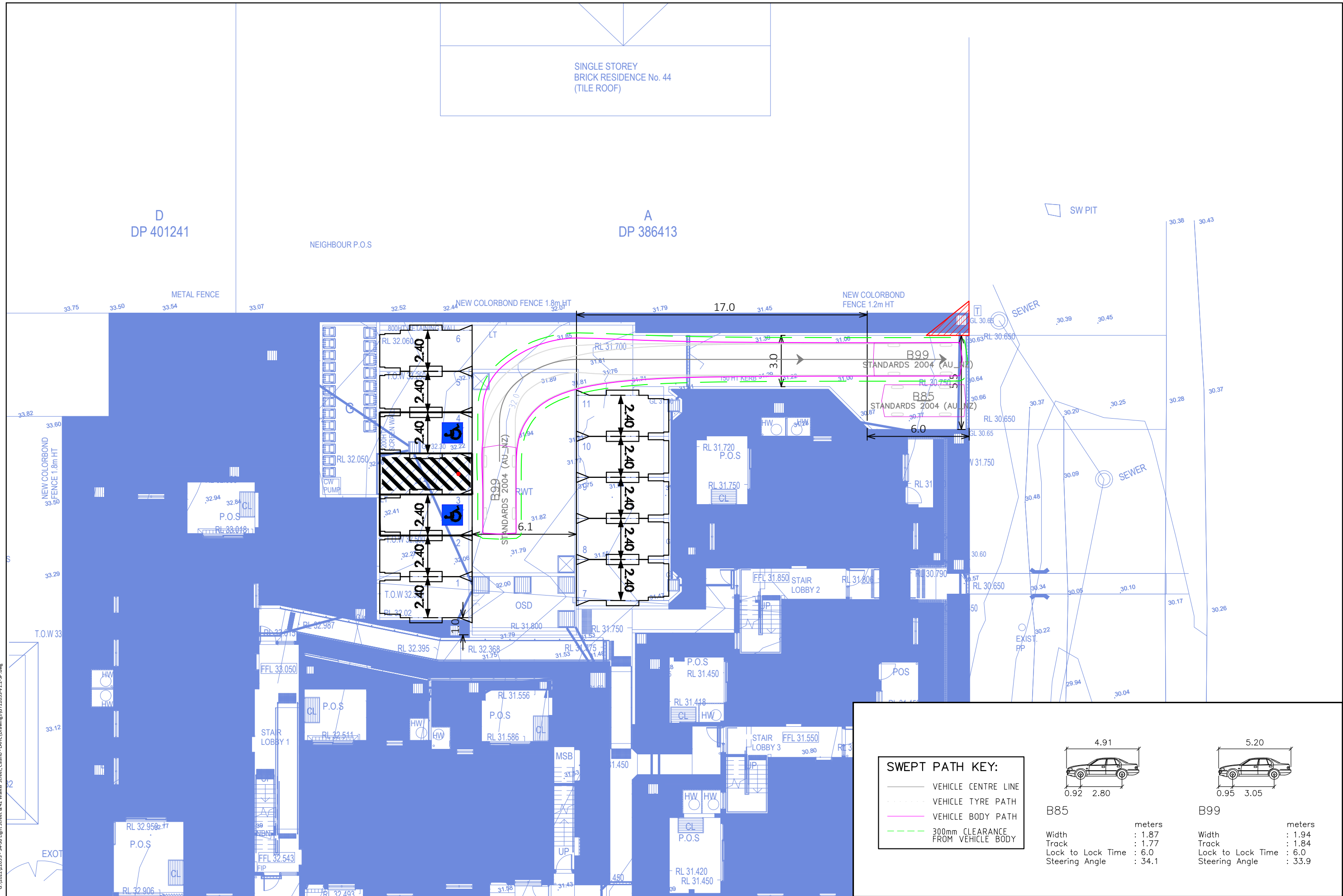
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