



# **FLOOD ASSESSMENT REPORT FOR PLANNING PROPOSAL**

240113 - 641 & 655A, PACIFIC HIGHWAY, CHATSWOOD 2067

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## QUALITY CONTROL REGISTER

This report has been prepared and checked as per below.

	Name	Signature	Date
Report Author:	Ali Akel		09.02.2024
Checked by:	Juan Wood		09.02.2024
Authorised by:	Juan Wood		09.02.2024

## 1 Document Summary

Project Number: 240113  
Project Name: 641 & 655A Pacific Highway, Chatswood  
Prepared For: Goldfields Group  
Date Prepared: 09.02.2024  
XK Project Director: Juan Wood

Status	Issue	Date	Prepared By	Approved By
Planning Proposal	A	09.02.2024	Ali Akel	Juan Wood

## 2 Introduction

Xavier Knight has been engaged to prepare a flood assessment report to address comments raised by Willoughby Council engineers during a Planning Proposal meeting for the development at 641 & 655A Pacific Highway, Chatswood. Council have tagged the site as affected by overland flow (major) and have requested a preliminary report to confirm that the proposed building platform is clear of the overland floor path. Refer to Appendix A for Council's comments.

This preliminary report details the pre-development and post development flood behaviour taking into consideration the proposed building footprint and demonstrates how the proposed development has negligible impact on the overall flood behaviour.

### 2.1 SITE CONTEXT

The existing site consists of two three storey brick buildings with basements. The site is bounded by Hammond Lane to the east, Hammond Lane to the north, Gordon Avenue to the south and Pacific Highway to the west. The site sits upstream of a road sag on Pacific Highway, adjacent to 689-699 Pacific Highway, and a road sag at the intersection of Hammond Lane with Gordon Ave. The site falls south-west to north-east with an average grade of 1.9%. A detailed survey conducted by Survey Plus dated 2<sup>nd</sup> and 23<sup>rd</sup> February 2021, REF no.18716\_DET\_2A can be found in Appendix B.



Figure 1 - Existing Site



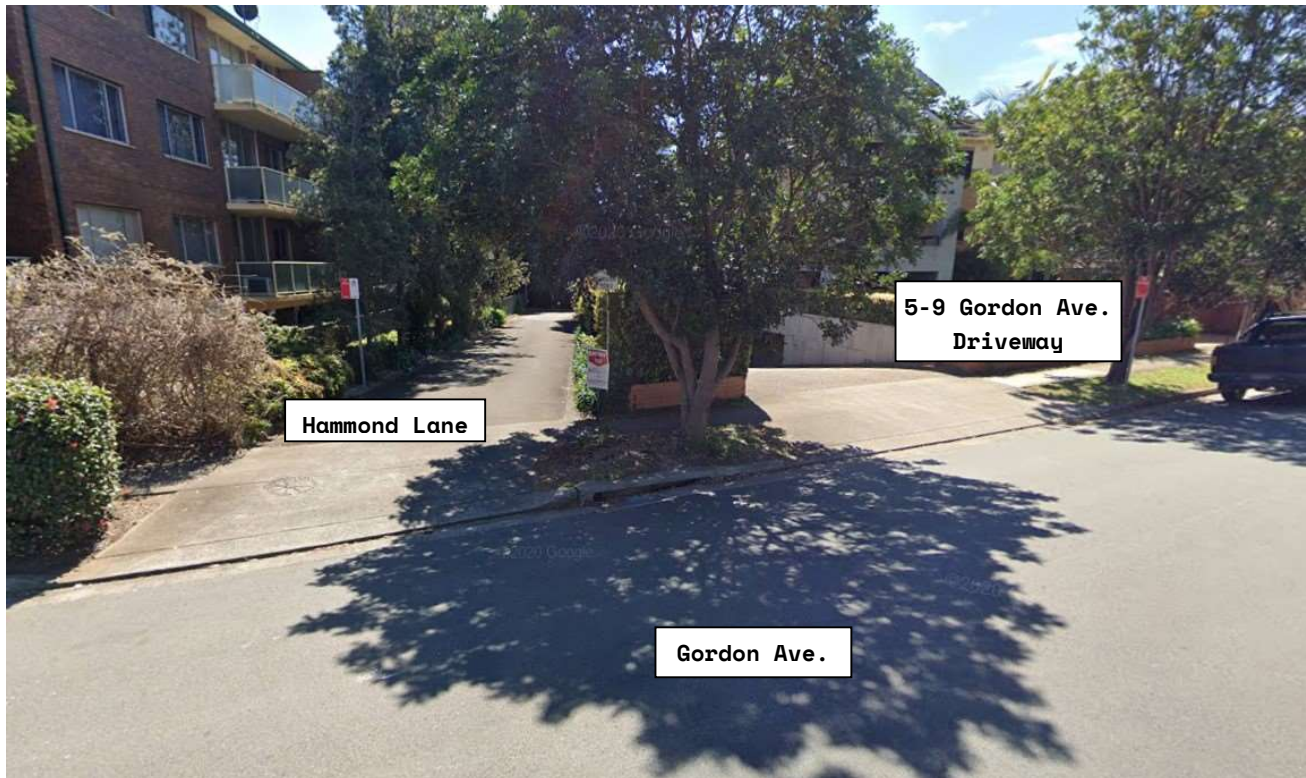


Figure 2 - Entrance to Hammond Lane on Gordon Ave (Google Maps 2020)

## 2.2 PROPOSED DEVELOPMENT

The existing buildings will be demolished and replaced with two, 26 storey mixed-use towers. The ground floor will be comprised of non-residential and retail spaces. Hammond Lane will be maintained and upgraded with a pedestrian north-south link as part of the proposed works. Pedestrian access will also be provided between Pacific Highway and Hammond Lane through an open space between the two proposed towers. Refer to Appendix C for architectural concept plans.

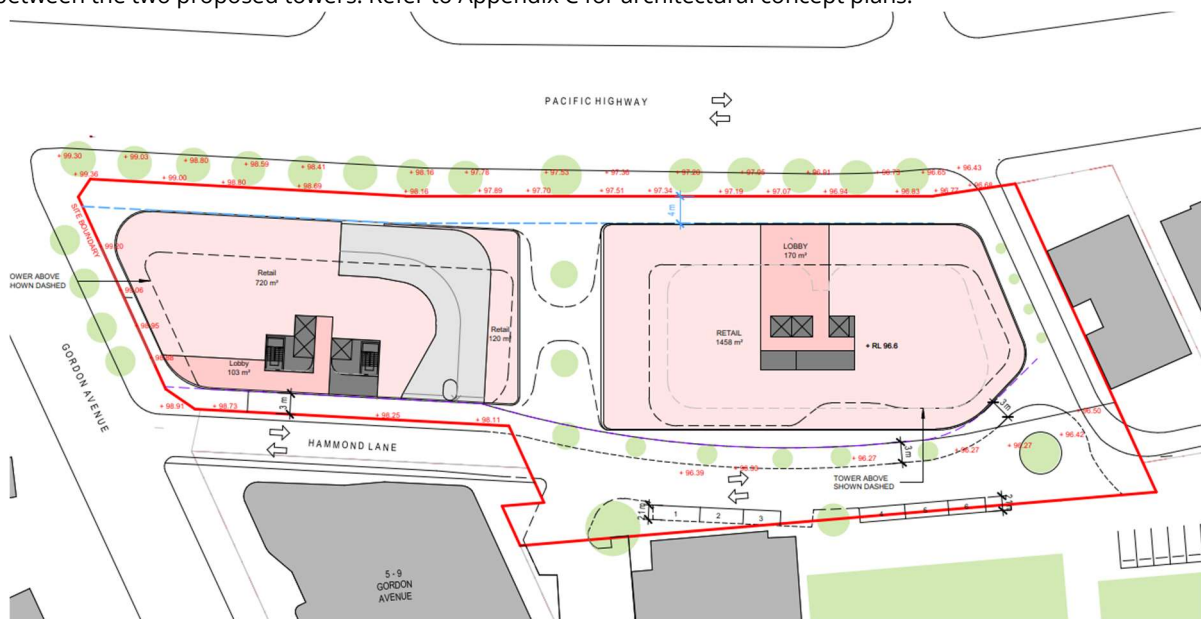
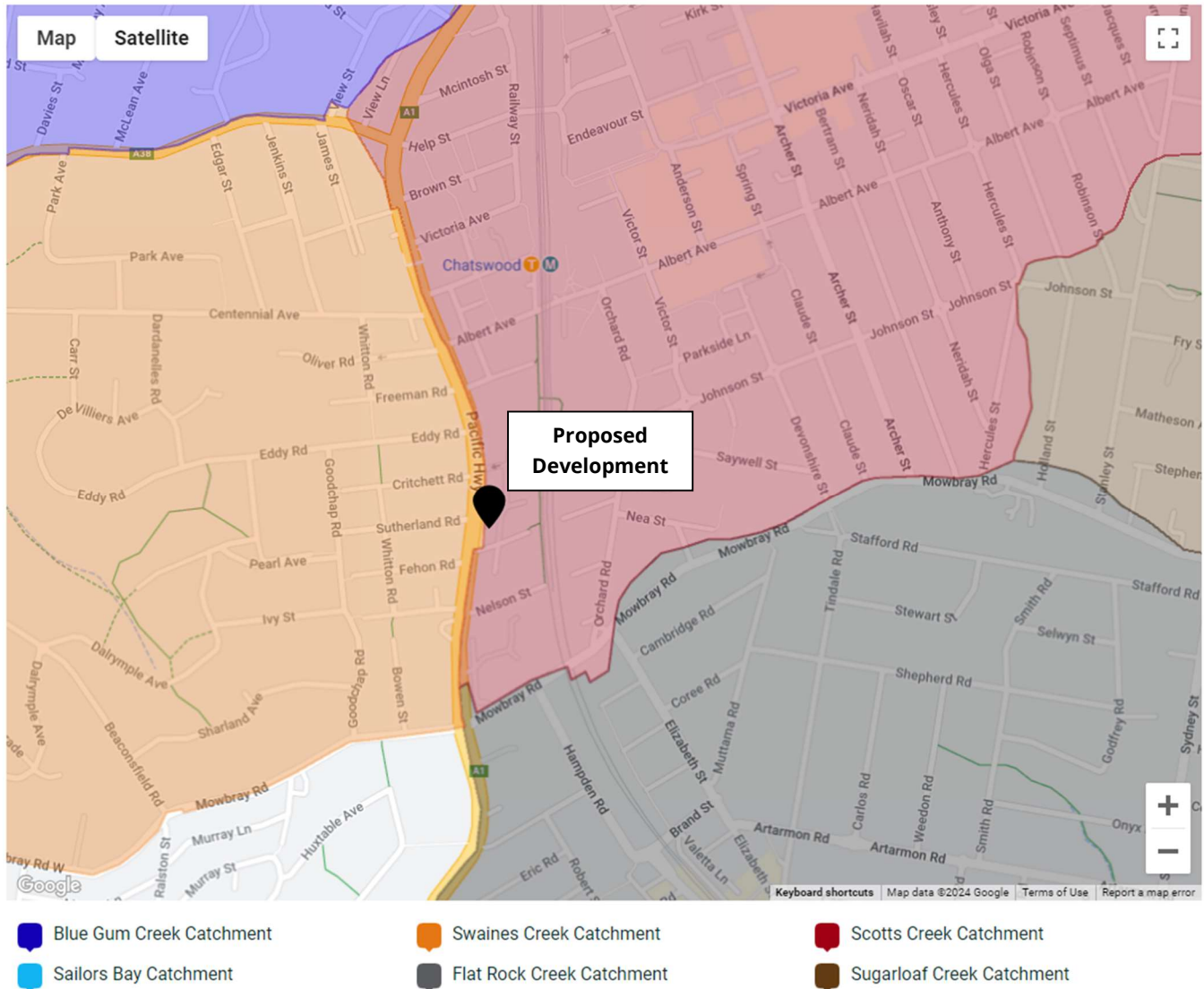


Figure 3 - Architectural Ground Floor Plan

## 2.3 EXISTING STUDIES

The Willoughby Council catchment area map (Figure 4) indicates that the development is within the Scotts Creek catchment. The Scotts Creek Flood Study, prepared by Lyall & Associates Consulting Engineers, dated March 2008 studied the flood behaviour within Scotts Creek for floods ranging between the 5 and 200 ARI as well as extreme flood events.



**Figure 4 - Willoughby Council Catchment Area Breakdown**

The flood study did not produce any flood maps for the subject site; however, it did provide the following hydrological design parameters:

### Rainfall Losses:

- Soil Type = 2.5
- Antecedent Moisture Condition = 3.0
- Paved Area Depression Storage = 2.0mm
- Grassed Area Depression Storage = 10.mm

The study has indicated that the Chatswood Oval, located downstream of the development, functions as a detention basin and has a storage volume of 17,500 m<sup>3</sup> and ponding depths up to 1.2m. Figure 5 below has been adapted from the flood study and shows stage vs. storage relationship for the Chatswood Oval. The top water level of the basin has been determined to be RL 94.0 and will be used as the downstream boundary condition for the purposes of this assessment.

