

Flood Impact and Risk Assessment

**State Significant Development Application
SSD-72891212**

**57-61 Archer Street and
34 Bertram Street, Chatswood**

Chatswood Property Co. Pty Ltd

29/08/2025

24-1218

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1. Introduction

1.1. Overview

This report has been prepared to accompany a detailed State Significant Development (SSD) development application (DA) for a proposed mixed use infill affordable housing development at 57-61 Archer St & 34 Albert Ave, Chatswood ([SSD-72891212](#)).

The Minister for Planning and Public Spaces, or their delegate, is the consent authority for the SSDA and this application is lodged with the NSW Department of Planning, housing and Infrastructure (NSW DPHI) for assessment.

This report has been prepared in response to the requirements contained within the Conservation Programs, Heritage and Regulation (CPHR) advice on the Environmental Impact Statement (EIS) for SSD-72891212, dated 7 February 2025. In this report, CPHR comments based on reviewing the AT&L Flood Impact and Risk Assessment report (REP001-02-24-1218) have been addressed within **Table 1**.

Table 1: CPHR Advice and AT&L Response

Issue and Assessment Requirement	Recommendation/Action	Section of this report which responds to the SEAR
<i>The FIRA in section 3.1 indicates that separate hydrology and hydraulic models were used however in section 3.4.2.1 states that Rainfall on Grid was used.</i>	<i>Clarify the method used in the model.</i>	TUFLOW direct rainfall model was used for the flood assessment. An assessment of critical duration and temporal pattern was undertaken using DRAINS. Refer to Section 3 Hydrology and Hydraulic modelling approach.
<i>The FIRA provides an Intensity-Frequency-Duration (IFD) download from Australian Rainfall and Runoff 2019 (ARR2019) however it does not indicate if multiple temporal patterns were used.</i>	<i>Clarify if multiple temporal patterns were used in accordance with ARR recommendations. Multiple temporal patterns are generally required unless justification is provided.</i>	This Flood Impact and Risk Assessment (FIRA) has been prepared in accordance with the latest 2019 ARR rainfall guidelines. Refer to section 3.3 for further details.
<i>The FIRA did not include piped drainage for the modelling. The site location has significant council drainage and inter-allotment drainage. Excluding this pipework overestimates water depths and does not place water in easements in the correct locations.</i>	<i>Include stormwater drainage with appropriate pit and pipe blockage factors in model in accordance with ARR recommendations and Willoughby City Council guidelines.</i>	Site and Council stormwater network have been included in the flood model with 50% blockage according to Council blockage requirements.
<i>The IFDs used underestimate current condition flows and should be updated in accordance with latest ARR guidance regarding existing climate change.</i>	<i>Consider scale up of IFD results.</i>	The IFD information was taken from BOM. This IFD information was scaled up to include the SSP2-4.5 in 2030.
<i>The provided model indicates unacceptable offsite impacts in the 1% AEP event. Impacts of 300 to 700 mm increase in depth are shown on properties served by the easement together with a change</i>	<i>Modify design and demonstrate that offsite impacts are mitigated to 10 mm or less for the 1% AEP.</i>	Additional scenarios were tested, refer to manage the potential for flood impacts. Refer to Section 3.4.2.2.

<i>of hazard from H1/H2 to H3. There are also significant offsite areas shown on the afflux map which were dry and are now wet.</i>		
<i>Probable maximum flood (PMF) afflux mapping is not provided.</i>	<i>Provide PMF afflux mapping.</i>	To be considered in future reporting.
<i>The method of protection of the proposed multistorey basement is unclear. It is also not clear if all service entries/ducts are above the PMF.</i>	<i>Clarify protection of the basement.</i>	A flood barrier will be required to be included in future design stages. A proposed flood barrier as a fully blocked obstruction at the driveway on Bertram Street is proposed to protect the basement from the flood water getting into the basement in flood events.
<i>The plans show increase in H5 flooding to the rear of the heritage building which is being retained. It is likely that this will cause damage to this structure, and it is not clear how water from the easement will be prevented from impacting the heritage building. It is also unclear how public safety in the high hazard pedestrian area is achieved.</i>	<i>Provide an amended design which protects the heritage building and pedestrian areas from H5 flooding.</i>	Additional scenarios were tested, refer to manage the potential for flood impacts. Refer to Section 3.4.2.2. Note this is a small area with shallow depths of flooding, so minimal structural loading. As much or the area will be paved, the potential for scour will also be minimal.

Following this, a subsequent round of comments was received from CPHR. These are documented in Table 2.

Table 2: Additional CPHR Advice and AT&L Response

Issue and Assessment Requirement	Recommendation/Action	Section of this report which responds to the SEAR
<i>IFDs have been upscaled to current conditions only. No future climate change has been included. A development of this scale would generally apply future climate change to provide some resilience over the life span of the building. The upscale to 2030 is adequate to assess current risks however the upscaled results have not been used to prepare afflux maps. The upscaled results reflect current rainfall conditions and should not be labelled climate change. Flood afflux maps should be prepared using the 2030 values.</i>	<i>Prior to determination apply the 2030 results to generate the afflux maps and relabel the maps as current condition.</i>	Modelling has been undertaken with and without climate change/ the results reported in Section 4, with mapping provided in Appendix F.
<i>Probable Maximum Flood (PMF) afflux mapping has not been provided however the maps provided indicate that a change in the extent of H3 hazard on several sites to the south site occurs</i>	<i>Provide PMF afflux mapping.</i>	Additional discussion on change in flood hazard during the PMF provided (refer Section 4), afflux mapping is included in Appendix F.

<i>because of the development. This is not considered to be adequate.</i>		
<i>The FIRA indicates that the extent of H5 flooding around the heritage building is minor and that paving will protect surfaces. The FIRA does not provide the finished floor level of the heritage building and flood contours indicate that flood levels increase in this area.</i>	<i>Provide an amended design which protects the heritage building and pedestrian areas from H5 flooding.</i>	Additional discussion on change in flood hazard during the PMF provided (refer Section 4)
<i>The high hazard pedestrian areas have not been commented upon in the report. CPHR notes that the building is modelled as a blocked element however it is likely that the increase in flood level may result in entry of water into the heritage building..</i>		
<i>The SSD appears to rely on development occurring as part of an SSD on 51-55 Archer Street (SSD-75116211). Each development must be able to mitigate its own impacts and cannot rely on work by others.</i>	<i>Redesign to ensure that the development does not rely on other developments.</i>	No works are proposed on adjoining private land. Flood impacts are an artifact of initial the initial model, and removed once a refined TIN were included into the model However, Drainage works required in Bertram Street and are proposed as part of this development (Refer Appendix D)
<i>Redesign the easement diversion and show evidence that it provides equivalent service with respect to piped and overland flow to the benefited properties. Show evidence of negotiation with adjacent properties and evidence of permission to change the easement location.</i>	<i>Confirmation of an agreement with adjoining land holders together with a demonstration of a viable design prior to determination.</i>	No works are proposed on the neighbouring properties.
<i>The plans show increase in H5 flooding to the rear of the heritage building which is being retained. It is likely that this will cause damage to this structure, and it is not clear how water from the easement will be prevented from impacting the heritage building. It is also unclear how public safety in the high hazard pedestrian area is achieved.</i>	<i>Provide an amended design which protects the heritage building and pedestrian areas from H5 flooding.</i>	Additional discussion on change in flood hazard during the PMF provided (refer Section 4.1.3).
<i>The mitigation methods include relocation of an easement serving other properties to allow for basement construction. There is no evidence that this is correctly designed. The impact offsite</i>	<i>Redesign the easement diversion and show evidence that it provides equivalent service with respect to piped and overland flow to the</i>	Sewer diversion plans have been approved by Sydney Water. These are attached in Appendix E.

<i>indicates that the relocated easement does not effectively drain the properties which currently benefit from the easement.</i>	<i>benefited properties. Show evidence of negotiation with adjacent properties and evidence of permission to change the easement location.</i>	
The FIRA proposed to provide a Flood Emergency Response Plan (FERP) later.	A flood emergency response plan may not be required at this stage depending on assessed risk however the FIRA is required to carry out a risk assessment of the proposed development which should consider, but is not limited to, such items as hazard on site and on roadways, structural design, access and egress. Table A in Flood impact and risk assessment, Flood risk management guideline LU01 which accompanies the NSW Flood Risk Management Manual 2023 provides guidance on preparation of FIRA.	FERP has been drafted as a companion document.

This report documents the findings of hydrologic and hydraulic modelling of the site under existing and proposed conditions. The assessment aims to understand flood behaviour, evaluate the impact of flooding on the proposed development, and assess the potential impact of the development on flood behaviour within and adjacent to the site.

The site is located within the Scotts Creek catchment area, where Council is finalising a Floodplain Risk Management Study and Plan (FRMS&P).

1.2. Project Scope

The project scope and objectives are:

- Liaise with Council to obtain existing stormwater asset data and any available flood information.
- Develop a TUFLOW model to simulate pre-development conditions.
- Develop a TUFLOW model to simulate post-development conditions, incorporating proposed changes to built form and ground levels associated with the development.
- Simulate the 1% Annual Exceedance Probability (AEP) with and without climate change, and Probable Maximum Flood (PMF) events under both pre- and post-development scenarios.
- Prepare detailed mapping for the critical storm duration, illustrating peak flood extents and depths, flood levels, hazard categories (AIDR H1-H6), and changes in flood level (1% AEP only).
- Compile a Flood Assessment report that documents the methodology and results of flood modelling and assesses the proposed development against Council's Technical Standard 2 (Floodplain Management) and the 2023 Flood Risk Management Manual.

1.3. Relevant Guidelines

This report has been prepared in accordance with the following guidelines and policies:

- [Willoughby Development Control Plan 2023 \(DCP\)](#)
- [Willoughby Local Environment Plan 2012 \(LEP\)](#)
- NSW Department of Planning and Environment, *Flood Risk Management Manual* (2023)
- Flood risk management guideline LU01

2. Site Characteristics and Overview

2.1. Location and Site Description

The Site Extent, approximately 0.266 hectares, is located at 57-61 Archer Street and 34 Albert Avenue, Chatswood, within the Willoughby Local Government Area (LGA) (see Figure 1). The site comprises of the following allotments:

- SP81015 (57-61 Archer Street Chatswood NSW 2067)
- SP101358 (34 Albert Avenue Chatswood NSW 2067)



Figure 1: Site extent (source: ATL & Nearmap)

2.2. Topography

The topography surrounding and within the Site Extent generally slopes in a north-easterly direction (see Figure 2) before reaching Scotts Creek. An initial review of elevation contours in the vicinity of the site shows a local gully that drains south to north through private properties bounded by Archer Street and Bertram Street (see Figure 3). This indicates that the site may be prone to inundation from local catchment flooding.

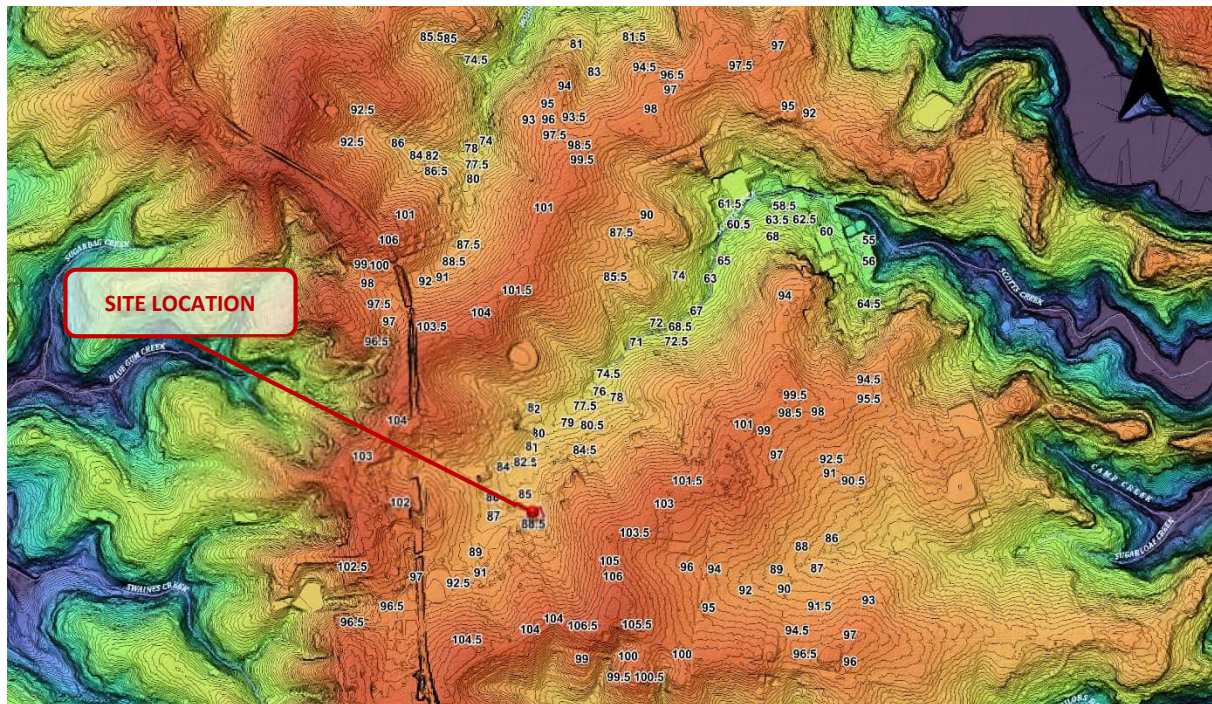


Figure 2: Site with respect to existing topography (source: AT&L and ELVIS)

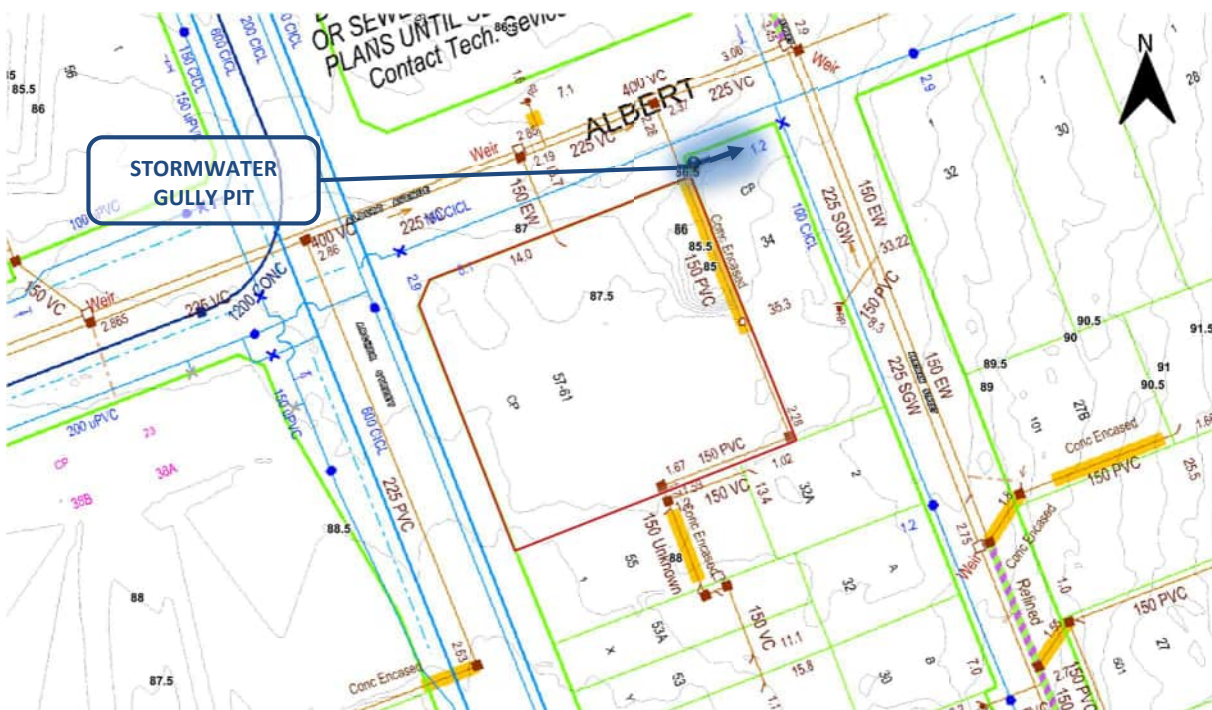


Figure 3: Site with respect to location of a local gully that drains south to north through private properties bound by Archer Street and Bertram Street (source: AT&L and Sydney Water)

2.3. Current Land Use and Zoning

The Site is currently zoned as **MU1 Mixed Use** under Willoughby LEP 2012, as shown in **Figure 4**. The permitted development uses for this zoning are listed in **Table 3**. The Site is situated nearby to Chatswood Police Station and Chatswood Private Hospital.

Table 3: Zone MU1 objectives and land use regulations under Willoughby LEP 2012

Zone MU1 Mixed Use
1. Objectives of Zone • To encourage a diversity of business, retail, office and light industrial land uses that generate employment opportunities. • To ensure that new development provides diverse and active street frontages to attract pedestrian traffic and to contribute to vibrant, diverse and functional streets and public spaces. • To minimise conflict between land uses within this zone and land uses within adjoining zones. • To encourage business, retail, community and other non-residential land uses on the ground floor of buildings. • To allow for city living on the edges of the city centre of Chatswood, which encourages public transport use, shopping and the use of businesses and recreational services that contribute to the vitality of the city, without undermining its commercial role. 2. Permitted without Consent Nil 3. Permitted with Consent Amusement centres; Boarding houses; Building identification signs; Business identification signs; Car parks; Centre-based child care facilities; Commercial premises; Community facilities; Entertainment facilities; Function centres; Information and education facilities; Light industries; Local distribution premises; Medical centres; Oyster aquaculture; Passenger transport facilities; Places of public worship; Recreation areas; Recreation facilities (indoor); Registered clubs; Respite day care centres; Restricted premises; Seniors housing; Shop top housing; Tank-based aquaculture; Tourist and visitor accommodation; Vehicle repair stations; Any other development not specified in item 2 or 4 4. Prohibited Agriculture; Air transport facilities; Airstrips; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Environmental facilities; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Marinas; Mooring pens; Mortuaries; Open cut mining; Port facilities; Recreation facilities (major); Research stations; Residential accommodation; Resource recovery facilities; Rural industries; Service stations; Sewage treatment plants; Sex services premises; Signage; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Veterinary hospitals; Waste disposal facilities; Water recycling facilities; Water supply systems; Wharf or boating facilities; Wholesale supplies

As shown in **Figure 5**, the maximum building height for the western portion of the site is 90 metres. The eastern portion of the site, including the extent of the existing heritage building adjacent to Bertram Street and Archer Street, has a maximum building height limit of 23 metres. It is noted that the property immediately to the south of the site also has a maximum building height of 90 metres, and the western portion of the MU1 zoned land bound by Albert Avenue (to the north), Bertram Street (to the east), Johnson Street (to the south) and Archer Street (to the west) has a varying height limit from 90 metres, transitioning to 68 metres, 41 metres and then to 11 metres for the lot on the corner of Archer Street and Johnson Street. This maximum height of building limit suggests that the entirety of the MU1 zoned land described above will be redeveloped at some stage.

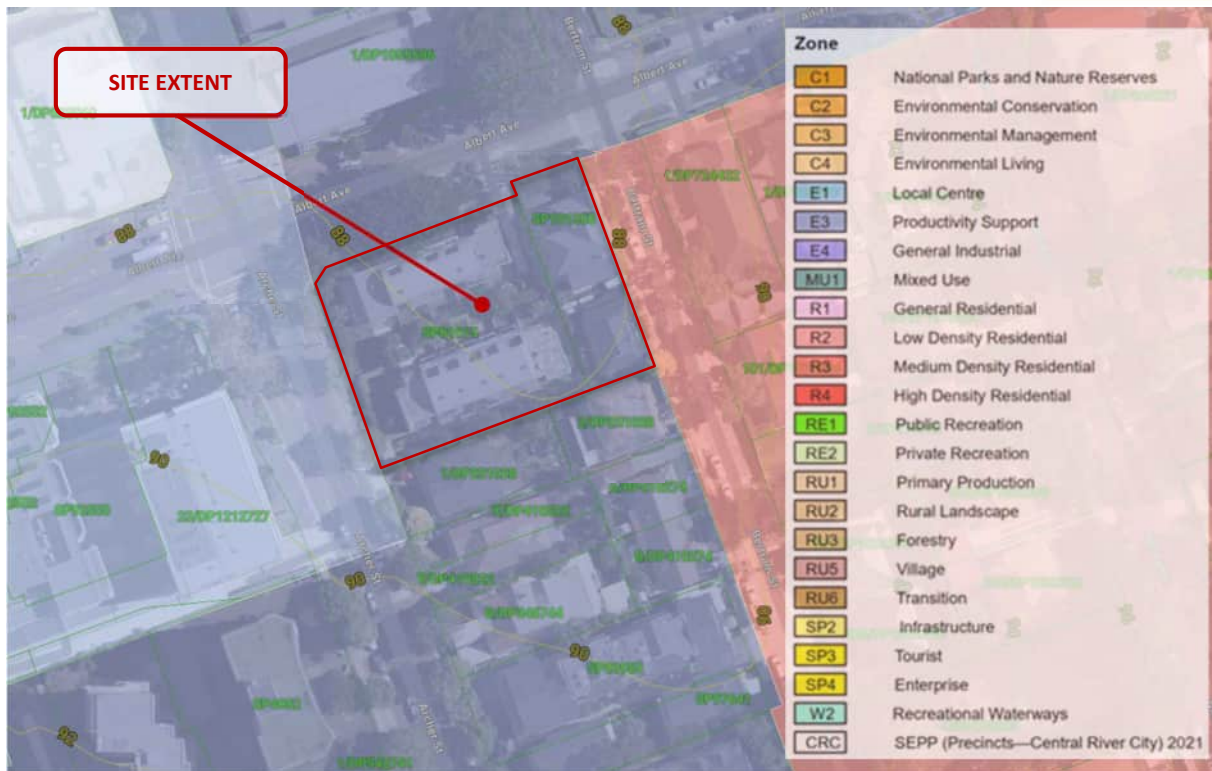


Figure 4: Site extent with respect to the surrounding land use zones under Willoughby LEP 2012 (source: Mecone Mosaic)

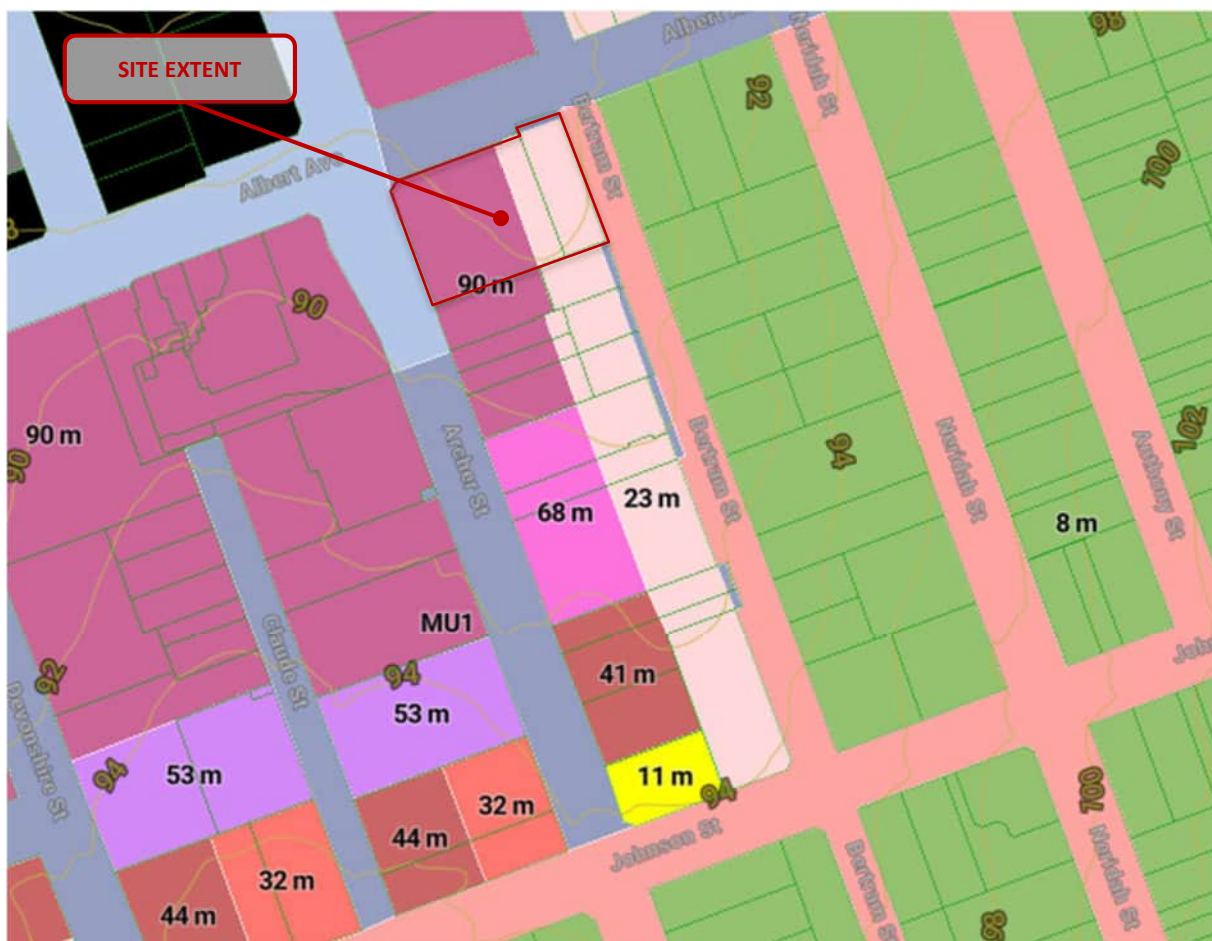


Figure 5: Maximum height of building limits under Willoughby LEP 2012 (source: Mecone Mosaic)

2.4. Catchment Characteristics

AT&L has used three catchments for different study purposes. The biggest catchment within the Scotts Creek Catchment has been shown in Figure 6) and has been used to estimate the tailwater level boundary condition in the TUFLOW hydraulic model. This catchment in Willoughby is highly urbanised, with a mix of natural channels and constructed drainage systems that influence runoff and flood behaviour. The catchment's topography, size, and land use contribute to potential flooding, especially during major storm events.