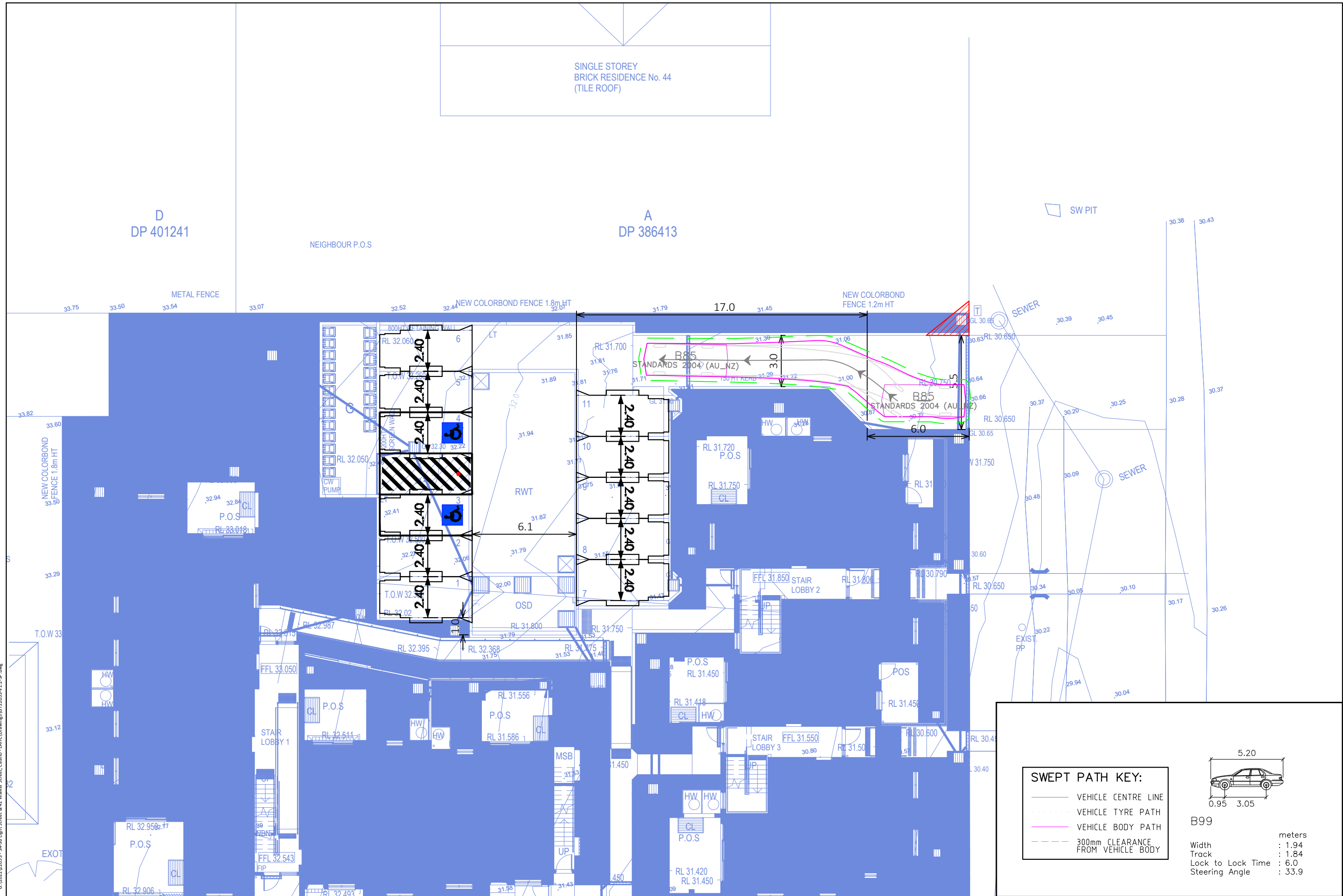
FOR DISCUSSION PURPOSES
ONLY SUBJECT TO CHANGE
WITHOUT NOTIFICATION

