

# **Proposed Mixed-Use Development 13-19 Canberra Avenue, St Leonards S4.55 Application Traffic and Parking Assessment**

Ref: 21144 (B)  
Date: January 2023  
Issue: D

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## 1.0 Introduction

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This report has been prepared to accompany a S4.55 Application (concurrent with an Alterations and Additions DA for the same modification) to Lane Cove Council to modify an approved mixed-use development at 13-19 Canberra Avenue, St Leonards (Figure 1).

The site is located within the St Leonards South Development Precinct and comprises a consolidation of 4 existing residential lots. Consent was granted for a development scheme on the site comprising 80 apartments, Childcare Centre, a retail unit and basement parking while a S4.55 application (MOD 3) has been submitted involving minor design modifications to that Consent.

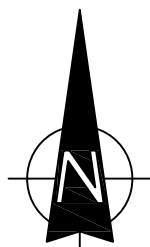
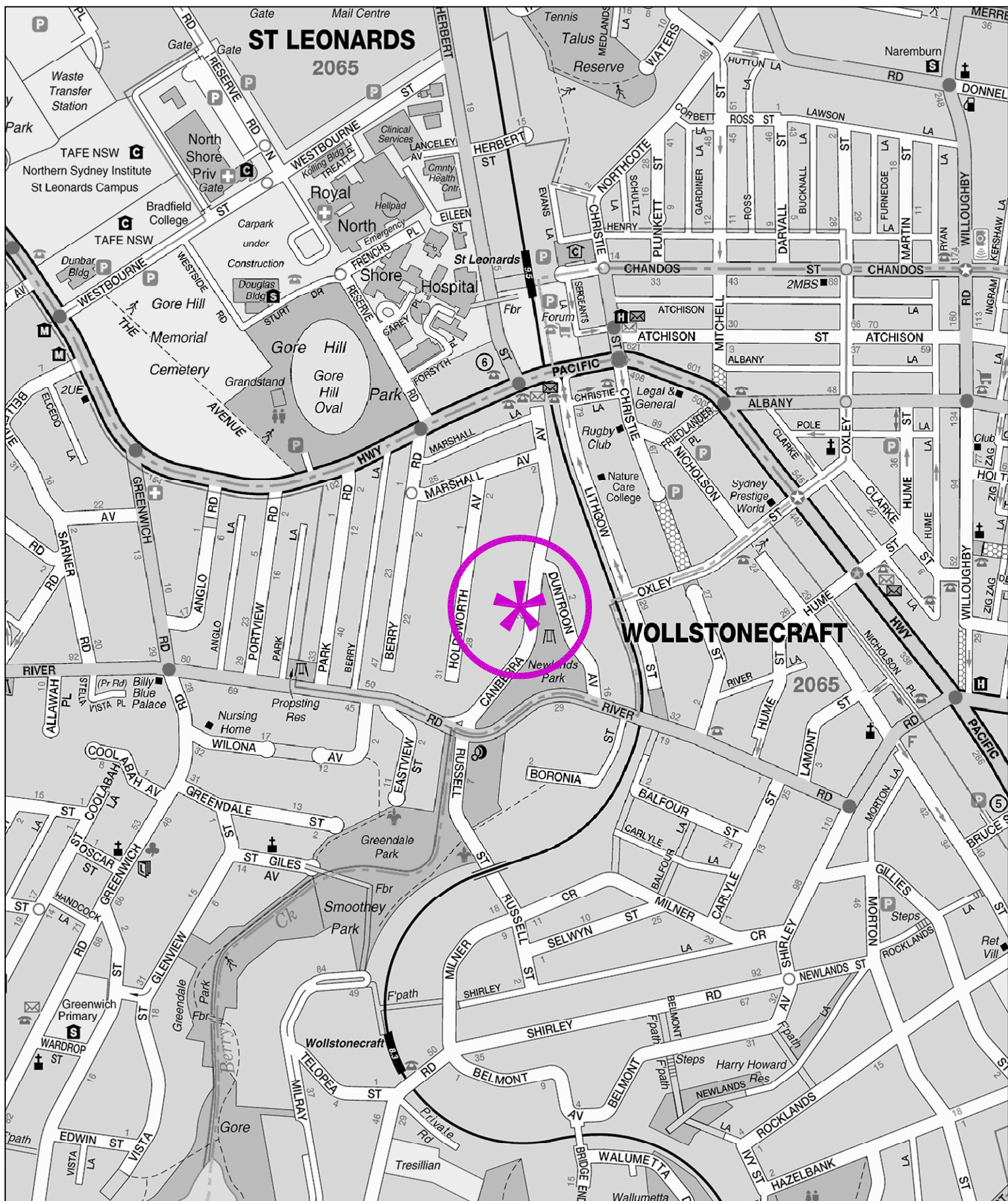
The now proposed S4.55 scheme (MOD 4) remains similar to the approved scheme, albeit with 2 additional levels, and comprises:

- ❖ 84 apartments
- ❖ Childcare Centre (60 children)
- ❖ Retail/Cafe tenancy
- ❖ Basement parking (4 levels)

The purpose of this report is to:

- ❖ describe the site, the approved development and the proposed S4.55 scheme
- ❖ describe the road network serving the site and the prevailing traffic conditions
- ❖ assess the adequacy of the proposed parking provision
- ❖ assess any potential traffic implications
- ❖ assess the suitability of the proposed access, internal circulation, and servicing arrangements





LOCATION

FIG 1



## 2.0 Proposed Development Scheme

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### 2.1 Site, Context, and Existing Circumstances

The development site (Figure 2) is a consolidation of Lots 11, 12, 13, and 14 in DP7259, occupying a total area of some 2,663m<sup>2</sup>. The site has a frontage of some 61m to Canberra Avenue and is located just to the south of the St Leonards Centre.

The immediate surrounding area comprises older-style single dwelling residences and some more recent apartment/townhouse buildings. The St Leonards Town Centre comprises retail/commercial buildings and a large hospital complex extending along to the north of the Pacific Highway.

The site is currently occupied by 4 older-style single dwellings with vehicle access on the Canberra Avenue frontage.

### 2.2 Approved Development

Consent (DA 162/2021) was granted for the demolition of existing buildings, excavation of the site and construction of a 12-level building over a 4-level basement car park.

This approved development (including subsequent modifications) comprised:

#### Residential

1 x studio apartment

26 x one-bedroom apartments (including 10 adaptable units)

25 x two-bedroom apartments (including 4 adaptable units)

28 x three-bedroom apartments (including 3 adaptable units)

**Total: 80 dwellings (including 17 adaptable units)**

#### Childcare Centre

60 children

14 employees

#### Retail

37m<sup>2</sup> GFA





**SITE**

**FIG 2**



A total of 116 parking spaces as well as 2 wash bays, 10 motorcycle and 36 bicycle spaces, were proposed in 4 basement level with vehicle access located on Canberra Avenue.

Architectural details of the approved development are provided on the plans prepared by SJB Architects which are reproduced in Appendix A.

## 2.3 Proposed S4.55 Scheme

The proposed S4.55 scheme (MOD 4) is very similar to the approved development but with a 14 level building over a 4-level basement car park.

The proposal maintains the approved scheme comprising:

### Residential

1 x studio apartment

26 x one-bedroom apartments (including 10 adaptable)

25 x two-bedroom apartments (including 4 adaptable)

31 x three-bedroom apartments (including 3 adaptable)

1 x four-bedroom apartment

**Total: 84 apartments (including 17 adaptable)**

### Childcare Centre

60 children and 14 staff

### Retail

37m<sup>2</sup> GFA

It is proposed to provide a total of 121 parking as well as 2 wash bays, 10 motorcycle spaces and 36 bicycle spaces in the 4 basement levels with vehicle access located on Canberra Avenue at the south-eastern boundary.

Architectural details of the proposed S4.55 development scheme are provided on the plans prepared by SJB Architects and Hyecorp which accompany the Application and are reproduced in Appendix B.



## 3.0 Parking

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### 3.1 Car Parking

Lane Cove Council's DCP specifies the following parking provision in relation to the residential apartments located within 400m of St Leonards Railway Station.

One-Bed apartment	0.5 space
Two-Bed apartment	0.9 space
Three-Bed apartment	1.4 spaces
Four-Bed apartment	2.0 spaces
Adaptable apartment	1 accessible space
Visitors	1 space per 5 apartments 1 accessible visitor space per 10 visitor spaces (minimum 1 space)
Car wash bay	1 bay per 50 units

Lane Cove Council's DCP specifies the following parking provision in relation to the Childcare and Retail component of the proposed development scheme.

Childcare Centre	1 space per 2 employees 1 short-term drop off space per 6 children 1 accessible space per 20 car spaces (minimum 1 space)
Retail	1 space per 110m <sup>2</sup> 1 accessible space per 20 car spaces (minimum 1 space)

The existing Consent provides for:

Residents

1 x Studio	0.5 space
26 x One-Bed	13.0 spaces
25 x Two-Bed	22.5 spaces
28 x Three-Bed	39.2 spaces

**Total 77 spaces (17 accessible)**

Visitors (80)	17 spaces (4 accessible)
CCC	17 spaces (1 accessible)
Retail	1 space (accessible)
Car Share	2 spaces

**Total 114 spaces**

2 wash bays

The now proposed additional apartments require:

3 x Three-Bed @ 1.4	4.2 spaces
1 x Four-Bed @ 2.0	2.0 spaces

**Total 7.0 spaces**

It is noted that the approved 80 apartments only actually required 16 visitor spaces (rather than the 17 approved), therefore the now proposed 84 apartments still only require 17 spaces.

