

18 June 2025

Ref: 23187

Mills Oakley  
Level 7, 151 Clarence Street  
SYDNEY NSW 2000

Attention: Shivana Barnes  
[shbarnes@millsoakley.com.au](mailto:shbarnes@millsoakley.com.au)

Dear Shivana,

**WITHOUT PREJUDICE**  
**Land & Environment Court Proceedings No. 2025/00040207**  
**1 & 3 Careel Head Road, Avalon Beach**  
**Proposed Mixed Use Development**  
**Response to Traffic & Vehicular Access Contentions**

**Introduction**

This statement has been prepared in relation to the abovementioned Land & Environment Court (LEC) Proceedings pertaining to the deemed refusal of DA2024/1091, involving *demolition works, tree removal and construction of a mixed use development, comprising 4 retail tenancies and a 60-place centre-based childcare facility, including associated basement parking and signage*, at 1 & 3 Careel Head Road, Avalon Beach.

This statement provides my position in respect of the relevant traffic and vehicular access particulars detailed in the Statement of Facts & Contentions (SOFACs) prepared by Council, filed 10 March 2025. I also note that I was present at the s.34 conciliation conference held between the parties on Friday 6 June 2025 to discuss the contentions detailed in the SOFACs.

A revised set of architectural plans which attempt to address Council's contentions have therefore been prepared by CD Architects, with the plans relevant to traffic and parking attached, along with the following responses to the Traffic & Vehicular Access contentions.

**Site**

The development site is located on the south-eastern corner of the Barrenjoey Road and Careel Head Road intersection and comprises the following properties:

- 1 Careel Head Road, Avalon Beach
- 3 Careel Head Road, Avalon Beach

The site has street frontages of approximately 50 metres in length to Careel Head Road and approximately 40 metres in length to Barrenjoey Road. The site covers a total area of approximately 1,771m<sup>2</sup> and is legally described as Lot 1 in SP 32656 and Lot B in DP 385973.

No.1 Careel Head Road (the corner allotment) is currently occupied by a single-storey commercial building, comprising 7 small tenancies including a pizza café, pie shop, chicken shop, café and massage. The cumulative floor area of the existing local shopping village is 344m<sup>2</sup> GLFA.

Off-street parking for the shopping village is provided for 14 cars within an outdoor at-grade parking area on the western portion of the property, fronting Barrenjoey Road. Vehicular ingress to the site is currently provided via an entry-only driveway located towards the western end of the Careel Head Road site frontage, whilst vehicular egress is provided via an exit-only driveway located at the southern end of the Barrenjoey Road site frontage.

No.3 Careel Head Road is currently occupied by a single-storey residential dwelling house with off-street parking. Vehicular access to the property is provided via a single driveway located at the western end of its Careel Head Road site frontage.

An aerial image of the site is reproduced below.



Figure 1 – Aerial map (Source: Nearmap)

### Deemed Refused Scheme

The deemed refused scheme which is before the Court seeks consent for the following works:

- Demolition of all existing structures and removal of all existing trees
- Construction of a mixed use development, comprising of:
  - Basement: Parking for 30 cars (allocated according to the proposed uses), 1 motorcycle space and 4 bicycle spaces, storage, bin storage, services, lifts and fire stairs, and accessible toilet
  - Ground floor: Parking for 6 Dan Murphys spaces, 2 accessible spaces, 2 “click & collect” spaces, 1 x 500m<sup>2</sup> packaged liquor retail tenancy (Dan Murphys), 3 small retail tenancies with a cumulative floor area of 174m<sup>2</sup>, outdoor dining area, loading bay (parallel and inside of the Careel Head Road boundary), and landscaping
  - First-floor: Centre-based childcare facility for 60 children and 9 educators, including associated indoor and outdoor play areas (the latter with an acoustic barrier)
  - Rooftop: Solar panels and lift overrun
- Landscaping works, and
- Stormwater works.

Vehicular access to the site was proposed to essentially remain via the existing, separate entry and exit driveways located off Careel Head Road and Barrenjoey Road, respectively.

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### **Pre-s.34 Without Prejudice Scheme**

In the lead up to the s.34 conciliation conference, separate without prejudice discussions were held between the parties, with the aim of narrowing the issues on the day of the s.34 conference. The without prejudice scheme which was discussed at the s.34 conference comprised the following:

- Demolition of all existing structures and removal of all existing trees
- Construction of a mixed use development, comprising of:
  - Basement: Parking for 31 cars (allocated according to the proposed uses), 1 motorcycle space and 3 bicycle spaces, storage, bin storage, services, lifts and fire stairs, and accessible toilet
  - Ground floor: Parking for 2 Dan Murphys spaces, 2 accessible spaces, 2 “click & collect” spaces, 1 x 500m<sup>2</sup> packaged liquor retail tenancy (Dan Murphys), 2 small retail tenancies with a cumulative floor area of 83m<sup>2</sup>, outdoor dining area, loading bay (parallel and inside of the southern boundary), and landscaping
  - First-floor: Centre-based childcare facility for 60 children and 9 educators, including associated indoor and outdoor play areas (the latter with an acoustic barrier)
  - Rooftop: Solar panels and lift overrun
- Landscaping works, and
- Stormwater works.

Vehicular access to the site was again proposed to essentially remain via the existing, separate entry and exit driveways located off Careel Head Road and Barrenjoey Road, respectively.

### **Post-s.34 Without Prejudice Scheme**

In response to the discussions held between the parties at the s.34 conciliation conference, the proposed scheme has been further amended and now comprises the following:

- Demolition of all existing structures and removal of all existing trees
- Construction of a mixed use development, comprising of:
  - Basement: Parking for 31 cars (allocated according to the proposed uses), 1 motorcycle space and 3 bicycle spaces, storage, bin storage, services, lifts and fire stairs, and accessible toilet
  - Ground floor: Parking for 2 Dan Murphys spaces, 2 accessible spaces, 2 “click & collect” spaces, 1 x 500m<sup>2</sup> packaged liquor retail tenancy (Dan Murphys), 2 small retail tenancies with a cumulative floor area of 70m<sup>2</sup>, outdoor dining area, loading bay (parallel and on the northern side of the basement access ramp with 4.5m overhead clearance), and landscaping
  - First-floor: Centre-based childcare facility for 60 children and 9 educators, including associated indoor and outdoor play areas (the latter with an acoustic barrier)
  - Rooftop: Solar panels and lift overrun
- Landscaping works, and
- Stormwater works.

Vehicular access to the site is again proposed to essentially remain via the existing, separate entry and exit driveways located off Careel Head Road and Barrenjoey Road, respectively. Notwithstanding, and in order to address one of Council’s contentions, the amended scheme now includes road widening along the Careel Head Road site frontage and the construction of a new raised central median island, restricting entry movements to left-in/left-out only.

Whilst Council advised at the s.34 conference that a number of traffic-related contentions have been addressed with the amended scheme or are no longer pressed, the following matters remain outstanding:

- Requirement to prevent right-turn in movements at the entry-only driveway off Careel Head Road
- Any adjustments to Careel Head Road would need to consider the swept turn paths of the 12.5m long HRV as well as the 19m long articulated bus
- Discussion regarding quantum and impact of traffic redirection as a result of left-in/left-out only restrictions at the Careel Head Road entry driveway
- Design of ground floor loading bay, including location and overhead clearance
- Waste collection and delivery details – frequencies, hours, etc

## **Response to Outstanding Matters**

### Road Safety

As noted in the foregoing, the proposed amended scheme now includes road widening along the Careel Head Road site frontage and the construction of a new raised central median island, restricting entry movements to left-in/left-out only. A concept plan of the proposed central island has been prepared by CJP and is attached, along with a series of swept turn paths of the design vehicles specified by Council. Key features of the concept design include:

- Widening of the Careel Head Road carriageway along the western half of the site frontage by approximately 1.2m, tapering back into the existing southern kerb alignment along the eastern half of the site frontage,
- A new raised 600mm wide central median island which extends 5m beyond the eastern edge of the proposed entry driveway
- A new raised wombat crossing immediately east of the raised central island, with new pram ramps at both ends
- Removal of existing pram ramps and restoration to kerb & gutter
- New footpath extension along the northern side of Careel Head Road to meet the new crossing
- 12.5m long HRV turning left-in/out and right in/out
- 19m long articulated bus turning left-in/out and right-in only
- 8.8m long MRV turning left into the entry driveway
- B99 & B85 internal circulation turn paths

In addition, pedestrian circulation has also been improved by way of clearly delineated marked walkways within the basement parking area, along with the proposed new wombat crossing on Careel Head Road.

### Traffic Redistribution

With respect to traffic generation, based on TfNSW trip generation rates for retail shops (specialty shops) and childcare centres, the proposed development is expected to generate 57 vph during the weekday morning peak, approximately 68 vph during the weekday afternoon peak period, and approximately 62 during the Saturday peak, as set out in the table on the following page.

In terms of the AM trip rates, the bottle shop will be closed during the weekday AM road network peak, therefore a trip rate of 25% of the PM has been adopted in this instance. The retail shops, however, may be a café, bakery, or similar, which may be open during the weekday AM road network peak, therefore the same trip rate has been applied as the PM.



Table 1 – Proposed Peak Period Traffic Generation							
Land Use	Key Parameters	Trip Rate			Traffic Generation*		
		AM	PM	SAT	AM	PM	SAT
Bottle shop	500m <sup>2</sup>	1.2 trips/100m <sup>2</sup>	4.6 trips/100m <sup>2</sup>	10.7 trips/100m <sup>2</sup>	6 vph	23 vph	54 vph
Retail shops	70m <sup>2</sup>	4.6 trips/100m <sup>2</sup>	4.6 trips/100m <sup>2</sup>	10.7 trips/100m <sup>2</sup>	3 vph	3 vph	8 vph
Childcare	60 children	0.8 trips/child	0.7 trips/child	-	48 vph	42 vph	-
<b>Total</b>					<b>57 vph</b>	<b>68 vph</b>	<b>62 vph</b>

\* entry/exit combined

Notwithstanding, traffic surveys were undertaken at the site's entry and exit driveways as part of the Traffic & Parking Assessment Report (TPAR) that accompanied the DA, the results of which are summarised below.

- on the day of the traffic surveys, the existing shopping village generated in the order of 42 vph during the weekday AM road network peak period (in and out combined)
- on the day of the traffic surveys, the existing shopping village generated in the order of 27 vph during the weekday PM road network peak period (in and out combined)
- on the day of the traffic surveys, the existing shopping village generated in the order of 86 vph during the Saturday road network peak period (in and out combined)

The traffic implications of development proposals primarily concern the *nett change* in the traffic generation potential of a site compared to its existing and/or approved uses.

Based on the TfNSW trip generation rates and the above existing volumes, the proposed development is expected to result in a *nett increase* of 15 vehicle trips during the weekday morning peak, a *nett increase* of 41 vehicle trips during the weekday afternoon peak, and a *nett reduction* of 24 vehicle trips during the Saturday peak.

Table 2 – Nett Peak Traffic Generation			
Period	Proposed Peak Trips	Existing Peak Trips	Nett Peak Trips
AM Peak Hour	57 vph	42 vph	+15 vph
PM Peak Hour	68 vph	27 vph	+41 vph
SAT Peak Hour	62 vph	86 vph	-24 vph

That projected weekday increase in traffic activity as a consequence of the subject site is consistent with the planning controls which apply to the site and will not have any unacceptable traffic implications in terms of road network capacity or traffic-related environmental effects.

