Urban Design Report
3 Ellis St, Chatswood

Planning Proposal
28 July 2020

GMU

Contents

1.0
Introduction

1.1 Introduction

GM Urban Design & Architecture (GMU) has been appointed by MPG AU Pty Ltd to prepare an urban design report considering an appropriate built form outcome for the site located at No. 3 Ellis Street, Chatswood NSW (henceforth referred to as the subject site). The subject site is known as SP 2715, forms part of the Willoughby Local Government Area (LGA) and is subjected to applicable controls under the *Willoughby Local Environmental Plan 2012* (henceforth referred to as *WLEP 2012*). The *WLEP 2012* guides the desired future character for Chatswood city centre (which includes the subject site) in terms of land zoning, lot size, the height of buildings and floor space ratio (FSR). Willoughby Council is currently undergoing the process of amending the LEP following the exhibition of the *Chatswood CBD Planning and Urban Design Strategy 2036* (henceforth referred to as the *Chatswood Strategy*.

The current Planning Proposal (PP) of the subject site proposes a new development for the site within the city centre, Chatswood. The PP proposes the demolition of the current structures on site and the construction of 1 new mixed use building with basement car parking. The site constitutes an approximate area of 808 m² and is located on Ellis Street which is perpendicular to the railway corridor, within the Chatswood city centre. The site is located approximately a 200m walk from Chatswood Railway Station via the Frank Channon Walk.

The purpose of this Urban Design report is to consider whether the proposed scheme for a mixed-use development on the subject site provides an appropriate urban design response given the applicable changes to the applicable controls within the *Chatswood Strategy*, SEPP 65 considerations and the surrounding context. The conclusion of this report is that the proposal provides a well-considered solution for the site. Given the transitional characteristics of the surrounding context, the proposal offers a high end and well-designed development on the site which is consistent with the surrounding area and enhances the local character. The proposal offers continued solar access for nearby open spaces such as Chatswood Oval and Chatswood Croquet club, and creates well-considered internal living areas and outdoor facilities on the site itself.

The overall proposal shows a careful consideration to the existing streetscape and built form pattern of the immediate context, by proposing an active street edge which sits proud of the existing bare frontages of the street. The proposed building footprint and the distribution of built form sits appropriately within its context within its subject block (bounded by Ellis St, Crispe Ln, Albert Ave and Frank Channon Walk). The development is surrounded by residential flat buildings of 6-9 levels with many strata owners, and therefore little development potential in the short to long term. Setbacks to neighbours are prioritised and the buildings placement, siting and distribution of built form sits appropriately within the transitional character of the subject block and responds to the streetscape and landscape character of the area.

The built form configuration and well-considered sculpting ensures minimal impact to the adjoining properties and enables adequate setbacks to facilitate the retention of clusters of mature trees which complement the amenity and landscape character of the area. The aim of the proposal is to create a high standard of living close to the city centre, which is in accordance with the *Chatswood Strategy*.

1.2 Documents reviewed

In preparing this report, GMU has reviewed the following applicable controls and documents describing the site and its immediate surroundings:

Architecture drawings:

- SK010-1 Site Analysis plan
- SK101-2 B4 basement plan
- SK102-2 B2-B3 basement plan
- SK103-2 B1 basement plan
- SK104-2 Ground level plan
- SK105-2 Level 1 plan
- SK106-2 Level 2 plan
- SK107-2 Level 3-9 plan
- SK108-2 Level 10-11 plan
- SK109-2 Level 12 & Loft plan
- SK201-2 Ellis St (South) Elevation
- SK202-2 East Side Elevation
- SK203-2 North (rear) Elevation
- SK204-2 West Side Elevation
- SK301-2 North-South Section

Landscape Plan – by dem landscape architecture
Development Schedule for option 1
Development Schedule for option 2

GMU has reviewed the following controls and documents relevant to the development proposal:

- *Willoughby Council Local Environmental Plan 2012*
- *Willoughby Council Development Control Plan*
- *Chatswood CBD Planning and Urban Design Strategy to 2036*
- *SEPP 65 and the Apartment Design Guide (ADG)*

GMU has also conducted extensive site visits and prepared photographic documentation of the site and its context as well as undertaken extensive built form massing exercises for the proposed site.

1.3 Site Description

The subject site is located on Ellis Street just off the Pacific Highway in Chatswood. The site is within walking distance from Chatswood Railway Station (0.2km), which is frequented by local residents as well as those commuting to Sydney CBD and other commercial locations as well as those coming to Chatswood for its extensive commercial and retail offerings. The site is a rectangular shape which sits within the subject block, bounded by Ellis St to the south-east and three neighbours to the south-west, north-west and north-east, all of which are recently developed residential flat buildings of about 8-9 storeys with no foreseeable development potential. It is the smallest site of the subject block. Further east of 84- 86 Albert St is the Frank Channon Walk which provides convenient pedestrian passage to the city centre and Chatswood station. Parallel to the walk is the rail line. Across Ellis St to the South are residential flat buildings of 4- 8 storeys and are not considered to have development potential. The south-eastern boundary along the Ellis St has an approximate length of 24.38m. The south-western boundary measures approximately 33.18m, the north-western boundary 24.38m and the north-eastern boundary measures approximately 33.17m. The topography slopes gently from the north-western corner down to the south-eastern corner with a fall of approximately 2m across the entire site diagonally a distance of 41.7m.

The subject site is currently occupied by a 3 storey, 9 apartment residential flat building with ground-level undercroft parking beneath the built form and a foyer built form further set back from the street behind the exposed car parking. The built form and parking is set back from the front boundary by approximately 6m to respond to neighbouring residential buildings, with lawn in the front setback with a low brick fence on the front boundary. The existing building on the is dilapidated and with an inactive frontage. The entry is not visible from the street due to the brick fence which acts as a barrier. The parking in the foreground is unsightly and it covers the majority of the site with hard surfaces to the rear of the site. There is poor landscape quality to the site, and the site has poor narual surveillance due to the undercroft parking at street level.

According to the *WLEP 2012,* the subject site is currently zoned R4 High Density Residential as are the adjacent residential buildings in the same block and those to the south across Ellis St. According to the *Chatswood CBD Planning and Urban Design Strategy*, the zoning is B4 Mixed-Use.

On approach from the south along Pacific Highway, the existing 3 storey building on the site is not visible, but the neighbouring 8-9 storey residential developments, in particular, 7-13 Ellis St are seen beyond filtering Pacific Hwy street trees. The neighbours are seen at the forefront of the CBD buildings, however, are at a lower scale than the background buildings which tower over the buildings on Ellis St and dominate the skyline. The Ellis St buildings fit into the development context of the area acting as a transitional step up from the lower scale RE1 Public Recreation and R3 Medium Density Residential to the South.

The closest vehicular and pedestrian access into Chatswood CBD to the site is via Albert Avenue which is to the north and parallel to Ellis St, which has signalised intersection and a pedestrian crossing. This leaves Ellis St a street of only local residents and pedestrians travelling through on their way to and from Chatswood CBD and station. A development on the site would be clearly visible and prominent to pedestrians travelling north along the Frank Channon Walk, due to the large setback to the western neighbour at 84-86 Albert Avenue.

A current aerial view of the site and its immediate surrounding context shows that the subject site occupies an area to the east of the Pacific Highway, west of the railway line. GMU is aware that the area is currently undergoing transition due to its close proximity to the Chatswood commercial core, and also The Strategy designates a change to controls which allow a higher level of development for increased commercial and residential FSR. Numerous large residential developments can be found within the area, particularly within the boundary of Chatswood CBD.

As seen by the development pattern of the area as well as the new planning controls, it is understood that higher density developments are favoured in precincts such as these; close to public and mass transport. Transport connections provide direct routes to Sydney's CBD within 30 minutes and short commutes to other major job hubs can facilitate rapid change to an area and cater to the demand for affordable and conveniently located housing in the greater Sydney region. This is reflected in the target demographics for an emerging property market in Sydney's northern suburbs.

Through built form massing and analysis, GMU has come to the conclusion that the subject site can achieve a higher level of development and it would be a missed opportunity for Chatswood's growing and transitional character if the site's proposed FSR of 2.5:1 was met.

It is GMUs view that as long as the height limits, solar access and appropriate setbacks are met, the FSR should be increased to further protect FSR that has been nominated in areas of the *Chatswood Strategy* which are unachievable. For example, the large scale residential developments north of Johnson St east of Chatswood Oval have a high number of strata owners and are unlikely to redevelop in the near to medium term, therefore FSR targets in that area will not be met. Neighbours within the subject sites subject block are also limited by the same condition of many strata owners.

Existing building on site

Uncercroft parking with 3 levels of residential

On approach from Pacific Hwy

Street trees, large neighbours and train line beyond

1.4 Proposed Development

The proposed development includes:

+ A mixed use building with a total height of a double height podium and 12 storey tower
+ Four basement levels with B1 for service vehicles, waste storage & collection and bicycle storage, with three levels of basement parking
+ 2-storey commercial podium floor retail and commercial
+ 33 apartments
+ Associated landscaping, communal open space, private gardens and landscaped areas to the rear and side of building and adjacent to public domain along Ellis St
+ Communal open space = 220m² (27.2% of site area)
+ Proposed FSR of Option 1 is 4.7:1
+ Proposed FSR of Option 2 is 4.8:1
+ Proposed GFA of Option 1: 3800m²
+ Proposed GFA of Option 2: 3890m²
+ A general street wall height to Ellis St of 2 storeys or 7.6 meters
+ A general front setback to Ellis St of 2m, with the tower stepping back further
+ A general rear setback of 4-10m to the rear boundary to the northwest
+ A general tower east side setback of for Option 1 of 800 mm to Northern component and 2.350-2.7m to the Southern component up to level 9
+ A general tower east side setback of for Option 2 of 0m to the Northern component and 2.350m-2.7m to the Southern component up to level 9
+ A general side setback of 3m to the west

The proposal contains the following number of residential units:

+ 10 no. of apartments of 3 bedrooms
+ 21 no of apartments of 2 bedrooms
+ 1 no. apartments of 1 bedrooms w

39 car parking spaces including the following:

+ 34 residential spaces (incl. 7 accessible spaces)
+ 3 residential visitor spaces
+ 2 commercial spaces
+ 7 adaptable spaces
+ 4 WCA spaces
+ 4 motorcycle parking
+ 34 bicycle parking

Render by Ivolve Studios

2.0
Context

2.1 General Context

The subject site is located in the suburb of Chatswood within the boundary of Chatswood Central Business District (CBD) as defined by the *Chatswood CBD Planning and Urban Design Strategy*. Chatswood is approximately 12 km from the Sydney CBD (16-minute drive on the A1 Pacific Highway), which is home to approximately 437,000 jobs according to the *City of Sydney's Employment Lands Study* (2014-2019). The suburb of Chatswood comprises of an area bounded to the south by Mowbray Road and to the north by Ashley St and Wyvern Ave. The western boundary surrounds the Chatswood Golf Club and goes through Blue Gum Creek Reserve, while the eastern boundary is along the western boundary of properties fronting Sydney Street, in neighbouring Willoughby and North Willoughby.

Chatswood Railway Station is on the North Shore and Northern Line of the Sydney Trains network and is also used by the Sydney Metro Northwest to connect Chatswood with Epping and all the way to Tallawong further to the west. A bus stop at the end of Ellis St at Pacific Hwy head to Manly, Burwood, Sydney Olympic Park, Gladesville, Lane Cove and King Street Wharf, while Chatswood station bus stands add more destinations to bus travel.

The site has access to public transport and other important service necessities, and it is located well within reasonable commuting distance. There is a remarkable amount of commercial activity in the Chatswood CBD which services the suburb and its immediate catchment area as well as visitors.

The neighbourhood has a number of schools including Chatswood Primary School, Chatswood High School, St Pius X College for boys, Mercy Catholic College for girls and Our Lady of Dolours Primary School. Several of these schools are highly sought after and draw residents to the area from Sydney's entire north shore.

Chatswood also has a number of recreational facilities within proximity of the subject site. Chatswood Park with a skate park, Chatswood Oval and Dougherty Community Centre are 200-300m to the east of the site, accessible via Frank Channon Walk and Albert Avenue or the Chapman Ave underpass. Chatswood Croquet Club is 100m south. In the Chatswood CBD Chatswood Library and the Concourse, Hoyts Cinema, Strike Bowling with karaoke and laser tag, Chatswood Bowling Club and Chatswood RSL Club provide entertainment and provide local community groups and sporting activities in the area.

Pedestrian movement to and around the site is well serviced, with Frank Channon Walk approximately 7m east of the site. Frank Channon Walk travels north-south, north up to Chatswood CBD and railway station, with the southern direction offering an ancillary route which passes under the rail line at Chapman Avenue. There are further E-W connections across the rail line at Albert Avenue at the north of the subject block, and further north at Thomas Street. Crispe Lane to the west offers an alternative northern route to Chatswood CBD, and pedestrian footpaths are offered along Pacific Hwy. The site is well connected by pedestrian links to its surrounds and has convenient accessibility to greater Chatswood. The proposal will enhance Frank Channon Walk by offering passive surveillance and activation to its periphery at Ellis St, with future development set to further enhance the walkway and pedestrian connectivity within Chatswood.

Chatswood Railway Station

A 200m walk from subject site

Chatswood Oval

A 140m walk from subject site

Victoria Avenue

Main avenue of Chatswood CBD, within 300m

Chatswood Park

A 200m walk from the subject site

2.2 Local Context- Existing and Desired Future Character

The local context surrounding the development, particularly within the Chatswood CBD boundary is characterized by a diversity of building forms and typologies. However, the local order of Ellis Street and the current zoning of R4 High Density Residential has meant an inactive street dominated by under-croft parking, garage doors or blank walls.

The most prevalent typology in the immediate vicinity is residential flat buildings with heights between 6 and 9 storeys. At the end of Ellis Street at the intersection with Pacific Hwy and to the south at Gordon Ave and Nelson St there are some lower scale residential buildings between 2 storeys (which are remnant traditional buildings) to 3 storey walk-up flat buildings of varying age. Across Pacific Hwy to the west, outside of the Chatswood CBD, a residential mix of 2-6 storey buildings continues. The number of 6-9 storey buildings has increased in the area in recent years and is seen to reflect the growing demand for high density apartment buildings close to rapid transport and exemplary community facilities. Examples can be seen at No. 85-86 Albert Ave (7 storeys) 757- 759 Pacific Hwy (9 storeys) and 640- 650 Pacific Hwy (6 storeys). To the north of the site, from Albert Ave and further north the character changes. The mixed use and commercial core zoning have manifested into larger tower and podium style buildings such as No. 85 Albert St which is 38 storeys tall and 63-77 Albert St which is 11 storeys tall. The subject site and its surroundings being so close to the Pacific Hwy and within the Chatswood CBD boundary are continuing to develop from the lower scale residential development into high density residential and mixed use. A nearby site at the end of Ellis St, 747-753 Pacific Hwy, has received support from Council for its Planning Proposal which proposes an 18 storey development. This scale responds to the site's proximity to Chatswood CBD and reacts to the evolving character of the area.