A total of 121 spaces are to be provided in the basement levels plus 2 wash bays with the following breakdown:

- 84 resident spaces (17 accessible spaces)
- 17 visitor spaces (4 accessible spaces)
- 7 CCC staff spaces
- 10 CCC visitor spaces (1 accessible)
- 1 retail space (accessible)
- 2 car share spaces

The on-site car parking provision for the CCC will be adequate to meet its parking demands, with all set-down and pick-up activities to occur within the site. As such, there will be no reliance on the on-street parking by the parents/carers along surrounding roads (including Canberra Avenue).

It is noted that the proposed development will provide 6 EV charging points with the locations to be resolved during the Detailed Design stage.

## 3.2 Bicycle & Motorcycle Parking

Council's DCP specifies the following requirements for bicycles and motorcycles:

### **Bicycles**

#### Apartments

Residents	1 space per 4 apartments
Visitors	1 rack + 1 rack per 10 apartments

#### Shop / Restaurant or Café

Employees	1 space per 50m <sup>2</sup> GFA
Customers	2 racks + 1 rack per 200 m <sup>2</sup> over 200 m <sup>2</sup> GFA

#### Child Care Centre

Employees	1 space per 10 staff
Visitors	2 racks per centre

<b>Motorcycles</b>	1 space per 15 car spaces
--------------------	---------------------------

It is proposed to provide a total of 36 bicycle parking spaces in compliance with the DCP as follows:

### **Bicycles**

21 spaces for residents  
9 spaces for visitors  
1 space for café staff  
2 spaces for café customers  
1 space for childcare staff  
2 spaces for childcare visitors  
5 charging points

### **Motorcycles**

10 spaces



## 4.0 Traffic

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Because the S4.55 development will be very similar to the previously approved development the potential traffic implications will continue to be entirely satisfactory with the proposed 4 additional apartments only generating less than 1 vtpd additional.

Further, it is noted Council undertook Aimsun modelling of the St Leonards South Precinct in an effort to support the original rezoning of the precinct. The model took into consideration the cumulative traffic impacts of the existing and future site developments of up to 2,400 dwellings within Areas 1 to 23 of the precinct.

The proposed development is located within Area 5, which accounts for approximately 4% of the total permissible GFA of the precinct. This equates to a total of 96 apartments in the original Aimsun modelling. The proposal for 84 dwellings is an approximately 13% reduction in dwelling yield compared to Council's original Aimsun model of the precinct. In this required the potential traffic implications continue to be entirely acceptable.

## 5.0 Access, Internal Circulation and Servicing

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### 5.1 Access

Access is proposed via a single 6.85-metre-wide combined ingress/egress driveway located near the south-eastern site boundary (as per the existing Consent) which accords with the design requirements of AS2890.1&2.

Canberra Avenue is relatively straight and level at this location and there are excellent sight distances available.

### 5.2 Internal Circulation

The proposed internal circulation arrangements have been designed in accordance with AS2890.1, 2 and 6. Residential and employee parking bays are a minimum of 2.4 x 5.4 metres, while the aisles are a minimum of 5.8 metres wide.

CCC visitor parking bays are provided at a minimum of 2.7 x 5.4 metres. The 6.3-metre-wide aisle allows adequate vehicle manoeuvring and pedestrian movement areas within the basement carpark for safe and efficient set-down and pick-up activities.

Details of the vehicle turning assessment indicating a satisfactory provision for turning and manoeuvring are provided in Appendix D.

## 5.3 Servicing

A loading bay is located on the ground level (as per the existing Consent) for refuse collection and other service vehicles, with 4.5m headroom to accommodate up to an 8.8m medium rigid vehicle (MRV) and Council's typical 8m long garbage truck.

Smaller service vehicles (i.e., deliveries, courier activity, maintenance, etc.), which typically involves van, utes, etc., will also be able to use the loading bay or the available visitor parking spaces.

The day-to-day operation of the loading area will be subject to a detailed Loading Dock Management Plan to ensure efficient use and the primary considerations will be for garbage collection and removalist trucks, which can be easily separated and managed.

The Loading Dock Management Plan will be based on the use of a detailed online booking system operated and maintained by the Building Management and made available via a link on the building's website. Such systems are common practice and will ensure appropriate use and prevent overstaying in the loading dock.



## 6.0 Conclusion

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The traffic, transport and parking assessment for the S4.55 scheme confirms that:

- ❖ the site will have ready access to transport services as well as retail, entertainment and employment facilities within the nearby St Leonards Town Centre
- ❖ the proposed development will only generate minor additional peak traffic movements and will not present any adverse traffic/safety implications
- ❖ the proposed parking provisions (car, motorcycle and bicycle) accord with the Council's DCP requirements
- ❖ the proposed access, internal circulation and servicing arrangements will comply with the design requirements of relevant Australian Standards (i.e., AS2890.1, AS2890.2 and AS2890.6)

# Appendix A

## Approved Plans









LANE COVE COUNCIL  
THIS SHEET FORMS PART OF THE APPROVAL  
OF DEVELOPMENT APPLICATION DA162/2021  
AND CONDITIONS CONTAINED THEREIN  
DATED 27/06/2022

### Carparking Schedule

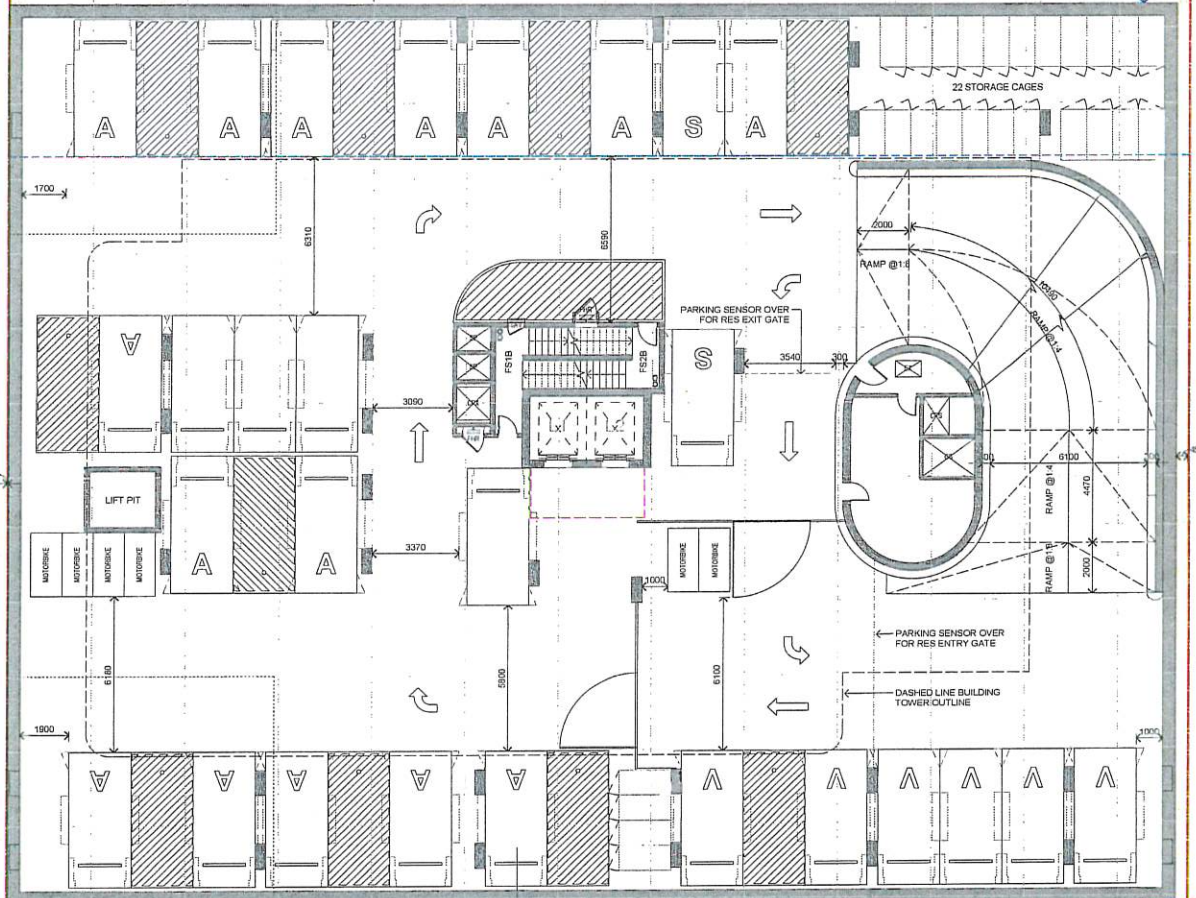
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ADAPTABLE 5400x2400	BASEMENT 4	1
ADAPTABLE 5400x2400	BASEMENT 3	1
ADAPTABLE 5400x2400	BASEMENT 2	1
CAR SHARE 5400x2400	BASEMENT 2	2
CAR WASH 5400x3000	BASEMENT 4	1
CAR WASH 5400x3000	BASEMENT 3	2
CHILD CARE 5400x2700	BASEMENT 1	10
CHILD CARE STAFF 5400x2400	BASEMENT 1	7
RETAIL 5400x2400	BASEMENT 1	1
STANDARD 5400x2400	BASEMENT 4	29
STANDARD 5400x2400	BASEMENT 3	47
STANDARD 5400x2400	BASEMENT 2	60
VISITOR 5400x2400	BASEMENT 2	5
VISITOR 5400x2400	BASEMENT 1	12
<b>Grand total</b>		<b>116</b>