In this regard, the target market of the proposed development is the immediately surrounding suburbs of Palm Beach, Whale Beach, Avalon Beach, Clareville and Bilgola Beach, noting Newport Beach has its own town centre.

According to 2021 census data, the population of Palm Beach, Whale Beach, Avalon Beach, Clareville and Bilgola Beach was 13,419. Based on the surrounding geography, for the purposes of this assessment it has been assumed that 25% of the surrounding population reside north of the subject site, whilst the remaining 75% reside south of the subject site.

Furthermore, in order to provide a rigorous assessment, the existing volumes generated by the local shopping village on the subject site have been excluded – i.e. the assessment assumes the proposed development’s traffic will be entirely new, or additional, to the surrounding road network.

For the purposes of this assessment, the highest trip generation period has also been reviewed, that being, the weekday PM peak period with 68 vehicle trips – i.e. 34 trips TO & 34 trips FROM.

This can be further broken down into 8 trips TO & 8 trips FROM the north, and 26 trips TO & 26 trips TO the south.

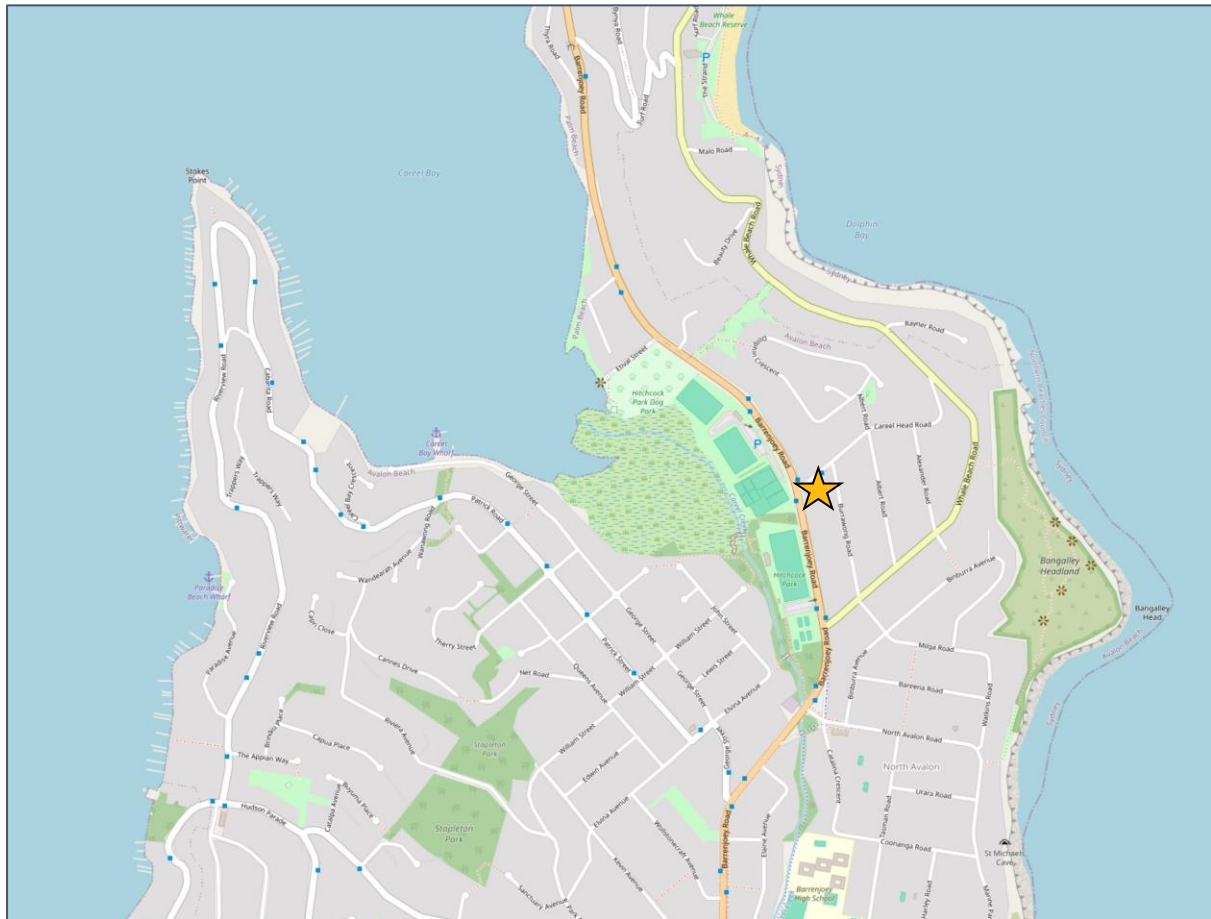


Figure 2 – Site Location (Source: OpenStreetMap)

In this regard, those residing to the north of the subject site can easily approach via Whale Beach Road, potentially via Surf Road, before turning right into Careel Head Road and then left into the site. Those residing to the north will be able to turn right out of the exit driveway back onto Barrenjoey Road. In terms of additional traffic on the local road network, this essentially means there may be in the order of up to 8 additional trips along Careel Head Road via Whale Beach Road during peak periods.

Those residing to the south will likely turn right onto Whale Beach Road, then left onto Burrawong Road, then left onto Careel Head Road and then left into the site. Those residing to the south will be able to turn left out of the exit driveway back onto Barrenjoey Road. In terms of additional traffic on the local road network, this essentially means there may be in the order of up to 26 additional trips along Burrawong Road during peak periods.

Noting there are approximately 40 existing dwellings located along Burrawong Road, the cumulative peak period traffic movements along Burrawong Road as a consequence of the development proposal are therefore expected to be less than 100 vehicle movements – i.e. *well below* the threshold of 200 vehicle movements which is the environmental goal for a local residential street.

Accordingly, the redirection of traffic as a result of the proposed raised central media island in Careel Head Road is considered acceptable.

#### Waste & Servicing

Lastly, in terms of waste collection, servicing and deliveries etc, as noted in the TPAR that accompanied the DA, deliveries to the proposed bottle shop will be undertaken by a variety of commercial vehicles such as vans and utilities, up to and including small and medium rigid trucks. Noting Dan Murphys is not likely to open before 10am, deliveries will be scheduled to arrive late morning, say between 10am-12 noon, and outside of the childcare peak periods. There are expected to be 2-3 Dan Murphys deliveries per day, taking between 10-30 minutes to unload.

Deliveries to the proposed retail shops and childcare will be undertaken by a variety of light commercial vehicles such as vans, utilities and the like, which are capable of fitting into a conventional parking space. Deliveries will therefore be scheduled to occur outside of the childcare centre peak periods when the childcare visitor spaces will be largely vacant. There are expected to be 2-3 retail deliveries per day and 1-2 childcare deliveries per day, all taking between 5-10 minutes to unload.

In terms of waste collection arrangements, there are separate childcare and retail bin rooms within the basement and designed in accordance with specified rates in the DA Waste Management Plan (WMP) prepared by Dickens Solutions, dated August 2024.

Each tenancy will arrange their own respective contract with a private waste contractor. These trucks will range from compact small rigid trucks up to and including typical rear-loading medium rigid trucks. a temporary bin holding area is proposed to be located on the ground floor level, at the rear of the loading bay. Nominated personnel will transfer the bins between the basement and the loading bay. In this regard, a ride-on bin tug has been indicated on the basement plan to assist in transferring bins to/from the ground floor loading bay.

The Dickens Solutions WMP indicates there will be 3 general waste collections and 3 recycling collections per week for the retail component, whilst the childcare centre component will require 2 general waste collections and 2 recycling collections per week – i.e. a total of 5 general waste collections and 5 recycling collections per week, with each collections taking no more than 5 minutes. These collections will occur outside of the childcare centre peak periods – i.e. early morning or between 10am-2pm – and be specified in the contract agreement with the waste contractor. Importantly, bins will not be lined up along the kerbside for collection.

In summary, the waste collection, servicing and deliveries will be able to operate satisfactorily with the proposed arrangements and management procedures in place.

In my view, the amended scheme addresses the traffic and vehicular access contentions and will not result in any unacceptable traffic, parking, servicing or access implications.

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Please do not hesitate to contact me on the number below should you have any queries.

Kind regards



Chris Palmer  
Director  
B.Eng (Civil), MAITPM

Attachments

1. Amended architectural plans
2. Central median island concept plans
3. Swept turn paths



Any variations or deviations from approved construction drawings must be reviewed and approved by PCA or nominated certifying authority.

Drawings to be read in conjunction with, but not limited to, all structural engineers, stormwater engineers, landscape architects, fire protection, essential electrical services and mechanical services plans & other associated plans & reports.

Refer to current Basix report for additional requirements to ones noted on plans

**Notes**

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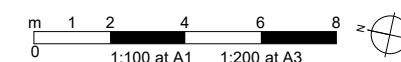
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Nominated Architect: Lilliana Ermilova 7887. ABN 24 243 205 327

CHILD CARE	10%
COMMERCIAL	10%
DAN MURPHY'S	10%

D	13/06/2025	GENERAL AMENDMENT
C	23/04/2025	GENERAL AMENDMENT
B	01/20/2025	GENERAL AMENDMENT



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CAR PARKING SCHEDULE PITTWATER DCP 2021				
GROUND FLOOR - DAN MURPHY'S (500m <sup>2</sup> )	REQ	GR	B1	-
RETAIL PREMISES 1 SPACE / 30m <sup>2</sup>	16.7	4	13	
GROUND FLOOR - RETAIL SHOPS (83m <sup>2</sup> )				
RETAIL 1 SPACE /	2.7	-	2	
CHILDCARE (60 KIDS) 1 SPACE / 4 KIDS ( TOTAL 60 KIDS )	15	-	15	
TOTAL ON GROUND AND BASEMENT 1	-	4	31	
GRAND TOTAL	34.5		35	-
MOTORBIKE -	1	1	1	
BICYCL -	1	-	3	

**1 BASEMENT 1**  
1 : 100 at A1    1:200 at A3

GENERAL NOTE: BASEMENT WILL BE TANKED IN  
LINE WITH EXPERT RECOMMENDATIONS

BARRENJOEY ROAD

Project

**PROPOSED MIXED USE  
DEVELOPMENT**

**1 & 3 CAREEL HEAD ROAD, AVALON BEACH,  
NEW SOUTH WALES 2107**

## BASEMENT 1 FLOOR PLAN

Project Stage

**DA Submission**

Job no.      Drawing no.      Rev.