Figure 6: Catchment used to estimate Down Stream Boundary Condition of the TUFLOW model (Image source: Google Satellite Hybrid)

2.5. Available Flood Studies

2.5.1. Scotts Creek Flood Study (Lyll and Associates 2008)

A review of available flood studies yielded the following information:

- The *Scotts Creek Flood Study* (Lyll and Associates 2008) documents and details the extents of flooding within the Scotts Creek catchment for a range of design storm events being the 18.13% AEP, 5% AEP, 1% AEP and the PMF. The study is based on a HEC-RAS model and does not yield sufficient information regarding the local overland flood mechanisms at the Site.
- Upstream limit of flood mapping extent is at Chatswood Chase shopping centre (345 Victoria Avenue Chatswood) and does cover the Site Extent.
 - ▶ The flood study determined the critical duration for the 1% AEP was the 90 minutes for the Scotts Creek Catchment.
 - ▶ The flood study determined the peak PMF flow rate to be 4 x the 1% AEP peak flow.

2.6. Site Flood Mechanisms

Willoughby City Council experiences two main types of flooding, mainstream flooding and local overland flooding.

2.6.1. Mainstream Flooding

This happens when floodwaters from rivers or creeks overflow and impact properties. Structures in these flood paths can alter the water flow and potentially harm nearby properties.

2.6.2. Local Overland Flooding

This occurs when runoff flows over surfaces like grass and roads, heading towards the main drainage system. It's further divided into:

- Major Drainage - Involves deeper and potentially more dangerous water flow.
- Local Drainage - Involves shallower water flow, generally not hazardous.

Both types of flooding can redirect water to other properties if obstructed by structures, requiring careful design in new developments. Flooding can reach depths of up to 2 metres and speeds of up to 4 m/s during major storms.

2.6.3. Site Flooding

Willoughby Council has advised that the Site is affected by overland flow. At the time of this assessment Council are currently in the process of finalising a Floodplain Risk Management Study and Plan (FRMS&P) for the Scotts Creek catchment, and detailed information on flood levels was unavailable. Therefore, to inform a site-specific flood assessment for 57-61 Archer Street, results were compared to Scotts Creek Flood Study (Lyll and Associates 2008).

AT&L has requested preliminary details of the Scotts Creek Flood Study as they pertain to flood risk at the site, however Council was unable to provide any further information.

2.7. Existing Flood Maps

Investigations of the publicly available flood map data is limited. This is because the maps within the Scotts Creek Flood Study (Lyll and Associates 2008) have an upstream limit of flood mapping at Chatswood Chase shopping centre (345 Victoria Avenue Chatswood) and exclude the Site Extent.

2.8. Proposed Development

A proposed site development layout is provided in Appendix B. It will be a 32-storey development comprising 150 residential dwellings, including one, two, and three-bedroom apartments and penthouses. Additionally, there will be 0.28 hectares of retail and commercial space.

3. Hydrology and Hydraulic Modelling

3.1. Overview

The hydrological and hydraulic modelling approaches used to assess the Site under both existing (pre-development) and post-development conditions are as below:

- Drains model to assess the critical storm.
- TUFLOW to assess the flood conditions on the Site (Rain on Grid).

3.2. Scenarios

3.2.1. Catchment Conditions

The hydraulic model was setup to represent the following flood condition scenarios:

- E01: Existing conditions, the catchment in its current state as described in Section 2.4
- P01: Proposed conditions, the catchment in its current state as described in Section 2.4 and the site as describes in Section 2.8

3.2.2. Storm Events

The hydrological modelling storm events adopted for this assessment include:

- 1% AEP
- 1% AEP with climate change (SSP2-4.5 in 2030)
- Probable Maximum Flood (PMF)

3.3. Preliminary Catchment Hydrology

Catchment hydrology has been modelled using an IL-CL DRAINS model. An ensemble of storms durations and temporal patterns was run in DRAINS to determine the critical storm duration for the site in the storm events ranging between (and including) the 5 minute and 180-minute durations. To model 1% AEP with climate change, related rainfall data have been adopted in accordance with updated ARR guidelines.

Refer to Figure 8 below for the catchment used in DRAINS model to get the critical storm events.

Sensitivity testing was undertaken on the critical events using model to test other durations TUFLOW.

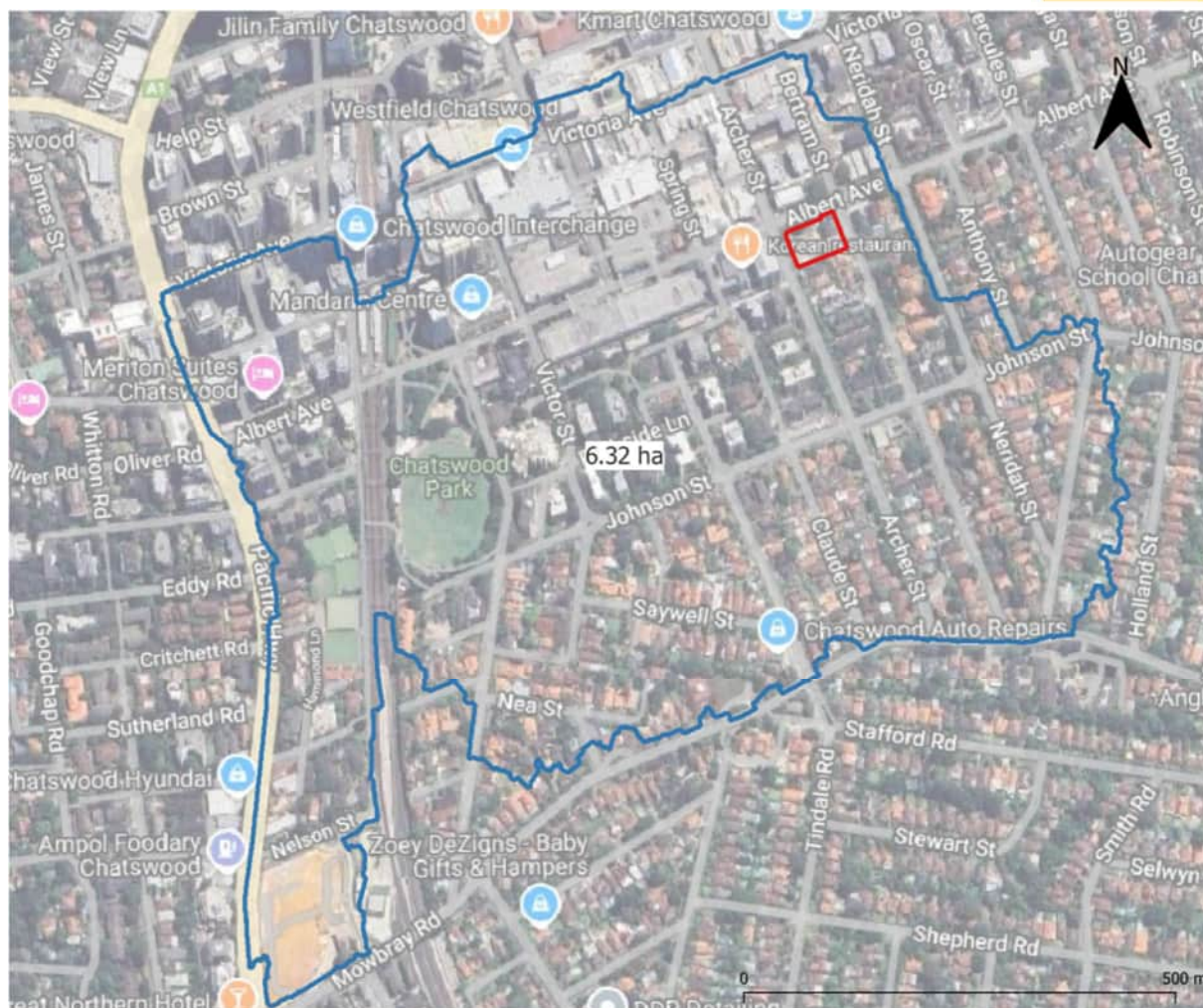


Figure 7: Catchment Used in DRAINS for Hydrology Purpose.

Modelling assumptions are as below:

- Intensity Frequency Duration (IFD) data were derived from the Bureau of Meteorology Datahub in accordance with ARR2019
 - ▶ Longitude: 151.187 Latitude: -33.797
- Continuing Loss of 0.72 mm and Probability Neutral Burst Initial Loss of 6.6 mm have been used for 1% AEP in accordance with the ARR Data Hub.
- Continuing Loss of 0.756 mm and Probability Neutral Burst Initial Loss of 6.732 mm have been used for 1% AEP with climate change in accordance with the updated ARR guidelines.
- The Probable Maximum Precipitation (PMP) intensities and temporal distribution were determined using the Bureau of Meteorology Generalised Short Duration Method (1994)
- The critical durations selected with respect to the Site are provided in Table 4.

Table 4: Critical Storm Duration Results

Storm Event	Duration (min)	Temporal Pattern
1% AEP	30 minutes	TP09
1% AEP with Climate Change (SSP2-4.5 in 2030)	30 minutes	TP09
PMF	15 minutes	-

3.4. Hydraulic Modelling

A two-dimensional TUFLOW hydraulic model was developed to assess flood behaviour in the vicinity of the Study Area.

3.4.1. Terrain Data

The 3D surface for existing and conditions was generated from a combination of:

- LIDAR Data of the existing topography surrounding the site and catchment area from the ELVIS – Elevation and Depth – Foundation Spatial Data (<https://elevation.fsdf.org.au/>)
- Survey of the site and surrounding roads by Stuart de Nett Land Surveyors Pty Ltd surveyors (2017)

3.4.2. TUFLOW Modelling Setup

3.4.2.1. Existing Conditions

The existing conditions model construction consisted of:

- a) Creating a 1m x 1m topographic grid based on the available LiDAR and survey information outlined in Section 3.4.1.
- b) Establishment of model boundary extents which generally align with upstream catchment of Bertram Street Victoria Avenue intersection, on Bertram Street.
- c) Establishment of boundary conditions and extents downstream of the site on Albert Avenue. The downstream boundary extent slope has been calculated to be 0.01.
- d) Establishment of the tailwater condition (based on the catchment described in section 2.4) at the most downstream locations of the Council pipe network in the TUFLOW study area.
- e) Incorporating critical storm rainfall intensities (outlined in section 3.3) onto rainfall on grid.
- f) Initial and continuing losses for pervious and impervious areas were incorporated within the 2d_mat layer and the materials database as nominated in
- g) Inclusion of 2d_zsh polygons to represent existing building in the study area.
- h) Assigning a water depth filter of 0.1m to remove water that is not considered flood flows
- i) Assigning existing site Manning's roughness coefficients based on Google Street Maps and Nearmap aerial imagery. Manning's Roughness values are summaries in Table 5 and are derived from the Scotts Creek Flood Study (Lyal and Associates 2008)
- j) Inclusion of the majority of Council's pit and pipe network (50% Blocked), refer to Figure 8.
- k) Inclusion of Site-specific pit and pipe network based on the survey (50% Blocked). Refer to figure 9 below for the Existing pit and pipe network layout used in the existing condition.



Figure 8: Existing Council pit and pipe network layout (AT&L model)

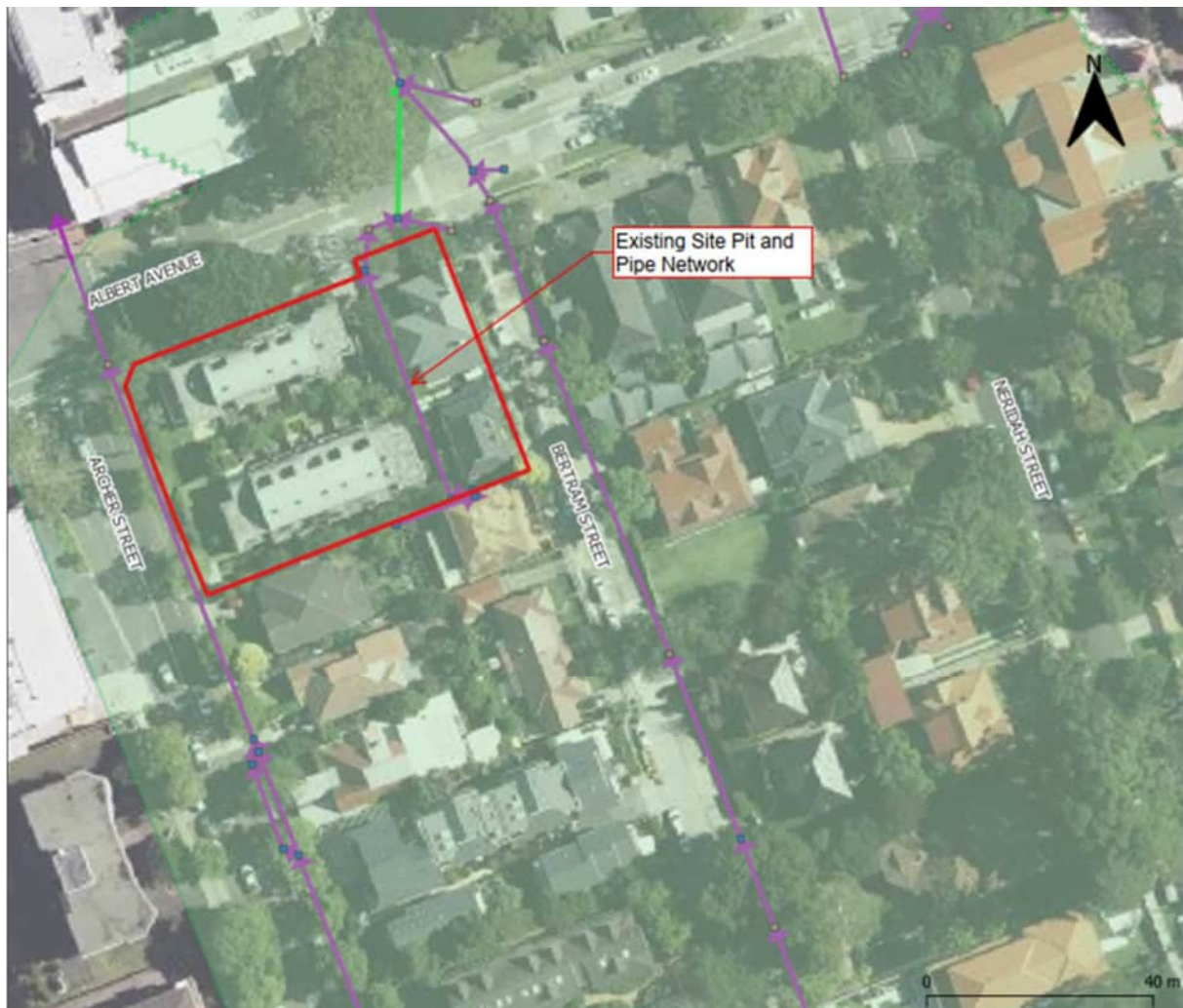


Figure 9: Existing Site pit and pipe network layout (AT&L model)

Table 5: Manning's Roughness Values from Scotts Creek Flood Study (source: Lyall and Associates 2008)

Material	Manning's Roughness Value
Asphalt / Paved Areas	0.020
Grassed	0.035
Landscape Areas (e.g., shrubs / long native grasses)	0.050
Residential Areas	0.100

3.4.2.2. Proposed Conditions

All elements and parameters described in Section 3.4.2.1 were used in the proposed scenario with the following additions and modifications:

- Updating the surface to represent the proposed design surface.
- Assigning Manning's roughness coefficients and Initial and Continuing losses based on **Table 5** to reflect the proposed development.
- Updating the 2d_zs polygons to reflect the proposed buildings on the Site.
- Incorporating a proposed flood barrier as a fully blocked z-shape obstruction at the driveway on Bertram Street.

- e) Inclusion of the proposed stormwater pit and pipe network as 4.8 x 0.5 m culvert between the sag point at the back of the property to Bertram Street and then followed by a 1.3 m pipe on Bertram Street to meet the existing Council pipe at the corner of Bertram Street – Albert Avenue, refer to Figure 10.



Figure 10: Proposed Site pit and pipe network layout (AT&L model)

It should be mentioned for the proposed stormwater network; AT&L has tested more 4 design scenarios summarised in Figure 11 and Table 6 below.

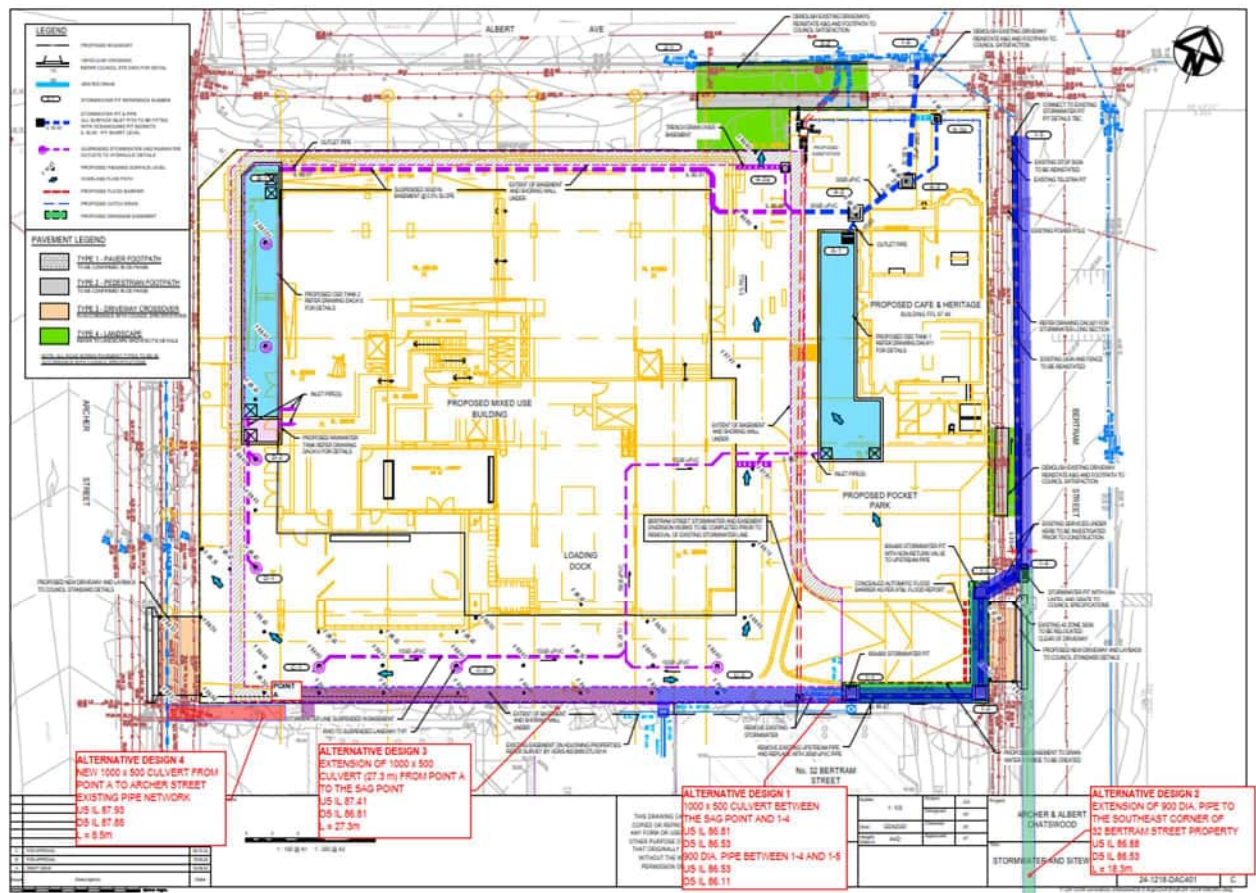


Figure 11: Stormwater design scenarios tested for flood mitigation purpose.

Table 6: Stormwater Design Iteration Summary

Stormwater Design Iteration	Description of Flood Mitigation Measures
Alternative Design 1 (most preferred)	New 900mm dia. stormwater line along Bertram Street New culvert along southern boundary between sag point and Bertram Street (1000 x 500)
Alternative Design 2	Same as Alternative design 1 Plus extension of 900mm line south along Bertram Street to intercept more flow draining from the south
Alternative Design 3	Same as Alternative design 1 Plus extension of culvert (1000 x 500) from southwest corner of the Site close to Archer Street to Bertram Street to drain water to proposed stormwater line along Bertram Street and ultimately connect to the existing pit near the Albert Avenue Bertram Street intersection.
Alternative Design 4	Same as Alternative design 1 Plus new culvert (1000x500) from southwest corner of the site (outside site boundary) to Archer Street existing pipe line to intercept more flow draining from Archer Street to the Site.

3.4.3. Preferred option

Following the review the options discussed above, a 5th option was developed as a derivative of Alternative Option 1 (refer Figure 12). This option has been refined to reflect:

- Existing utilities constraints.
- Structural design.
- Architectural and carpark access.
- Available precast culvert sizes.
- Ensuring that no works are required on the neighbouring properties.