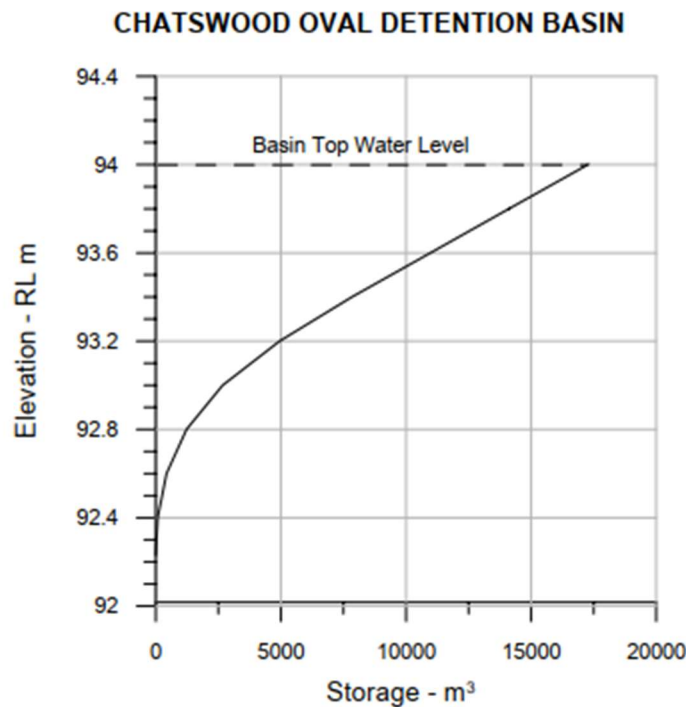


Figure 5 - Chatswood Oval Stage vs Storage Relationship

### 3 Flood Modelling

#### 3.1 CATCHMENT AREA

LiDAR data with 1m resolution has been obtained from NSW Spatial Services in order to determine the topography of the area and delineate catchments affecting the site. For the purposes of this assessment, the catchment downstream boundary has been chosen 120m downstream of the site at the Chatswood Oval to account for the tailwater condition caused by the oval functioning as a detention basin. Runoff from the delineated catchment reaches the oval through a pedestrian underpass located under the railway as show in Figure 7.

The catchment affecting the proposed development and draining to the oval consists of medium-density residential developments and roads, as well as the Chatswood bowling club. As per Council's Catchment Breakdown (Figure 4) and the LiDAR Contours (Figure 1), it is observed that Pacific Highway acts as a dividing feature between Swaines Creek Catchment and Scotts Creek catchment, therefore the area west of Pacific Highway drains away from the site and does not contribute to flooding of the development.

The catchment area draining to the downstream boundary is approximately 9.45 ha and has been further subdivided into 8 smaller sub-catchments (Figure 6) to account for the existing site topography and allow for multiple upstream boundary conditions in the TUFLOW model.





Figure 6 - Catchment Breakdown

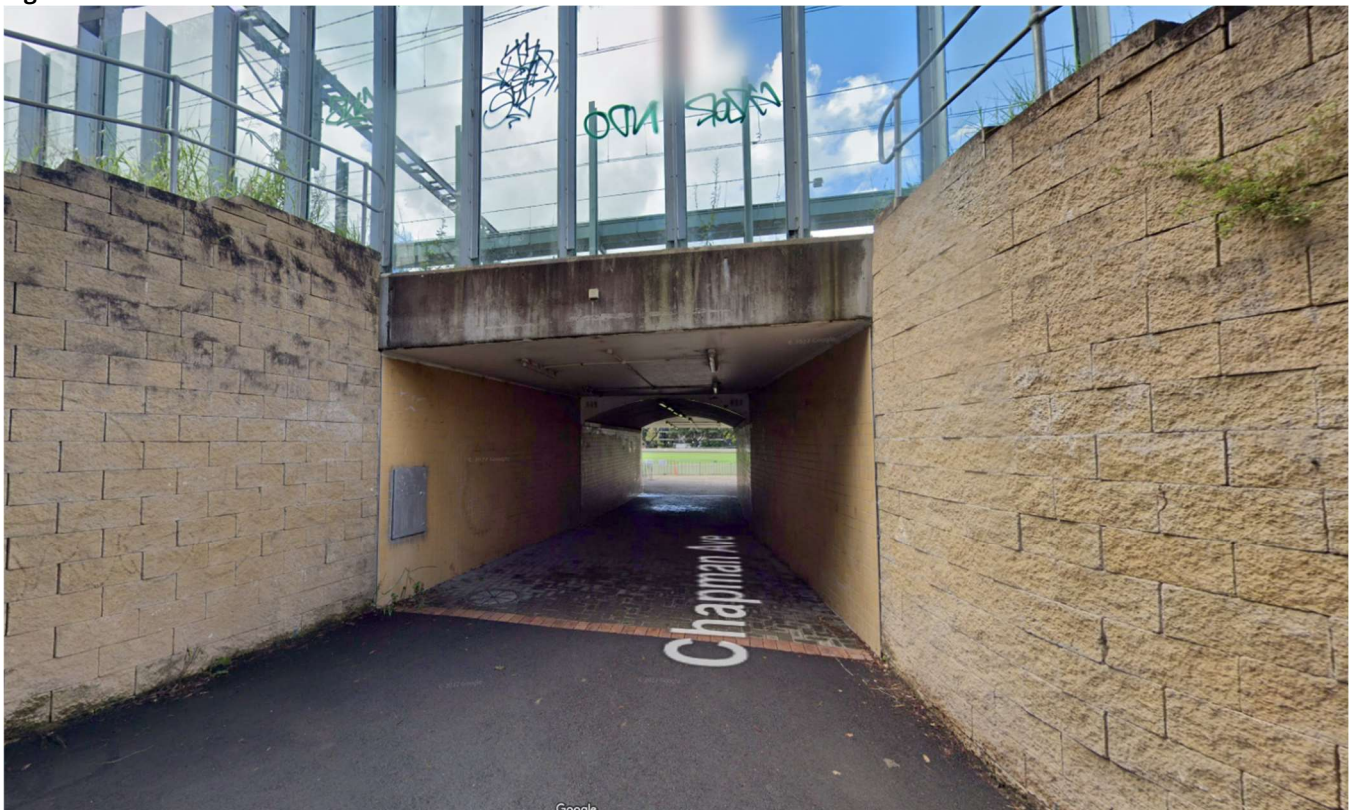


Figure 7 - Pedestrian Underpass to Chatswood Oval



### 3.2 HYDROLOGIC MODEL

The catchment is comprised of urban residential properties and roads. A DRAINS model was developed for the 8 sub-catchments (Figure 6) and an ILSAX analysis was run to generate individual hydrographs to be input into TUFLOW.

### 3.3 HYDRAULIC MODEL

#### 3.3.1 DIGITAL ELEVATION MODEL (DEM)

A 1 metre DEM obtained from NSW Spatial Services was used to represent the existing ground surface for the hydraulic model. This resolution is fine enough to represent roads and overflow paths and did not result in excessive run time. Surface levels immediately surrounding and within the site have been read from the detailed survey (Appendix B).

#### 3.3.2 LAND USE

Land use throughout the site has been determined through satellite imagery and land use maps. The following land uses, and corresponding manning's roughness coefficients were modelled in TUFLOW:

**Table 1 - Land use**

Land Use	Manning's n
Roads	0.02
Urban Residential	0.04
Landscaped Areas	0.06

#### 3.3.3 BUILDINGS

Existing and proposed footprints to our proposed site were determined from satellite imagery and plans and have been modelled as "ineffective areas".

#### 3.3.4 EXISTING STORMWATER DRAINAGE INFRASTRUCTURE

Existing stormwater drainage infrastructure has been assumed as 100% blocked and were not modelled in TUFLOW. The results from the simulation will be conservative as the effect from existing drainage infrastructure was not included.

#### 3.3.5 UPSTREAM BOUNDARY CONDITION

The stormwater hydrographs extracted from the DRAINS hydrological model were used as inputs for the TUFLOW model. The upstream boundary conditions are 2d QT (Flow vs. Time) boundaries and were placed along flow paths.

#### 3.3.6 DOWNSTREAM BOUNDARY CONDITION

A HT (Stage vs. Time) boundary was digitised downstream of the site at the Chatswood Oval, 120m from the site, at a constant level of RL 94.0 as per the Scotts Creek Flood Study.

## 4 Results

The flood maps for the 1% AEP scenario can be found in Appendix C.

### 4.1 EXISTING FLOOD BEHAVIOUR

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Preliminary assessment of the existing flood event show floodwaters approaching the development from the south-west. The majority of the flow is contained within Pacific Highway while a portion enters Gordon Avenue and ponds at the sag point, after which it overtops the Hammond Lane driveway and flow through Hammond Lane.

Hammond Lane serves as an overland flow path with depths ranging from 0.06m to 0.3m, with the highest depths being in front of the bowling club.

Runoff from these two overland flow paths continue flowing north-west through the development before finally reaching the pedestrian underpass and flowing into the Chatswood Oval.

It should be noted that based on site photographs (Figure 2), the neighbouring 5-9 Gordon Avenue basement driveway crest appears lower than the internal Hammond Lane levels and is likely to be inundated in major storm events. The basement storage capacity, however, has not been modelled in TULFOW to produce more conservative results.

### 4.2 PROPOSED FLOOD BEHAVIOUR

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The overland flow paths in the proposed scenario flow in a similar manner to the existing scenario, being largely contained within Hammond Lane and Pacific Highway. Since Hammond Lane has been maintained and setbacks have been provided between the site boundary and the building footprint, the overland flow paths on Pacific Highway and Hammond Lane have been largely unaffected.

A preliminary Flood Afflux Map has been produced and shows no negative effects on the main flow paths or the neighbouring properties, and only minor flood level increases around the developments southern corner. Refer to Appendix D for the preliminary flood maps.

## 5 Conclusions

This report has been prepared for a planning proposal for the proposed development of 641 & 655A Pacific Highway, Chatswood.

The catchment area for the site was delineated and the existing and proposed 1% AEP flood levels, hazards and afflux were determined using TUFLOW.

The flood modelling has shown that the flow paths are mostly contained within Hammond Lane and Pacific Highway and are not significantly impacted by the proposed building footprint.

Based on the results of this preliminary assessment, the proposed building is clear of the overland flow path and therefore satisfies Council's requirement.

The subject site should undergo further detailed flooding assessment as part of a future Development Application (DA) once more detailed plans have been produced.

This report was completed for and on behalf of the Xavier Knight team.

Kind regards,

Ali Akel



Civil Engineer  
BE (Civil) MIEAust

## 6 Appendix

### 6.1 APPENDIX A – COUNCIL'S COMMENTS

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Notwithstanding the above, more detailed and readable shadow diagrams are required if this Planning Proposal proceeds to Gateway and public exhibition. This has been addressed in the officer's recommendation.

Further consideration of overshadowing may occur following public exhibition and at development application stage.

### **Privacy and general amenity**

With regard to privacy and general amenity impacts to neighbouring properties, it is noted that:

- To the north, from 689 to 701 Pacific Highway, are single storey dwellings and three storey residential flat buildings. This land is part of the Chatswood CBD. A Planning Proposal has been lodged on 691-699 Pacific Highway.
- To the south, on the other side of Gordon Avenue, is 629-637 Pacific Highway – the subject of a Planning Proposal responding to the CBD Strategy, supported by Council and made (maximum height of 90m and FSR of 6:1). A Planning Proposal is being assessed for 10 Gordon Avenue and 15-19 Nelson Street (maximum height of 90m and FSR of 6:1). Another Planning Proposal at 9-11 Nelson Street, responding to the CBD Strategy, has been supported by Council and made (maximum height of 90m and FSR of 6:1).
- To the east is 5-9 Gordon Avenue – the subject of a Planning Proposal responding to the CBD Strategy, supported by Council and made (maximum height of 90m and FSR of 6:1).  
Also to the east is the Chatswood Bowling Club. The proponent has been in consultation with the Chatswood Bowling Club. Privacy and amenity concerns will be further considered following Gateway and public exhibition with regards to the Chatswood Bowling Club.
- To the west is the Pacific Highway, and on the opposite side, R3 Medium Density Residential land containing a mix of single storey houses and three storey residential flat buildings, outside of the Chatswood CBD.

Further consideration of amenity impacts such as privacy may occur following public exhibition of the Planning Proposal, and at the design excellence and development application stage.

### **Other Internal Referrals**

The Planning Proposal has also been referred to the Urban Design, Traffic, Engineering and Open Space sections of Council, and no objections have been raised.

The Engineering section made the following comment:

- The site is flood affected and tagged as affected by overland flow – major.
- Access to basement parking areas must be 500mm above the 1% AEP flood level or the PMF level adjacent to the crossing, whichever is higher.
- Floor levels are to be 500mm above the 1%AEP flood level.
- A Flood Impact Report in accordance with Technical Standard 3 will be required as part of the DA, to confirm that the above minimum flood levels are achieved and to confirm that the proposed works do not impact flood levels. A preliminary report should be considered at this stage, to confirm that the proposed building platform is clear of the overland flow path.

- The site will require OSD, and space for this needs to be included in any DA plans. Given the size of the system required, consideration should be given at this stage as to where the OSD tank will be located, ensuring that all impervious area can drain to the tank. The outlet level for the tank needs to be above the downstream 1%AEP flood level. Where connecting to a Council pit, the adopted level must be the grate level on the pit.

Preliminary floor analysis is required prior to gateway and exhibition and is addressed in the officer's recommendation.

