54-56 ANDERSON STREET, CHATSWOOD
MIXED-USE DEVELOPMENT
URBAN DESIGN STUDY

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Project no. 4450-00

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1.0 INTRODUCTION

This report has been prepared by DEM (Aust) Pty Ltd on behalf of DPG Project 18 Pty Ltd to support a Planning Proposal submission to Willoughby City Council for the land at 54 and 56 Anderson Street, Chatswood.

The report will demonstrate a desirable urban design response for the Density and Height of Building controls envisage in the Chatswood CBD Planning and Urban Design Strategy 2036.

Rigorous urban design analysis of strategic and local context, site, and desired future character will determine appropriate site-specific development principles and controls to ensure the best possible contribution to the neighbourhood character of Anderson Street. while contributing to strategic planning outcomes for the region.

1.1 BACKGROUND

The Chatswood CBD Planning and Urban Design Strategy 2036 (the Strategy) was endorsed by Council at its meeting of 26 June 2017. A Council standalone document incorporating the recommendations of the Strategy was subsequently prepared and forwarded to the Department of Planning, Industry and Environment (DPIE) for endorsement in January 2018.

This report presents the updated Chatswood CBD Planning and Urban Design Strategy as endorsed by DPIE incorporating recommended changes.

DPIE wrote to Council on 9 August 2019 stating that the Strategy had been reviewed and partially endorsed subject to conditions listed by DPIE.

In regards the B4 Mixed-Use zone surrounding the Commercial Core, the letter identified that further information was required from Council as follows:

- Transport and traffic analysis in consultation with Transport for NSW (TfNSW).
- Economic feasibility testing of the 1:1 commercial floor space requirement.
- Built form analysis, a review of impacts and appropriate transitions in terms of FSR and height in areas adjacent to heritage conservation areas and low-density residential development.
- A value capture or value uplift sharing approach was not supported to fund public domain improvements.

As a result of the 9 August 2019 DPIE letter:

- Planning Proposals previously supported by Council to proceed to Gateway for determination (including public exhibition) were returned subject to the preparation and consideration of further information.
- 54-56 Anderson Street which was endorsed by Council on 25 June 2018 was returned to Council until further studies satisfied DPIE's concerns.

Since then, Council's approach has involved the preparation of a number of studies which comprehensively review and address the conditions and requirements of DPIE's partial endorsement of the Strategy. The studies contain recommendations for changes to future planning controls for some sites in the CBD which serve as the interface between the identified mixed-use areas and heritage conservation areas (HCAs) to the north and south of the CBD. The revised Strategy is supported by urban design & heritage input from GM Urban Design and Architecture (GMU) and Weir Phillips, transport and traffic input from Arup and economic advice from SGS, AEC, BIS-Oxford Economics.

The built form analysis and related review was undertaken by GM Urban Design and Architecture (GMU), with further input provided by Weir Phillips Heritage and Planning. In summary, GMU recommended transitions to interface areas with adjacent heritage conservation areas and low density residential development that involves reductions in floor space ratios (FSRs) and heights along the edges of the Chatswood CBD from that proposed in the Strategy (Refer to Section 3.3 & 3.4).

These studies were forwarded to DPIE which responded on 9 July 2020 with full endorsement of the Strategy. In relation to this planning proposal's urban design study, DPIE's recommendation is as follows:

- Council is to implement built form mitigation recommendations contained in the GMU report in the Strategy.

Based on the recommendation within the supplement packaged issued to DPIE and the subsequent refinements of the strategy by the Council, the Strategy was further endorsed by the Council on 14th September 2020.

As a result of the 14th September 2020 Council's endorsement, the revised controls for 54-56 Anderson Street has been established (Refer to Section 3.2).

INTRODUCTION

1.2 LOCATION AND CONTEXT

The subject site has a total site area of approximately 2,216m² and comprises the following lots:

- 54 Anderson Street – SP 30740
- 56 Anderson Street – SP 11846

The site is located approximately 550m north of Chatswood railway station and approximately 450m from the central retail / civic precinct of Chatswood.

The site is located east of the Pacific Highway and North Shore railway line and west of a residential area characterised by detached dwellings. A three-storey apartment building is located immediately south of the site at 52 Anderson Street.

The site is bounded to the north by Wilson Street which extends from the Pacific Highway to Anderson Street across the railway line. O'Brien Street forms the southern street boundary.

The site contains two 1960's residential flat buildings, one of three-storey (No. 54 Anderson Street) and one of two-storeys (56 Anderson Street). Each of the residential flat buildings is on separate allotments, with separate vehicular access driveways. Neither of these buildings has any heritage value or architectural merit.

The locality around the site to the east, south and southwest is residential in character, with low density detached one and two storey single dwellings located to the north, east and southeast of the site. This residential area is identified as a Heritage Conservation Area (HCA), or refer as Chatswood North HCA. Low rise three-storeys residential flat buildings predominate to the south and west of the site, with high rise apartment buildings located further to the southeast of the site.

Further site investigation and analysis can be found in Section 4.0.

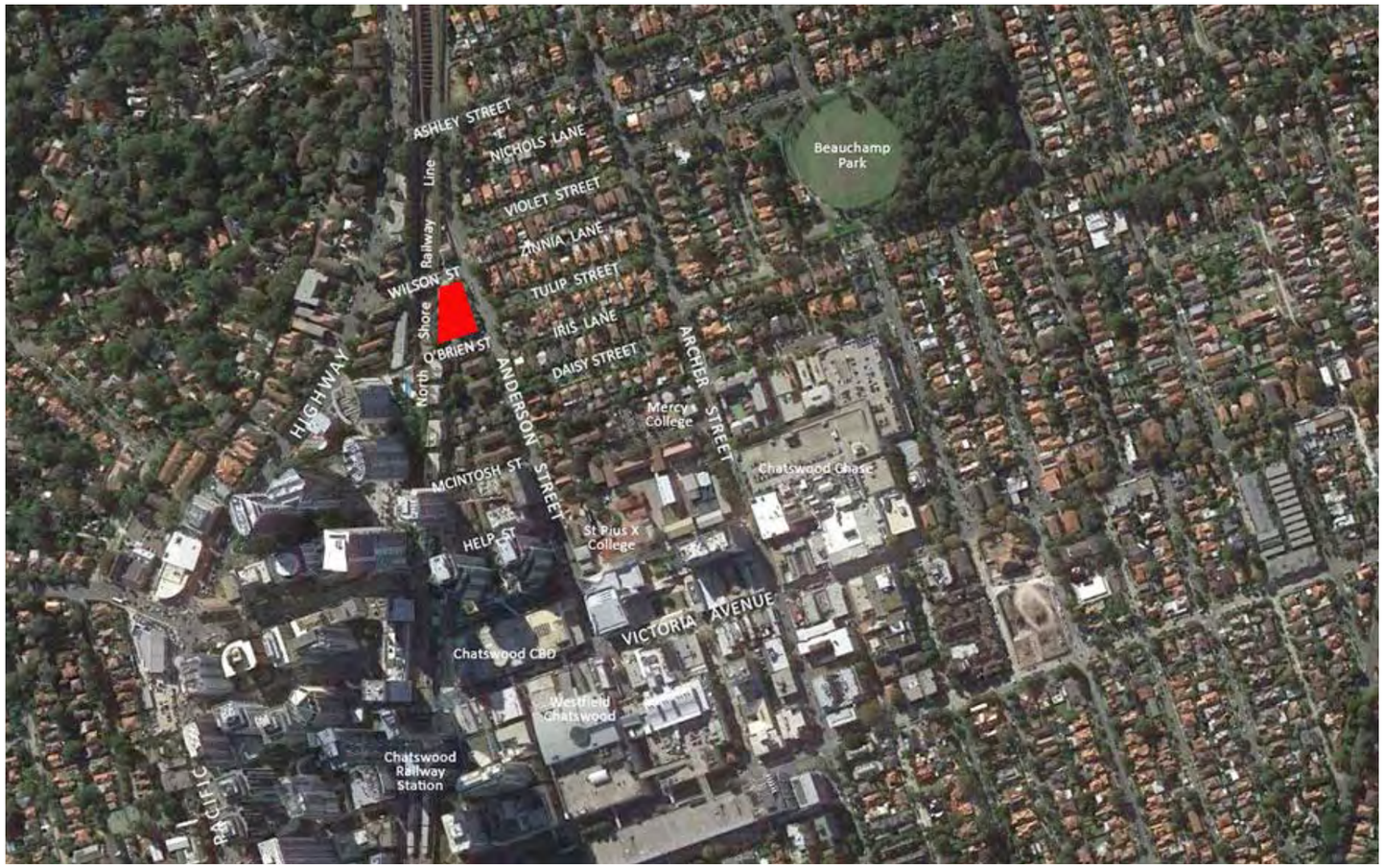


Figure 1.2.1: Context

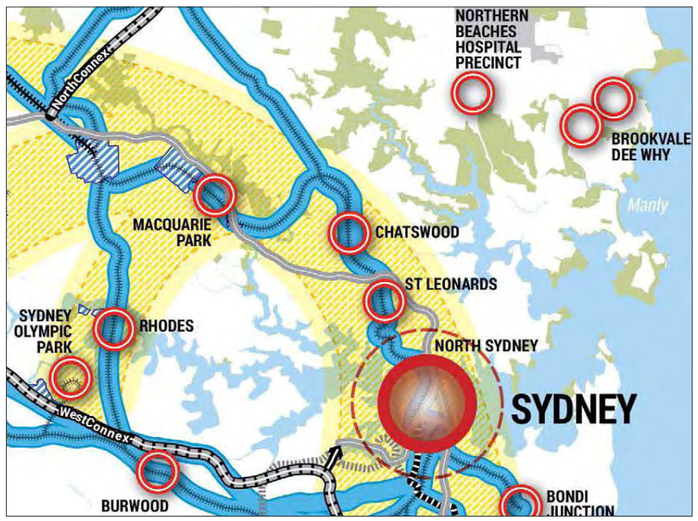


Figure 1.1: Regional Location
Source: A Plan for Growing Sydney (NSW Dept Planning and Environment)

INTRODUCTION

1.3 SUMMARY OF DEVELOPMENT

The proposed development includes the following:

- A mixed-use building with a total height of a three-storey podium and 24 storey residential tower (27 storeys in total)
- Basement loading for service vehicles, waste storage and collection
- 4 levels of basement parking with bicycle storage, end of trip facilities and services
- Three-storey commercial podium floor retail and commercial with a total of 1773 m²
- Development statistics breakdown as follow:
  - Retail GFA - 373 m²
  - Commercial GFA - 1400 m²
  - Residential GFA - 8949 m2
  - 4% Affordable Housing GFA - 358 m2
  - Total GFA/FSR proposed - 11,080 m2 / 5 : 1
- Associated landscaping, and landscaped areas to the front, rear and side of building and adjacent to public domain along Anderson Street
- Total communal roof open space on level 3 and 16 = approx 1500 m²
- A general street wall height of approx13m
- A front setback to Anderson Street of 4.5m, with the tower stepping back 1.5m further
- A general rear setback of 3m to the rear boundary to the west, with the tower stepping back 3m further.
- A side setback to O'Brien Street of 3m, with the tower stepping back 3m further
- A side setback to Wilson Street of approx 8m, with the tower stepping back further
- The proposal contains the following number of residential units:
  - Total 114 apartments
  - 24 of apartments of 1 bedroom
  - 70 of apartments of 2 bedrooms
  - 20 of apartments of 3 bedrooms

Figure 1.3.1: View of the podium levels from the intersection between Anderson Street and Wilson Street

2.0 STRATEGIC PLANNING CONTEXT

The following section discusses the strategic planning direction at state level for the future of Chatswood, including the Greater Sydney Region Plan and District Plans by The Greater Sydney Commission (GSC).

2.1 SYDNEY METROPOLITAN STRATEGY - A PLAN FOR GROWING SYDNEY

The subject land is located within the proposed expanded CBD boundaries and is identified for an increase in height and density. These increased densities are intended to accommodate anticipated demand for additional housing in the Willoughby Local Government Area (LGA) as envisaged in the Sydney Metropolitan Strategy – A Plan for Growing Sydney and the Draft North District Plan.

The NSW Government's metropolitan strategy for Sydney identifies Chatswood CBD as a Strategic Centre in the North Subregion.

Willoughby is located in the Eastern Harbour City. The population of the Easter Harbour City is projected to grow from 2.4 million people in 2016 to 3.3 million people by 2036.

The priority for future growth in Chatswood is identified as being growth in mixed-use development including offices, retail, services, and housing.

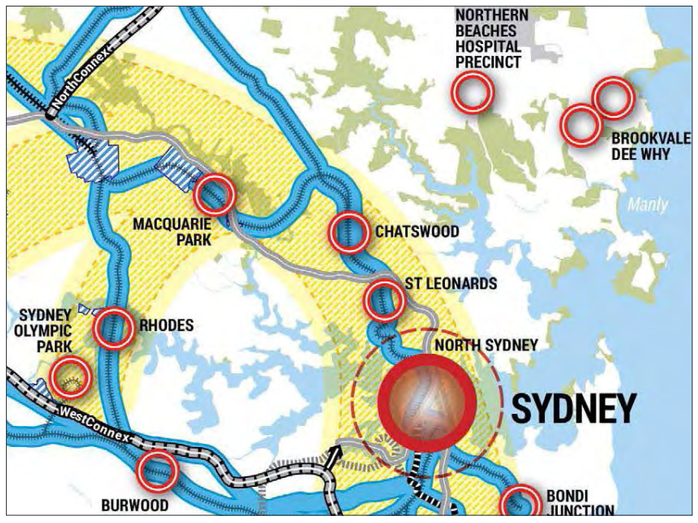


Figure 2.1.1: Regional Location
Source: A Plan for Growing Sydney (NSW Dept Planning and Environment)

2.2 DRAFT NORTH DISTRICT PLAN

The Draft North District Plan highlights the important economic role that Strategic Centres such as Chatswood play in supporting the growth of Sydney as a global city.

In 2016 the NSW Government estimated the number of jobs in Chatswood to be 24,700 and set a target of between 31,000 and 33,000 for 2036.

In addition to being a significant commercial centre, Chatswood incorporates high density residential as well as high-profile retail and entertainment facilities and is an important civic and cultural centre.

In response to Chatswood's future role, the following policy directions have been identified:

- maximise the land use opportunities provided by the enhanced rail services of Sydney Metro;
- provide height and floor space ratio incentives as part of planning controls;
- promote the role of the centre as a location for high quality commercial office buildings and a diverse retail offering;
- enhance the role of the centre as a destination for cultural and leisure activities;
- promote and encourage connectivity and upgrade and increase public open spaces.

In accordance with the District Plan, Willoughby City Council is required to support the delivery of 1,250 additional dwellings by 2021 and is required to address demand and diversity in and around local centres and infill areas.

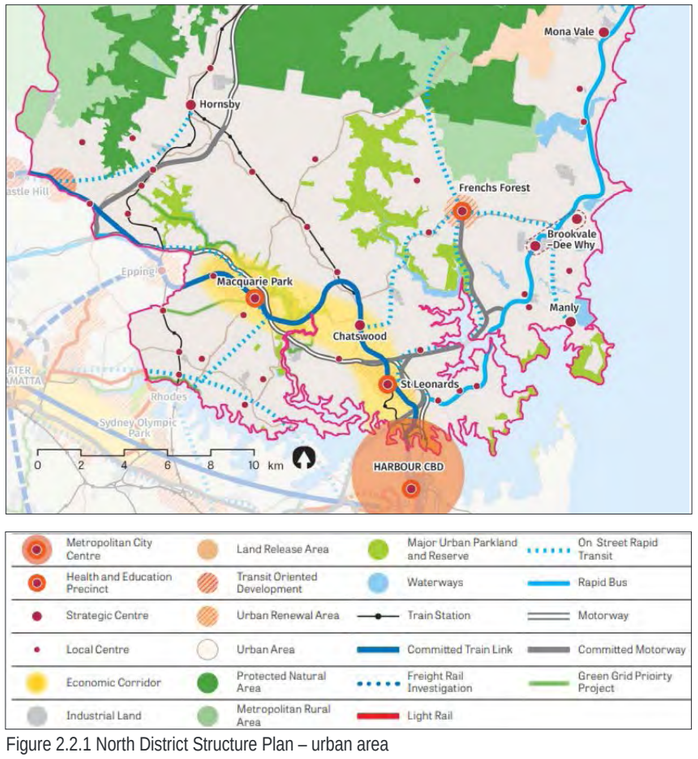


Figure 2.2.1 North District Structure Plan – urban area
Source: Revised Draft North District Plan Connecting Communities Oct 2017
Greater Sydney Commission

2.3 DRAFT CHATSWOOD CBD PLANNING AND URBAN DESIGN STRATEGY (JAN 2018)

The Chatswood CBD Strategy aims to establish a strong framework to guide future private and public development as the CBD grows over the next 20 years. It aims to provide capacity for future growth, achieve exceptional design and a distinctive, resilient, and vibrant CBD. The Strategy will inform the changes to Willoughby LEP and DCP.

The principles for future development of Chatswood centre identified in the Strategy include the following:

- A reinvigorated commercial core area and economically buoyant CBD, to provide for future employment.
- A sustainable balance between commercial, retail, residential, education, cultural and other uses to ensure on-going vibrancy.
- A compact, walkable CBD.
- A city form and scale to accommodate future growth and change.
- A CBD of exceptional urban design, easy pedestrian linkages and good public domain, where local character and heritage are embraced, and the greening of the centre is achieved.

Simplified controls for the LEP and DCP in relation to the CBD.

To achieve the above objectives, the Strategy:

- expands the Chatswood CBD boundary.
- identifies the Commercial Core and mixed-use areas and protects the residential uses from encroaching the core area.
- lifts the FSR restrictions within the town centre area to maximize the floor space provision and requires a 1:1 commercial FSR inclusion within mixed-use developments.
- increases height limits while protecting solar access to key public spaces.

2.4 UPDATED CHATSWOOD CBD PLANNING AND URBAN DESIGN STRATEGY (SEPTEMBER 2020)

Council has received full endorsement of the Strategy via letter from DPIE following a supplement package issued to DPIE earlier in 2020, which foreshadowed the approach to amending the CBD Strategy in response to the matters raised in DPIE's August 2019 letter. Since then Council has fully endorsed the updated Strategy that implemented recommendations made by the consultants.

The outcome addressed the following:

- the proposed transition of FSR and built form from the mixed-use areas identified in the strategy to HCAs
- visual impacts to demonstrate how the future built form will look along major roads; and
- potential amenity impacts (overshadowing) to the neighbouring low-density and/or existing development in HCAs, particularly during mid-winter.

Details of the updated controls from the revised Strategy can be found in Section 3.2.

2.5 WILLOUGHBY HOUSING STRATEGY 2016 (DEC 2019)

The Willoughby Housing Strategy aims to guide future housing growth in Willoughby City to 2036 and provides guidelines regarding the amount, location, and dwelling types to be provided within Willoughby City.

It seeks to concentrate an increase in housing growth in and around strategic and local centres.

They key findings are:

- Chatswood CBD (around the core area) will be a pri me focus for population growth due to its great connectivity (Page 38, Willoughby Housing Strategy to 2036),
- 6,000 to 6,700 additional dwellings will be required to achieve the population goal within the Willoughby LGA, and the rezoning by Chatswood CBD Planning and Urban Design Strategy to 2036 will take up 5,000 of this. In other words, without the strategy, the LGA will struggle achieving the population target.

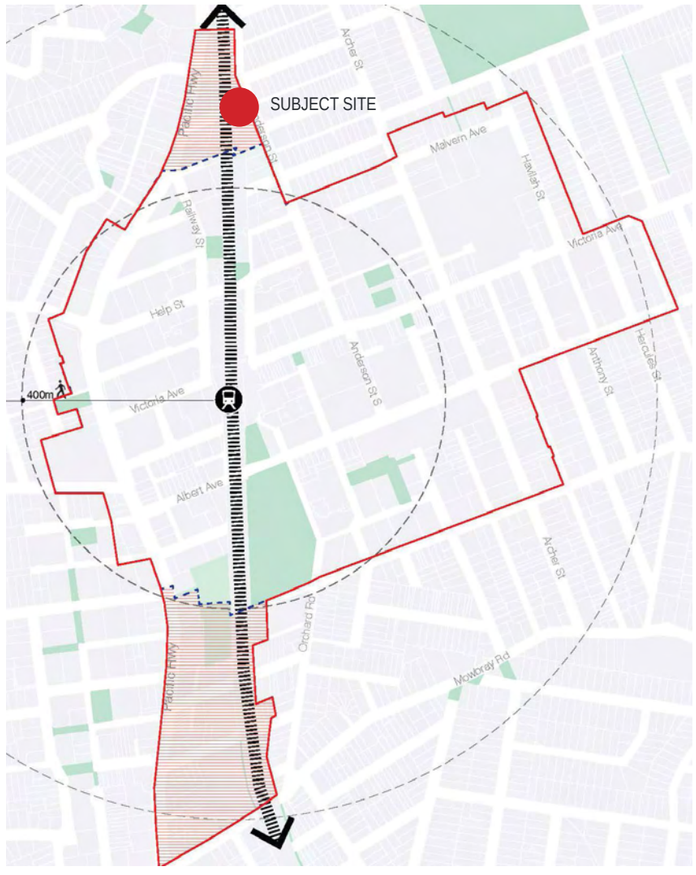


Figure 2.5.1: Recommended CBD Boundary –
Chatswood CBD Planning and Urban Design Strategy

3.0 PLANNING CONTROLS

3.1 WILLOUGHBY LEP 2012

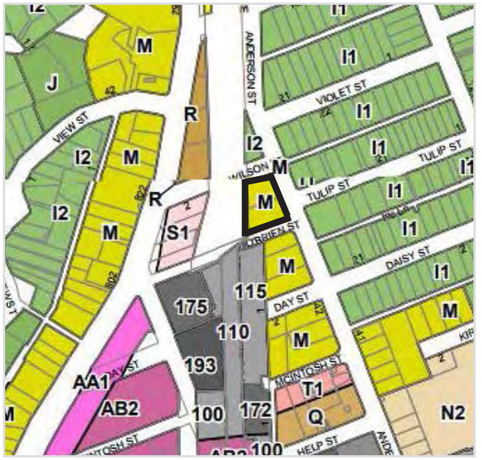
The current key statutory planning controls for the site are outlined in the Willoughby Local Environmental Plan 2012 and are summarized as below.

ZONING	The site is zoned R3 Medium Density Residential and is surrounding by other R3 zoning and R2 zoning.
MAXIMUM FSR	The LEP maximum Floor Space Ratio on the subject site is 0.9:1.
BUILDING HEIGHT	The current height control of the subject site is a maximum of 34m.
HERITAGE	There is no heritage item on the subject site. The North Chatswood Heritage Conservation Area is east of Anderson Street. Item 129 – House at 20 Tulip St. - Local Significance

Although the LEP previously was the primary planning documents for the site, the site is now subject to the Chatswood CBD Planning and Urban Design Strategy to 2036, which provides the strategic framework for an amendment of the existing planning controls, by way of an amended LEP and subsequent amendments to the DCP. The Zoning of the site in the Chatswood Strategy is B4 Mixed-use, the base FSR remains the same at 0.9:1, but a maximum FSR will be increased to 6:1. The Height of building allowable will increase from 12m to 53m and 90m respectively.

Zoning

Floor Space Ratio



Maximum Building Height

Heritage

PLANNING CONTROLS

3.2 CHATSWOOD CBD PLANNING AND URBAN DESIGN STRATEGY 2036 (2020)

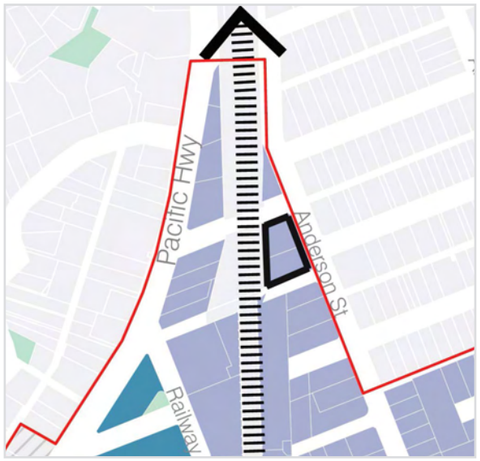
The Chatswood CBD Planning and Urban Design Strategy (Chatswood Strategy) has recently been adopted by Council and introduces new planning controls for the Chatswood CBD and fringe areas noted for development. As a result, Council will soon prepare an amended Local Environmental Plan which will integrate the recommendations of the Chatswood Strategy.

The Chatswood Strategy aims to establish a strong framework to guide future development over the next 20 years "in an aim to provide capacity for future growth, achieve exceptional design and a distinctive, resilient and vibrant CBD. The Strategy will inform changes to the Willoughby LEP and DCP".

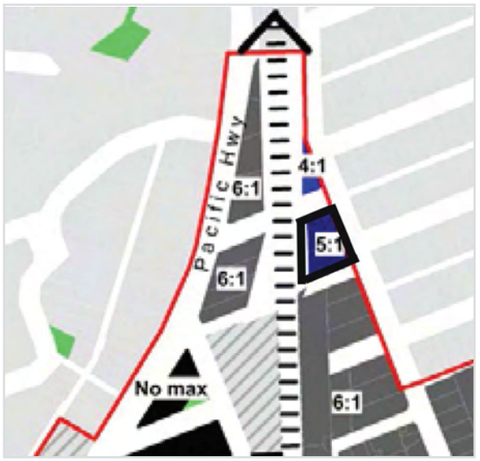
Due to the Chatswood Strategy, the subject site sits within an expanded CBD boundary and has varying controls in relation to zoning, height, built form, street frontages and FSR.