**J23587D    DA1100    D**

Drawn by      Checked by      Approved by      Date

**GH      RJ      ZC      JULY, 2024**



NEIGHBOUR'S PROPERTY  
5-7 CAREEL HEAD ROAD

NEIGHBOUR'S PROPERTY  
5-7 CAREEL HEAD ROAD

## CAR PARKING SCHEDULE PITTWATER DCP 2021

GROUND FLOOR - DAN MURPHY'S (500m <sup>2</sup> )		REQ	GR	B1	-
RETAIL PREMISES	1 SPACE / 30m <sup>2</sup>	16.7	4	13	
GROUND FLOOR - RETAIL SHOPS (89m <sup>2</sup> )					
RETAIL	1 SPACE /	2.7	-	2	
CHILDCARE (60 KIDS)	1 SPACE / 4 KIDS ( TOTAL 60 KIDS )	15	-	15	
TOTAL ON GROUND AND BASEMENT 1		-	4	31	
GRAND TOTAL		34.5		35	
MOTORBIKE		1	1	1	
BICYCL		1	-	3	

**References**  
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Drawings to be read in conjunction with, but not limited to, all structural engineers, stormwater engineers, landscape architects, fire protection, essential electrical services and mechanical services plans & other associated plans & reports.

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Nominated Architect: Liljana Emilova 7887, ABN 24 243 205 327

### PARKING LEGEND

	CHILDCARE
	COMMERCIAL
	DAN MURPHY'S

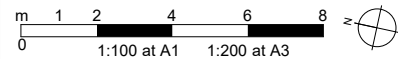
### LEGEND

	TREES TO BE RETAINED
	TREES TO BE REMOVED
	TREES TPZ

NEIGHBOUR'S PROPERTY  
712 BARRENJOEY RD

NEIGHBOUR'S PROPERTY  
712A  
BARRENJOEY RD

D	13/06/2025	GENERAL AMENDMENT
C	23/04/2025	GENERAL AMENDMENT
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Project  
**PROPOSED MIXED USE  
DEVELOPMENT**  
1 & 3 CAREEL HEAD ROAD, AVALON BEACH,  
NEW SOUTH WALES 2107

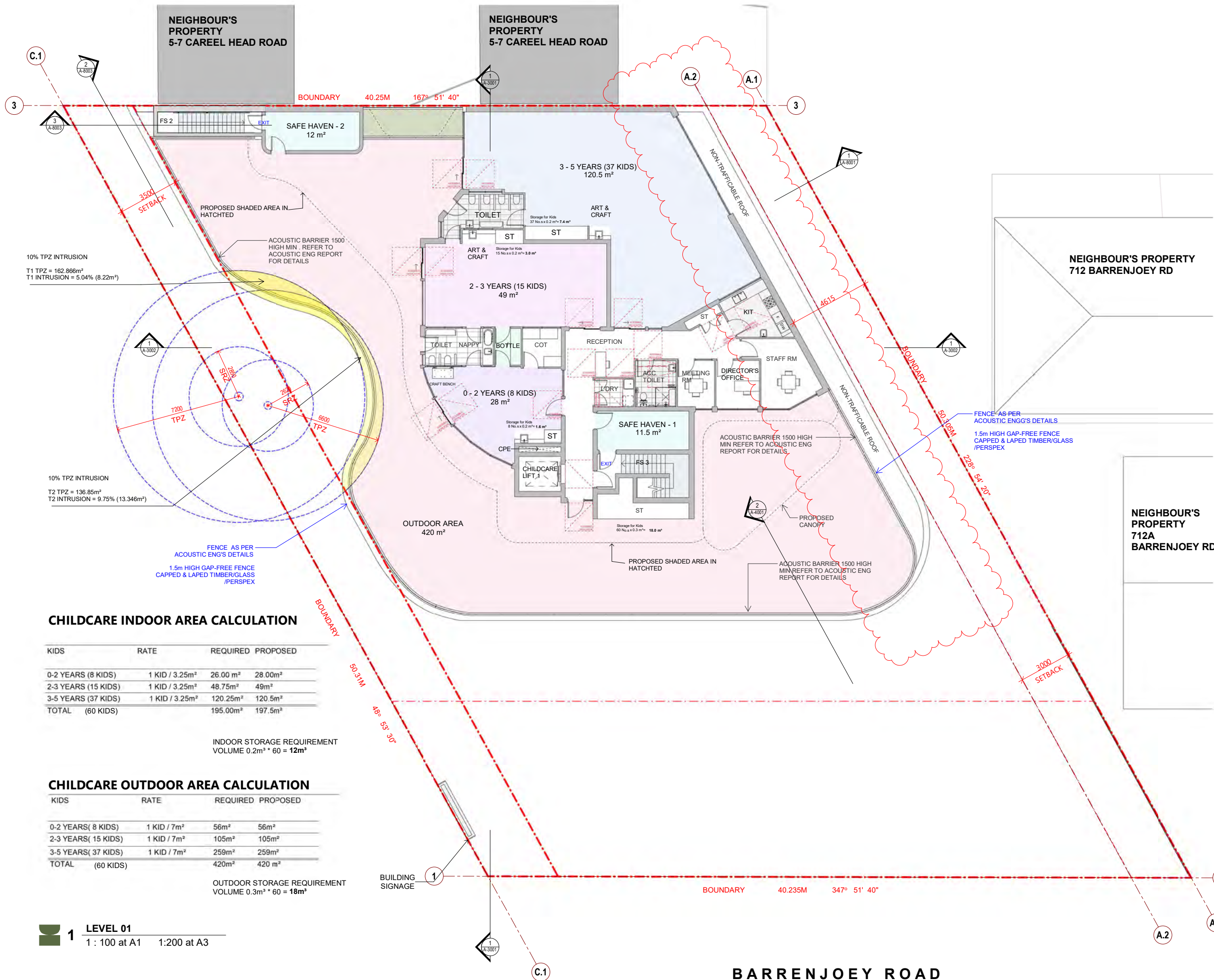
Drawing Title  
**GROUND FLOOR PLAN**

Project Stage  
**DA Submission**  
Job no. Drawing no. Rev.  
**J23587D DA1101 D**  
Drawn by Checked by Approved by Date  
GH RJ ZC JULY, 2024

**1 GROUND FLOOR PLAN**  
1 : 100 at A1 1 : 200 at A3

BARRENJOEY ROAD





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CHILD CARE INDOOR AREA CALCULATION

KIDS	RATE	REQUIRED	PROPOSED
0-2 YEARS (8 KIDS)	1 KID / 3.25m²	26.00 m²	28.00m²
2-3 YEARS (15 KIDS)	1 KID / 3.25m²	48.75m²	49m²
3-5 YEARS (37 KIDS)	1 KID / 3.25m²	120.25m²	120.5m²
TOTAL (60 KIDS)		195.00m²	197.5m²

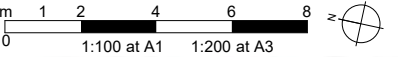
INDOOR STORAGE REQUIREMENT  
VOLUME 0.2m³ \* 60 = 12m³

CHILD CARE OUTDOOR AREA CALCULATION

KIDS	RATE	REQUIRED	PROPOSED
0-2 YEARS (8 KIDS)	1 KID / 7m²	56m²	56m²
2-3 YEARS (15 KIDS)	1 KID / 7m²	105m²	105m²
3-5 YEARS (37 KIDS)	1 KID / 7m²	259m²	259m²
TOTAL (60 KIDS)		420m²	420 m²

OUTDOOR STORAGE REQUIREMENT  
VOLUME 0.3m³ \* 60 = 18m³

D 13/06/2025 GENERAL AMENDMENT  
C 23/04/2025 GENERAL AMENDMENT  
B 01/20/2025 GENERAL AMENDMENT



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Project  
**PROPOSED MIXED USE DEVELOPMENT**  
1 & 3 CAREEL HEAD ROAD, AVALON BEACH,  
NEW SOUTH WALES 2107

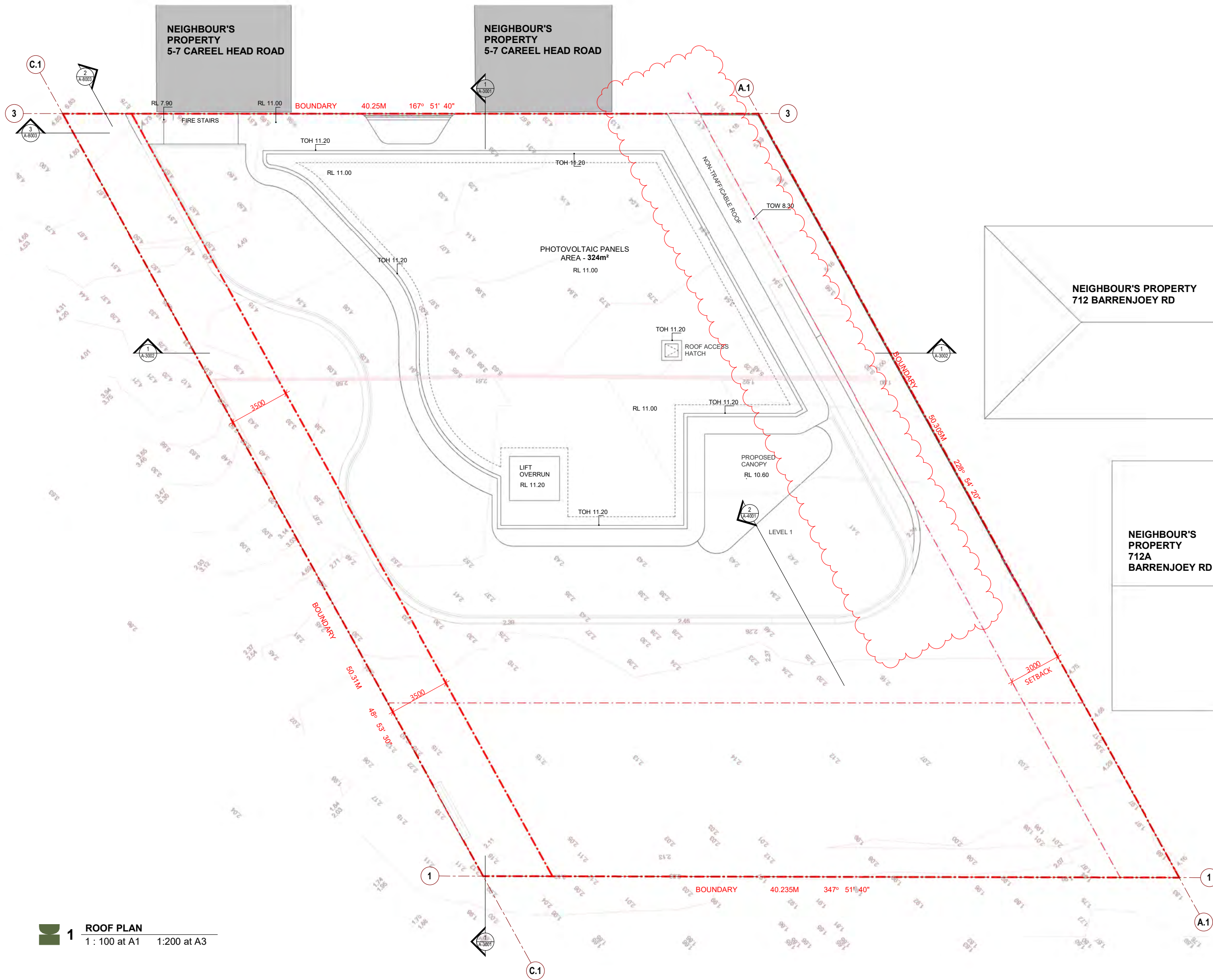
Drawing Title  
**LEVEL 01 FLOOR PLAN**

Project Stage  
**DA Submission**

Job no.	Drawing no.	Rev.
J23587D	DA1102	D

Drawn by	Checked by	Approved by	Date
GH	RJ	ZC	JULY, 2024





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#### Notes

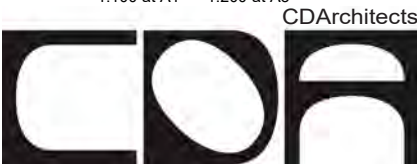
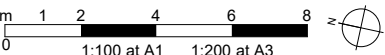
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B	01/20/2025	GENERAL AMENDMENT