### **Development Control Plan provisions**

Council has prepared draft site specific and precinct development control plan provisions.

These will be further assessed following public exhibition and may be the subject of amendments.

It is also noted that, where matters are not covered by site specific provisions, the remainder of the Development Control Plan will apply to the site.

### **Department of Planning and Environment Requirements**

The Planning Proposal is considered to be generally in accordance with the requirements under Section 3.33(2) of the *Environmental Planning and Assessment Act 1979* and the Department of Planning and Environment (August 2023) *Local Environmental Plan Making Guideline*. Refer to **Attachment 3**.

### **Willoughby Local Planning Panel**

The Willoughby Local Planning Panel has provided advice on this matter dated 14 November 2023 (Refer to **Attachment 8**). The issues considered included:

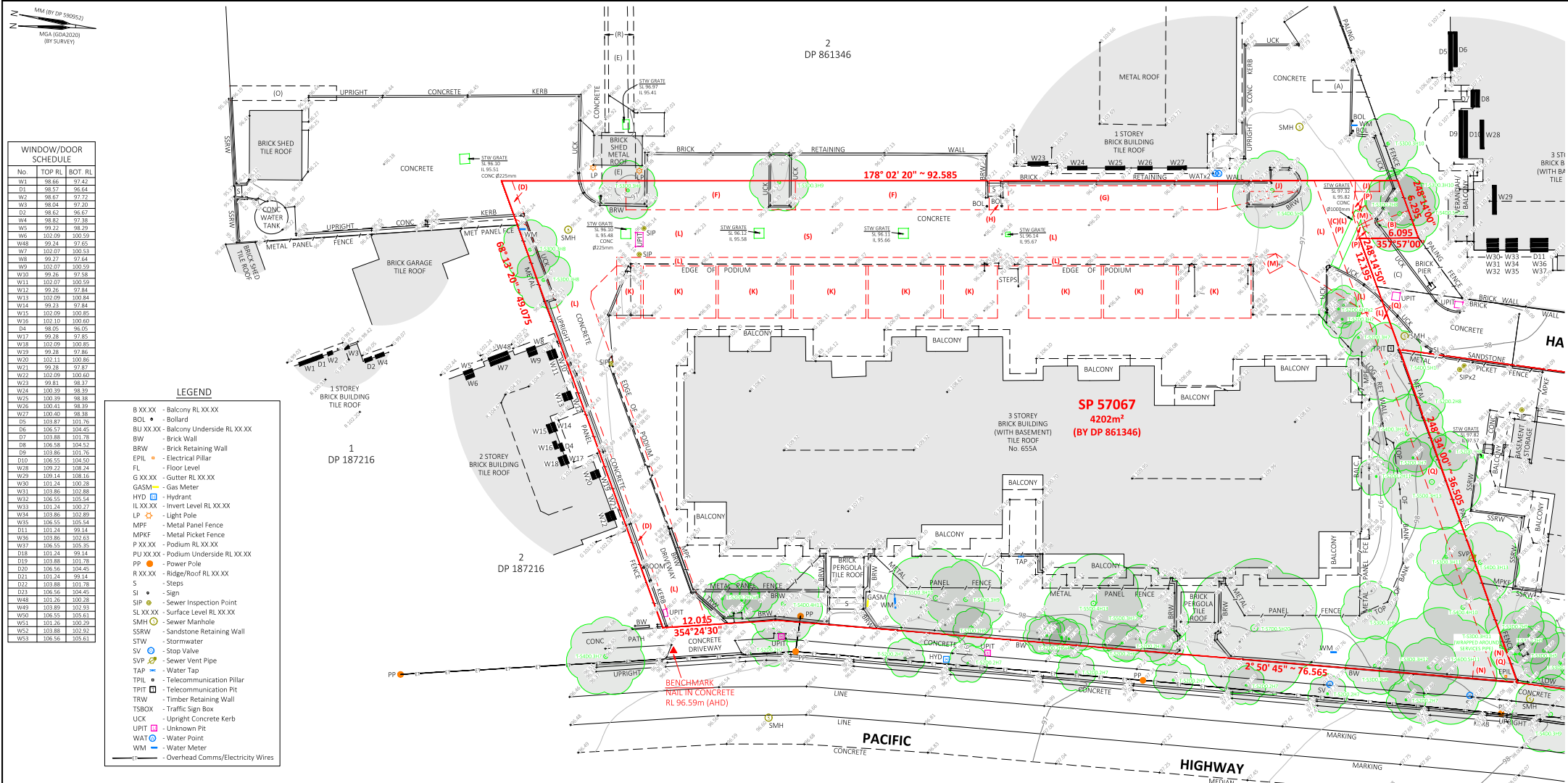
- Compliance with the strategic framework,
- Ground level public domain embellishment,
- Connection to a wider pedestrian and cycle network,
- Relationship of site with the Chatswood Bowling Club,
- Adequacy of the percentage of affordable housing to be provided,
- Precinct Plan and wider transport issues,
- Approach to vehicle access and egress,
- Traffic capacity of Gordon Avenue,
- Site access from the south, and
- Car parking and traffic generation.

The Panel *"advises it is satisfied that the planning proposal is worthy of being forwarded to the DP&E for a Gateway consideration having demonstrated strategic and site specific merit. The Panel notes that the plans and documentation provided have been superseded and are to include amendments to reflect recent changes to the Council planning controls. The Panel advises the Council that it supports forwarding the planning proposal to the DP&E for a Gateway consideration as set out in the Officer's report for the following reasons:*

- a) The proposal is to be consistent with Council's CBD strategy public domain vision with regard to through site links and open space embellishment.*

## 6.2 APPENDIX B - SURVEY

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WINDOW/DOOR SCHEDULE		
No.	TOP RL	BOT RL
W1	98.56	97.42
D1	98.57	96.64
W2	98.67	97.72
W3	98.04	97.20
D2	98.62	96.67
W4	98.82	97.38
W5	99.22	98.29
W6	102.09	100.59
W8	99.24	97.65
W7	102.07	100.53
W8	99.27	97.64
W9	102.07	100.59
W10	99.26	97.58
W11	102.07	100.59
W12	99.26	97.84
W13	102.09	100.84
W14	99.23	97.84
W15	102.09	100.85
W16	102.10	100.60
D4	98.05	96.05
W17	99.28	97.85
W18	102.09	100.85
W19	99.28	97.86
W20	102.11	100.86
W21	99.28	97.87
W22	102.09	100.60
W23	99.81	98.37
W24	100.39	98.39
W25	100.39	98.38
W26	100.41	98.39
W27	100.40	98.38
D5	103.87	101.76
D6	106.57	104.45
D7	103.88	101.78
D8	106.58	104.52
D9	103.86	101.76
D10	106.55	104.50
W28	109.22	108.24
W29	109.14	108.16
W30	103.24	100.78
W31	103.86	102.88
W32	106.55	105.54
W33	103.24	100.72
W34	103.86	102.89
W35	106.55	105.54
D11	103.24	99.54
W36	103.86	102.83
W37	106.55	105.35
D12	103.24	99.54
D13	103.88	101.78
D14	106.56	104.45
D15	103.24	99.54
D16	103.88	101.78
D17	106.56	104.45
D18	103.26	100.28
D19	103.89	102.83
D20	106.55	105.61
D21	103.26	100.29
D22	103.88	101.82
D23	106.56	105.61
D24	103.26	100.28
D25	103.89	102.83
D26	106.55	105.61
D27	103.26	100.29
D28	103.88	101.82
D29	106.56	105.61

#### LEGEND

- B XX XX - Balcony RL XX XX
- BOL - Bollard
- BU XX XX - Balcony Underside RL XX XX
- BW - Brick Wall
- BRW - Brick Retaining Wall
- EPIL - Electrical Pillar
- FL - Floor Level
- G XX XX - Gutter RL XX XX
- GASM - Gas Meter
- HYD - Hydrant
- IL XX XX - Invert Level RL XX XX
- LP - Light Pole
- MPF - Metal Panel Fence
- MPKF - Metal Picket Fence
- P XX XX - Podium RL XX XX
- PU XX XX - Podium Underside RL XX XX
- PP - Power Pole
- R XX XX - Ridge/Roof RL XX XX
- S - Steps
- SI - Sign
- SIP - Sewer Inspection Point
- SL XX XX - Surface Level RL XX XX
- SMH - Sewer Manhole
- SSRW - Sandstone Retaining Wall
- STW - Stormwater
- SV - Stop Valve
- SVP - Sewer Vent Pipe
- TAP - Water Tap
- TPIL - Telecommunication Pillar
- TPIT - Telecommunication Pit
- TRW - Timber Retaining Wall
- TSBOX - Traffic Sign Box
- UCK - Upright Concrete Kerb
- UPIT - Unknown Pit
- WAT - Water Point
- WM - Water Meter
- Overhead Comms/Electricity Wires

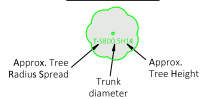
#### NOTES

- Do not scale from this plan.
- The purpose of this Detail Survey plan is to show detail and levels for planning and design. Do not use the information shown for any other purpose.
- Plan coordinates have been determined from ground real distances and are related to an MGA (GDA2020) grid point of origin. A scale factor must be applied to convert plan coordinates to true MGA (GDA2020) grid coordinates.
- Contours are an indication of the topography and should only be used for planning purposes. Spot levels only should be used for detailed design.
- A preliminary location of subject site boundaries has been made. Boundary dimensions and areas have been compiled from the current subject site Deposited Plan. If any work is to be undertaken on or adjacent to a boundary then a Boundary Survey is recommended to define the boundaries of the site.
- The relationship of built form and natural features to boundaries is diagrammatic and if critical should be confirmed by a Boundary Survey. Boundary setbacks (if shown) are approximate only.
- Building and feature descriptions are to be used for general identification purposes only and may require further investigation.
- No services search has been undertaken. Only those services visible at the time of survey have been located. It is recommended to contact Dial Before You Dig and the relevant service authority prior to commencement of any work.
- Only those windows visible and unobscured from within the subject property on the date of survey have been located.
- Tree information and canopy location is approximate (and not necessarily symmetrical) and if critical may require further assessment.
- The DWG format file for this plan is integral and contains additional plan information not able to be displayed in the PDF file.
- This drawing and the information it contains is copyright and remains the property of SurveyPlus Pty Ltd. It must not be copied, used or altered without the express authority of SurveyPlus.
- These notes and interests noted in the Certificate of Title form an integral part of this plan and must not be erased.

#### INTERESTS RELATING TO THE SUBJECT SITE:

- The Certificate of Title for SP57067 ordered on 18.02.2021 identified the following interests (refer to the original 888 Instrument or Dealing creating the interest for specific terms we recommend this be undertaken prior to design or construction):
- Reservations and conditions in the crown grants (Not Investigated).
- 861387 Covenant - (Denoted A) in this plan.
- 861388 Covenant - (Not shown remote to survey site).
- 861389 Covenant - (Denoted B) in this plan.
- 861390 Covenant for severance purposes 1.22 wide & variable affecting the part shown so burdened in the Title diagram - (Denoted B) in this plan.
- 861391 Right of carriageway appurtenant to the land above described affecting the land shown so burdened in DP861346 - (Denoted C) in this plan.
- 861346 Easement for drainage of water variable width limited in height to RL 100.35 (AHD) affecting the part shown so burdened in DP861346 - (Denoted D) in this plan.
- 861346 Easement for drainage of water 3.0 wide affecting the part shown so burdened in the Title diagram - (Denoted E) in this plan.
- 861346 Easement for carparking 2.5 wide affecting the part shown so burdened in the Title diagram - (Denoted G) in this plan.
- 861346 Right of footway 2.0 wide affecting the part shown so burdened in the Title diagram - (Denoted H) in this plan.
- 861346 Easement for carparking 1.1 wide affecting the part shown so burdened in the Title diagram - (Denoted I) in this plan.
- 861346 Easement for carparking 5.4 wide affecting the part shown so burdened in the Title diagram - (Denoted K) in this plan.
- 861346 Right of carriageway 3.5 & 5.4 wide & variable width affecting the part shown so burdened in the Title diagram - (Denoted L) in this plan.
- 861346 Easement for support 1.5 wide affecting the part shown so burdened in the Title diagram - (Denoted M) in this plan.
- 861346 Easement for signage variable width affecting the part shown so burdened in the Title diagram - (Denoted N) in this plan.
- 861346 Restriction on the use of land - (Not Investigated).
- 861755 Right of footway 1.5 wide appurtenant to the land above described affecting the land shown so burdened in DP268643 - (Denoted O) in this plan.
- DP268846 Easement for drainage of water variable width limited in height to RL 100.35 (AHD) affecting the part(s) shown so burdened in DP268846 - (Denoted P) in this plan.
- DP268846 Easement for drainage of water 2.0 wide affecting the part(s) shown so burdened in DP268846 - (Denoted Q) in this plan.
- DP268846 Easement for drainage of water 3.0 wide appurtenant to the land above described - (Denoted R) in this plan.
- DP268846 Easement for drainage of water variable width limited in height to RL 98.2 (AHD) affecting the part shown so burdened in DP268846 - (Denoted S) in this plan.
- DP268846 Positive Covenant - (Not Investigated).
- AP604262 Consolidation of registered by-laws - (Not Investigated).