EXTENDED CBD BOUNDARY	The extended Chatswood CBD boundary has now encompassed the subject site. (figure 3.2.1)
RECOMMENDED LAND USE	The site is zoned B4 Mixed-Use. The proposal is a Mixed-use development with a three-storey podium height retail and commercial frontage and 24 level residential component above. (figure 3.2.2)
RECOMMENDED MAXIMUM FSR	5:1 The site has a maximum FSR of 5:1. DEM has gone through an extensive built form testing of the site which established an appropriate building envelope with no adverse shadowing impact and appropriate separation distances from surrounding existing & future developments. The proposal's building envelope achieved FSR of 5:1. (figure 3.2.3)
RECOMMENDED BUILDING HEIGHT	90m 54 Anderson Street is nominated to a maximum height of 53m. 56 Anderson Street is at 90m. The proposal provided a building envelope that does not exceed the proposed height limit. (figure 3.2.4)
RECOMMENDED LINKS AND NEW OPEN SPACE DIAGRAM	Although the site has no nominated site links under the strategy, the proposal allows for the extension of through site link between O'Brien Street and Wilson Street adjacent to the railway line thereby providing an extension to the existing pedestrian connection between Mcintosh Street and O'Brien Street. (figure 3.2.5)
SETBACKS AND STREET FRONTAGE HEIGHTS	The site is nominated as a mixed-use frontage with commercial at ground level from front boundary with a 6-14m street wall and a minimum 1m setback above the street wall to tower. The proposal has a minimum 4m setback from front boundary with a 12.6m street wall, and minimum of 3m setback on other boundaries. The residential tower component is setback another 2m from the main street wall (Anderson Street) and minimum of 3m on other sides, satisfying this control. (figure 3.2.6)

3.2.1 Extended CBD Boundary

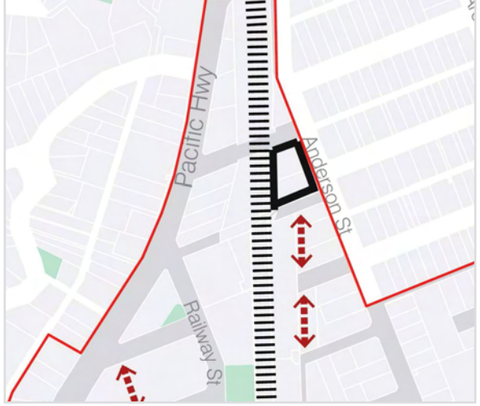


3.2.2 Recommended Land Use



3.2.3 Recommended Maximum FSR

3.2.4 Recommended Building Height



3.2.5 Recommended Links and Open Space

3.2.6 Setbacks and Street Frontage Heights

The Chatswood CBD Planning and Urban Design Strategy was fully endorsed by the Department of Planning, Industry and Environment by letter dated 9 July 2020.

3.3 CHATSWOOD PRECINCT STUDY BY GM URBAN DESIGN AND ARCHITECTURE (GMU)

GM Urban Design and Architecture (GMU) has been engaged by the Council to undertake an independent study of the built form and heritage approach within the Draft Strategy, having specific regard to DPIE's request that building heights and FSRs for the land in the mixed-use precincts be reviewed. The has been informed in consideration of impacts to adjacent Heritage Conservation Areas (HCAs) and low density development and reaches conclusions as to recommended built form transitions, with a view to ensuring that future development is compatible with adjacent existing and retained development outside of the strategy area.

Based on the recommended approach provided by DPIE, GMU has conducted extensive testing with regard to built forms, visual impacts and amenity impacts (overshadowing) as part of their methodology. In arriving at their recommendations on how the Draft Strategy should be amended to address the matters raised in the condition, GMU has:

- conducted an extensive site visit of the Chatswood CBD, with a particular focus on the interface areas along the periphery of the CBD which border the HCAs and low density development;
- reviewed Council's previous studies and applicable controls, analysed the characteristics of the land holdings in the study area, and reviewed the correspondence between Council and DPIE;
- investigated relevant literature as a theoretical basis for the analysis;
- tested opportunity and amalgamated sites identified on page 106 and 109 of the draft Strategy and created a compliant massing for each site that is consistent with ADG guidelines and applicable controls;
- applied the proposed height, Floor Space Ratios (FSRs) floor plates and setbacks into a 3D massing form of each opportunity site as nominated in the draft Strategy; and
- conducted high level transition, visual impact and potential overshadowing testing based on the interrogation of a full-scale 3D model of Chatswood.

The intention of the study was to provide greater clarity and depth of analysis of the likely built form to be realised by the Draft Strategy, showing a realistic future built form under the strategy which had not previously been considered to this level of detail, and to suggest amendments to particular key sites to address transition issues raised by DPIE.

As a result of the 14th September 2020 Council's endorsement, the revised controls for 54-56 Anderson Street has been established which include a FSR control of 5:1 and a height control ranging from 53m within the northern portion of the site and 90m in the the southern portion.

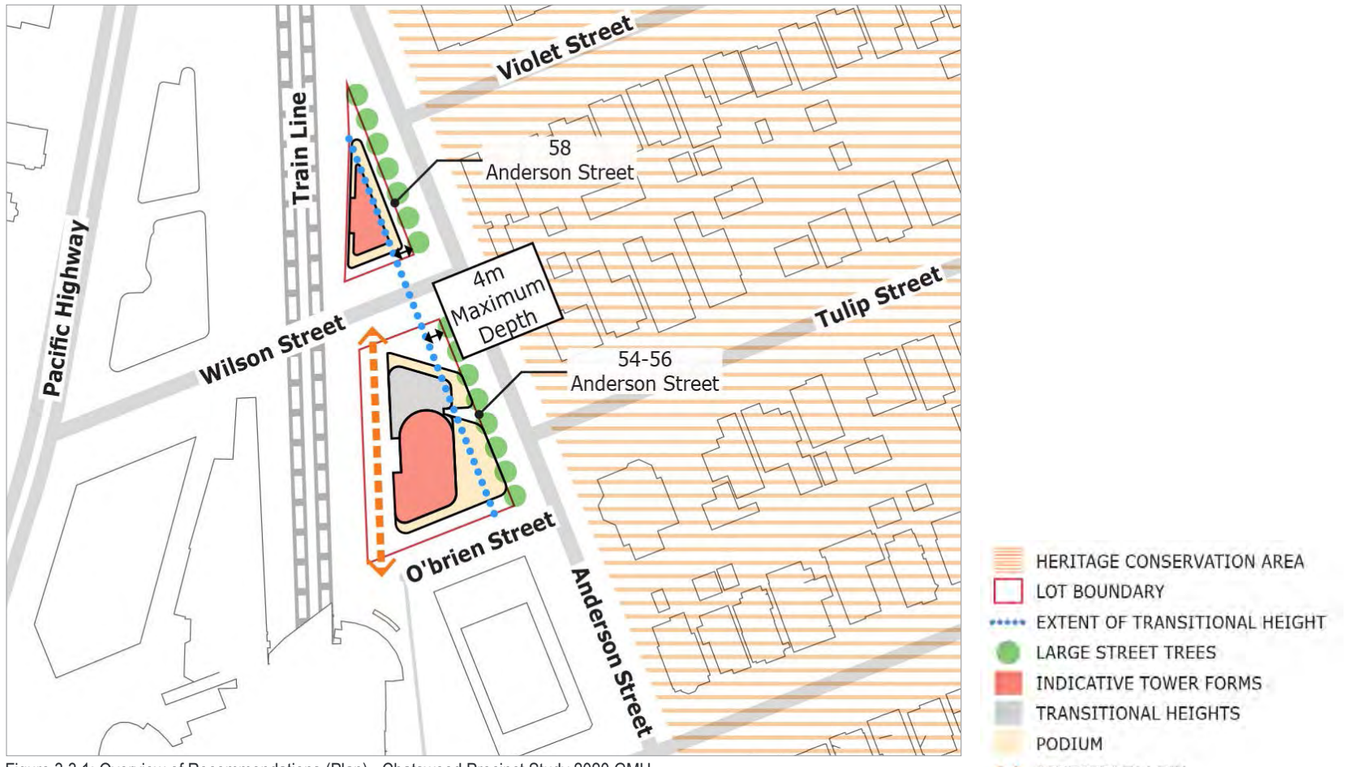


Figure 3.3.1: Overview of Recommendations (Plan) - Chatswood Precinct Study 2020 GMU

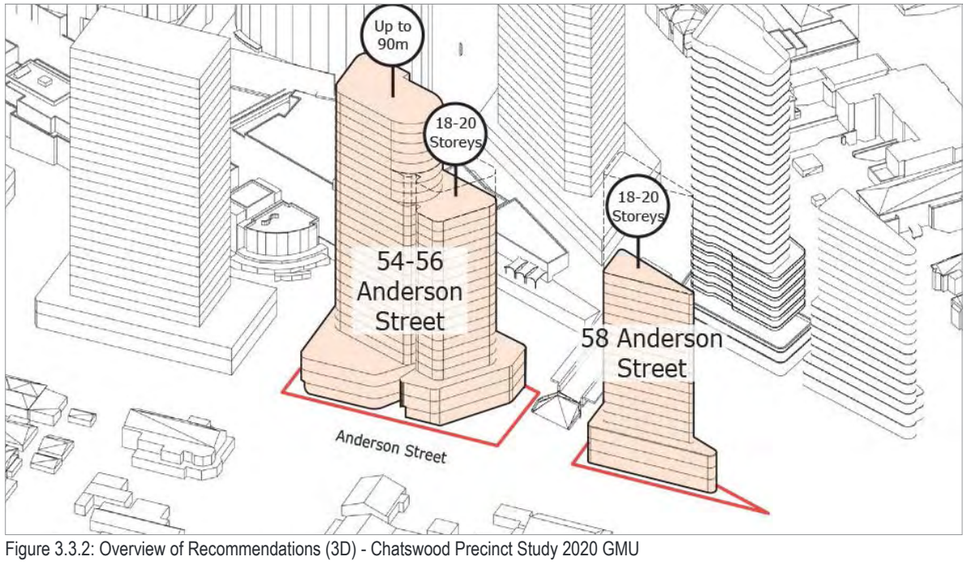


Figure 3.3.2: Overview of Recommendations (3D) - Chatswood Precinct Study 2020 GMU

3.4 HERITAGE STRATEGY BY WEIR PHILLIPS HERITAGE AND PLANNING

Weir Phillips' Heritage and Planning were engaged to provide independent recommendations for the heritage approach to interface areas. In doing so, a heritage strategy report was prepared, which analyses the existing and proposed built form controls and provides recommendations regarding the most appropriate response for planning controls for the periphery of the Chatswood CBD, particularly where the CBD has an interface with the various HCAs. It has been informed by an extensive site visit with GMU and the 3D massing studies they produced for the Chatswood Precinct Study. The heritage strategy report has directly informed the methodology and findings of the urban design study prepared by GMU.

3.5 SUMMARY OF RECOMMENDATION / AMENDMENTS BY CHATSWOOD PRECINCT STUDY AND HERITAGE STRATEGY

Following a sieving process and urban design analysis, GMU has concluded that the majority of the built forms which would occur from the realisation of the Draft Strategy would result in acceptable urban design outcomes, with the exception of a handful of sites.

In relation to 54-56 Anderson Street site, the recommended mitigation measures have been made to directly address the concerns raised by DPIE regarding transition and visual impact of HCAs, as well as retained low density development outside the strategy area.

GMU's analysis has concluded that there are no overshadowing issues for 54-56 Anderson Street site.

3.5.1 BUILT FORM AND HEIGHT

To create a better transition between the taller building forms and the Heritage Conservation Area HCA., heritage advice by Weir Phillips, and adopted in the GMU Chatswood Precinct Study 2020 requires the reconfiguration of the built form identified in the Chatswood CBD Planning and Urban Design Strategy 2016.

The GMU Chatswood Precinct Study 2020 controls require that the taller building forms be located away from Anderson Street to provide a height transition zone of up to maximum of 4m from Anderson Street.

The GMU Chatswood Precinct Study 2020 controls adopts a 20-storey height limit (i.e 65m) to the northern part of the site to and a 90m height limit to the southern part of site.

3.5.2 HERITAGE

The subject site is located on Anderson Street which runs in parallel along the western boundary of the Heritage Conservation Area (HCA). This street is also running in a north south alignment parallel to the railway corridor. The properties lining along the western boundary of the HCA is predominately residential in use.

It is important to note that the dwellings within the HCA on the eastern side of the street face inwardly towards cross streets (including Daisy Street, Tulip Street and Violet Street) with side elevations fronting Anderson Street. The only dwelling fronting Anderson Road is No. 20 Tulip Street, which is a local heritage item (I129). Each principal street in the HCA also has a secondary service lane.

The dwellings on the western side of Anderson Street are predominately medium density residential flat building which are between 3-4 storey. The CBD forms a backdrop to Anderson Street and the south of the HCA.

The CBD is a visible component in the background of almost all dwellings in the HCA. Much of the visual impact of the CBD is mitigated by tree plantings along the streetscape. Encouraging street tree planning will have a positive effect in mitigating the visual impacts brought by high-rises through screening their presence.

Adopting a podium of appropriate scale between 3-5 stories with proposed towers set further to the west of the site towards the rail line will assist in mitigating the visual impact of the CBD skyline.

3.5.3 COMPARISON BETWEEN ENDORSED REVISED CBD STRATEGY AND URBAN DESIGN AND HERITAGE STUDY

CONTROL	URBAN DESIGN AND HERITAGE STUDY RESPONSE (GMU & WEIR PHILLIPS)	CHATSWOOD CBD PLANNING AND URBAN DESIGN STRATEGY 2036 (SEPTEMBER 2020)
Land Use	B4 Mixed-Use	B4 Mixed-Use
FSR	6:1	5:1
Height	Reconfiguration of built form for better transition to urban design recommendations. Sculpt form of No. 54-56 Anderson Street to form a transitional step of 18-20 storeys. (65m) Southern end of site to retain 90m height limit.	56 Anderson Street – 53m 54 Anderson Street – 90m
Street Frontage & Setbacks	Mixed-use frontage with commercial ground floor 6-14m street wall, min 3m setback above street wall.	Minimum 3m setback at Ground Level from front boundary. 6-14m street wall height. Minimum 1m setback above street wall to tower.
Other built form controls	Small Office/Home Office (SOHO) at Ground Floor would be more appropriate to passive frontage to the HCA. Plant street trees in road blisters between car spaces to mitigate the scale of change between the HCA and new development. Tree planting will also partially screen adjacent development when seen from more distant points in the HCA.	None

3.6 DESIGN EXCELLENCE STRATEGY

The Chatswood CBD Planning and Urban Design Strategy document identifies that Design Excellence and Building Sustainability is one of many recommended controls.

8. Design excellence is to be required for all developments based on the following process:

a) A Design Review Panel for developments up to 35m high

b) Competitive designs for developments over 35m high

9. Achievement of design excellence will include achievement of higher building sustainability standards.

10. The Architects for design excellence schemes should be maintained through the development application process and can only be substituted with written agreement of Council.

DEM is encouraged by Willoughby City Council's initiative of instituting a design excellence provision and process as this will improve the quality of future built form and public domain interfaces for the Chatswood CBD as a whole.

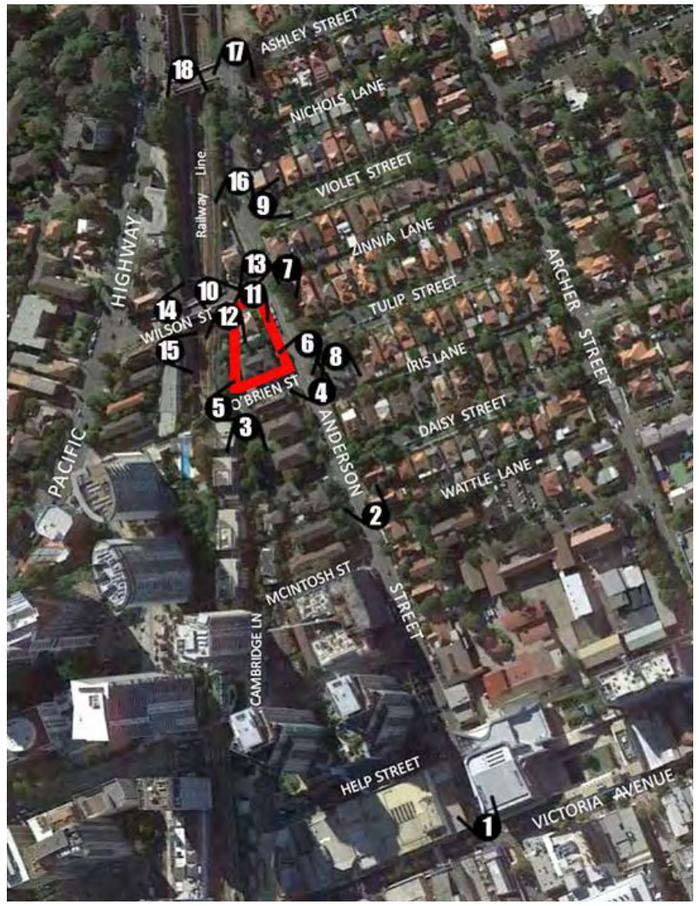
The proposal includes a reference design of a development for the subject site. This reference design informs the site specific DCP provisions that will assist in formulating the brief for Design Excellence competition. The design excellence process will proceed in accordance with the Council's Design Excellence Policy.

The proposal has already undergone a rigorous process assisted by credible and independent consultants including the fields of urban design, landscape, and planning in addition to numerous rounds of consultations with Council staff.

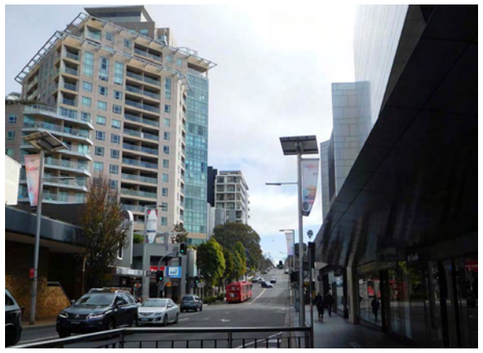
DEM is confident that this groundwork will assist the architects in having a more productive design excellence process and we welcome the added value that the design excellence process will add to the design.

4.0 SITE ANALYSIS

4.1 SITE PHOTOGRAPHS



- The site is located at the northern edge of Chatswood CBD but in close proximity to the large-scale retail centres and high-rise commercial and residential towers that dominate the heart of Chatswood.
- Three storey apartment buildings are located south of the site between O'Brien Street and McIntosh Street.
- The heritage conservation area located east of the site is predominantly comprised of single storey detached housing in Federation and Interwar bungalow styles.
- The site is visible along the Anderson Street corridor from both the north and south.
- The railway line and Pacific Highway provide visual separation from areas to the west.



1 View north towards the site from the intersection of Anderson Street and Victoria Avenue
- the 'Regency' apartment building is prominent in the foreground and the recently completed apartment building 'The Chatswood' is visible in the middle distance

2 View north from the intersection of Anderson Street and Wattle Lane towards the site located at the crest of the hill

3 Pedestrian walkway extending from O'Brien Street to Cambridge Lane / Help Street adjacent to the 'Pacific Place' apartment complex

4 Three storey apartment building located at 54 Anderson Street

5 View east along O'Brien Street

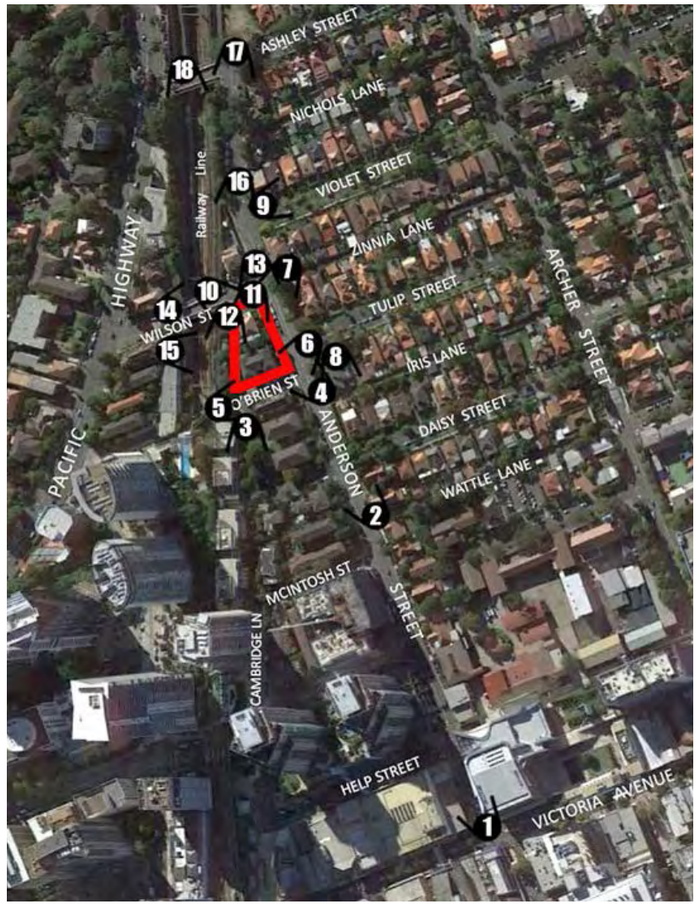
6 View of three storey apartment building located at 52 Anderson Street, south of the site
- Chatswood CBD towers prominent in middle distance

7 Two storey apartment building located at 56 Anderson Street
- view of the site screened by existing trees

8 Heritage listed house located at the corner of Tulip Street and Anderson Street

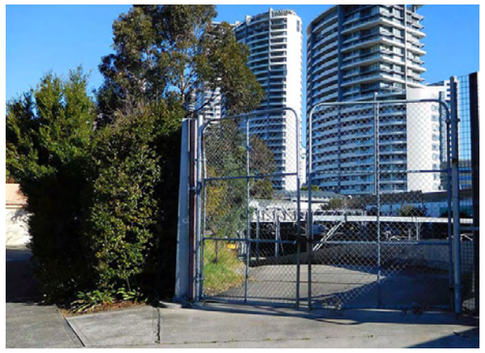
9 View east along Violet Street
- street located within the North Chatswood Heritage Conservation Area

SITE ANALYSIS



10 Two storey apartment building located at 56 Anderson Street viewed from Wilson Street

11 View south-west from Wilson Street
- Chatswood CBD towers visually prominent and form urban backdrop



12 Gated entry providing emergency access to the railway line from Wilson Street adjacent ot the site

13 View south from the corner of Anderson Street and Wilson Street

14 View east across the Wilson Street rail bridge towards the site

15 View west from Wilson Street across railway line
- safety / retaining wall forms prominent visual element along boundary

16 View south towards the site from the intersection of Anderson Street and Violet Street
- Chatswood CBD towers highly visible in the background

17 View south towards the site from the intersection of Anderson Street and Ashley Street

18 View of the site from the Ashley Street road bridge over the railway line

SITE ANALYSIS

4.2 ACCESS TO PUBLIC TRANSPORT

The site is located in close proximity to the following existing public transport services:

Chatswood railway station and transport interchange are located approximately 600m south of the site which equates to a 7 – 8 minute walk.

A bus stop located adjacent to the site on Anderson Street for the following bus routes:

- 277 Castle Cove to Chatswood
- 278 Chatswood to Killarney Heights
- 279 Frenchs Forest to Chatswood
- 280 Warringah Mall to Chatswood
- 281 Davidson to Chatswood
- 282 Davidson and Belrose to Chatswood
- 283 Belrose to Chatswood
- 284 Duffys Forest to Terrey Hills and Chatswood
- 558 Chatswood to Lindfield

Bus stops on the Pacific Highway approximately 150 metres west of the site for the following bus route:

- 565 Chatswood to Macquarie University

Figure 4.2.1: Public Transport Services

4.3 EXISTING BUILT FORM

Two low-rise apartment buildings are currently located on the site.

Surrounding buildings and developments include the following:

- Pacific Place mixed-use development to the south-west incorporating Era, Altura, Epica and Cambridge towers, and B2E low-rise apartments. The complex also incorporates communal open space and an outdoor swimming pool for residents, and public open space fronting Railway Street.
- Three storey apartment buildings along Anderson Street between O'Brien Street and Mcintosh Street.
- The Chatswood apartment building at the corner of Anderson Street and Help Street which varies in height up to 12 storeys.
- The Vista Chatswood is a proposed seven storey mixed-use residential and commercial building at 871-877 Pacific Highway.
- The North Chatswood Heritage Conservation Area to the east predominantly comprised of single storey detached housing in Federation and Interwar bungalow styles.

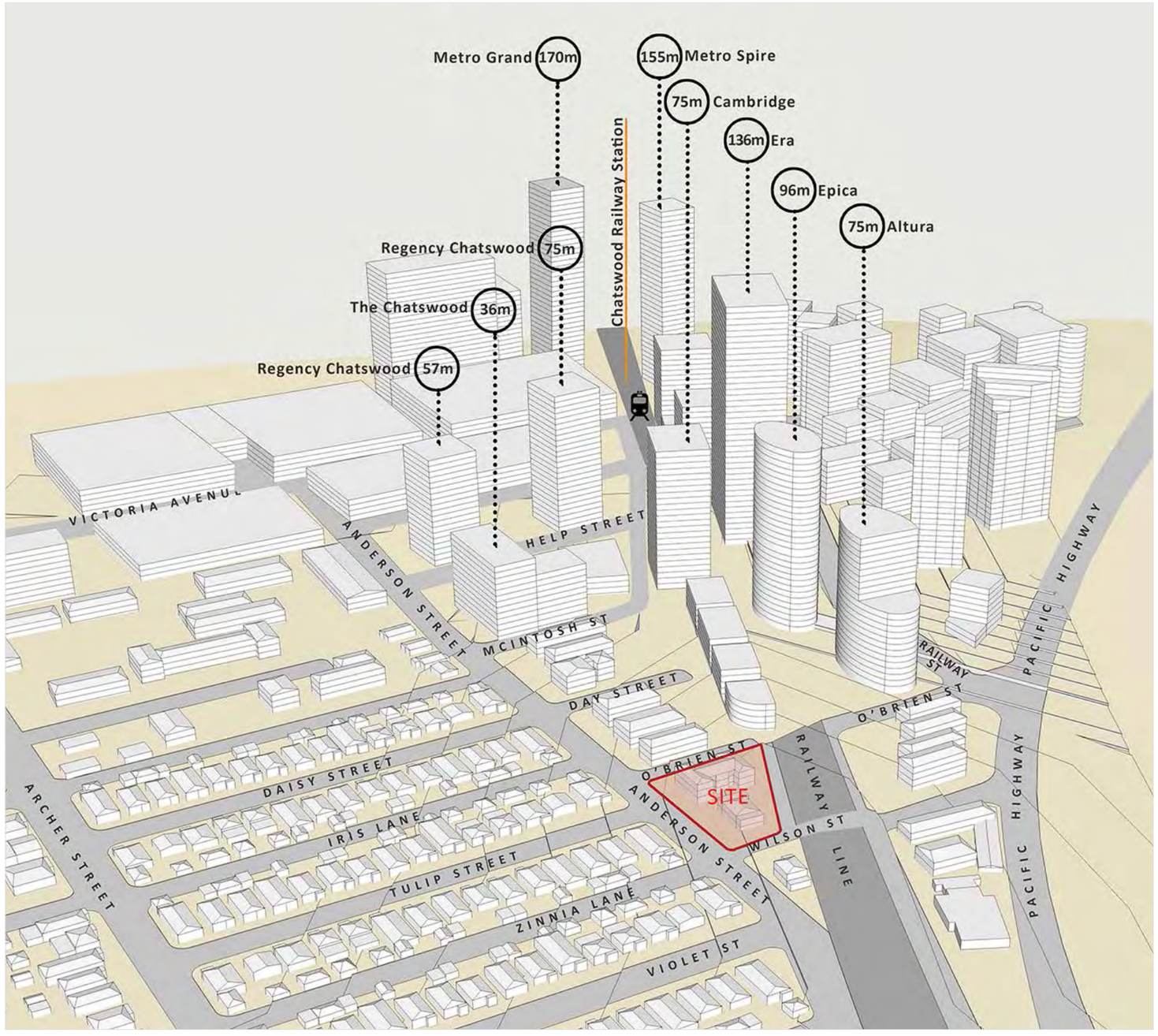


Figure 4.3.1: Existing Built Form viewed from North

SITE ANALYSIS

4.4 TOPOGRAPHY

- The site falls from a high point of approximately RL 106.14 in the north-west corner of the site to a low point of approximately RL 104.35 at the corner of Anderson Street and Wilson Street; a level difference of approximately 1.79 m.
- The site falls approximately 1.3 m along the western boundary adjacent to the railway line.
- There are very gentle falls along both Anderson Street and O'Brien Street.
- The site is elevated above Chatswood retail / transport centre by approximately 10 m.