The stepping of developments down south of the CBD provides solar access to the public recreation areas of Chatswood Park, Oval and Croquet Club. The contrasting settings of the commercial hub and public open spaces requires built form responses in accordance with the locality to the demographic and economic transformation occurring in the area. The area appropriately steps the development down as it shifts away from the commercial hub, allowing views from the towers along Albert Ave, Thomas St and Victoria Ave. As discussed in later sections of this report, the proposal has been design to complement the evolving character and transition in scale occurring in this section of the town centre.

The *Chatswood CBD Planning and Urban Design Strategy 2036* 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 changes to Willoughby LEP and DCP."

While many nearby residential buildings are quite large in size and with many strata owners e.g. 84-86 Albert Avenue, 88 Albert Avenue and 7-13 Ellis St, it seems unlikely that they will redevelop in the short to medium terms. The subject site, however, has redevelopment potential, being only 3 storeys, having 9 apartments in single ownership and due to the age of its stock. The proposal is the only site that can realise, in the short term, some of the projected FSR which the subject block is allocated to achieve.

The development will need to respond to the residential flat building characteristics of the area such as providing setbacks for significant vegetation and the provision of amenity. However, with the vision of the *Chatswood Strategy* rezoning to increase job provision through the introduction of a generally consistent mixed-use zones, GMU understands that the buildings street presence will be different and offer an alternative to what currently exists in Ellis St. Street activation at the ground floor has the opportunity to transform Ellis St from a purely residential street to a Mixed Use Street as per the guidelines and aims of the *Chatswood Strategy*. While neighbouring sites can only be expected to undergo a transformation in the long term, the subject site, near the eastern end of Ellis St and close to Frank Channon Walk has the potential to generate destination foot traffic and exposure for its proposed retail and commercial offering. The view of the proposed development on approach from the Pacific Hwy is also well considered, with the ground floor activation sitting proud of the residential program of the street.

While the proposed built form on the subject site is in the form of a double storey commercial podium and residential tower above, it still retains the character of an intimate residential street with a 'human-scaled' street wall element. The podium façade is designed in a manner to form a coherent and prominent edge along Ellis St and directly visible from Frank Channon Walk, therefore acting as a transitional zone between the currently residential zones of Ellis St and further south, and the mixed use to the north in the commercial hub of Chatswood. The proposed architectural features include a well-articulated façade composition and mass distribution to ensure a -finer-grain' expression and a reduced perception of bulk and scale.

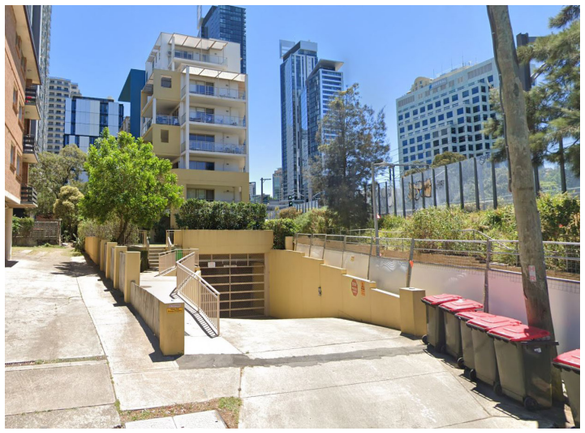
To Frank Channon Walk and Ellis St, the proposed development would present as a 2-storey podium including a commercial/retail frontage and a 11-storey setback tower. A part storey to the north increases the total number of levels to 14, which responds to solar requirements and is hidden from the street view as the tower steps down to the Ellis St to the south. The tower setback provides opportunity for private open space on the podium (RL 101.3) and vegetative softening on the part of the podium fronting Ellis Street as well as canopy-height greenery to complement the streetscape on the western boundary. The ground level landscaped communal open space to the side and rear of the development is consistent in location with the subject site's western neighbour at 7-13 Ellis St, providing a consolidated biotope and green corridor also providing visual amenity and being benefited by the solar access from the east.

7-13 Ellis St

Garage doors and blank brick walls to street

Subject site- 3 Ellis St

Undercroft parking and blank walls



84- 86 Albert Ave, Ellis St frontage

Dominated by driveway, roller door and concrete walls

8 Ellis St

Services and parking to street level

745 Pacific Highway

Remnant 2 storey remaining at end of Ellis St

84-86 Albert Ave, Albert Ave frontage

Concrete fence and hedging, apartments at ground

88 Albert St

Apartments at ground level

100 Albert Ave

Apartments at ground level

2.3 Section Conclusion

The Chatswood CBD and surrounding residential zones are a mix of different types and scales of developments. Ranging from large mixed use and commercial buildings in the city centre down to 9 storey and progressively lower residential buildings as small as 2 storeys further south and west, the existing scale is in transition towards a higher density as seen by recent surrounding developments as well as the updated approach to Chatswood CBD described in the *Chatswood Strategy*. The built form character within the area is experiencing a gradual transition to a denser and more urban precinct, especially for the sites closest to the CBD, while being sensitive to solar requirements of the public recreation areas. The *Chatswood Strategy* encourages this transformation as it complements the current trend of intensifying development next to transport routes and railway links.

The subject site has an opportunity to lift the quality standard of residential flat developments in Ellis Street. In order to complement the existing and evolving character of the area, future development on the subject site will promote an improved and activated retail commercial frontage, with car parking hidden below ground. The development is compliant with the objectives and aims of the relevant controls and the proposed massing, density and landscaped setting for the subject site have carefully taken into account all of the site constraints. The proposal should be considered based on its individual merit, response to the site and its ability to make a positive contribution to the streetscape and surrounding character.

3.0
The controls and the response of the proposal

3.1 LEP

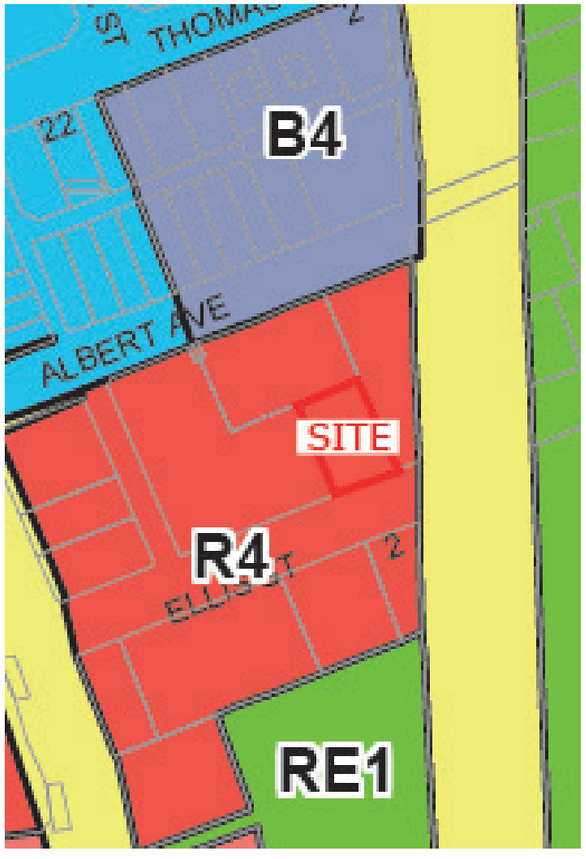
There are a number of controls applicable to the site and these controls inform the desired future character for the area. This section of the report will concentrate on the council controls that guide the built form on the subject site. Other applicable controls i.e. landscape, amenity and quality of open space will be discussed under each appropriate heading in later parts of the report. In general, the council controls that inform the built form on the site are as follows:

The Willoughby Local Environmental Plan 2012 (WLEP 2012) was made on 31 January 2013 in accordance with the Department of Planning and Infrastructure's Standard Instrument Order 2006. *WLEP 2012* at the time of being made provided the statutory framework for all planning within the area, development and building within the area. The LEP is made up of a written instrument and maps. This document allocates land for specific purposes through zoning and development controls.

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 1.7:1, but a maximum FSR will be increased to 2.5:1. The Height of building allowable will increase to between RL 122m and RL approximately 144m based on sun access to key public spaces.

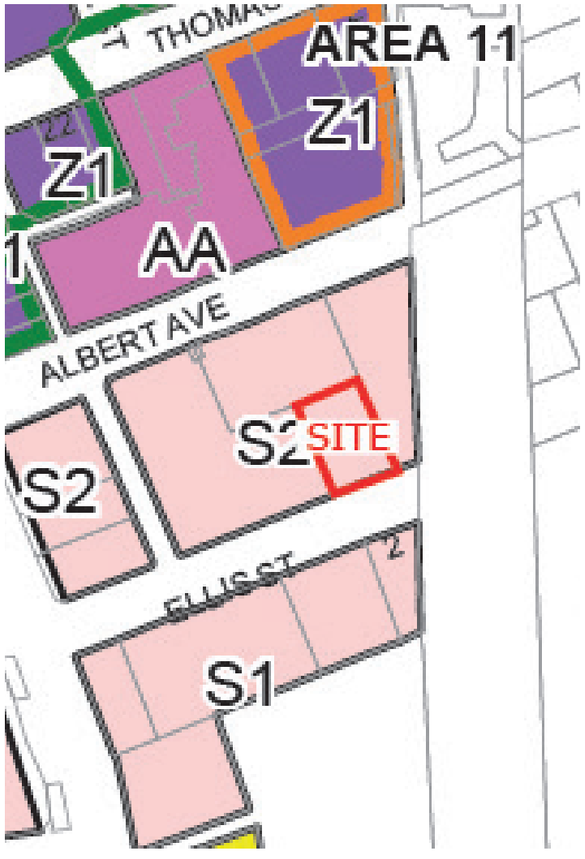
Zoning

The site is zoned R4 High Density Residential, and is surrounding by other R4 zoning.



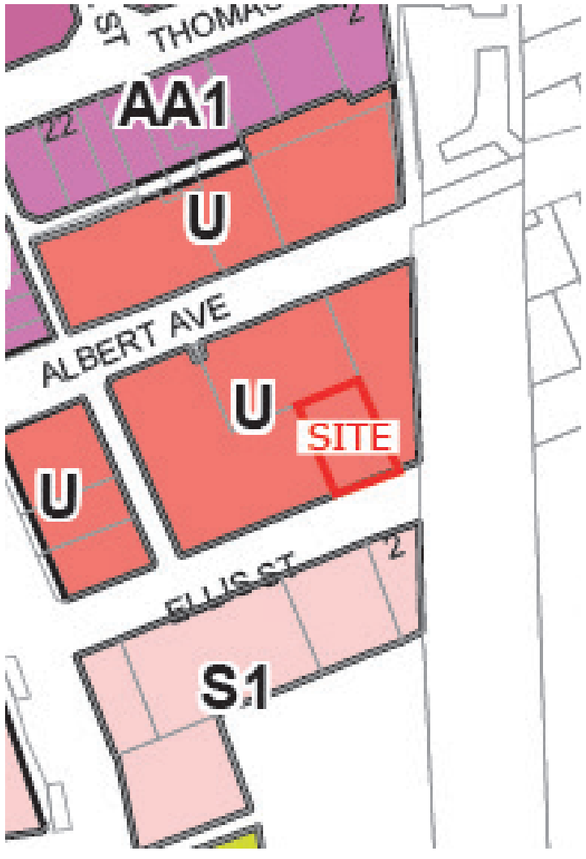
FSR

The LEP maximum Floor Space Ratio on the subject site is 1.7:1.



Height of building

The current height control of the subject site is a maximum of 34m.



3.2 DCP

WDCP provides detailed guidelines and environmental controls to guide development within the Willoughby local government area. It supports the objectives and planning provisions contained within *Willoughby Local Environmental Plan 2012 (WLEP 2012)*.

Willoughby Development Control Plan (WDCP) was adopted by Council on 26 June 2006 and came into force on 21 August 2006. The site is now subject to the *Chatswood CBD Planning and Urban Design Strategy to 2036*, which supersedes most of these controls.

E.1.1 Frontages: there should be an appropriate building siting which minimises vehicular dominance and enhances the streetscape character. Commercial space should activate the street.

Comment- the proposal satisfies this control by programming commercial frontage to activate the street, while vehicular access is disguised by using the same high quality pedestrian paving materials to the driveway as well as by setting back the basement entry gate so that the active commercial frontage dominates the street.

E.1.2 Density, Use and Height: The development should be suit and improve the existing or future scale and character of the area, while maintaining appropriate solar access, amenity and existing views

Comment- The development does well to respond to the residential scale of the street through the podium bulk and height, while the setback and tower component solidify the uplift in density and streetscape quality that the city fringe area of Ellis St requires.

E.1.3 Design and Streetscape Design Qualities: talks about visual interest at street level and lists the need for articulation and an activated street edge to increase the quality of the pedestrian domain.

Comment- The tested and applied setbacks and articulation measures, particularly to Ellis St and publicly accessible Frank Channon Walk dramatically improve the visual interest of the site. The modular composition of the built form, the interplay between horizontal and vertical, the design of openings and fenestrations as well as the elegant use of materiality, texture and colour all reinforce the visual success of the proposal in such a high pedestrian zone.

E.1.4 Setbacks: ensure that the building setbacks reinforce the streetscape character to the street and are stepped to minimise building mass and bulk and ensure adequate amenity, solar access and communal open space provision.

Comment- the proposal's front setback is 2m to enhance the streetscape pedestrian experience by providing a greater spill-out zone and landscaping. The tower 3m setback ensures a human-scale presentation to the street, and side and rear setbacks ensure that amenity, privacy and open space provisions are met for residents and neighbours.

E.1.5 Building Depth: should have a maximum depth of 20m to ensure solar access and that the desired future context is maintained.

Comment- The tower component is less than 20m depth, in order to satisfactorily meet solar and ventilation requirements. All apartments in the proposal are dual aspect and all meet full solar and ventilation requirements.

3.3 The Chatswood CBD Planning and Urban Design Strategy to 2036

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, solar access, built form, street frontages and FSR.