#### TREE DIAGRAM



0m 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m 11m 12m 13m 14m 15m 16m 17m 18m 19m 20m

SCALE 1:200 @A1



CLIENT  
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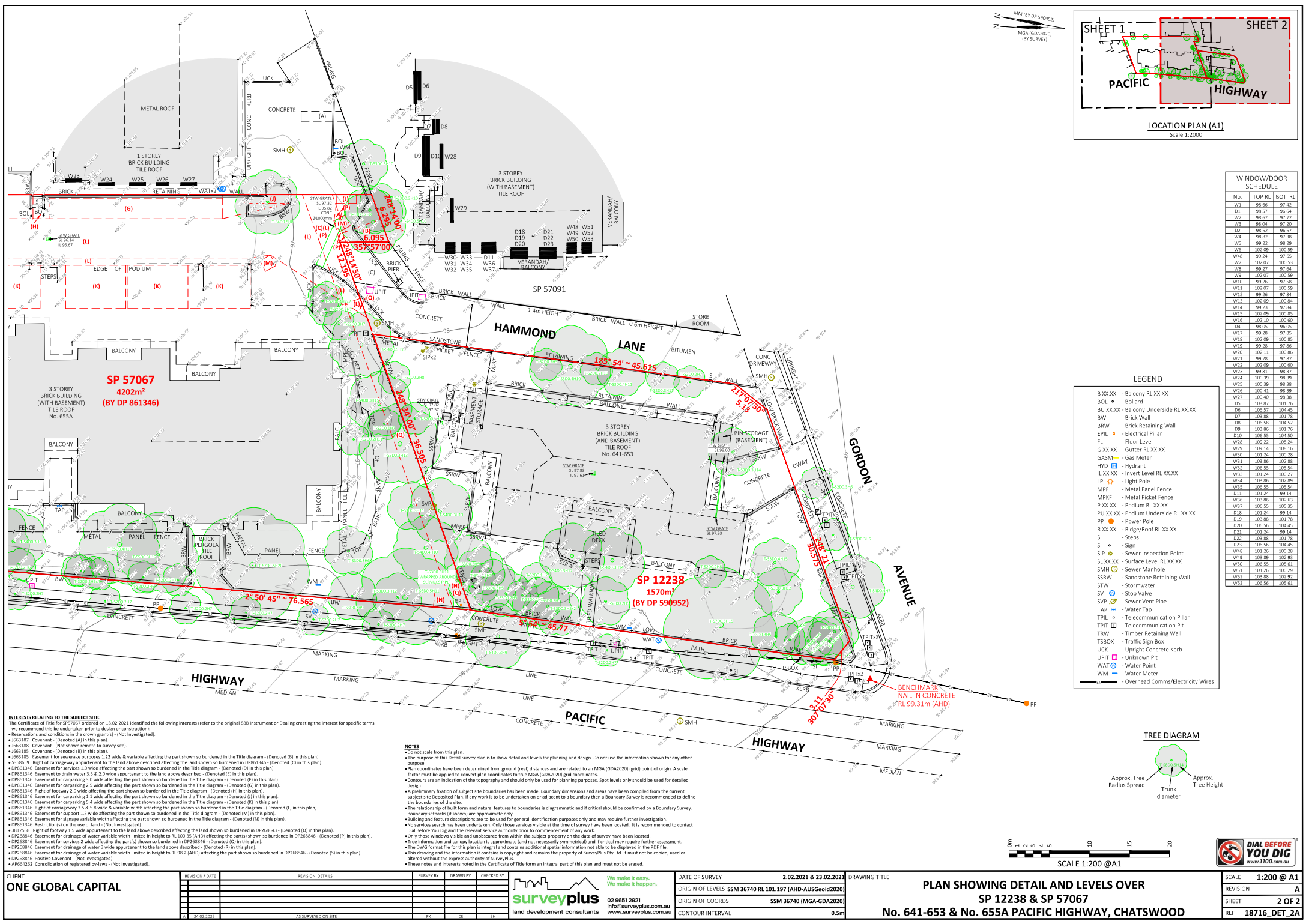
DATE OF SURVEY	2.02.2021 & 23.02.2021
ORIGIN OF LEVELS	SSM 36740 RL 101.197 (AHD-AUSGeoid2020)
ORIGIN OF COORDS	SSM 36740 (MGA-GDA2020)
CONTOUR INTERVAL	0.5m

DRAWING TITLE

**PLAN SHOWING DETAIL AND LEVELS OVER  
SP 12238 & SP 57067  
No. 641-653 & No. 655A PACIFIC HIGHWAY, CHATSWOOD**

SCALE	1:200 @A1
REVISION	A
SHEET	1 OF 2
REF	18716_DET_2A





## 6.3 APPENDIX C – ARCHITECTURAL PLANS

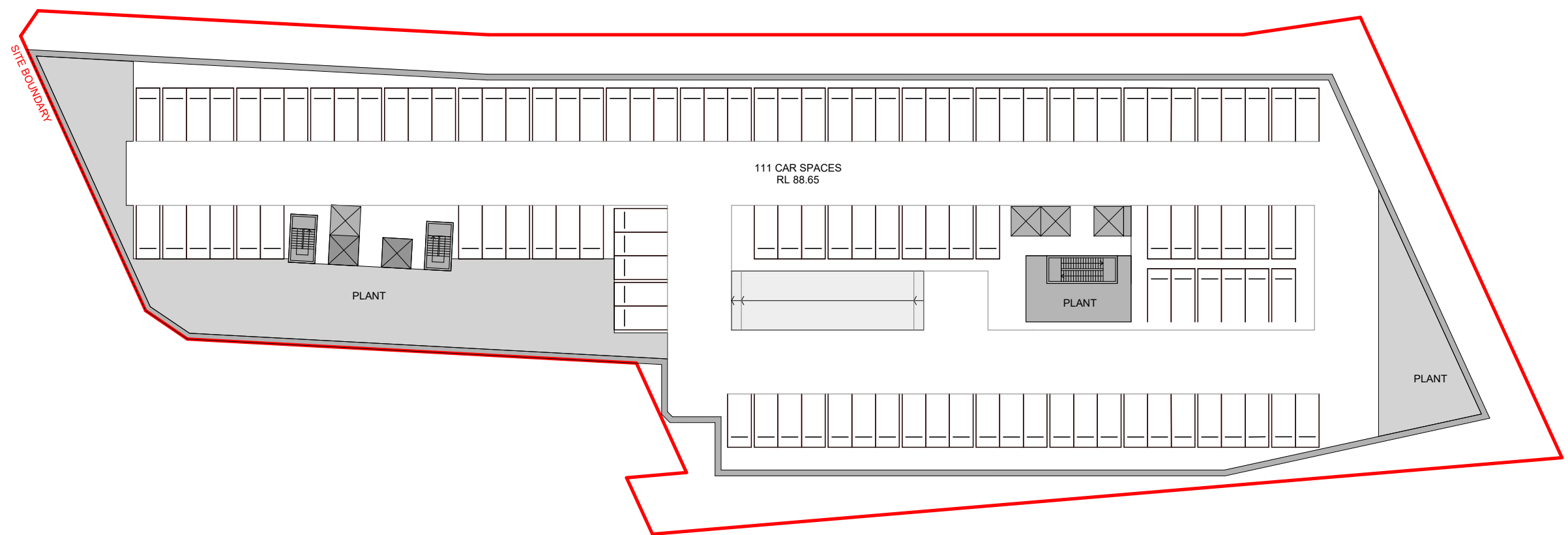
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Tower 1		
Level	Non Residential GFA	Residential GFA
Ground	1458	170
Level 1	918	41
Level 2	953	
Level 3 to 24		15224
Level 25		148
Total	3329	15583

Total Non Residential GFA	5,772
Total Residential GFA	28,860

Tower 2		
Level	Non Residential GFA	Residential GFA
Ground	840	125
Level 1	776	47
Level 2	827	
Level 3 to 24		12958
Level 25		147
Total	2443	13277

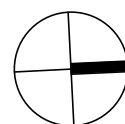
Car Parking	
Level	Car Parking Spaces
B1	88
B2	111
B3	111
Total	310



641 & 655A Pacific Highway,  
Chatswood

Drawing:  
Drawing no:  
Issue:  
Scale @ A3:  
Date:

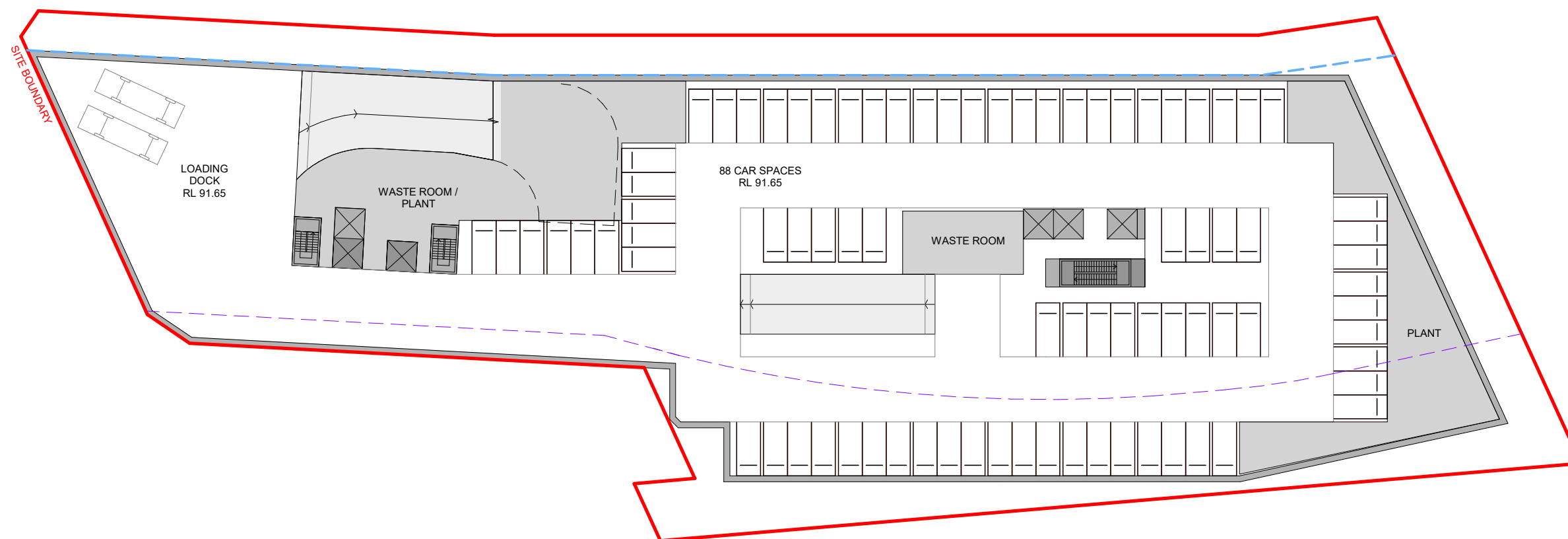
**Basement 2 & 3 Plan**  
**A08**  
**B**  
**1 : 500**  
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0 2.5 5 7.5 10 12.5 25  
m

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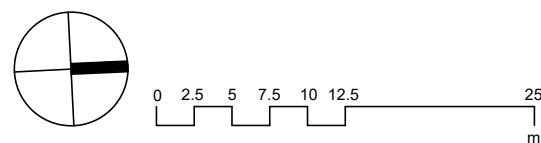
**architectus™**



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Chatswood

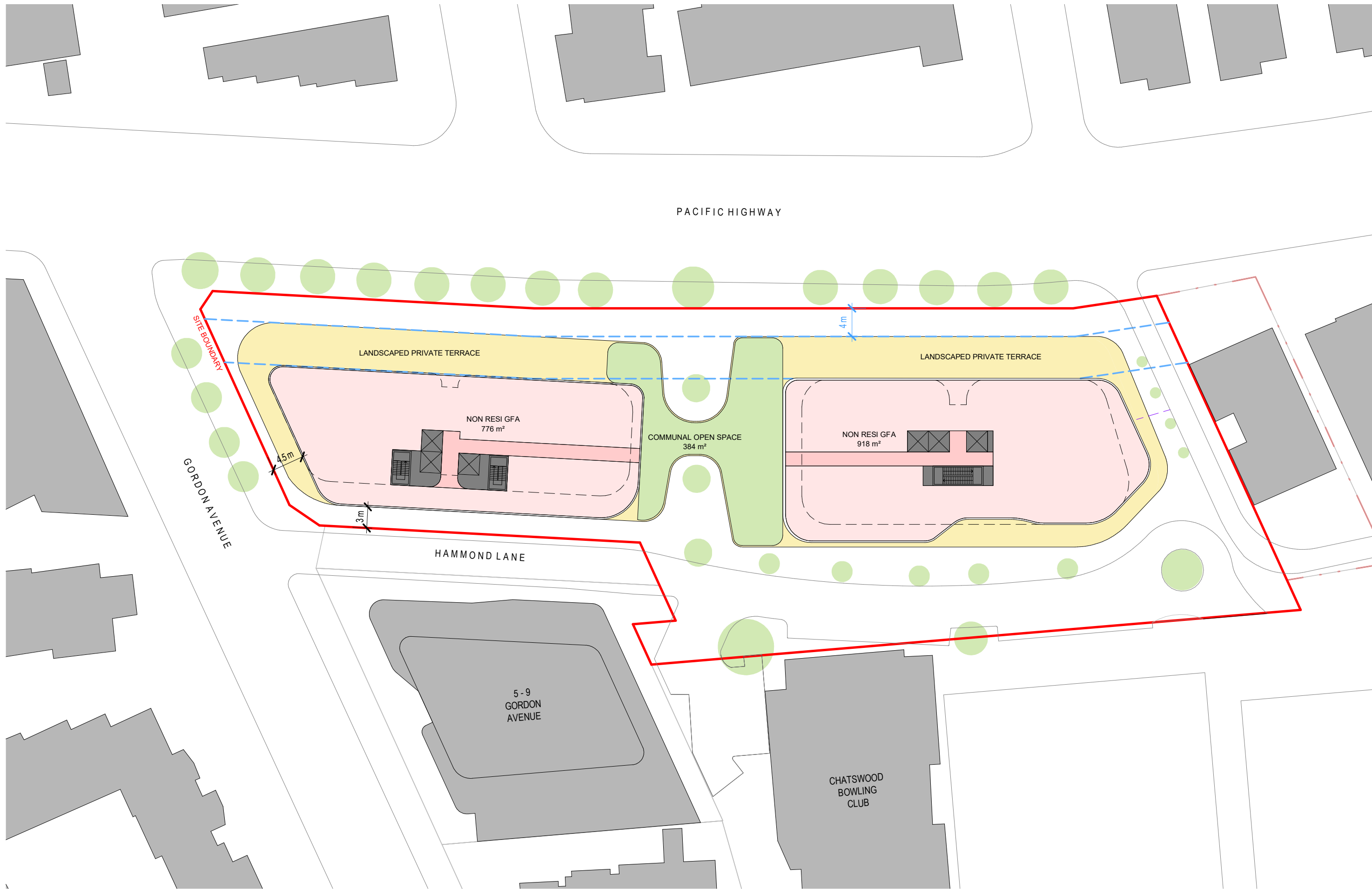
Drawing:  
Drawing no:  
Issue:  
Scale @ A3:  
Date:

**Basement 1 Plan**  
**A09**  
**B**  
**1 : 500**  
**07/09/23**



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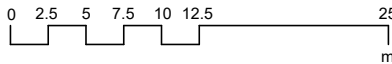
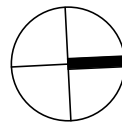
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Chatswood

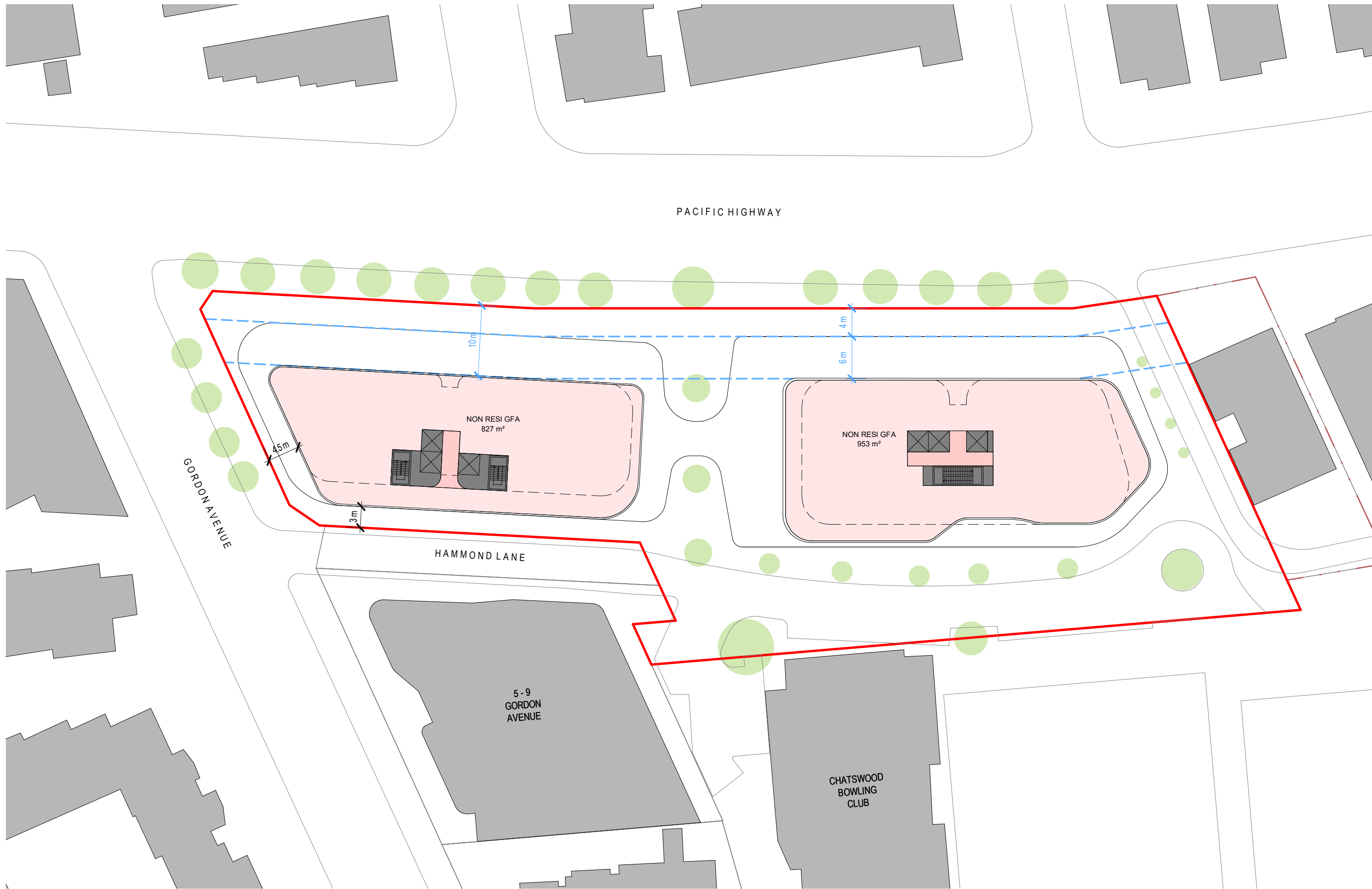
Drawing:  
Drawing no:  
Issue:  
Scale @ A3:  
Date:

**Level 1 Plan**  
**A11**  
**B**  
**1 : 500**  
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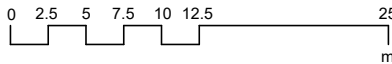
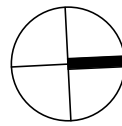
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Chatswood

Drawing:  
Drawing no:  
Issue:  
Scale @ A3:  
Date:

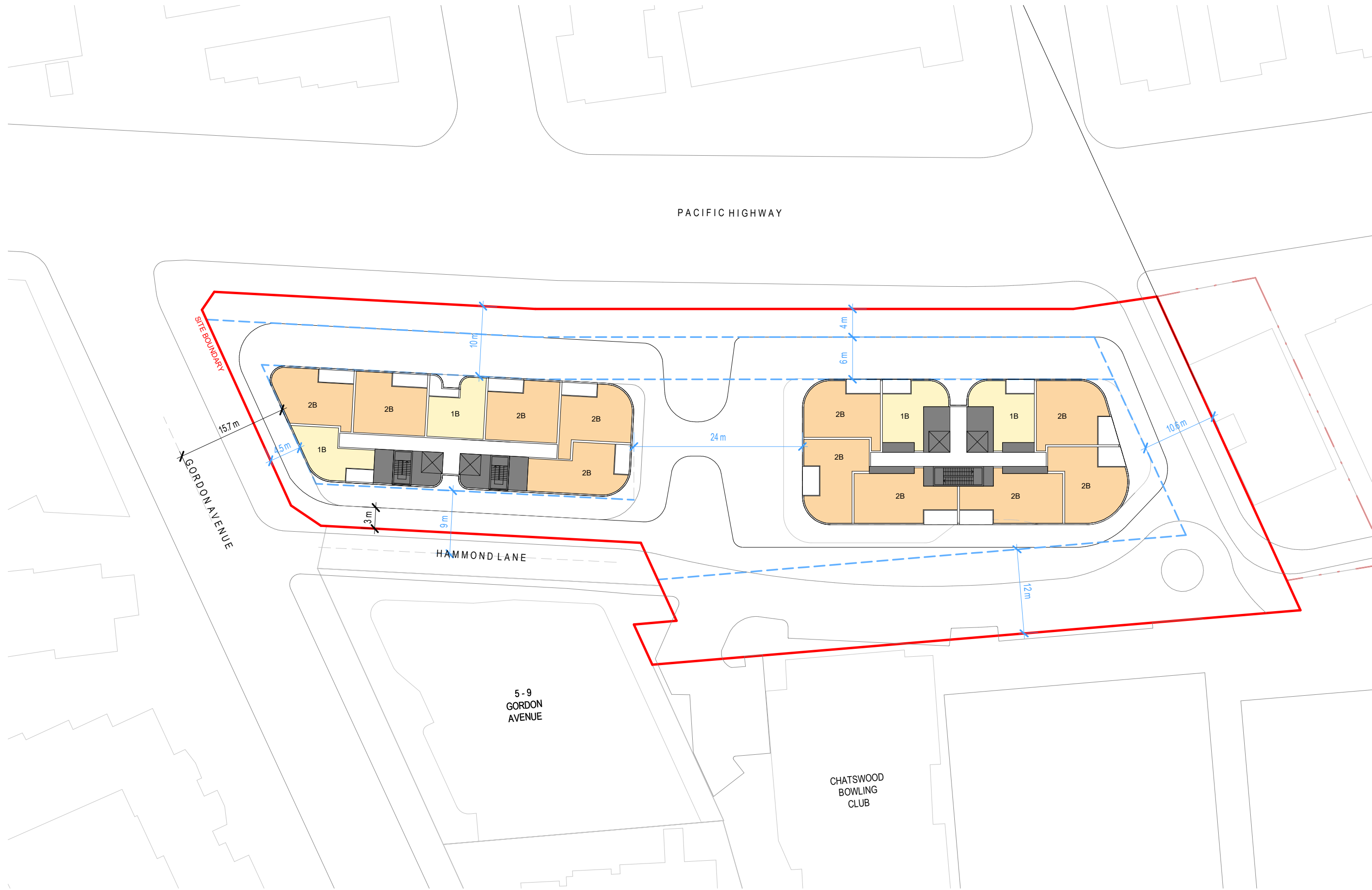
**Level 2 Plan**  
**A12**  
**B**  
**1 : 500**  
**07/09/23**



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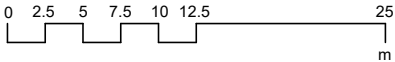
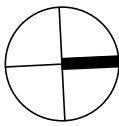




641 & 655A Pacific Highway,  
Chatswood

Drawing:  
Drawing no:  
Issue:  
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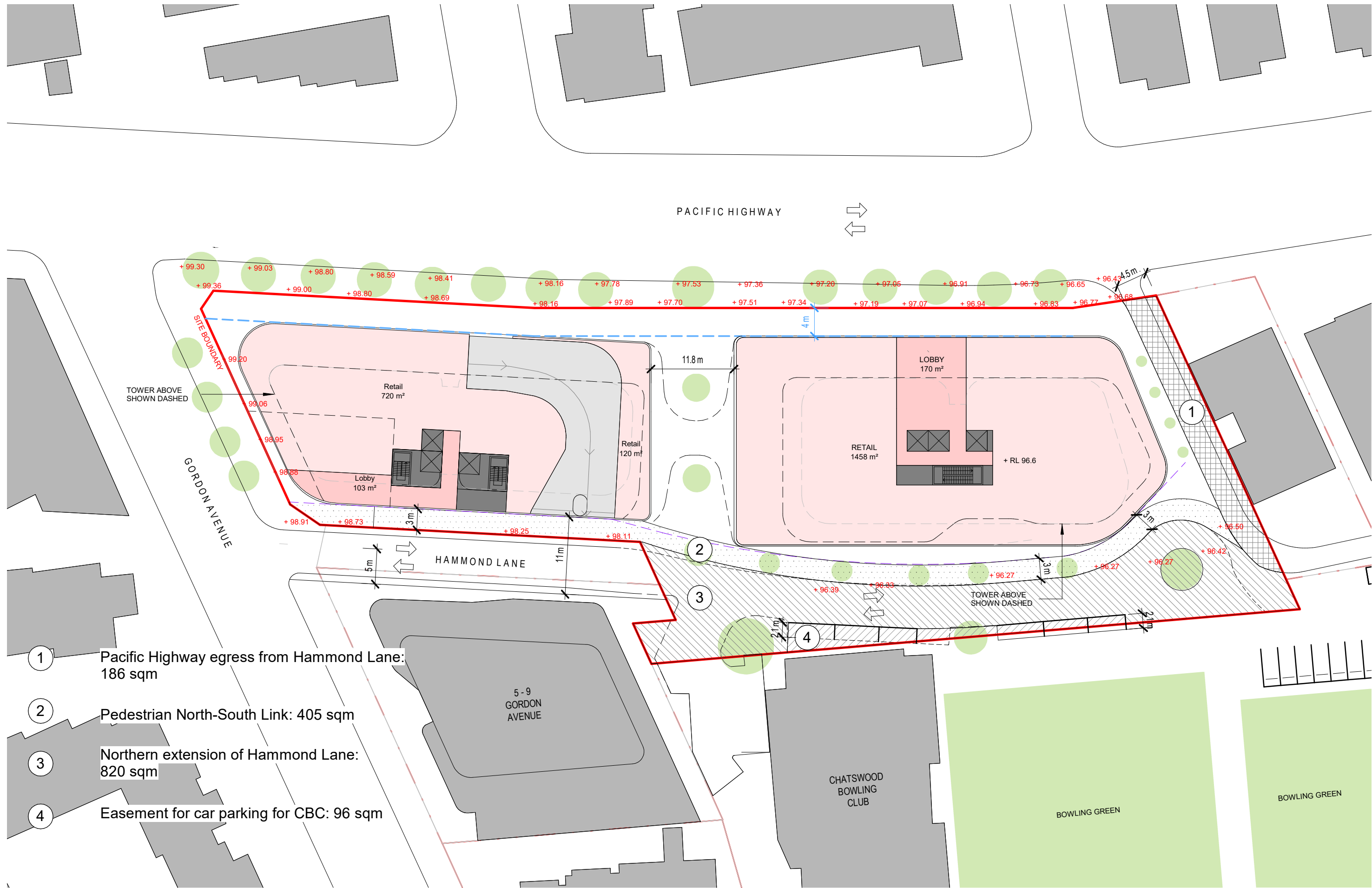
**Typical Tower Plan**  
**A13**  
**B**  
**1 : 500**  
**07/09/23**