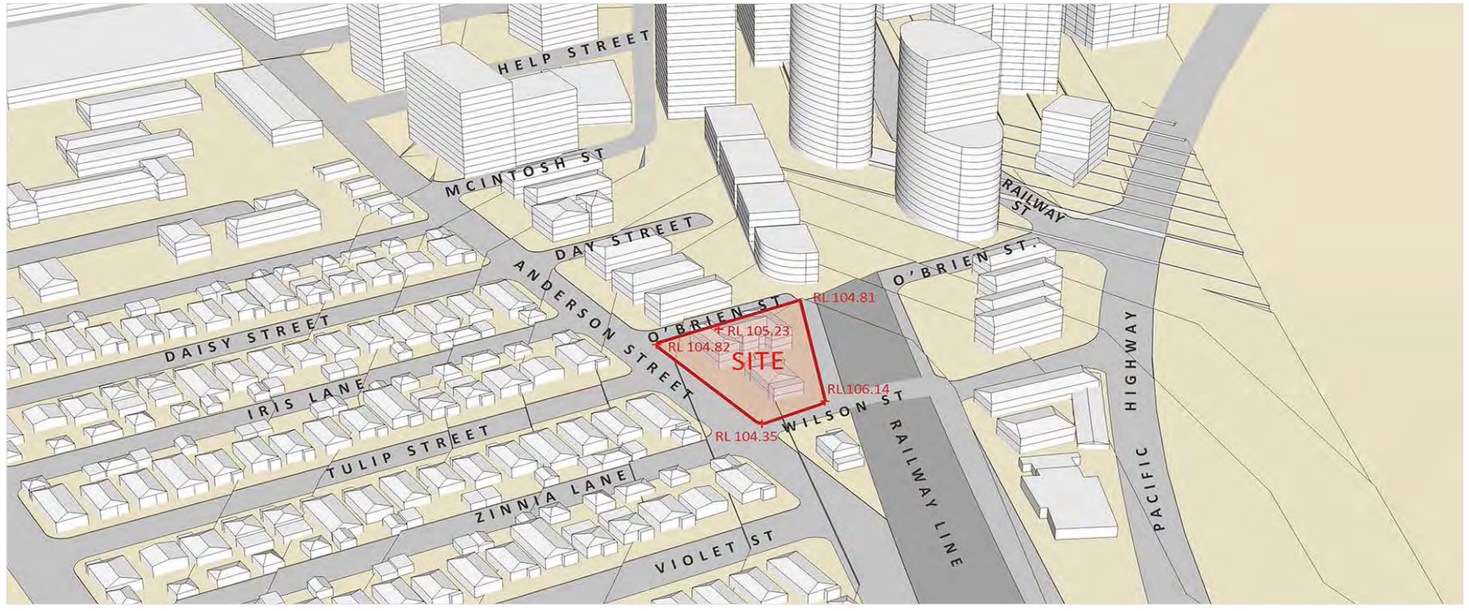


Figure 4.4.1: Topography

4.5 SOLAR ORIENTATION

- There is minimal overshadowing of the site and it is exposed to high levels of sunlight from the north, east and west.

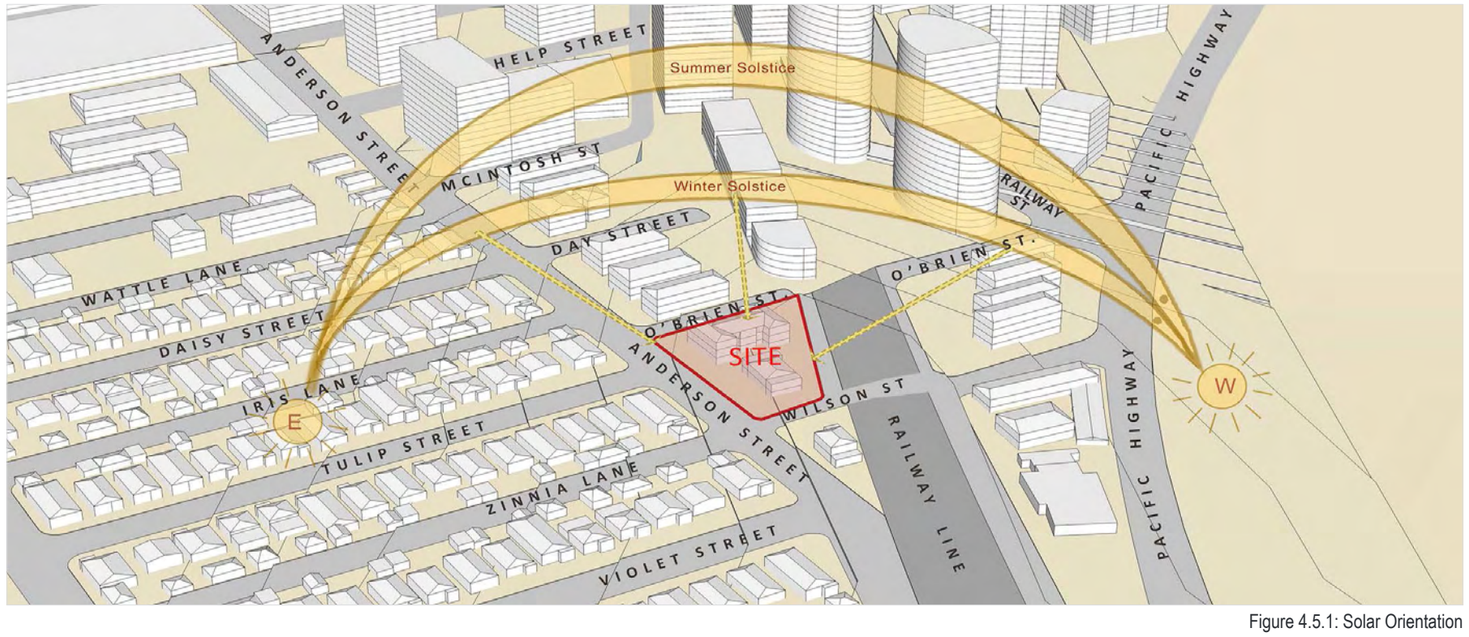


Figure 4.5.1: Solar Orientation

SITE ANALYSIS

4.6 EXISTING TRAFFIC

- Vehicular access to the site is currently from O'Brien Street, Anderson Street and Wilson Street.
- Anderson Street is a major road providing access from north Chatswood to the heart of the CBD and connects directly to Victoria Avenue.
- Access to the site from the Pacific Highway, and across the railway line, is via a signalised intersection at Ashley Street and a left-in / left-out intersection at Wilson Street.
- O'Brien Street forms a cul-de-sac at the railway line.

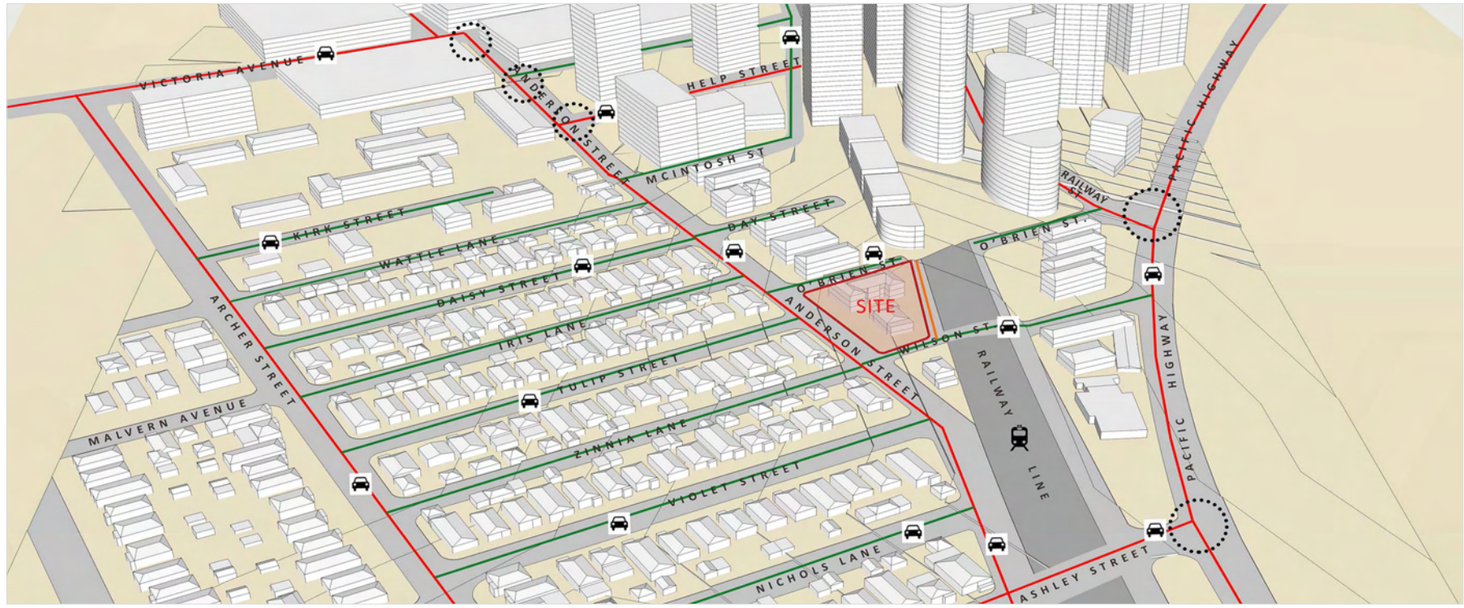


Figure 4.6.1: Existing Traffic

4.7 EXISTING PEDESTRIAN ROUTES

- Footpaths are located on both sides of all roads adjoining the site and provide direct pedestrian access to major destinations within Chatswood CBD.
- A pedestrian walkway also extends from the western end of O'Brien Street to Help Street alongside the Pacific Place apartments. The walkway provides a direct, pedestrian friendly connection to Chatswood CBD and transport interchange.
- Bus stops are located adjacent to the site on Anderson Street as well as 150 metres west of the site on the Pacific Highway – refer to Section 4.2.

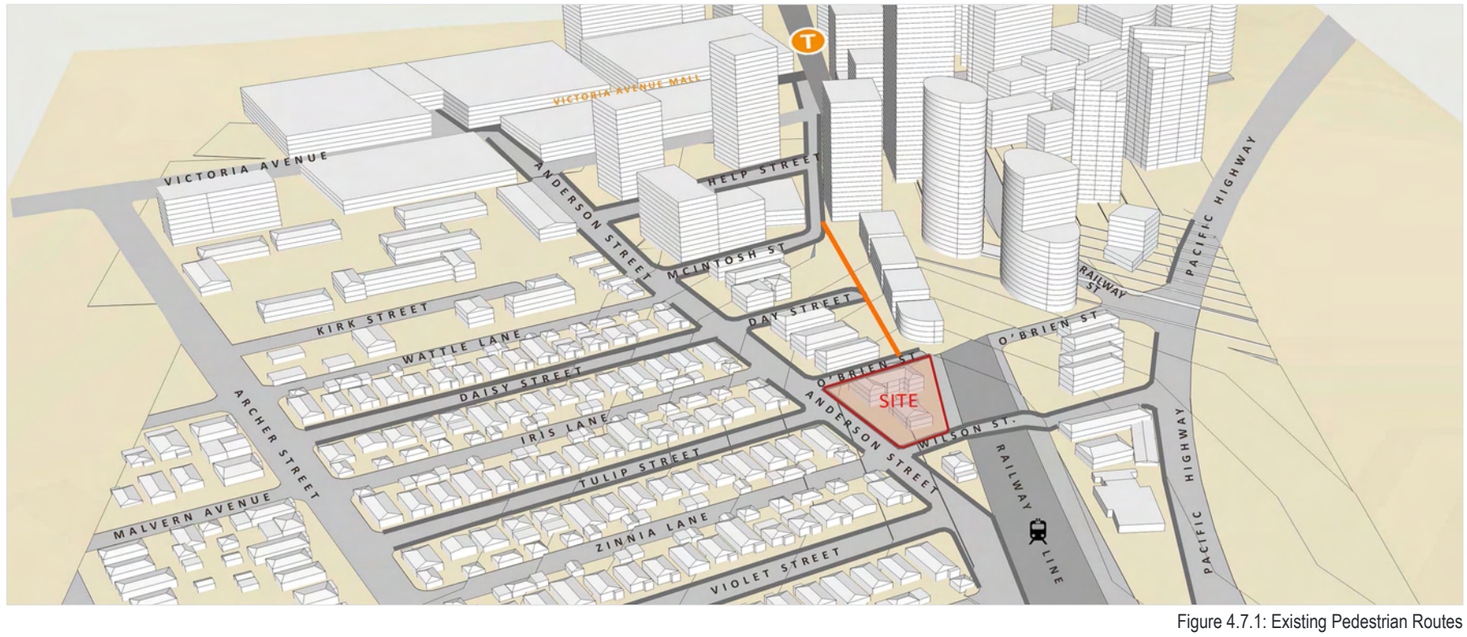


Figure 4.7.1: Existing Pedestrian Routes

4.8 VIEW OPPORTUNITIES

Existing ground level views are to surrounding residential and commercial areas including:

- Detached residential dwellings to the east.
- Low-rise apartment buildings immediately south of the site.
- Medium density residential apartment buildings to the south.
- High rise towers in Chatswood CBD to the south.
- Views of the railway line to the west are partially screened by vegetation and walling.
- There is the potential for elevated panoramic views of Chatswood and Sydney CBD views to the south; residential and park views to the east; and bushland views to the west and north-west.

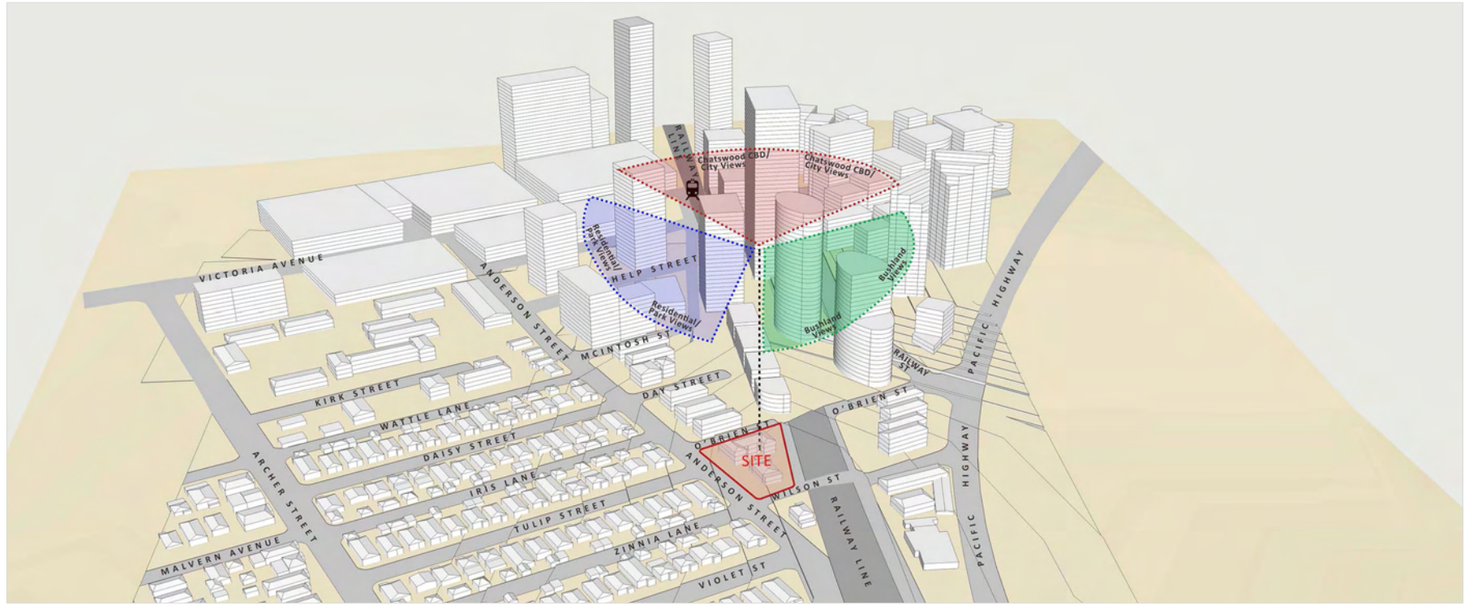


Figure 4.8.1: View Opportunities

4.9 OPPORTUNITIES AND CONSTRAINTS

OPPORTUNITIES

- Provision of a mixed-use development within the Chatswood CBD, and within walking distance to Chatswood's major transport interchange, but outside Chatswood's Commercial Core.
- Provision of a residential tower form that responds to its CBD context as well as the adjacent heritage conservation area.
- Provision of a pedestrian footpath between O'Brien Street and Wilson Street adjacent to the railway line that provides an extension to the existing linkage between Mcintosh Street and O'Brien Street.
- Provision of an east – west mid-block pedestrian connection to enhance permeability and connectivity.
- Provision of pedestrian path diagonally across the site from the mid point of Wilson Street to the bus stop.
- Provision of a landscaped forecourt on the corner of Wilson and Anderson streets.
- Landscaped street frontages to provide enhanced interfaces with adjoining residential areas particularly the Heritage Conservation Area to the east.
- Incorporation of retail / commercial at ground level to provide increased activation of the pedestrian linkages.
- Vehicle access to the site from O'Brien Street.

CONSTRAINTS

- The North Chatswood Heritage Conservation Area located immediately east of the site.
- The North Shore Railway Line located to the west of the site with access to the corridor from Wilson Street.
- Vehicle access and egress is limited to O'brien Street to maximise street activation and pedestrian connectivity.

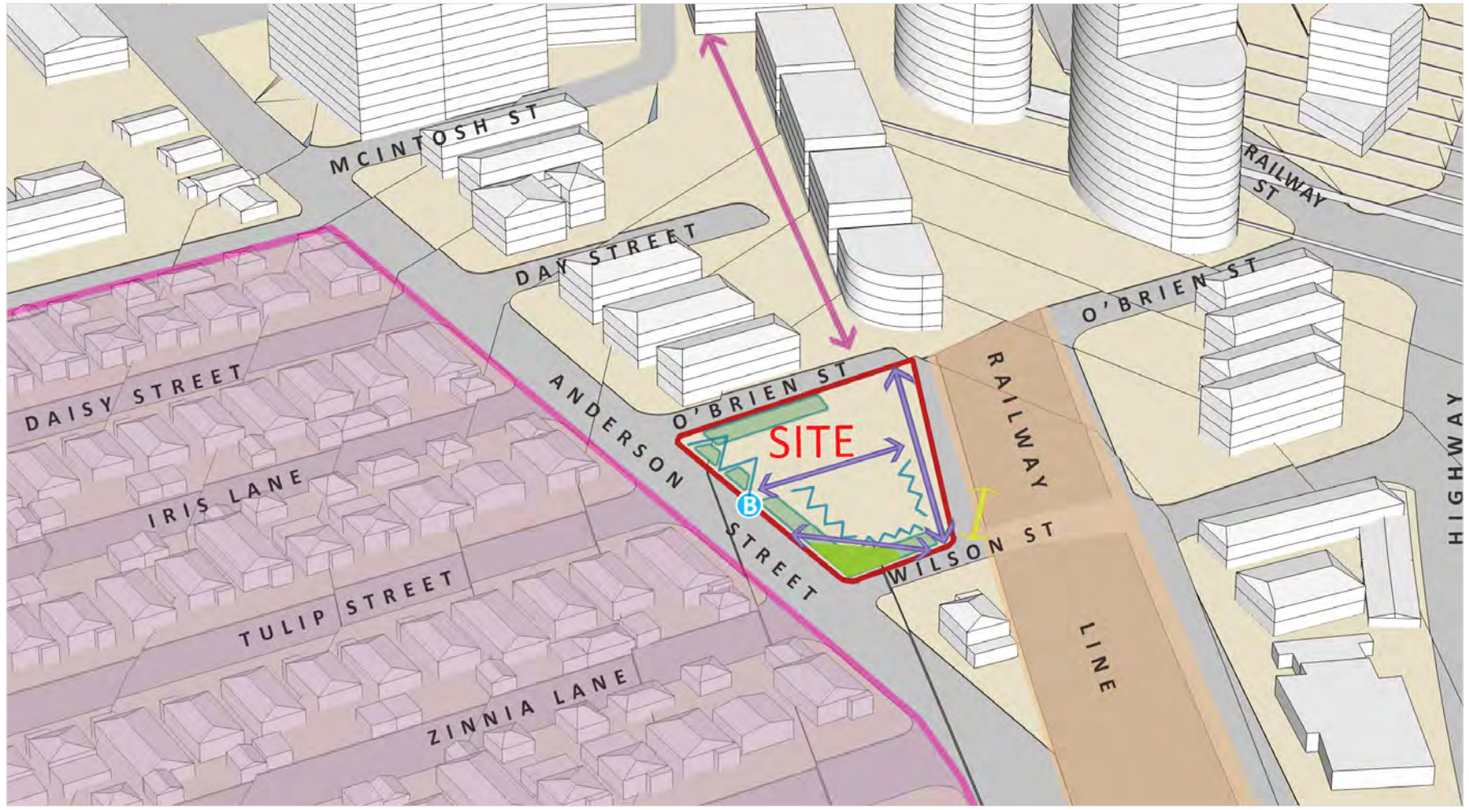


Figure 4.9.1: Opportunities and Constraints

5.0 THE DESIGN

The design of the built form reflects opportunities and constraints relevant to the subject site, which in turn informed the design principles adopted for the proposal. The site analysis and planning controls (Section 3.0 & 4.0) informed the key design principles applied to the propose development, which are illustrated in the built form massing diagrams in figures 5.1.1, 5.1.2,5.3.1,5..3.2,5.3.3,5.3.4,5.3.4 and 5.3.6.

The key design principles include the following:

- Provide a built form response to the existing surrounding development, and provide a built form transition to the higher building to the south in the commercial core and the lower residential buildings to the north.
- Provide visual and transitional response to the Heritage Conservation Area.
- Locate the built form towards the active street frontage to the south, providing a consolidated landscaped area to the north, to facilitate the recreational needs and residential lifestyle for residents while also providing an engaging streetscape.
- Maximise solar access to the proposed apartments.
- Ensure no adverse overshadow impact to surrounding areas.
- Incorporate existing environmental elements such as mature trees and a diversity of landscaping areas.
- Present fine grain and human scale design to Anderson Street.
- Engage Anderson Street and contribute positively to the pedestrian environment.
- Enhance and encourage pedestrian activities to the Northern end of the CBD extension.
- Provide appropriate street wall heights to Anderson Street with upper levels expressed as recessed.
- Provide generous separation distances to neighbouring development.
- Incorporate high quality sustainable materials and low water consumption garden areas.

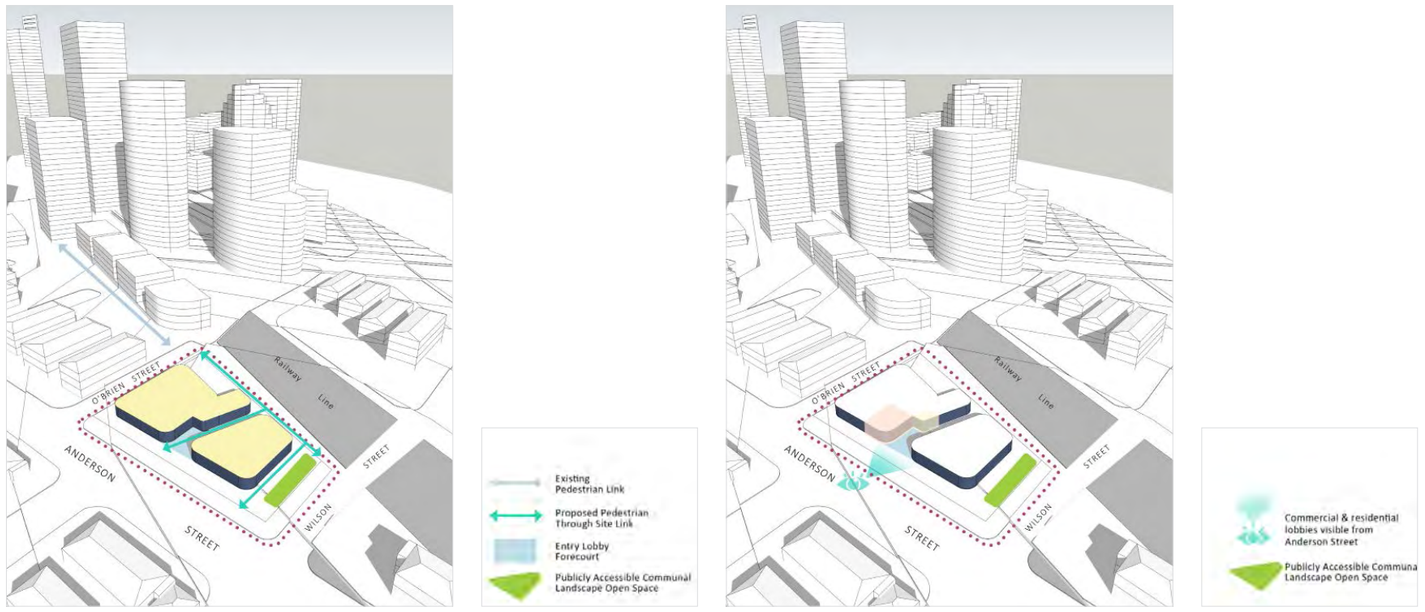


Figure : 5.1.1Connectivity

Figure 5.1.2 Visibility

5.1 PODIUM FORM

- The proposal will improve the existing street presentation to the public domain interface and provide a greater landscape frontage to Anderson Street, O'Brien Street and Wilson Street.
- The commercial and retail uses will be located within a three-storey podium and address Anderson Street to maximise visibility and to provide improved activation of the public realm.
- The podium will contain the building lobbies and retail / commercial uses at ground level which will provide improved street activation and passive surveillance of Anderson and O'Brien Streets and the pedestrian pathway to Chatswood Station. A potential street level café on the corner of O'Brien and Anderson Streets would provide further activation.
- The podium street wall will be below 14m to reduce the visual impact of the perceived height of the development when viewed from the Heritage Conservation Area. This is consistent with the recommendation by the Strategy.
- The podium build form has a minimum of 4.5m setback along Anderson Street to mitigate potential visual impact from the Heritage Conservation Area to the east of the site. The additional setback allows for more generous buffer as well as street tree planning that will have a positive effect in mitigating the visual impacts brought by high-rises through screening their presence.
- The podiums will be modulated and articulated to provide an enhanced presentation to the adjacent Heritage Conservation Area.
- Additional elements including awnings and verandas provides a layered interface and respond to the human scale of the pedestrian environment.
- The substation was careful tucked away from Anderson street and integrated with the build form to enhance the ground level presentation.