WARNING

THE LOCATION OF UNDERGROUND SERVICES
ARE APPROXIMATE ONLY
THE EXACT LOCATIONS SHALL BE PROVIDED ON SITE
ALL EXISTING SERVICES SHOWN ARE NOT GUARANTEED

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SWEPT PATH KEY:

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

B99

Width : 1.94 meters
Track : 1.84
Lock to Lock Time : 6.0
Steering Angle : 33.9

34-36 LIGHT STREET & 42 WALKER STREET, CASINO
LAHC - PROPOSED RESIDENTIAL DEVELOPMENT
SWEPT PATH ASSESSMENT- B99 PASSING

DRAWING REF NO. GT22053-V1.2-SP

SHEET NO. 03 OF 05

ISSUE DATE 19 January 2024

DESIGNED BY L.NG
REVIEWED BY B.LO

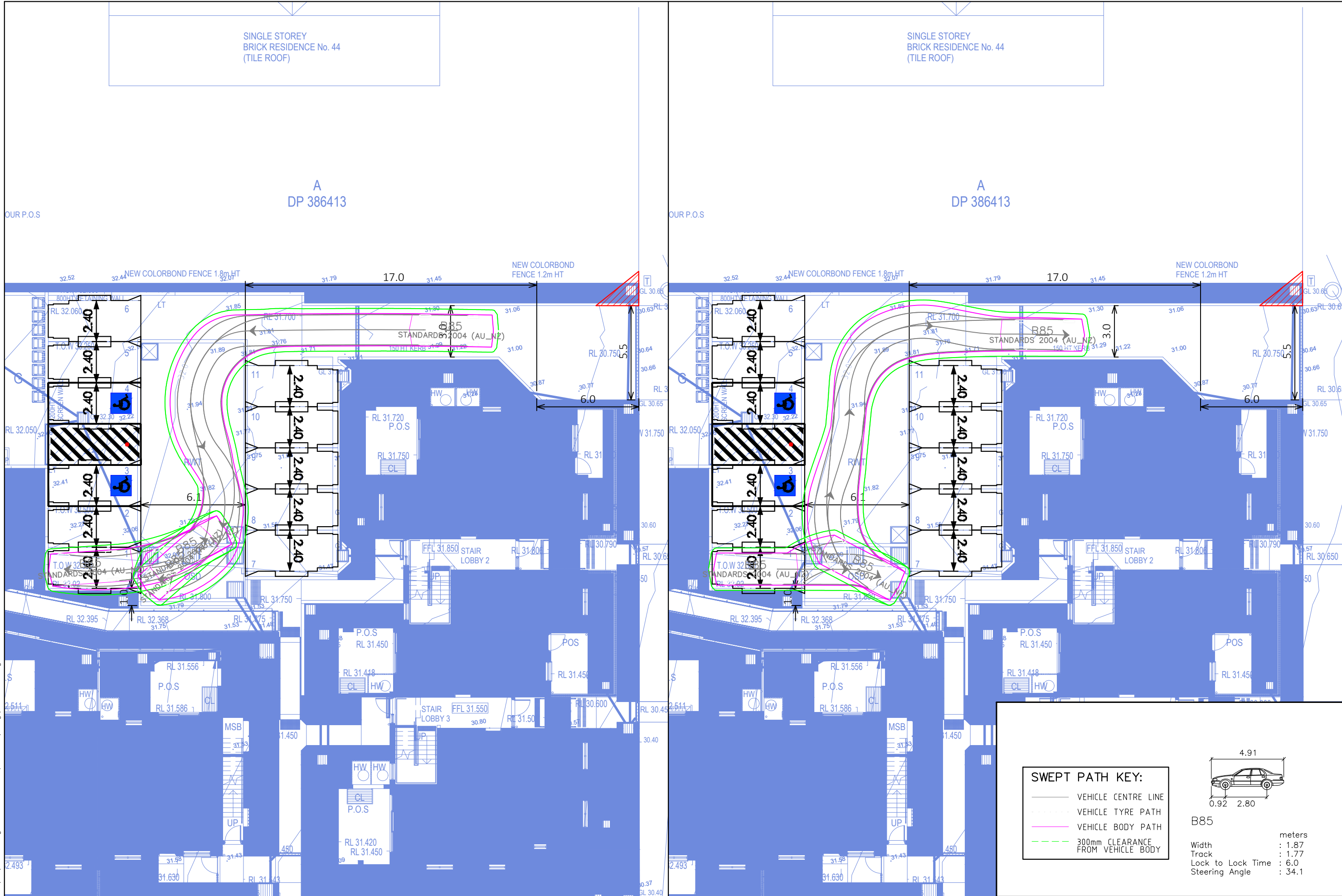
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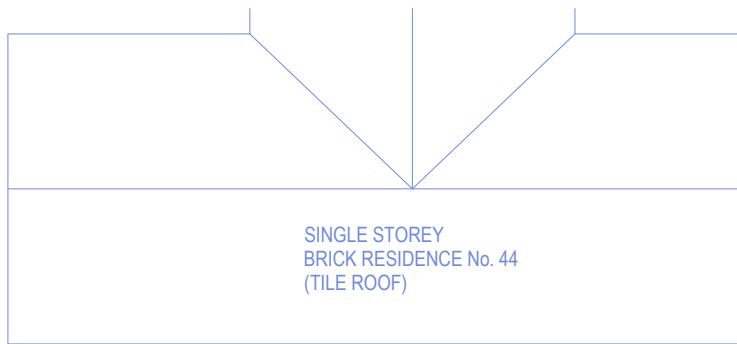