Chatswood CBD boundary

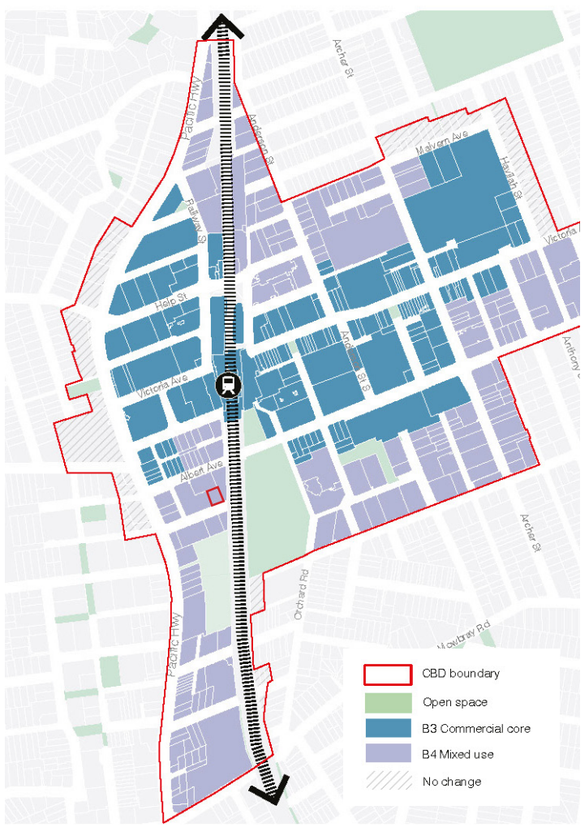
The Chatswood CBD boundary has expanded and now encompasses the subject site

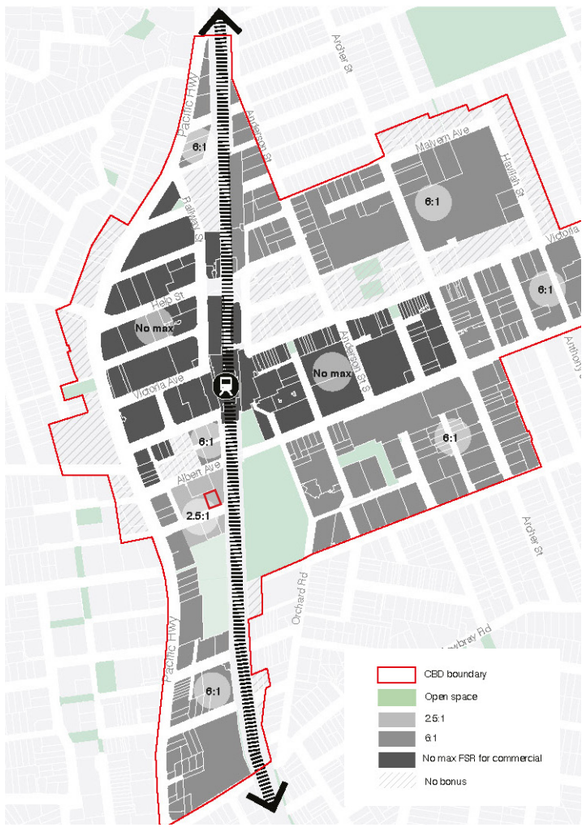
Land use

The site is zoned B4 Mixed Use. The proposal is a mixed-use development with a double height commercial frontage and 12 levels of residential above, aligning with the B4 zoning.

FSR

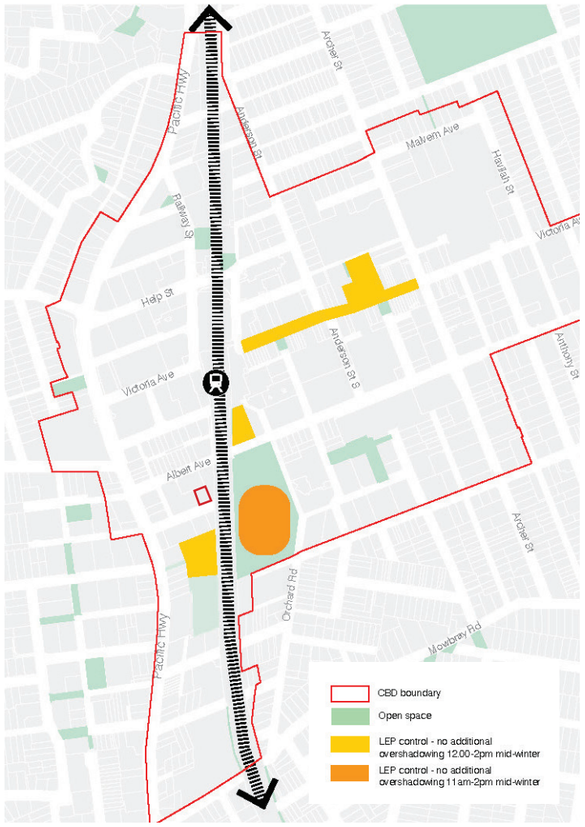
The site has maximum FSR of 2.5:1. GMU did extensive built form testing of the site which established an appropriate building envelope with no adverse shadowing impacts and appropriate separation distances. The final building envelope achieves an FSR of 4.7:1 for Option 1 and 4.8:1 for Option 2.





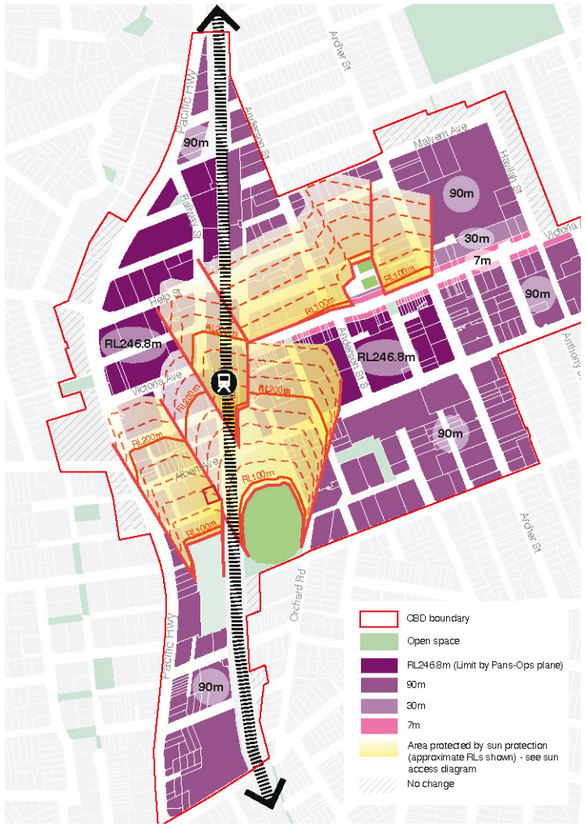
Solar Access

Solar access must be available to the Chatswood Oval and Croquet Club between 11am and 2pm. The proposal ensures that solar access remains to Chatswood Oval and the Croquet Club well outside this time bracket, and there are no overshadowing impacts. This is further described in 'Principle 6- Amenity' of this report.



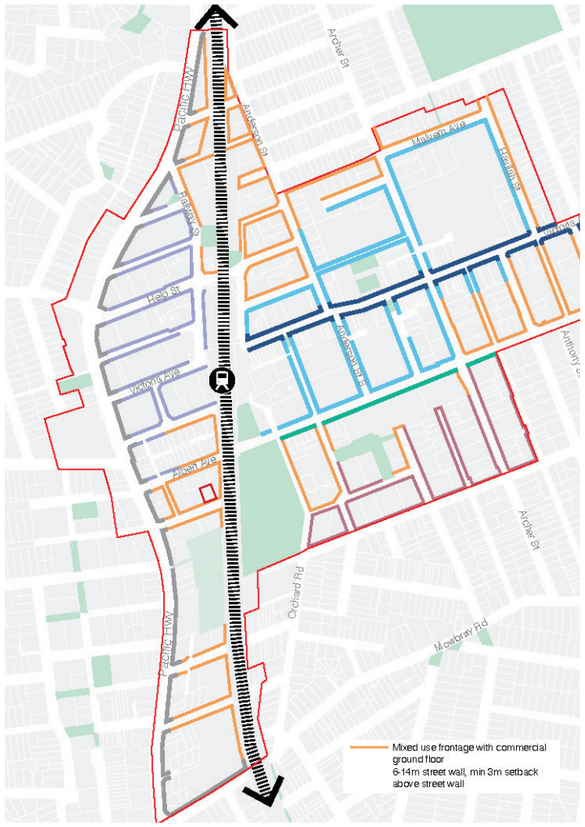
Building heights

The site is nominated to a height range between RL 122- RL 144m in order to protect solar access to Chatswood Oval and the Croquet Club. The proposal surpasses the height range, yet fulfils the objective of the height limit as it does not cause any adverse overshadowing to the Oval or Croquet club.



Street Frontages and setbacks

The site is nominated as a mixed use frontage with commercial ground floor with a 6-14m street wall and a minimum 3m setback above the street wall. The proposal has a 7.6m, double height commercial street wall which activates the street. The residential tower component is setback by 3m, satisfying this control.



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.

6. *Design excellence and building sustainability is to be required for all developments exceeding the base FSR based on the following processes:*

- *Competitive designs for developments over 35m high.*
- *A Design Review Panel for developments up to 35m high.*

7. *To achieve design excellence, developments must achieve higher building sustainability standards.*

8. *The Architects for design excellence schemes should be maintained through the DA process and can only be substituted with agreement of Council.*

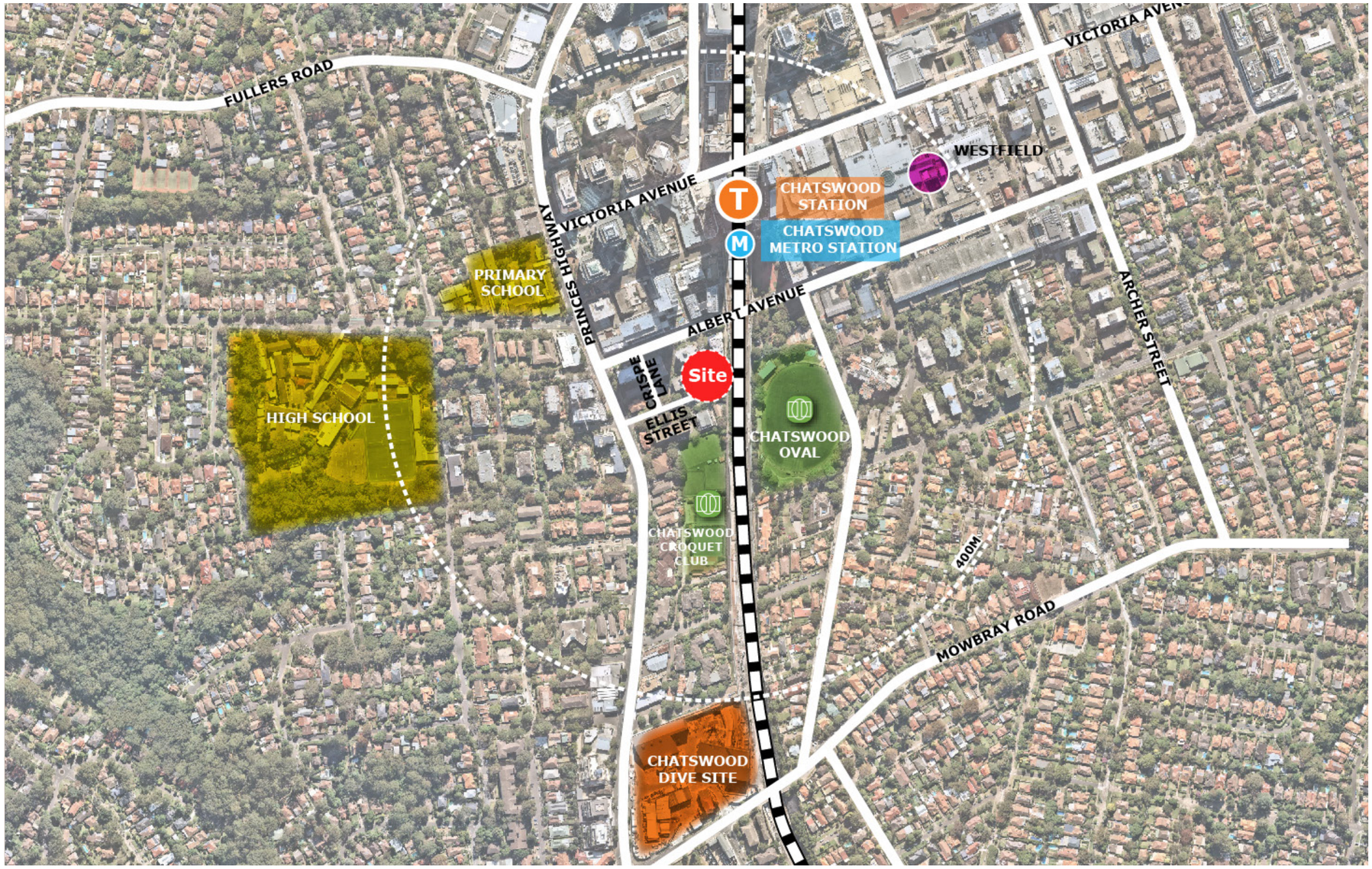
GMU is encouraged by Willoughby Council's initiative of instituting a design excellence provision and process as this will improve the quality of future built form and public domain interfaces for the Chatswood CBD as a whole. The proposal has already undergone a rigorous process of internal quality control assisted by credible and independent consultants including the fields of urban design, landscape and planning in addition to numerous rounds of consultation with Council staff. We are confident that this ground work will assist us 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
SEPP 65 analysis and comment

4.1 Principle 1: Context and Neighbourhood Character

"Good design responds and contributes to its context. Context is the key natural and built features of an area, their relationship and the character they create when combined. It also includes social, economic, health and environmental conditions.

Responding to context involves identifying the desirable elements of an area's existing or future character. Well designed buildings respond to and enhance the qualities and identify of the area including the adjacent sites, streetscape and neighbourhood. Considerations of local context is important for all sites, including sites in established areas, those undergoing change or identified for change."



Comment-

As discussed in the previous section relating to the immediate surrounding character, the general built form context of the subject site within the Chatswood precinct is characterised by a diverse mix of development, including multi-storey residential developments between the Pacific Highway and the rail line as well as taller mixed uses further north towards the commercial core.