Civil Drawings for this option are attached in Appendix D. This option has been designed to avoid utilities running parallel to Albert Avenue as well as some of the stormwater network capacity constraints by reproducing the overland flows that travel over Albert Avenue. Results for this scenario are presented in Appendix F.

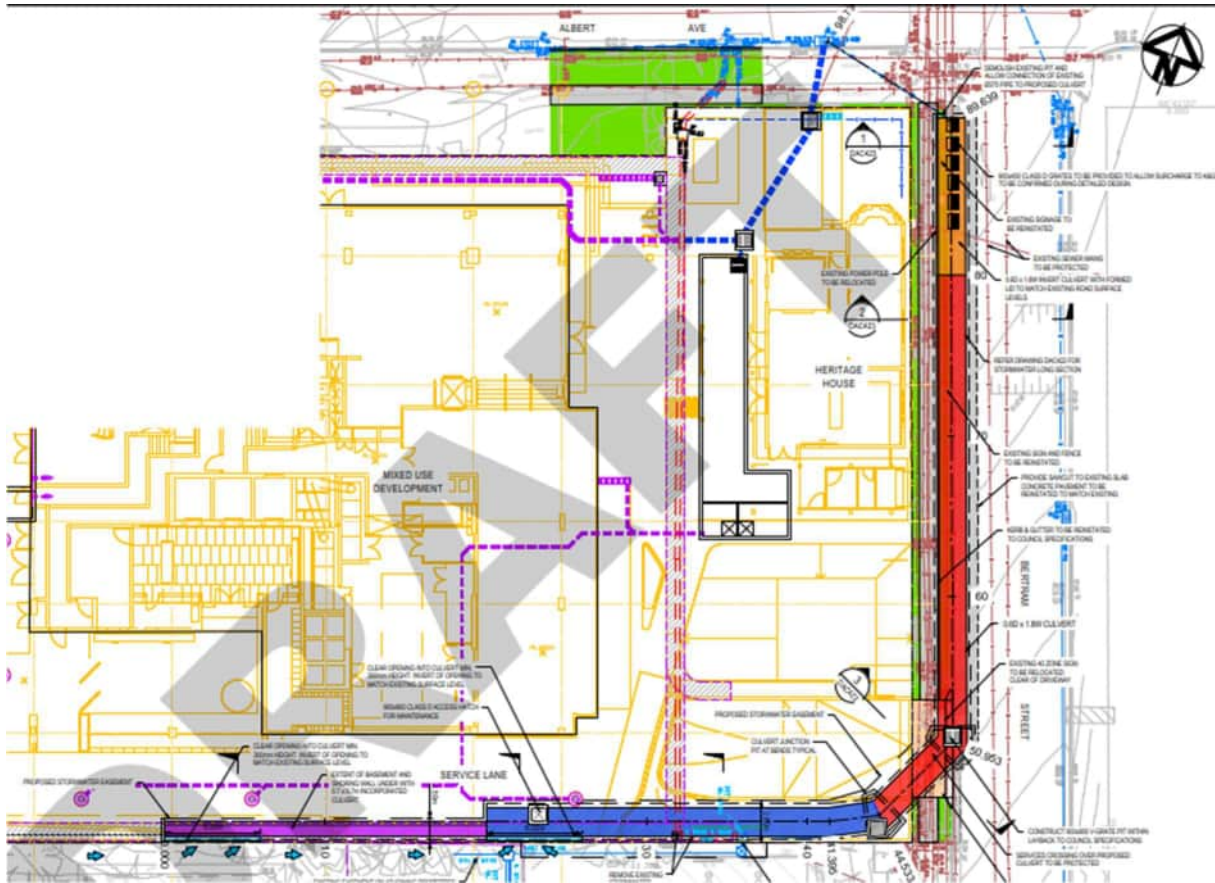


Figure 12: Preferred flood management option (AT&L)

This option has been developed to

4. TUFLOW Modelling Results

Mapping of TUFLOW model results showing peak flood extents and depths, level, hazard category (AIDR H1-H6) and change in flood level for the 1% AEP, 1% AEP with Climate Change and PMF events are provided in **Appendix D**.

4.1. Discussion

We note the following regarding the modelled flood behaviour:

4.1.1. Existing Conditions

- The primary source of site flooding is overland flows from the upstream catchments south and east of the site. These flows travel overland through residential properties and roadways to the west, south and east of the site, eventually overtopping Archer and Bertram Street onto the site.
- The site is not affected by mainstream flooding from Scotts Creek.
- Overland flows from within and surrounding the site overtop Archer Street and flow in a northerly direction towards Victoria Avenue.
- The TUFLOW model results indicate a portion of the site experiences flood detention due to the existing basement driveway off Albert Avenue. The basement driveway would drain to a local stormwater system within the basement, which discharges to the local stormwater network within Albert Avenue.
- Archer Street (west of the site) experiences high flood hazard in the PMF event. This hazard is associated with the upstream catchment to the north.

4.1.2. Proposed Conditions

- The flood model results for the proposed diversion culvert at the southern boundary.
- Flood levels are reduced to the rear of 32A Bertram Street and 55 Archer Street.
- Some localised afflux is noted as a result of the changes to the grade along the property boundary between 55 Archer Street and the site. This will be addressed through the use of localise grading to ensure that stormwater can drain freely in this area.
- There is some afflux as a result of the discharge of the system in Bertram Street.

It is noted that in both the existing case and the developed case that the flood hazard is characterised by relatively shallow depth flows travelling along the streets. While this may represent a significant objective hazard in rare to extreme events, these conditions are typical of many urban areas during such events.

4.1.3. Changes to flood hazard

Changes to the PMF conditions are noted in some of the surrounding areas. There are limited areas where the flood hazard has increased from H1 to H2 in the rear yard of 55 Archer Street. Noting that under existing conditions the hazard is up to H3 in the rear of this property, this is a minor change in the hazard extent.

An increase in hydraulic hazard is also noted adjacent to the heritage building facing Albert Avenue. This is in the context of shallow depth flow (less than 0.25 m), and as such is unlikely to compromise the building safety in the context of a maintained passageway. The residual hazard to residents would be managed by advising people to avoid travelling outdoors.

Other areas of flood hazard change are minor in extent. Noting that hydraulic hazards may be extensive, these represent no change in the hazard the public is exposed to.



Figure 13: Change to flood hazard in the PMF

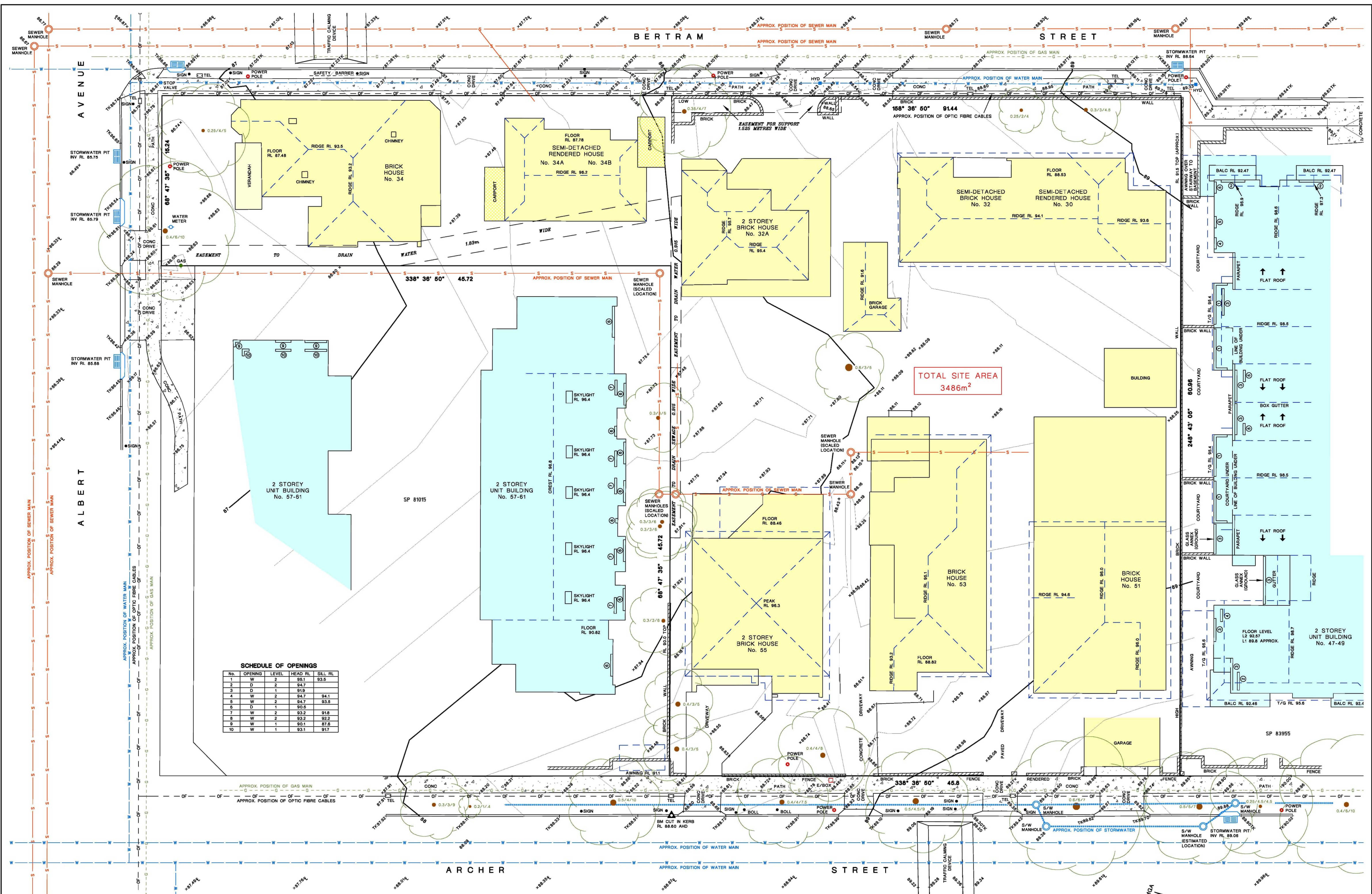
5. Summary and Recommendations

The flood assessment for 57-61 Archer Street, Chatswood indicates that the primary source of site flooding is from overland flows originating upstream (south) of the site. Based on the TUFLOW model results, the proposed development would have acceptable impact upstream adjacent properties with the proposed diversion scheme, though some changes and localised afflux is noted as a result of the earthworks and changes. In particular, the scheme has altered the way that flooding crosses Albert Avenue (which is flooded under existing conditions).

Flood protection to the development is otherwise provided by raising the ground level of the site to be above the 1% AEP flood level (+0.5 m), and by installing a flood barrier on the carpark entrance. With these measures in place, the risk to the building and its occupants is relatively minimal. The heritage constraints associated with heritage building restrict the options available to manage this risk, and as such this component will implement flood resistant construction (where feasible), or otherwise manage the risk through the implementation of a Flood Emergency Response Plan (FERP).

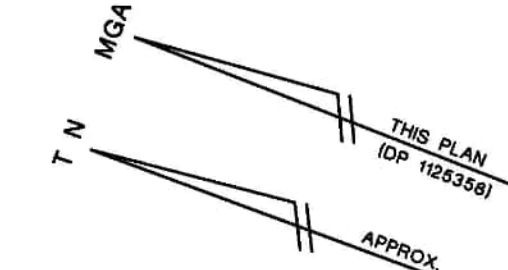
Refinements to the scheme to reflect utilities, secondary approvals and other constraints are expected to be ongoing. However, the functionality of the scheme will seek to reproduce the existing overland flooding arrangements, and as such has minimal impact on the nearby dwellings of the community.

Appendix A – Site Survey



SCHEDULE OF OPENINGS

No.	OPENING	LEVEL	HEAD RL	SILL RL
1	W	2	95.1	93.5
2	D	2	94.7	
3	D	1	91.9	
4	W	2	94.7	94.1
5	W	2	94.7	93.5
6	D	1	90.6	
7	W	2	93.2	91.6
8	W	2	93.2	92.2
9	W	1	90.1	87.5
10	W	1	93.1	91.7



Appendix B – Proposed Development

Drawing Number	Sheet Title
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DEVELOPMENT APPLICATION
DA-1000
DA-1000 COVER SHEET :
DA-1101 LOCATION PLAN :
DA-1102 SITE PLAN :
DA-1201 SHADOW DIAGRAMS - JUNE 21ST : WINTER SOLSTICE
DA-1202 SHADOW DIAGRAMS - SUNS EYE VIEWS : WINTER SOLSTICE

DA-2000
DA-2201 BASEMENT 5 :
DA-2202 BASEMENT 4 :
DA-2203 BASEMENT 3 :
DA-2204 BASEMENT 2 :
DA-2205 BASEMENT 1 :
DA-2210 GROUND FLOOR PLAN :
DA-2211 LEVEL 1 :
DA-2212 LEVEL 2 :
DA-2213 LEVEL 3 : LOWRISE - PODIUM
DA-2214 LEVEL 4 : LOWRISE - TYPICAL
DA-2215 LEVEL 5 : LOWRISE - TYPICAL
DA-2216 LEVEL 6 :
DA-2217 LEVEL 7-8 :
DA-2219 LEVEL 9-29 :
DA-2230 LEVEL 30 : SUB-PENTHOUSES
DA-2231 LEVEL 31 :
DA-2232 ROOF PLAN :

DA-3000
DA-3201 ELEVATION 01 :
DA-3202 ELEVATION 02 :
DA-3301 SECTION 01 : SITE SECTION
DA-3302 SECTION 02 : SITE SECTION

DA-4000
DA-4101 APARTMENT TYPE_AFFORDABLE : RESIDENTIAL TOWER
DA-4102 APARTMENT TYPES_LOWRISE : RESIDENTIAL TOWER
DA-4103 APARTMENT TYPES_TYPICAL : SUB-PENTHOUSES
DA-4104 APARTMENT TYPES_SUB-PENTHOUSE : SUB-PENTHOUSES
DA-4105 APARTMENT TYPE_PENTHOUSE : PENTHOUSES
DA-4201 POST ADAPTIVE TYPES - 2BED TYPE T4 :
DA-4202 POST ADAPTIVE TYPES - 3BED TYPE T5 :
DA-4205 POST ADAPTIVE TYPES- 2BED TYPE T2 :
DA-4206 POST ADAPTIVE TYPES- 2BED TYPE T1 :

DA-6000
DA-6001 LANDSCAPING AREA :

DA-7000
DA-7001 FACADE PACK PG1 :
DA-7002 FACADE PACK PG2 :
DA-7003 FACADE PACK PG3 :
DA-7004 FACADE PACK PG4 :
DA-7005 FACADE PACK PG 5 :
DA-7006 FACADE PACK PG6 :
DA-7007 FACADE PACK PG7 :

DA-8000
DA-8001 ADG - CROSS VENT & SOLAR ACCESS :
DA-8002 ADG - STORAGE 1 :
DA-8003 ADG - STORAGE 2 :
DA-8201 GFA AREA SCHEDULE :



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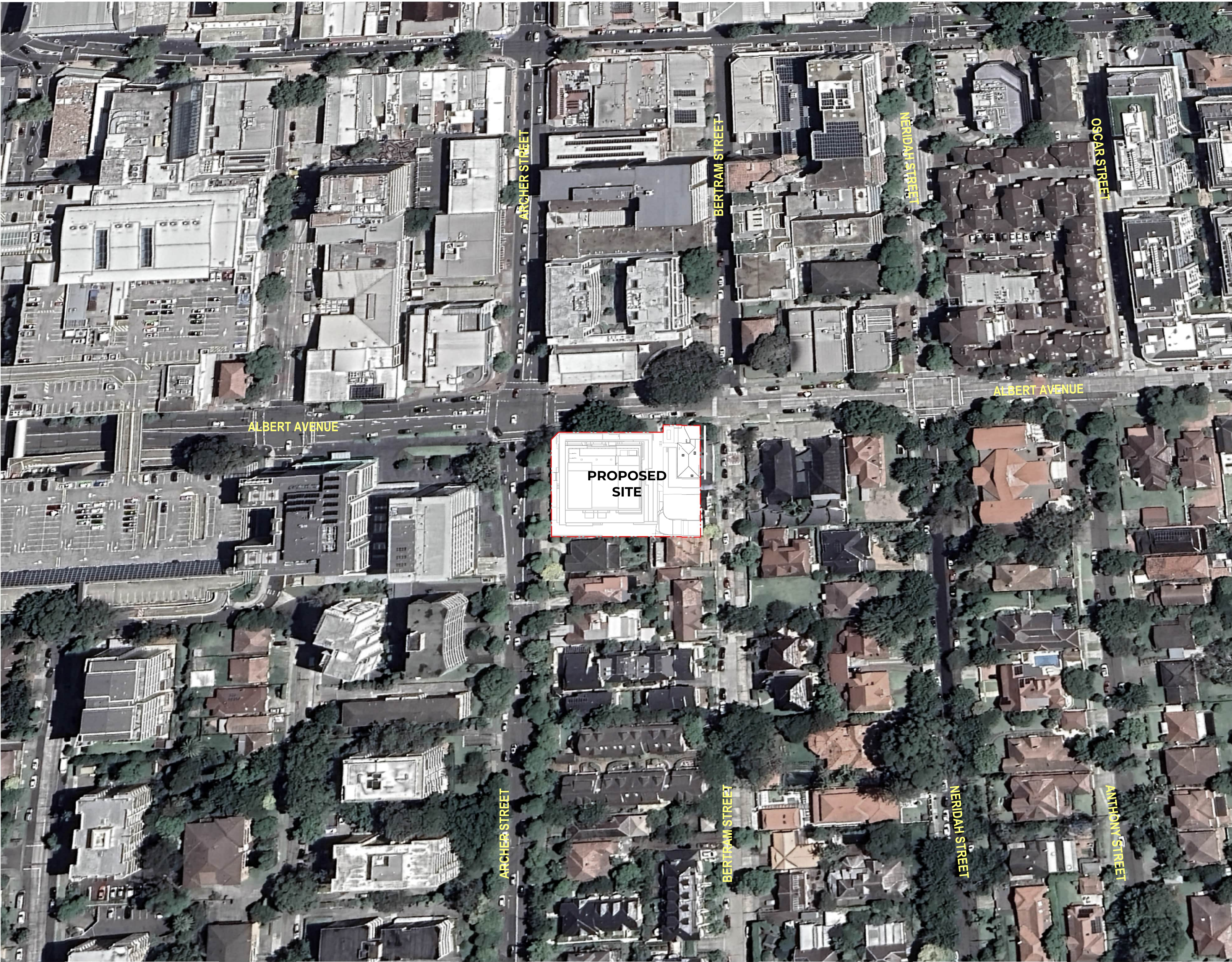
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Sheet size	Scale
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COVER SHEET

Sheet number
DA-1000
Status
FOR DEVELOPMENT APPLICATION

Revision
1



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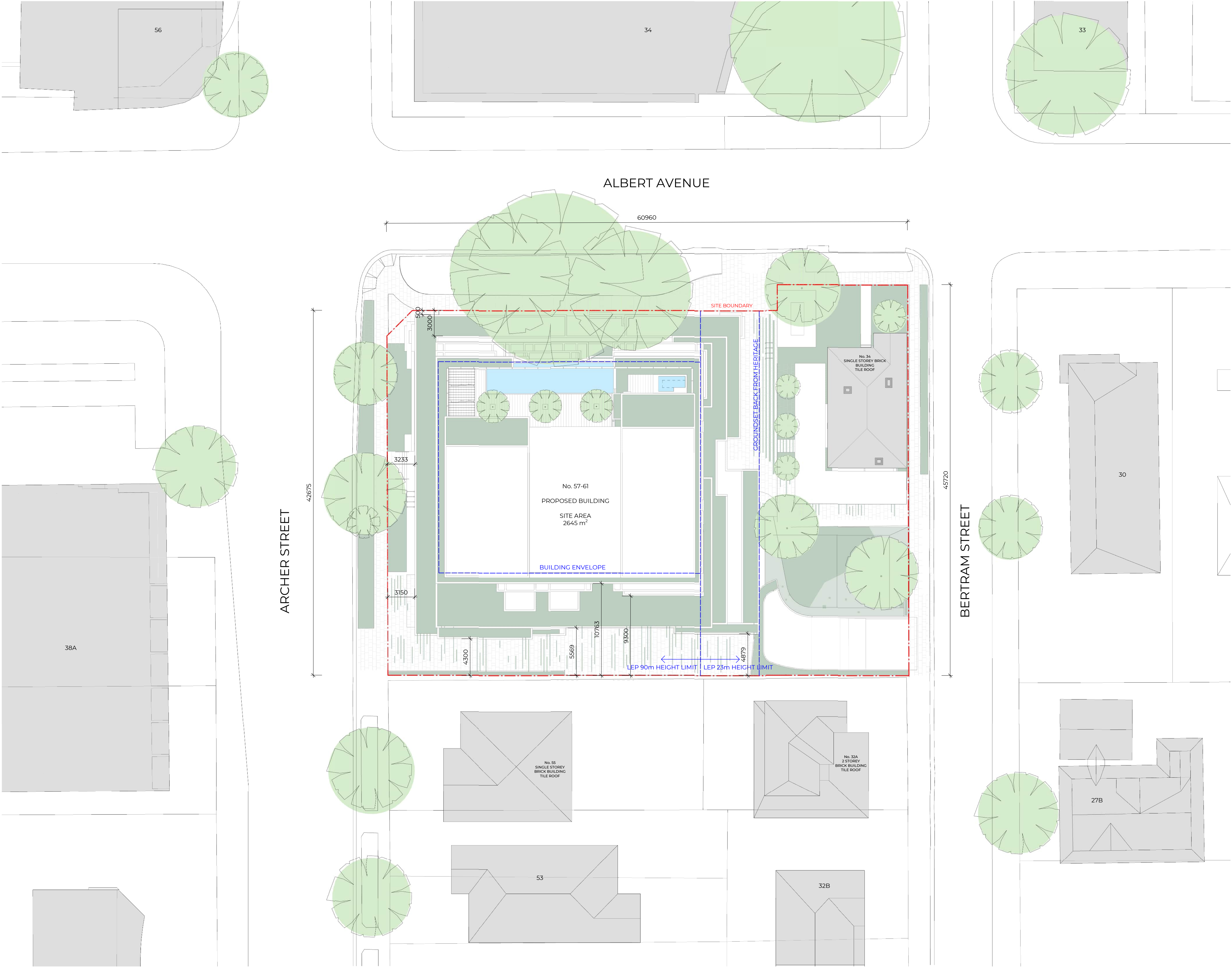
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LOCATION PLAN

Sheet number
DA-1101
Status
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Sheet title

SITE PLAN

Sheet number	Revision
DA-1102	1
Status	
FOR DEVELOPMENT APPLICATION	



1. SHADOW DIAGRAM - WINTER SOLSTICE - 9AM



2. SHADOW DIAGRAM - WINTER SOLSTICE - 10AM



3. SHADOW DIAGRAM - WINTER SOLSTICE - 11AM



4. SHADOW DIAGRAM - WINTER SOLSTICE - 12 MIDDAY



5. SHADOW DIAGRAM - WINTER SOLSTICE - 1 PM



6. SHADOW DIAGRAM - WINTER SOLSTICE - 2 PM



7. SHADOW DIAGRAM - WINTER SOLSTICE - 3PM

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LEGEND	
DA MASSING ENVELOPE	
SHADOW	
30% UPLIFT SHADOW	
PROPOSED DESIGN SHADOW	
SUN ACCESS PROTECTION LINE	