### Bicycle Parking Schedule

Type	Level	Count
BIKE PARKING - RESIDENT	BASEMENT 1	12
BIKE PARKING - RESIDENT	GROUND FLOOR	11
		23
BIKE PARKING - VISITOR	GROUND FLOOR	13
<b>Grand total</b>		<b>36</b>

### Motorbike Parking Schedule

Type	Level	Count
MOTORBIKE 1200x2500	BASEMENT 2	5
MOTORBIKE 1200x2500	BASEMENT 1	4
<b>Grand total</b>		<b>10</b>



Rev	Date	Revision	By	CHK
21	28/07/2021	FOR CONSTRUCTION COORDINATION	ML	AH
22	04/07/2021	DRAFT FOR CLIENT REVIEW	LL	AH
23	13/02/2021	FOR COORDINATION	LL	AH
24	21/04/2021	FOR CONSTRUCTION	LL	AH
25	03/02/2021	FINAL DRAFT FOR DA	LL	AH
26	24/02/2021	FINAL DRAFT FOR DA	LL	AH
27	24/02/2021	FINAL DRAFT FOR DA	LL	AH
28	24/02/2021	FINAL DRAFT FOR DA	LL	AH
29	08/02/2021	FINAL DRAFT FOR DA	LL	AH
30	13/02/2021	FOR DA APPROVAL	LL	AH
43	28/07/2022	RESPONSE TO RFI	LL	AH

**HYECORP**

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13-19 Canberra Ave  
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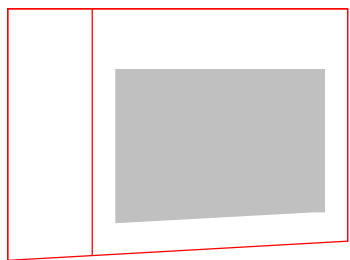
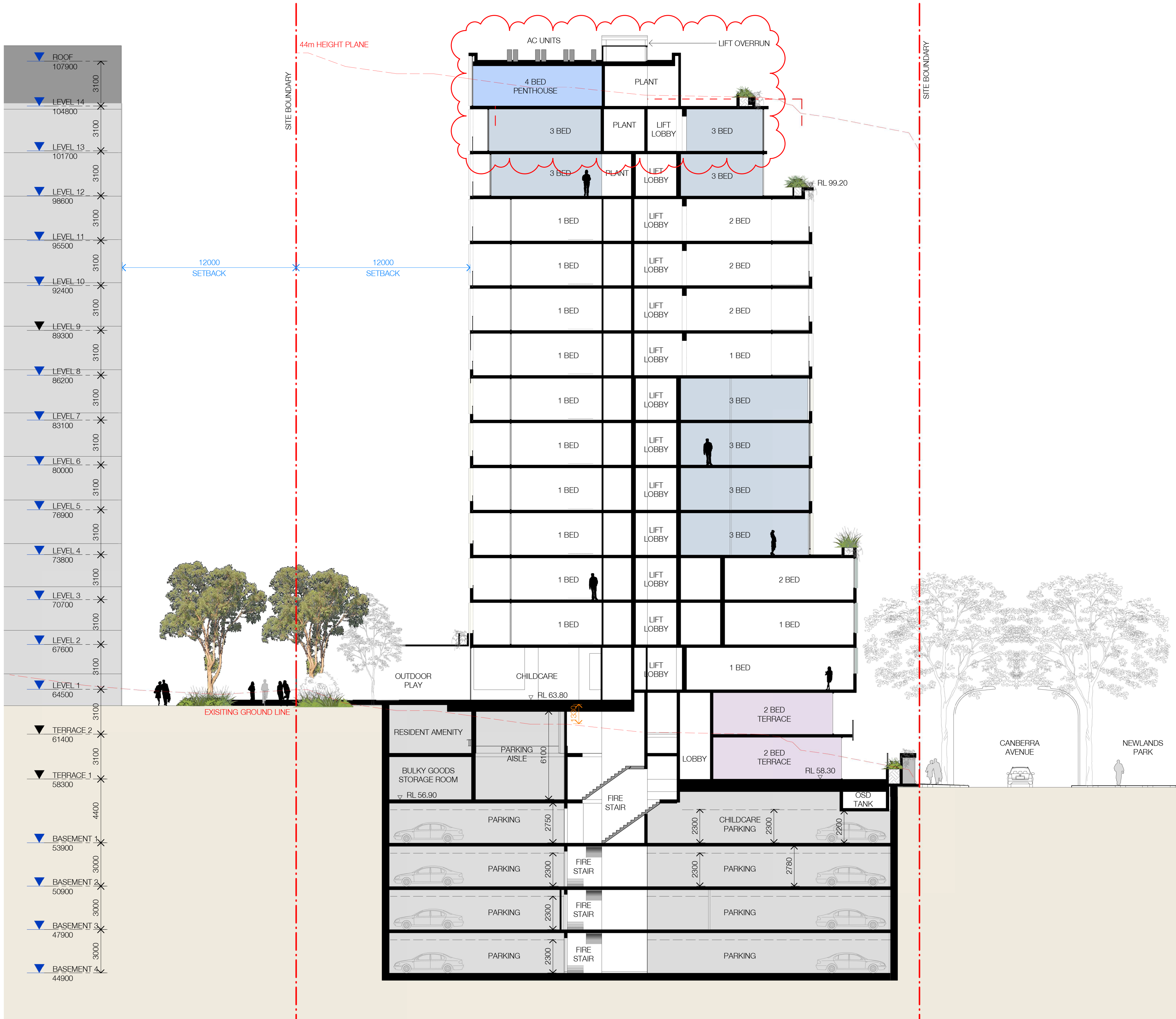
## Appendix B

### Proposed S4.55 Plans

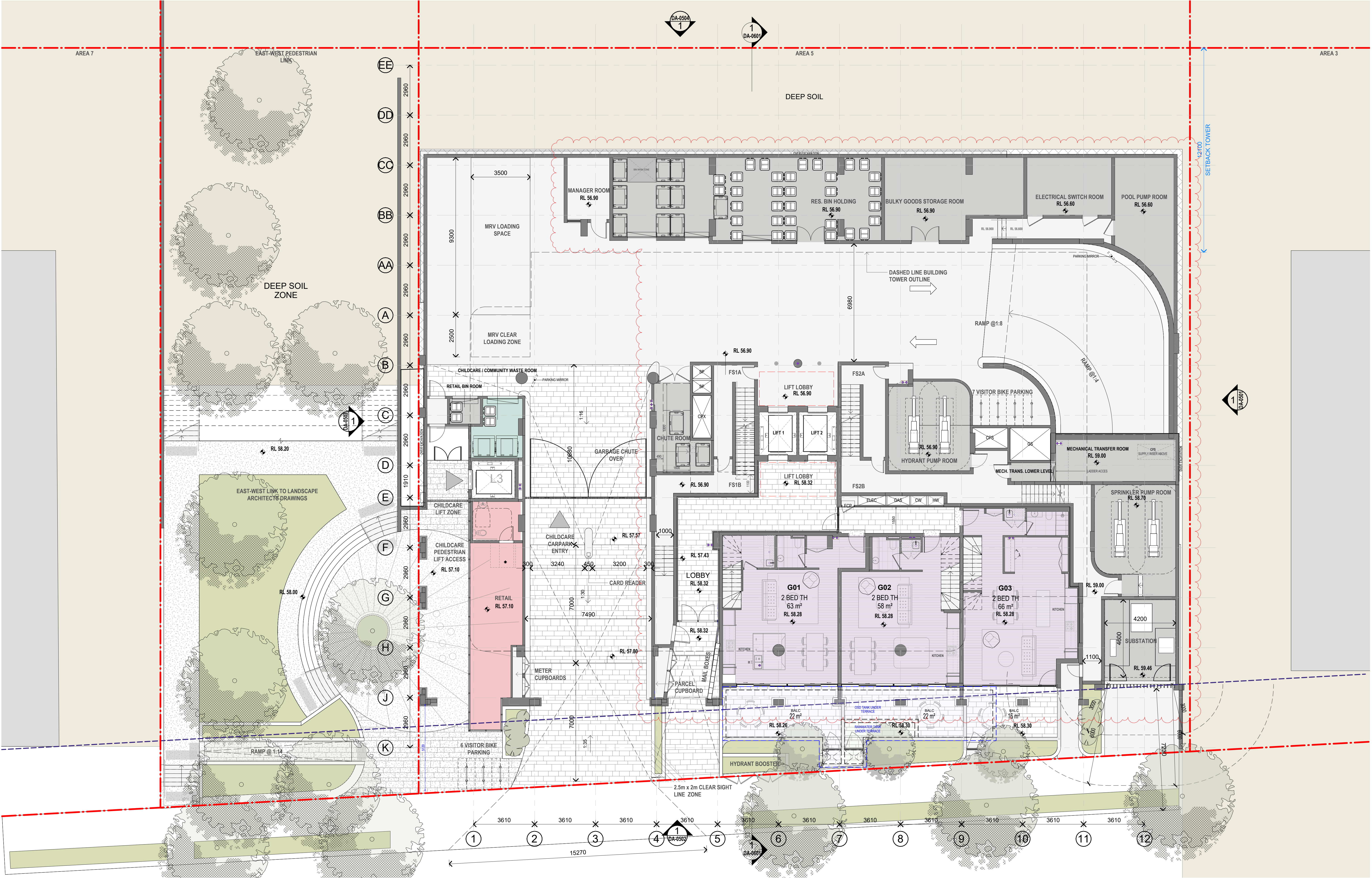






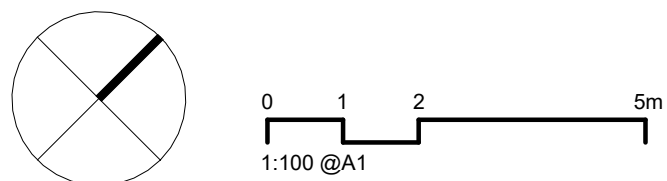




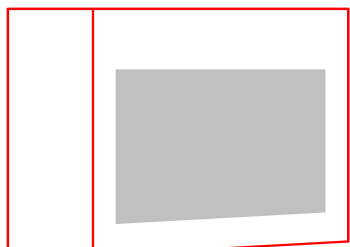


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Nominated Architects: Adam Haddow-7188 | John Pradel-7004