5.2 CONNECTIVITY

In addition to the public domain upgrade, the proposal provides two (2) through site links to further enhance and encourage pedestrian activities to the Northern end of the CBD extension.

- Through site link between O'Brien Street and Wilson Street adjacent to the railway line thereby providing an extension to the existing pedestrian connection between Mcintosh Street and O'Brien Street; and
- East – west through the centre of the site providing access to the building lobbies and a connection from Anderson Street to the pedestrian link adjacent to the railway line.

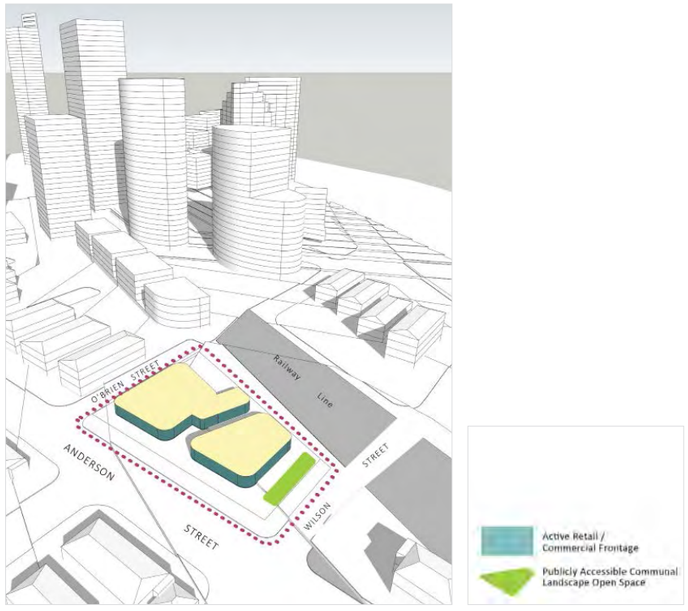


Figure 5.1.3 Active Frontages

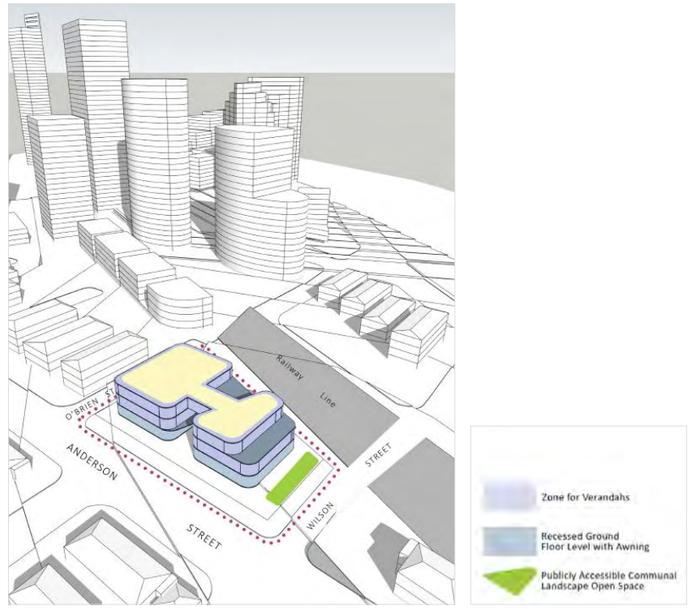


Figure 5.1:4 Podium Form

5.3 TOWER FORM

- The proposal will provide a catalyst to rebrand the northern entry to Chatswood CBD and set a benchmark for the desired future character of the CBD skyline and streetscape. The proposed tower form will contribute to visually mark the northern extension to the Chatswood CBD. Once the commercial core and mixed-use development occur, the development will form part of a harmonious foreground as a lower transition with the CBD form as a taller backdrop.
- In line with the Strategy, the taller building forms are to be positioned further away from Anderson Street than the lower podium building forms. To achieve this outcome a 90m building form is located to the south of the site and a lower building form is located to the north of the site to provide a transitional height form across the site to mitigate the visual impact when viewed from the HCA.
- In addition, the lower level tower form is located towards the north of the site providing an improved solar access amenity outcome for existing apartments to the south of the site.
- The tower form is setback by 6m from boundary with a minimum of 1.5m from the podium edge along Anderson Street to mitigate potential visual impact from the Heritage Conservation to the east of the site. The additional setback allows for more generous buffer as well as street tree planning that will have a positive effect in mitigating the visual impacts brought by high-rises through screening their presence.
- The tower form is distinctively delineated by 2 levels of communal open space at level 3 & level 16. The landscape design establishes attractive and practical areas for the future residents to enjoy, while contribute to the overall outlook from taller buildings to the south. In addition, the communal open space are located on the northern portion of the site to maximise solar access.
- The lower tower floor plate is 560 sqm, whereas the upper tower floor plate is 300 sqm. The overall distribution of bulk and scale across the tower form allows it to achieve a slender tower form.

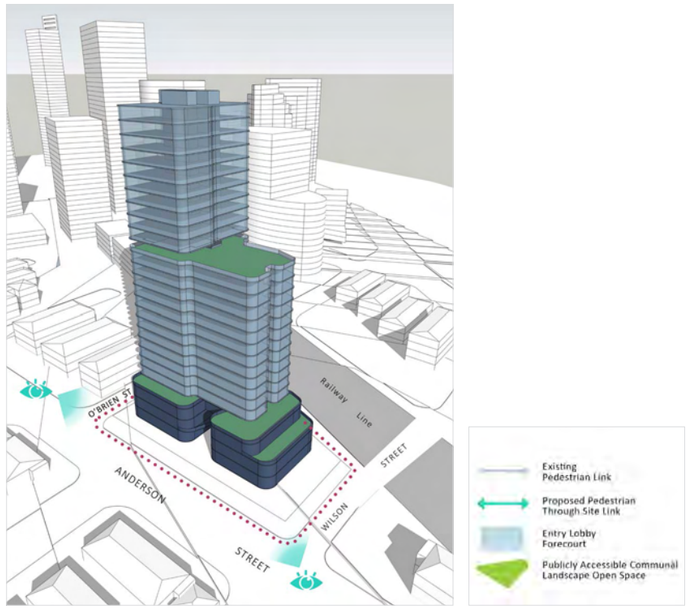


Figure 5.3.1 Stepped Tower Form

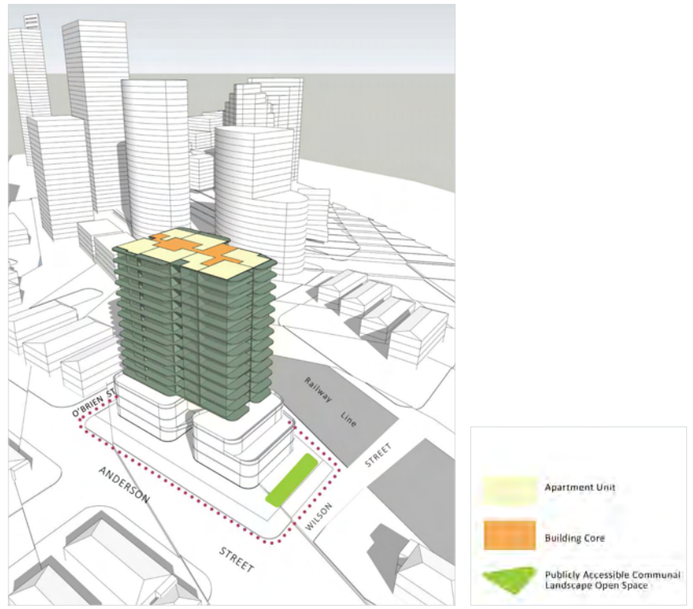


Figure 5.3.2 Residential Floor Plate

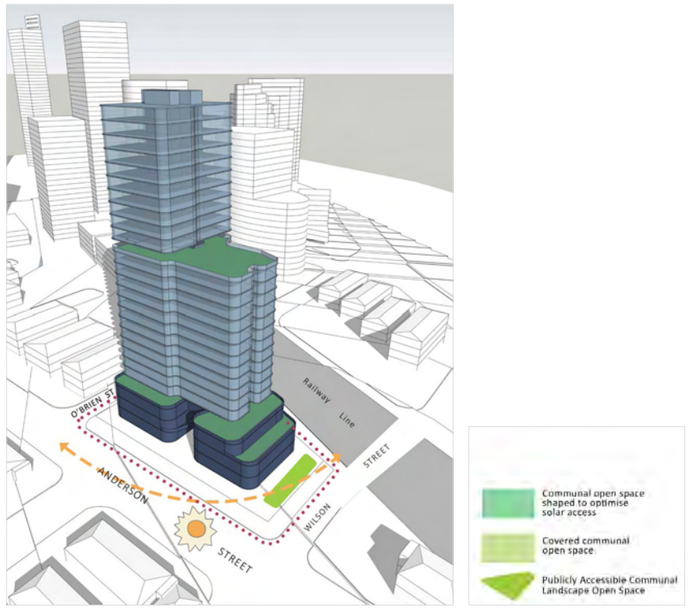


Figure 5.3.3: Communal Open Space

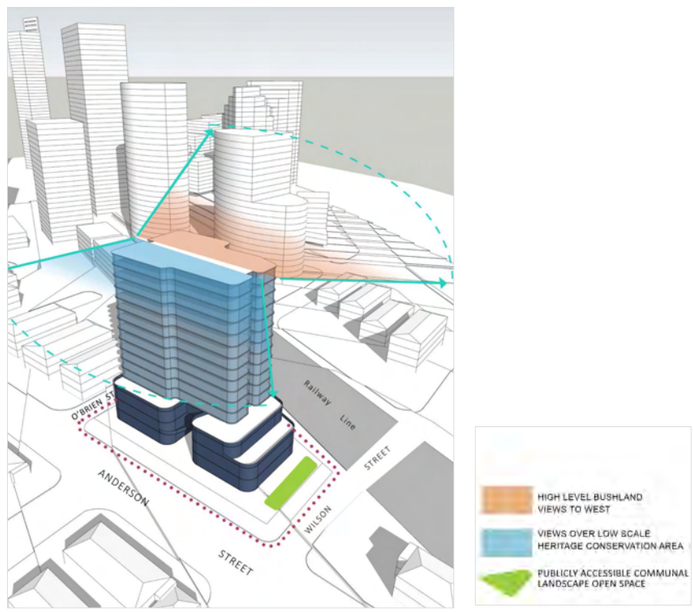


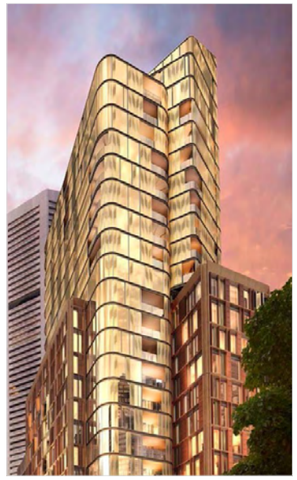
Figure 5.3.4: Views

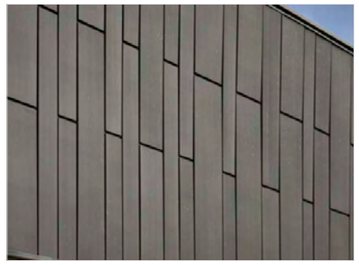
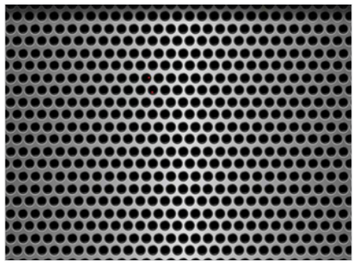
5.4 AESTHETIC

- The three-storey podium will be articulated as a strong base to the building with further articulation of the tower forms to visually reduce the overall scale of the building. A three-storey podium height is consistent with the height of apartment buildings south of O'Brien Street.
- The building form and articulation will provide detail and architectural interest at prominent parts of the building including the streetscape, podium, entries, and roof gardens.
- The podium building form and articulation will be designed to clearly define the corner of Anderson and Wilson Streets, with setbacks to provide a visual and physical transition between the public and private realms.
- The podium will be shaped to create two separate building elements flanking a cross site link which helps to create a building scale in keeping with the heritage conservation area east of Anderson Street.
- The modular composition of the façade to Anderson Street and Wilson Street provide a contemporary design while create an elegant and well-balanced interplay between vertical element and horizontal balconies.
- Strong horizontal lining and extensive use of openings and fenestration adding depth to the overall composition.
- The contemporary material palette merges the functional aspects of the environmental performance of the facade with aesthetic features to underpin the unique and elegant expression of the development. Vertical fixed metal louvres enhance the slender proportions of the tower façade segments to complement the choice of dark window frames and break up the horizontality of floor plates.
- Curves are a running theme for the build form, softening the ground level and result in an elegant tower form that is contemporary, yet familiar as a high-quality example of the proposed mixed-use typology.

5.5 AMENITY

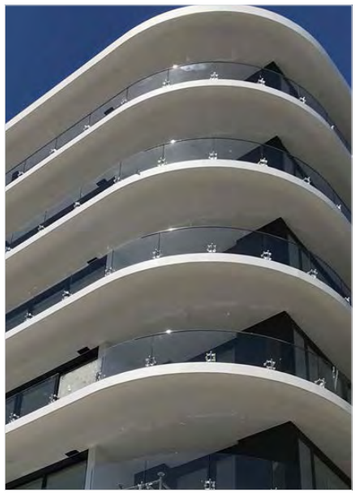
- The proposal demonstrated a high level of amenity for future residents as well as respecting the surrounding developments.
- All of the apartments have northerly, easterly, and southerly aspects with no units facing south.
- The provision for district views to the north, east and south enjoyed by the majority of the units will contribute greatly to the overall amenity available to future residents. In addition, the west and north west facing units has the opportunity to enjoy the bushland views.
- Majority of the units (more than 70%) are cross ventilated which vastly exceeds the minimum requirement as per the ADG (60%).
- The proposed apartment layouts are considered to be efficient, minimising circulation space and appropriate depth of apartment. Apartments in general comply with the ADG requirement.
- The common circulation and lift core only service seven apartments on each lower level, and three on upper levels. Each compact circulation space is provided with excellent natural light and ventilation.
- In addition to the communal open space area at level 3 & level 16, additional outdoors area is provided for potential communal garden for groups of residents.









5.6 BUILDING SUSTAINABILITY

The design is focused on provision of simple, passive strategies to reduce energy consumption and maximise sustainability. These passive strategies would be supplemented with building systems to further reduce ongoing resource use.

Apartments have been planned to provide a good level of cross ventilation above SEPP 65 minimum standard requirements.

The majority of apartments have also been orientated to provide a good level of solar access in mid-winter, providing passive heating and daylight penetration during the winter months.

The benchmark for the building design is to exceed minimum BASIX requirements.

Issues to be considered during design development include:

Energy Use

- Coordination of glazing, thermal mass, and surface reflectance.
- Provision of sun shading, insulation, low glare high performance glass.
- Use of light shelves, appropriate ceiling finishes, motion sensors and external time switch con-trols to reduce electric lighting usage.
- Incorporation of operable louvres where required.
- Carpark mechanical ventilation systems compliance with AS 1668 energy efficiency measures.

Water Use

- Best practice fixtures and fittings.
- Use of water tolerant plant species in public and communal open spaces.

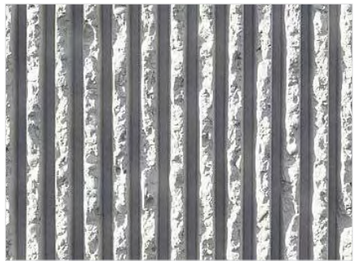
Materials

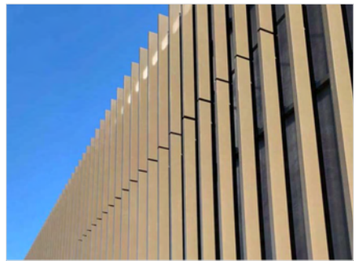
- Use of materials and building elements that are recycled and recyclable.
- Use of timber or timber from responsibly managed forests.
- Selection of materials with levels of finish and quality to minimise ongoing maintenance re-quirements.
- Use of locally manufactured building materials where available.

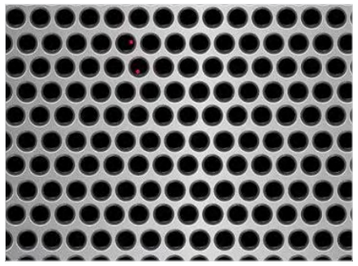
Transport

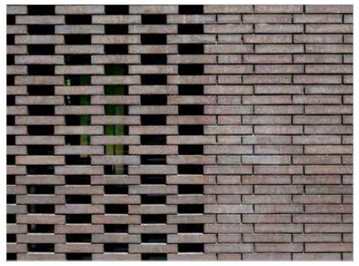
- Provision of end of trip facilities.
- Provision of small car spaces in preferred locations.








5.7 VIEW OF PODIUM ADDRESSING TO ANDERSON STREET AND WILSON STRET

5.8 AERIAL VIEW LOOKING SOUTH TOWARDS CHATSWOOD CBD

5.9 PROPOSAL STATISTICS

The proposed development includes the following:

- A mixed-use building with a total height of a three-storey podium and 24 storey residential tower (27 storeys in total)
- Basement loading for service vehicles, waste storage and collection
- 4 levels of basement parking with bicycle storage, end of trip facilities and services
- Three-storey commercial podium floor retail and commercial with a total of 1773 m²
- Development statistics breakdown as follow:
  - Retail GFA - 373 m²
  - Commercial GFA - 1400 m²
  - Residential GFA - 8949 m2
  - 4% Affordable Housing GFA - 358 m2
  - Total GFA/FSR proposed - 11,080 m2 / 5 : 1
- Associated landscaping, and landscaped areas to the front, rear and side of building and adjacent to public domain along Anderson Street
- Total Communal roof open space on level 3 and 16 = approx 1500 m²
- A general street wall height of approx13m
- A front setback to Anderson Street of 4.5m, with the tower stepping back 1.5m further
- A general rear setback of 3m to the rear boundary to the west, with the tower stepping back 3m further.
- A side setback to O'Brien Street of 3m, with the tower stepping back 3m further
- A side setback to Wilson Street of approx 8m, with the tower stepping back further
- The proposal contains the following number of residential units:
  - Total 114 apartments
  - 24 of apartments of 1 bedroom
  - 70 of apartments of 2 bedrooms
  - 20 of apartments of 3 bedrooms

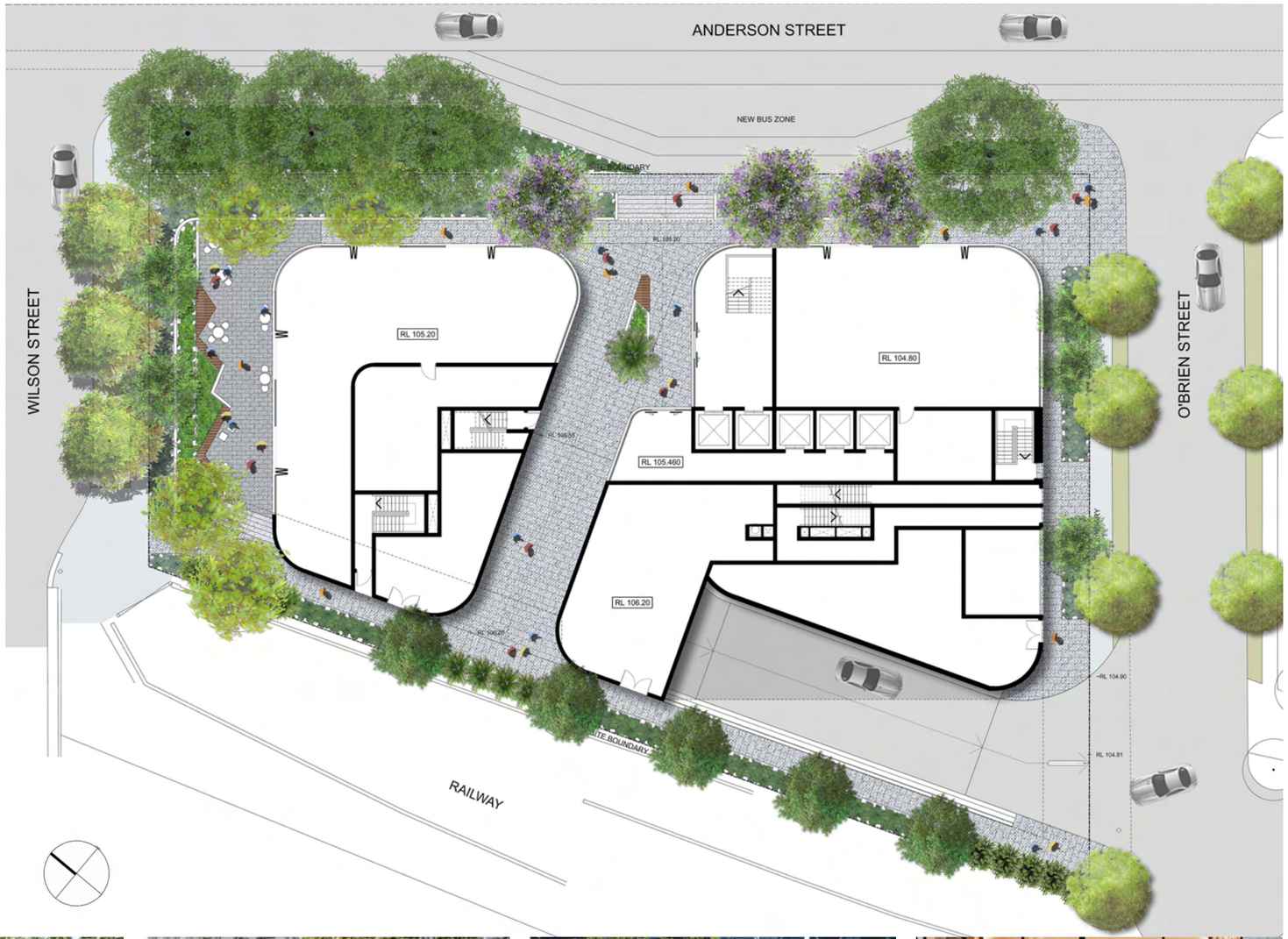
Figure 5.9.1 Building Envelope

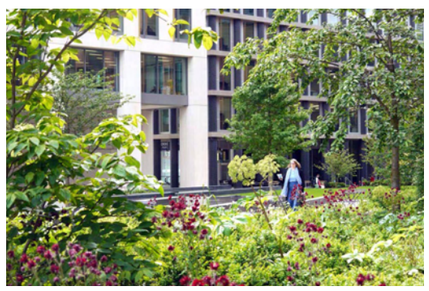
6.0 LANDSCAPE CONCEPT

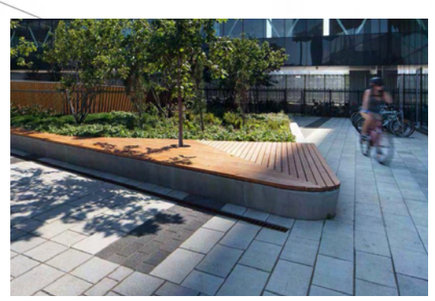
6.1 LEVEL 1 (GROUND FLOOR) PUBLIC DOMAIN

The level 1 open space is to incorporate :

- A revitalised public domain and pedestrian environment with direct access to new retail / commercial facilities.
- Improved through-site links providing enhanced pedestrian connections to and from Chatswood CBD and train station.
- Legible, safe access to the building entry from Anderson Street.
- Casual outdoor dining to provide a drawcard and in turn enliven the open space and streetscape.
- Outdoor seating for both individuals and groups.
- Planters with integrated seating, and fixed and loose furniture to provide a variety of seating opportunities.
- Paved areas to facilitate pedestrian movement across the site and to provide flexible spaces for meeting, socialising and relaxation.
- Planting along boundaries to reinforce the 'greening' of Chatswood and to provide increased amenity to the ground level public realm.
- Areas of deep soil to allow for planting of large trees to provide an enhanced visual and environmental outcome.
- Planting incorporating a mix of permanent green elements and species with foliage and flowers to provide seasonal interest, and enhance views and amenity.
- Tree planting to enhance the visual qualities of the open space and allow for winter sun and summer shade to create a comfortable outdoor environment.



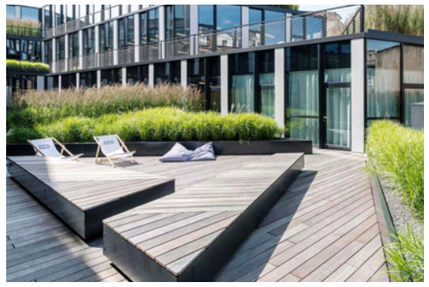
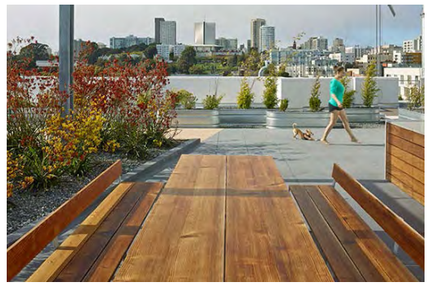




LANDSCAPE CONCEPT

6.2 LEVEL 4 MID-RISE COMMUNAL OPEN SPACE

- The communal open space located on Level 4 will provide opportunities for passive recreation and social interaction, and will feature flexible activity spaces and areas for group functions.
- This landscaped level is to include:
  - seating areas for both individuals and groups;
  - tables and chairs for outdoor dining;
  - spaces for group activities such as yoga and Tai Chi;
  - relaxation space and lounge area defined by timber decking;
  - raised planters for growing vegetables; and
  - screens where wind protection is required.
- Planting is to incorporate a mix of permanent green elements and species with foliage and flowers that provide seasonal interest, to enhance views and amenity.

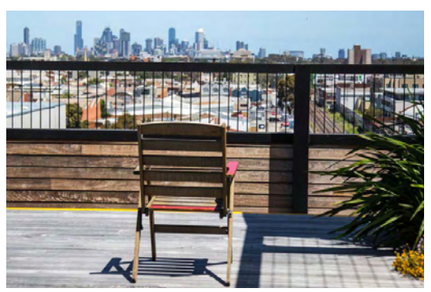
LANDSCAPE CONCEPT

6.3 LEVEL 17 HIGH-RISE COMMUNAL OPEN SPACE

- The communal open space located on Level 17 will incorporate lounge and retreat spaces and will also provide opportunities for people to enjoy the panoramic views that will be available from this elevated terrace.
- The landscaped open space on Level 17 will also include:
  - a variety of seating spaces for relaxation and contemplation;
  - tables and chairs for outdoor dining;
  - raised planting beds to define and enhance seating areas;
  - informal seating clusters to accommodate individuals and groups of varying sizes; and
  - screens where wind protection is required.
- Planting is to incorporate a mix of permanent green elements and feature species with contrasting foliage and texture to enhance views and amenity.