Project
ARCHER & ALBERT

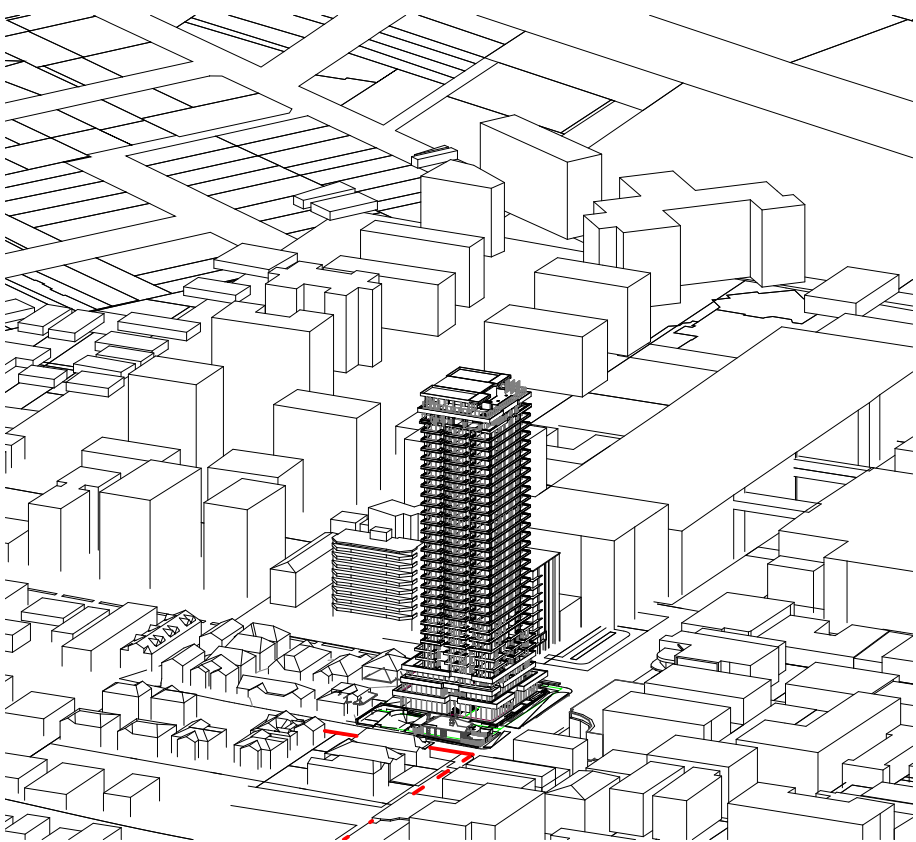
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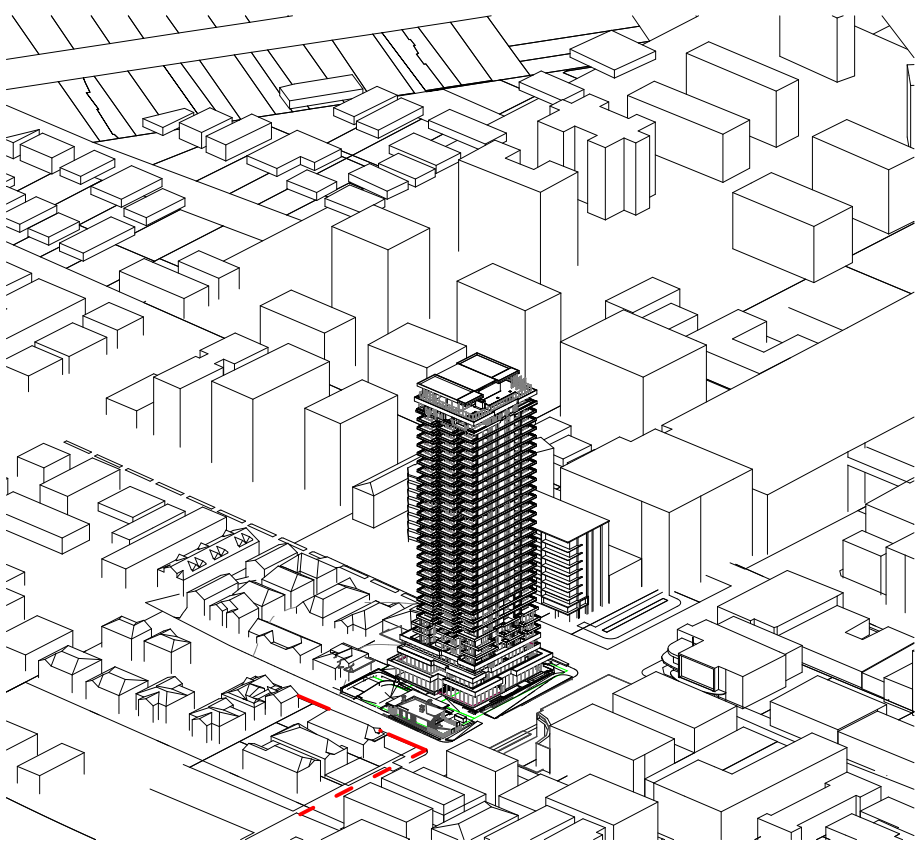
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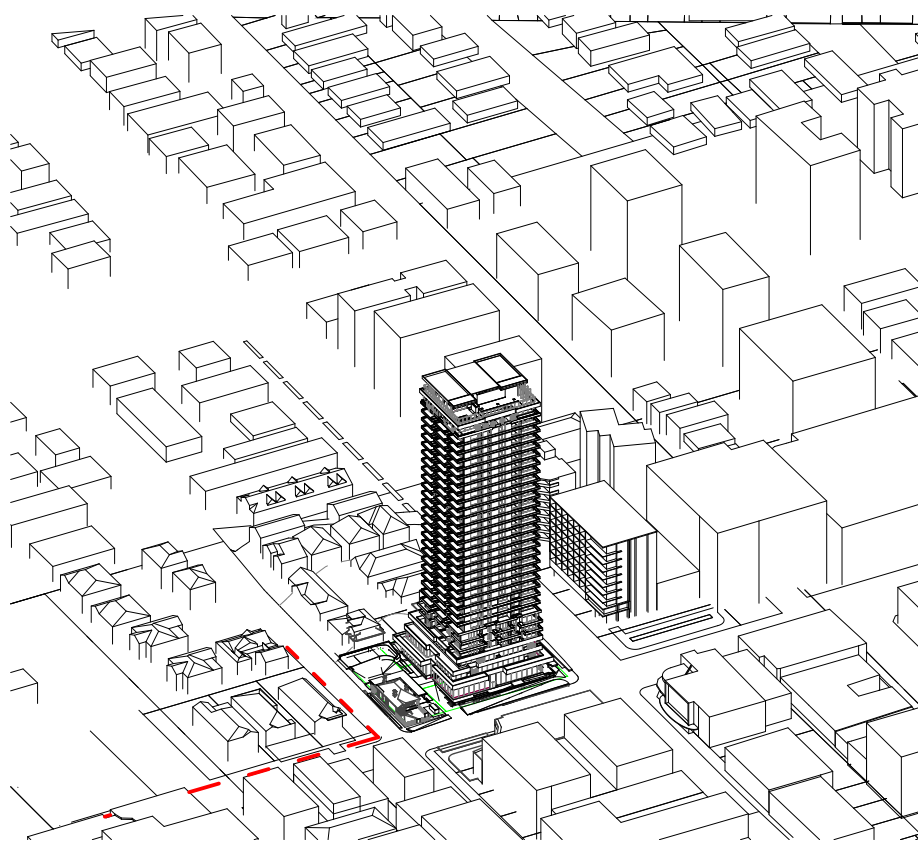
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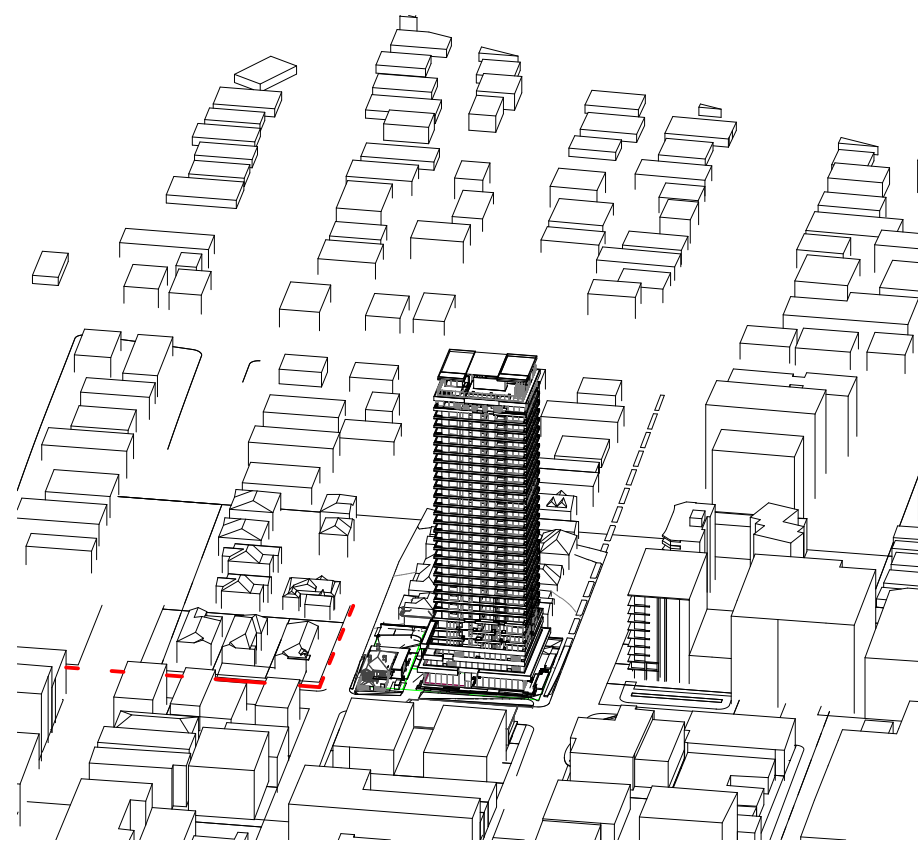
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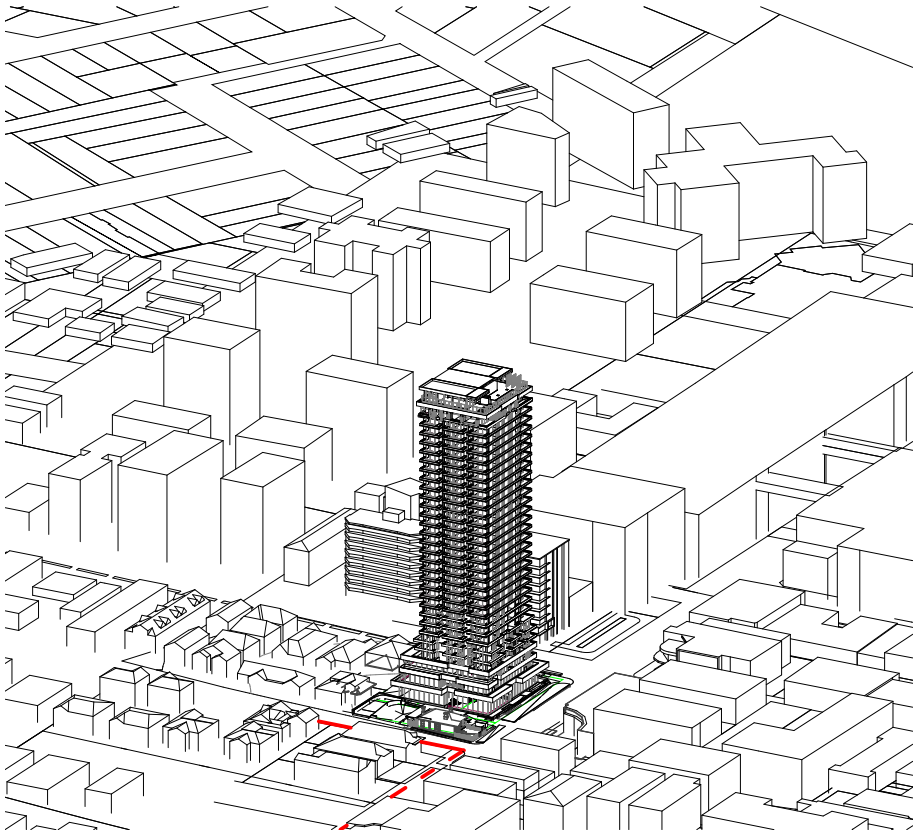
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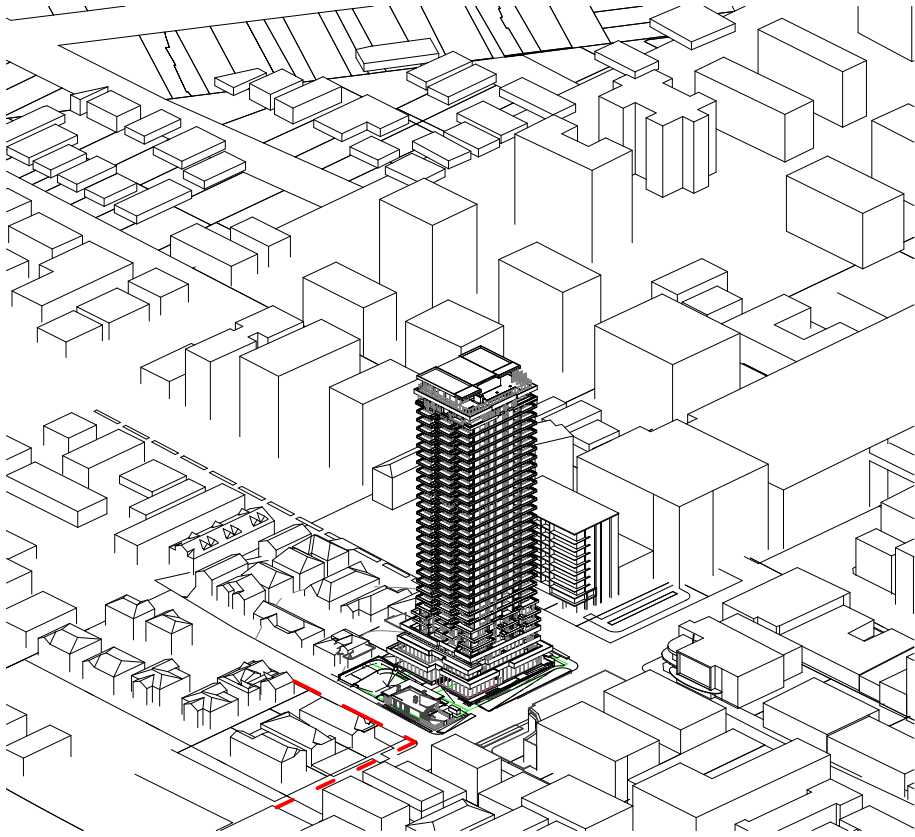
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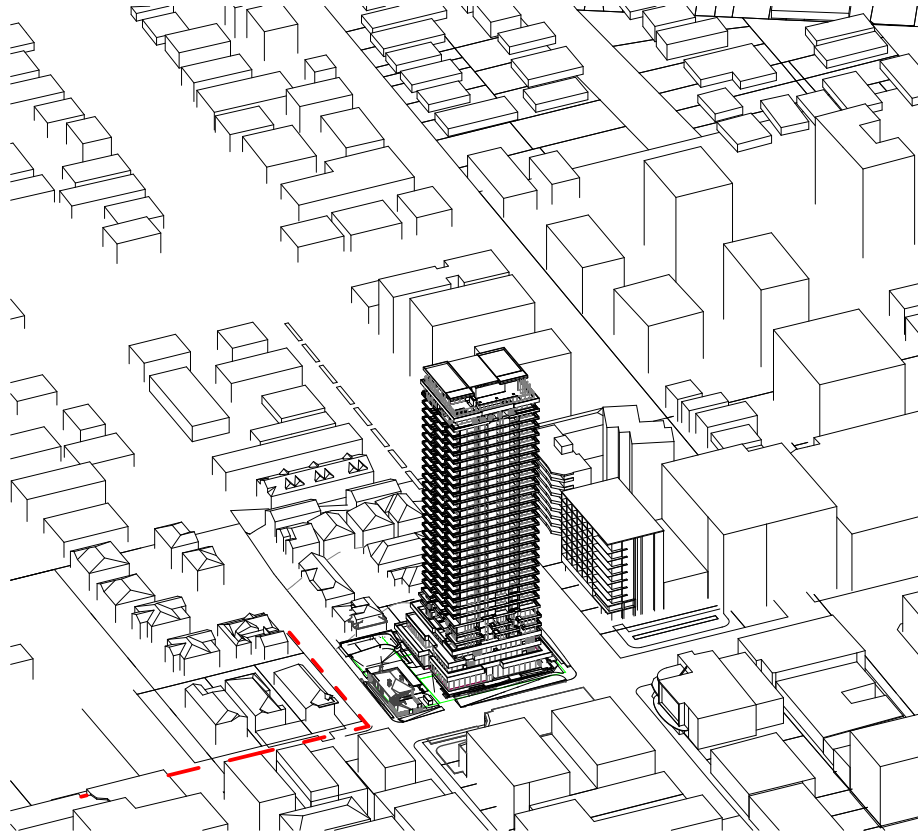
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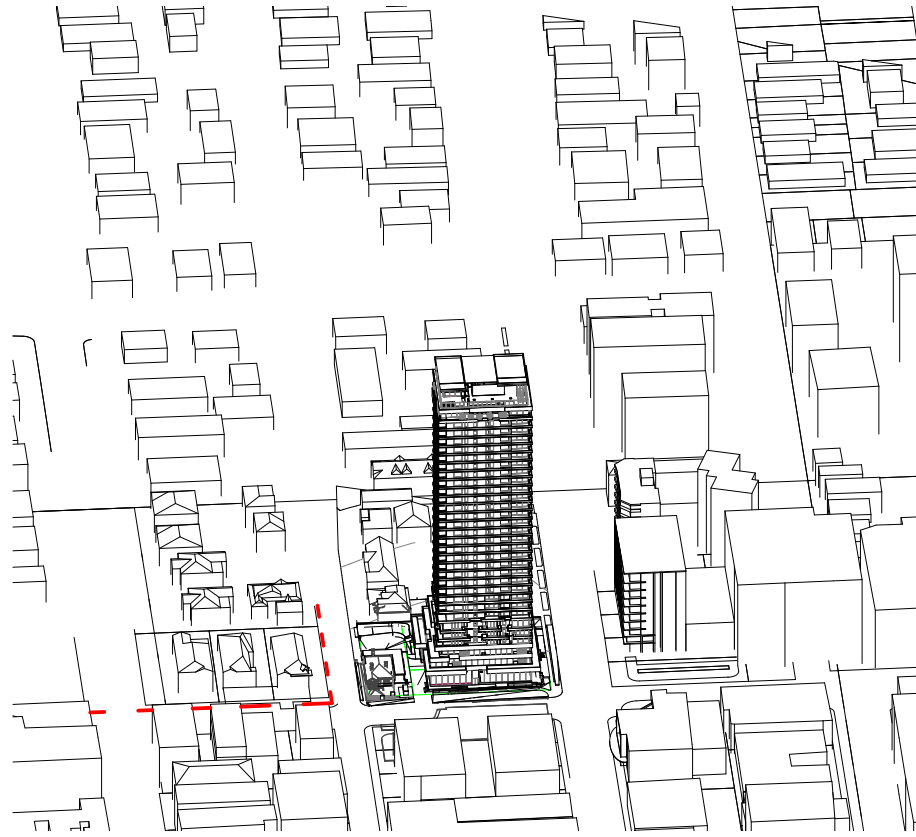
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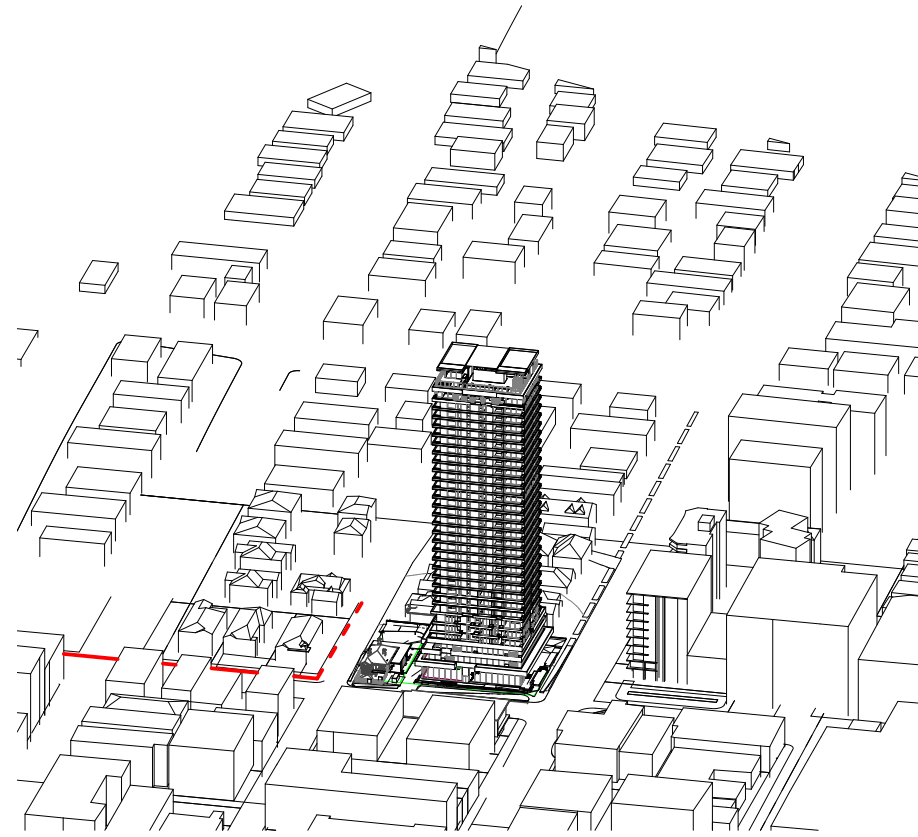
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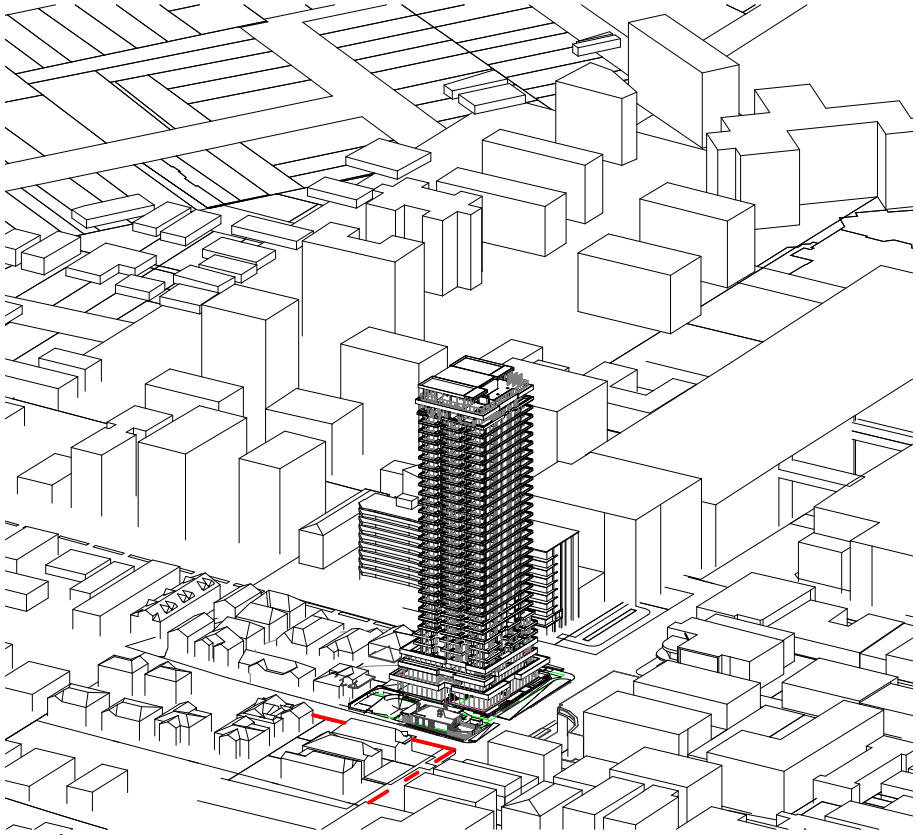
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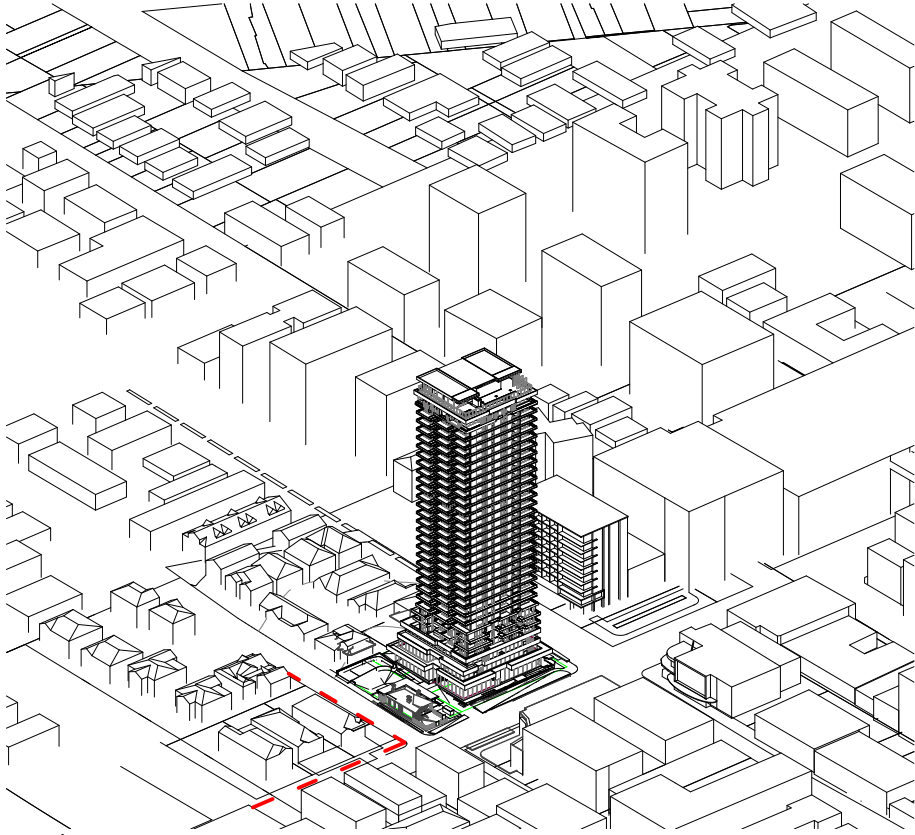
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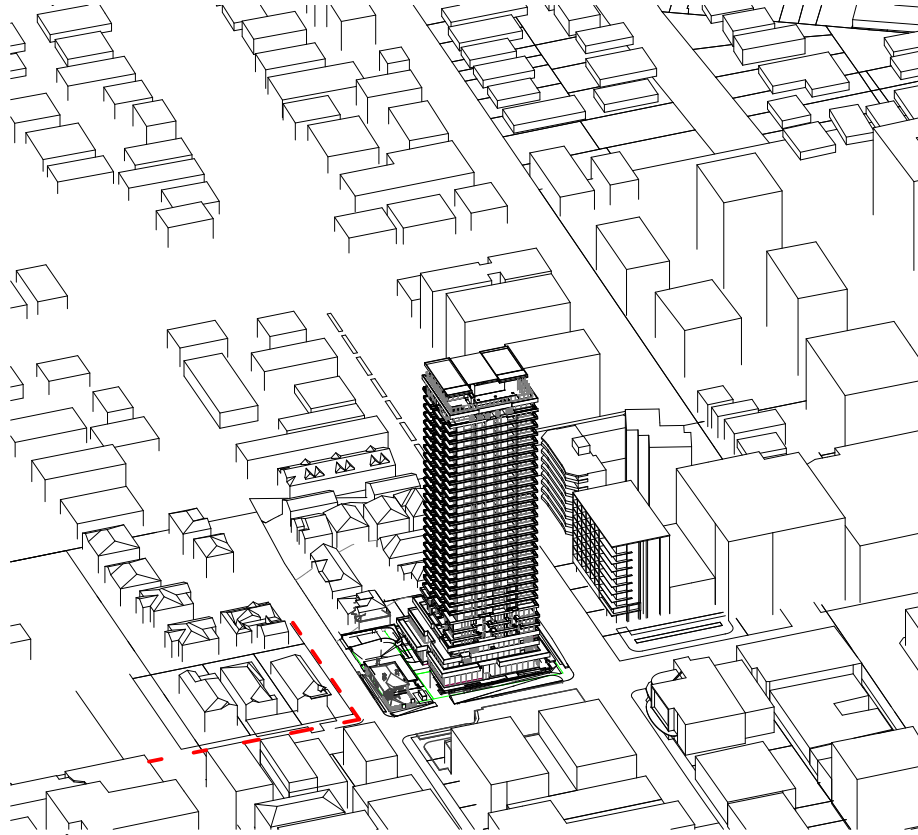