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#### Dubai

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Australian  
Institute of  
Architects

Project

#### PROPOSED MIXED USE DEVELOPMENT

1 & 3 CAREEL HEAD ROAD, AVALON BEACH,  
NEW SOUTH WALES 2107

Drawing Title

#### ROOF PLAN

Project Stage

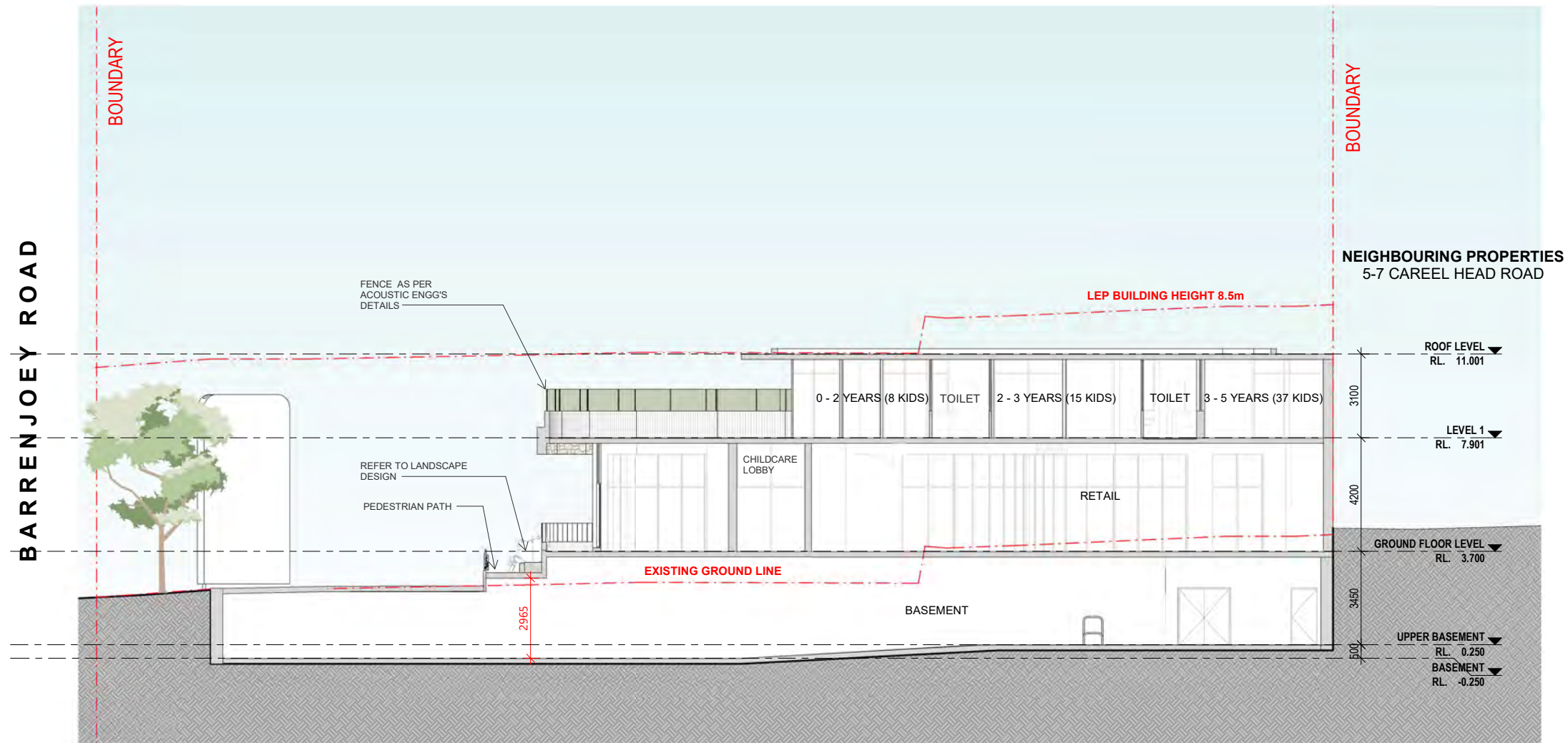
#### DA Submission

Job no. Drawing no. Rev.

J23587D DA1103 D

Drawn by Checked by Approved by Date  
GH RJ ZC JULY, 2024





1 SECTION A  
1 : 100 at A1 1:200 at A3

**References**  
Any variations or deviations from approved construction drawings must be reviewed and approved by PCA or nominated certifying authority.

Drawings to be read in conjunction with, but not limited to, all structural engineers, stormwater engineers, landscape architects, fire protection, essential electrical services and mechanical services plans & other associated plans & reports.

Refer to current Basix report for additional requirements to ones noted on plans.

**Notes**  
All dimensions and setbacks are to be verified on site and all omissions or any discrepancies to be notified to the architect. Figured dimensions to be used at all times. DO NOT SCALE measurements off drawings.

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Nominated Architect: Liljana Emilova 7887, ABN 24 243 205 327

C 23/04/2025 GENERAL AMENDMENT  
B 01/20/2025 GENERAL AMENDMENT  
A 15/07/2024 DA SUBMISSION

m 1 2 4 6 8  
0 1:100 at A1 1:200 at A3



**Sydney**  
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AUSTRALIA

**Dubai**  
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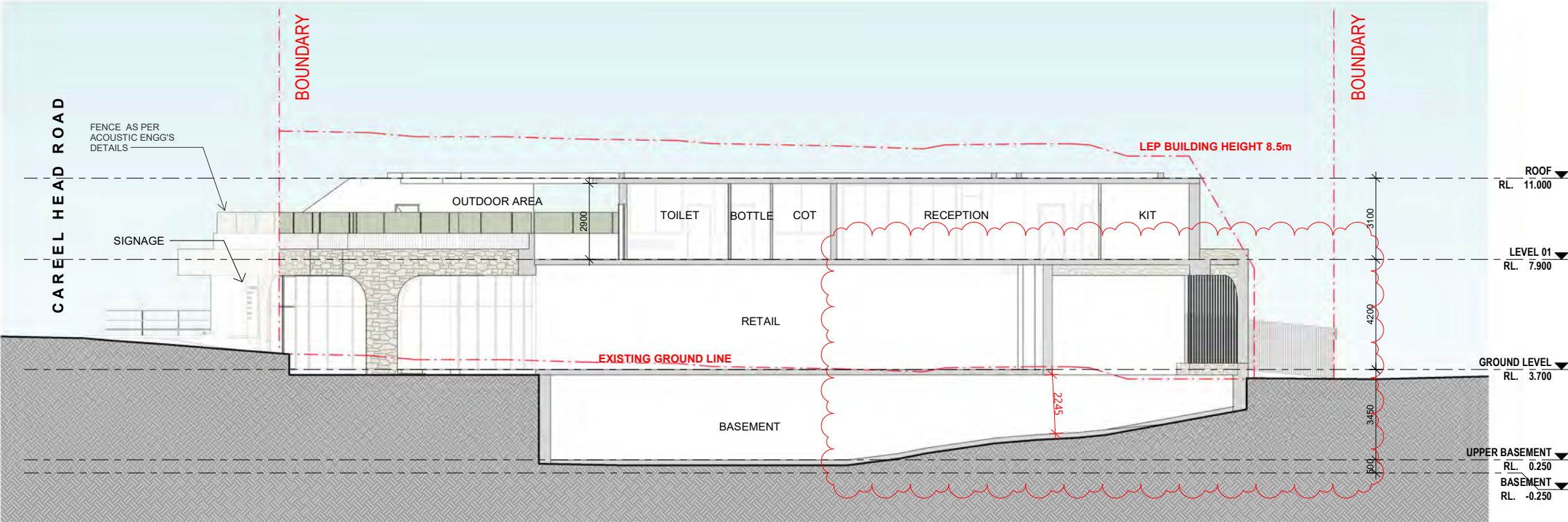
Project  
**PROPOSED MIXED USE DEVELOPMENT**  
1 & 3 CAREEL HEAD ROAD, AVALON BEACH,  
NEW SOUTH WALES 2107

Drawing Title  
**SECTION A**

Project Stage  
**DA Submission**

Job no.	Drawing no.	Rev.
J23587D	DA3001	C

Drawn by	Checked by	Approved by	Date
GH	RJ	ZC	JULY. 2024



**1 SECTION B**  
1 : 100 at A1 1:200 at A3

**References**  
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Nominated Architect: Liljana Emilova 7887, ABN 24 243 205 327

D 13/06/2025 GENERAL AMENDMENT  
C 23/04/2025 GENERAL AMENDMENT  
B 01/20/2025 GENERAL AMENDMENT

m 1 2 4 6 8  
0 1:100 at A1 1:200 at A3



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Project  
**PROPOSED MIXED USE DEVELOPMENT**  
1 & 3 CAREEL HEAD ROAD, AVALON BEACH,  
NEW SOUTH WALES 2107

Drawing Title  
**SECTION B**

Project Stage  
**DA Submission**

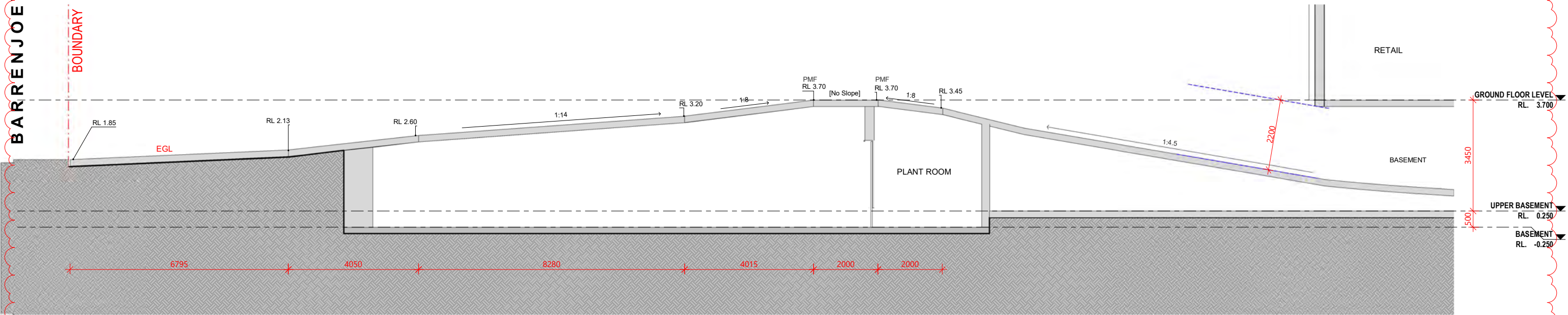
Job no. Drawing no. Rev.