Rev	Date	Revision	By	Chk.
DA29	27/08/2021	FOR INFORMATION	LL	AH
DA35	20/09/2021	FOR INFORMATION	LL	AH
DA36	24/09/2021	FINAL DRAFT FOR DA	LL	AH
DA37	28/09/2021	FINAL DRAFT FOR DA	LL	AH
DA39	07/10/2021	GF UPDATE	LL	AH
DA40	08/10/2021	FINAL DRAFT FOR DA	LL	AH
DA42	13/10/2021	FOR DA APPLICATION	LL	AH
DA45	29/04/2022	RESPONSE TO RF	LL	AH
DA49	14/10/2022	FOR S4.55 MODIFICATION	AR	MS
DA50	18/11/2022	ISSUED FOR MOD3	AR	ST



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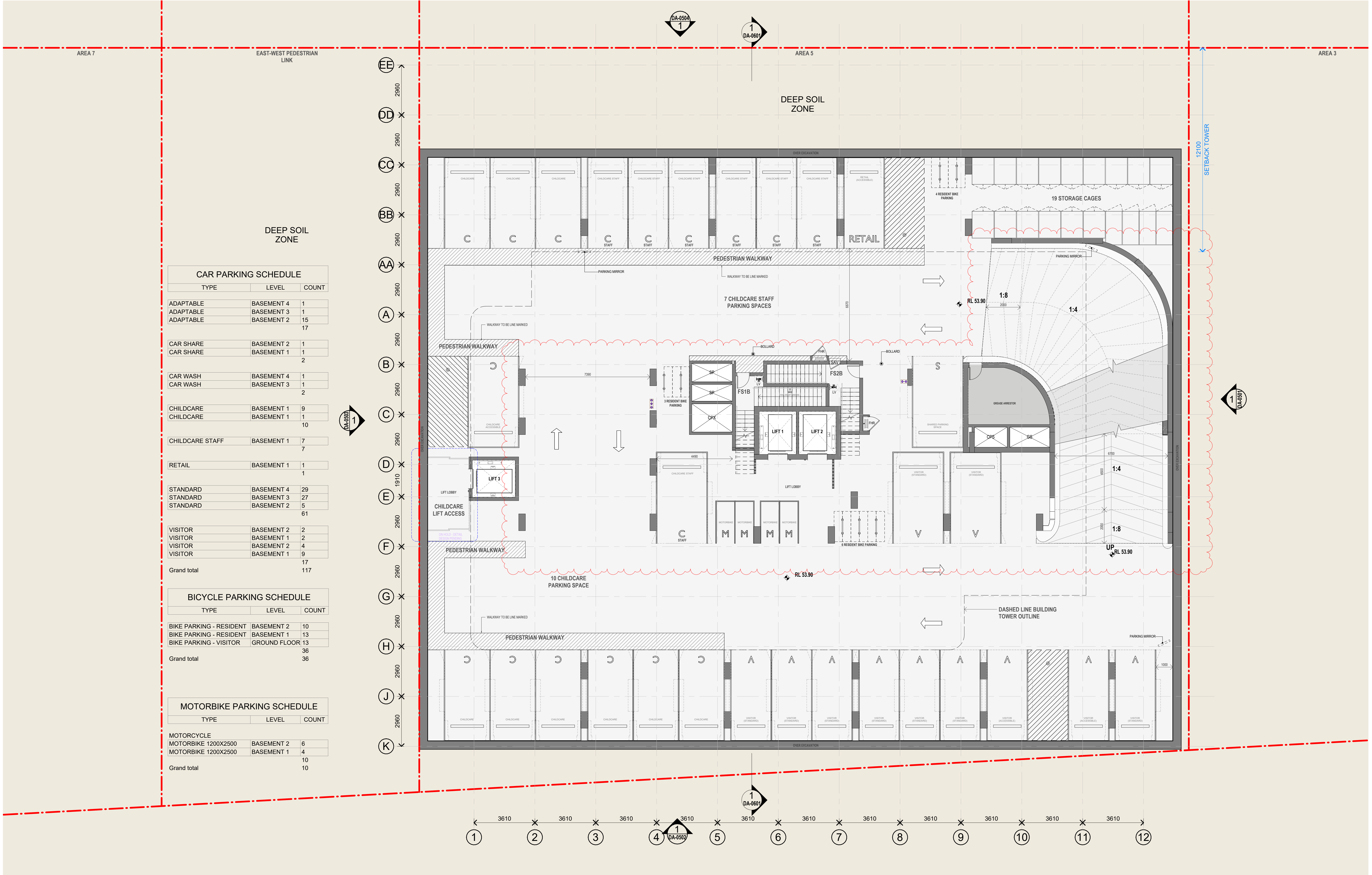
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CAR PARKING SCHEDULE

TYPE	LEVEL	COUNT
ADAPTABLE	BASEMENT 4	1
ADAPTABLE	BASEMENT 3	1
ADAPTABLE	BASEMENT 2	15
		17
CAR SHARE	BASEMENT 2	1
CAR SHARE	BASEMENT 1	1
		2
CAR WASH	BASEMENT 4	1
CAR WASH	BASEMENT 3	1
		2
CHILDCARE	BASEMENT 1	9
CHILDCARE	BASEMENT 1	1
		10
CHILDCARE STAFF	BASEMENT 1	7
		7
RETAIL	BASEMENT 1	1
		1
STANDARD	BASEMENT 4	29
STANDARD	BASEMENT 3	27
STANDARD	BASEMENT 2	5
		61
VISITOR	BASEMENT 2	2
VISITOR	BASEMENT 1	2
VISITOR	BASEMENT 2	4
VISITOR	BASEMENT 1	9
		17
Grand total		117

BICYCLE PARKING SCHEDULE

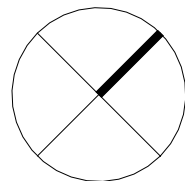
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BIKE PARKING - RESIDENT	BASEMENT 1	13
BIKE PARKING - VISITOR	GROUND FLOOR	13
		36
Grand total		36

MOTORBIKE PARKING SCHEDULE

TYPE	LEVEL	COUNT
MOTORCYCLE		
MOTORBIKE 1200X2500	BASEMENT 2	6
MOTORBIKE 1200X2500	BASEMENT 1	4
		10
Grand total		10

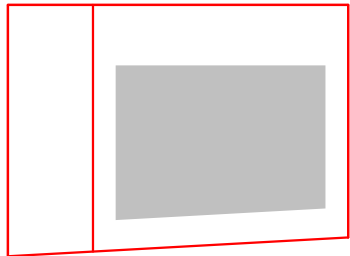
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DA28	18/08/2021	FOR COORDINATION	LL	AH
DA29	27/08/2021	FOR INFORMATION	LL	AH
DA32	03/09/2021	FINAL DRAFT FOR DA	LL	AH
DA36	24/09/2021	FINAL DRAFT FOR DA	LL	AH
DA37	28/09/2021	FINAL DRAFT FOR DA	LL	AH
DA40	08/10/2021	FINAL DRAFT FOR DA	LL	AH
DA42	13/10/2021	FOR DA APPLICATION	LL	AH
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DA49	14/10/2022	FOR S4.55 MODIFICATION	AR	MS
DA50	18/11/2022	ISSUED FOR MOD3	AR	ST