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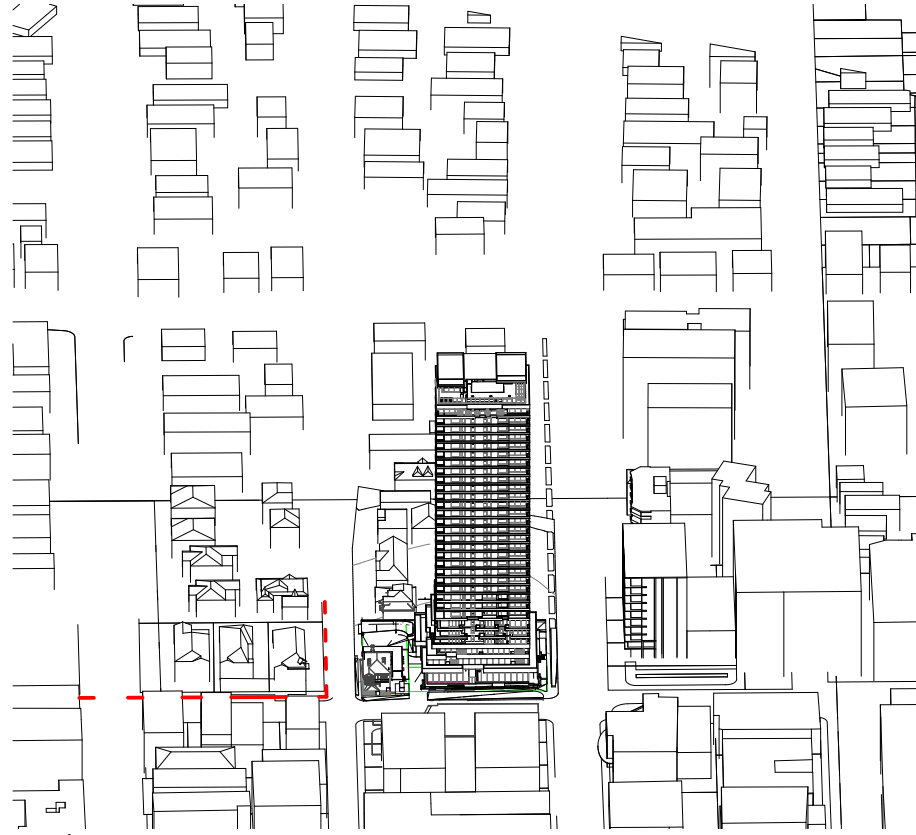
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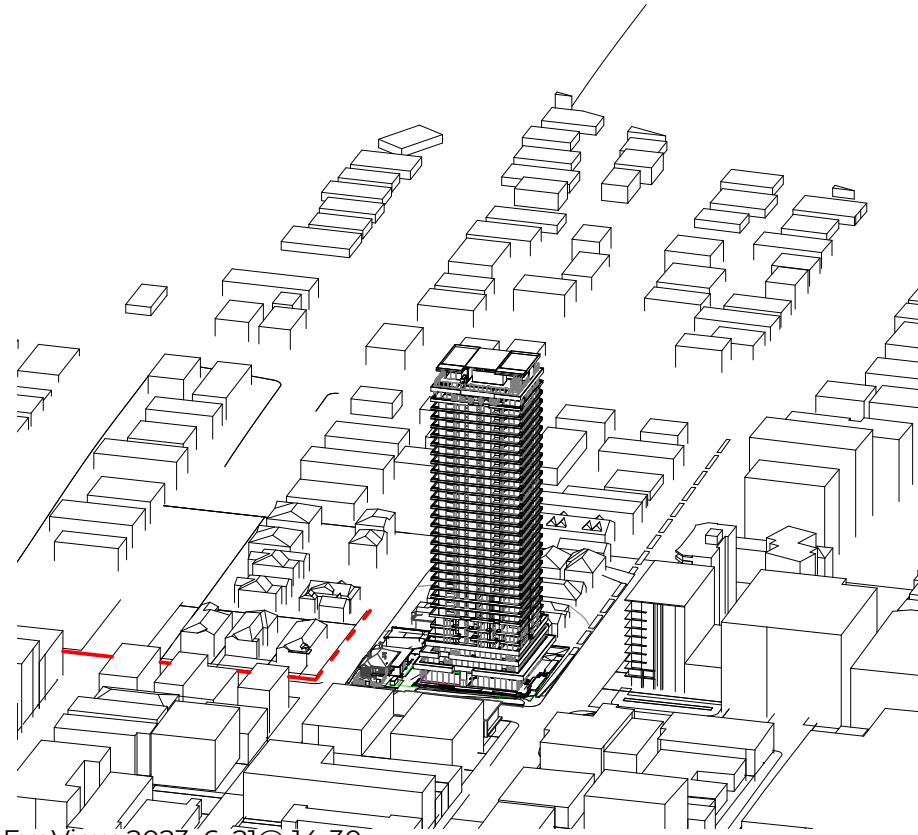
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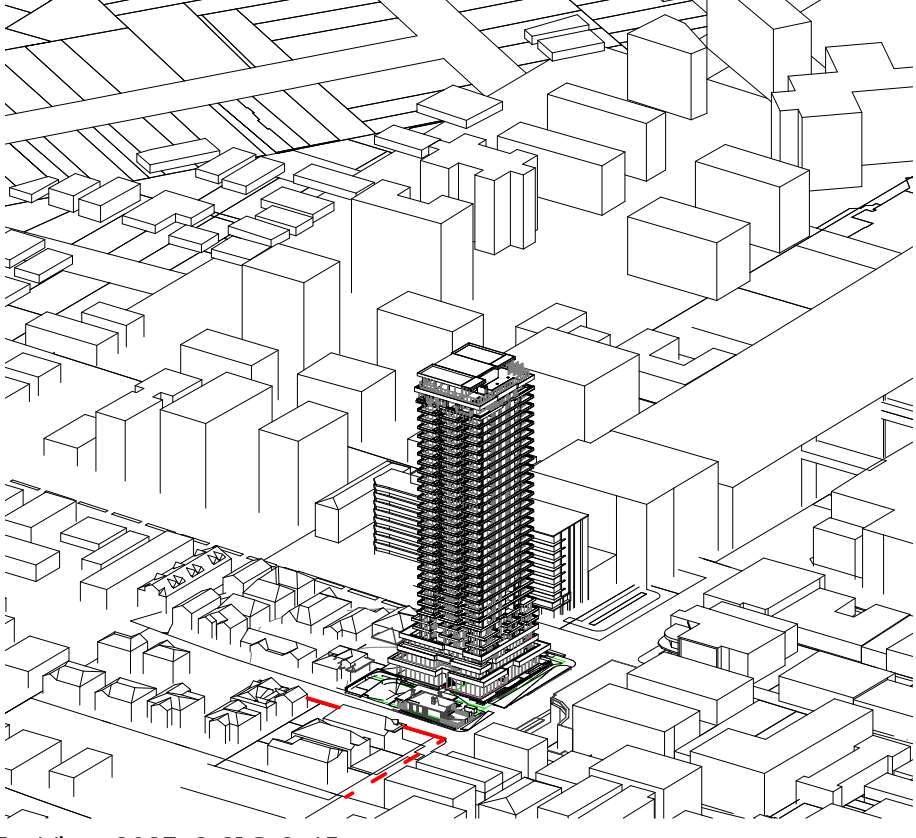
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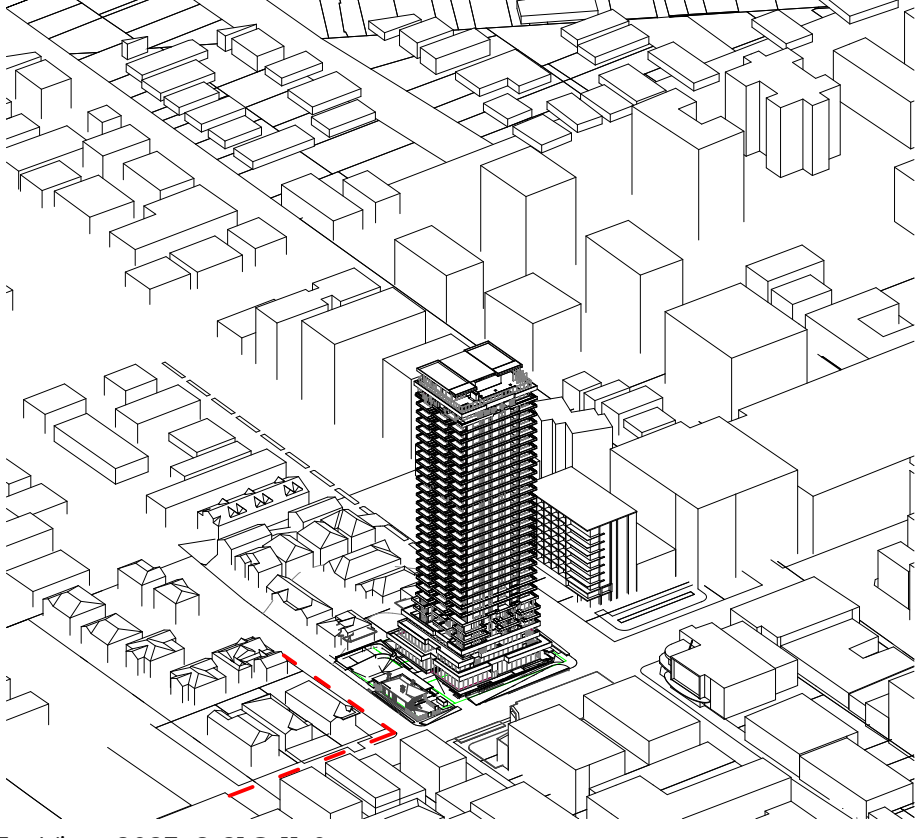
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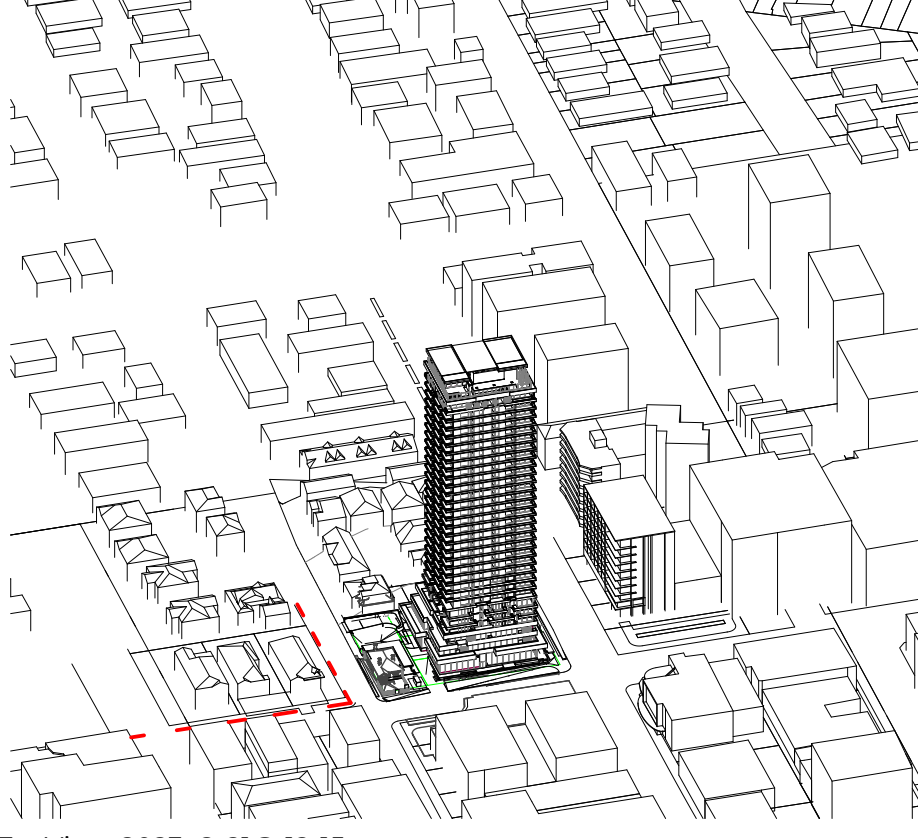
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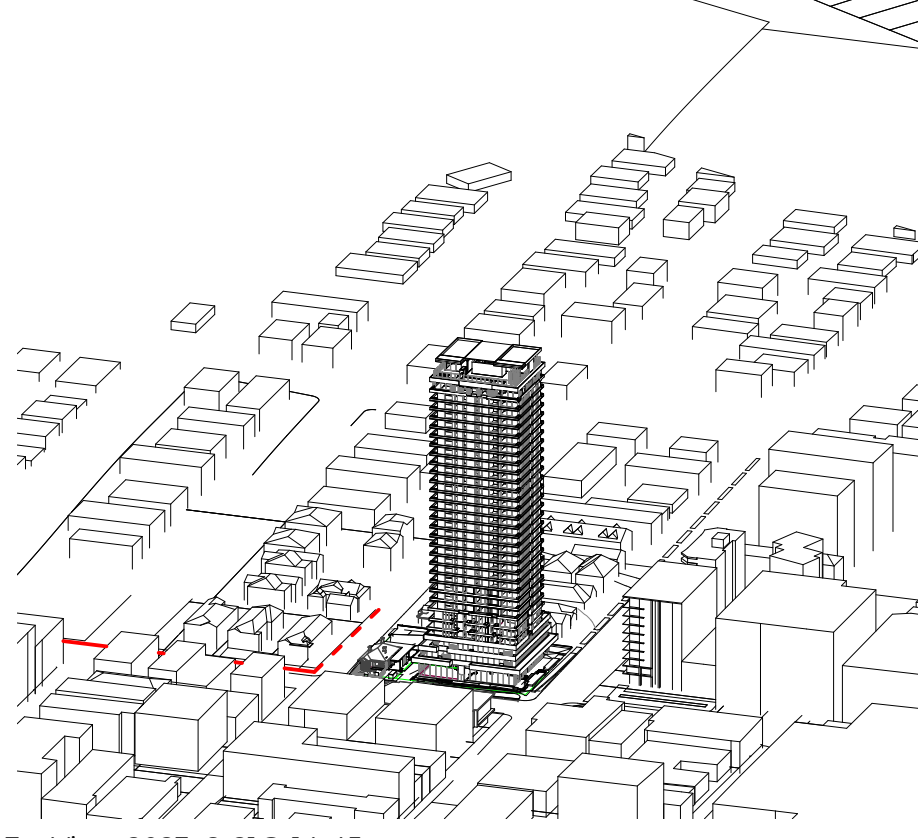
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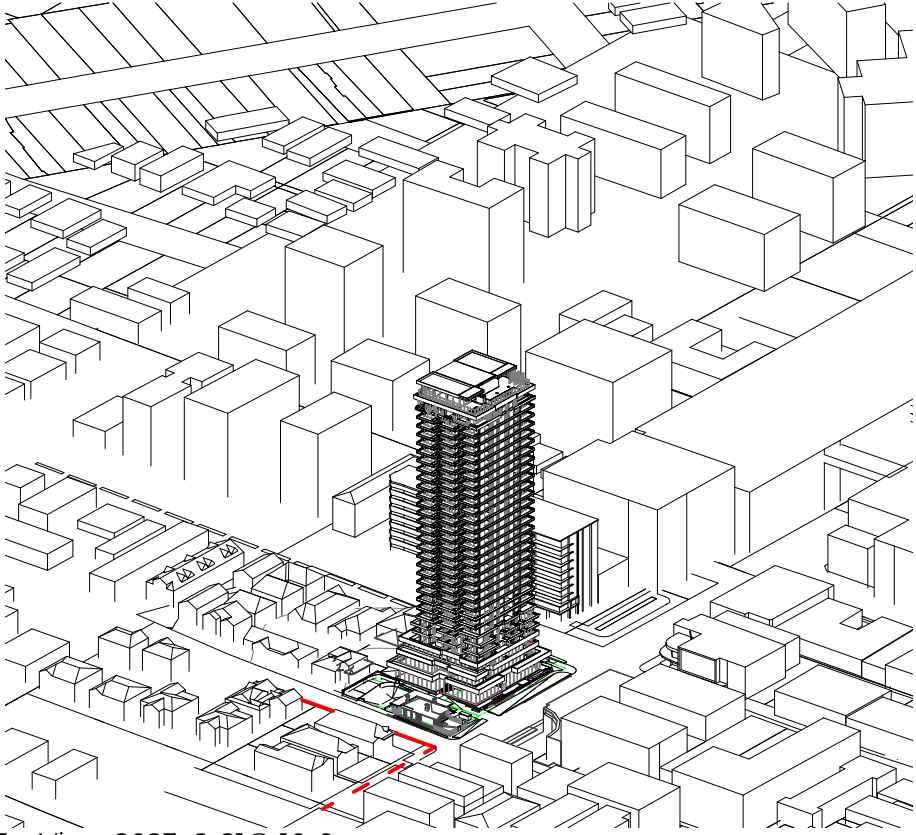
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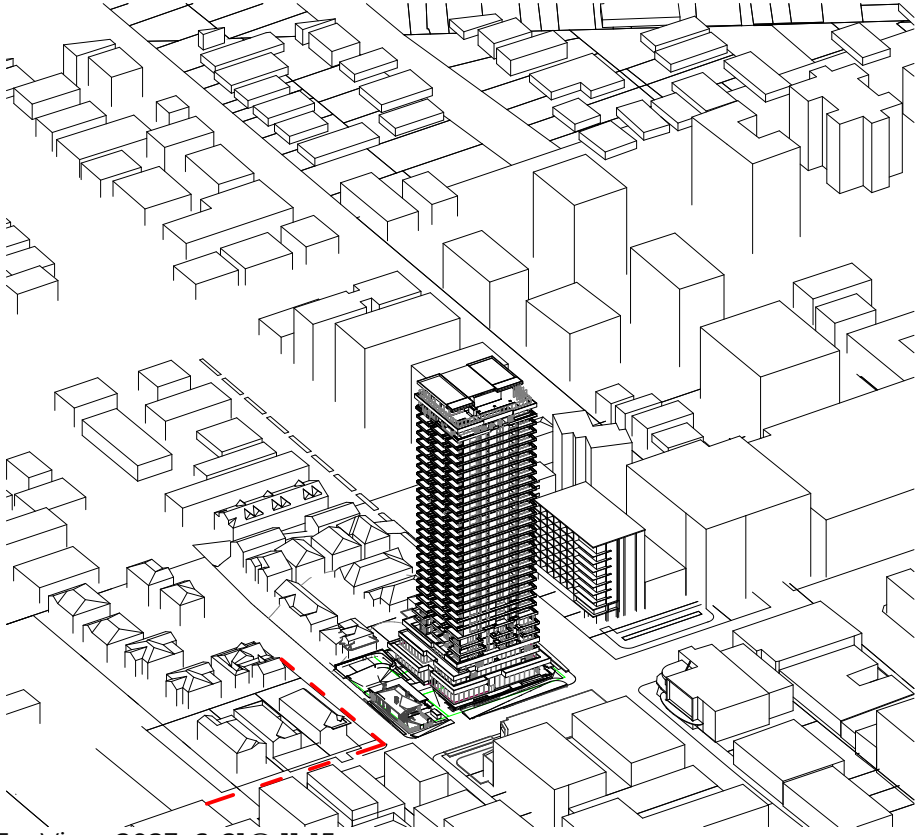
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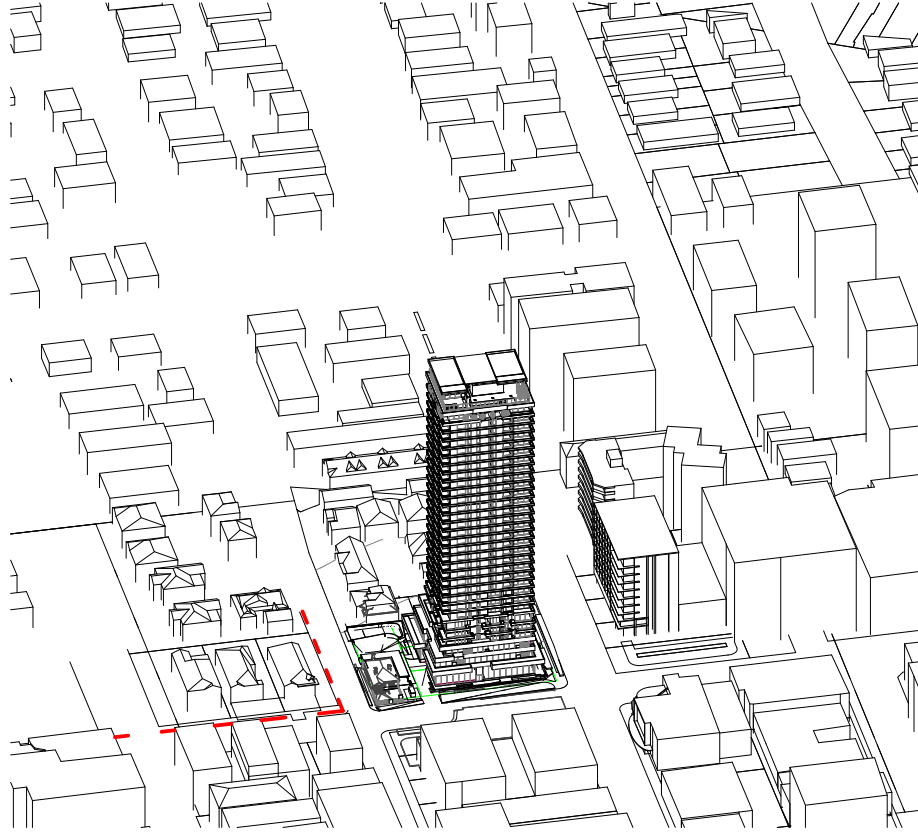
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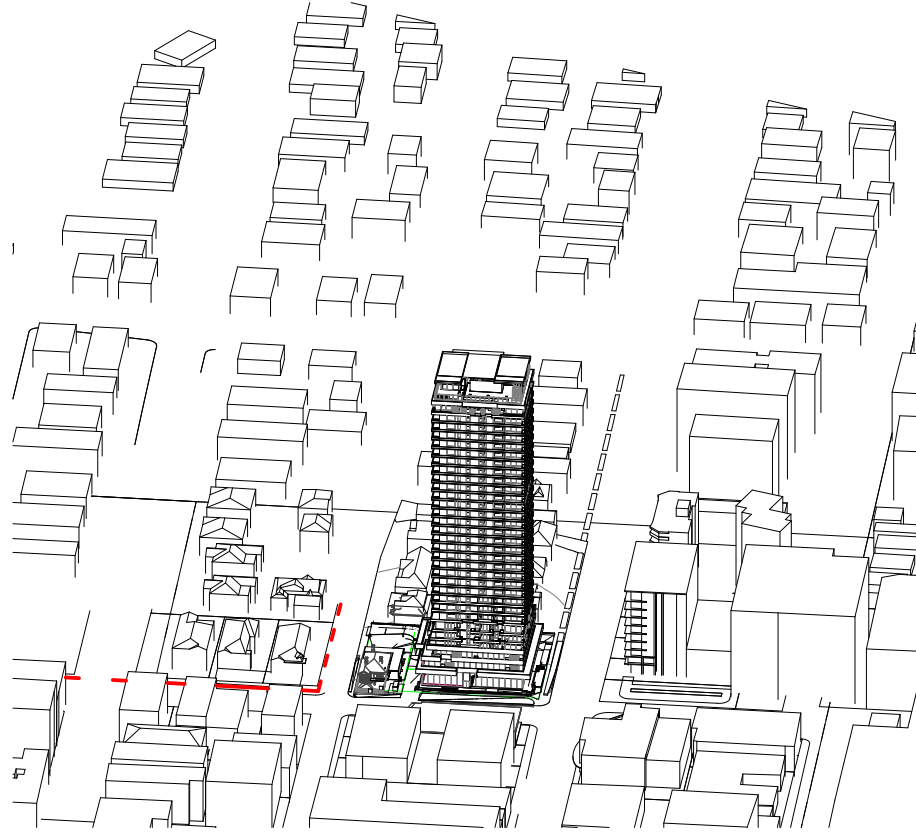
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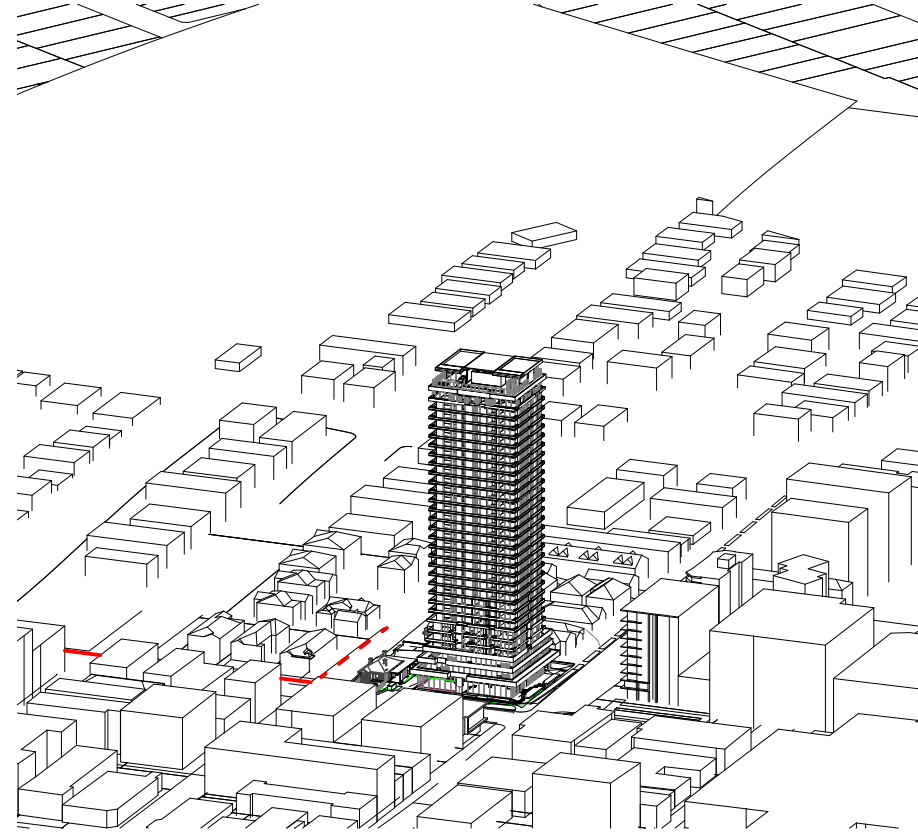
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25. SunEyeView-2023_6_21@ 15-0 -