J23587D DA3002 D

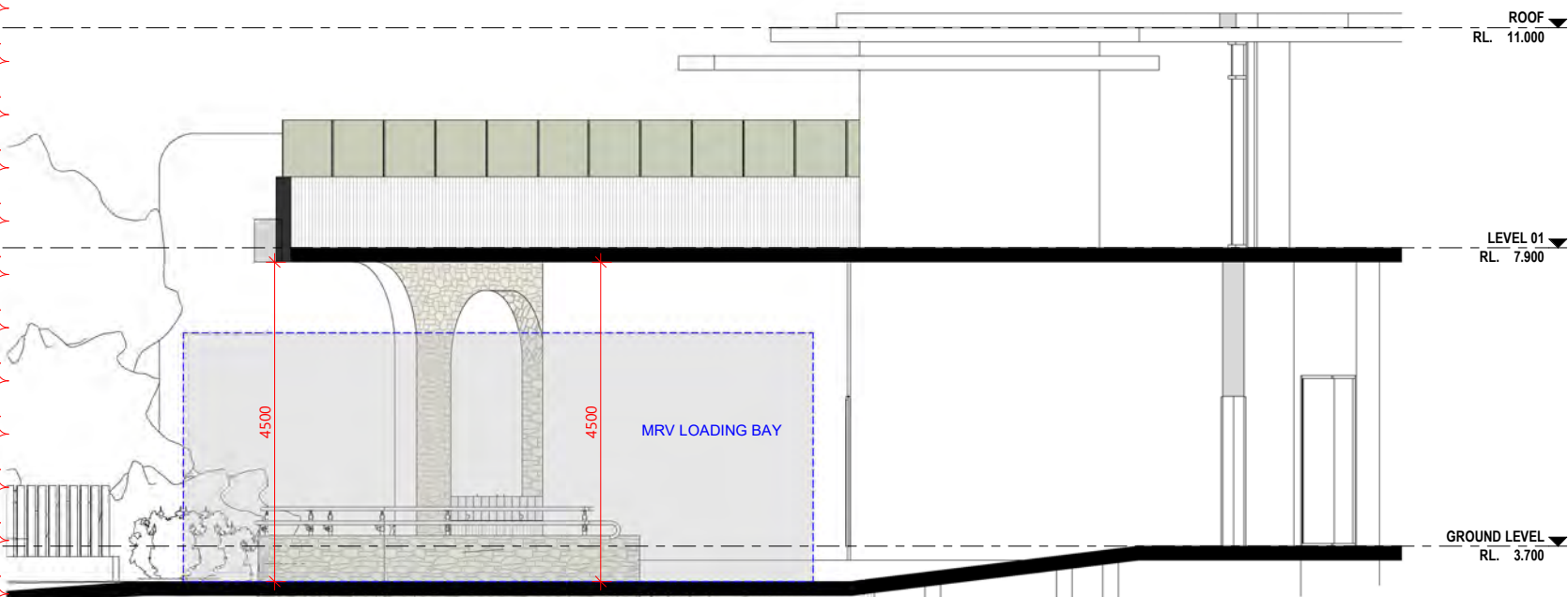
Drawn by Checked by Approved by Date  
GH RJ ZC JULY. 2024



BARRENJOEY ROAD



**1 RAMP SECTION**  
1 : 60 at A1 1:120 at A3



**2 RAMP SECTION 2**  
1 : 50 at A1 1:100 at A3

**References**  
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Nominated Architect: Liljana Emilova 7887, ABN 24 243 205 327

D 13/06/2025 GENERAL AMENDMENT  
C 23/04/2025 GENERAL AMENDMENT  
B 01/20/2025 GENERAL AMENDMENT

m 1 2 4 6 8  
0 1:100 at A1 1:200 at A3



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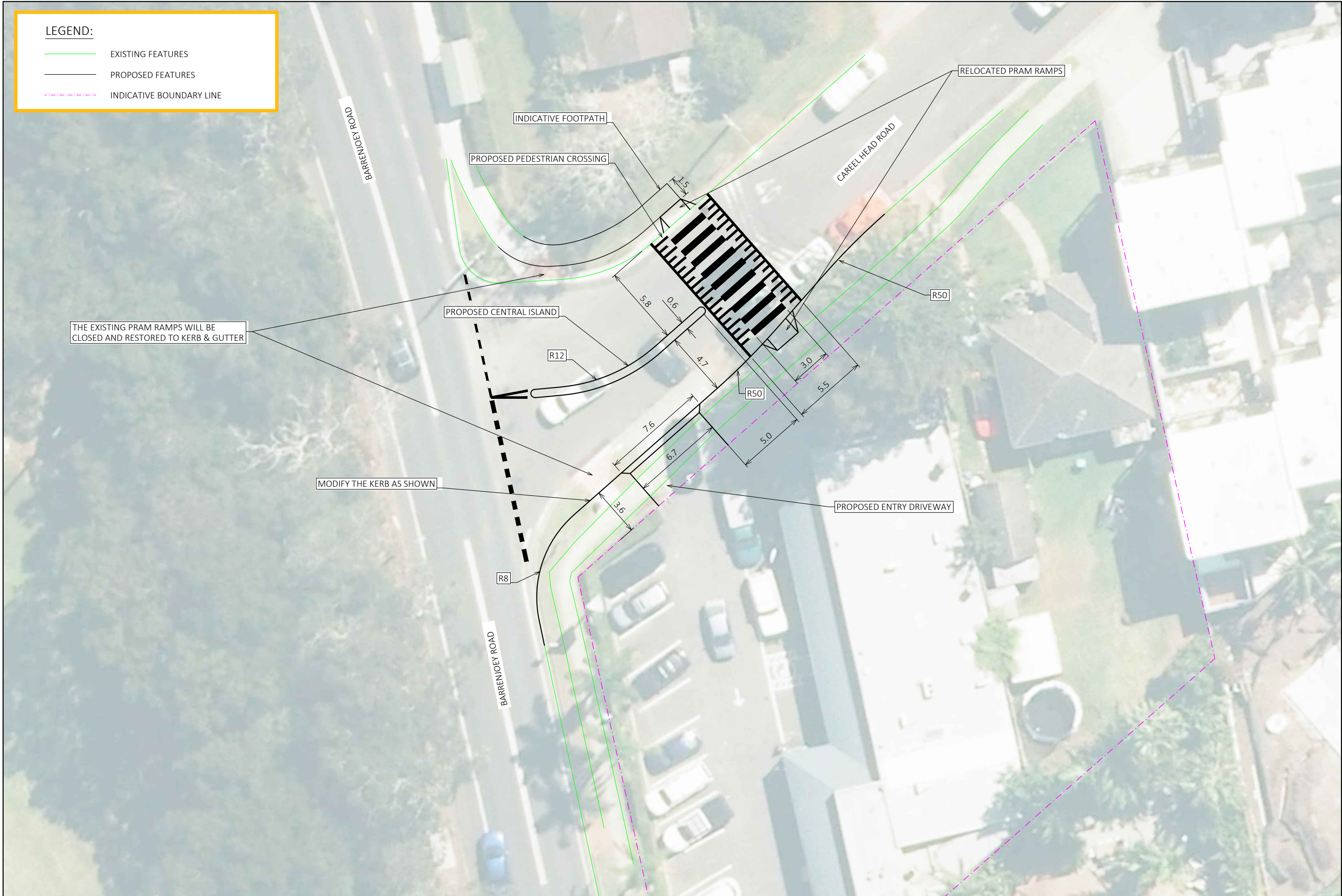


Project  
**PROPOSED MIXED USE DEVELOPMENT**  
1 & 3 CAREEL HEAD ROAD, AVALON BEACH,  
NEW SOUTH WALES 2107

Drawing Title  
**RAMP SECTION**

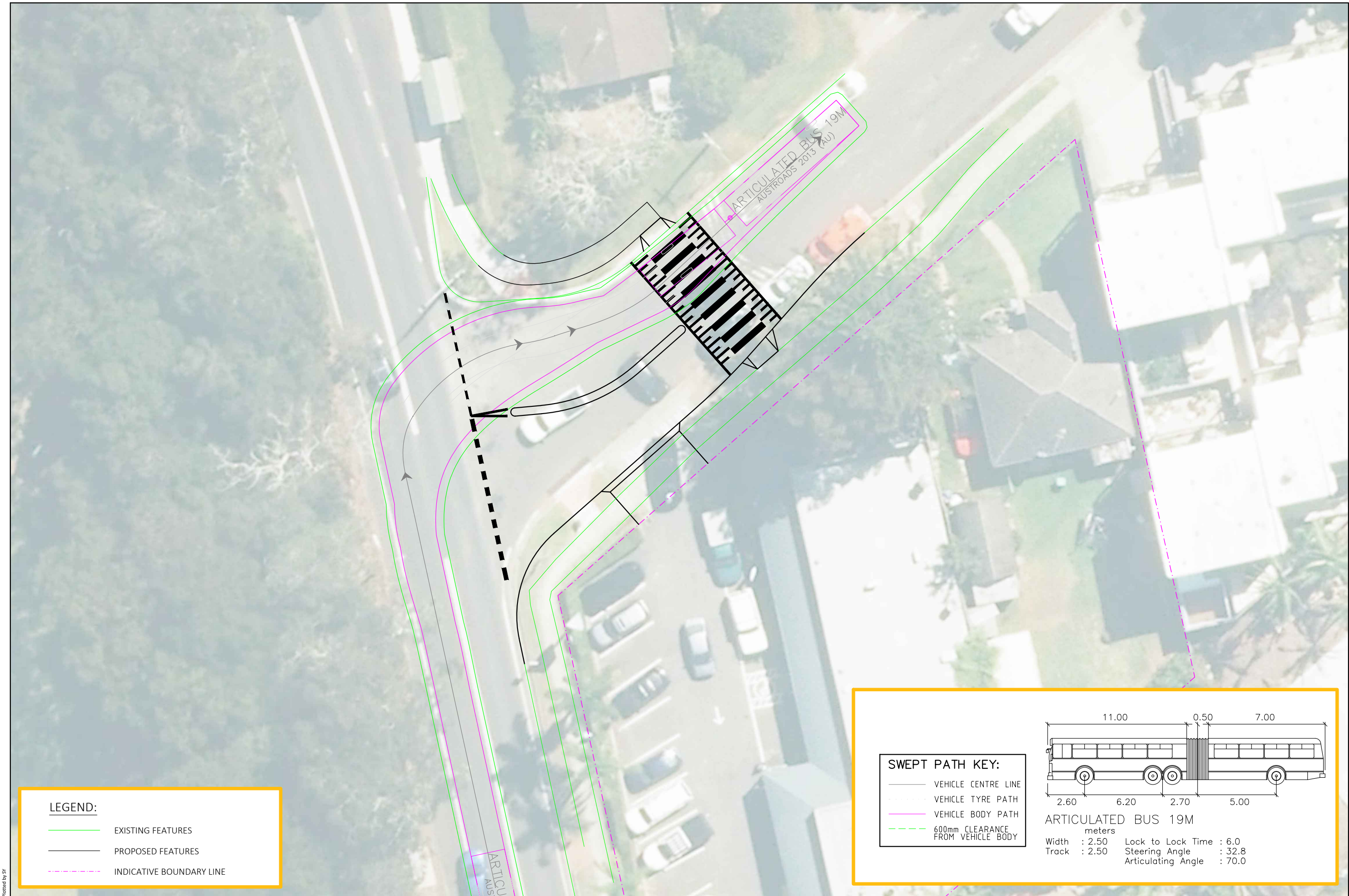
Project Stage  
**DA Submission**  
Job no. Drawing no. Rev.  
**J23587D DA4001 D**  
Drawn by Checked by Approved by Date  
GH RJ ZC JULY, 2024





Plotted by SY



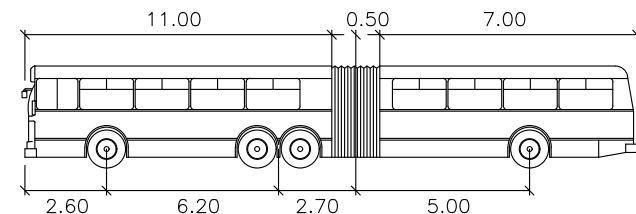


**LEGEND:**

- EXISTING FEATURES
- PROPOSED FEATURES
- INDICATIVE BOUNDARY LINE

**SWEPT PATH KEY:**

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 600mm CLEARANCE FROM VEHICLE BODY



ARTICULATED BUS 19M

Width : 2.50m  
Track : 2.50m  
Lock to Lock Time : 6.0s  
Steering Angle : 32.8°  
Articulating Angle : 70.0°

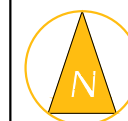
**PRELIMINARY PLAN**

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 EXISTING SERVICES SHOWN ARE NOT GUARANTEED.