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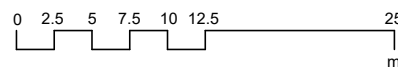
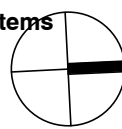




641 & 655A Pacific Highway,  
Chatswood

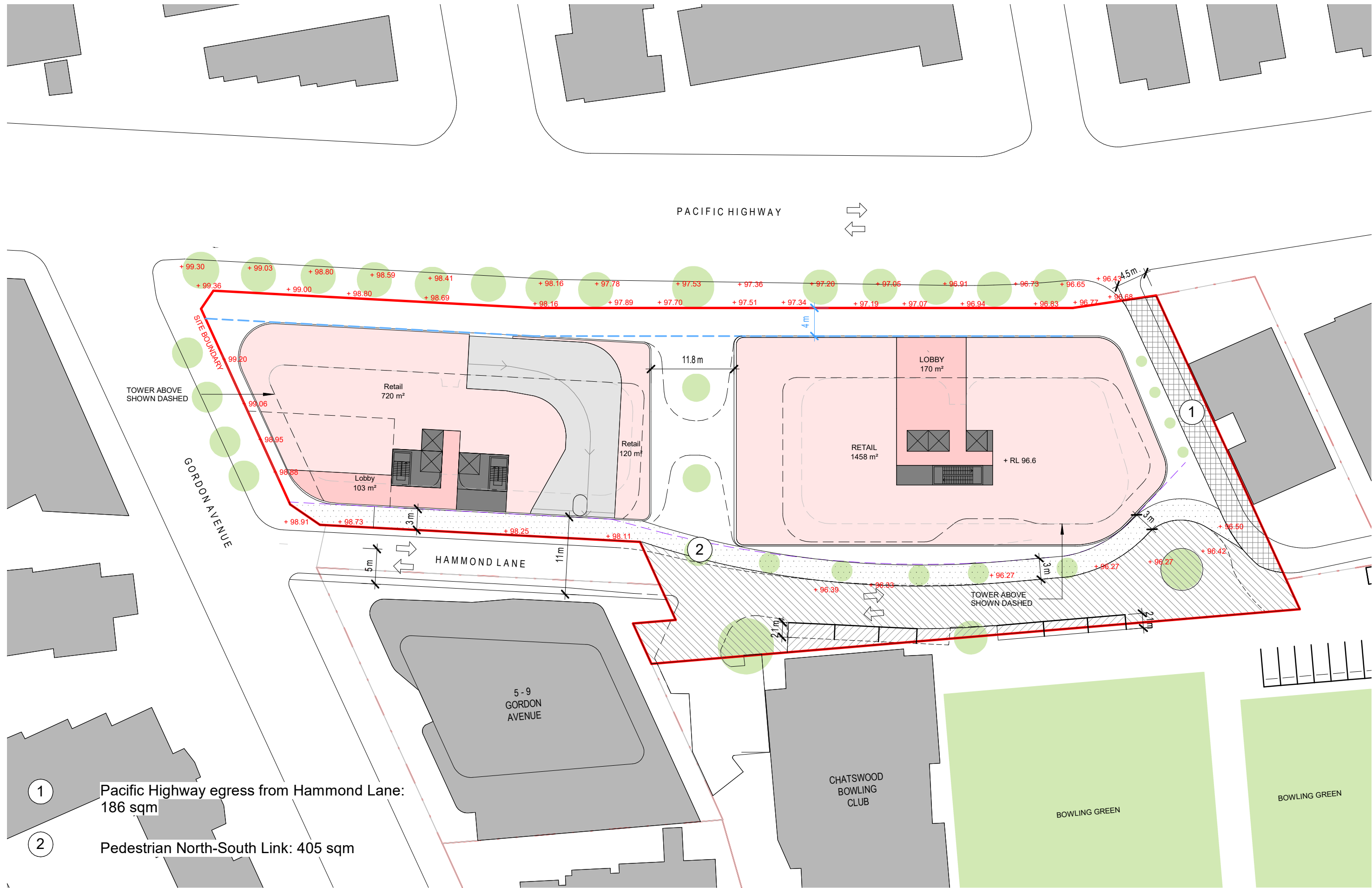
Drawing:  
Drawing no:  
Issue:  
Scale @ A3:  
Date:

Ground floor plan of Schedule 1 items  
A21  
B  
1 : 500  
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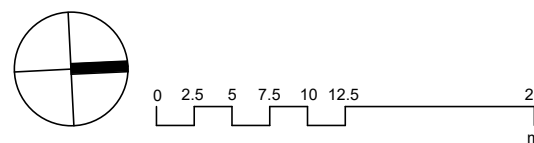


641 & 655A Pacific Highway,  
Chatswood

Drawing:  
Drawing no:  
Issue:  
Scale @ A3:  
Date:

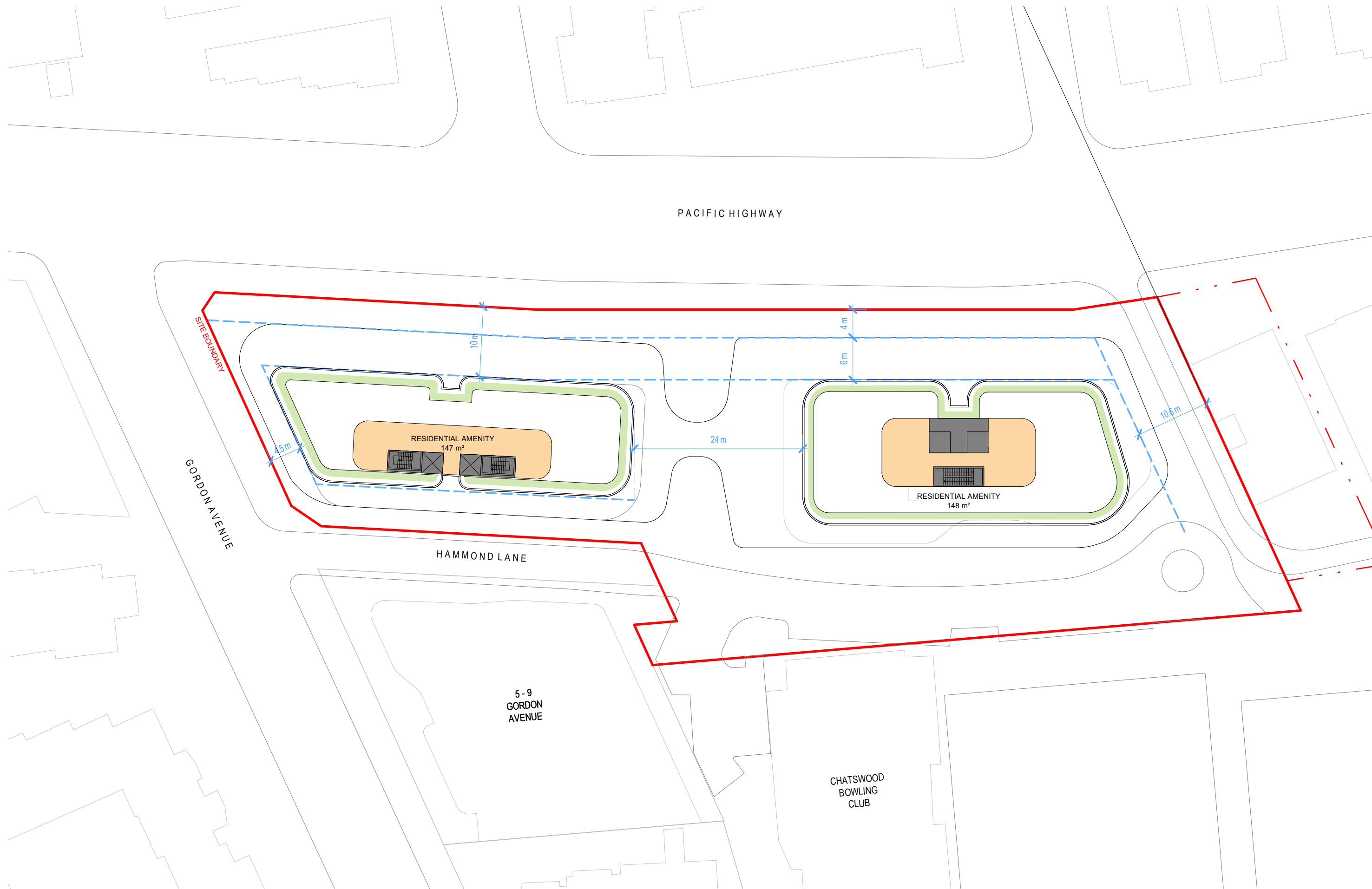
**Annexure B plan  
A22**

**1 : 500  
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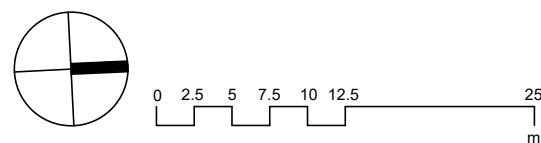
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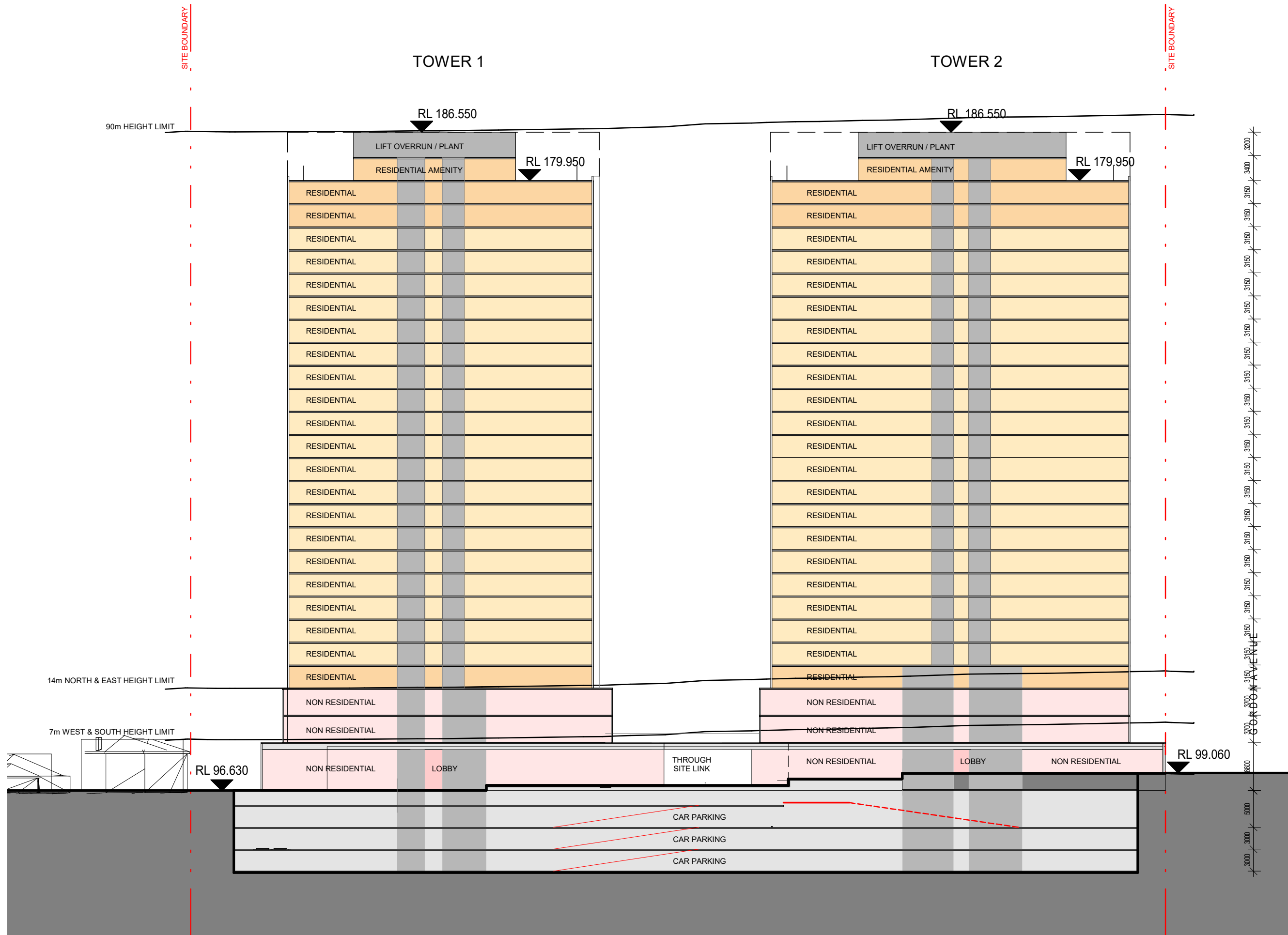
Drawing:  
Drawing no:  
Issue:  
Scale @ A3:  
Date:

**Level 25 Plan**  
**A35**  
**B**  
**1 : 500**  
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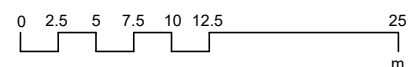


Roof	-	RL186.550
Level 26	-	RL183.350
Level 25	-	RL179.950
Level 24	-	RL176.800
Level 23	-	RL173.650
Level 22	-	RL170.500
Level 21	-	RL167.350
Level 20	-	RL164.200
Level 19	-	RL161.050
Level 18	-	RL157.900
Level 17	-	RL154.750
Level 16	-	RL151.600
Level 15	-	RL148.450
Level 14	-	RL145.300
Level 13	-	RL142.150
Level 12	-	RL139.000
area schedule	-	RL135.850
Level 10	-	RL132.700
Level 09	-	RL129.550
Level 08	-	RL126.400
Level 07	-	RL123.250
Level 06	-	RL120.100
Level 05	-	RL116.950
Level 04	-	RL113.800
Level 03	-	RL110.650
Level 02	-	RL106.950
Level 01	-	RL103.250
Upper Ground	-	RL98.300
Ground	-	RL96.650
Mezzanine	-	RL94.650
Basement 01	-	RL91.650
Basement 02	-	RL88.650
Basement 03	-	RL85.650

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Chatswood

Drawing:  
Drawing no:  
Issue:  
Scale @ A3:  
Date:

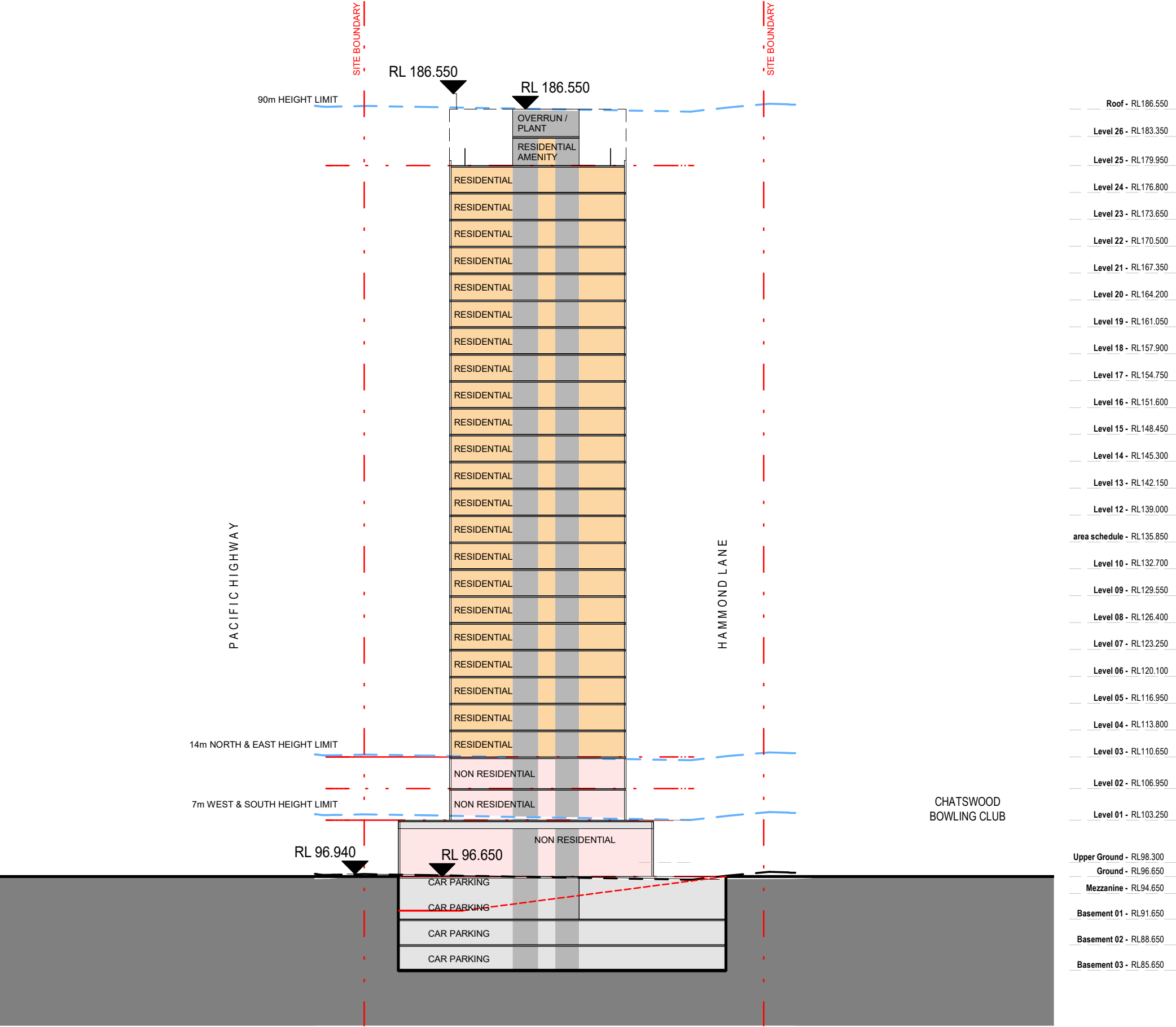
North - South Section  
A40  
B  
1 : 500  
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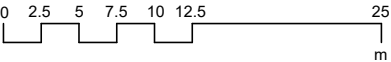




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Chatswood

Drawing:  
Drawing no:  
Issue:  
Scale @ A3:  
Date:

**Tower 1 Section**  
**A41**  
**B**  
**1 : 500**  
**07/09/23**

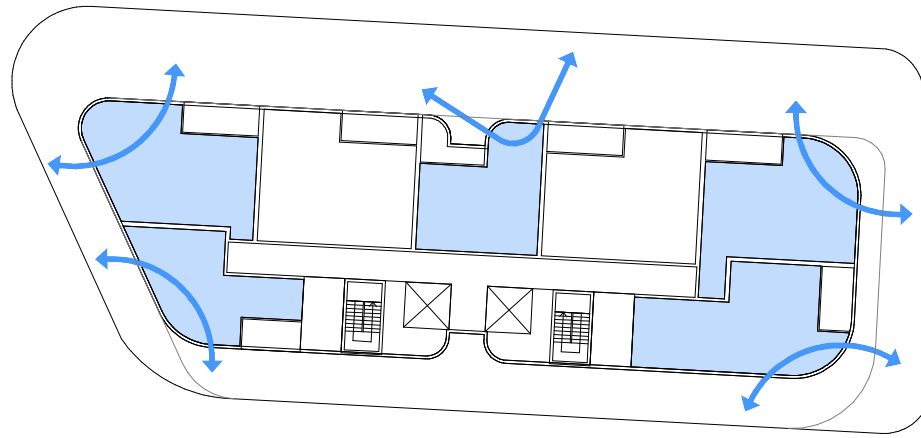


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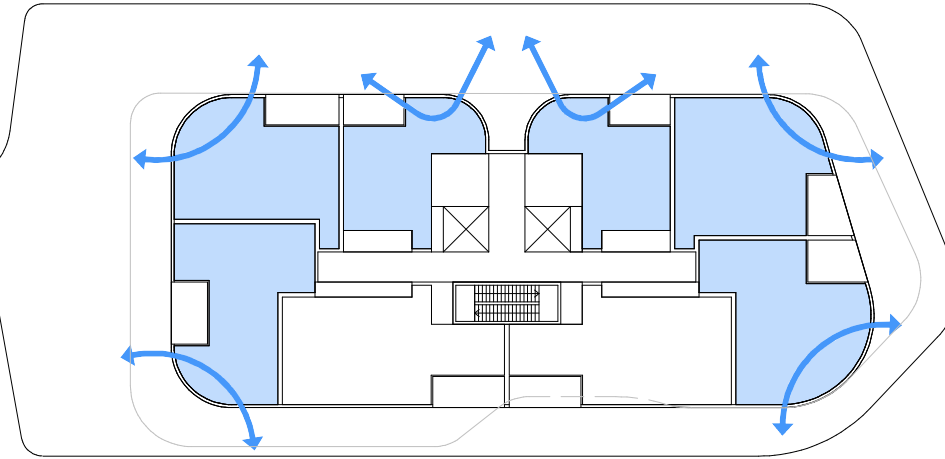
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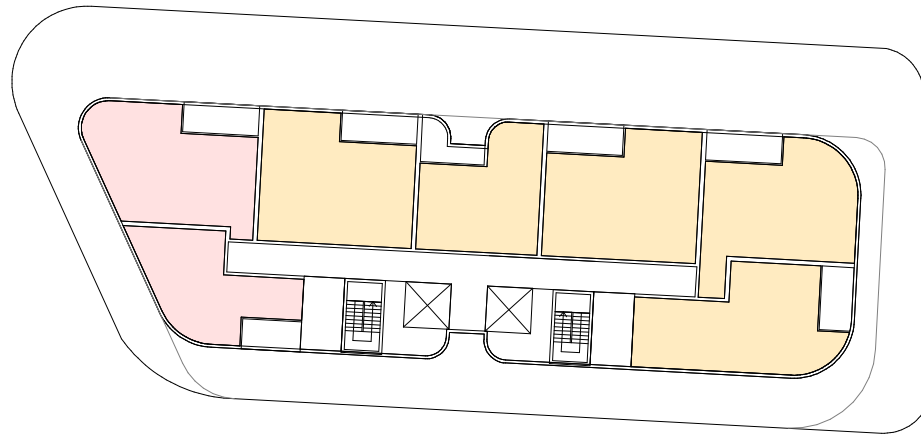




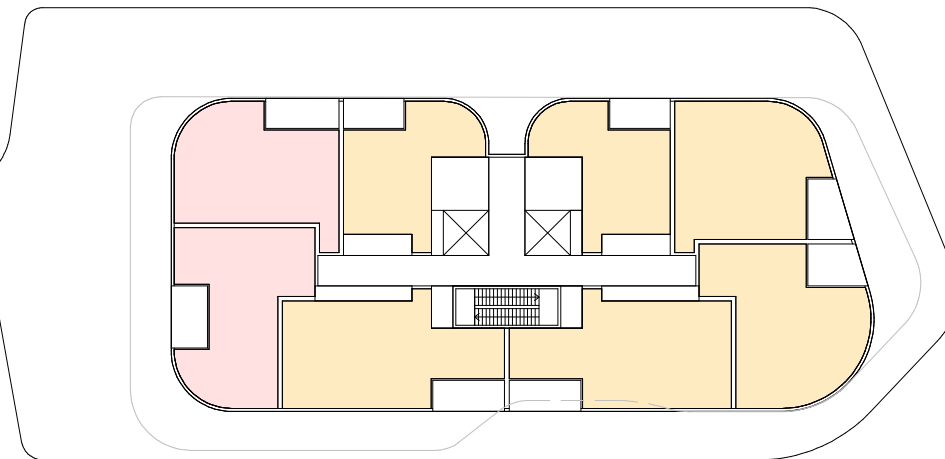
**TOWER 2**  
CROSS VENTILATION: 71% (5 / 7)



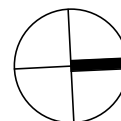
**TOWER 1**  
CROSS VENTILATION: 75% (6 / 8)