6.4 INDICATIVE PLANT SPECIES AND MATERIALS

- A range of native and exotic plants is to be incorporated within the development to:
  - allow for winter sun and summer shade;
  - provide an enhanced visual aesthetic;
  - promote a connection with nature;
  - provide screening and buffers;
  - promote biodiversity; and
  - provide a low maintenance and drought tolerant landscape.
- Wind tolerant species are to be included where required.
- To address the neighbouring heritage area, boundary planting at ground level is to incorporate species associated with Federation and Interwar bungalow style gardens in combination with typical 'North Shore garden' species and contemporary drought tolerant plants.
- Large street trees are to be incorporated along Anderson Street in accordance with heritage advice by Weir Phillips and the Chatswood Precinct Study (GMU).
- A refined palette of high quality elements and materials is to be incorporated throughout the landscaped areas of the development to support the Chatswood CBD identity.

Jacaranda mimosifolia

Tristaniopsis laurina 'Luscious'

Rhaphiolepis 'indica Snow Maiden'

Lavandula dentata

Lomandra longifolia 'Tanika'

INDICATIVE PLANT SPECIES - Ground Level

Pittosporum tobira

Correa glabra

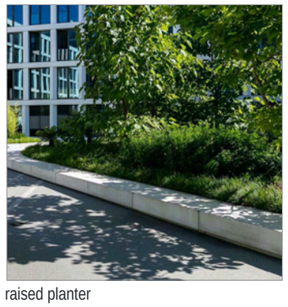
Liriope muscari 'Just Right'

Helichrysum petiolare

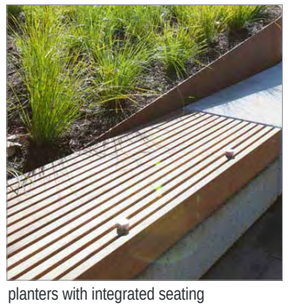
Dianella 'Cassa Blue'

INDICATIVE PLANT SPECIES - Level 3 and Level 16

granite paving



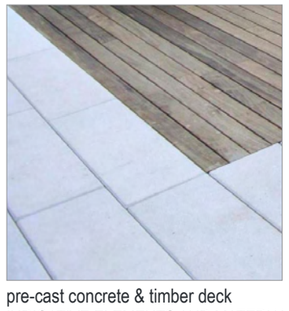
raised planter



planters with integrated seating

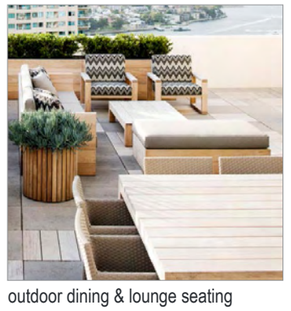
cafe seating

INDICATIVE ELEMENTS AND MATERIALS - Ground Level



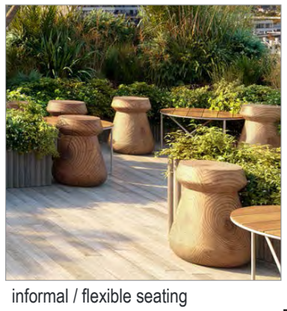
pre-cast concrete & timber deck

decorative gravel



outdoor dining & lounge seating

raised vegetable garden



informal / flexible seating

INDICATIVE ELEMENTS AND MATERIALS - Level 3 and Level 16

7.0 VISUAL ASSESSMENT

7.1 VISUAL ASSESSMENT

Assessment of visual impact upon views is based on visual sensitivity and the magnitude of visual effects and follows the following process.

1 Identify areas from which the proposal is visible	
Zone of Visual Influence	The area within which the proposed development may have an effect on visual amenity. Areas from which the site is clearly visible.
Key Viewpoints	Nominated viewpoints from within the zone of visual influence representing a typical view experienced by the visual receptors.

2 Describe the existing view from each viewpoint	
Visual Amenity	The value of a particular area or view in terms of what is currently seen. The existing nature of the site and its context.

3 Determine the sensitivity of the view	
Visual Sensitivity	The degree to which a landscape can absorb change of a particular type and scale without significant adverse effects in relation to its location or visual receptors. The sensitivity of visual receptors and views is dependent on: - the location and context of the viewpoint; - the expectation or activity of the receptor; and - the duration of the view. Receptor sensitivity may be categorised as: - High - likely from residential properties affected by a development where duration of the view is long and is experienced frequently. - Moderate - experienced in the public realm where duration of the view is temporary e.g. pedestrians and from vehicles. - Low sensitivity - from places of work, or similar, where attention is expected to be focussed on

4 Determine how much the view is changing	
Magnitude of Visual Effects	The degree of change in the composition of the view established by assessing: - loss or addition of features in the view; - the degree of contrast or integration of changes in relation to such factors as form, scale and colour; - extent the view would be occupied by the development; and - distance of the viewpoint from the proposed development which determines whether the

5 Evaluate the significance of the change	
Visual Impact	The significance of change based on the sensitivity of the location or receptor and the scale or magnitude of the effect. Greater impact is generally associated with large-scale effects and effects on sensitive or high value receptors. The visual impact may be positive (beneficial) or negative (adverse).

6 Identify measures to reduce visual impacts or enhance visual quality	
Mitigation Strategy	Built form design or landscape design measures to enhance visual quality or reduce, remedy or compensate for adverse visual impacts.

7.2 KEY VIEWPOINTS

- The impact of the proposal on views from key viewpoints within the Zone of Visual Influence is described on the following pages.
- From selected viewpoints photomontage images illustrate the extent of potential visual impacts.
- The visual impact rating is based on the following matrix -

SENSITIVITY \ MAGNITUDE	High	Moderate	Low	Negligible
High	High	High-Moderate	Moderate	Negligible
Moderate	High-Moderate	Moderate	Moderate-Low	Negligible
Low	Moderate	Moderate-Low	Low	Negligible
Negligible	Negligible	Negligible	Negligible	Negligible

Visual Impact Rating Matrix

Figure 7.2.1 Location of Key Viewpoints

7.3 VIEWPOINT 1

View north along Anderson Street

Visual Amenity

- View north-east along Anderson Street looking towards the site.
- Mature street trees are highly visible in the middle distance.
- Buildings are aligned to the street boundary without a setback which contains the views corridor along Anderson Street
- along the road corridor.
- The hilly terrain to the north and the hard edge wall of buildings on either side of the Anderson Street prevents any distant views.

Visual Sensitivity

- Receptor Type : public realm / residential
- Duration : short / temporary
- The view towards the proposed development from the public realm would be temporary as it would be experienced from vehicles and by pedestrians.
- High rise residential apartments located along Anderson street address the street. Views towards the site from apartments would be significantly blocked by adjoining residential towers.
- Given the level terrain and containment of the view by existing high rise residential towers, visual receptors would experience minimal change to the views and to visual amenity at this location.
- Receptor sensitivity : public realm - low; residential - low

Magnitude of Visual Effects

- Degree of Change: public realm - low
- Distance of Viewpoint: Distant
- There would be minimal change to the composition of views from this location with the addition of the proposed development.
- New built form elements would be substantially screened by existing and future high rise residential built form.
- Magnitude of change : public realm - low; residential - low

Visual Impact

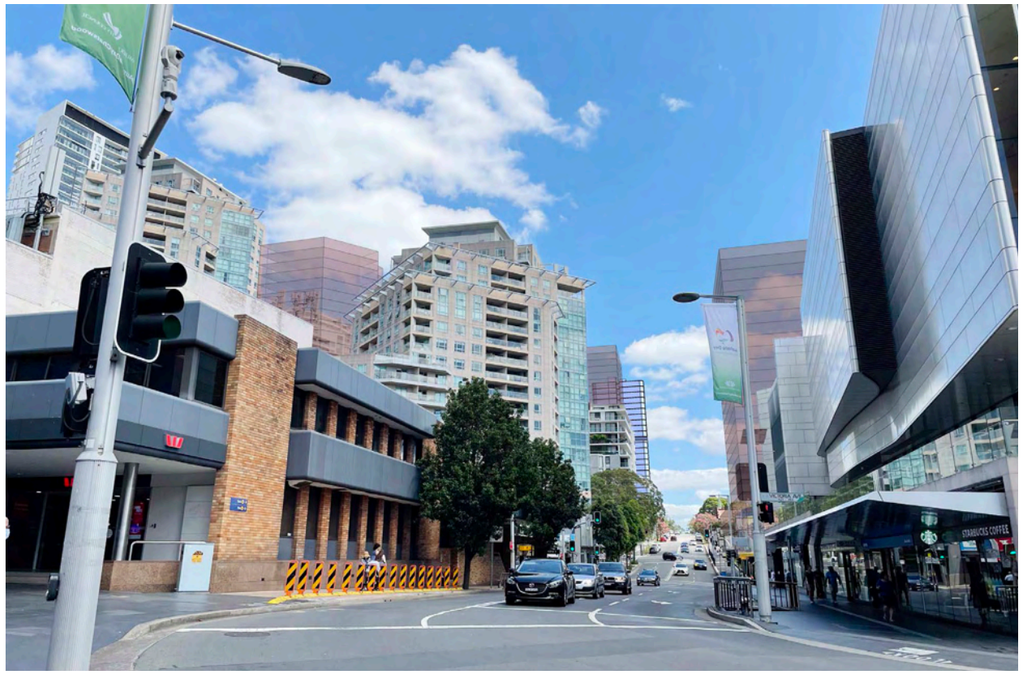
- From the public domain the view is of short duration.
- High rise residential properties along Anderson Street address the street which would significantly limit visual impact from these habitable rooms
- Visual Impact : public realm - low; residential - low

Mitigation Strategy

- To mitigate negative impacts the proposed development would be designed to include the following:
  - Built Form - selection of finishes and colour palette to complement the surrounding high rise buildings. Base building colours would be in earthy, neutral tones with minimal colour intensity (or hue), and the exterior of buildings would incorporate materials with low reflectivity.
  - Landscape - Large native trees are proposed to be planted along Anderson Street .

Montage

Viewpoint 1 Within Future Context Established In the Chatswood CBD Planning & Urban Design Strategy 2036 (2020)



7.4 VIEWPOINT 2

View north along Anderson street at the intersection of Help Street

Visual Amenity

- View north-east along Anderson Street looking towards the site.
- Mature street trees are highly visible in the middle distance.
- A high-rise Building on the corner of Anderson and Help Streets aligned to both street boundaries frames the western edge of the view cone.
- Low-rise buildings with a vegetated setback frame the eastern edge of the view cone along Anderson Street.
- The hilly terrain to the north and the hard edge wall of buildings on the western side of the Anderson Street prevents any distant views.

Visual Sensitivity

- Receptor Type : public realm
- Duration : short / temporary
- Receptor Type : residential
- Duration : long
- The view towards the proposed development from the public realm would be temporary as it would be experienced from moving vehicles and by pedestrians.
- Apartments within the high-rise residential apartment building located along Anderson street address either Anderson or Help Streets. Views towards the site from these apartments would be significantly blocked by neighboring apartments or any future highrise apartment development to be located north of this building.
- Low density residential houses addressing the eastern side of Anderson Street have views towards Anderson Street and not the site.
- Receptor sensitivity : public realm - low; residential - Low

Magnitude of Visual Effects

- Degree of Change: public realm - Moderate
- Medium Distance of Viewpoint: medium
- Degree of Change: residential - low
- Distance of Viewpoint: medium
- There would be minimal change to the composition of views from residential properties from this location with the addition of the proposed development.
- Although the magnitude of change is moderate when viewed from the public realm, the duration of these views is short and temporary.
- Magnitude of change : public realm Moderate ; residential - low

Visual Impact

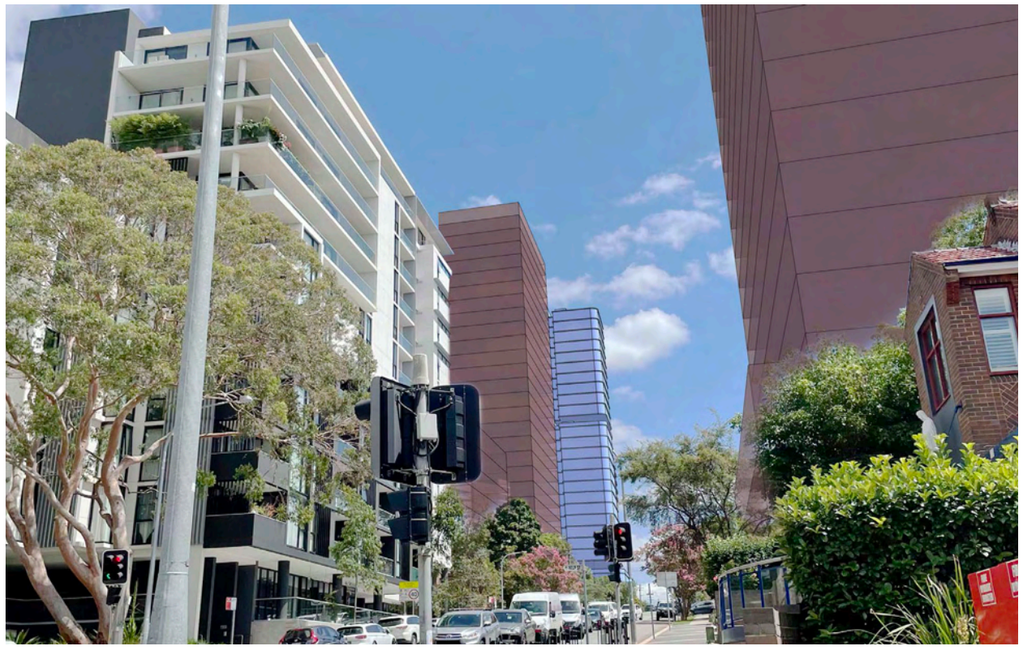
- From the public domain the view is of short duration.
- Residential properties along Anderson Street address the street and these views would not be significantly impacted by the proposed development.
- Visual Impact : public realm - low- moderate; residential - low

Mitigation Strategy

- To mitigate negative impacts the proposed development would be designed to include the following:
  - Built Form - selection of finishes and colour palette to complement the surrounding landscape. Base building colours would be in earthy, neutral tones with minimal colour intensity (or hue), and the exterior of buildings would incorporate materials with low reflectivity.
  - Landscape - extensive tree planting, including large native trees, along streets and within areas of open space. T

Montage

Viewpoint 2 Within Future Context Established In the Chatswood CBD Planning & Urban Design Strategy 2036 (2020)



7.5 VIEWPOINT 3

View south west along Anderson street at the intersection of Violet Street

Visual Amenity

- View south west along Anderson Street looking towards the site.
- Mature street trees are highly visible in the middle distance..
- Low rise buildings with a vegetated setbacks frame the eastern and western edge of the view cone along Anderson Street.
- Existing high rise apartment developments provide the background of the view.

Visual Sensitivity

- Receptor Type : public realm
- Duration : short / temporary
- Receptor Type : residential
- Duration : long
- The view towards the proposed development from the public realm would be temporary as it would be experienced from moving vehicles and by pedestrians.
- Low density housing located along Anderson street have a side boundary address to Anderson street, views form these properties are either towards the south -east or north west and not towards the site.
- Receptor sensitivity : public realm - low; residential - Low

Magnitude of Visual Effects

- Degree of Change: public realm - Moderate
- Medium Distance of Viewpoint: medium
- Degree of Change: residential - low
- Distance of Viewpoint: medium
- There would be minimal change to the composition of views from residential properties from this location with the addition of the proposed development.
- Although the magnitude of change is moderate when viewed from the public realm, however the duration of these views is short and temporary.
- Magnitude of change : public realm High; residential - low

Visual Impact

- From the public domain the view is of short duration.
- Residential properties along Anderson Street address the street and these views would not be significantly impacted by the proposed development.
- Visual Impact : public realm -Moderate ; residential - low

Mitigation Strategy

- To mitigate negative impacts the proposed development would be designed to include the following:
  - Built Form - selection of finishes and colour palette to complement the surrounding landscape. Base building colours would be in earthy, neutral tones with minimal colour intensity (or hue), and the exterior of buildings would incorporate materials with low reflectivity.
  - Landscape - extensive tree planting, including large native trees, along streets and within areas of open space. T

Montage

Viewpoint 3 Within Future Context Established In the Chatswood CBD Planning & Urban Design Strategy 2036 (2020)

7.6 VIEWPOINT 4

View west from the corner of Archer and Violet Streets

Visual Amenity

- View west along Violet Street looking towards the site.
- Mature street trees are highly visible in the middle distance..
- Low-rise residential buildings with a vegetated setbacks frame the southern and northern edge of the view cone along Tulip Street.
- Existing high-rise apartment developments provide the background of the view.

Visual Sensitivity

- Receptor Type : public realm
- Duration : short / temporary
- Receptor Type : residential
- Duration : long
- The view towards the proposed development from the public realm would be temporary as it would be experienced from moving vehicles and by pedestrians.
- Low density housing located along Violet Street address the street, views form these properties are either towards the south -east or north west and not towards the site.
- Receptor sensitivity : public realm - low; residential - Low

Magnitude of Visual Effects

- Degree of Change: public realm - High
- Medium Distance of Viewpoint:: Medium
- Degree of Change: residential - low
- Distance of Viewpoint: medium
- There would be minimal change to the composition of views from residential properties from this location with the addition of the proposed development.
- Although the magnitude of change is high when viewed from the public realm, the duration of these views is short and temporary.
- Magnitude of change : public realm High ; residential - low

Visual Impact

- From the public domain the view is of short duration.
- Residential properties along Violet Street address the street and these views would not be significantly impacted by the proposed development.
- Visual Impact : public realm -Moderate ; residential - low

Mitigation Strategy

- To mitigate negative impacts the proposed development would be designed to include the following:
  - Built Form - selection of finishes and colour palette to complement the surrounding landscape. Base building colours would be in earthy, neutral tones with minimal colour intensity (or hue), and the exterior of buildings would incorporate materials with low reflectivity.

Montage

Viewpoint 4 Within Future Context Established In the Chatswood CBD Planning & Urban Design Strategy 2036 (2020)

VISUAL ASSESSMENT

7.7 VIEWPOINT 5

View east towards the site from 822-830 Pacific Highway

Visual Amenity

- View east across the Pacific Highway from No.822-830 Pacific Highway
- A medium density apartment building of four storey height is highly visible in the middle distance.
- Low rise residential buildings with a vegetated setbacks frame the southern and northern edge of the view cone along Tulip Street.
- Existing high-rise apartment developments provide the southern edge to the view cone.

Visual Sensitivity

- Receptor Type : public realm
- Duration : short / temporary
- Receptor Type : residential
- Duration : long
- The view towards the proposed development from the public realm would be temporary as it would be experienced from moving vehicles and by pedestrians.
- Medium density apartment buildings located along Pacific Highway have the majority of views primary to the north , however there are many apartments with private open space and habital rooms fronting the Pacific Highway.
- Receptor sensitivity : public realm - Moderate; residential - Moderate

Magnitude of Visual Effects

- Degree of Change: public realm - High
- Medium Distance of Viewpoint: Medium
- Degree of Change: residential -High
  Distance of Viewpoint: medium
- There would be a moderate change to the composition of views from residential properties from this location with the addition of the proposed development.
- Although the magnitude of change is high when viewed from the public realm, the duration of these views is short and temporary.
- Magnitude of change : public realm High ; residential - High

Visual Impact

- From the public domain the view is of short duration.
- Apartments located along the Pacific Highway with habitable rooms and private open space fronting the Highway will have views impacted moderately.
- Visual Impact : public realm -moderate-high ; residential - moderate- high

Mitigation Strategy

- To mitigate negative impacts the proposed development would be designed to include the following:
  - Built Form - selection of finishes and colour palette to complement the surrounding landscape. Base building colours would be in earthy, neutral tones with minimal colour intensity (or hue), and the exterior of buildings would incorporate materials with low reflectivity.

Montage

Viewpoint 5 Within Future Context Established In the Chatswood CBD Planning & Urban Design Strategy 2036 (2020)

7.8 VIEWPOINT 6

View south west along Anderson street at the intersection of Ashley Street

Visual Amenity

- View south west along Anderson Street looking towards the site.
- Mature street trees are highly visible in the fore ground and middle distance.
- Low-rise buildings with a vegetated setbacks frame the eastern and western edge of the view cone along Anderson Street.
- Existing high-rise apartment developments provide the background of the view.

Visual Sensitivity

- Receptor Type : public realm
- Duration : short / temporary
- Receptor Type : residential
- Duration : long
- The view towards the proposed development from the public realm would be temporary as it would be experienced from moving vehicles and by pedestrians.
- Low density housing located along Anderson street have a side boundary address to Anderson street, views form these properties are either towards the south -east or north west and not towards the site.
- Receptor sensitivity : public realm - low; residential - Low

Magnitude of Visual Effects

- Degree of Change: public realm - Moderate
- Medium Distance of Viewpoint: medium
- Degree of Change: residential - low
- Distance of Viewpoint: medium
- There would be minimal change to the composition of views from residential properties from this location with the addition of the proposed development.
- Although the magnitude of change is moderate when viewed from the public realm, however the duration of these views is short and temporary.
- Magnitude of change : public realm High; residential - low

Visual Impact

- From the public domain the view is of short duration.
- Residential properties along Anderson Street address the street and these views would not be significantly impacted by the proposed development.
- Visual Impact : public realm -Moderate ; residential - low

Mitigation Strategy

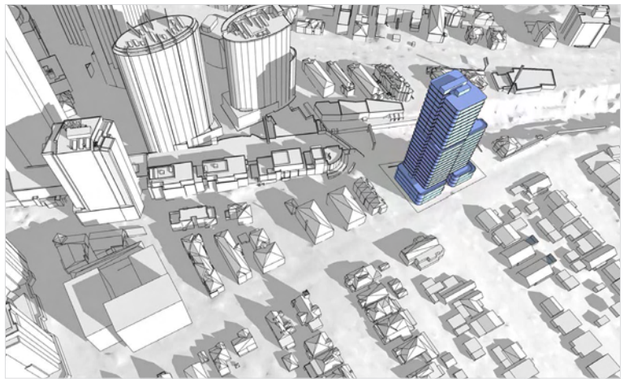
- To mitigate negative impacts the proposed development would be designed to include the following:
  - Built Form - selection of finishes and colour palette to complement the surrounding landscape. Base building colours would be in earthy, neutral tones with minimal colour intensity (or hue), and the exterior of buildings would incorporate materials with low reflectivity.

Montage

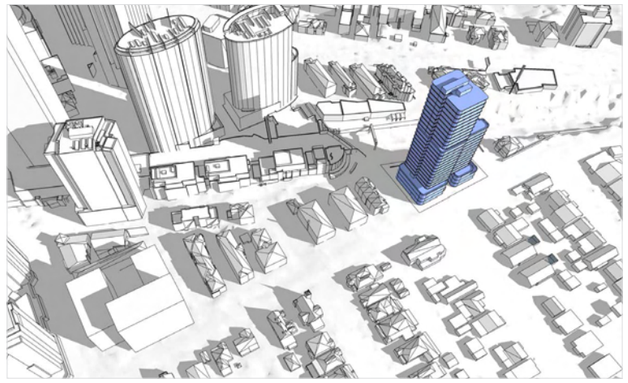
Viewpoint 6 Within Future Context Established In the Chatswood CBD Planning & Urban Design Strategy 2036 (2020)

8.0 AMENITY

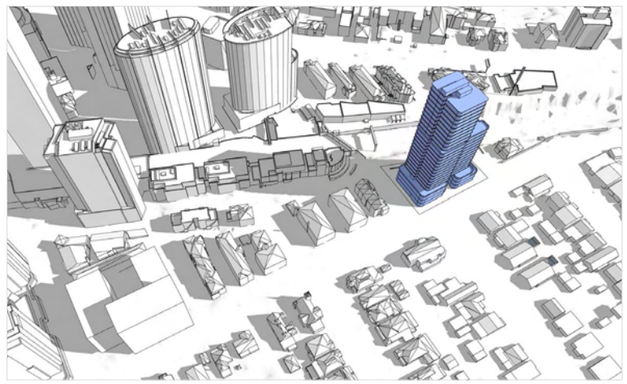
8.1 SHADOW DIAGRAMS



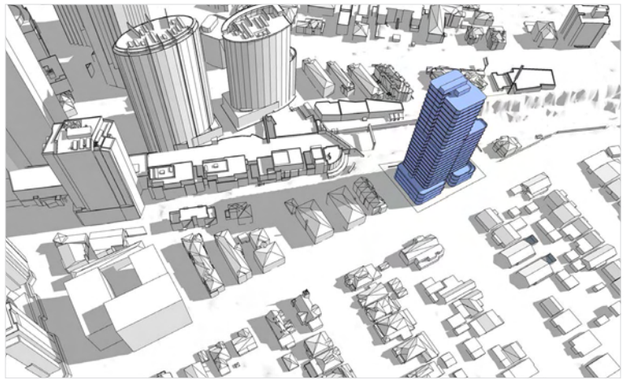
21st June 9.00 am



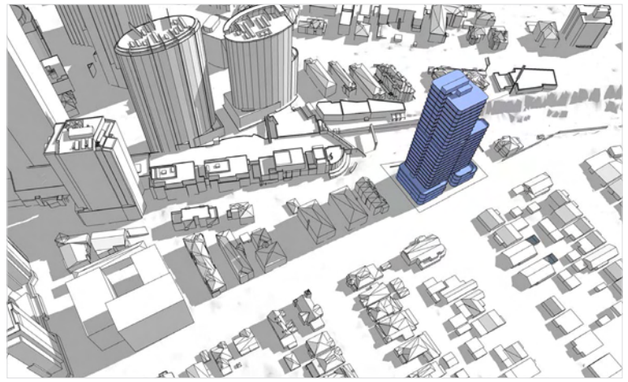
21st June10.00 am



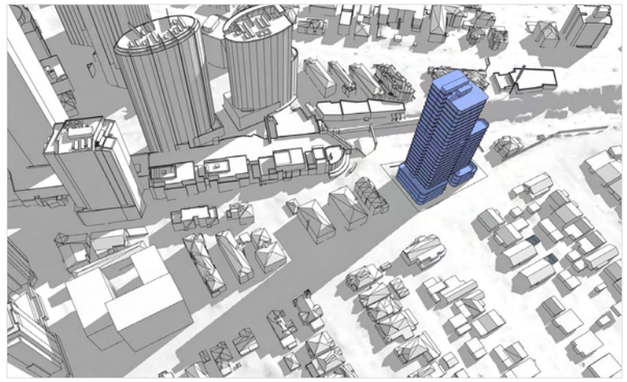
21st June 11.00 am



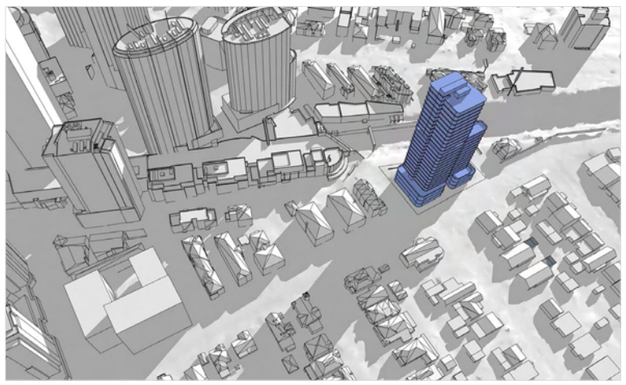
21st June noon



21st June 1pm



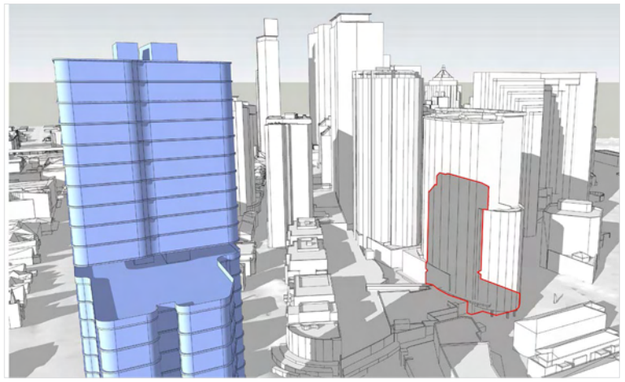
21st June 2pm



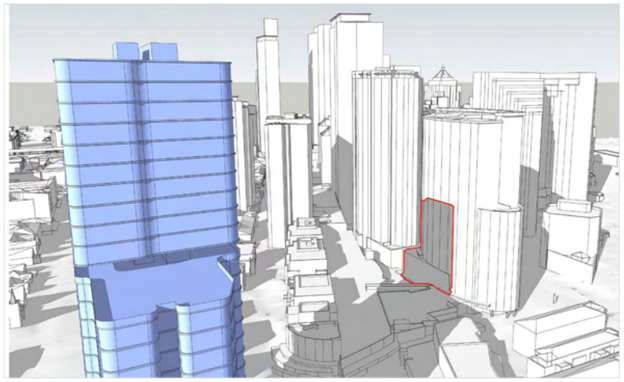
21st June 3pm

- The above shadow diagrams illustrate that shadows to be cast by the proposed building form on the 21st June would move quickly through the day which will ensure that residential private open space of properties surrounding the site will receive more than the required 2 hours of solar access.