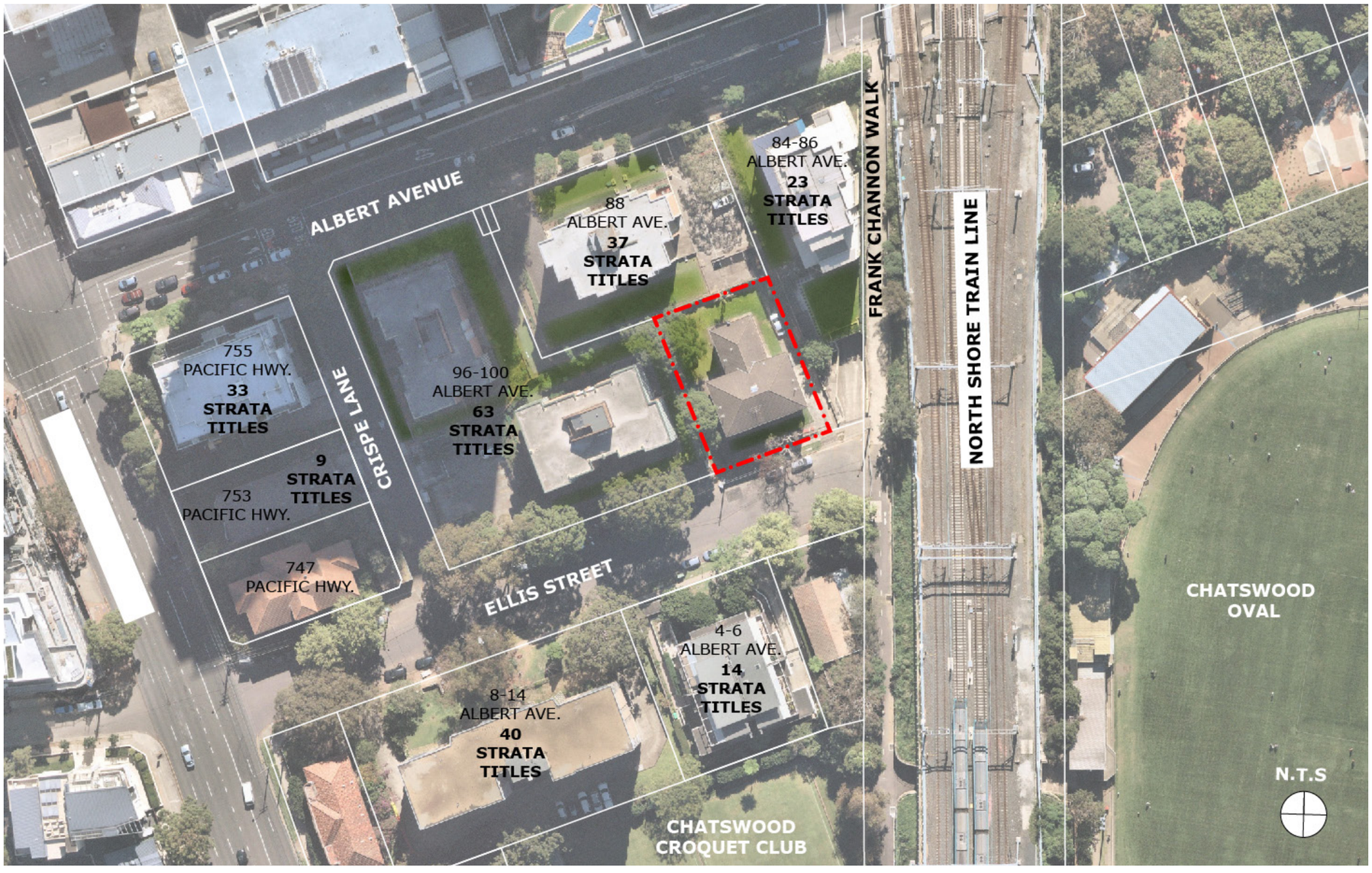
There are many residential flat developments located near the subject site such as 85-86 Albert Ave (7 storeys) 757- 759 Pacific Hwy (9 storeys), 640- 650 Pacific Hwy (6 storeys). As previously discussed, Residential flat developments are the predominant typology of the peripheral areas around the core, with an apparent trend to be lower towards the south, and taller further north closer to the commercial core. This is in line with solar access requirements for the oval and other open spaces and a change in zoning from commercial to mixed use then residential further south. Development across Pacific Hwy is

predominantly residential flat buildings, also of ranging heights. With the proposed change in zoning in the *Chatswood Strategy* the site will be the first mixed use development on Ellis Street, and with the change will come street activation and passive surveillance for a site within the visual catchment of Frank Channon Walk.

As stated in Principle 1 – Response to Context – "in the case of precincts undergoing a transition…" the proposal should respond to "the desired future character". As per the *Chatswood Strategy* vision, Chatswood can be expected to see an increase in development and density, not least in areas within walking distance of the CBD and railway station such as the subject site. As shown on the analysis map above, the subject site is located approximately 200m (a 3 minute walk) from Chatswood Railway Station. The developments as one of the first in the area to redevelop in line with *Chatswood Strategy* will still sit comfortably within the context of the surrounding existing buildings and be subservient to the overall skyline of larger developments beyond. it will provide a natural transition in height between the residential development to the south and commercial development to the north.

The proposed typology is considered to be harmonious with the existing surrounding heights, while creating a better defined street wall height and quality street activation addressing Ellis Street and providing a destination off Frank Channon Walk.

GMU considers, that the proposal responds well to the existing and the evolving height character of the area, by proposing heights of approximately 12 storeys with a setback above the podium. The building's footprint and bulk are relatively small compared to neighbouring lots with larger site areas. This benefit of being a lot with smaller proportion combined with the fact that a consistent 3m setback to the west has



been maintained allows the retention of mature trees within the separation distances, resulting in more tree canopy perceived from the street and obliquely from Frank Cannon Walk. The consistent 3m setback for podium and tower provides greater opportunity for the retention of the existing canopy.

The proposal's streetscape presence has deliberately departed from the non-contributory elements within the existing character and quality of the street. The street is dominated by inactive frontages, empty setbacks, car parking and large 'black holes' in the presentation of vehicle driveways. In response, the subject site's driveway and basement have been well considered and are recessed behind an activated street edge.

To further enhance the streetscape, there are two options for the proposal; Option 1 with an 800mm setback to the eastern boundary which responds to an averaged side setback of 1:20 as *Chatswood Strategy's '3.1 Key Strategies of future LEP and DCP controls- 28',* and Option 2 with a nil setback to the eastern boundary. The advantage of the nil setback approach in Option 2 is the enhanced opportunity for future development towards the front of the site at 84-86 Albert Ave. The added benefit is that a greater averaged setback toward Frank Channon Walk can be achieved above the podium level. We estimate that the 800mm setback along the common boundary would be mirrored along the eastern edge of No. 84-86 for an approximate total of 1.5metres setback above podium next to Frank Channon Walk. The subject site's vehicular entry to the basement is designed so that the basement can be connected to the basement of 84-86 Albert Avenue via a collapsible wall, therefore removing the need of side-by-side double driveways and providing future development opportunity to No. 84-86 where its driveway currently is. To the right, there is an illustration that shows an indicative massing for the adjacent site with a separation on the common boundary or abutting to the subject site.

Existing site frontage

Undercroft parking and an inactive street edge

Street condition

Dominated by parking, roller doors or blank walls

In either option, the proposal demonstrates a strong contextual fit with the rest of the surrounding built form. The development, while mixed use in nature responds to the human scale of the residential character of the street by providing an appropriate height street wall. If the adjacent site at No. 84-86 Albert Street ever redevelops, this will be in the form of a transition building, which will complement and complete the evolving streetscape. The proposed street wall is 7.6m high and then sets back. The development provides setbacks for significant under-storey vegetation and the provision of amenity to the west. The rear building line responds to the neighbouring site to provide a consolidated biotope and green corridor also providing ventilation and solar access and improving the neighbours' existing view for a greener outlook. As it is presented to the street, the passive surveillance and active frontage also visible to Frank Channon Walk will increase the level of activity suitable for the subject site's location on the fringe of Chatswood's commercial core, but in a more intimate and secluded mixed-use zone.

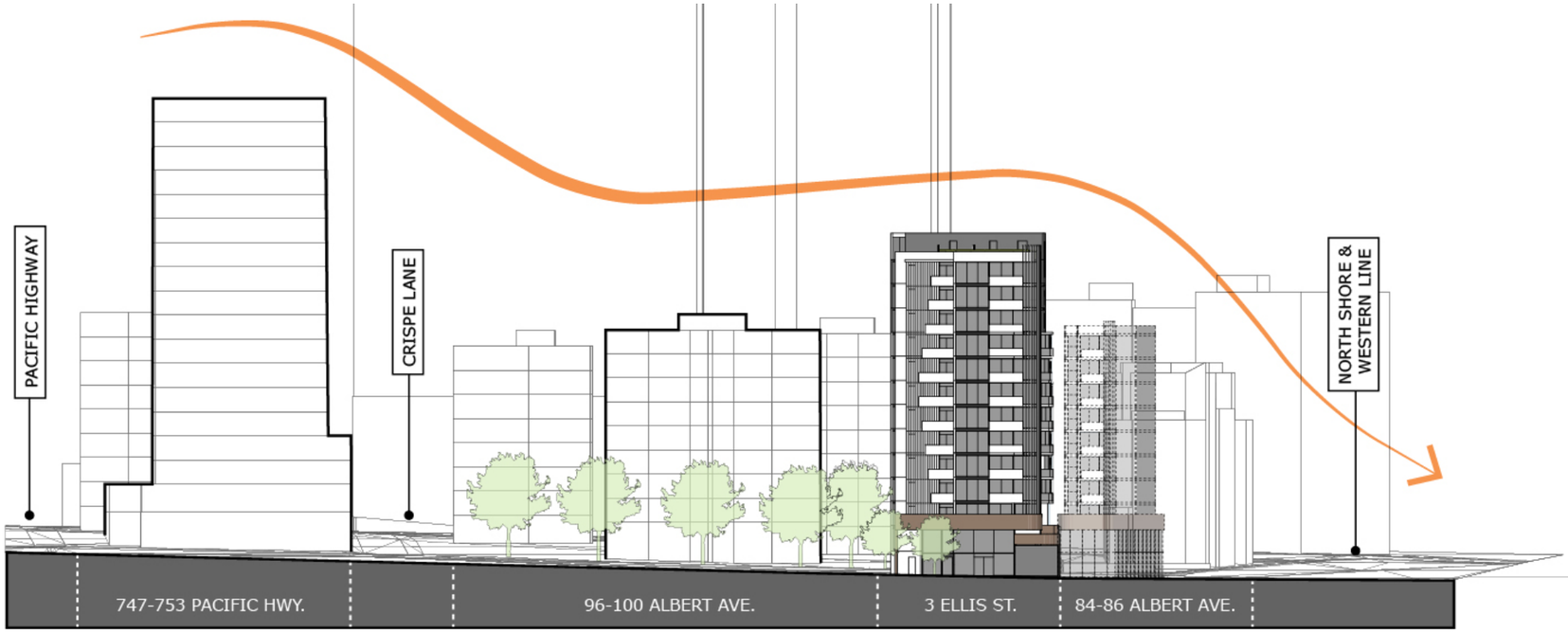
The architectural aesthetic and style fit with the evolving character of the area, and is discussed further in later principles in this report. The typology and grain of the building will be discussed below and the issues of height and scale will be discussed in more depth in the section relating to the principle of scale. The elevations are carefully and thoughtfully articulated with a variety of materials and finishes, which further reduces the appearance of bulk and scale and relates to the diverse character of the area. The articulated tower steps back, responding to existing contextual conditions, the aims of the *Chatswood Strategy* and the orientation of the site.

Option 1

800m eastern setback

Option 2

Nil eastern setback

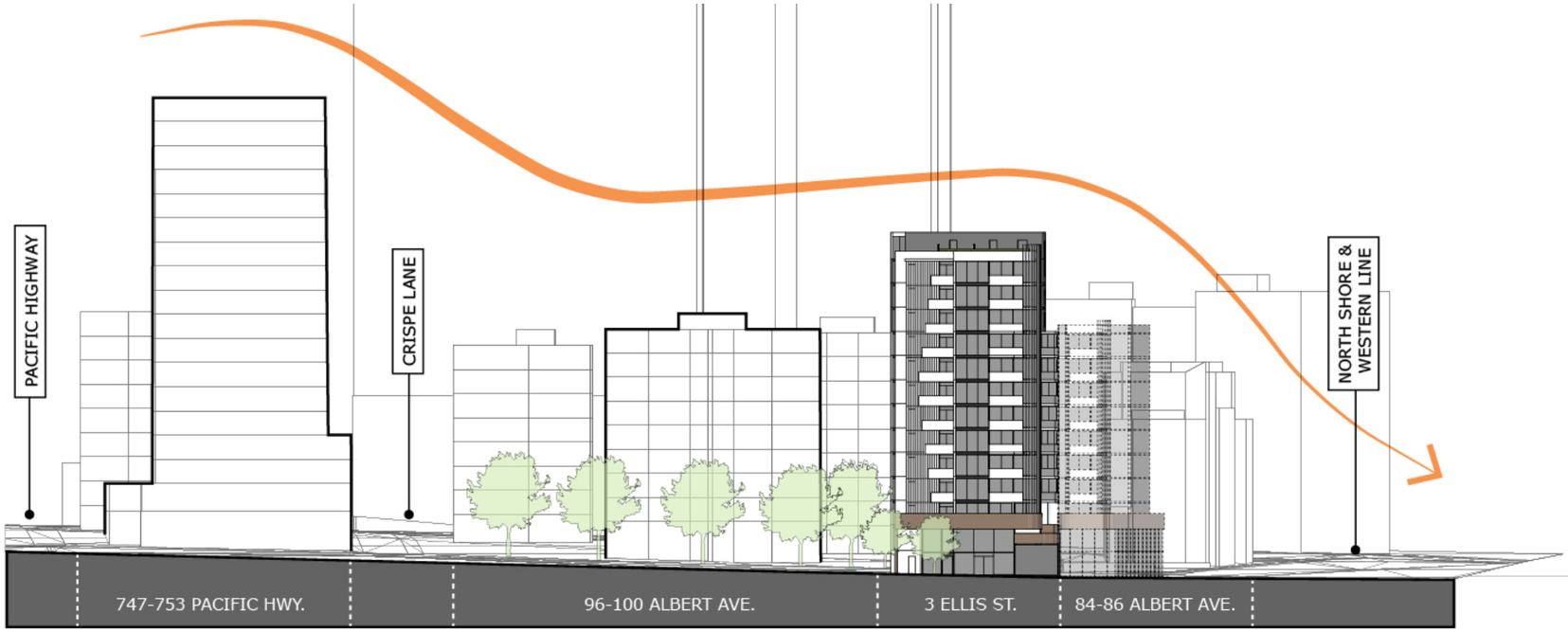


Option 1

with 800mm setback

Option 1

With 800mm setback



Option 2

with nil setback

Option 2

With nil setback

Existing view of Ellis St

from Pacific Hwy

Proposed building

As seen from Pacific Hwy; hidden by tree canopy

Conclusion -

The proposal's overall heights and the setback to upper storeys create an appropriate street-wall response and a sculpted and articulated massing presented to the street frontage and to the eastern side boundary. The proposal provides a sensitive response to the existing residential character of the area while also presenting an active edge to Ellis St within the visual catchment of Frank Channon Walk. This fits well with the transitional character of the subject block.