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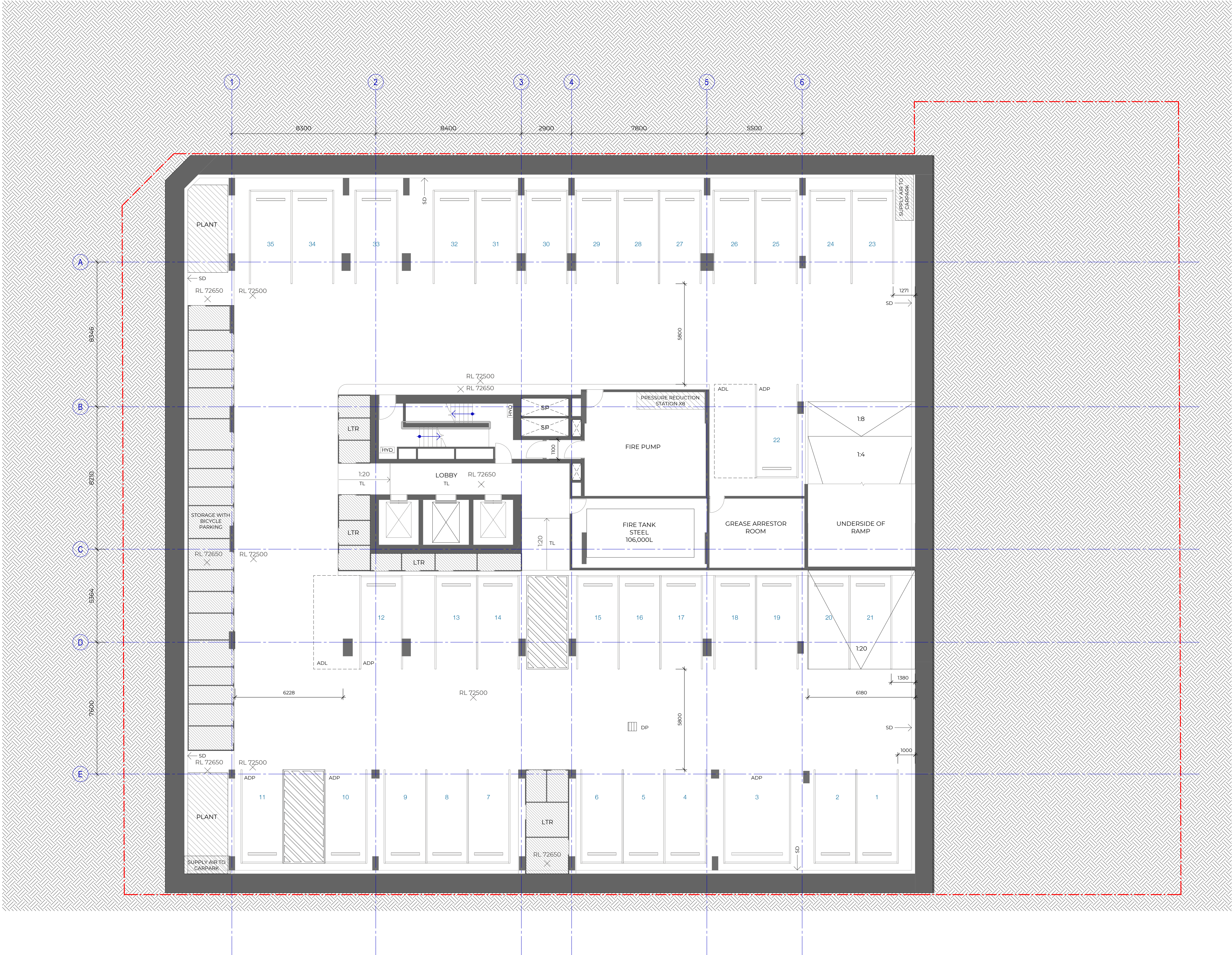
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Sheet title
WINTER SOLSTICE
SHADOW DIAGRAMS - SUNS EYE
VIEWS

Sheet number 1202	Revision 1
Status FOR DEVELOPMENT APPLICATION	



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19/12/23

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LEGEND

BASEMENT

DP	Drainage Pipe
LD	Linear Drain
SD	Spoon Drain
ADL	Adaptable Loading Area
ADP	Adaptable Parking Space
EOT	End-of-Trip Facility
MP	Motorcycle Parking Space
VP	Visitor Parking Space

GROUND

CO	Crossover
EP	Electric Pole
FS	Furniture - Seat
HB	Hydrant Booster
LP	Power and Light Pole
SS	Street Sign
TCR	Traffic Control Pole
ZGR	Zone for Gas Regulator

TOWER

C	Comms. Cupboard
E	Electrical Cupboard
F	High Pressure Fire Pipes Riser
GT	Gate
GTL	Louvered Gate
H	Hydraulic Riser
LR	Stair Relief
M	Meter Room
PB	Planter Box
SCN	Privacy Screen
SCR	Screen
SK	Skylight
SP	Stair Press
SPS	Precast Spandrel Shading Device
VRV	Centralised VRF Plant Room
BL	Balustrade
CL	Commercial Lift
FCR	Fire Control Room
GBC	Garbage Chute
LTR	Lockable Storage
RL-R3	Residential Lift
ST	Storage
ST	Stone Paving
STT	Stone Tile Paving
TD	Timber Deck
TL	Tile

NOTE:

The final facade profile of the proposed design may be subjected to change based on the client's inputs or the availability of facade modules by the supplier.

PARKING

Total	35
Adaptable	5

STORAGE

33

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Client
CORONATION PROPERTY

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Project number

121876

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Sheet size

Scale

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Sheet title

BASEMENT 5

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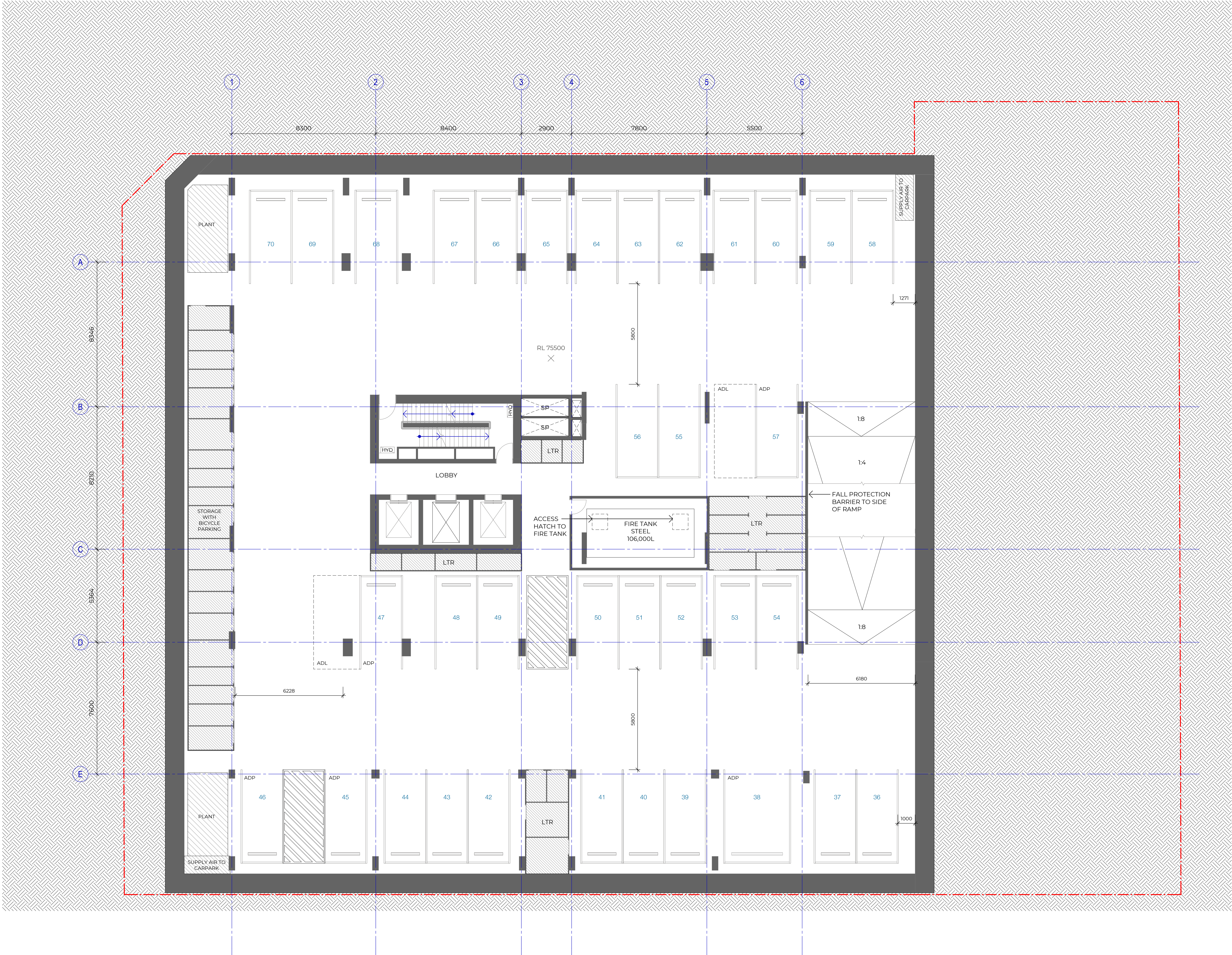
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Revision

1

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LEGEND

BASEMENT

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VP	Visitor Parking Space

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EP	Electric Pole
FS	Furniture - Seat
HB	Hydrant Booster
LP	Power and Light Pole
SS	Street Sign
TCR	Traffic Control Pole
ZGR	Zone for Gas Regulator

TOWER

C	Comms. Cupboard
E	Electrical Cupboard
F	High Pressure Fire Pipes Riser
GT	Gate
GTL	Louvred Gate
H	Hydraulic Riser
LR	Stair Relief
M	Meter Room
PB	Planter Box
SCN	Privacy Screen
SCR	Screen
SK	Skylight
SP	Stair Press
SPS	Precast Spandrel Shading Device
VRV	Centralised VRF Plant Room
BL	Balustrade
CL	Commercial Lift
FCR	Fire Control Room
GBC	Garbage Chute
LTR	Lockable Storage
RL-R3	Residential Lift
ST	Storage
ST	Stone Paving
STT	Stone Tile Paving
TD	Timber Deck
TL	Tile

NOTE:

The final facade profile of the proposed design may be subjected to change based on the client's inputs or the availability of facade modules by the supplier.

PARKING

Total	35
Adaptable	5

STORAGE 38

Project
ARCHER & ALBERT

Client
CORONATION PROPERTY

Issuer

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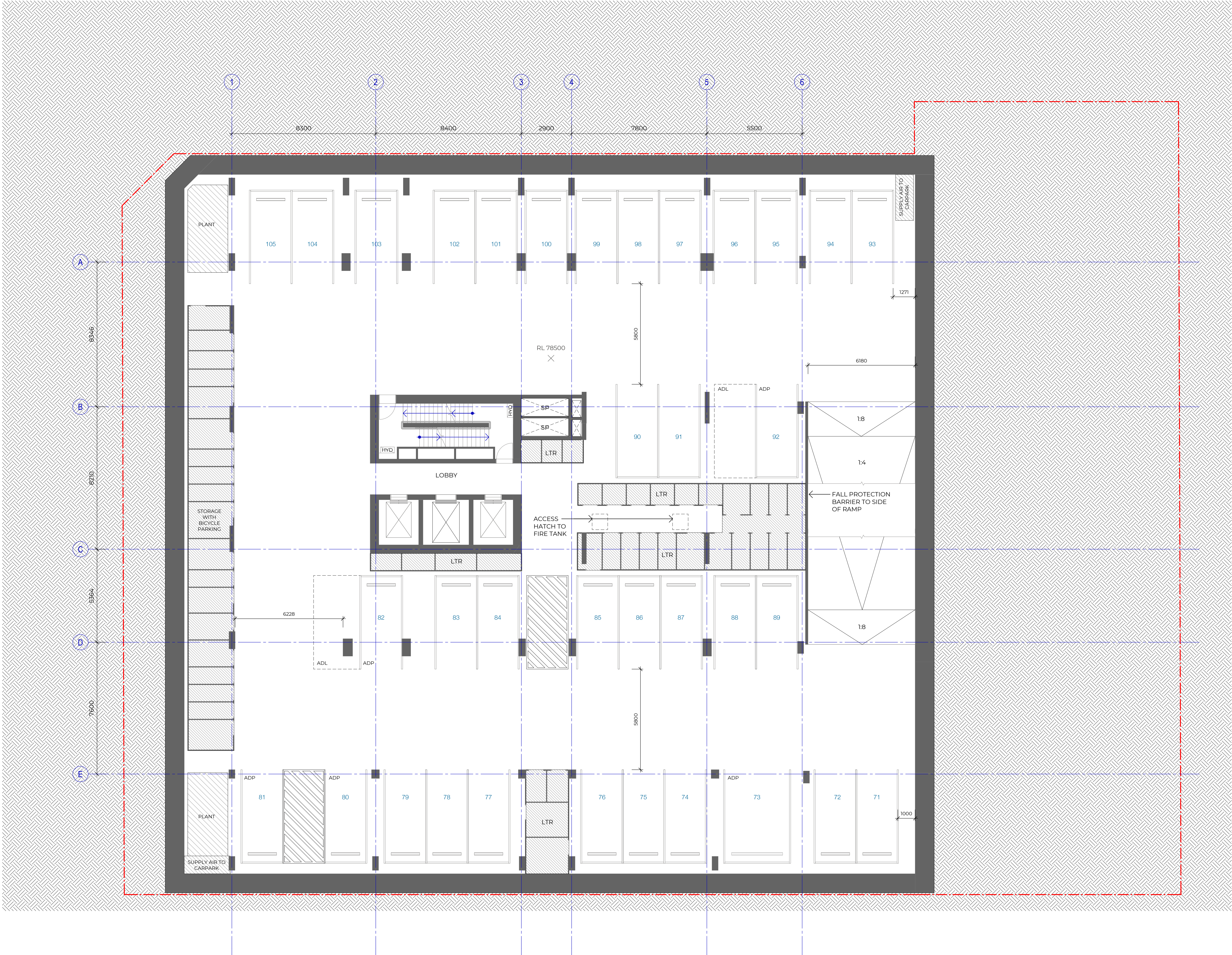
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LEGEND

BASEMENT

DP	Drainage Pipe
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SD	Spoon Drain
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ADP	Adaptable Parking Space
EOT	End-of-Trip Facility
MP	Motorcycle Parking Space
VP	Visitor Parking Space

GROUND

CO	Crossover
EP	Electric Pole
FS	Furniture - Seat
HB	Hydrant Booster
LP	Power and Light Pole
SS	Street Sign
TCR	Traffic Control Pole
ZGR	Zone for Gas Regulator

TOWER

C	Comms. Cupboard
E	Electrical Cupboard
F	High Pressure Fire Pipes Riser
GT	Gate
GTL	Louvred Gate
H	Hydraulic Riser
LR	Stair Relief
M	Meter Room
PB	Planter Box
SCN	Privacy Screen
SCR	Screen
SK	Skylight
SP	Stair Press
SPS	Precast Spandrel Shading Device
VRV	Centralised VRF Plant Room
BL	Balustrade
CL	Commercial Lift
FCR	Fire Control Room
GBC	Garbage Chute
LTR	Lockable Storage
RI-R3	Residential Lift
ST	Storage
ST	Stone Paving
STT	Stone Tile Paving
TD	Timber Deck
TL	Tile

NOTE:
The final facade profile of the proposed design may be subjected to change based on the client's inputs or the availability of facade modules by the supplier.