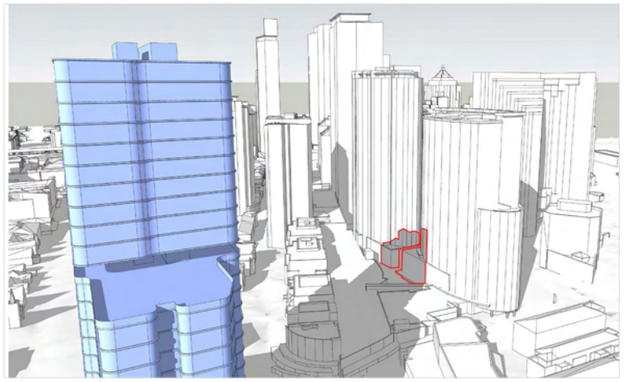
8.2 SUN PATH DIAGRAMS



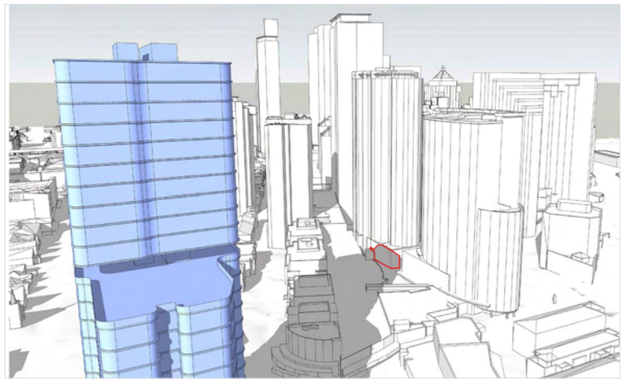
21st June 9.00 am



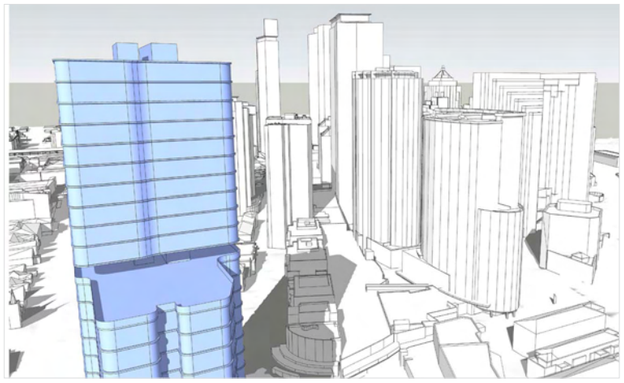
21st June 9.30 am



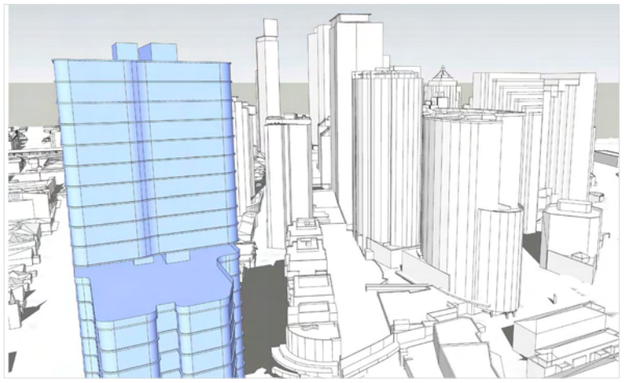
21st June 10.00 am



21st June 10.30am



21st June 11.00 am



21st June 11.30am

- Sun path diagrams have been prepared for over shadowing analysis on existing apartments at 1-9 Railway Street Chatswood.
- The sun path diagrams illustrate the shadow cast by the proposed building would move rapidly and will have minimal impact on the overshadowing of private and communal open space of these properties.

8.3 SUSTAINABILITY

- The design is focussed on provision of simple, passive strategies to reduce energy consumption and maximise sustainability. These passive strategies would be supplemented with building systems to further reduce ongoing resource use.
- Apartments have been planned to provide a good level of cross ventilation above SEPP 65 minimum standard requirements.
- The majority of apartments have also been orientated to provide a good level of solar access in mid winter, providing passive heating and daylight penetration during the winter months.
- The benchmark for the building design is to well exceed minimum BASIX requirements.
- Issues to be considered during design development include:

Energy Use

- Coordination of glazing, thermal mass and surface reflectance.
- Provision of sun shading, insulation, low glare high performance glass.
- Use of light shelves, appropriate ceiling finishes, motion sensors and external time switch controls to reduce electric lighting usage.
- Incorporation of operable louvres where required.
- Carpark mechanical ventilation systems compliance with AS 1668 energy efficiency measures.

Water Use

- Best practice fixtures and fittings.
- Use of water tolerant plant species in public and communal open spaces.

Materials

- Use of materials and building elements that are recycled and recyclable.
- Use of timber or timber from responsibly managed forests.
- Selection of materials with levels of finish and quality to minimise ongoing maintenance requirements.
- Use of locally manufactured building materials where available.

Transport

- Provision of cyclist facilities.
- Provision of small car spaces in preferred locations.

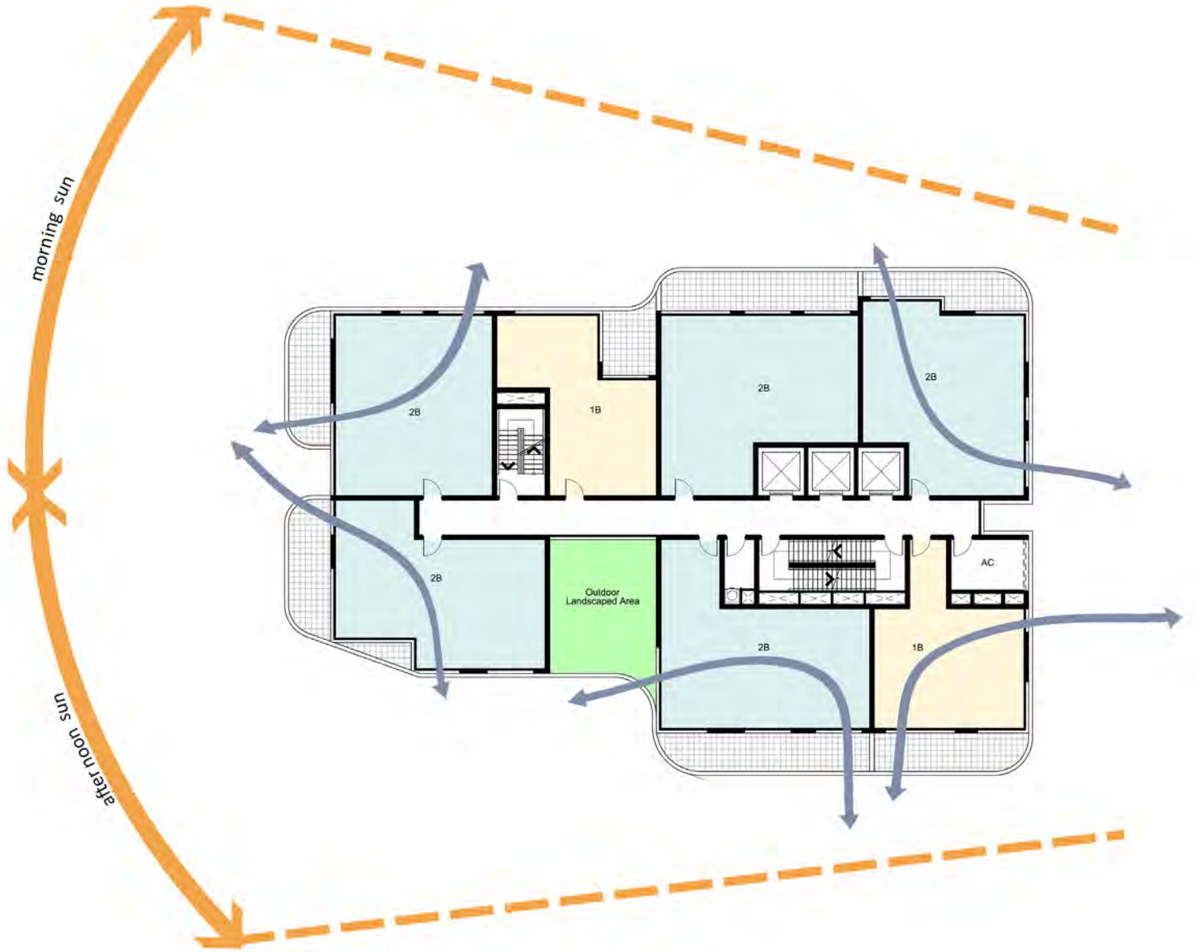
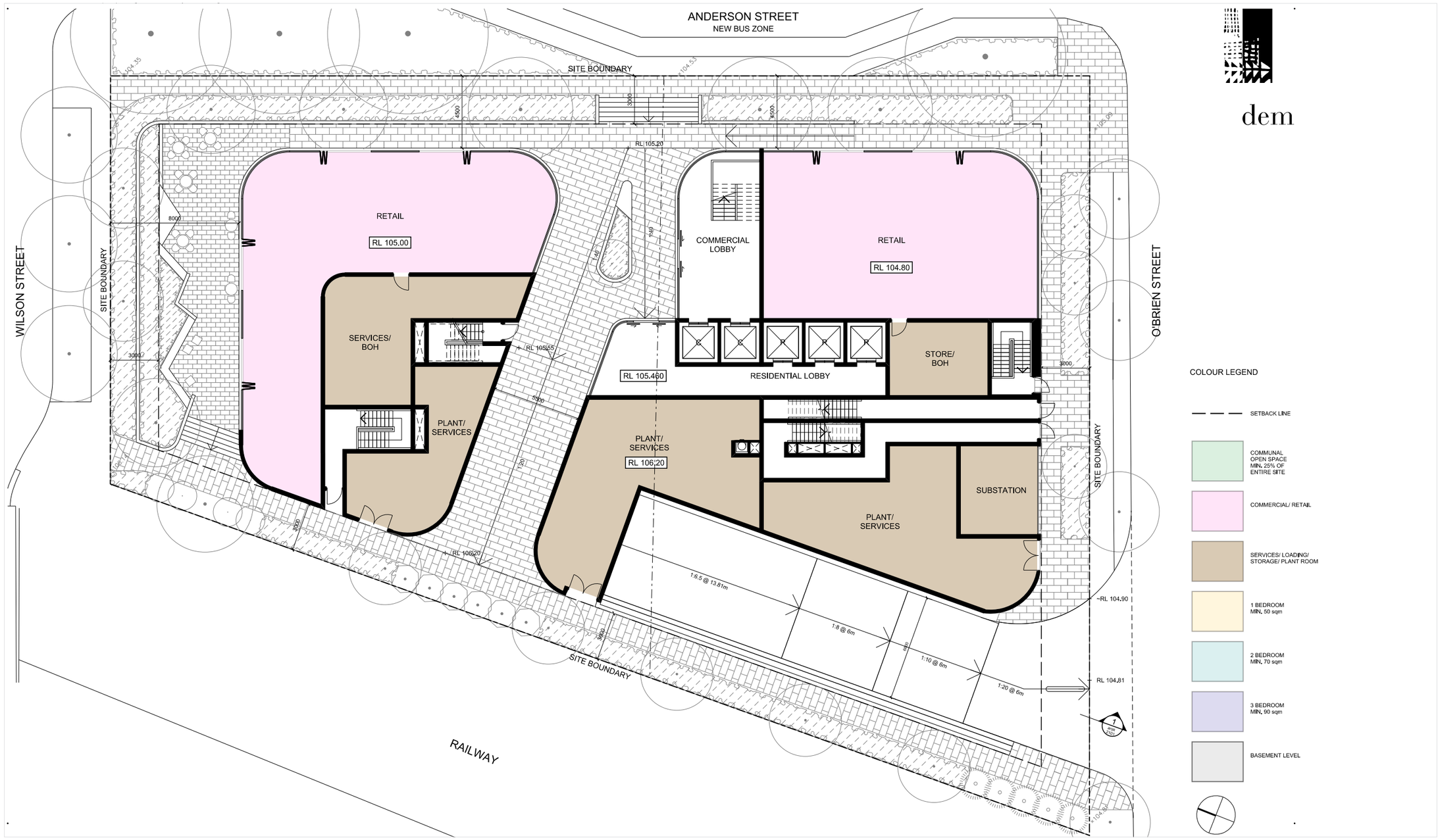