Furthermore, the built form response follows the desired future character for the area in terms of typology, height complying with the solar plane requirements, activating the street edge, façade articulation and choice of building materials. The relationship of the building's footprint and associated communal open areas is considered to be in keeping with the rest of the subject block. The proposed development has been carefully planned to provide appropriate setbacks and separation distances. Therefore, the proposed development is considered to relate well to both the existing adjacent developments, as well as responding to future development within in the area. This is accomplished through the proposed building typology, built form configuration, separation distances as well as the carefully considered options on how the proposal can clip to the adjacent site at No 84-86 Albert Avenue. The proposal therefore fulfils this principle.

4.2 Principle 2: Built form and scale

"Good design achieves a scale, bulk and height appropriate to the existing or desired future character of the street and the surrounding buildings.

Good design also achieves an appropriate built form for a site and the building's purpose in terms of building alignments, proportions, building type, articulation and the manipulation of building elements. Appropriate built form defines the public domain, contributes to the character of streetscapes and parks, including their views and vistas, and provides internal amenity and outlook.

Comment –

The proposed built form distribution is a direct response to the opportunities and constraints relevant to the subject site, which in turn informed the design principles for the site. GMU has conducted extensive built form massing studies of the subject site in relation to its surrounding context to determine the site's natural attributes and constraints. The analysis informed the key design principles applied to the proposed development, which in turn informed the overall built form. The design principles include:

+ Provide a built form response to the existing 8 storey residential building to the west and north, and provide a built form transition to the higher building to the north in the commercial core and the lower residential buildings to the south
+ 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 additional overshadow impact on Chatswood Oval and Chatswood Park
+ Maximise CBD and Oval views for the proposed apartments
+ Stepping back of the built form in response to the configuration of adjacent apartment buildings
+ Incorporate existing environmental elements such as mature trees and a diversity of landscaping areas
+ Present articulated bays and modules to Ellis St and Frank Channon Walk
+ Engage Ellis St and contribute positively to the pedestrian environment
+ Provide appropriate street wall heights to Ellis St with upper levels expressed as recessed
+ Provide generous separation distances to neighbouring development
+ Provide sunny open spaces to maintain exiting canopy sustained biotopes
+ Incorporate high quality sustainable materials and low water consumption garden areas

The above key built form parameters are intended to guide the proposed development beyond the PP stage in order to achieve an appropriate built form response in terms of building alignments, proportions, building type and orientation to establish vistas and provide internal amenity and outlook. The *Chatswood Strategy* as well as the contextual opportunities and constraints of the site have informed the overall placement and scale of the building.

The tower bulk responds to the characteristics of the area such as the front setback of neighbouring apartments, while on the other hand offers an amended and improved form in the podium which steps forward with the purpose of activating and engaging the streetscape.

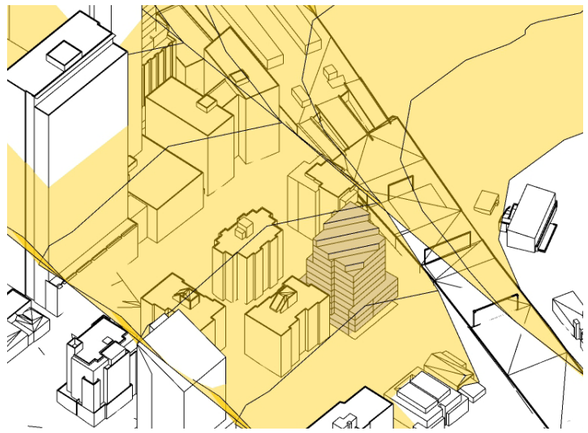
Except for minor encroachments on the highest and second highest storeys, the building follows the solar plane closely as dictated by the *Chatswood Strategy*. The additional massing of the upper levels assists in rationalising what otherwise would be an unattractive stepping form at the crown of the building. The protruding areas of the built form into the solar plane have no adverse solar or visual impacts, but rather blends into the transitional height increase. The height of the building provides the required transition to the commercial scale towers to the north and the smaller residential buildings to the south.

The maximum height control applicable subject site is as follows:

+ Approximately RL 124m from the southern corner, increasing in height to approximately RL 144m in the northern corner

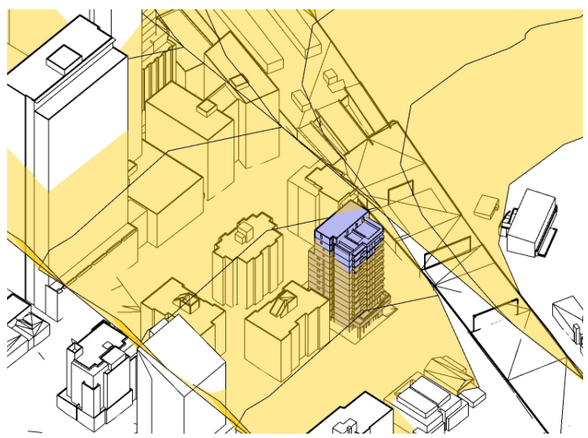
For the purpose of the height discussion, the proposed overall height is measured from the existing ground level. As the building height plane diagram below shows, the proposal is generally compliant with the maximum height control except in two areas where the upper floor and the second upper level have been rationalised into rectangles for efficiencies and a more aesthetically pleasing built form. Therefore, a limited area of non-compliance occurs toward the front of the site, set back from the street, which does not have any adverse overshadowing impacts.

The building is 14 levels in total with the upper most level being a partial level connected internally to the level below; therefore the uppermost universally accessible level is Level 12. The part-level above that is a sky level, independent of the lift core and accessed internally as a loft level via private spiral staircases. From the streetscape, the ground floor is a double height space which presents as one level, with 11 residential levels above and an additional residential level setback from the street, making a total of 12 visible levels to Ellis Street.



Building height plane

With a fully compliant built form beneath



Proposed building height

Showing a slight surpassing of the height limit

This built form outcome is considered to be the outcome of a logical and organic solution for the height distribution across the site from a largely compliant proposal with the solar plane. The proposal maintains a 3m tower setback and lower perceived scale to Ellis St and the eastern boundary and thereby mitigates any visual impacts to the public domain areas. This overall distribution of bulk and scale across the subject site is considered to provide an appropriate response to the existing character of the area and the objectives of the controls and the *Chatswood Strategy*.

The proposal's response to the street front provides a well-considered scale relationship and street wall length to the public domain, providing a balanced contribution to the pedestrian environment and providing an active edge to Ellis St. Equally, the proposal responds to existing built forms such as 84-86 Albert Ave, 88 Albert Avenue and 7-13 Ellis St. The proposal presents a street wall of 1 double level, with the recessed tower level to reduce the perceived bulk from the street. In regards to the neighbouring developments, the proposal presents a shorter, yet more pronounced level in the form of a podium, with a recessed upper level to reduce the perceived bulk to the street. Option 1 presents an averaged setback of 1:20m to the adjacent site and Option 2 allows any future development of the next door site to clip to the common boundary maximising the development potential of the adjacent site. Both options are considered to have advantages and it is up to Council to choose the preferred solution. The tower is articulated by shading blades and recesses to the built edge which soften and add interest and express the façade as an elegant built from marker terminating views from Frank Channon Walk.

The built form floor plates step in unison with the topography of the site. The Ellis St floor plate is at a lower level than the rear communal open space. This stepping provides a good built form solution to the street, being a double height frontage for the activated commercial edge and allowing upper residential levels to be continuous and in line with neighbouring building levels.

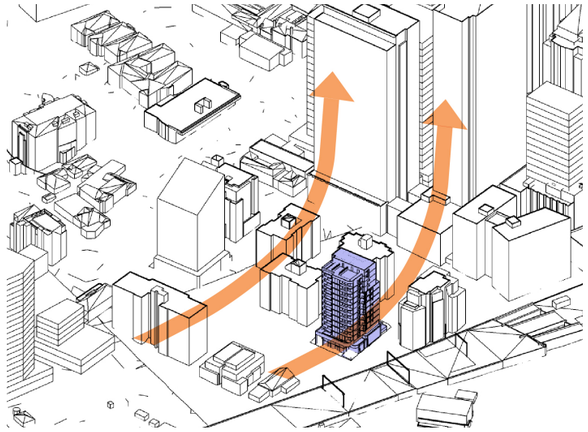
In previous schemes of the proposal, this stepping resulted in a double height space for the entirety of the street level commercial floor, with an upper mezzanine to the rear of the building leading out to the rear open space. However, after discussion with Council it was decided to turn the mezzanine level into a full floor, while still respecting the street frontage's double-height space. This is in response to Council's objective for additional commercial GFA in an effort to increase job generation targets for the mixed use zoning.

Setbacks –

Side and rear setbacks allow an appropriate separation distance to neighbours. To the south-west, in both options there is a continuous setback of 3m, providing the appropriate total of a 9m separation distance to No.7-13 Ellis St. Windows placement is minimal and well considered, and no adverse impacts are inflicted on the privacy of the neighbours. Therefore, this is considered to be an appropriate setback to the south-western boundary.

Rear setbacks range from 4m to the raised landscape terrace area, to 9m for the upper commercial level, and 12m to the setback tower mass. The rear setback aligns with neighbouring residential buildings to provide a consolidated biotope and rear yard for the subject block, with approximately 20m- 21m separation including the two rear yards between the subject proposal and the adjacent northern building at No.88 Albert Avenue.

The north-eastern setback, due to its high visibility to Frank Channon Walk is well articulated and steps back

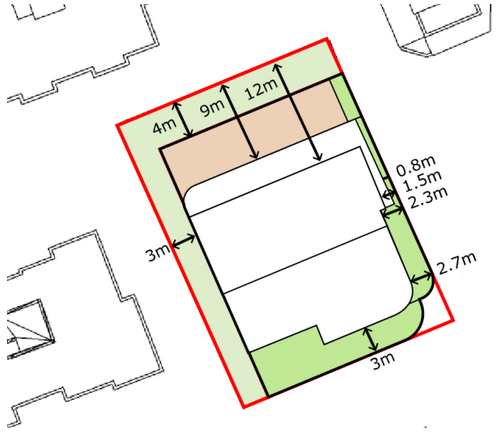


Transitional character of the area

The proposal fits well within the transtitional zone

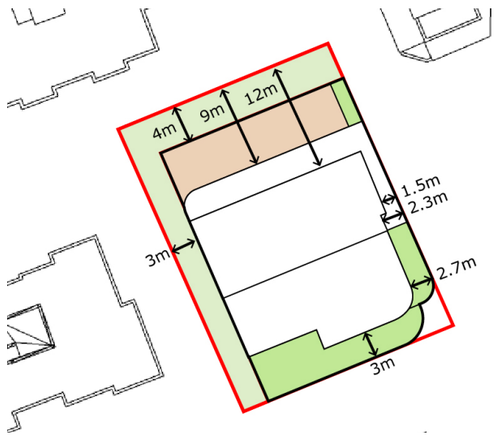
Good scale relationship with street

Offering a built edge to Ellis St and a pedestrian zone



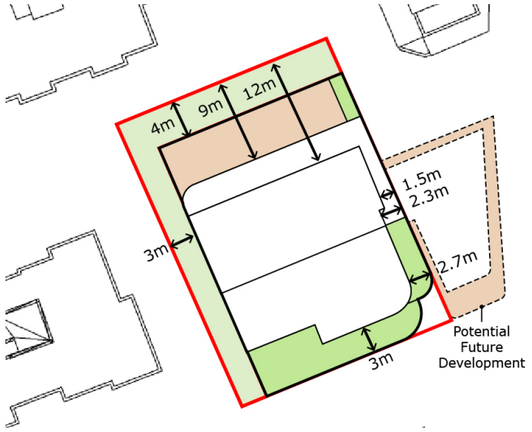
Option 1 setback option

With an 800mm setback to the residential tower



Option 2 setback option

With a nil-setback to the residential tower



Option 2 with adjacent development

Nil- setback allowing additoinal development in the subject block

Neighbouring development potential

Possible due to the nil setback condition in Option 2

to break up the perceived bulk and scale of the building. In both options, there is a nil setback to the podium level. The tower is then set back from the north-east by 2.7m towards front, and 0.8m in option 1, and 0m in Option 2 to the back portion of the building. This allows for a bay of balconies fronting the street to offer passive surveillance and street activation. Option 2, offering a nil-setback to the tower bulk encourages any neighbouring future development to attach to the development to create a strong street edge and an improved pedestrian experience, removing the double driveway condition.

The front setback is 2m, extending the pedestrian zone with a landscape treatment and providing an active zone against the commercial/ retail street frontage. The residential tower component sets back an additional 3m, satisfying the applicable setback controls and providing a suitable residential scale street wall of 7.6m to the street edge.

Conclusion -

The proposed heights and scale respond well to the desired future character maintaining a lower street wall height across the frontage to the public domain. The proposed building forms respond to the topography of the site by stepping the built form and carefully considering the impact of the built form scale visible to the public domain.

Furthermore, the built form response follows the desired future character for the area in terms of typology, use and streetscape presence, setbacks to the public domain, façade articulation and choice of building materials. The relationship between building footprint and communal open areas, is considered to be in keeping with the rest of the precinct. The proposed development has been carefully planned to provide appropriate setbacks and separation distances. Therefore, the proposed development is considered to relate well to both the existing adjacent developments, as well as responding to future development within in the area. This is accomplished through the proposed building typology, the architectural expression as well as built form configuration, separation distances and the treatment to podium areas visible from neighbouring development. The proposal therefore fulfils this principle.