**1-3 CAREEL HEAD ROAD, AVALON BEACH  
INTERSECTION UPGRADED  
SWEPT PATH ASSESSMENT**



SCALE 0 2.5 5.0 1:250 @ A3

DRAWING NO. 23187-D01-V1

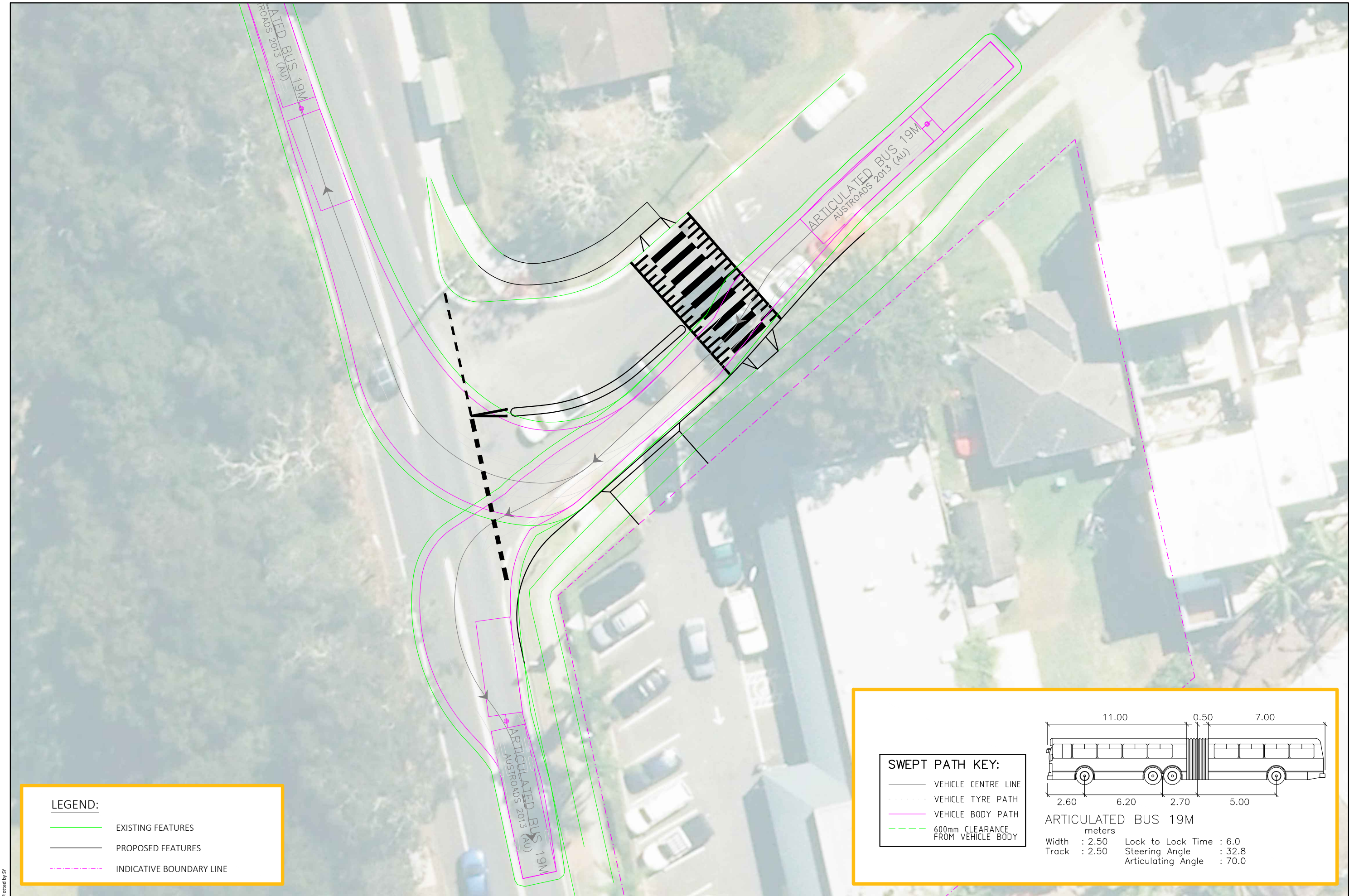
ISSUE DATE 12 June 2025

SHEET NO. 02 OF 06

DRAWN BY Z.YANG

REVIEWED BY C.PALMER



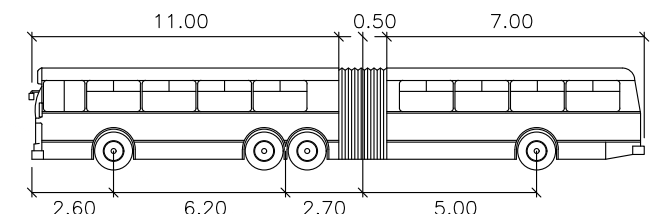


**LEGEND:**

- EXISTING FEATURES
- PROPOSED FEATURES
- INDICATIVE BOUNDARY LINE

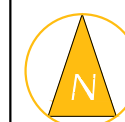
**SWEPT PATH KEY:**

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 600mm CLEARANCE FROM VEHICLE BODY

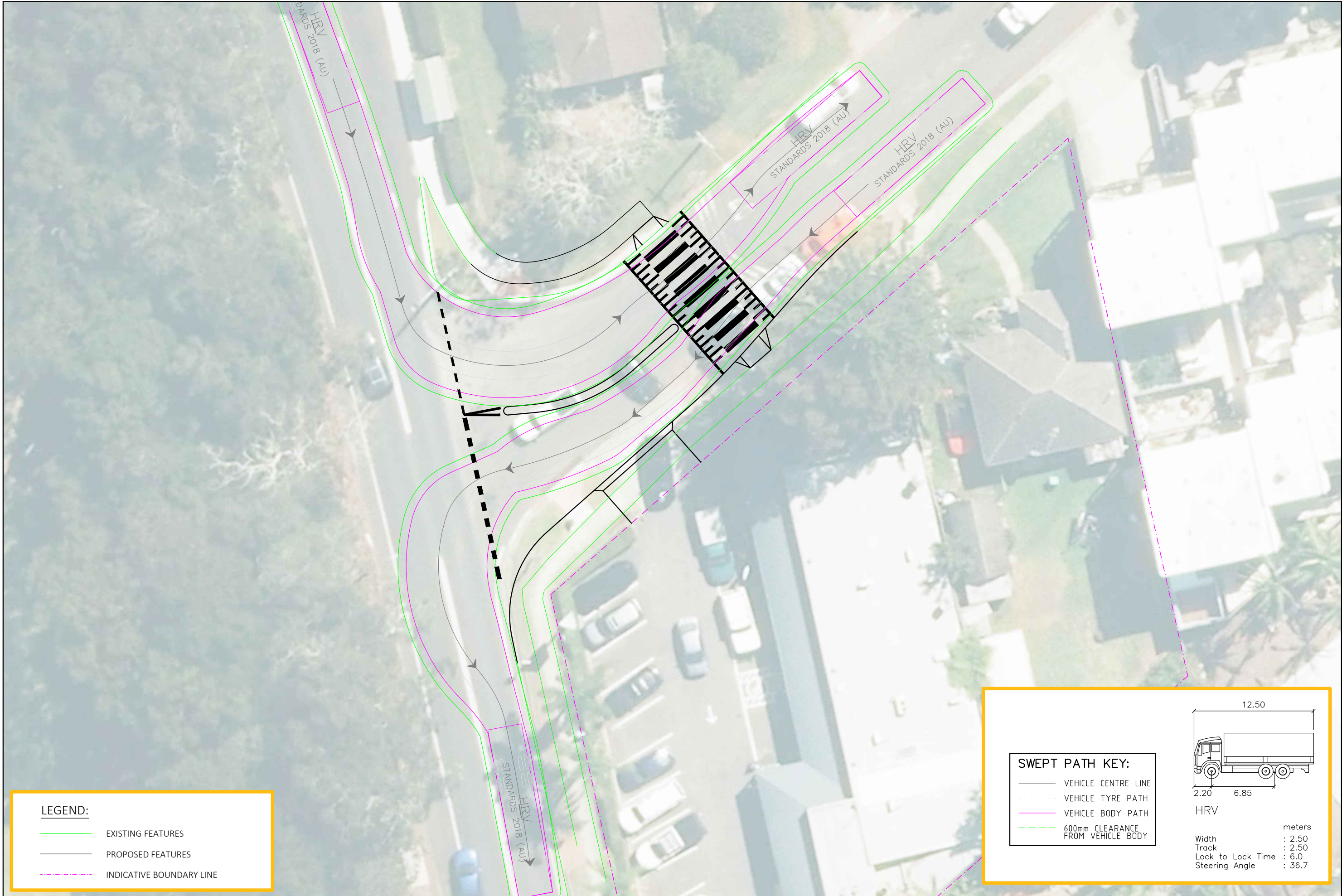


ARTICULATED BUS 19M

Width	: 2.50	Lock to Lock Time	: 6.0
Track	: 2.50	Steering Angle	: 32.8
		Articulating Angle	: 70.0





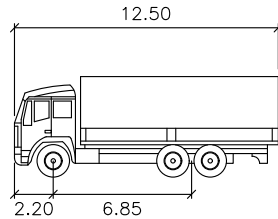


LEGEND:

- EXISTING FEATURES
- PROPOSED FEATURES
- INDICATIVE BOUNDARY LINE

SWEPT PATH KEY:

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 600mm CLEARANCE FROM VEHICLE BODY



HRV

Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.7

PRELIMINARY PLAN

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1-3 CAREEL HEAD ROAD, AVALON BEACH  
INTERSECTION UPGRADED  
SWEPT PATH ASSESSMENT