Figure 8.3.1: Typical Floor Plan – Cross Flow Ventilation and Solar Access

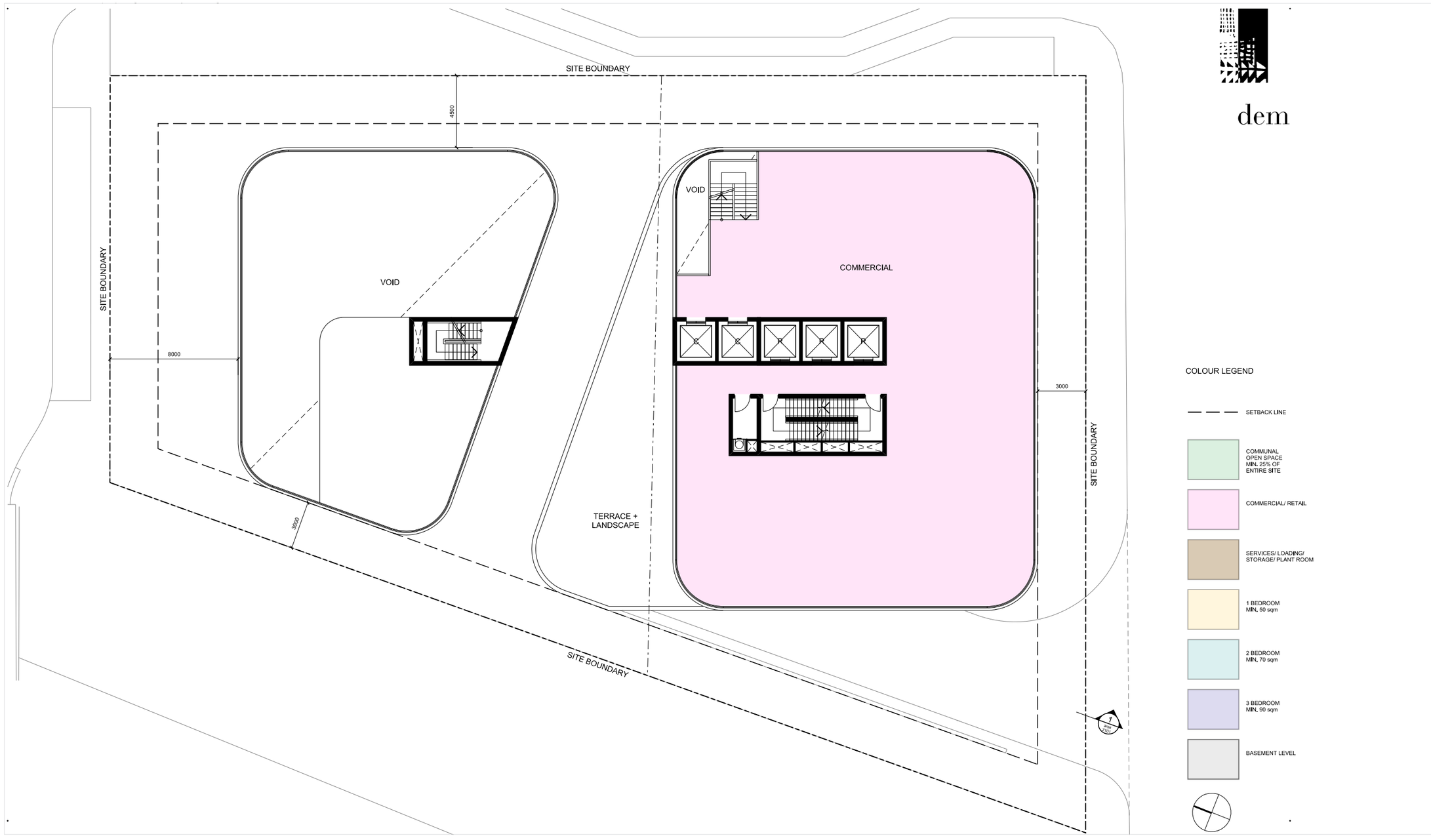
9.0 REFERENCE CONCEPT DESIGN

9.1 LEVEL 1 PLAN

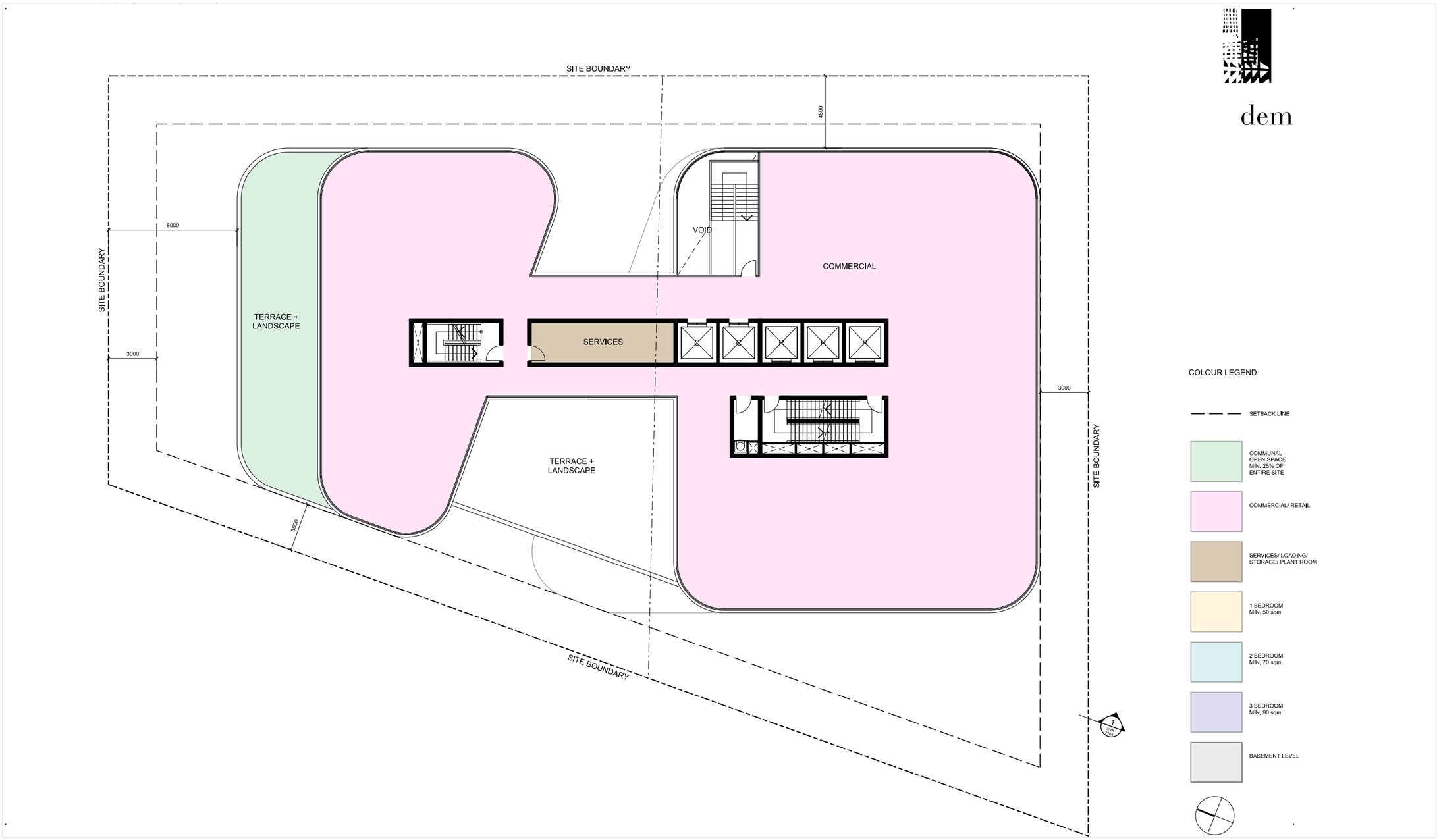


9.2 LEVEL 1 LANDSCAPE PLAN

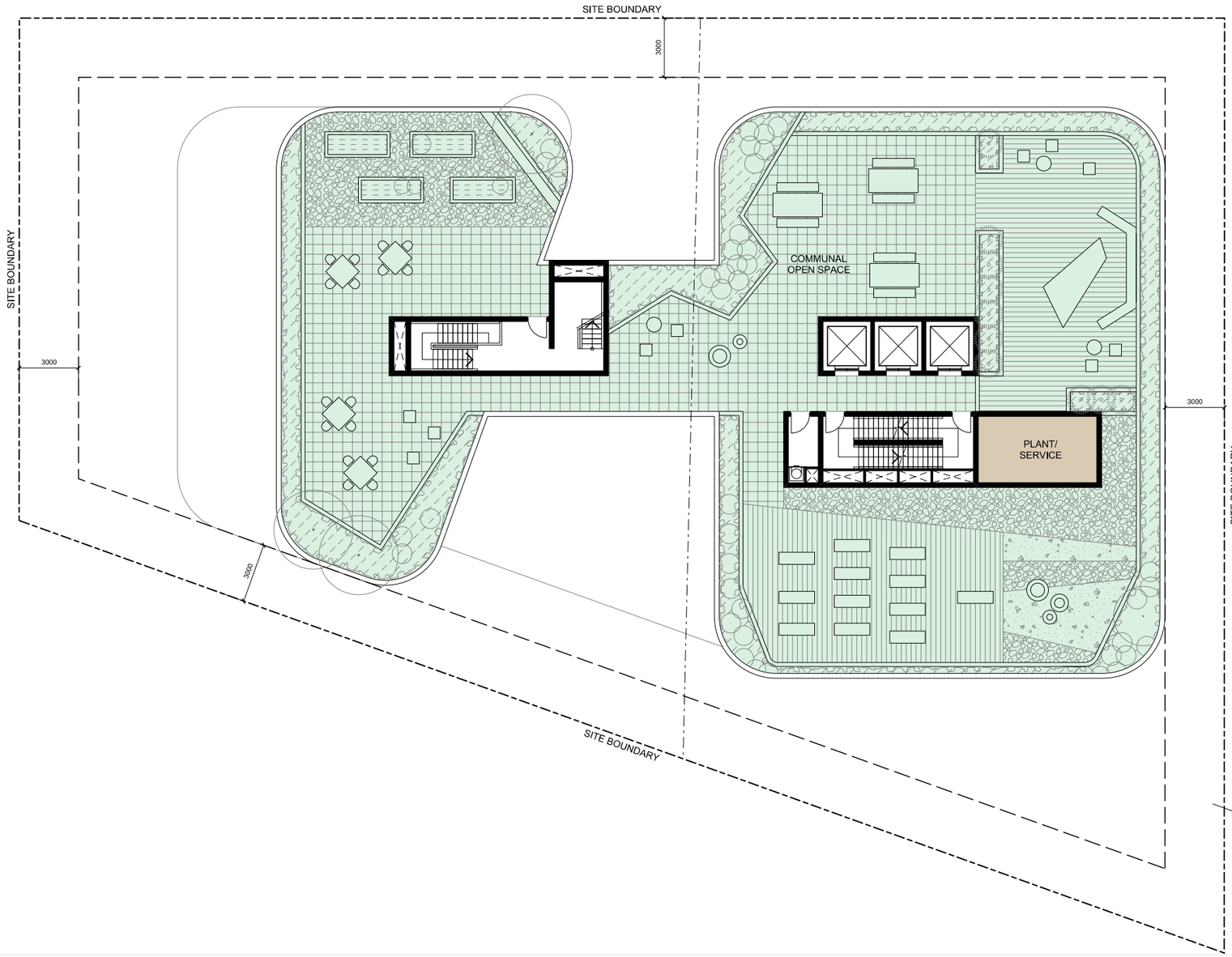
9.3 LEVEL 2 PLAN



9.4 LEVEL 3 PLAN



9.5 LEVEL 4 PLAN



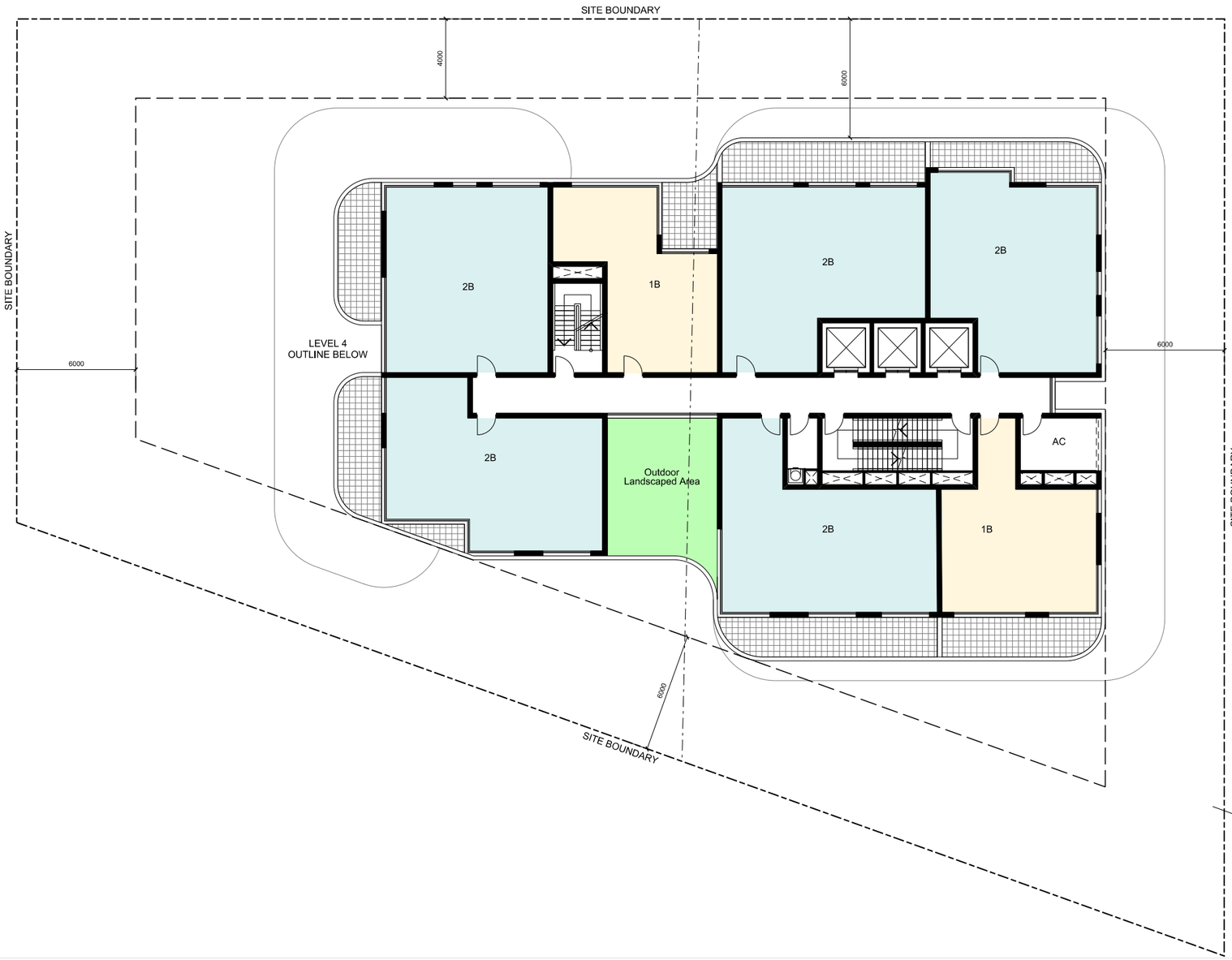
dem

COLOUR LEGEND

- SETBACK LINE
- COMMUNAL OPEN SPACE MIN. 25% OF ENTIRE SITE
- COMMERCIAL/ RETAIL
- SERVICES/ LOADING/ STORAGE/ PLANT ROOM
- 1 BEDROOM MIN. 50 sqm
- 2 BEDROOM MIN. 70 sqm
- 3 BEDROOM MIN. 90 sqm
- BASEMENT LEVEL

9.6 LEVEL 4 LANDSCAPE PLAN

9.7 LEVEL 5 - 16 PLAN

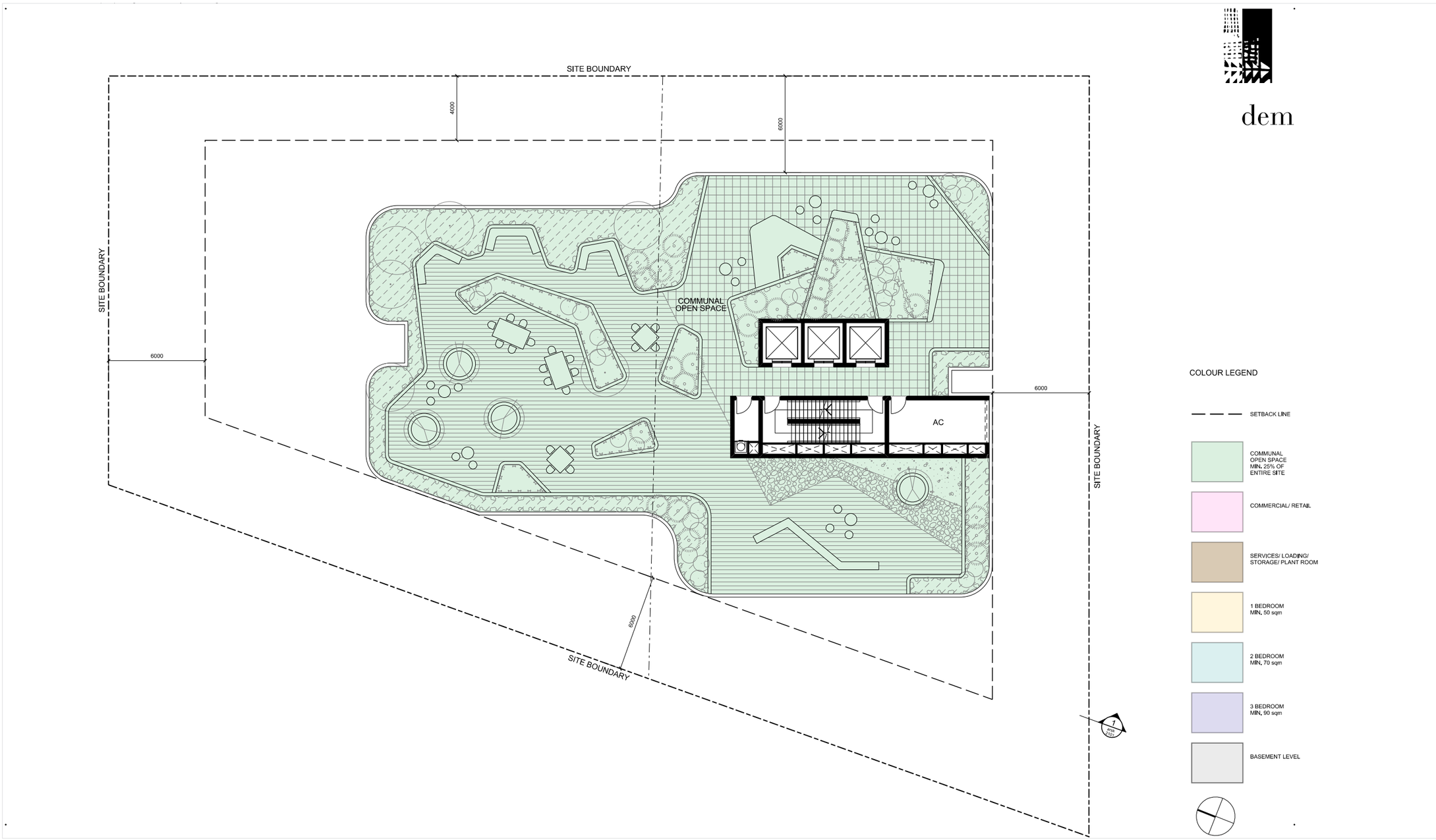


dem

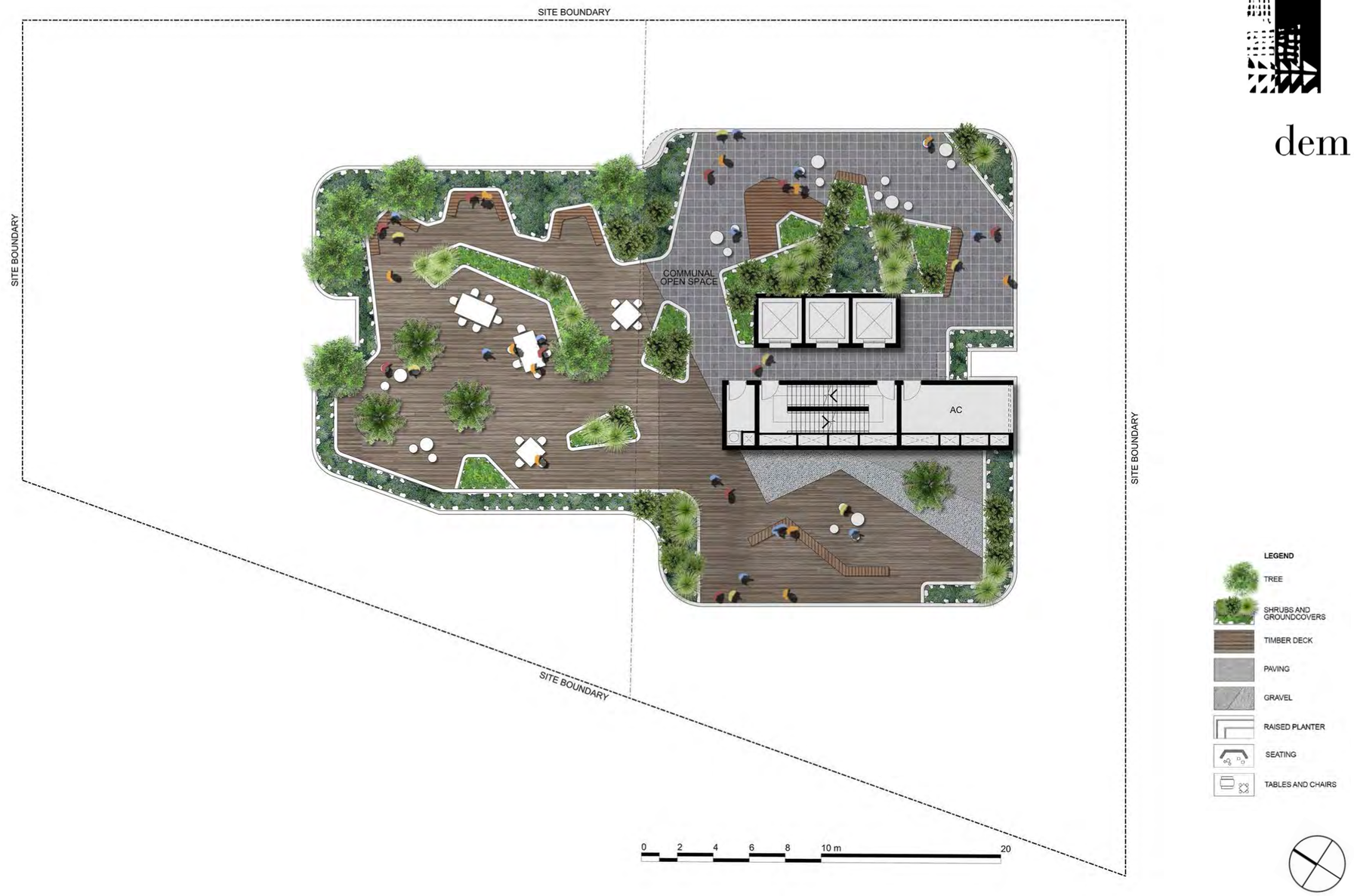
COLOUR LEGEND

- SETBACK LINE
- COMMUNAL OPEN SPACE MIN. 25% OF ENTIRE SITE
- COMMERCIAL/ RETAIL
- SERVICES/ LOADING/ STORAGE/ PLANT ROOM
- 1 BEDROOM MIN. 50 sqm
- 2 BEDROOM MIN. 70 sqm
- 3 BEDROOM MIN. 90 sqm
- BASEMENT LEVEL

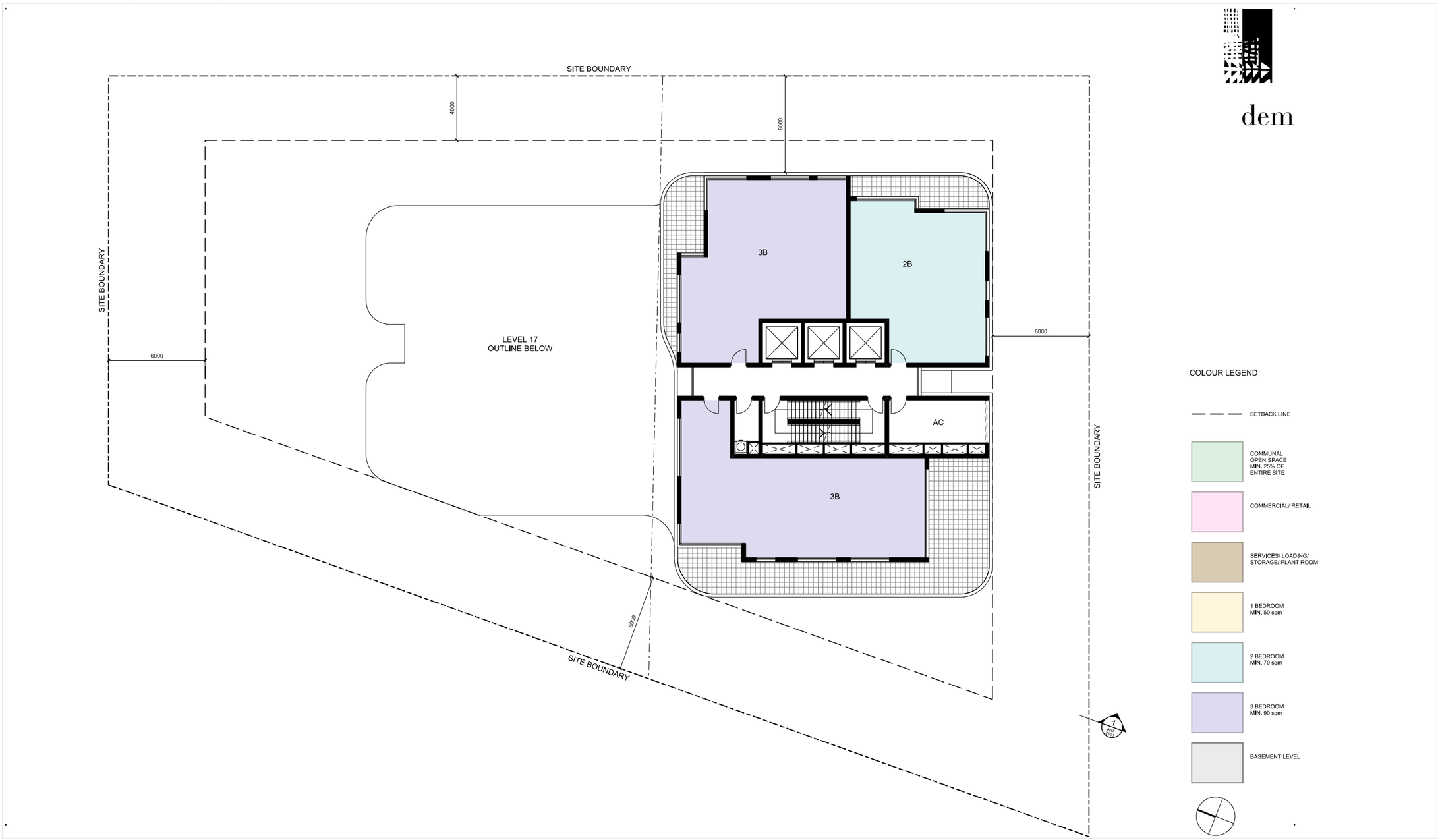
9.8 LEVEL 17 PLAN



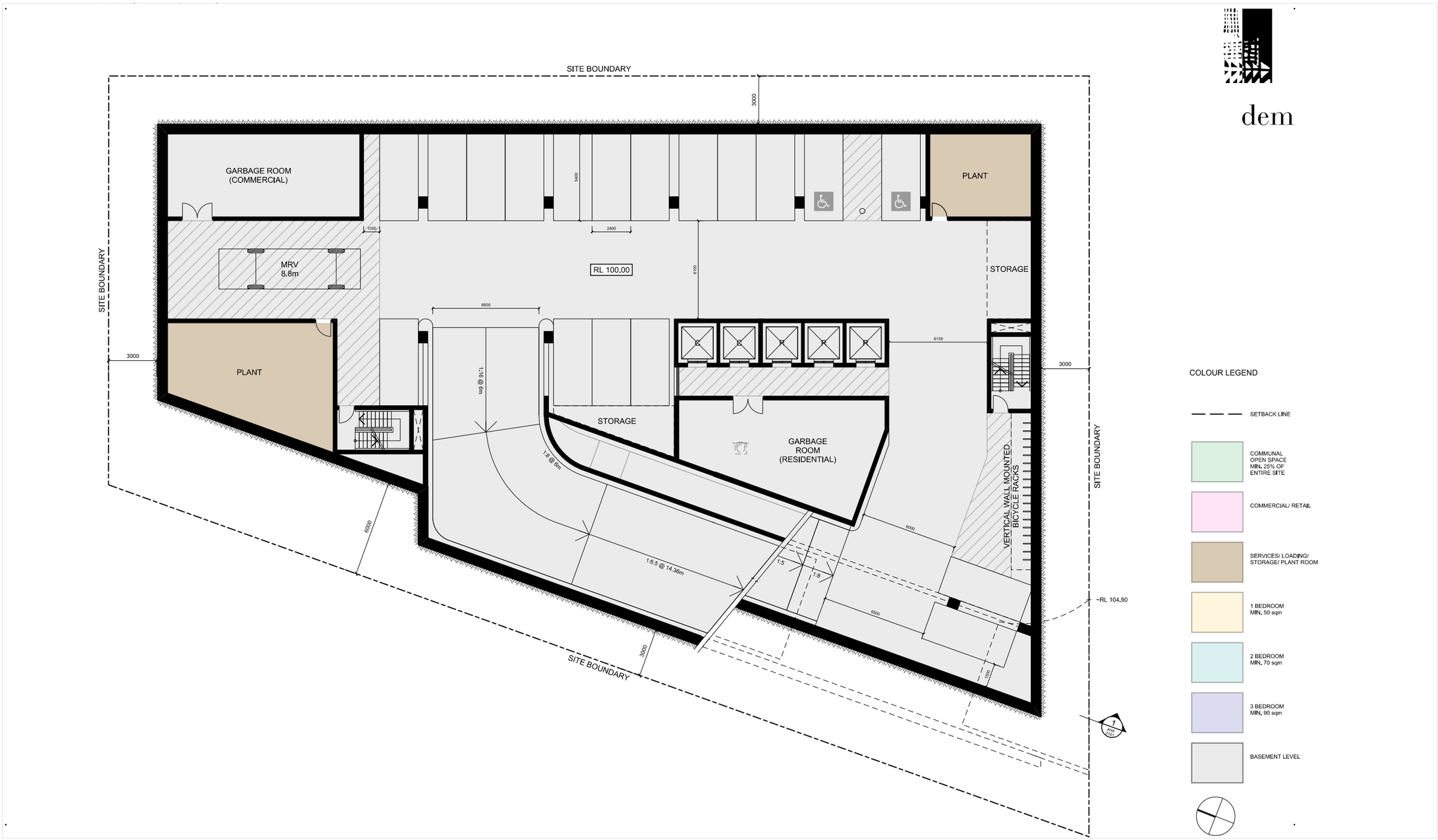
9.9 LEVEL 17 LANDSCAPE PLAN



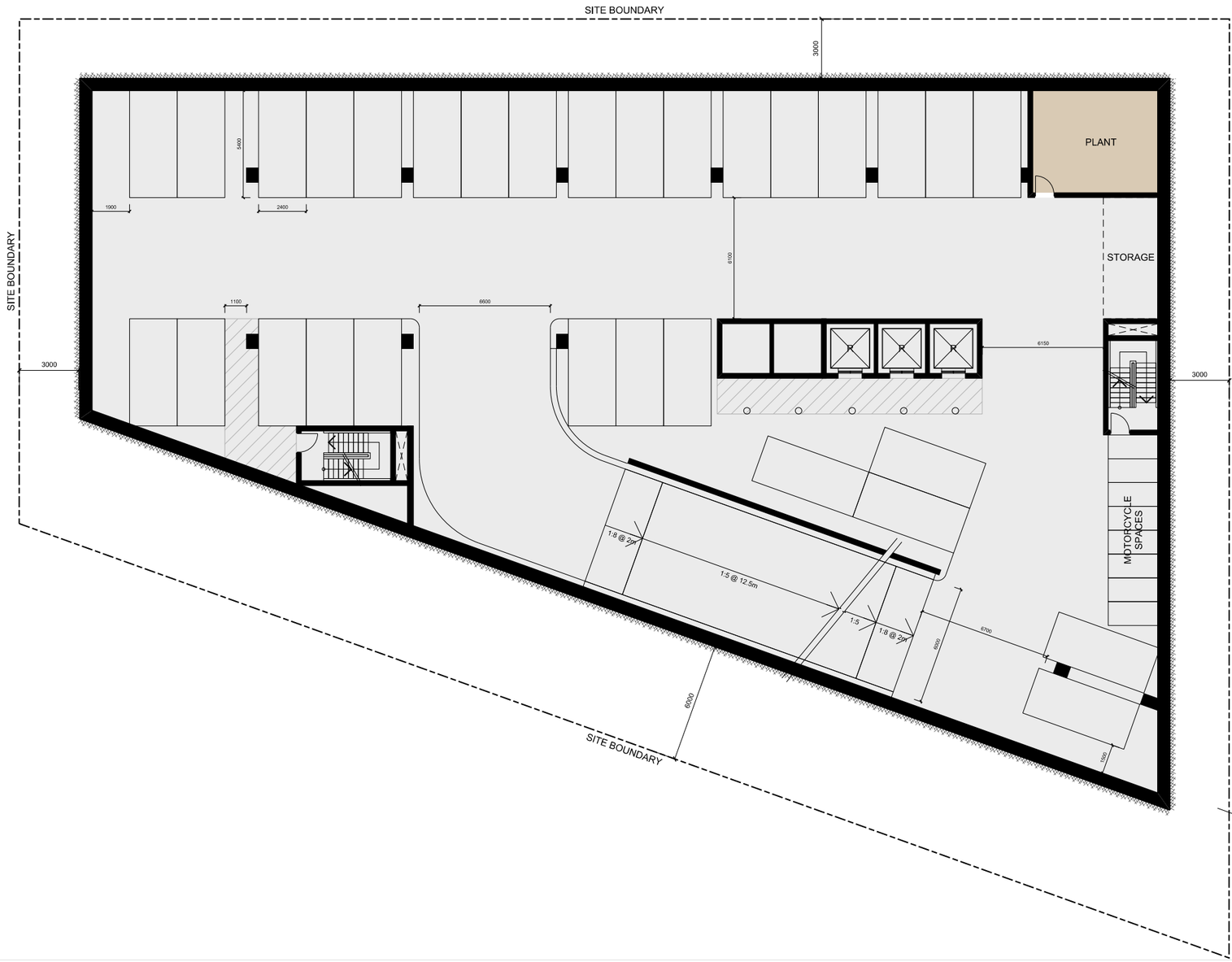
9.10 LEVEL 18-27 PLAN



9.11 BASEMENT 1 PLAN



9.12 BASEMENT 2 TYPICAL PLAN



dem

COLOUR LEGEND

- SETBACK LINE
- COMMUNAL OPEN SPACE MIN. 25% OF ENTIRE SITE
- COMMERCIAL/ RETAIL
- SERVICES/ LOADING/ STORAGE/ PLANT ROOM
- 1 BEDROOM MIN. 50 sqm
- 2 BEDROOM MIN. 70 sqm
- 3 BEDROOM MIN. 90 sqm
- BASEMENT LEVEL

10.0 Appendix A: SEPP 65 COMPLIANCE SCHEDULE

SCHDEULE NEXT PAGE

Objective	Design Criteria	Complies	Comments
Part 3 Sitting Development			
3A Site Analysis			
3A - 1 Site analysis illustrates that design decisions have been based on opportunities and constraints of the site conditions and their relationship to the surrounding context		YES	Refer to Urban Design Report submitted for details
3B Orientation			
3B - 1 Building types and layouts respond to the streetscape and site while optimising solar access within the development		YES	The subject site has 3 main street frontages with the rear boundary fronting the existing Lower North shore railway line. O'Brien street is a cur de sac that allows main vehicular and services vehicle access from the secondary frontage without interfere the primary frontage and public domain interface on Anderson Street. At street level the proposed development provides a mix of retail opportunities combined with a prominent and legible street level residential and commercial lobby which will provide an active and vibrant street edge to the development site. Residential apartment typical floor plate design has been carefully thought through to maximise daylight access, natural ventilation and cross ventilation to individual units and well excess the minimum requirements under the SEPP.
3B - 2 Overshadowing of neighbouring properties is minimised during mid winter		YES	The proposed redevelopment respects and responds to the Chatswood CBD Planning and Urban Design Strategy 2036's desired future character, scale and objectives. The overall building envelope has been formulated through detailed shadow & visual impact analysis studies and provides sufficient

Objective	Design Criteria	Complies	Comments
			separation from existing properties to the eastern, southern and northern side of the proposed development. Overshadowing impacts to neighbouring properties will only improve once adjoining properties are developed in accordance with Council's new CBD strategy and zoning provisions and SEPP 65 ADG requirements.
3C Public Domain Interface			
3C - 1 Transition between private and public domain is achieved without compromising safety and security		YES	Open space has been designed to provide a hierarchy of areas and to provide privacy for residents, whilst maintaining an open area with clear sight lines within the communal areas. The differentiation between public and private open spaces has been incorporated into the project by way of building level separation, landscape zones at the interface of the public/private realm and selection of materials. The principle of passive surveillance has been incorporated into the planning of the development. Activation is ensured by way of positioning the main building entry with direct access off the pedestrian network and the main street frontage which enables visual interaction with the public domain. In addition the majority of living areas and balconies have been orientated to allow overlooking over pedestrian / public areas for passive surveillance. Retail / commercial uses at ground level which will provide improved street activation and passive surveillance of Anderson and O'Brien Streets and the pedestrian pathway to Chatswood Station.
3C - 2 Amenity of the public domain is retained and enhanced		YES	The existing context creates a mix of residential styles with a predominance of low to medium rise residential development in the local precinct within which the proposed development sits

Objective	Design Criteria	Complies	Comments
			comfortably. The proposed design also creates the opportunity for improved pedestrian acess along Anderson Street and Wilson Street frontage. The new cross site link, retail shop front and landscape forecourt area will provide convenient, safe and well activated pedestrian routes from the site to surrounding context, CBD and station precinct. The public domain network within the development is aimed to : • Enhance the existing streetscape and pedestrian network within the new Chatswood CBD precinct. • Integrate the new development with the mixed use surroundings whilst creating a sense of ownership for the site. • Provide a communal open space focus for the development that is easily accessible and incorporates sunny outdoor seating areas and gathering spaces. • Allow for surveillance of public and communal areas and provide open space that is well illuminated to promote a safe and secure environment. • Provide variety throughout the development to promote a sense of ownership for residents. • Provide visual interest of podium roof garden when viewed from upper levels of the residential units and surrounding buildings. • Provide a mixed plant palette of indigenous trees and medium scaled feature plants to enhance the streetscape character.