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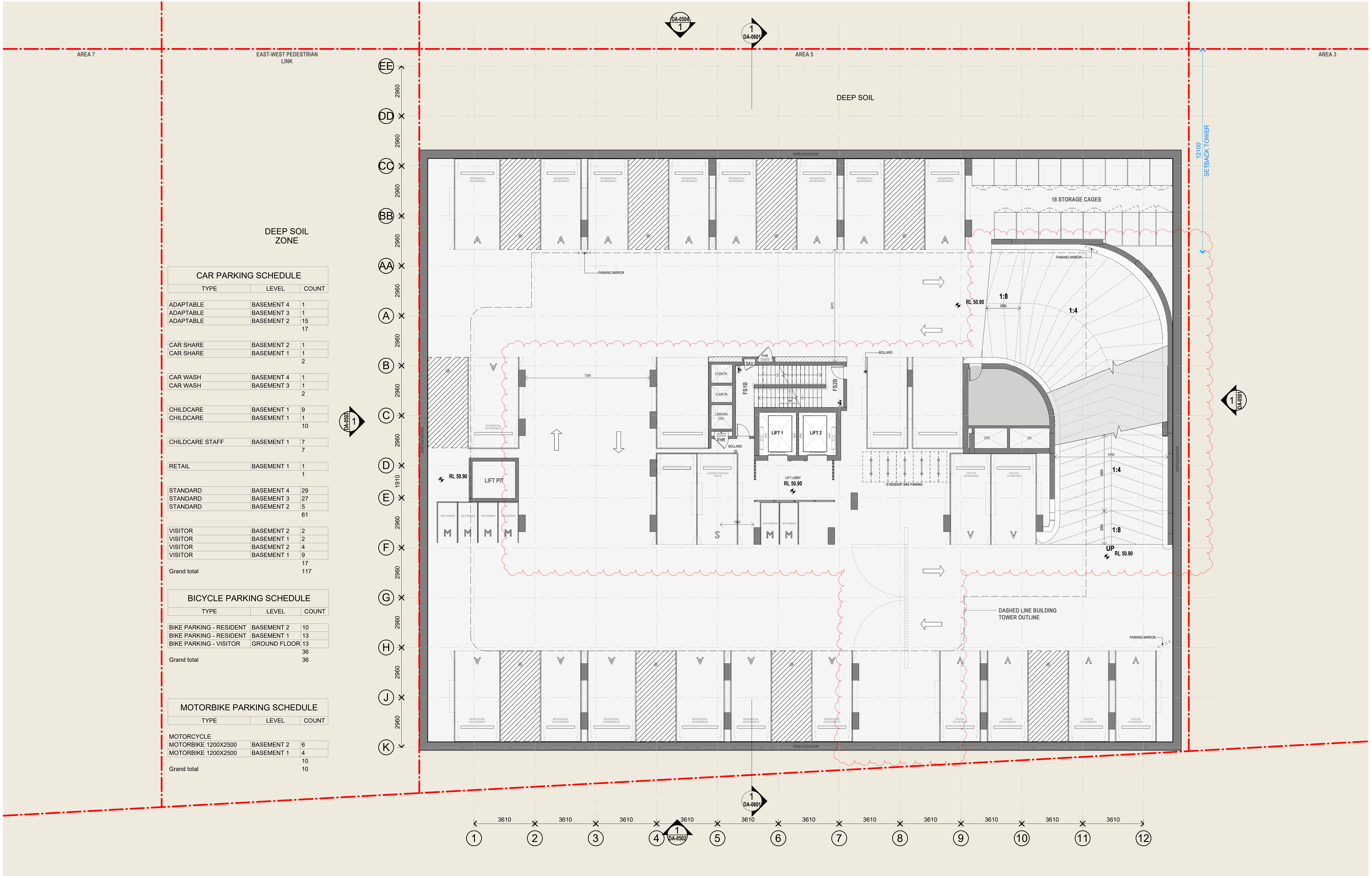
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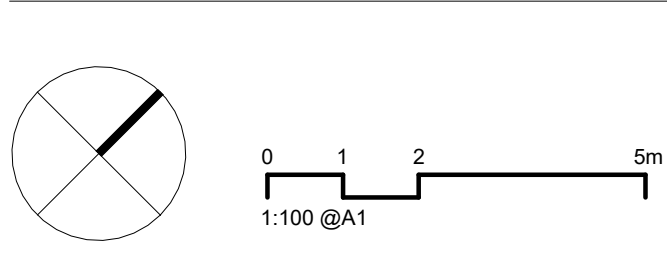
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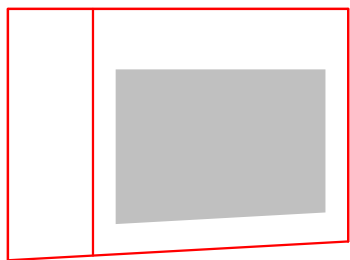


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DA50	18/11/2022	ISSUED FOR MOD3	AR	ST



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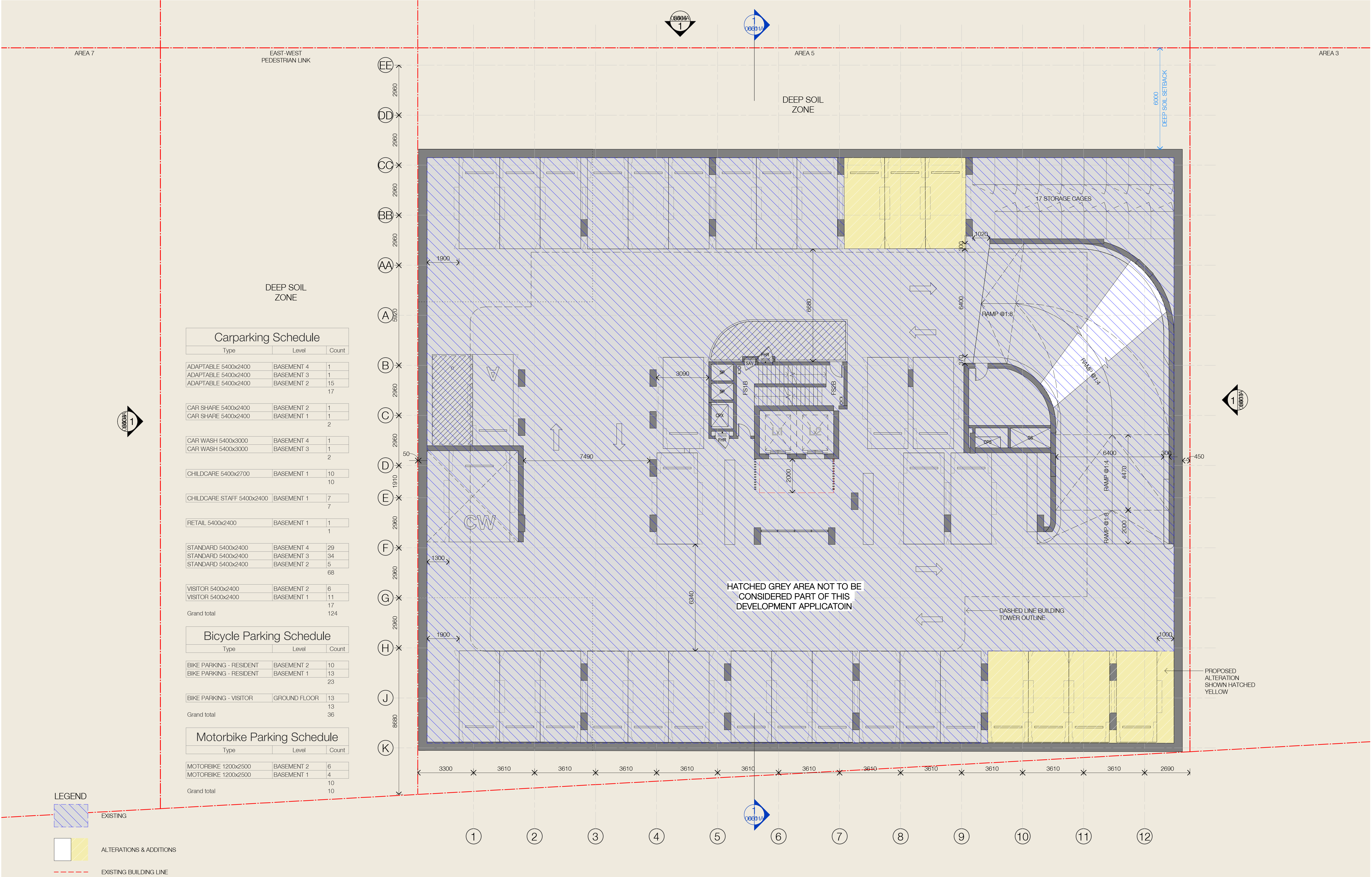
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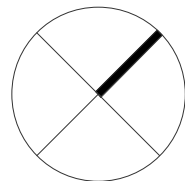
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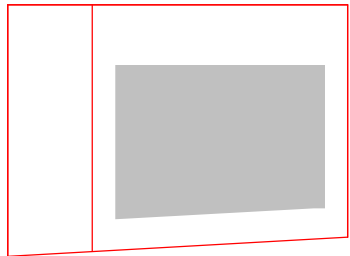
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42	13/10/2021	FOR DA APPLICATION	LL	AH
45	29/04/2022	RESPONSE TO RFI	LL	AH
50	29/11/2022	DRAFT UPLIFT SET	ML	AH
53	09/12/2022	DRAFT ALTERATION & ADDITION SET	ML	AH
55	14/12/2022	FINAL ALTERATION & ADDITION SUBMISSION		