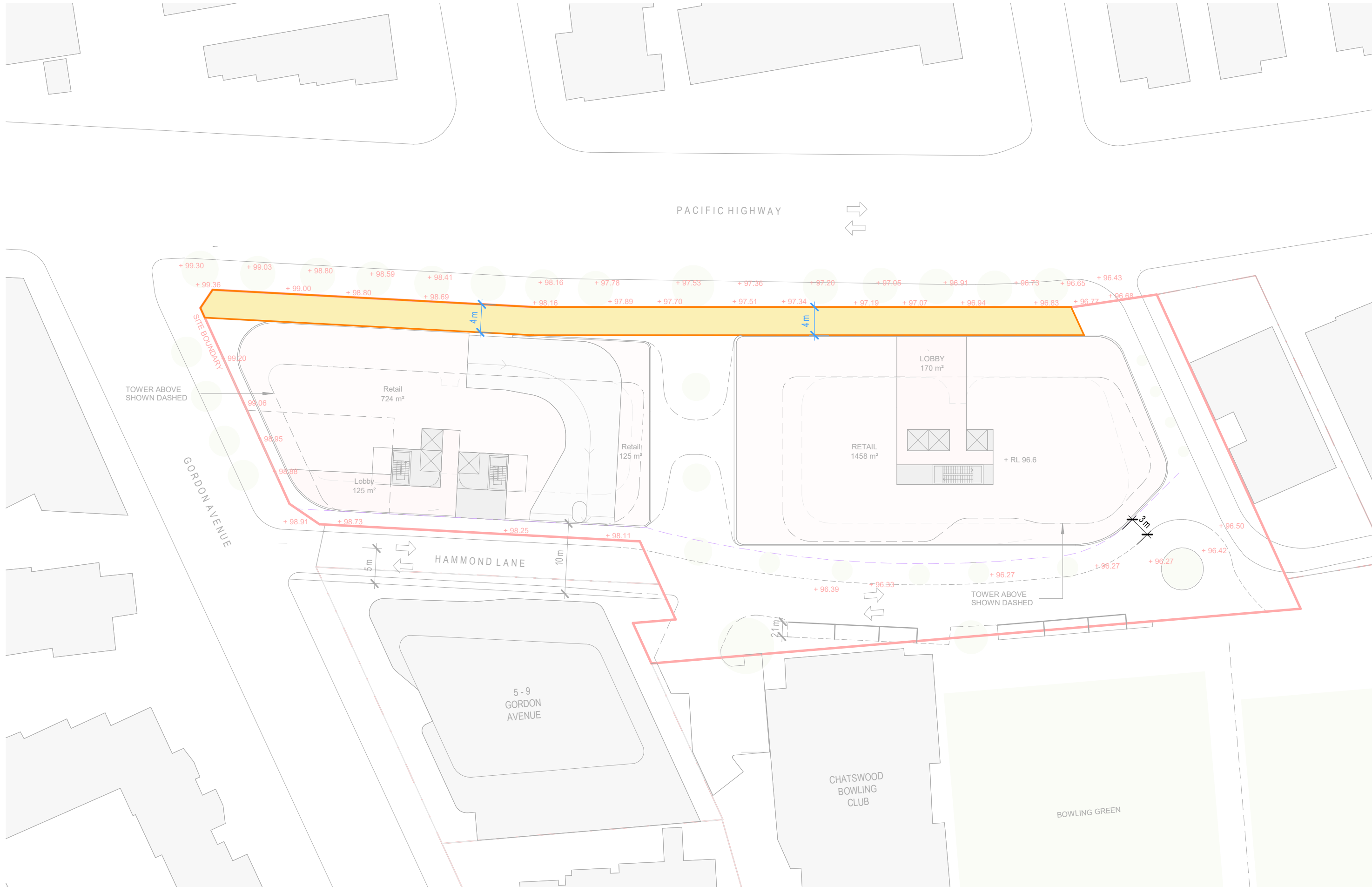


**TOWER 2**  
2 HR SOLAR ACCESS: 71% (5 / 7)  
LESS THAN 2 HR SOLAR ACCESS: 29% (2 / 7)



**TOWER 1**  
2 HR SOLAR ACCESS: 75% (6 / 8)  
LESS THAN 2 HR SOLAR ACCESS: 25% (2 / 8)

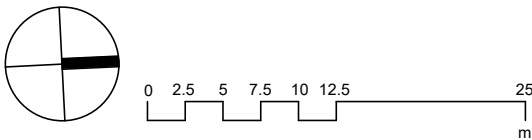




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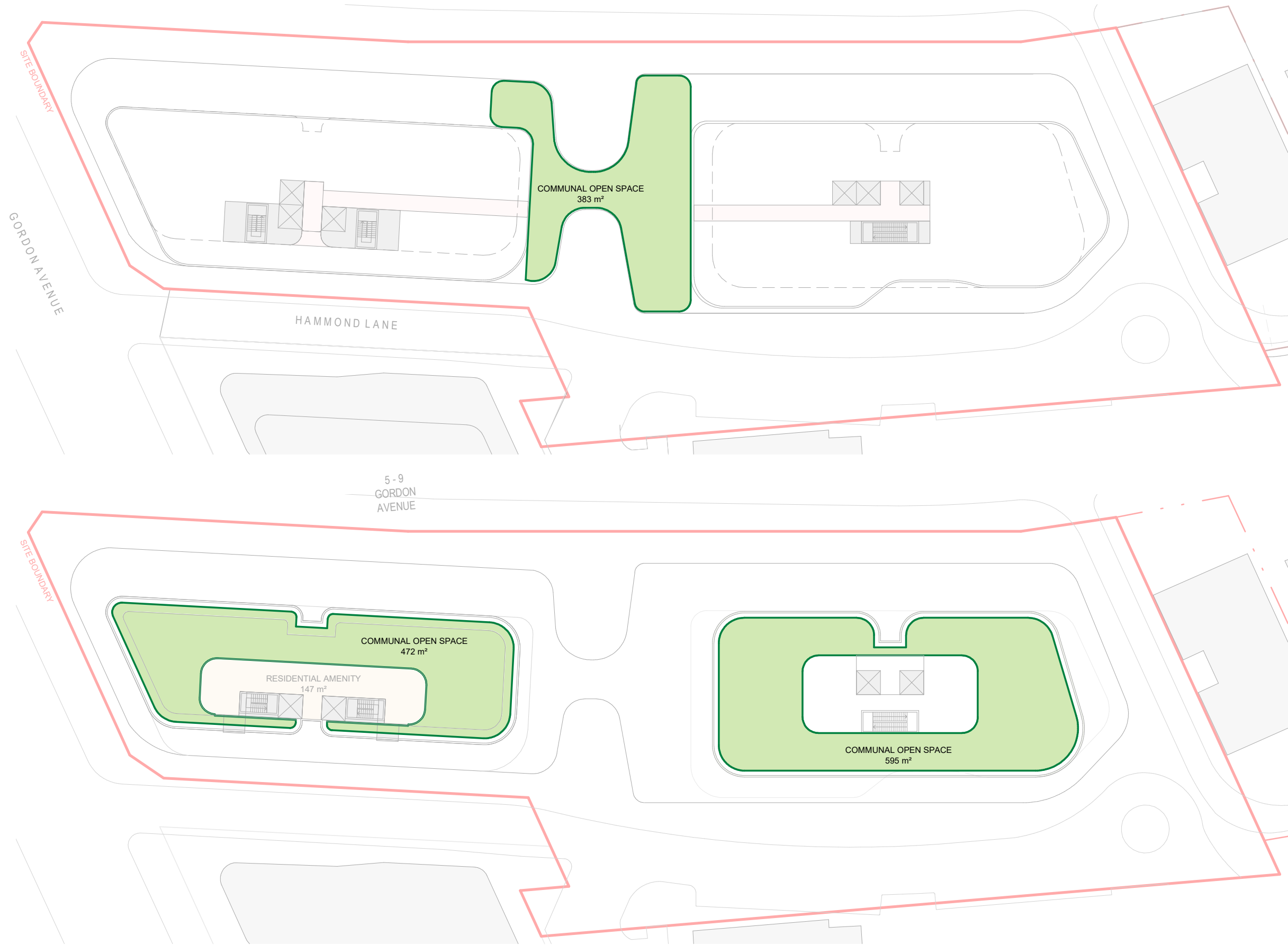
Drawing:  
Drawing no:  
Issue:  
Scale @ A3:  
Date:

**Deep Soil**  
**A51**  
**B**  
**1 : 500**  
**07/09/23**



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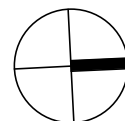
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Drawing:  
Drawing no:  
Issue:  
Scale @ A3:  
Date:

**Communal Open Space**  
**A52**  
**B**  
**1 : 500**  
**07/09/23**



**COMMUNAL OPEN SPACE: 25.16% SITE AREA**  
**LEVEL 1: 386 m²**  
**ROOF: 1067 m²**  
**TOTAL : 1453 m²**

**SITE AREA: 5774 m²**

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## 6.4 APPENDIX D – FLOOD MAPS

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1% AEP Flood Depth  
Existing Scenario








 Site Boundary


Flood Hazard

 H1 - Generally safe for people, vehicles and buildings.

 H2 - Unsafe for small vehicles.


 H3 - Unsafe for vehicles, children and the elderly.

 H4 - Unsafe for people and vehicles.

 H5 - Unsafe for vehicles and people.

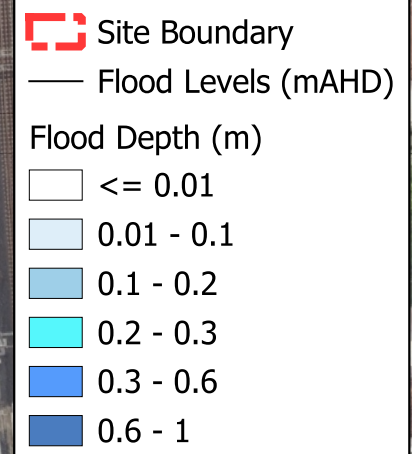
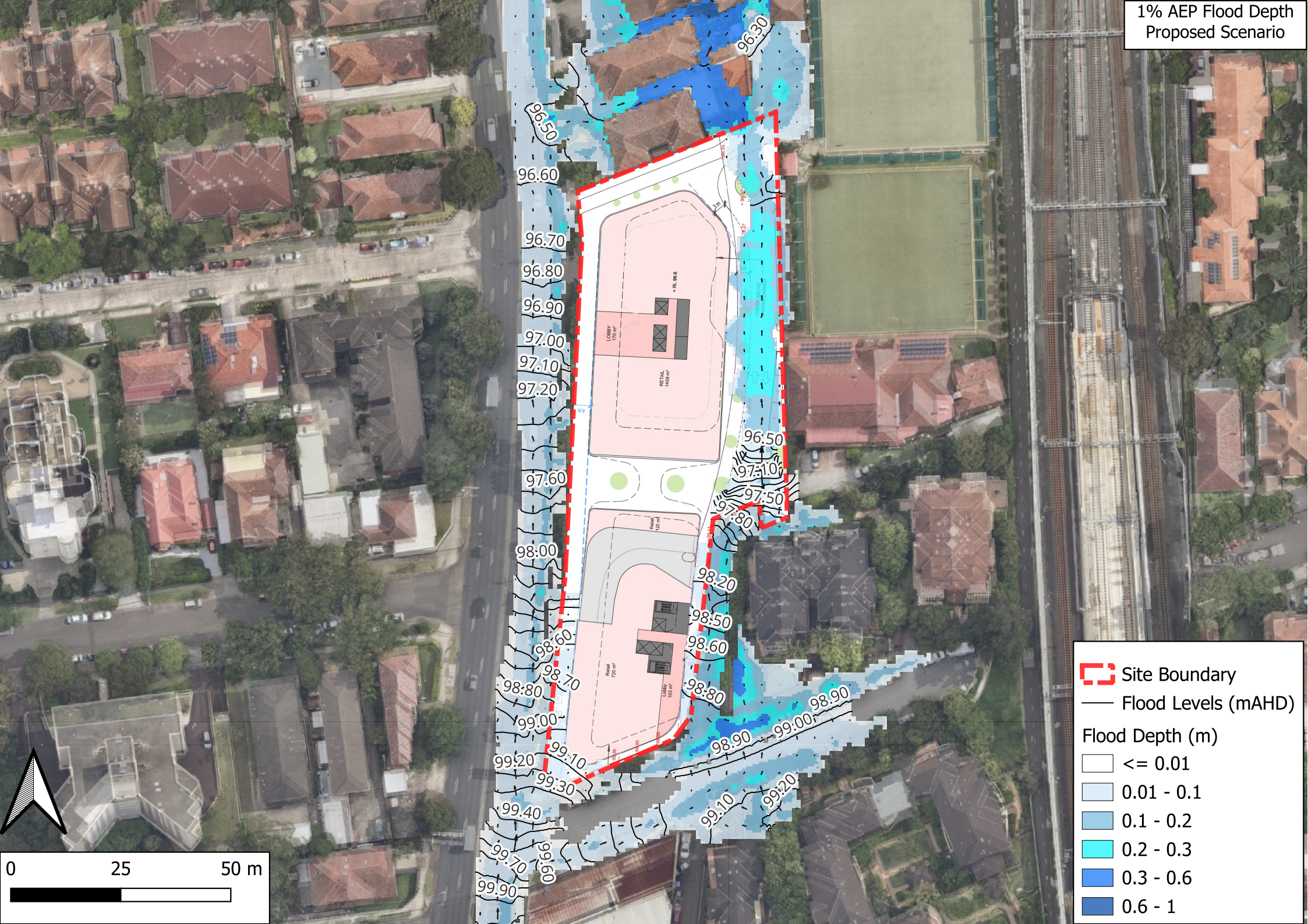
All buildings vulnerable to structural damage.

Some less robust building types vulnerable to failure.

 H6 - Unsafe for vehicles and people.

All building types considered vulnerable to failure.















 Site Boundary

#### Flood Hazard

-  H1 - Generally safe for people, vehicles and buildings.
-  H2 - Unsafe for small vehicles.
-  H3 - Unsafe for vehicles, children and the elderly.
-  H4 - Unsafe for people and vehicles.
-  H5 - Unsafe for vehicles and people.  
All buildings vulnerable to structural damage.  
Some less robust building types vulnerable to failure.
-  H6 - Unsafe for vehicles and people.  
All building types considered vulnerable to failure.