4.3 Principle 3: Density

"Good design achieves a high level of amenity for residents and each apartment, resulting in a density appropriate to the site and its context. Appropriate densities are consistent with the area's existing or projected population. Appropriate densities can be sustained by existing or proposed infrastructure, public transport, access to jobs, community facilities and the environment.

Comment –

The proposal's density is considered to be consistent with the density targets in the *Chatswood Strategy* and with the future desired character of the area, being so close to the commercial core and within the Chatswood CBD boundary. The proposed FSR of 4.7:1 in Option 1 and 4.81:1 in Option 2 are above the suggested FSR OF 2.5:1.

The proposed GFA is as follows:

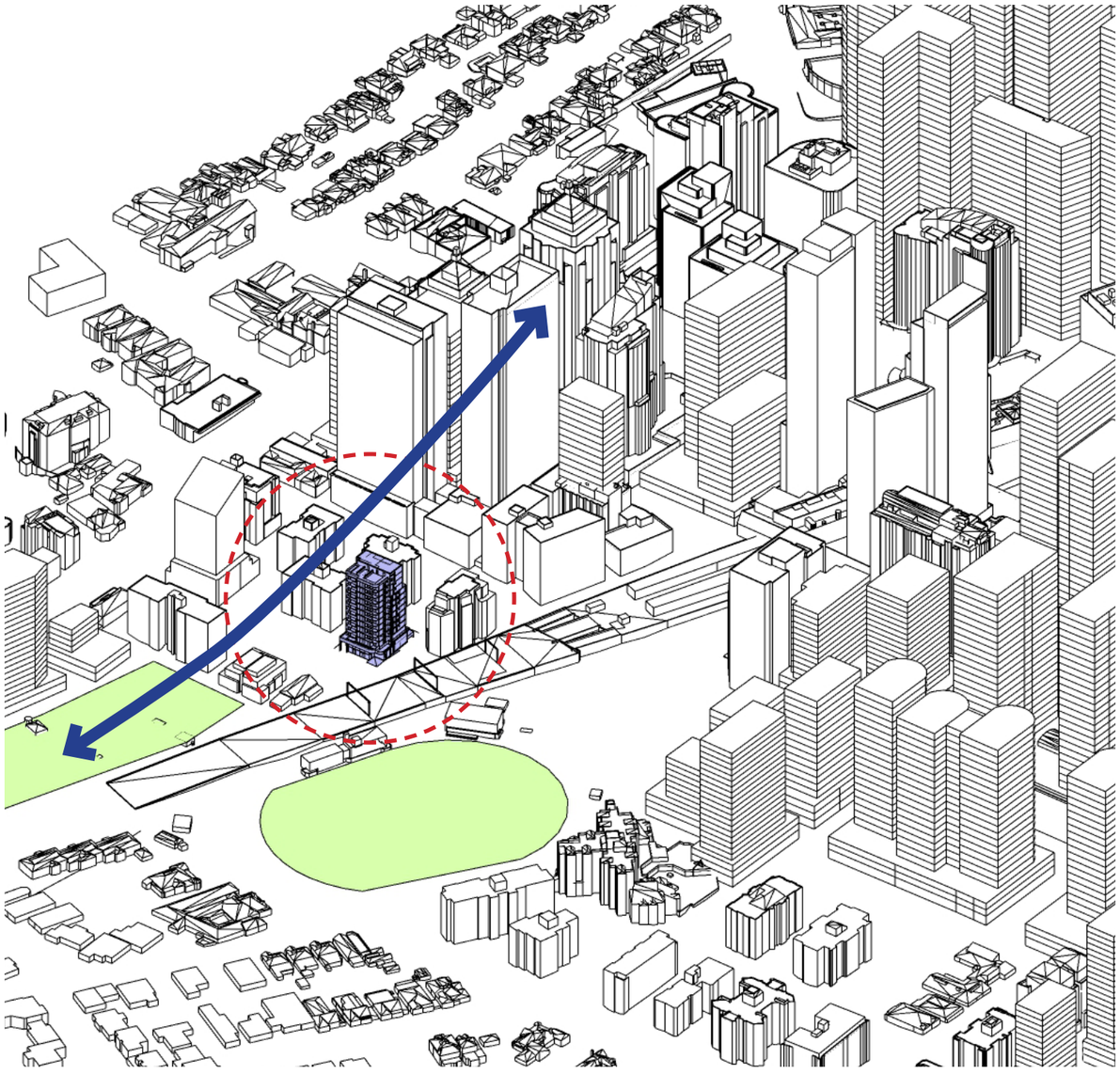
Building Level	Option 1- Residential GFA	Option 2- Residential GFA
Ground	23m²	23m²
1	40m²	40m²
2	310m²	318m²
3	300m²	310m²
4	300m²	310m²
5	300m²	310m²
6	300m²	310m²
7	300m²	310m²
8	300m²	310m²
9	300m²	310m²
10	258m²	260m²
11	258m²	260m²
12	248m²	248m²
Loft	140m²	140m²
Total GFA	3,377m²	3,459m²
Permissable GFA	2,020m²	2,020m²
Site area	808 m²	808 m²
Proposed FSR	4.7:1	4.8:1

Option 1

With 800mm setback

Option 2

With nil setback



The proposed FSR reflects a deliberate departure from the nominated FSR of 2.5: by the *Chatswood Strategy.* The proposed massing and built form are considered to be consistent with the aims of the *Chatswood Strategy* in terms of growth and the transitional character of the area, as well as assisting to achieve the intended FSR targets which other sites within the Chatswood town centre boundary will not be able to achieve due to their peripheral condition adjacent to conservation areas.

According to *WLEP 2012*, The objectives of Clause 4.4 Floor Space Ratio (relevant to built form) are as follows:

> *(c) to minimise the impacts of new development on adjoining or nearby properties from disruption of views, loss of privacy, overshadowing or visual intrusion,*

Objective C is satisfied by the provision of sufficient setbacks for acoustic and visual privacy, building separations to neighbours, careful allocation and placement of windows. There are no negative shadow impacts to nearby properties, and the development has no overshadowing impacts to the Chatswood Oval or Chatswood Park.

> *(d) to manage the bulk and scale of that development to suit the land use purpose and objectives of the zone,*

Objective D is achieved by applying the Chatswood Strategy's street frontage and setback principles in the form of a 2m front setback, 3m western setback, appropriate 7.6m high street wall height and 3m tower setback

> *(e) to permit higher density development at transport nodal points,*

The proposed development is less than 200m walk to Chatswood Train Station and CBD and is a prime location for higher density development at transport nodal points. The proposal is the first mixed-use development on the street, in line with the *Chatswood Strategy*, and through thorough built form testing to ensure the bulk and scale has no adverse effects, the resulting form maximises an appropriate building envelope and proposes a higher FSR and density as a result.

> *(i) to achieve transitions in building scale and density from the higher intensity business and retail centres to surrounding residential areas,*

The buildings height and density act as an intermediate transitional height between the taller buildings the city centre to the north to the lower-scale residential buildings to the south. The density is appropriate for the city fringe location of the site, nearby transport and commercial services.

The site is regular in shape and is an ideal opportunity for increased FSR in such a prime area of the Chatswood CBD close to transport and services. While Council had hoped for the site to amalgamate with at least one of its neighbours, principally No. 84-86 Albert Avenue, the neighbouring site has been recently developed and the current body corporate has shown no desire to amalgamate at the present time. However, GMU believes that the site might have redevelopment potential in the future and has undertaken extensive massing studies, which have found an opportunity to develop the front of the neighbouring site. If future vehicular access to No. 84-86 Albert Avenue is via the subject site's driveway, which the Applicant of the subject site is willing to ensure via an easement in favour of the adjacent site and the one to the north at 88 Albert Avenue, then the front area of no. 84-86 Albert Avenue could redevelop in the mid to long terms. Option 2 for the site, which has a nil setback, in combination with the adjacent site at No. 84-86 enables this opportunity. Option 1 has an 800mm setback to the north-east, and therefore does not as easily favour redevelopment potential of the neighbouring site. However, the FSR of the site itself is only Option 2 has a nil setback to the eastern boundary, allowing any future development at the front of no. 84-86 Albert Avenue to attach to the common boundary wall and provide a continuous built edge while maximising development potential of the adjacent site.

The proposed development on the subject site provides high quality apartments with high levels of amenity, flexible layouts and generous apartment sizes. The area of each type of apartment ranges as follows:

- 1 bedroom apartment: 64m², which exceeds the recommended size of 50m² by the ADG
- 2 bedroom apartments: from 80-83m² (with studies), which exceeds the recommended size of 70m² by the ADG
- 3 bedroom apartments (including loft apartments): from 105-148m², which far exceeds the recommended size of 95m² by the ADG

The proposal maintains high levels of living for future occupants and achieves an appropriate contextual fit and can be argued to provide a more sensitive response to the natural environment and the adjacent developments while achieving solar access and cross ventilation to 100% of the units. The proposed density achieves a balanced streetscape response, appropriate built form outcomes and high amenity communal open space.

Conclusion –

The proposed FSR results in a reasonable concentration of residents on the site, responding to the demand for quality housing in close proximity to transport routes and railway stations. The proposal has no visual or view-loss impacts and its bulk and scale respond well to the evolving character for the precinct. It represents good quality interfaces to the street and internal areas, as well as sensitive built form response to the adjacent buildings in consideration of their uses. Therefore, the proposal presents a sustainable density for the site consistent with similar developments with the future desired character of the Chatswood CBD and therefore it fulfils this principle.

4.4 Principle 4: Sustainability

"Good design combines positive environmental, social and economic outcomes. Good sustainable design includes use of natural cross ventilation and sunlight for the amenity and liveability of residents and passive thermal design for ventilation, heating and cooling reducing reliance on technology and operation casts. Other elements include recycling and reuse of materials and waste, use of sustainable materials, and deep soil zones for groundwater recharge and vegetation."

Comment –

The proposal includes 33 apartments of which all enjoy high levels of amenity achieved through building orientation and distribution, apartment depth and layout and ventilation measures. All 33 apartments achieve the required 2 hours of solar access, as per ADG guidelines. Therefore the proposal satisfies the requirements for solar access as 100% of the proposed units achieved the minimum provision. All 33 apartments are cross ventilated. Therefore the proposal meets the ADG requirement for cross ventilated units. This decreases the need for mechanical ventilation and air conditioning. All 33 apartments are corner units with dual aspect which makes the proposal compliant with ADG requirements, enhancing the amenity levels and the flexibility of the apartment layouts with the majority of the apartments enjoying district views.

The high levels of daylight access reduce the need for artificial lighting and enhances liveability and the potential for passive thermal design solutions. Thermal comfort will be ensured through the appropriate building elements, fittings and appliances. All proposed living areas have full access to a private outdoor area, enhancing amenity levels and the flexibility of the unit layouts. The proposal includes initiatives for energy reduction and a rainwater tank for water collection and reuse for irrigation of the landscape areas. There is significant amount of deep soil zone. 105m^2 of deep soil zone is provided for water recharge, being 13% of the site area.

The proposal makes efficient use of natural resources, energy and water through the use of the following measures:

+ The demolition of materials and removal of waste materials will comply with state and local government standards. The proposed selection of low embodied-energy materials reduces the overall green footprint.
+ Irrigation system comply with natural standards to reduce water consumption and reduce reliance on technological measures. Native and exotic species are selected to provide delightful landscaped areas, provide a varied animal habitat and ensure deep zones for groundwater recharge.
+ All apartments have a corner aspect, therefore increasing daylight penetration and reducing heating and artificial lighting requirements.
+ All dwellings/apartments are cross ventilated, which also reduces the need for air conditioning units / artificial climate control.
+ Rainwater is collected and reused for landscaping and irrigation of landscaped areas.
+ The location of the subject site close to a major bus corridor and rail services. Furthermore, the site's proximity to a number of schools and local shops reduces car dependency and provides more sustainable alternative transport options to a variety of destinations, reducing the use of private motor vehicles.

Conclusion –

The proposal is considered to adopt sound sustainable design practice and is therefore considered to satisfy this principle. For a more detailed discussion on the efficiency of appliances and mechanical services, please refer to the BASIX report.

4.5 Principle 5: Landscape

"Good design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in attractive developments with good amenity. A positive image and contextual fit of well designed developments is achieved by contributing to the landscape character of the streetscape and neighbourhood.

Good landscape design enhances the development's environmental performance by retaining positive natural features which contribute to the local context, coordinating water and soil management, solar access, micro-climate, tree canopy, habitat values, and preserving green networks. Good landscape design optimises usability, privacy and opportunities for social interaction, equitable access, respect for neighbours' amenity, provides practical establishment and long term management."