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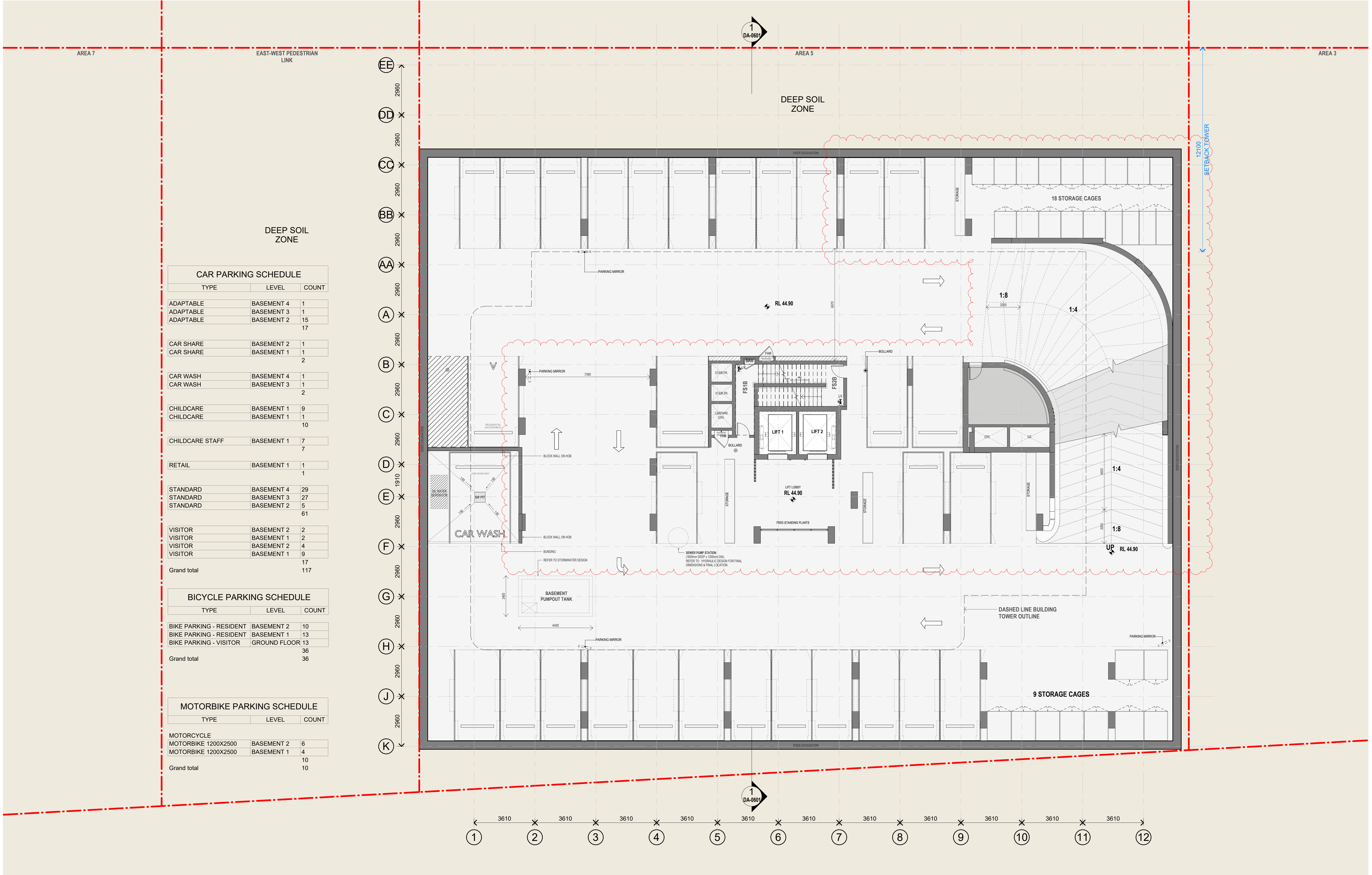
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2010 Australia  
T 61 2 9380 9911  
www.sjb.com.au

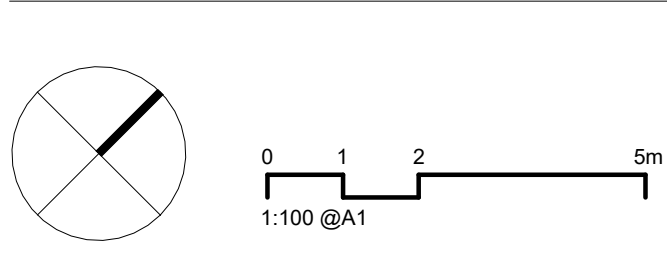




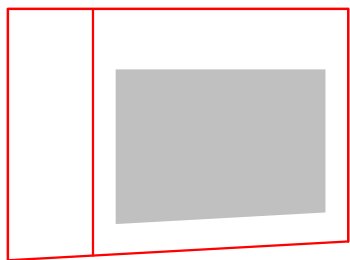


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Nominated Architects: Adam Haddow-7188 | John Pradel-7004



Rev	Date	Revision	By	Chk.
DA28	18/08/2021	FOR COORDINATION	LL	AH
DA29	27/08/2021	FOR INFORMATION	LL	AH
DA32	03/09/2021	FINAL DRAFT FOR DA	LL	AH
DA36	24/09/2021	FINAL DRAFT FOR DA	LL	AH
DA37	28/09/2021	FINAL DRAFT FOR DA	LL	AH
DA40	08/10/2021	FINAL DRAFT FOR DA	LL	AH
DA42	13/10/2021	FOR DA APPLICATION	LL	AH
DA45	29/04/2022	RESPONSE TO RF1	LL	AH
DA49	14/10/2022	FOR S4.55 MODIFICATION	AR	MS
DA50	18/11/2022	ISSUED FOR MOD3	AR	ST



Client

**HYECORP**

Project

13-19 Canberra Ave, St Leonards

Drawing Name  
FLOOR PLAN B4

Date

18/11/2022

Scale

1 : 100

Sheet Size

@ A1

Drawn

AR

Chk.

MS

Job No.

6429

Drawing No.

DA-0201

Revision

/ DA50



## Appendix C

### Transport Services

# Sydney rail network

**M** Metro **T** Trains



## Sydney metro and train lines

**M** Metro North West Line  
Chatswood  
Tallawong

**T1** North Shore & Western Line  
North Shore  
Western  
Richmond

**T2** Inner West & Leppington Line  
Inner West  
Leppington  
City

**T3** Bankstown Line  
Liverpool  
Lidcombe  
City

**T4** Eastern Suburbs & Illawarra Line  
Eastern Suburbs  
Illawarra  
Cronulla

**T5** Cumberland Line  
Leppington  
Richmond

**T7** Olympic Park Line  
Olympic Park  
Lidcombe

**T8** Airport & South Line  
Airport  
South  
City

**T9** Northern Line  
Northern  
Gordon



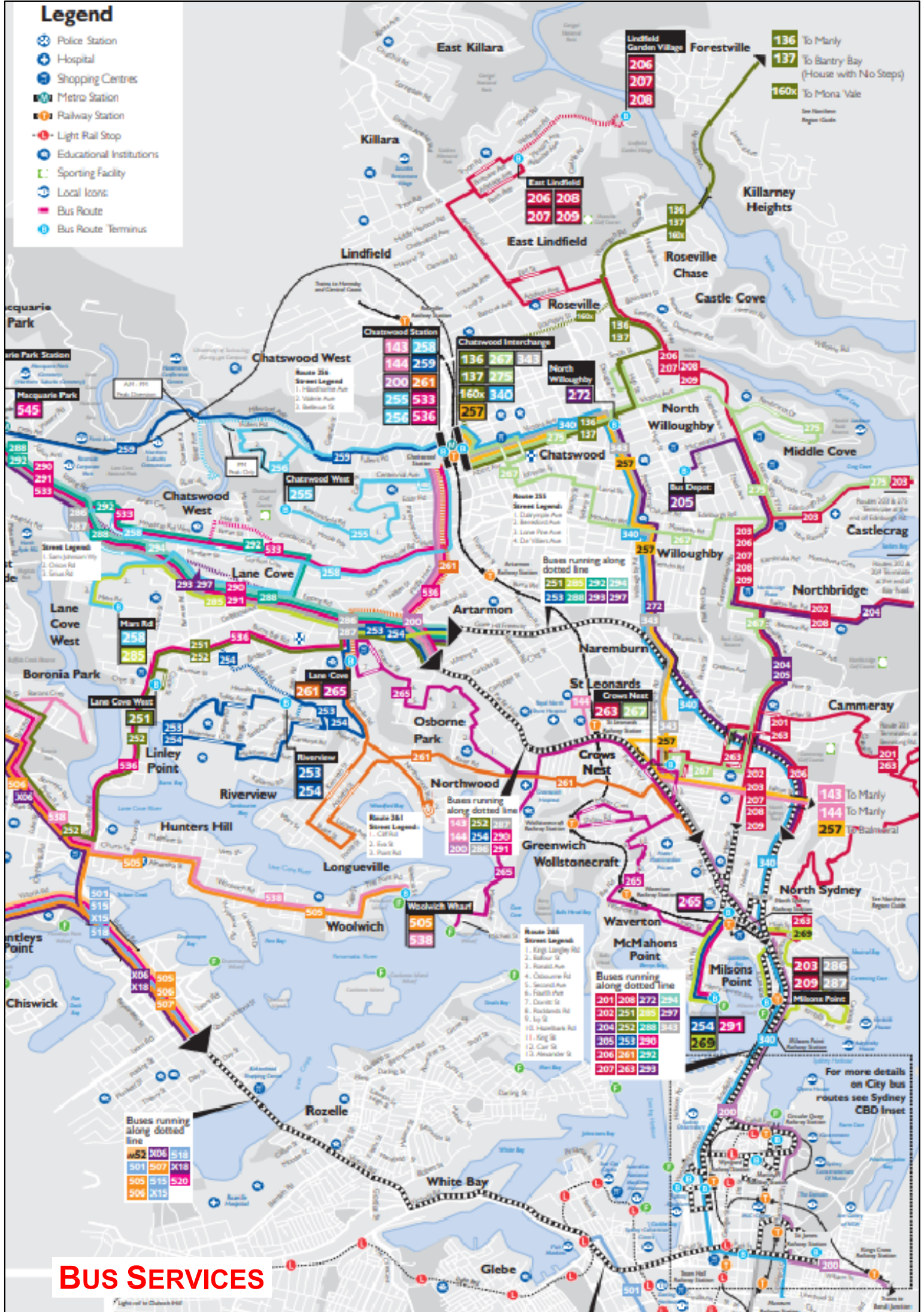
Check timetables and trip planners for train services and connections