Objective	Design Criteria	Complies	Comments
3D Communal and Public Open Space			
3D - 1 An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping	1. Communal open space has a minimum area equal to 25% of the site. 2.Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid winter)	YES	Landscaping and communal garden spaces have been provided on podium roof level and level 16 to provide opportunity for different usage and visual interest to view from the top levels and from surrounding buildings. The communal open space area has been provided as a landscaped terrace which provides outstanding views and outlook to all sides. Site Area = 2216 sqm (min 25% communal open space required = 554 sqm) Communal roof gardens = 1500 sqm (67%) More than 50% of the principle communal open space receives a minimum of 2 hours direct sun light between 9am and 3m in mid winter.
3D - 2 Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting		YES	The communal garden provides raised planter along the edge, timber seating, BBQ facilities and lounge areas with excellent views. It provides a habitable space with a mix of native evergreen all year round and green walls with climbers.
3D - 3 Communal open space is designed to maximise safety		YES	The Communal Open Spaces are fully accessible from common lift, lobbies, and community rooms. Visual privacy will be considered and allowed by way of acceptable landscape screening, differentiation in levels between the public and private zones, landscape screening and careful planning of the floor layout for the buildings pursuant to the provisions of SEPP 65.
3D - 4 Public open space, where provided,		YES	The forecourt area and landscape open space on the ground floor are fully accessible by the public and fully integrated with the Public

<table>
<tr><th>Objective</th><th>Design Criteria</th><th>Complies</th><th>Comments</th></tr>
<tr><td>is responsive to the existing pattern and uses of the neighbourhood</td><td></td><td></td><td>Domain interface to ensure the retail frontage is highly visible and fully integrated with surrounding context.</td></tr>
<tr><td colspan="4">3E Deep Soil Zones</td></tr>
<tr><td>3E -1
Deep soil zones provide areas on the site that allow for and support healthy plant and tree growth. They improve residential amenity and promote management of water and air quality</td><td>Deep soil zones are to meet the following minimum requirements:
<table>
<tr><th>Site Area</th><th>Min. Dimensions</th><th>Deep Soil Zone (% of site area)</th></tr>
<tr><td>< 650 sqm</td><td>N/A</td><td rowspan="4">7 %</td></tr>
<tr><td>650 - 1500 sqm</td><td>3m</td></tr>
<tr><td>>1500 sqm</td><td>6m</td></tr>
<tr><td>>1500 sqm with significant existing tree cover</td><td>6m</td></tr>
</table></td><td>YES, capable to comply subject to detail design at DA stage</td><td>The subject site is located within a high-density town center area and building typology has limitation for deep soil at ground level.
However, the proposed basement car park is setback at least 3m from all boundaries and allows opportunity for deep soil street tree and landscape planting at ground level to ensure landscaping opportunities are maximised throughout the development.</td></tr>
<tr><td colspan="4">3F Visual Privacy</td></tr>
<tr><td>3F -1
Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy</td><td>Separation between windows and balconies is provided to ensure visual privacy is achieved. Minimum required separation distances from buildings to the side and rear boundaries are as follows:
<table>
<tr><th>Building Height</th><th>Habitable rooms & balconies</th><th>Non-habitable rooms</th></tr>
<tr><td>Up to 12m (4 storeys)</td><td>6m</td><td>3m</td></tr>
<tr><td>Up to 25m (5-8</td><td>9m</td><td>4.5m</td></tr>
</table></td><td>YES</td><td>Refer to Urban Design Report for details.
Preferred Built Form Option / Reference Concept Design:
<u>Podium setback - L1(G) – L3</u>
4.5m setback from Anderson Street,
3m setback from O’Brien Street (South)
Over 6m setback from Western Boundary
Over 8m setback from Wilson Street (North)
<u>Building setback - L4 – L16</u>
Over 6m setback from Anderson Street</td></tr>
</table>

Objective	Design Criteria	Complies	Comments
	storeys) | | | Over 25m (9+ storeys) | 12m | 6m		6m setback from O'Brien Street (South) and Western Boundary Over 15m setback from Wilson Street (North) **Building setback - L17 – L27** Over 6m setback from Anderson Street 6m setback from O'Brien Street (South) Over 6m setback from Western Boundary Over 33m setback from Wilson Street (North)
3F -2 Site and building design elements increase privacy without compromising access to light and air and balance outlook and views from habitable rooms and private open space		YES, capable to comply subject to detail design at DA stage	The proposed built form provides maximum opportunities for day light and distance views from each units. Communal open spaces are provided within setback area and on the podium roof to ensure a focus for the development that is easily accessible and incorporates sunny and shaded outdoor seating areas and gathering spaces for different uses throughout the year. Surveillance of public and communal areas are considered and provide open space that is well illuminated to promote a safe and secure environment by providing a differentiation in levels between the public and private zones and using landscaping, screen fencing and Public/Communal Open Spaces, but retains desirable passive surveillance throughout the development where achievable.
3G Pedestrian Access and Entries			
3G-1 Building entries and pedestrian access connects to and addresses the public domain		YES	The proposed main building entry is located with direct access off the Anderson Street/existing pedestrian network which enables visual interaction with the public domain and enhances street activation and security around the site. The proposed design also creates the opportunity for improved

Objective	Design Criteria	Complies	Comments
3G-2 Access, entries and pathways are accessible and easy to identify **3G-3** Large sites provide pedestrian links for access to streets and connection to destinations			pedestrian acess along the Anderson Street and Wilson Street frontage. The new cross site link that will be created as part of the proposed development will provide convenient, safe and well activated pedestrian routes between Chatswood Town Centre and the site.
3H Vehicle Access			
3H-1 Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes		YES	The proposed vehicle car park entry is located at O'Brien Street/south-west corner of the site to ensure less disruptive to primary street frontages, adequate vehicle clearance headroom and to minimise the length of the vehicular ramp into basement car park. The proposed loading bay is also located at O'Brien Street on ground floor to minimise conflict with pedestrian access and separate these vehicular zones from the main lobby entry and retail shop fronts to maintain high quality pedestrian-oriented presentation from the primary street.
3J Bicycle and Car Parking			
3J-1 Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas **3J-2** Parking and facilities are provided for other modes of transport	For development in the following locations: • on sites that are within 800 metres of a railway station or light rail stop in the Sydney Metropolitan Area; or • on land zoned, and sites within 400 metres of land zoned, B3 Commercial Core, B4 Mixed Use or equivalent in a nominated regional centre	YES, capable to comply subject to detail design at DA stage	The subject site is proposed to be rezoned from R3 – Medium Density Residential Development to Mixed Use zone under Chatswood CBD Planning and Urban Design Strategy 2036. The minimum car parking requirement in Metro Sub-Regional Centres for residents and visitors is set out in the Guide to Traffic Generating Developments (GTGD) as follow,

<table>
<tr><th>Objective</th><th>Design Criteria</th><th>Complies</th><th>Comments</th></tr>
<tr>
<td>3J-3
Car park design and access is safe and secure
3J-4
Visual and environmental impacts of underground car parking are minimised .
3J-5
Visual and environmental impacts of on-grade car parking are minimised.
3J-6
Visual and environmental impacts of above ground enclosed car parking are minimised</td>
<td>The minimum car parking requirement for residents and visitors is set out in the Guide to Traffic Generating Developments, or the car parking requirement prescribed by the relevant council, whichever is less
The car parking needs for a development must be provided off street</td>
<td></td>
<td>
<table>
<tr><th></th><th>1B</th><th>2B</th><th>3B</th><th>Total</th></tr>
<tr><td>No.</td><td>24</td><td>70</td><td>20</td><td>114</td></tr>
<tr><td>Ratio</td><td>0.4</td><td>0.7</td><td>1.2</td><td></td></tr>
<tr><td>Require</td><td>10</td><td>49</td><td>24</td><td>83</td></tr>
<tr><td>Visitor</td><td colspan="3">1 space per 7 dwellings</td><td>17</td></tr>
<tr><td>Sub-Total</td><td colspan="3">For Residential</td><td>100</td></tr>
</table>
Proposed Parking Rate amendment under Chatswood CBD Strategic Transport Study as follow,
<table>
<tr><th></th><th>1B</th><th>2B</th><th>3B</th><th>Total</th></tr>
<tr><td>No.</td><td>24</td><td>70</td><td>20</td><td>114</td></tr>
<tr><td>Ratio</td><td>0.5</td><td>1</td><td>1</td><td></td></tr>
<tr><td>Require</td><td>12</td><td>70</td><td>20</td><td>102</td></tr>
<tr><td>Visitor</td><td colspan="3">1 space per 10 dwellings</td><td>12</td></tr>
<tr><td>Sub-Total</td><td colspan="3">For Residential</td><td>114</td></tr>
<tr><td>Retail (<1000 m2)</td><td colspan="3">N/A</td><td>0</td></tr>
<tr><td>Commercial</td><td colspan="3">1 space per 400 m2
(total = 1400)</td><td>3.5</td></tr>
<tr><td rowspan="2">Total</td><td colspan="3">With RMS rate - GTGD</td><td>104</td></tr>
<tr><td colspan="3">With CCBD ST rate</td><td>118</td></tr>
</table>
</td>
</tr>
</table>

Objective	Design Criteria	Complies	Comments
			4.5 levels of basement car park is anticipated in the final design, which can accommodate approx. 120 car spaces subject to further design development at DA stage.

Part 4 Designing The Building

4A Solar and Daylight Access

4A-1 To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space	1. Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas. 2. In all other areas, living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 3 hours direct sunlight between 9 am and 3 pm at mid winter. 3. A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid winter.	YES, capable to comply subject to detail design at DA stage	The fundamental urban design principles of passive surveillance, integrated/unified street character, good visual and open space amenity and building comfort have all been adopted when orientating the building and appartment layouts. Careful orientation and internal planning has been adopted to allow for excellent solar access, natural ventilation and avoid no direct sunlight units and overshadowing where possible. The building form and internal planning has been vigorously tested with 3D modelling and is documented in the Urban Design Report submitted together with the Planning Proposal Submission The design and orientation of apartments ensures that ALL units received a minimum of 2 hours of solar access during the winter solstice hours of 9am to 3pm and with no southern aspect units proposed. **Solar Access (min 70%)** — **102/ 114 (89.5%)** **No Direct Sun units (max 15%)** — **0 (0%)**
4A-2 Daylight access is maximised where		YES, capable	The proposed built form with two primary street corner frontage and fronting over the railway line to the west, achieves maximum

sunlight is limited		to comply subject to detail design at DA stage	opportunities in distance views and quality daylight to the majority of the units. Low height solid balustrades or glazed balustrades on balconies are proposed to maximise daylight penetration whilst maintaining privacy at lower levels.
4A-3 Design incorporates shading and glare control, particularly for warmer months		YES, capable to comply subject to detail design at DA stage	Shading devices would be considered to some windows and balconies to ensure that undesirable midday summer sun is screened without compromising the outlook viewing from apartments.

4B Natural Ventilation			
4B-1 All habitable rooms are naturally ventilated		YES	The proposed built form maximises capture and use of prevailing breezes for natural ventilation in habitable rooms. All windows provided to habitable rooms are at least 5% of the floor area which they serve.
4B-2 The layout and design of single aspect apartments maximises natural ventilation		YES	More than 50% of total apartments are at least dual aspect apartments, which allows air flow through windows on opposite walls.
4B-3 The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents	1. At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural	YES	Over 60% of units in the development have been designed to provide natural cross flow ventilation through windows provided on opposite walls **Total** **Cross Ventilated Units** **104 / 114 (91%)**

	ventilation and cannot be fully enclosed 2. Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line		Cross-through apartments are limited to 8m in depth measured from glass line to glass line as shown in the Reference Concept Design.

4C Ceiling Height

4C-1

Ceiling height achieves sufficient natural ventilation and daylight access

4C-2

Ceiling height increases the sense of space in apartments and provides for well proportioned rooms

4C-3

Ceiling heights contribute to the flexibility of building use over the life of the building

Measured from finished floor level to finished ceiling level, minimum ceiling heights are:

Minimum ceiling height for apartment and mixed use buildings	
Habitable rooms	2.7m
Non-habitable rooms	2.4m
For 2 storey apartments	2.7m for main living area floor 2.4m for second floor, where its area does not exceed 50% of the apartment area
Attic spaces	1.8m at edge of the room with a 30 degree minimum ceiling slope
If located in mixed used areas	3.3m for ground and first floor to promote future flexibility of use

YES

The proposed minimum floor-to-floor height of 3.1m which will achieve the recommended 2.7m minimum for ceiling height in all habitable rooms and 2.4m minimum ceiling height in all non-habitable rooms.

The sizes of the living areas of the units ensure that these spaces are usable and comfortable, with plentiful natural light and airflow.

4D Apartment Size and Layout

4D-1 The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity	1. Apartments are required to have the following minimum internal areas: Apartment Type / Min. Internal area Studio / 35 m2 1 bedroom / 50 m2 2 bedroom / 70 m2 3 bedroom / 90 m2 The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m2 each A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m2 each 2. Every habitable room must have a window in an external wall with a total minimum glass area of not less than 10% of the floor area of the room. Daylight and air may not be borrowed from other rooms.	YES, capable to comply subject to detail design at DA stage	There are total of 114 apartments proposed in the preferred concept option and broken down as follows: Apartment Type / Area (m2) 1 Bedroom / 50 - 60 2 Bedroom / 70 - 85 3 Bedroom / 90 - 110 All habitable rooms will have a window on external walls for daylight and natural ventilation. The area of the windows will be at least 10m2 of the floor area of the room it served.
4D-2 Environmental performance of the apartment is maximised	1. Habitable room depths are limited to a maximum of 2.5 x the ceiling height 2. In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m	YES, capable to comply subject to detail	All single aspect units have a maximum habitable room depth of 8m from a window with a common ceiling height of 2.7m.

	from a window	design at DA stage	
4D-3 Apartment layouts are designed to accommodate a variety of household activities and needs	1. Master bedrooms have a minimum area of 10m2 and other bedrooms 9m2 (excluding wardrobe space) 2. Bedrooms have a minimum dimension of 3m (excluding wardrobe space) 3. Living rooms or combined living/dining rooms have a minimum width of: • 3.6m for studio and 1 bedroom apartments • 4m for 2 and 3 bedroom apartments • The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts	YES, capable to comply subject to detail design at DA stage	The bedrooms have been sized to allow for maximum flexibility when furnishing each apartment with a minimum dimension of 3m and a minimum are of 10sqm. All living/dining area have a minimum dimension of 3.6m in width for 1 bedroom units and 4m for 2& 3 bedroom units.
4E Private Open Space and Balcony			
4E-1 Apartments provide appropriately sized private open space and balconies to enhance residential amenity **4E-2** Primary private open space and balconies are appropriately located to enhance liveability for residents **4E-3** Private open space and balcony design is integrated into and contributes to the overall	1. All apartments are required to have primary balconies as follows: Dwelling Type / Min. area / Min. Depth Studio / 4m2 / N/A 1 Bedroom / 8m2 / 2m 2 Bedroom / 10m2 / 2m 3 Bedroom / 12m2 / 2.4m The minimum balcony depth to be counted as contributing to the balcony area is 1m 2. For apartments at ground level or on a	YES, capable to comply subject to detail design at DA stage	Each of the units, regardless of size, has been provided with a usable external balcony or terrace area associated with the living area. This ensures that the residents are able to enjoy the outdoor lifestyle and the interface between the inside and outside is seamless and fully accessible. Balconies also assist in the casual surveillance of the Communal Open Space and the public streets without compromising the privacy of the residents. The majority of the balconies have a northern, eastern and western aspect to ensure a high quality of daylight is received onto balconies and into associated living areas. Balconies have been provided with a minimum size of 8m^2, 10m^2 and 12m^2 in all 1 bed, 2 bed and 3 bed units respectively.

architectural form and detail of the building **4E-4** Private open space and balcony design maximises safety	podium or similar structure, a private open space is provided instead of a balcony. It must have a minimum area of 15m2 and a minimum depth of 3m		
4F Common Circulation and Spaces			
4F-1 Common circulation spaces achieve good amenity and properly service the number of apartments **4F-2** Common circulation spaces promote safety and provide for social interaction between residents	The maximum number of apartments off a circulation core on a single level is eight For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40	YES	The design of internal lobbies and common circulation areas is provided with breakout / glazed areas on all levels which allow infiltration of natural light and ventilation into common lobby and common circulation areas. In addition, all common lobbies / corridors provide direct acess to landscaped Communal Open Spaces which provides an excellent level of activation, surveillance and security of these spaces. The proposed development has a maximum number of 7 units per common lobby on all typical levels and 3 units only between L18 – L27.
4G Storage			
4G-1 Adequate, well designed storage is provided in each apartment **4G-2** Additional storage is conveniently located, accessible and nominated for individual apartments	In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided: Dwelling Type / Storage Size Volume Studio – 4 m3 1 bedroom – 6 m3 2 bedroom – 8 m3 3 bedroom – 10 m3 At least 50% of the required storage is to be located within the apartment.	YES, capable to comply subject to detail design at DA stage	All units will be provided with a linen cupboard within the unit and some units have additional storage space in the common storage area in the basement car park with an approx. 50/50 split.

4H Acoustic Privacy			
4H-1 Noise transfer is minimised through the siting of buildings and building layout **4H-2** Noise impacts are mitigated within apartments through layout and acoustic treatments		YES, capable to comply subject to detail design at DA stage	The unit layout has consciously provided adequate separation between bedrooms and living areas. Where possible, the design of the units has ensured that bedrooms adjoin bedrooms and living areas adjoin living areas. Internal planning also facilitates that each unit's service zones (kitchen, laundry and bathroom) generally backs against the service zones of the adjoining apartment to minimise services noise transfer between units. Entrance areas/kitchens have generally been located to shield units from lobby/lift areas. All common/party walls will be insulated to achieve sufficient acoustic rating where required. Discontinuous wall construction methodology will be incorporated where required between habitable and non-habitable area if necessary.
4J Noise and Pollution			
4J-1 In noisy or hostile environments the impacts of external noise and pollution are minimised through the careful siting and layout of buildings **4J-2** Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission		YES, capable to comply subject to detail design at DA stage	The proposed development is located off Anderson Street which is one of the local streets that linked up Chatswood CBD centre and north Chatswood. The proposed recessed balcony design (particularly on the lower podium levels of the development) assists in reducing and mitigating noise transmission into the habitable rooms without compromising on daylight penetration. Appropriate type of glazing and facade construction and any mitigation measures will be used where required to ensure all units are acoustically shielded from noise transmission subject to detail assessment to be undertaken by qualified Acoustic Engineer.

<table>
<tr><td colspan="4">4K Apartment Mix</td></tr>
<tr><td>4K-1
A range of apartment types and sizes is provided to cater for different household types now and into the future

4K-2
The apartment mix is distributed to suitable locations within the building</td><td></td><td>YES, capable to comply subject to detail design at DA stage</td><td>There are total of 114 apartments proposed in the preferred concept option with the following mix proposed,
<table><tr><td>Apartment Type</td><td>No. of Units</td><td>% of Total</td></tr><tr><td>1 Bedroom</td><td>24</td><td>21%</td></tr><tr><td>2 Bedroom</td><td>70</td><td>61%</td></tr><tr><td>3 Bedroom</td><td>20</td><td>18%</td></tr></table></td></tr>
<tr><td colspan="4">4L Ground Floor Apartments</td></tr>
<tr><td>4L-1
Street frontage activity is maximised where ground floor apartments are located

4L-2
Design of ground floor apartments delivers amenity and safety for residents</td><td></td><td>N/A</td><td>Ground floor level will be utilised for retail or commercial (SOHO type office) with no courtyard apartments are proposed.</td></tr>
</table>

4M Facades			
4M-1 Building facades provide visual interest along the street while respecting the character of the local area **4M-2** Building functions are expressed by the facade		YES, capable to comply subject to detail design at DA stage	The tower will sit on a three storey podium which will create a human scale streetscape character along Anderson, Wilson and O'Brien Streets. The building form and articulation will provide detail and architectural interest at prominent parts of the building including the streetscape, podium, entries and roof gardens. Material proposed for the podium include a blue/grey terracotta wall cladding system to provide a contemporary interpretation of heritage Bowral blue brick commonly used in the federation houses within the Chatswood Heritage Conservation area. All building services will be integrated within the building or within the extent of balcony and facade treatment to avoid visual dominance of service elements from the streets.

4N Roof Design			
4N-1 Roof treatments are integrated into the building design and positively respond to the street **4N-2** Opportunities to use roof space for residential accommodation and open space are maximised **4N-3** Roof design incorporates sustainability features		YES, capable to comply subject to detail design at DA stage	The roof will be designed as an integral part of the building, providing a visually distinctive and interesting contribution to the Chatswood CBD skyline when viewed from the north. The roof form will also conceal plant and equipment. The contemporary roof design will further soften the building massing and create a visual interest from the surrounding streetscapes.

4O Landscape Design			
4O-1 *Landscape design is v*iable and sustainable **4O-2** Landscape design contributes to the streetscape and amenity		YES, capable to comply subject to detail design at DA stage	The landscape vision for the site includes: • Provision of private, communal and common open spaces which are clearly delineated through the use planting, fences / balustrades and varying site levels. • Incorporation of a mix of mainly indigenous / native vegetation and some exotic vegetation to contribute to biodiversity and solar performance. • Selection of drought tolerant indigenous, native and exotic plant species to minimise water use on the site. • Provision roof top garden/Communal Open Space to maximise usable outdoor space with excellent outlook and daylight opportunities.
4P Planting on Structures			
4P-1 Appropriate soil profiles are provided **4P-2** Plant growth is optimised with appropriate selection and maintenance **4P-3** Planting on structures contributes to the quality and amenity of communal and public open spaces		YES, capable to comply subject to detail design at DA stage	Some planting areas within the project are located over concrete slabs. Each of the areas will be designed to maximise soil depth in each space for a variety different sizes of plants from groundcovers to trees. An automatic drip irrigation system will be used to irrigation all on slab areas, including private courtyards. Plant selection aims to be low water use but retain evergreen all year round.

4Q Universal Design			
4Q-1 Universal design features are included in apartment design to promote flexible housing for all community members **4Q-2** A variety of apartments with adaptable designs are provided **4Q-3** Apartment layouts are flexible and accommodate a range of lifestyle needs		YES, capable to comply subject to detail design at DA stage	The units will be designed to Livable Housing Guideline with min 20% of units achieving silver level benchmark.
4R Adaptive Reuse			
4R-1 New additions to existing buildings are contemporary and complementary and enhance an area's identity and sense of place **4R-2** Adapted buildings provide residential amenity while not precluding future adaptive reuse		N/A	Due to the nature of the proposed new high density zoning of the site and the relatively residential use of existing properties on the site, it is not feasible for the proposed development to contemplate and adaptive reuse of any existing buildings. All existing building on site will be demolished as part of early works.
4S Mixed Use			
4S-1 Mixed use developments are provided in appropriate locations and		YES, capable to comply	The subject site is located within the proposed Chatswood Town centre expansion area and Mixed used development is encouraged.

provide active street frontages that encourage pedestrian movement **4S-2** Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents		subject to detail design at DA stage	The forecourt area on the ground floor are fully accessible by the public and fully integrated with the Public Domain interface to ensure the retail frontage is highly visible and fully integrated with surrounding context. The principle of passive surveillance has been incorporated into the planning of the development. Activation is ensured by way of positioning the main building entry with direct access off the pedestrian network and the main street frontage which enables visual interaction with the public domain. In addition the majority of living areas and balconies have been orientated to allow overlooking over pedestrian / public areas for passive surveillance.
4T Awnings and Signage			
4T-1 Awnings are well located and complement and integrate with the building design **4T-2** Signage responds to the context and desired streetscape character		YES, capable to comply subject to detail design at DA stage	An awning will be considered at main building entry and along retail frontage, will be fully integrated into the building design to ensure that the main entry lobby entry is well defined and visible from the public domain. Signage will be low key in keeping with the residential nature of the building and will clearly provide the street address and building identification to assist in legibility.
4U Energy Efficiency			
4U-1 Development incorporates passive environmental design **4U-2** Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer **4U-3**		YES, capable to comply subject to detail design at DA stage	The proposed design has maximised the building's orientation to allow for excellent solar access, natural ventilation, cross ventilation and minimise no direct sunlight units and overshadowing where possible. The building design will meet minimum BASIX requirements subject to detail design at the DA stage. The design and orientation of the units ensure that a minimum of 2 hours of solar access during the winter solstice hours of 9am to 3pm is received by at least 70% of the total number of units. All

Adequate natural ventilation minimises the need for mechanical ventilation			habitable rooms are naturally ventilated through external windows and a minimum of 60% of the units are cross ventilated either through windows proposed on opposite walls where possible.
4V Water Management and Conservation			
4V-1 Potable water use is minimised **4V-2** Urban stormwater is treated on site before being discharged to receiving waters **4V-3** Flood management systems are integrated into site design		YES, capable to comply subject to detail design at DA stage	Provision of a stormwater detention system will be proposed to control downstream flooding of stormwater system and improve the water quality of stormwater run-off. Rainwater collection system will be adopted for reuse on landscape irrigation. Urban stormwater will be treated on site before being discharged and flood management systems have been integrated into the site design where required subject to detail design by qualified Stormwater Design Consultant at the DA stage
4W Waste Management			
4W-1 Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents **4W-2** Domestic waste is minimised by providing safe and convenient source separation and recycling		YES, capable to comply subject to detail design at DA stage	Garbage room will be located on ground floor with direct access from the lobbies and to the designated loading dock for collection. General waste, recycle waste and organic waste bins will be provided in the main garbage room for residents.
4X Building Maintenance			
4X-1 Building design detail provides protection from weathering		YES, capable to comply	Robust, durable, low maintenance and long life span materials and finishes have been adopted to ensure minimal on-going building maintenance will be required.

4X-2 Systems and access enable ease of maintenance **4X-3** Material selection reduces ongoing maintenance costs		subject to detail design at DA stage	All service and equipment rooms are either located with easy access from lobbies and in sub-floor basement area or on the roof top.