Comment –

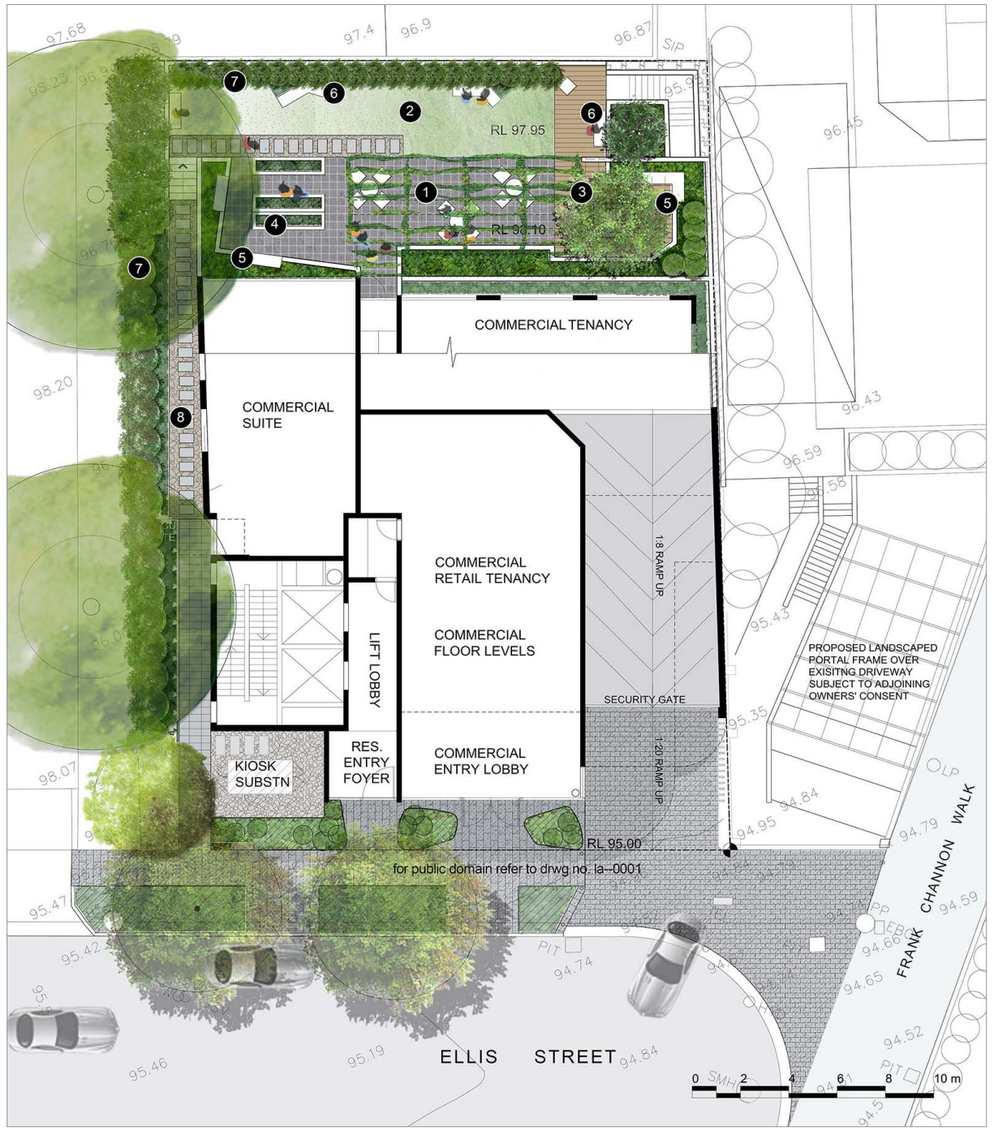
Dem Landscape Architecture was engaged to prepare a landscape design for the public and private landscaped areas within the proposal. One of the key drivers of the landscape concept has been to enhance the streetscape quality, being consistent with the unit paving of Chatswood CBD, to enhance the forecourt area and the pedestrian connection between the development and Frank Channon Walk. Another key driver is to provide a communal open space at the rear of the building which provides opportunities for passive recreation and social interaction. The landscape design establishes attractive and practical areas for the future residents to enjoy, while addressing the design of public domain interfaces. While the rooftop garden is accessible to the upper penthouse only, its treatment will contribute to the overall outlook from taller buildings to the north.

Based on the drawings received from the landscape architect, GMU have extracted a set of principles for the landscape approach to the site. These include the following:

+ Provide a lush landscape setting to the western boundary which also provides amenity to the neighbouring apartments.
+ Create a north facing private open space in the rear yard that maximises solar access and is removed from the active street front.
+ Provide high quality private open spaces to respond to the site's orientation and potential views.
+ Provide private open spaces that allow for maximised views. Rear balconies will enhance passive surveillance of the communal open areas to create a safer recreational environment.
+ Providing a landscape setting which is sensitive to the adjacent developments and boundary interfaces.
+ Ensuring that the landscape setting complements and contributes to the surrounding residential character of the area.

Furthermore, positive outcomes for the site include:

+ Enhance the landscaped character of the interface to Ellis St and Frank Channon Walk.
+ Introduce artistic treatments to the podium wall built to the boundary for the benefit of the visual amenity of the neighbouring property and Frank Channon Walk.
+ Ensure a vegetated buffer is maintained to provide visual softening to the adjacent properties.
+ Ensure activated public domain interfaces to Ellis St also visible from Frank Channon Walk contributing to the existing pedestrian



environment in this location.

+ Connect landscaped spaces by mediating the change in levels.
+ Create attractive and functional private spaces for residents.
+ Ensure vegetated interface areas to the communal areas to ensure the provision for privacy and passive surveillance.
+ A consolidated open space that promotes casual encounters and a variety of different gatherings and recreational activities.
+ Integrated landscape that responds to the architecture and site orientation.
+ Maintain and enhance native vegetation to encourage biodiversity and respect existing flora and fauna corridors.

The landscape design includes a variety of landscaped areas in response to the character and functionality of each space. The southern interface with the public domain is characterised by a combination of unit paving and ground cover planting between the footpath and road to provide greening of the streetscape. Curved, raised steel planters provide elements at building entries and further green the built threshold between commercial frontage and the residential street. The existing Crepe Myrtle street tree is supplemented by a new accompanying tree of the same species which offers a further greening quality to the street as visible from Frank Channon Walk. Small granite unit pavers will occupy the space between the kerb and the building frontage, offering a high quality finish and an enhanced pedestrian connection between the development and Frank Channon Walk on the way to the commercial hub of Chatswood. The small unit pavers are also used for the driveway basement access which assists by disguising and integrating the vehicular zone into the activated pedestrian zone. First floor and podium level raised planters to Ellis St and the eastern building edge offer more greenery to Ellis St and Frank Channon Walk as well as providing a higher level of amenity to private open spaces and concealing the plant room. The proposed structure will help to further conceal services and create a better pedestrian experience, while providing additional amenity for residents.

The communal open space to the rear and north of the building is accessed directly from within the development via the lobby on Level 1 and also via stepping stones on the western boundary, which enjoys benefits from mature neighbouring trees. The rear open space enjoys good solar access and offers a mix of facilities for a range of recreational needs and users. The rear yard is split into two main zones; a recreation deck inclusive of a paved outdoor dining and seating area with pergola structure and a timber seating area with sculptural elements. Sculptural bench seating and integrated seating walls form subtle design features and are arranged so that the space may be used by many small groups or by larger groups of people. The variety of textures and high quality materials capture the homely character of the space. The open areas enjoy high levels of passive surveillance and provide a positive outlook to the surrounding units.

The rear yard is surrounded by screen planting and dense undergrowth of scrubs adjacent to the fence, with small garden beds and small feature trees to the west, offering shade for outdoor eating and socialising. Raised planters offer opportunities for residents to grow vegetables and herbs. While the pergola structure provides filtered light and distinguished zones of use for smaller groups. The proposed planting will be characterised by diverse vegetated areas, with foliage and flowers which provide seasonal interest and enhance views and amenity to the communal space as well as the apartments above.

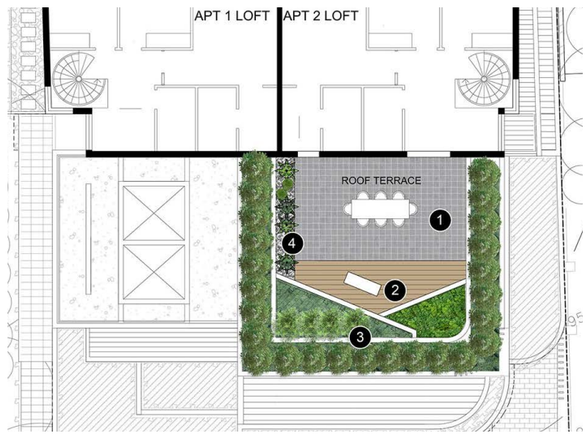
A rooftop garden capitalising on district views offers relaxation and entertaining opportunities for the two loft apartments. Raised planters benefit the apartments' amenity by using evergreen and accent species while also offering greening qualities to taller development beyond to the north. Plants are also to be low maintenance, have low water requirements and be tolerant of wind and there is the opportunity for flexibility in the terrace arrangement with additional pot plants.

The area of landscaped communal open space is approximately 97.95m², approximately 12% of the site's total area, with deep soil zones totalling an area of 105m² and occupying 13% of the site area.

Conclusion -

The proposal demonstrates high landscape aesthetic quality and amenity for future residents and the commercial users of the development. The proposed landscape strategy enhances the great orientation and location of the site and complements adjacent properties and passers-by.

The landscape design demonstrates high levels of sensitivity to boundary interfaces and to the improvements of the public domain interface to the pedestrian environment along Ellis St. The proposal therefore fulfils this principle in its entirety.



Rooftop garden

Private rooftop garden enabled by built from setback

4.6 Principle 6: Amenity

"Good design positively influences internal and external amenity for residents and neighbours. Achieving good amenity contributes to positive living environments and residents well being.

Good amenity combines appropriate room dimensions and shapes, access to sunlight, natural ventilation, outlook, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts and service areas, and ease of access for all age groups and degrees of mobility."

Comment –

The proposal presents high levels of amenity and quality internal layouts and outdoor spaces. 100% of apartments are dual aspect in a corner location, providing excellent levels of solar access and cross ventilation. Two-thirds of apartments have northern aspect with the rest enjoying easterly and southerly aspects. The provision for district views to the east and south enjoyed by the majority of the east and south facing units will contribute greatly to the overall amenity available to future residents. No units have a single aspect, which is a very positive outcome in terms of solar access and performs far better than ADG requirements, which allows up to 15% of units receiving no direct sunlight in mid-winter. Commercial and residential living components will have a 2.7m ceiling height.

All units (100%) are cross-ventilated which vastly exceeds the minimum requirement as per the ADG (60%). All units being corner units enjoy high quality outlooks and good solar access. The configuration of the built forms ensures that maximised solar access to living areas is achieved through the skilful design of the apartment layouts. Storage is provided to each of the apartments and all bedrooms are provided with wardrobes to comply with the ADG requirement of minimum length of 1.5m for bedrooms and 1.8m length for wardrobes to main bedrooms. 14 of the 33 apartments have two or more balconies, offering flexible use for a range of demographics and allow residents to take advantage of the apartments' dual aspect orientation. Additional storage areas have been provided within the basement levels to supplement the provision for storage available as a positive outcome. All apartments are provided with bicycle storage. Adequate storage has been provided in line with the ADG provision.

The proposed apartment layouts are considered to be very efficient, minimising circulation space and appropriate depth of apartment. Apartments in general comply with the ADG requirement relating to maximum depth from glazing to the rear kitchen cabinet in open living-dining areas of maximum 8m. The layouts are considered to be generous and well proportioned, satisfying ADG objectives by allowing for functional apartments which achieve appropriate levels of amenity. All bedrooms and living areas comply with ADG requirements for minimum widths. All open living areas and bedrooms have windows facing the outside and daylight access and outlook is prioritised to all living areas. All private open spaces including balconies and terraces comply with ADG provisions.

Careful consideration has been provided to the location of windows and balconies to allow for the capturing of district views and local vistas where possible. Great consideration has been given to the provision of privacy to habitable rooms and private open spaces, to minimise opportunity for compromised privacy and other adverse impacts to neighbouring apartments. Overlooking to neighbouring properties has been avoided, as well as compromised privacy between units within the development.

The common circulation and lift core only service three apartments on each level. Each compact circulation space ir provided with with excellent natural light and ventilation.

The proposed configuration and proposed placement of the buildings on the site is derived from setbacks and separation distances to meet the ADG requirements and objectives as well as meeting the solar access plane requirements. Visual and acoustic privacy is achieved through separation and reorientation of outlooks for habitable windows and balconies. Where the numerical requirements for building separation is not achievable, (diagonally along the western boundary) the minimal and careful placement and types of windows ensures the configuration complies with ADG guidelines, ensuring high levels of amenity to apartments and avoids overlooking to side boundaries and neighbouring balconies. Screen planting is provided along the western setback to buffer the interface to adjoining sites. Solar access is required to be maintained to Chatswood Oval between 11am and 2pm. The proposal ensures there is no overshadowing to Chatswood Park or Oval well outside of these hours as seen in the sun-eye diagrams on the next page.

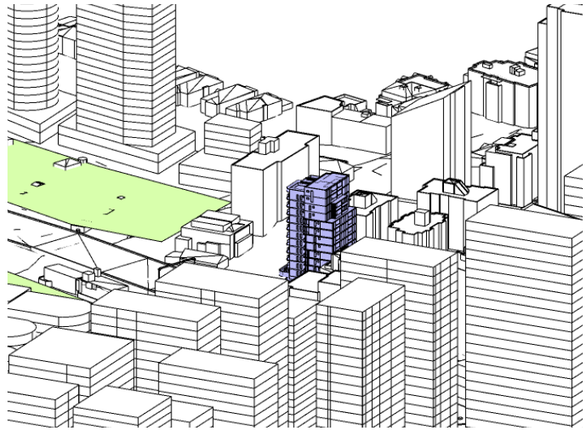
There is potential for a consolidated vehicular access between the subject site and the neighbour at 84-86 Albert Ave. This is possible due to the subject site's proposed allowance of an easement within the basement, and the consolidation would have amenity benefits. If the driveways are consolidated in this manner, the front of the neighbouring site could become an open space, as seen in the image to the right. This would further activate the street, provide further open space facilities to the residents, neighbours and passers by.

Communal Open Space Scenario

Opportunity if vehicular entries are consolidated

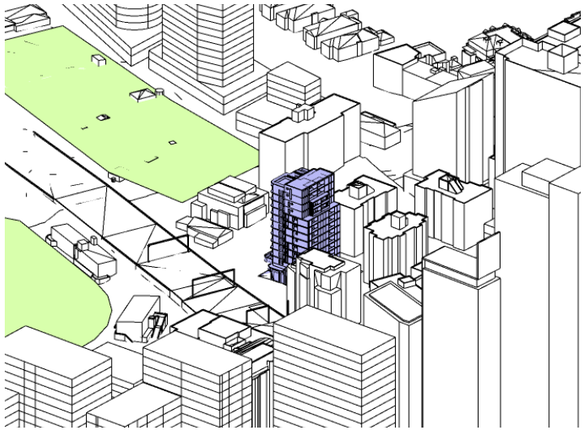
Conclusion -

100% of apartments enjoy good solar access and outlooks to Chatswood's skyline, district views and/or the public domain. Extensive vegetation is proposed to boundary areas to ensure greater levels of amenity and reduce adverse impacts to adjacent properties. Generous internal layouts are proposed to all apartments and all units enjoy access to high quality outdoor areas. Therefore, the proposal meets this requirement.