Visit [transportnsw.info](http://transportnsw.info)



# Legend

- Police Station
- Hospital
- Shopping Centres
- Metro Station
- Railway Station
- Light Rail Stop
- Educational Institutions
- Sporting Facility
- Local Icons
- Bus Route
- Bus Route Terminus

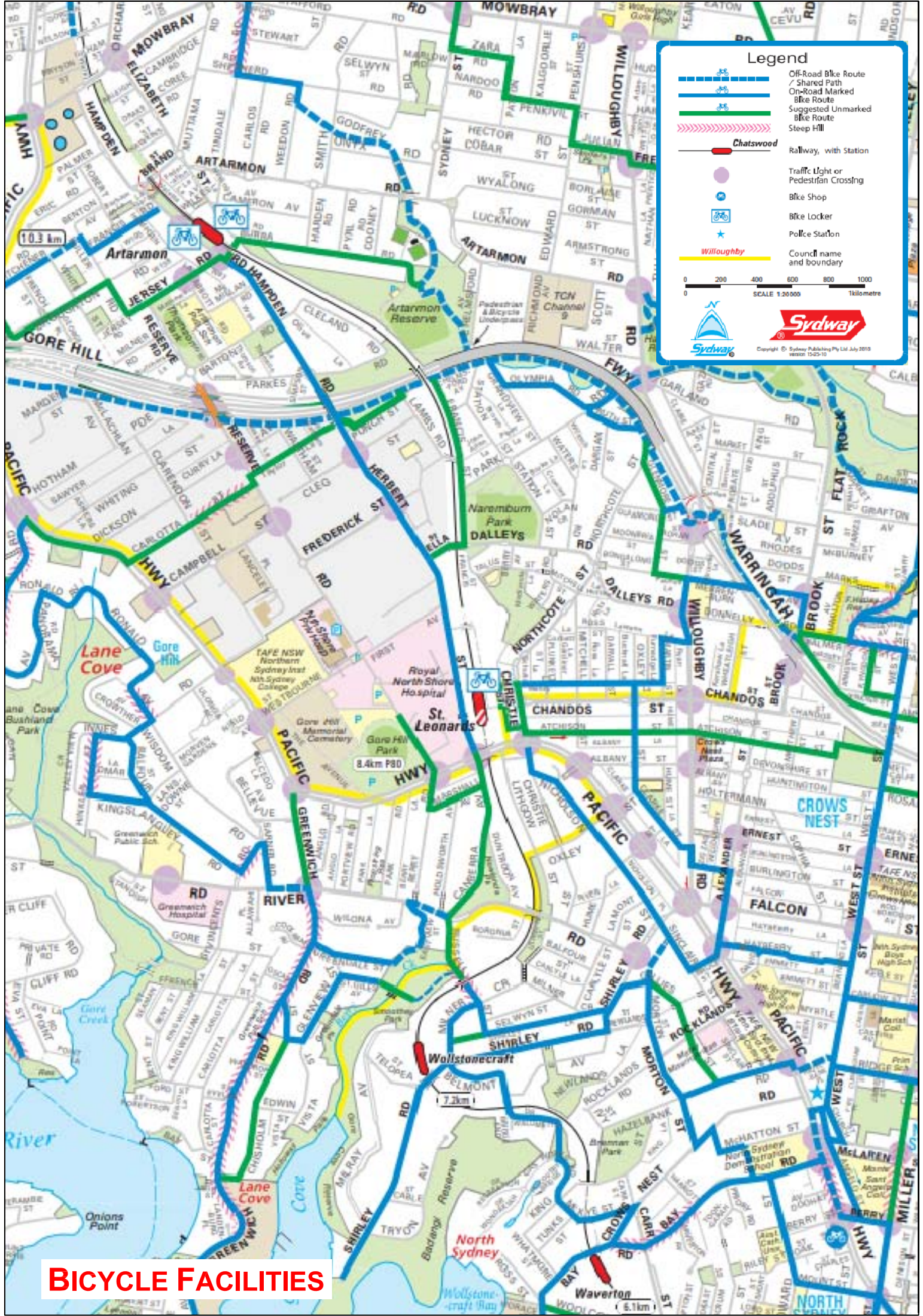


## BUS SERVICES

Light rail to Chiswick Road

For more details on City bus routes see Sydney CBD inset







**Legend**

- Off-Road Bike Route / Shared Path
- On-Road Marked Bike Route
- Suggested Unmarked Bike Route
- Steep Hill
- Chatswood
- Railway, with Station
- Traffic Light or Pedestrian Crossing
- Bike Shop
- Bike Locker
- Police Station
- Willoughby
- Council name and boundary

0 200 400 600 800 1000  
0 SCALE 1:20,000 1000metre

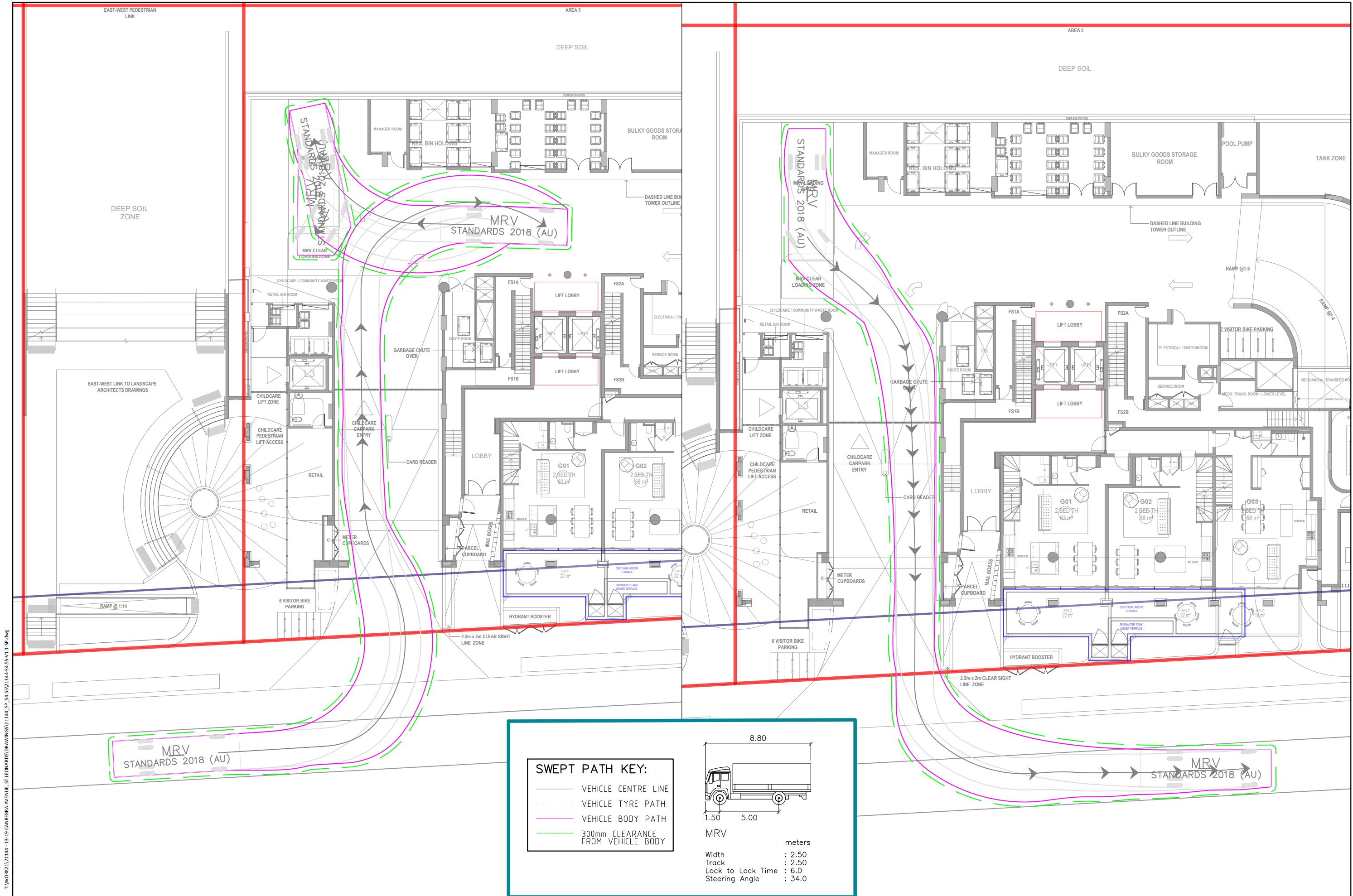
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**BICYCLE FACILITIES**



## Appendix D

# Turning Path Assessment



T:\WORK\21144 - 13-19 CANBERRA AVENUE, ST LEONARDS\DRAWINGS\21144\_SP\_S4\55\21144-S4-55-V1.1-SP.dwg  
Plotted by Van

13-19 CANBERRA AVENUE, ST LEONARDS  
MRV VEHICLE ENTERING AND EXITTING THE SITE  
SWEEP PATH ASSESSMENT

DRAWING REF NO. 21144-S4-55-V1.1-SP

SHEET NO. 01 OF 03

ISSUE DATE 31 October 2022

DESIGNED BY  
VAN DAU  
REVIEWED BY  
ROSS NETTLE

SCALE  
A3  
0 2.4 4.8  
1:238



DISCLAIMER  
This drawing has been prepared using vehicle modelling computer software AutoTurn Pro V11.0 in conjunction with AutoCAD 2018. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.