PRELIMINARY PLAN
FOR DISCUSSION PURPOSES
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ARE APPROXIMATE ONLY
THE EXACT LOCATIONS SHALL BE DETERMINED ON SITE.
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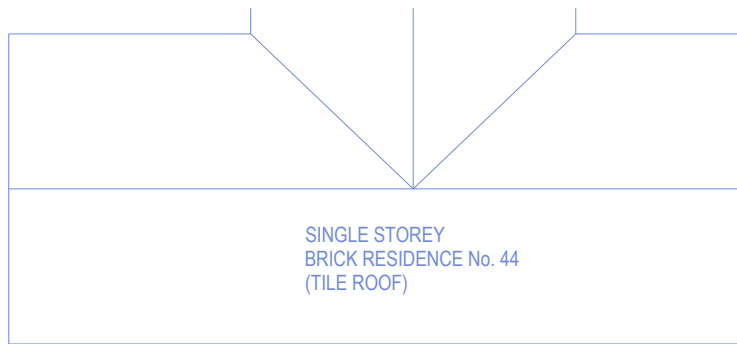
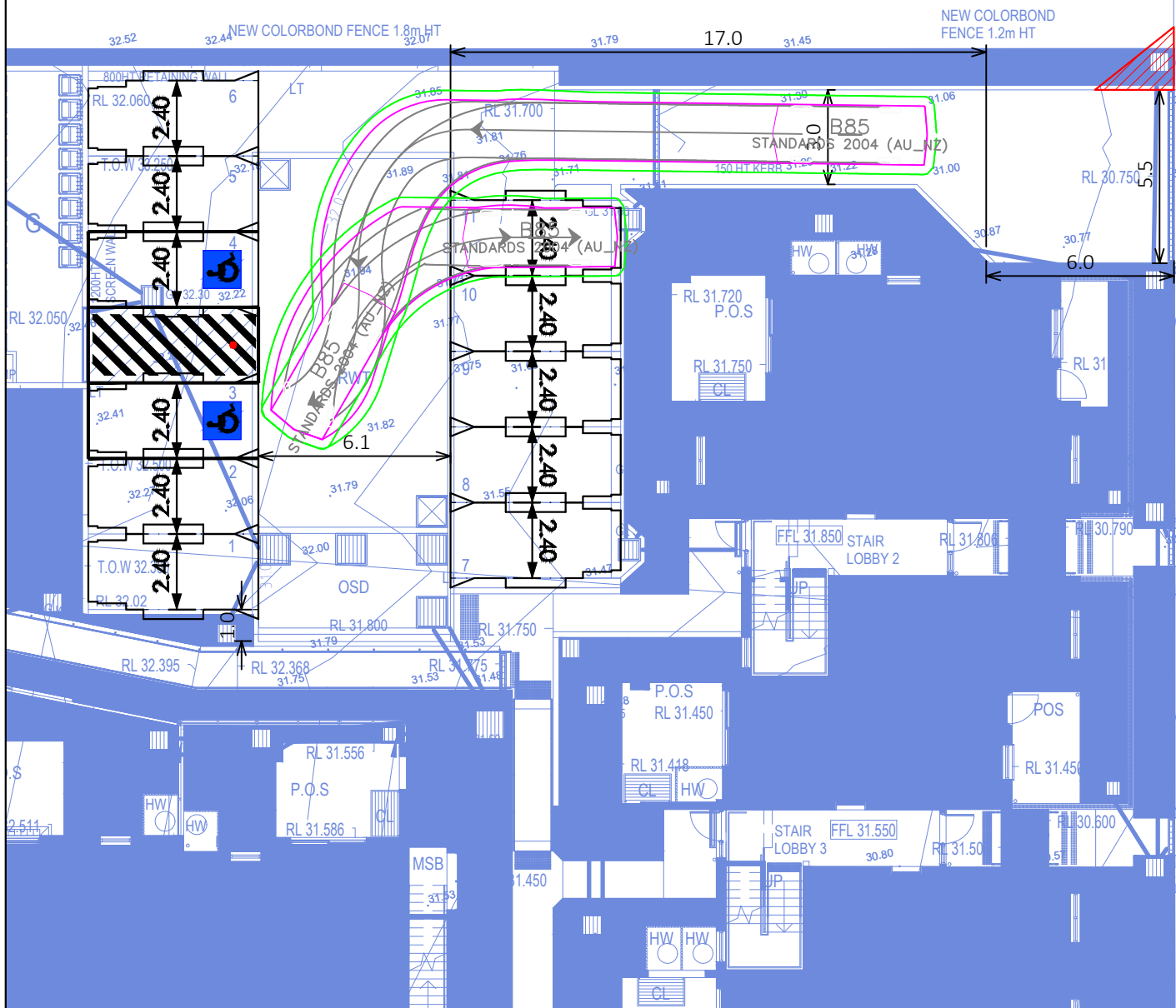