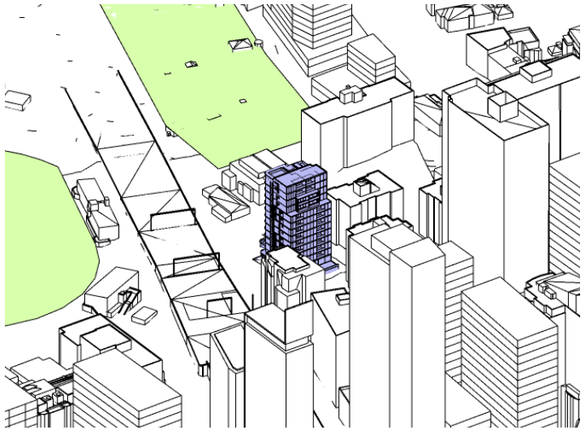
9am sun-eye

no overshadowing to park



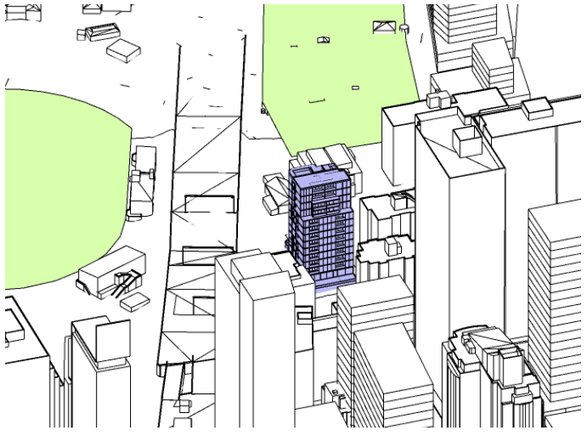
10am sun-eye

no overshadowing to park



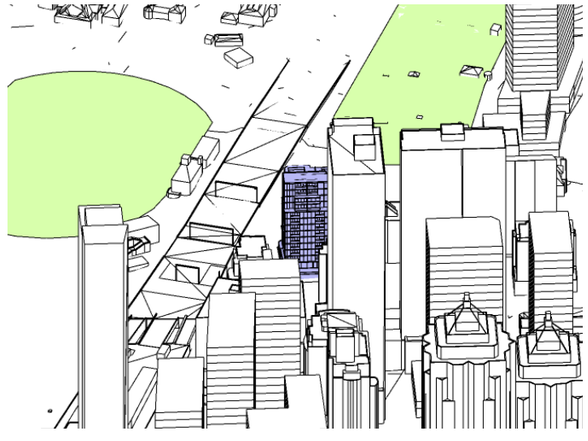
11am sun-eye

no overshadowing to park



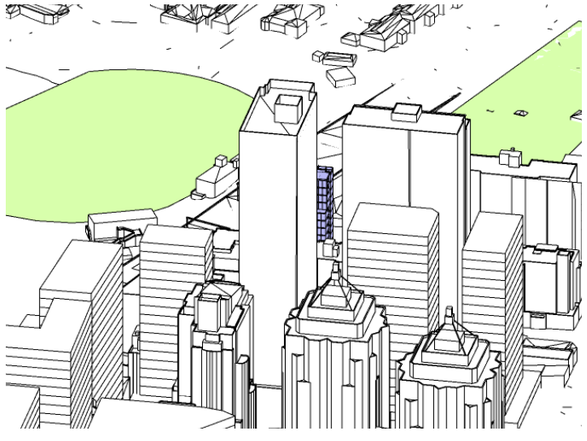
12pm sun-eye

no overshadowing to park



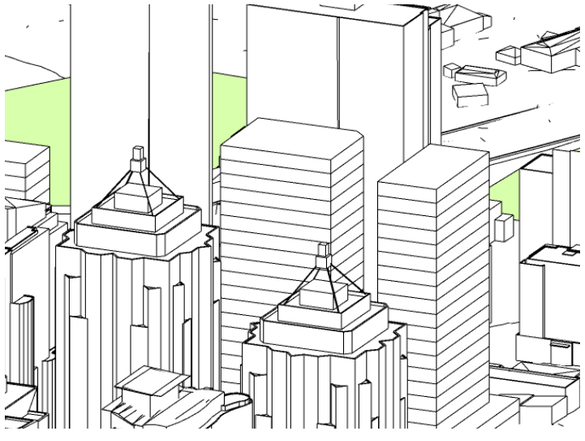
1pm sun-eye

no overshadowing to park by subject site



2pm sun-eye

no overshadowing to park by subject site



3pm sun-eye

no overshadowng impacts by subject site

4.7 Principle 7: Safety

'Good design optimises safety and security, within the development and the public domain. It provides quality public and private spaces that are clearly defined and fit for the intended purpose. Opportunity to maximise passive surveillance of public and communal areas promote safety"
"A positive relationship between public and private spaces is achieved through clearly defined secure access points and well lit and visible areas that are easily maintained and appropriate to the location and purpose"

Comment –

The proposal optimises safety and security for residents by the provision a clearly defined building entry point to the development from Ellis Street well sign-posted from the retail/commercial tenancy. There are two lifts which serve the 2 commercial floors at ground and level 1 and 11.5 residential levels with only 3 apartments on each level which is compliant with the ADG guidelines and objectives by providing straight, clear lines of sight to communal corridors and location of lifts and vertical circulation. The compact circulation area on the ground floor allows a short sightline and a good level of passive surveillance to the street and wayfinding for residents and visitors. Windows at the end of corridors provide passive surveillance to the street and ground level shops lit footpaths after work hours. The communal open areas enjoy high levels of natural passive surveillance from the habitable spaces within units and balconies on the upper levels overlooking the open spaces.

The adjacent neighbours at 7-13 Ellis Street, 88 Albert Avenue and pedestrians in general will benefit from the landscaped outlook and lush greenery within the western setback. This will improve the street landscape character. Also the definition of the ground plane is achieved with the use of an activated shop-front and artistically designed podium on the common boundary with No. 84-86 Albert Avenue. These delightful design features demonstrate carefully considered gestures to maximise the opportunities of the site and improve the condition of the surrounding landscape. The attention to such design details promotes higher levels of natural surveillance and a higher 'sense of belonging' and community amongst residents.

The public domain interface will have improved levels of safety to the pedestrian environments, which currently have poor levels of passive surveillance in this location. Overgrown brick fencing and under croft open parking areas are currently the dominant frontage to the public domain interface on the northern footpath of Ellis Street. To minimise opportunity for anti-social behaviour, principles of surveillance, access control, territorial enforcement and space management have been applied. The main features that promote this through the site in addition to those discussed above are as follows:

+ Redirected windows to secondary frontages to facilitate surveillance of the public domain.
+ High quality architectural lighting throughout development for enhanced security after business hours.
+ Controlled access to basement areas via a secure entrance door and gates, adequate movement sensor light and safety mirrors

This complies with the DCP crime prevention principles *C. 11 Safety by Design*, which have the following objectives:

Surveillance- people can see what others are doing; The proposal activates the main façades with well-articulated front and rear elevations and re-directed views from the side elevations.

Access control- physical and symbolic barriers that can be used to attract, channel or restrict the movement of people; the proposal's activated ground level helps to define the public from the private domains.

Territorial reinforcement- clear design cues on who is to use space and what it is used for; The provision of 'security grille' and 'air-locked' lobby achieves this.

Space management- ensuring that space is appropriately utilised and well cared for. The rear open space is inviting and well defined by fencing with high levels of solar access ensuring high levels of visitation and use in the future.

Conclusion –

The proposal presents high levels of internalized security and enhanced safety and activation to the surrounding streetscape therefore the proposal meets the objectives of this principle.

4.8 Principle 8: Housing Diversity and Social Interaction

"Good design achieves a mix of apartment sizes, providing housing choice for different demographics, living needs and household budgets.

Well designed apartment developments respond to social context by providing housing and facilities to suit the existing and future social mix. Good design involves practical and flexible features, including different types of communal spaces for a broad range of people, providing opportunities for social interaction amongst residents."

Comment –

The proposal includes 33 apartments as a mix of dwelling types of residential use. The residential apartments dwelling types include:

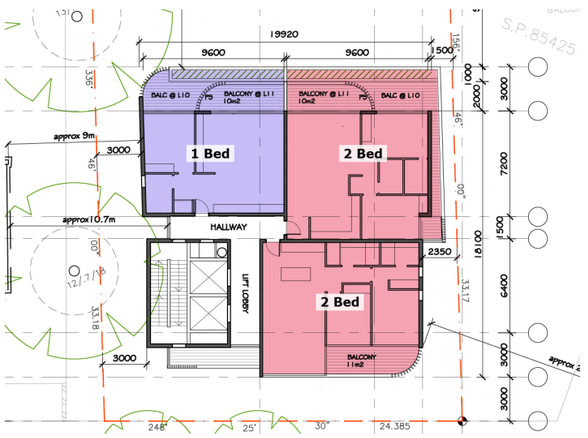
+ 2 apartment of 1 bedrooms (6%)
+ 21 apartments of 2 bedrooms (64%)
+ 10 apartments of 3 bedrooms (30%) (including 2x loft apartments)

The above mix of apartments supports a range of lifestyles and provides choice in living arrangements. As previously discussed in this report, the apartment sizes exceed the minimum requirement for unit sizes as per the ADG and local development controls. The apartment size allows for future adaptable housing provision. The proposed development incorporates universal design principles to allow for a better mobility access and future adaptation of the dwelling for the occupants' needs. The 3 bedroom units at Level 2- Level 9 have been designed to be adaptable apartments. The mix of apartments and the generous apartment sizes are also a reflection of the location of the subject site and the close proximity to the Chatswood commercial core, major road connections such as Pacific Hwy and public transport.

The development will appeal to young professionals, couples and families as well as seniors down-sizing from larger family homes in the surrounding residential enclaves. The generous sizes and the healthy provision of amenity to all units reflect the increasing demand for housing choice occurring throughout Sydney's north shore areas. Opportunities for a range of unit types from single and double balcony apartments through to upper level penthouse units with rooftop gardens or district views complements the excellent location of the site close to Chatswood's commercial core, retail hub and a range of healthcare and educational facilities. The apartments will be appealing to a broad spectrum of the population from young professionals, starting families and downsizers.

Level 3- Level 9

2 and 3 bedroom units



Level 10- Level 11

1 and 2 bedroom units

4.9 Principle 9: Aesthetics

'Good design achieves a built form that has good proportions and a balanced composition of elements, reflecting the internal layout and structure. Good design uses a variety of materials, colours and textures.

The visual appearance of well designed apartment development responds to the existing or future local context, particularity desirable elements and repetitions of the streetscape"

Comment -

The aesthetic strength of the proposal rests in a well-considered built form distribution, a contemporary and site responsive architectural façade as well as the use of high quality panel of materials. The modular composition of the façade to Ellis St and on the eastern boundary facing towards publicly accessible Frank Channon Walk is a strong example of contemporary and innovative design to create an elegant and well balanced interplay between vertical bays, contrasting horizontal balconies and extensive use of openings and fenestration adding depth to the overall composition. Planter boxes at multiple levels are showcased to Ellis street also facing Frank Channon Walk, adding further texture and interest. A brick/ mural wall to the eastern boundary further complements the podium interface with high quality and artistic treatments.

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. Distinct aluminium clad panels in warm bronze finish add an elegant finish to the ground level entry portal and frame the expressed curtain glazing along the front elevation of the podium mass. Curves are a running theme from the street, softening the interface to the podium and the highly visible south-east tower corner.

The accumulated result of these complementary elements and the complex façade compositions provide a contemporary response to the streetscape. It provides a legible interpretation of the residential use in the tower, as well as the structure and use of the podium's commercial use. These principles provide the building with an expression which is contemporary, yet familiar as a high-quality example of the proposed mixed-use typology.

Conclusion –

The proposal is considered to be a positive contribution to the streetscape, embracing and complementing the existing character as well as providing a contemporary architectural response in reference to the future development of the area. Therefore, the proposal meets the objectives of this principle.

1. INDENT LEVEL 2 TO CREATE WAIST
2. RECESS TO BREAK UP PODIUM LENGTH
3. CASCADING FORM: LOWER PORTION AT ELLIS STREET
4. MULTIPLE LEVEL PLANTER BOXES
5. NON-TRAFFICABLE LOWER PLANTER BOX

5.0
Conclusion and recommendations

Conclusion and recommendations -

The review of the context and the proposal by GMU confirms that the proposed development achieves an appropriate response to the surrounding existing and future contexts in terms of built form, open space, amenity and streetscape character. The proximity to public transport, major road connections, Chatswood commercial core and a wide selection of schools makes the subject site particularly suitable for a mixed-use development and the proposed mixed-use building typology.

It is GMUs opinion that the proposal satisfies the objectives of the *Chatswood Strategy* and will achieve an outstanding outcome. The proposal will improve the existing residential character of Ellis St and the ground floor commercial/ retail uses will activate the street to transition the otherwise residential area into the commercial hub to the north. The location of the subject site is highly visible and well known to the area, being located near publicly accessible Frank Channon Walk and close to Chatswood CBD and busy Pacific Hwy.

This location requires a carefully considered built form response to address and enhance the existing character and future opportunities available to the area. The design provides an appropriate response to the site's orientation and complements and improves the public domain interface to achieve a positive outcome for the subject site and the surrounding streetscape.

The proposal, as a whole, provides the following positive outcomes:

+ A variety of dwelling types for a wide range of occupants;
+ Improved presentation to the public domain interface and greater landscape treatment to Ellis St and adjacent properties;
+ Tucked away substation for enhanced ground level presentation to the front setback
+ Increased passive surveillance and improved pedestrian safety along Ellis St;
+ An appropriate built form setback and tower transition to the adjacent residential properties pending the preferred built form option by Council;
+ Appropriate setbacks to neighbours, providing deep-soil planting to enhance the existing biotope and amenity of the subject block, as well as increased native vegetation to provide further opportunities for increased biodiversity.
+ Activation to the streetscape and the public domain;
+ An elegant contemporary architectural response to the prominent location and the available vista from Frank Channon Walk;
+ A carefully modelled façade composition to break down the perceived bulk from the public domain and respond to the human scale of the pedestrian environment.

It is GMUs opinion that the proposal provides high levels of internal amenity and meets the objectives and recommendations of the ADG as a positive development outcome in that it provides the following:

+ 100% solar access for apartments and open areas;
+ Total natural and cross-ventilation to apartments;
+ Preservation of solar access to Chatswood Oval and Croquet Club;
+ Consolidated and flexible allocation of communal and private open spaces;
+ Enhanced passive surveillance to the public domain interface;
+ Excellence in architecture through the use of contemporary high quality materials and expression.

The proposal is a well-designed, multi-unit mixed-use development which will set a good precedent for future similar developments within the locality of Chatswood. Therefore, it is GMU's recommendation that the planning proposal be considered for approval.

3 Ellis St, Chatswood
Urban Design Report

Project Number: 20018

Revision	Issue	Date	By	Checked
A	Draft	12.06.20	EG	KC
B	Final	17.06.20	EG	KC
C	Final Revised	28.07.20	EG	KC

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