**ttpa** TRANSPORT AND TRAFFIC PLANNING ASSOCIATES  
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T:\WORK\21144 - 13-19 CANBERRA AVENUE, ST LEONARDS\DRAWINGS\1144\_SP\_S4\55\1144-S4-55-V1.1-SP.dwg  
Plotted by Van

13-19 CANBERRA AVENUE, ST LEONARDS  
CAR PARK COMPLIANCE REVIEW  
SWEEP PATH ASSESSMENT

DRAWING REF NO. 21144-S4-55-V1.1-SP

SHEET NO. 02 OF 03

ISSUE DATE 31 October 2022

DESIGNED BY  
VAN DAU

REVIEWED BY  
ROSS NETTLE

SCALE  
A3 0 2.1 4.2 1:208

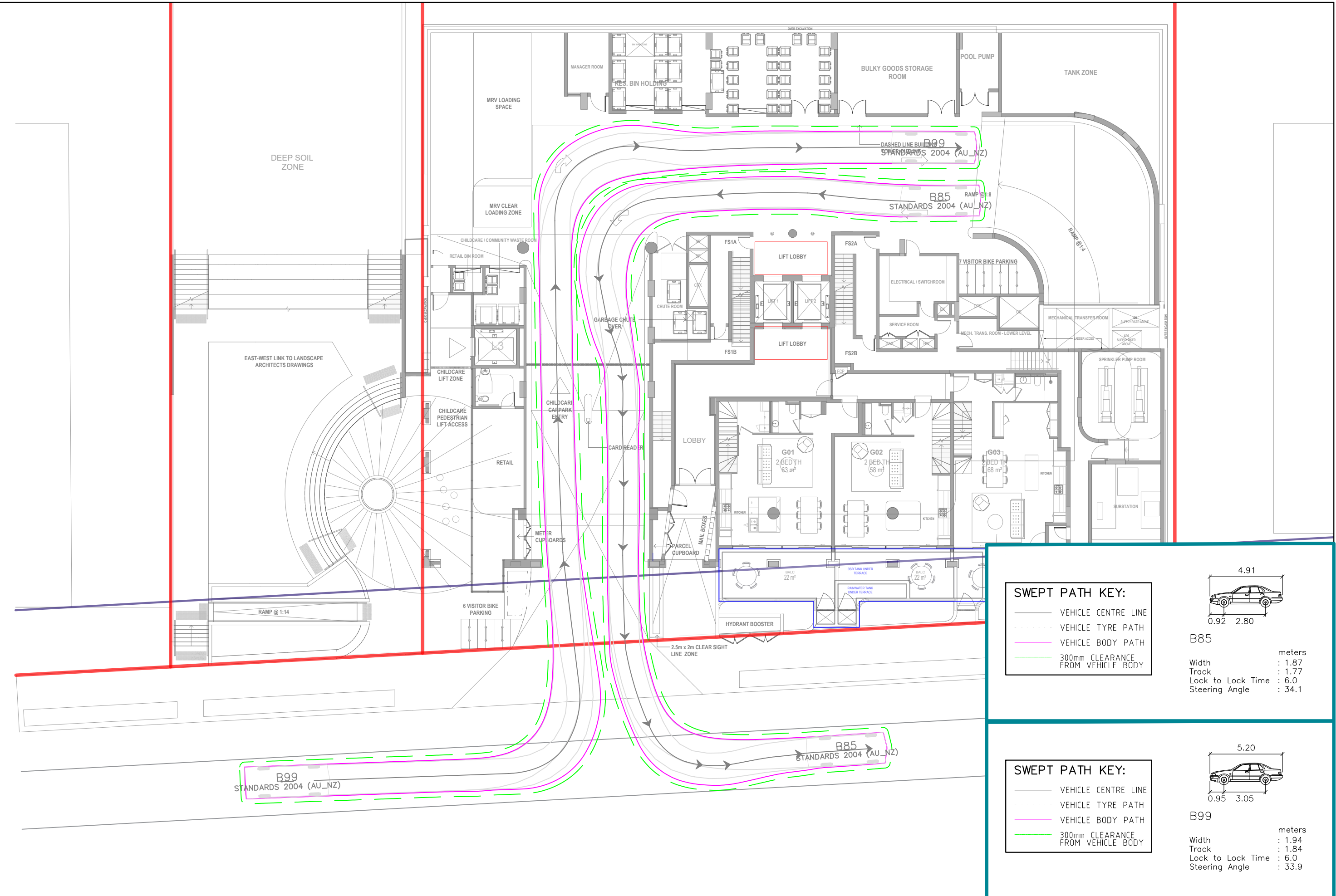


DISCLAIMER

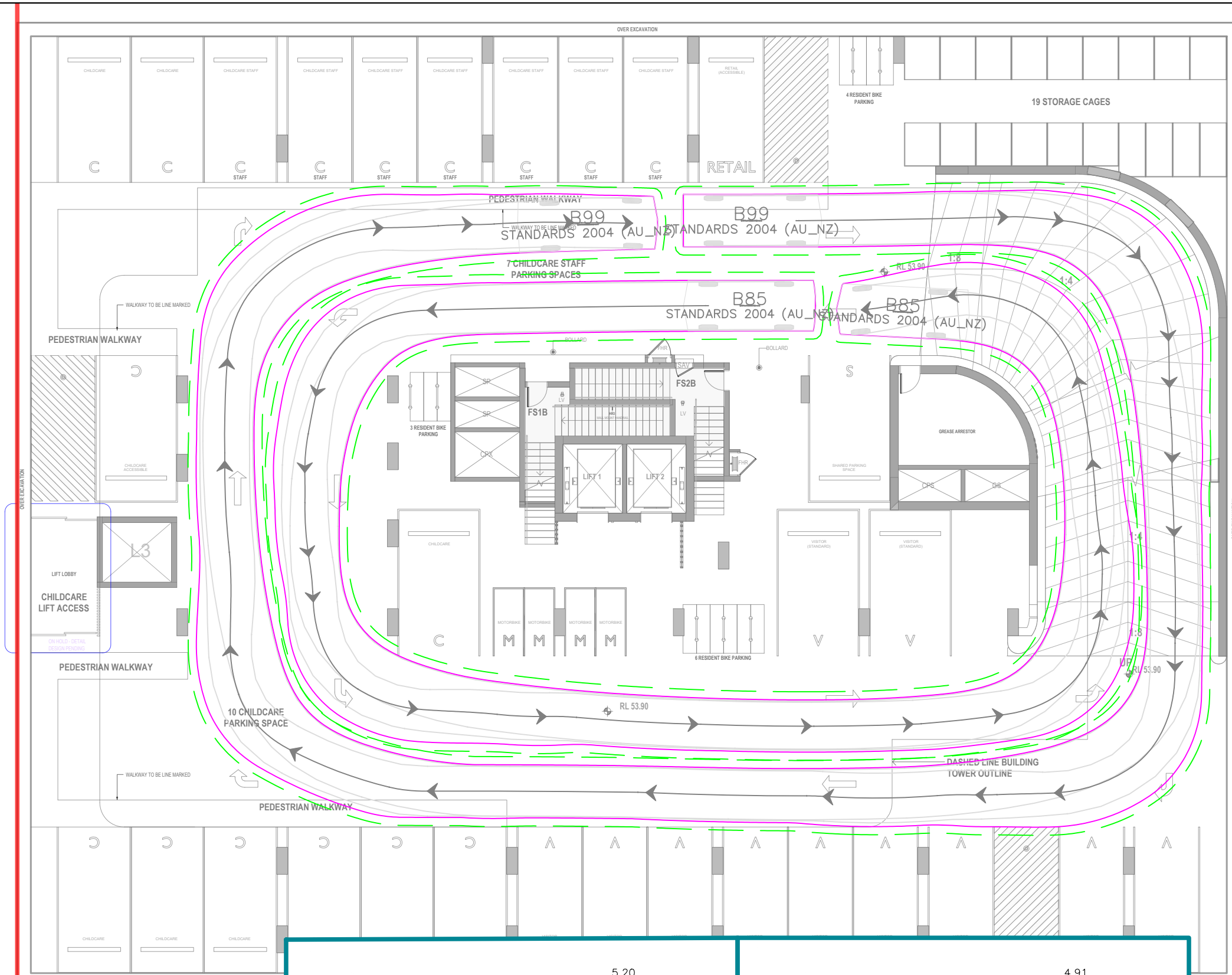
This drawing has been prepared using vehicle modelling computer software AutoTurn Pro V11.0 in conjunction with AutoCAD 2018. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.

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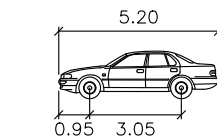


T:\WORK\21144 - 13-19 CANBERRA AVENUE, ST LEONARDS\DRAWINGS\21144\_SP\_54.55\21144-54.55-V1.1-SP.dwg  
Plotted by Van



**SWEPT PATH KEY:**

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

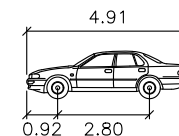


**B99**

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

**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

**13-19 CANBERRA AVENUE, ST LEONARDS**  
**CAR PARK COMPLIANCE REVIEW**  
**SWEPT PATH ASSESSMENT**

DRAWING REF NO. 21144-S4.55-V1.1-SP

SHEET NO. 03 OF 03

ISSUE DATE 31 October 2022

DESIGNED BY  
VAN DAU

REVIEWED BY  
ROSS NETTLE

SCALE  
A3 0 16 33 1:165



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