SCALE 0 2.5 5.0 1:250 @ A3

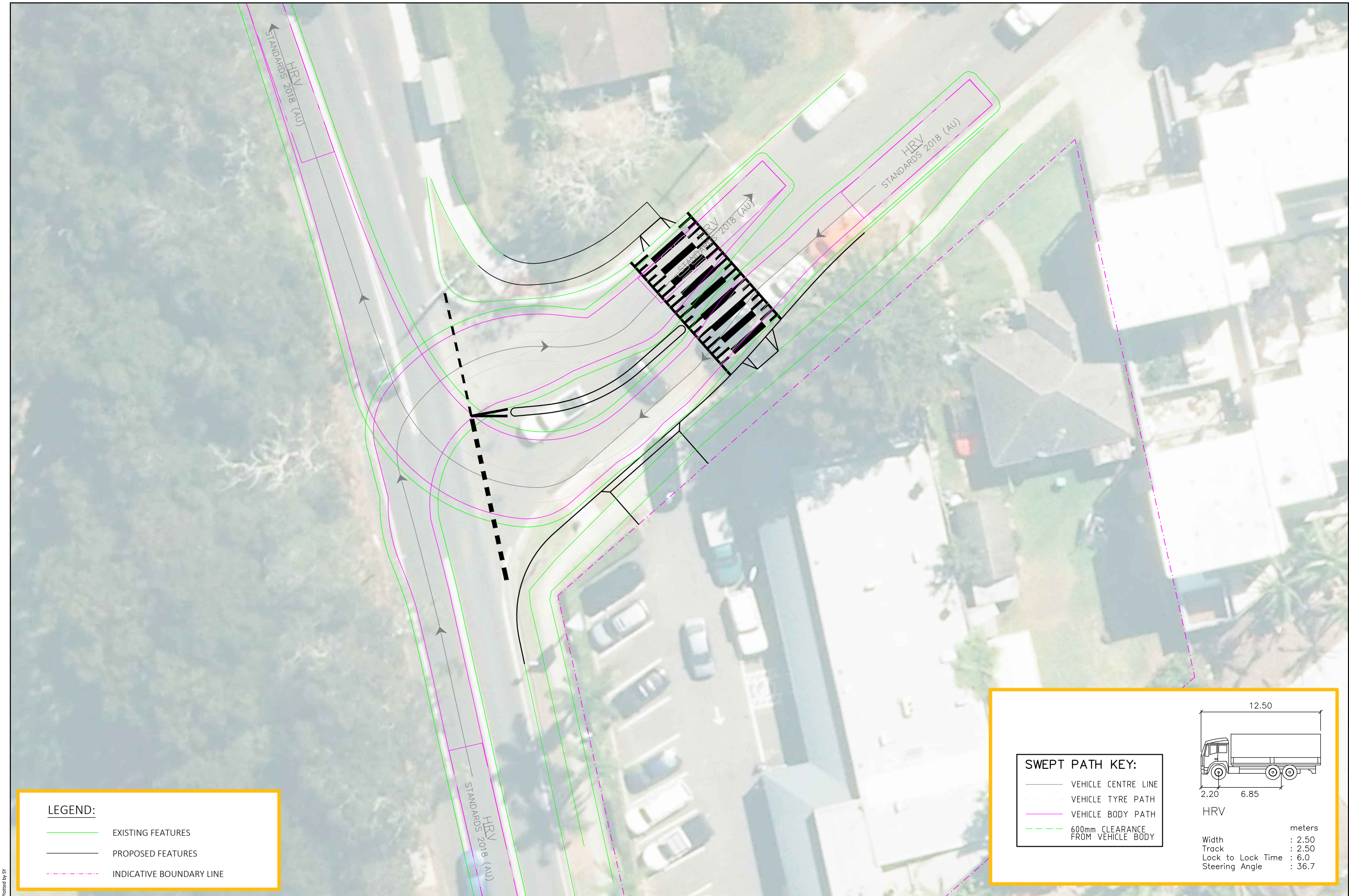
DRAWING NO. 23187-D01-V1

ISSUE DATE 12 June 2025

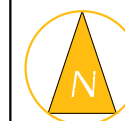
SHEET NO. 04 OF 06

DRAWN BY Z.YANG  
REVIEWED BY C.PALMER

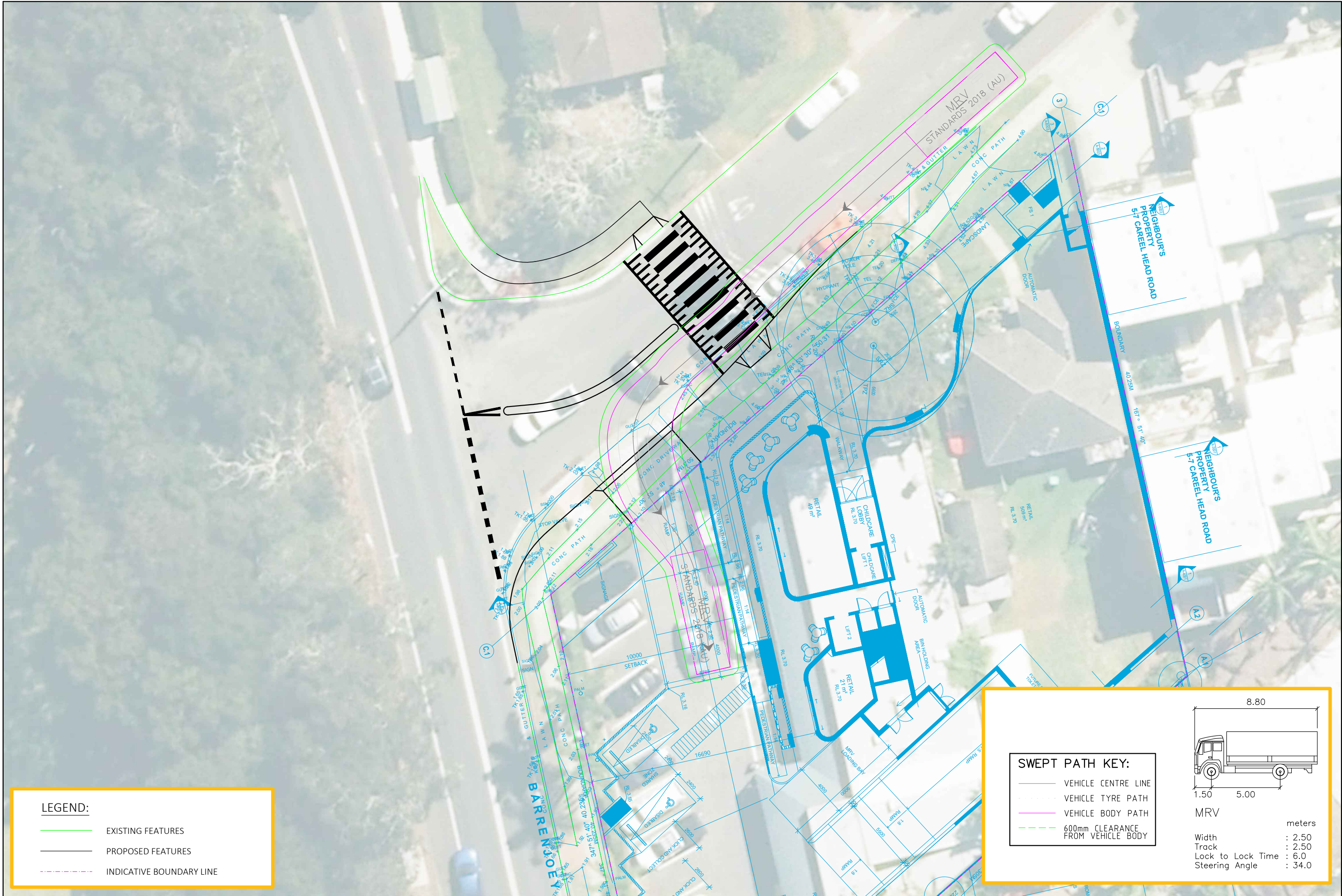




Plotted by SY





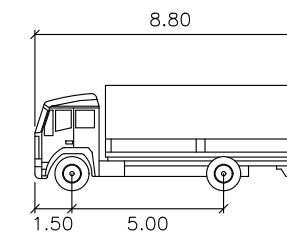


LEGEND:

- EXISTING FEATURES
- PROPOSED FEATURES
- INDICATIVE BOUNDARY LINE

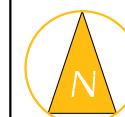
SWEPT PATH KEY:

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 600mm CLEARANCE FROM VEHICLE BODY

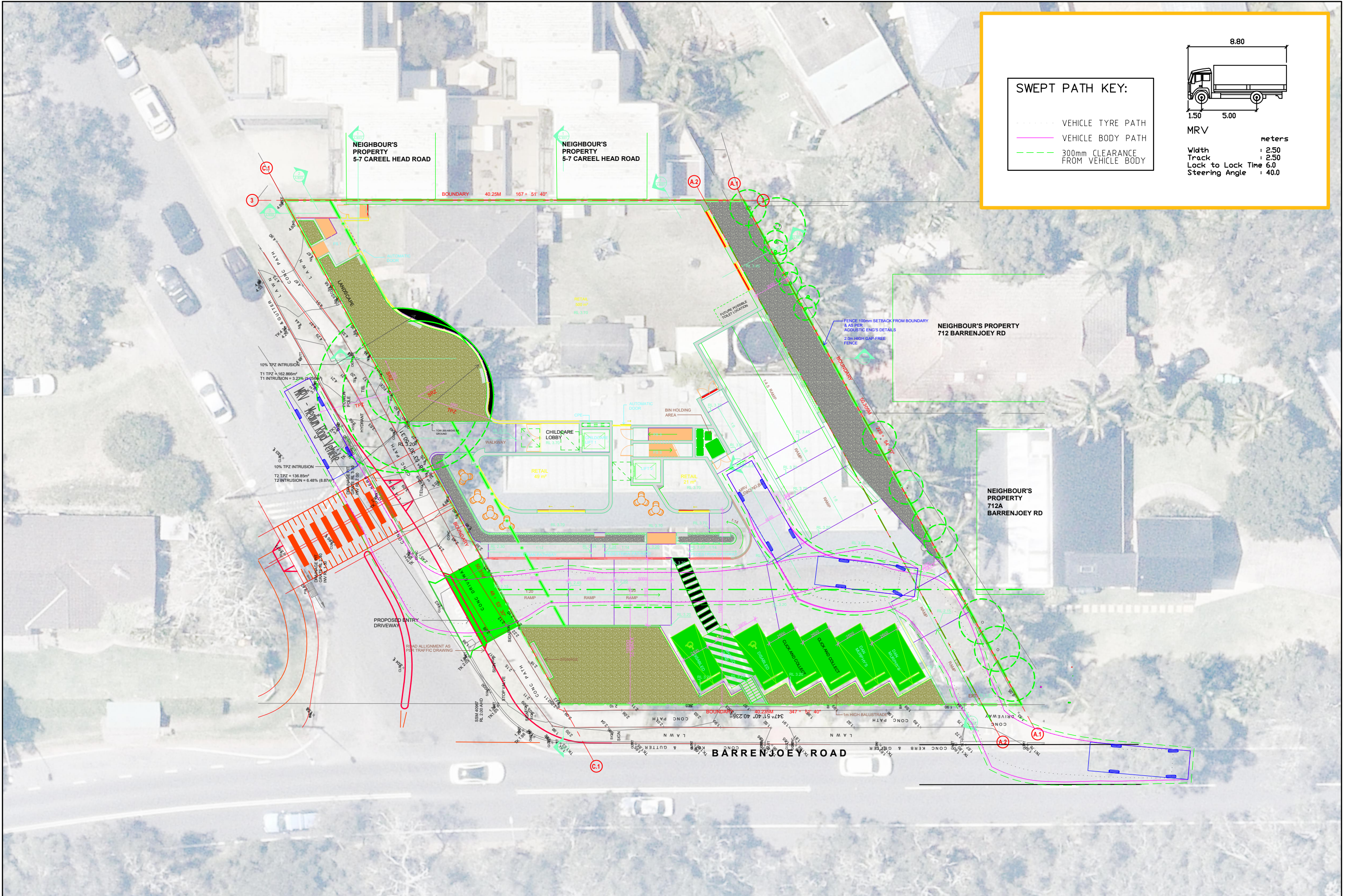


MRV

Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 34.0

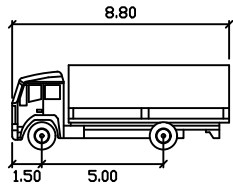






SWEPT PATH KEY:

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



MRV

	metres
Width	2.50
Track	2.50
Lock to Lock Time	6.0
Steering Angle	40.0

Plotted by CJP CONSULTING ENGRS



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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  
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1-3 CAREEL HEAD ROAD, AVALON BEACH  
SWEPT TURN PATH ASSESSMENT - GROUND FLOOR  
MRV ENTRY AND EXIT PATH



SCALE 0 3.0 6.0 1:300 @ A3

DRAWING NO. 23187-D01-V5

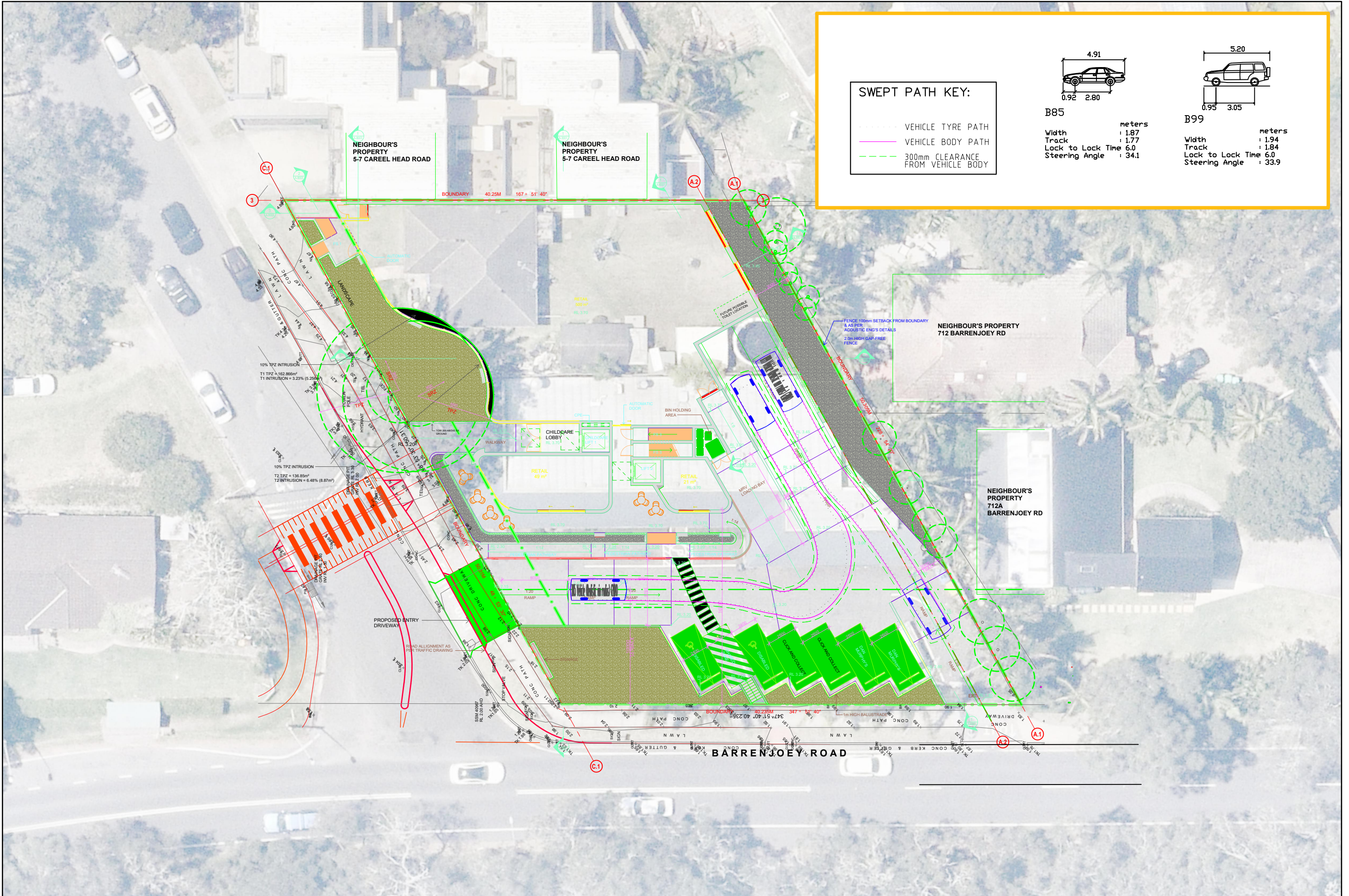
ISSUE DATE 18 June 2025

SHEET NO. 01 OF 03

DRAWN BY C. PALMER

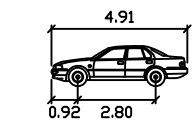
REVIEWED BY C. PALMER



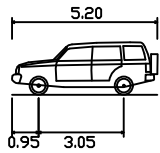


SWEPT PATH KEY:

- 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



B99  
Width : 1.94  
Track : 1.84  
Lock to Lock Time : 6.0  
Steering Angle : 33.9

Plotted by CJP CONSULTING ENGRS



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Hunters Hill NSW 2110  
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E: info@cjpconsultingengineers.com.au

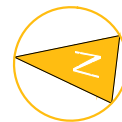
PRELIMINARY PLAN

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 EXISTING SERVICES SHOWN ARE NOT GUARANTEED

1-3 CAREEL HEAD ROAD, AVALON BEACH  
SWEPT TURN PATH ASSESSMENT - GROUND FLOOR  
B85 ENTRY PATH AND B99 EXIT PATH



SCALE 0 3.0 6.0 1:300 @ A3

DRAWING NO. 23187-D01-V5

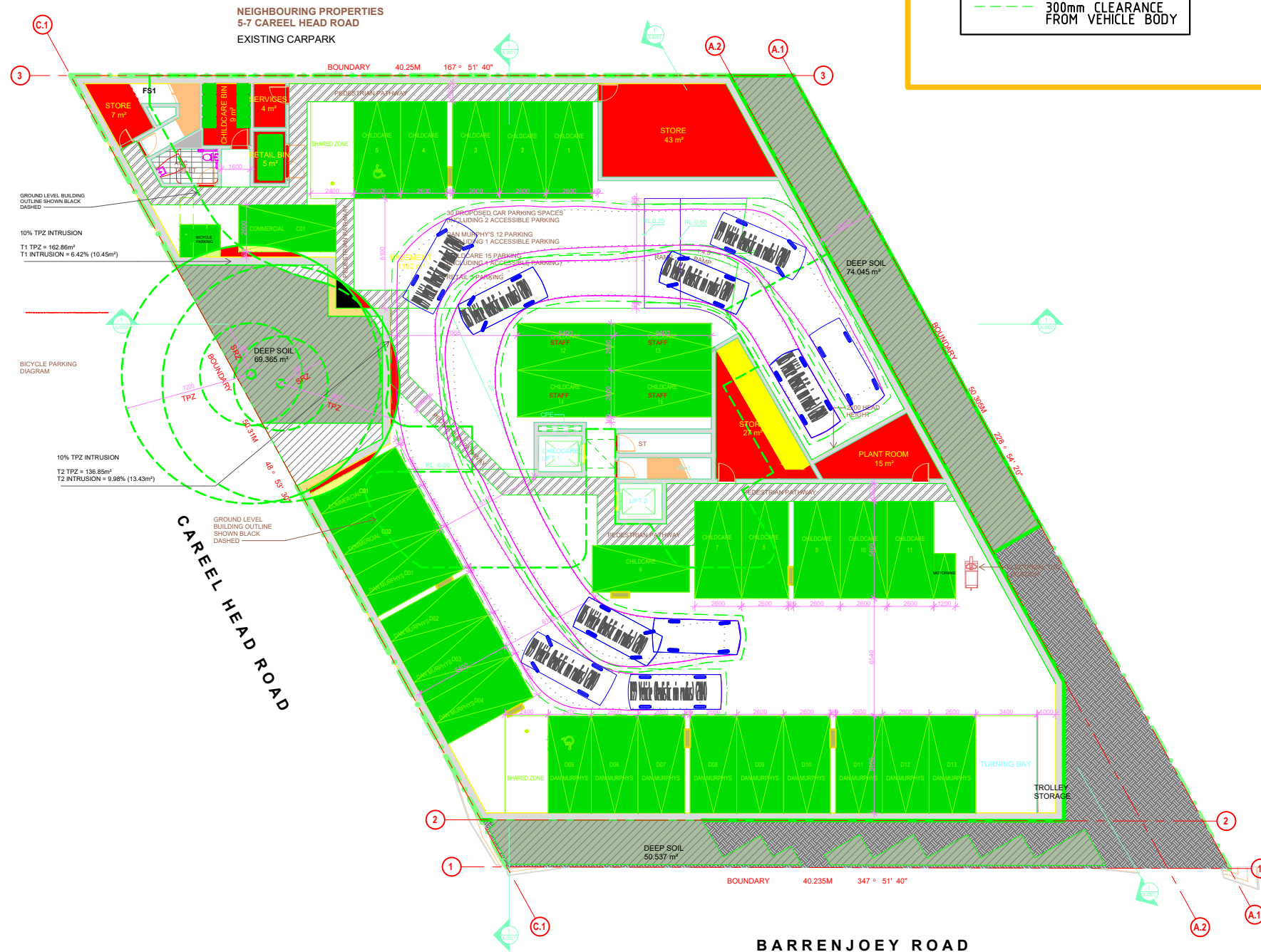
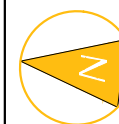
SHEET NO. 02 OF 03

ISSUE DATE 18 June 2025

DRAWN BY C. PALMER

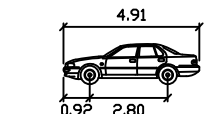
REVIEWED BY C. PALMER



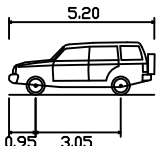


SWEPT PATH KEY:

- 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



B99  
Width : 1.94 meters  
Track : 1.84  
Lock to Lock Time : 6.0  
Steering Angle : 33.9