PARKING

Total	35
Adaptable	5

STORAGE

	51
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Project
ARCHER & ALBERT

Client
CORONATION PROPERTY

Issuer
W-B
WOODS BAGOT

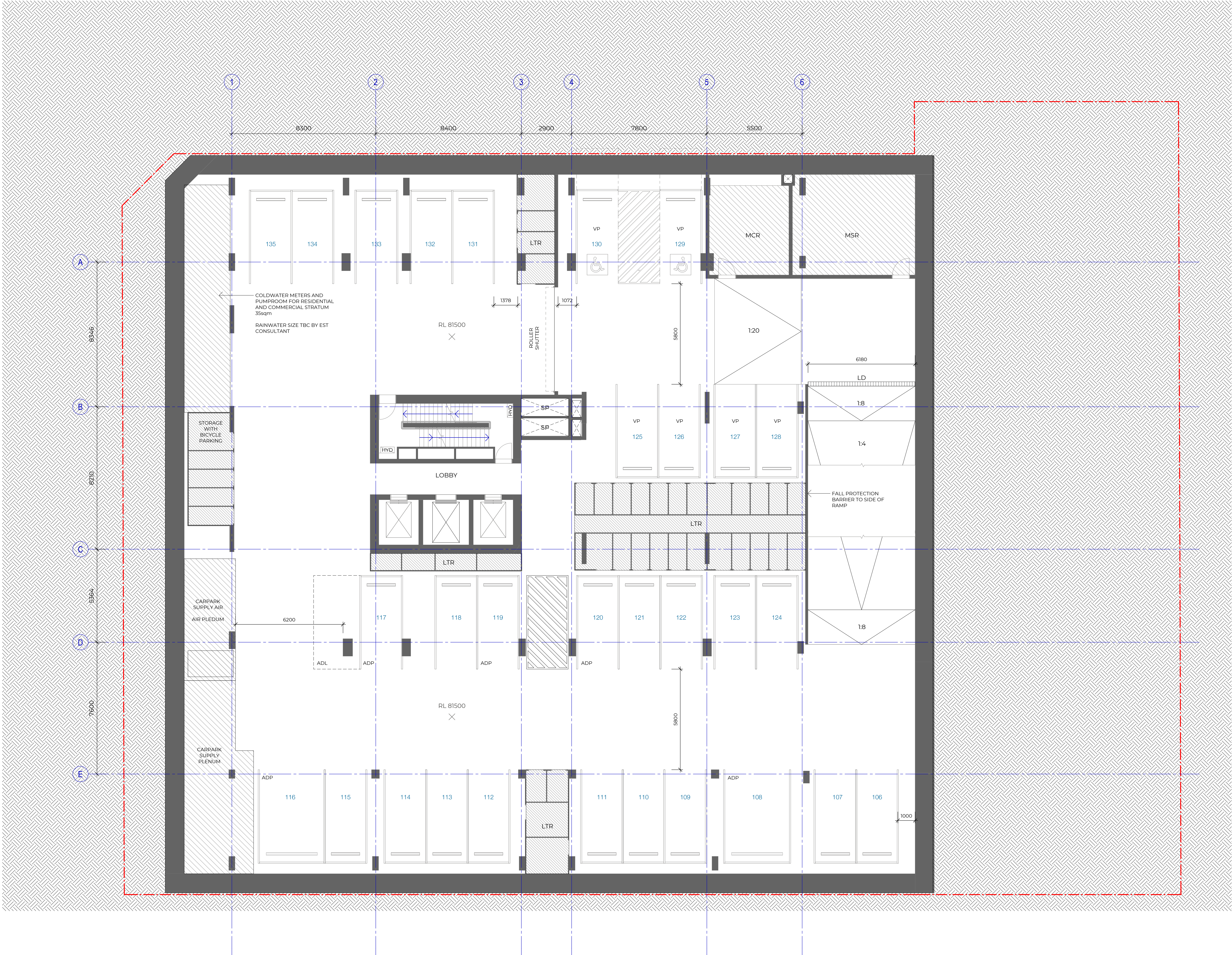
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BASEMENT 3

Sheet number
DA-2203
Status
FOR DEVELOPMENT
APPLICATION

Revision
1



Recent revision history		
#	Status	Description
1		ISSUE FOR DA

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LEGEND

BASEMENT

DP	Drainage Pipe
LD	Linear Drain
SD	Spoon Drain
ADL	Adaptable Loading Area
ADP	Adaptable Parking Space
EOT	End-of-Trip Facility
MP	Motorcycle Parking Space
VP	Visitor Parking Space

GROUND

CO	Crossover
EP	Electric Pole
FS	Furniture - Seat
HB	Hydrant Booster
LP	Power and Light Pole
SS	Street Sign
TCR	Traffic Control Pole
ZGR	Zone for Gas Regulator

TOWER

C	Comms. Cupboard
E	Electrical Cupboard
F	High Pressure Fire Pipes Riser
GT	Gate
GTL	Louvred Gate
H	Hydraulic Riser
LR	Stair Relief
M	Meter Room
PB	Planter Box
SCN	Privacy Screen
SCR	Screen
SK	Skylight
SP	Stair Press
SPS	Precast Spandrel Shading Device
VRV	Centralised VRF Plant Room
BL	Balustrade
CL	Commercial Lift
FCR	Fire Control Room
GBC	Garbage Chute
LTR	Lockable Storage
RL-R3	Residential Lift
ST	Storage
ST	Stone Paving
STT	Stone Tile Paving
TD	Timber Deck
TL	Tile

NOTE:

The final facade profile of the proposed design may be subjected to change based on the client's inputs or the availability of facade modules by the supplier.

PARKING

Total	30
Visitor	6
DDA	2
Adaptable	5

STORAGE

40

Project
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Client
CORONATION PROPERTY

Issuer

W-B
WOODS BAGOT

Project number

121876

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Approved

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Size check

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Sheet title

BASEMENT 2

Sheet number

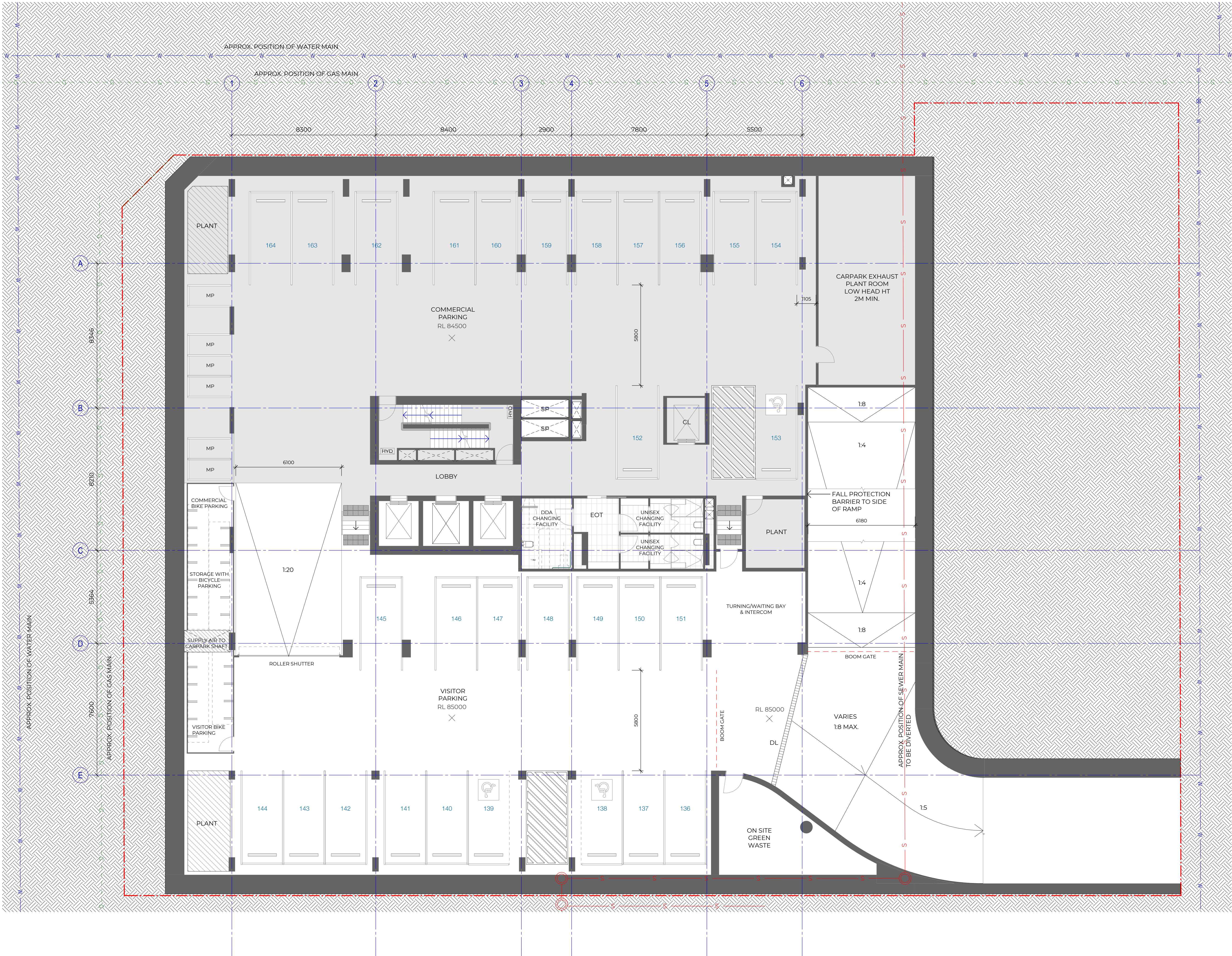
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Revision

1

Status

FOR DEVELOPMENT
APPLICATION



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#	Status	Description
1		ISSUE FOR DA

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LEGEND

BASEMENT

DP	Drainage Pipe
LD	Linear Drain
SD	Spoon Drain
ADL	Adaptable Loading Area
ADP	Adaptable Parking Space
EOT	End-of-Trip Facility
MP	Motorcycle Parking Space
VP	Visitor Parking Space

GROUND

CO	Crossover
EP	Electric Pole
FS	Furniture - Seat
HB	Hydrant Booster
LP	Power and Light Pole
SS	Street Sign
TCR	Traffic Control Pole
ZGR	Zone for Gas Regulator

TOWER

C	Comms. Cupboard
E	Electrical Cupboard
F	High Pressure Fire Pipes Riser
GT	Gate
GTL	Louvre Gate
H	Hydraulic Riser
LR	Stair Relief
M	Meter Room
PB	Planter Box
SCN	Privacy Screen
SCR	Screen
SK	Skylight
SP	Stair Press
SPS	Precast Spandrel Shading Device
VRV	Centralised VRF Plant Room
BL	Balustrade
CL	Commercial Lift
FCR	Fire Control Room
GBC	Garbage Chute
LTR	Lockable Storage
RL-R3	Residential Lift
ST	Storage
ST	Stone Paving
STT	Stone Tile Paving
TD	Timber Deck
TL	Tile

COMMERCIAL PARKING

NOTE:
Total 13
Final facade profile of the proposed design may be subjected to change based on the client's inputs or the availability of facade modules by the supplier.

VISITOR PARKING

Total	16
DDA	2

MOTORCYCLE PARKING 6

STORAGE 33

Project
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Client
CORONATION PROPERTY

Issuer

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WOODS BAGOT

Project number

121876

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Sheet title

BASEMENT 1

Sheet number

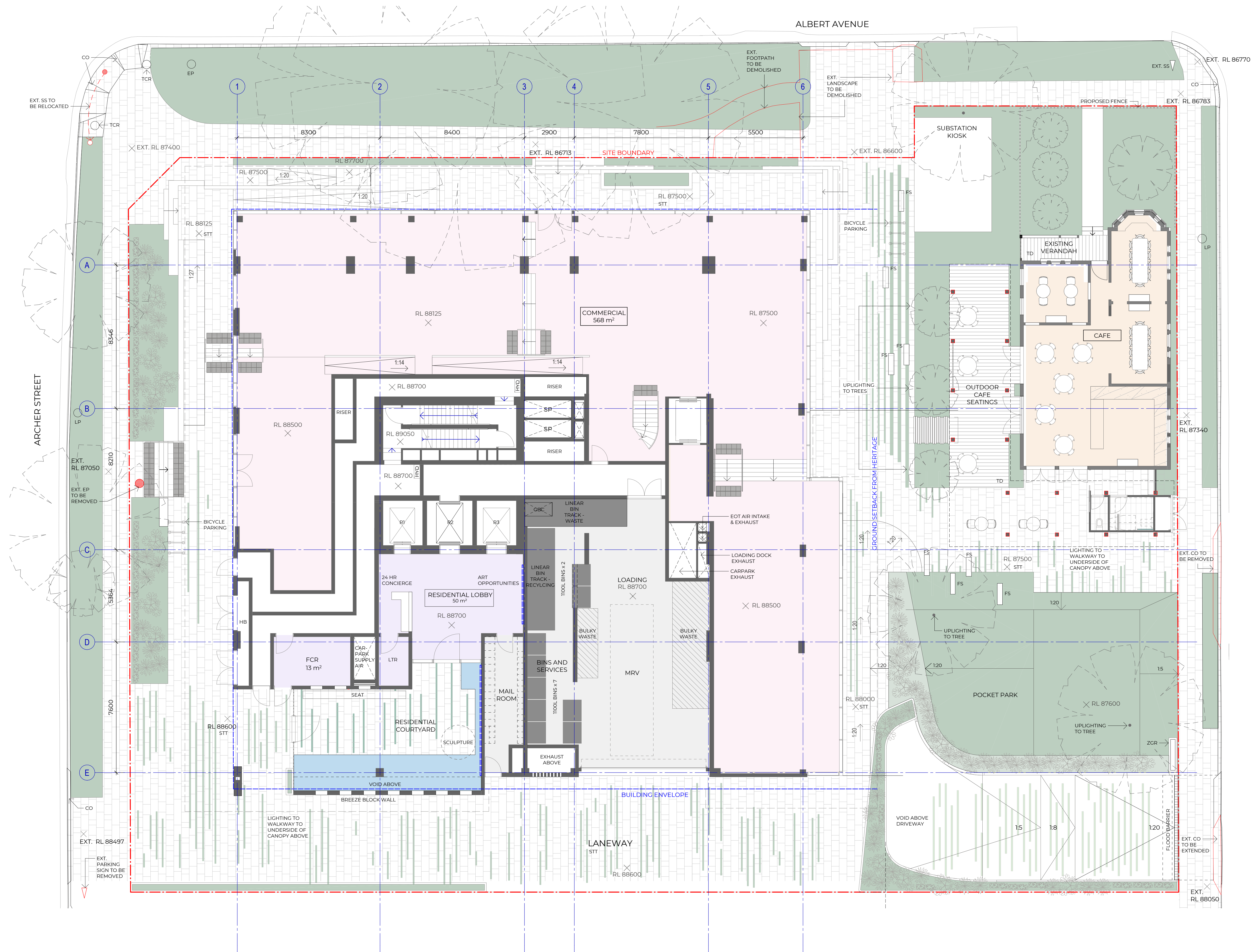
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Revision

1

Status

FOR DEVELOPMENT
APPLICATION



Recent revision history		
#	Status	Description
1		ISSUE FOR DA

Date
19/12/23

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LEGEND

BASEMENT

DP	Drainage Pipe
LD	Linear Drain
SD	Spoon Drain
ADL	Adaptable Loading Area
ADP	Adaptable Parking Space
EOT	End-of-Trip Facility
MP	Motorcycle Parking Space
VP	Visitor Parking Space

GROUND

CO	Crossover
EP	Electric Pole
FS	Furniture - Seat
HB	Hydrant Booster
LP	Power and Light Pole
SS	Street Sign
TCR	Traffic Control Pole
ZGR	Zone for Gas Regulator

TOWER

C	Comms. Cupboard
E	Electrical Cupboard
F	High Pressure Fire Pipes Riser
GT	Gate
GTL	Louvered Gate
H	Hydraulic Riser
LR	Stair Relief
M	Meter Room
PB	Planter Box
SCN	Privacy Screen
SCR	Screen
SK	Skylight
SP	Stair Press
SPS	Precast Spandrel Shading Device
VRV	Centralised VRV Plant Room
BL	Balustrade
CL	Commercial Lift
FCR	Fire Control Room
GBC	Garbage Chute
LTR	Lockable Storage
RL-R3	Residential Lift
ST	Storage
ST	Stone Paving
STT	Stone Tile Paving
TD	Timber Deck
TL	Tile

NOTE:

The final facade profile of the proposed design may be subjected to change based on the client's inputs or the availability of facade modules by the supplier.

Project
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Client
CORONATION PROPERTY

Issuer
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WOODS BAGOT

Project number
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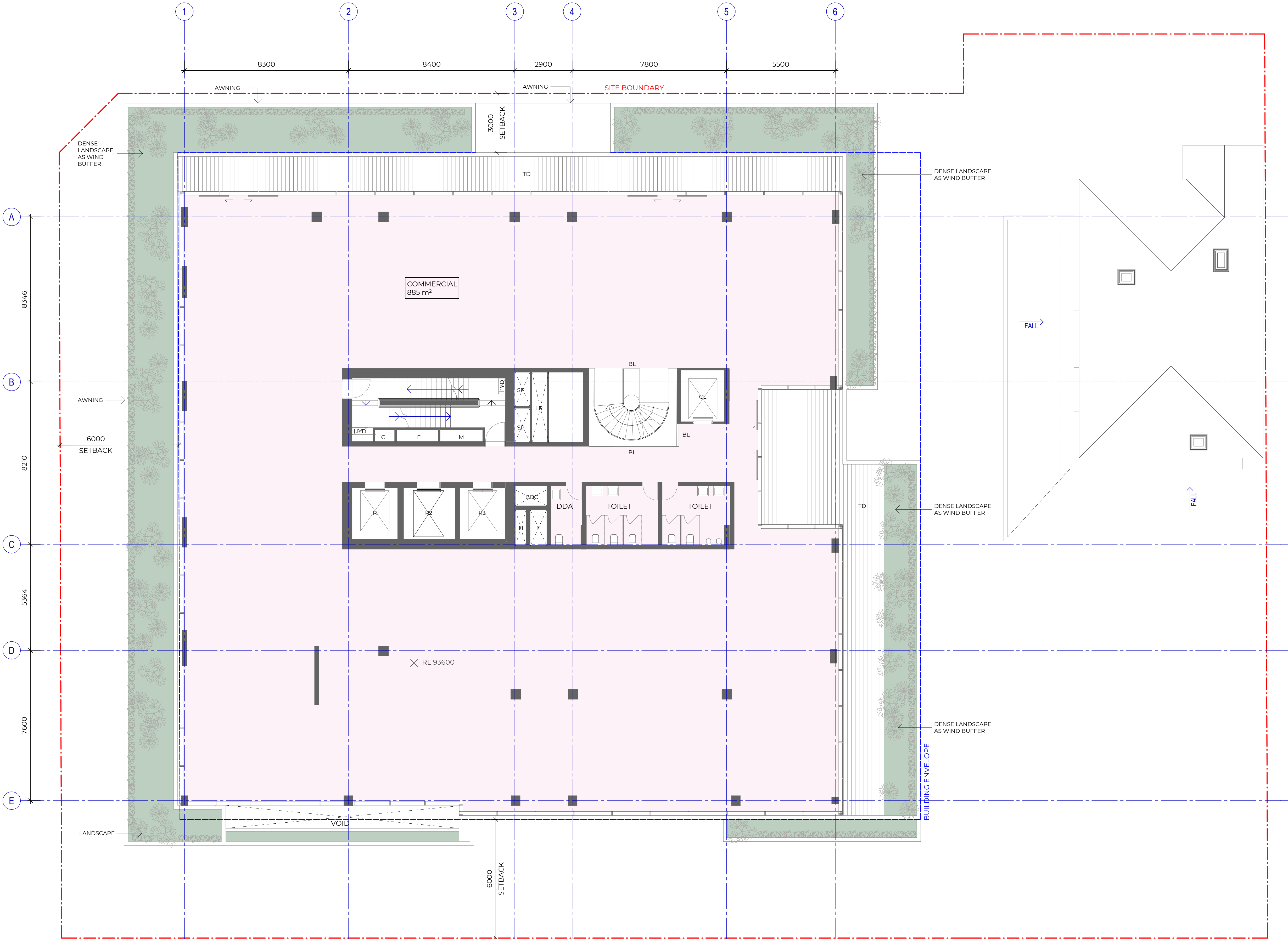
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GROUND FLOOR PLAN

Sheet number
DA-2210

Revision
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Status
FOR DEVELOPMENT APPLICATION



Recent revision history		
#	Status	Description
1		ISSUE FOR DA

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LEGEND

BASEMENT

DP Drainage Pipe
LD Linear Drain
SD Spoon Drain

ADL Adaptable Loading Area
ADP Adaptable Parking Space
EOT End-of-Trip Facility
MP Motorcycle Parking Space
VP Visitor Parking Space

GROUND

CO Crossover
EP Electric Pole
FS Furniture - Seat
HB Hydrant Booster
LP Power and Light Pole
SS Street Sign
TCR Traffic Control Pole
ZGR Zone for Gas Regulator

TOWER

C Comms. Cupboard
E Electrical Cupboard
F High Pressure Fire Pipes Riser
GT Gate
GTL Louvred Gate
H Hydraulic Riser
LR Stair Relief
M Meter Room
PB Planter Box
SCN Privacy Screen
SCR Screen
SK Skylight
SP Stair Press
SPS Precast Spandrel Shading Device
VRV Centralised VRF Plant Room

BL Balustrade
CL Commercial Lift
FCR Fire Control Room
GBC Garbage Chute
LTR Lockable Storage
R1-R3 Residential Lift
ST Storage

ST Stone Paving
STT Stone Tile Paving
TD Timber Deck
TL Tile

NOTE:

The final facade profile of the proposed design may be subjected to change based on the client's inputs or the availability of facade modules by the supplier.