SINGLE STOREY
BRICK RESIDENCE No. 44
(TILE ROOF)

A
DP 386413

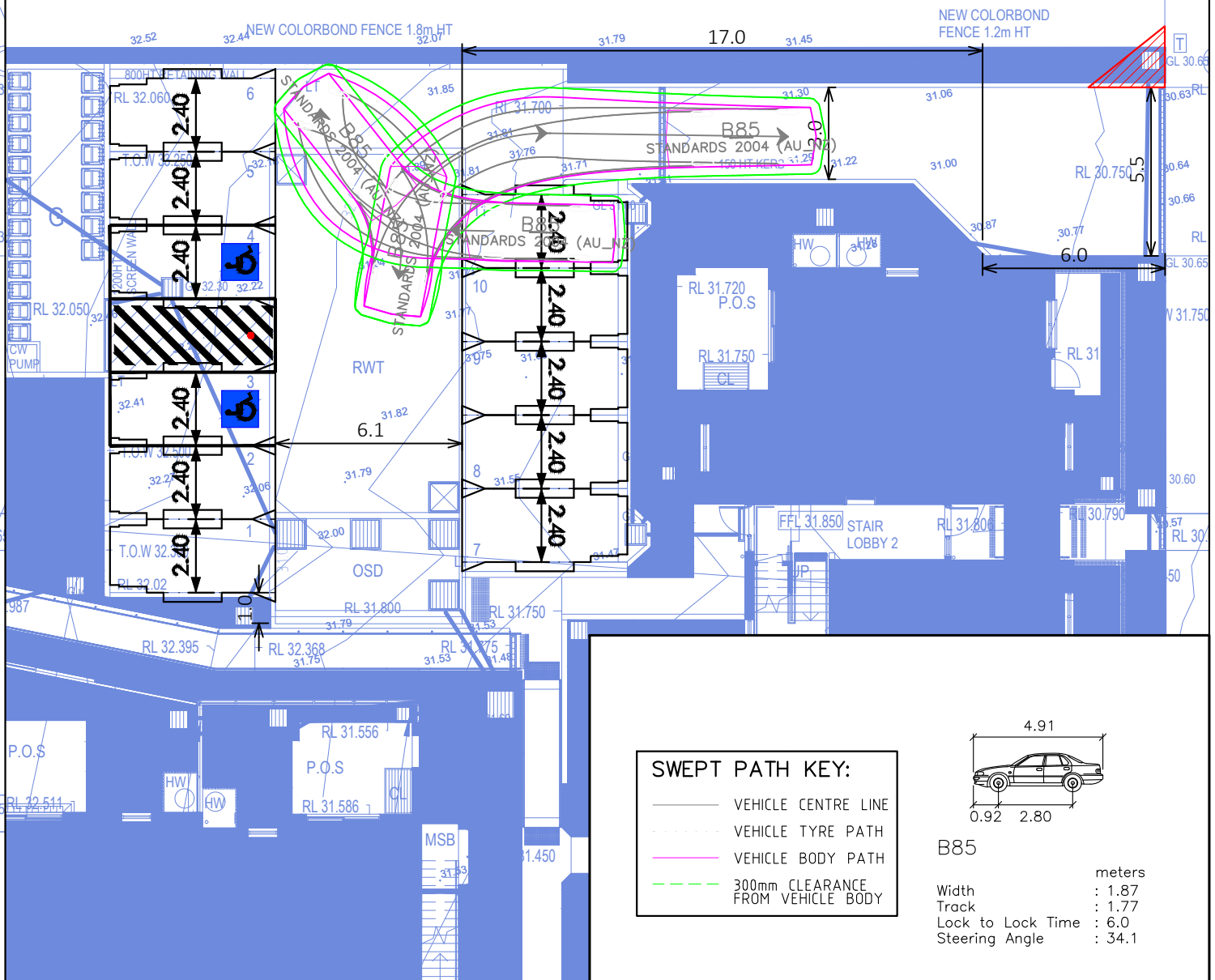
OUR P.O.S



SINGLE STOREY
BRICK RESIDENCE No. 44
(TILE ROOF)

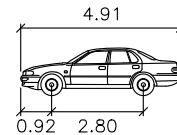
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DP 386413

GHBOUR P.O.S



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

34-36 LIGHT STREET & 42 WALKER STREET, CASINO
LAHC - PROPOSED RESIDENTIAL DEVELOPMENT
SWEPT PATH ASSESSMENT- B85 ENTER (LEFT) AND EXIT (RIGHT) THE CAR SPACE

DRAWING REF NO. GT22053-V1.2-SP

SHEET NO. 05 OF 05

ISSUE DATE 19 January 2024

DESIGNED BY
L.NG

REVIEWED BY
B.L.O

SCALE
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PRELIMINARY PLAN

FOR DISCUSSION PURPOSES
ONLY SUBJECT TO CHANGE
WITHOUT NOTIFICATION

WARNING

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