Project
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Client
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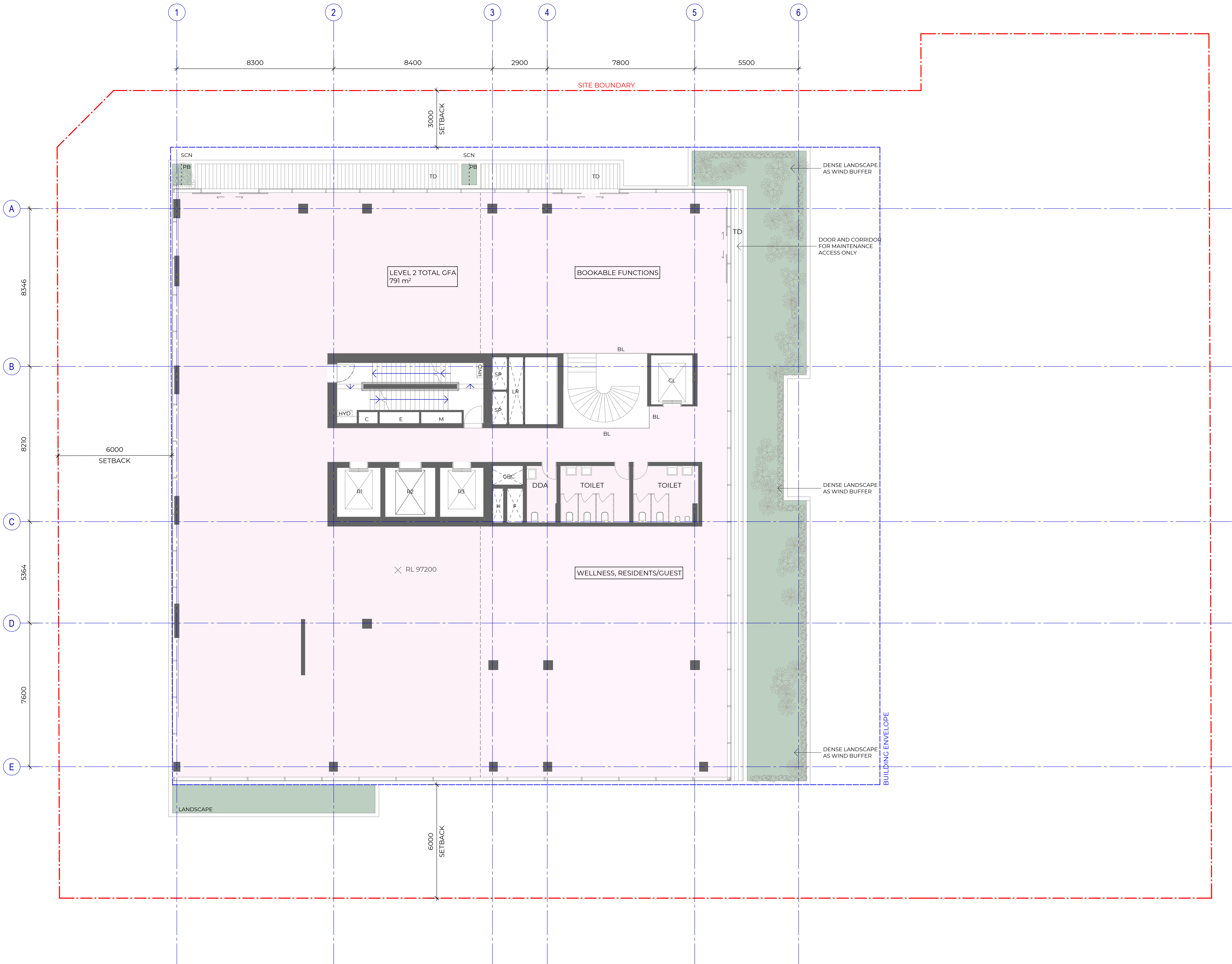
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LEVEL 1

Sheet number
DA-2211

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Recent revision history		
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1		ISSUE FOR DA

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LEGEND

BASEMENT

DP	Drainage Pipe
LD	Linear Drain
SD	Spoon Drain
ADL	Adaptable Loading Area
ADP	Adaptable Parking Space
EOT	End-of-Trip Facility
MP	Motorcycle Parking Space
VP	Visitor Parking Space

GROUND

CO	Crossover
EP	Electric Pole
FS	Furniture - Seat
HB	Hydrant Booster
LP	Power and Light Pole
SS	Street Sign
TCR	Traffic Control Pole
ZGR	Zone for Gas Regulator

TOWER

C	Comms. Cupboard
E	Electrical Cupboard
F	High Pressure Fire Pipes Riser
GT	Gate
GTL	Louvred Gate
H	Hydraulic Riser
LR	Stair Relief
M	Meter Room
PB	Planter Box
SCN	Privacy Screen
SCR	Screen
SK	Skylight
SP	Stair Press
SPS	Precast Spandrel Shading Device
VRV	Centralised VRF Plant Room
BL	Balustrade
CL	Commercial Lift
FCR	Fire Control Room
GBC	Garbage Chute
LTR	Lockable Storage
RL-R3	Residential Lift
ST	Storage
ST	Stone Paving
STT	Stone Tile Paving
TD	Timber Deck
TL	Tile

NOTE:

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Project
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Client
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Issuer

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WOODS BAGOT

Project number
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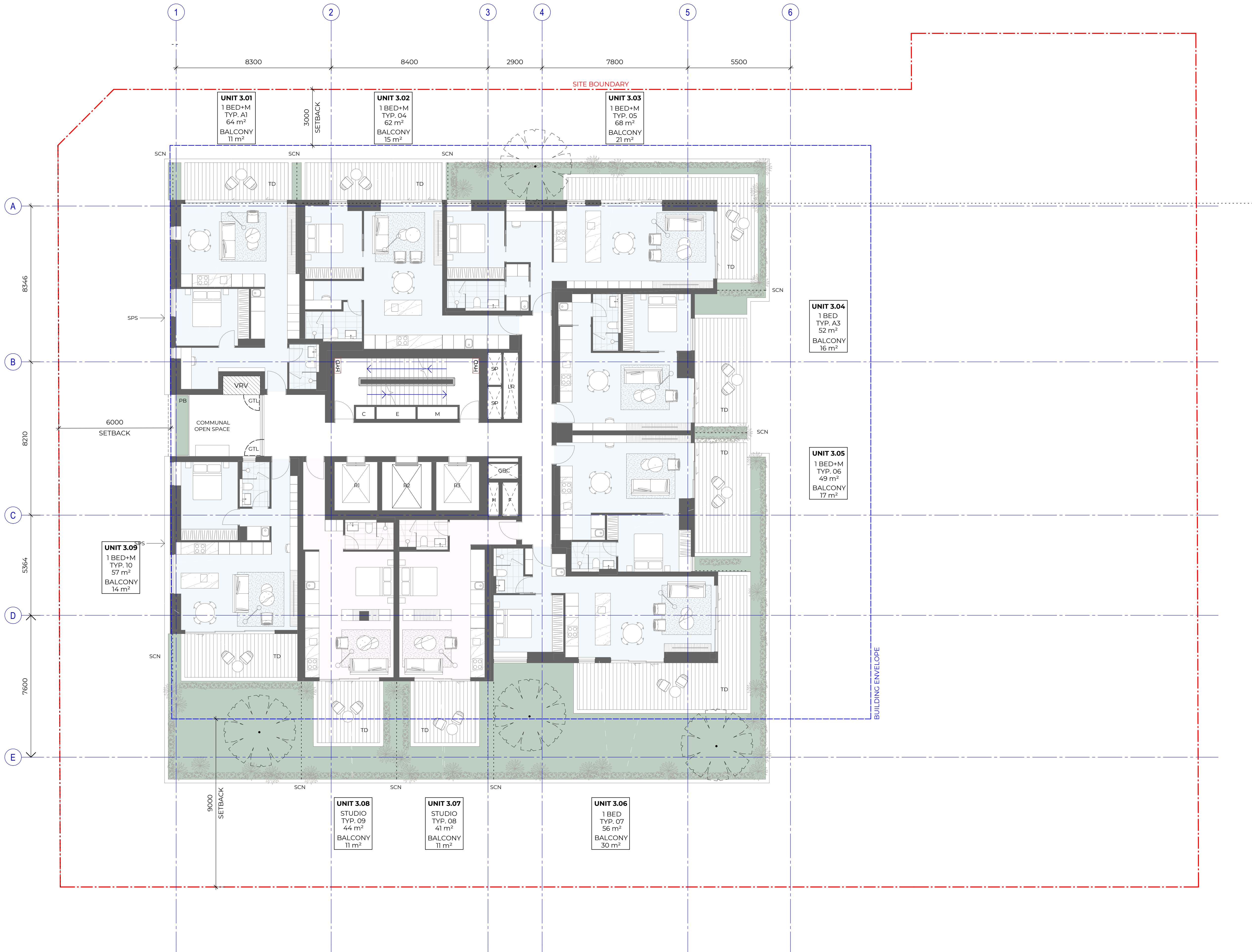
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LEVEL 2

Sheet number
DA-2212

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APPLICATION



Recent revision history		
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1		ISSUE FOR DA

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LEGEND

BASEMENT

DP Drainage Pipe
LD Linear Drain
SD Spoon Drain

ADL Adaptable Loading Area
ADP Adaptable Parking Space
EOT End-of-Trip Facility
MP Motorcycle Parking Space
VP Visitor Parking Space

GROUND

CO Crossover
EP Electric Pole
FS Furniture - Seat
HB Hydrant Booster
LP Power and Light Pole
SS Street Sign
TCR Traffic Control Pole
ZGR Zone for Gas Regulator

TOWER

C Comms. Cupboard
E Electrical Cupboard
F High Pressure Fire Pipes Riser
GT Gate
GTL Louvred Gate
H Hydraulic Riser
LR Stair Relief
M Meter Room
PB Planter Box
SCN Privacy Screen
SCR Screen
SK Skylight
SP Stair Press
SPS Precast Spandrel Shading Device
VRV Centralised VRV Plant Room

BL Balustrade
CL Commercial Lift
FCR Fire Control Room
GBC Garbage Chute
LTR Lockable Storage
R1-R3 Residential Lift
ST Storage

ST Stone Paving
STT Stone Tile Paving
TD Timber Deck
TL Tile

NOTE:

The final facade profile of the proposed design may be subjected to change based on the client's inputs or the availability of facade modules by the supplier.

Project
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Client
CORONATION PROPERTY

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Project number
121876

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Sheet title

LOWRISE - PODIUM
LEVEL 3

Sheet number
DA-2213

Revision
1

Status
FOR DEVELOPMENT
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19/12/23

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LEGEND

BASEMENT

DP Drainage Pipe
LD Linear Drain
SD Spoon Drain

ADL Adaptable Loading Area
ADP Adaptable Parking Space
EOT End-of-Trip Facility
MP Motorcycle Parking Space
VP Visitor Parking Space

GROUND

CO Crossover
EP Electric Pole
FS Furniture - Seat
HB Hydrant Booster
LP Power and Light Pole
SS Street Sign
TCR Traffic Control Pole
ZGR Zone for Gas Regulator

TOWER

C Comms. Cupboard
E Electrical Cupboard
F High Pressure Fire Pipes Riser
GT Gate
GTL Louvred Gate
H Hydraulic Riser
LR Stair Relief
M Meter Room
PB Planter Box
SCN Privacy Screen
SCR Screen
SK Skylight
SP Stair Press
SPS Precast Spandrel Shading Device
VRV Centralised VRV Plant Room

BL Balustrade
CL Commercial Lift
FCR Fire Control Room
GBC Garbage Chute
LTR Lockable Storage
R1-R3 Residential Lift
ST Storage

ST Stone Paving
STT Stone Tile Paving
TD Timber Deck
TL Tile

NOTE:

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Project
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Client
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Project number
121876

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Sheet title

**LOWRISE - TYPICAL
LEVEL 4**

Sheet number
DA-2214

Revision
1

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APPLICATION**



Recent revision history		
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1		ISSUE FOR DA

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LEGEND

BASEMENT

DP Drainage Pipe
LD Linear Drain
SD Spoon Drain

ADL Adaptable Loading Area
ADP Adaptable Parking Space
EOT End-of-Trip Facility
MP Motorcycle Parking Space
VP Visitor Parking Space

GROUND

CO Crossover
EP Electric Pole
FS Furniture - Seat
HB Hydrant Booster
LP Power and Light Pole
SS Street Sign
TCR Traffic Control Pole
ZGR Zone for Gas Regulator

TOWER

C Comms. Cupboard
E Electrical Cupboard
F High Pressure Fire Pipes Riser
GT Gate
GTL Louvred Gate
H Hydraulic Riser
LR Stair Relief
M Meter Room
PB Planter Box
SCN Privacy Screen
SCR Screen
SK Skylight
SP Stair Press
SPS Precast Spandrel Shading Device
VRV Centralised VRV Plant Room

BL Balustrade
CL Commercial Lift
FCR Fire Control Room
GBC Garbage Chute
LTR Lockable Storage
R1-R3 Residential Lift
ST Storage

ST Stone Paving
STT Stone Tile Paving
TD Timber Deck
TL Tile

NOTE:

The final facade profile of the proposed design may be subjected to change based on the client's inputs or the availability of facade modules by the supplier.

Project
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Client
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Project number

121876

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Scale

1 : 100

Sheet title

LOWRISE - TYPICAL
LEVEL 5

Sheet number

DA-2215

Revision

1

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LEGEND

BASEMENT

DP Drainage Pipe
LD Linear Drain
SD Spoon Drain

ADL Adaptable Loading Area
ADP Adaptable Parking Space
EOT End-of-Trip Facility
MP Motorcycle Parking Space
VP Visitor Parking Space

GROUND

CO Crossover
EP Electric Pole
FS Furniture - Seat
HB Hydrant Booster
LP Power and Light Pole
SS Street Sign
TCR Traffic Control Pole
ZGR Zone for Gas Regulator

TOWER

C Comms. Cupboard
E Electrical Cupboard
F High Pressure Fire Pipes Riser
GT Gate
GTL Louvred Gate
H Hydraulic Riser
LR Stair Relief
M Meter Room
PB Planter Box
SCN Privacy Screen
SCR Screen
SK Skylight
SP Stair Press
SPS Precast Spandrel Shading Device
VRV Centralised VRF Plant Room

BL Balustrade
CL Commercial Lift
FCR Fire Control Room
GBC Garbage Chute
LTR Lockable Storage
R1-R3 Residential Lift
ST Storage

ST Stone Paving
STT Stone Tile Paving
TD Timber Deck
TL Tile

NOTE:

The final facade profile of the proposed design may be subjected to change based on the client's inputs or the availability of facade modules by the supplier.

Project
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Client
CORONATION PROPERTY

Issuer

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Project number

121876

Size check

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Approved

Sheet size

A1

Scale

1 : 100

Sheet title

LEVEL 6

Sheet number

DA-2216

Revision

1

Status

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Recent revision history		
#	Status	Description
1		ISSUE FOR DA

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LEGEND

BASEMENT

DP Drainage Pipe
LD Linear Drain
SD Spoon Drain

ADL Adaptable Loading Area
ADP Adaptable Parking Space
EOT End-of-Trip Facility
MP Motorcycle Parking Space
VP Visitor Parking Space

GROUND

CO Crossover
EP Electric Pole
FS Furniture - Seat
HB Hydrant Booster
LP Power and Light Pole
SS Street Sign
TCR Traffic Control Pole
ZGR Zone for Gas Regulator

TOWER

C Comms. Cupboard
E Electrical Cupboard
F High Pressure Fire Pipes Riser
GT Gate
GTL Louvred Gate
H Hydraulic Riser
LR Stair Relief
M Meter Room
PB Planter Box
SCN Privacy Screen
SCR Screen
SK Skylight
SP Stair Press
SPS Precast Spandrel Shading Device
VRV Centralised VRF Plant Room

BL Balustrade
CL Commercial Lift
FCR Fire Control Room
GBC Garbage Chute
LTR Lockable Storage
R1-R3 Residential Lift
ST Storage

ST Stone Paving
STT Stone Tile Paving
TD Timber Deck
TL Tile

NOTE:

The final facade profile of the proposed design may be subjected to change based on the client's inputs or the availability of facade modules by the supplier.

Project
ARCHER & ALBERT

Client
CORONATION PROPERTY

Issuer
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WOODS BAGOT

Project number
121876

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Sheet title

LEVEL 7-8

Sheet number
DA-2217

Revision
1

Status
FOR DEVELOPMENT APPLICATION



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#	Status	Description
1		FOR INFORMATION
2		ISSUE FOR DA

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LEGEND

BASEMENT

DP	Drainage Pipe
LD	Linear Drain
SD	Spoon Drain
ADL	Adaptable Loading Area
ADP	Adaptable Parking Space
EOT	End-of-Trip Facility
MP	Motorcycle Parking Space
VP	Visitor Parking Space

GROUND

CO	Crossover
EP	Electric Pole
FS	Furniture - Seat
HB	Hydrant Booster
LP	Power and Light Pole
SS	Street Sign
TCR	Traffic Control Pole
ZGR	Zone for Gas Regulator

TOWER

C	Comms. Cupboard
E	Electrical Cupboard
F	High Pressure Fire Pipes Riser
GT	Gate
GTL	Louvred Gate
H	Hydraulic Riser
LR	Stair Relief
M	Meter Room
PB	Planter Box
SCN	Privacy Screen
SCR	Screen
SK	Skylight
SP	Stair Press
SPS	Precast Spandrel Shading Device
VRV	Centralised VRF Plant Room
BL	Balustrade
CL	Commercial Lift
FCR	Fire Control Room
GBC	Garbage Chute
LTR	Lockable Storage
R1-R3	Residential Lift
ST	Storage
ST	Stone Paving
STT	Stone Tile Paving
TD	Timber Deck
TL	Tile

NOTE:

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Project
ARCHER & ALBERT

Client
CORONATION PROPERTY

Issuer
W-B
WOODS BAGOT

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LEVEL 9-29

Sheet number
DA-2219

Revision
2

Status
FOR DEVELOPMENT APPLICATION



Recent revision history		
#	Status	Description
1		ISSUE FOR DA

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19/12/23

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LEGEND

BASEMENT

DP	Drainage Pipe
LD	Linear Drain
SD	Spoon Drain
ADL	Adaptable Loading Area
ADP	Adaptable Parking Space
EOT	End-of-Trip Facility
MP	Motorcycle Parking Space
VP	Visitor Parking Space

GROUND

CO	Crossover
EP	Electric Pole
FS	Furniture - Seat
HB	Hydrant Booster
LP	Power and Light Pole
SS	Street Sign
TCR	Traffic Control Pole
ZGR	Zone for Gas Regulator

TOWER

C	Comms. Cupboard
E	Electrical Cupboard
F	High Pressure Fire Pipes Riser
GT	Gate
GTL	Louvered Gate
H	Hydraulic Riser
LR	Stair Relief
M	Meter Room
PB	Planter Box
SCN	Privacy Screen
SCR	Screen
SK	Skylight
SP	Stair Press
SPS	Precast Spandrel Shading Device
VRV	Centralised VRF Plant Room
BL	Balustrade
CL	Commercial Lift
FCR	Fire Control Room
GBC	Garbage Chute
LTR	Lockable Storage
RI-R3	Residential Lift
ST	Storage
ST	Stone Paving
STT	Stone Tile Paving
TD	Timber Deck
TL	Tile

NOTE:
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Project
ARCHER & ALBERT

Client
CORONATION PROPERTY

Issuer
W-B
WOODS BAGOT

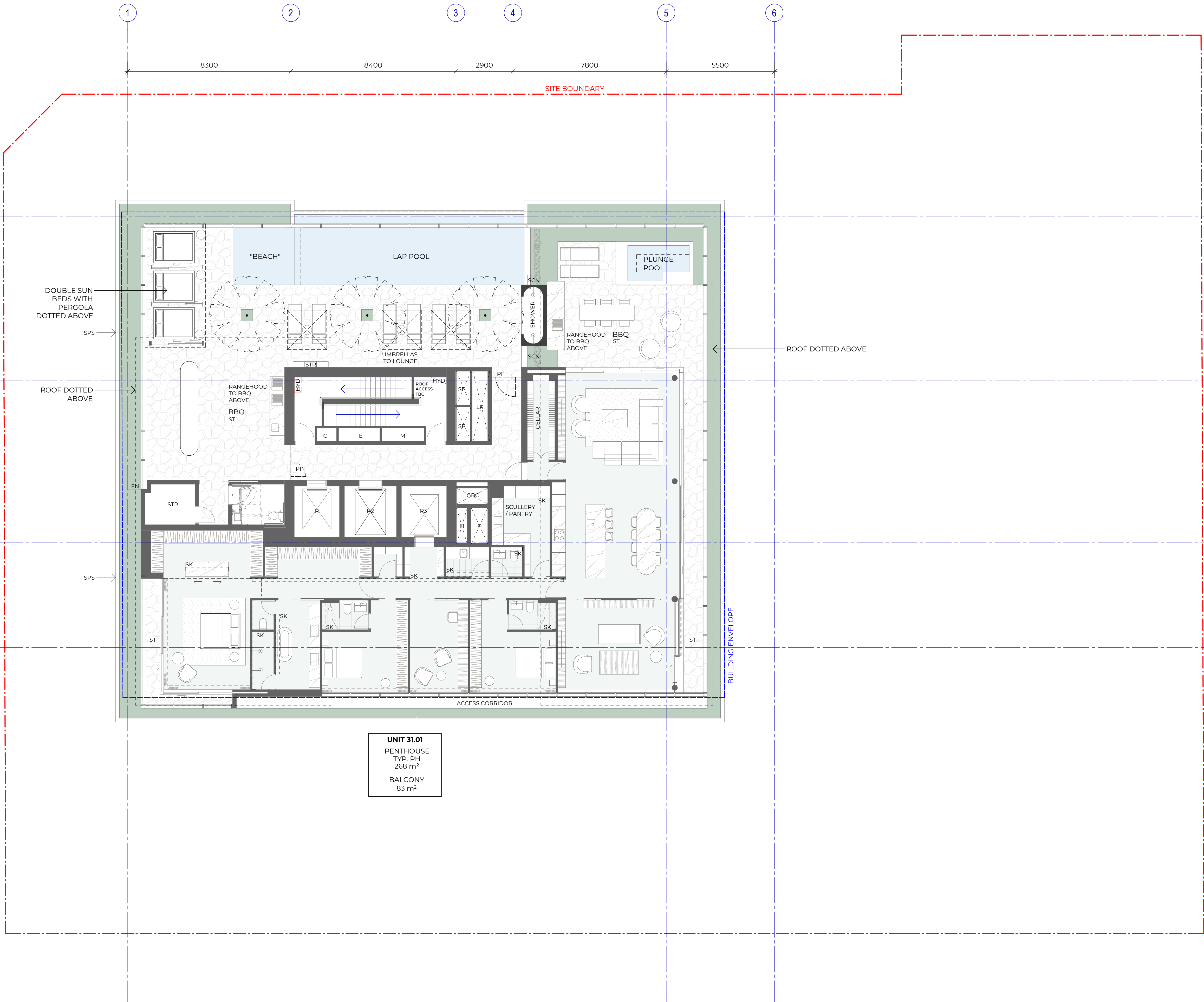
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SUB-PENTHOUSES
LEVEL 30

Sheet number
DA-2230
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1



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1		ISSUE FOR DA

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LEGEND

BASEMENT

DP Drainage Pipe
LD Linear Drain
SD Spoon Drain

ADL Adaptable Loading Area
ADP Adaptable Parking Space
EOT End-of-Trip Facility
MP Motorcycle Parking Space
VP Visitor Parking Space

GROUND

CO Crossover
EP Electric Pole
FS Furniture - Seat
HB Hydrant Booster
LP Power and Light Pole
SS Street Sign
TCR Traffic Control Pole
ZGR Zone for Gas Regulator

TOWER

C Comms. Cupboard
E Electrical Cupboard
F High Pressure Fire Pipes Riser
GT Gate
GTL Louvred Gate
H Hydraulic Riser
LR Stair Relief
M Meter Room
PB Planter Box
SCN Privacy Screen
SCR Screen
SK Skylight
SP Stair Press
SPS Precast Spandrel Shading Device
VRV Centralised VRF Plant Room

BL Balustrade
CL Commercial Lift
FCR Fire Control Room
GBC Garbage Chute
LTR Lockable Storage
R1-R3 Residential Lift
ST Storage

ST Stone Paving
STT Stone Tile Paving
TD Timber Deck
TL Tile

NOTE:

The final facade profile of the proposed design may be subjected to change based on the client's inputs or the availability of facade modules by the supplier.

Project
ARCHER & ALBERT

Client
CORONATION PROPERTY

Issuer
W-B
WOODS BAGOT

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Size check
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LEVEL 31

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Status
FOR DEVELOPMENT APPLICATION