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Design Quality Statement

SEPP 65 – Design Quality of Residential Apartment Development

SP 2715

3 Ellis Street, Chatswood

MPG AU Pty Ltd

November 2018

Table of Contents

Attachments

1 Introduction

1.1 State Environmental Planning Policy No. 65 and the Planning Proposal

The NSW Governments *Guide to Preparing Planning Proposals* requires that in justifying the case for a planning proposal, the Proposal must not be inconsistent with any applicable State Environmental Planning Policies. In this situation, the planning proposal should demonstrate how a development that is enabled by the Proposal, is consistent with the requirements of *State Environmental Planning Policy No. 65 (SEPP 65) Design Quality of Residential Apartment Development*, which aims to ensure high quality residential apartment development.

The proposal is described as a site specific amendment to the Willoughby Local Environmental Plan 2012 (WLEP 2012), Clauses 4.3A, 4.4A and 6.10, to facilitate the redevelopment of an existing Residential Flat Building (RFB) (‘**the Proposal’**).

The Proposal aims to amend the WLEP 2012 in so far as the following clauses relate to the site:

1. Cl. 4.3A Exceptions to height of buildings;
2. Cl. 4.4A Exceptions to floor space ratio;
3. Cl. 6.10 Minimum lot sizes for attached dwellings, dual occupancies, multi dwelling housing, residential flat buildings and secondary dwellings.

Additionally, for the reasons demonstrated within this document, amendments of the kind described below are sought in respect of related maps within the WLEP 2012, in so far as they relate to the site:

1. Minimum Lot Size map - to permit a maximum building height of 49m;
2. Maximum Floor Space Ratio map - to permit maximum Floor Space Ratio of 5.1:1; and
3. Special Provisions Area map - to endorse a Minimum Lot Size of 800m^2 for development for the purpose of residential flat buildings.

1.2 Design Quality Principles

The Design Quality Principles are prescribed in *SEPP 65 – Design Quality of Residential Apartment Development*. These Principles, in conjunction with the *Apartment Design Guide*, aim to set the direction for good quality design of residential flat building development.

While the planning proposal does not nominate a particular built form, the analysis in this report demonstrates the suitability and acceptability of the proposed development standards that comprise the Proposal, relating to:

- maximum building height (HOB);
- maximum Floor Space Ratio (FSR);
- minimum lot size (MLS); and
- potential implications for any resulting development.

The **Design Quality Principles** presented in this report are:

Principle 1: Context and neighbourhood character

Principle 2: Built form and scale

Principle 3: Density

Principle 4: Sustainability

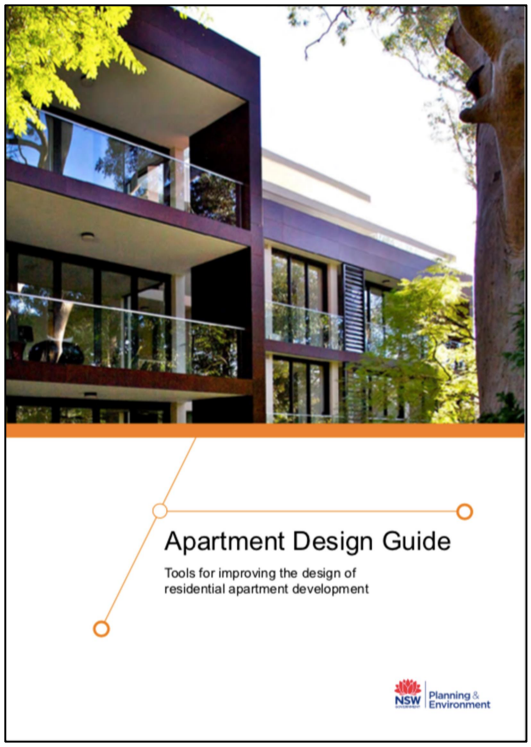
Principle 5: Landscape

Principle 6: Amenity

Principle 7: Safety

Principle 8: Housing diversity and social interaction

Principle 9: Aesthetics



2 Principle 1: Context and Neighbourhood Character

2.1 Context

2.1.1 Apartment Building Types

The predominant building typology in the immediate area of the site is residential flat buildings in varying forms, from 'infill' and 'row' to 'tower' apartments.

Surrounding buildings vary in age from approximately 10 to 70 years, and in height from three (3) to nine (9) storeys. Beyond the local street, the cluster adjoins the Chatswood CBD with mixed use and high-rise development, and significant transport infrastructure such as the North Shore Railway and the Pacific Highway.

Figure 1 Surrounding Development

Source: JWP

Figure 2 Existing Streetscape (view toward West)

Source: JWP

Figure 3 Existing Streetscape (view toward East)

Source: JWP

2.1.2 The Transforming Streetscape

The following provides a visual summary of existing built forms, approximate age, unit numbers and building levels near to the site. A variety of styles is evident, and an indicative built form that is in full compliance of the ADG, is presented in the last image.

3 Ellis St (Development Site)

3 Storeys

9 Units

c. 1967

7-13 Ellis St

8 Storeys

62 Units

c. 1974

8-14 Ellis St

8 Storeys

38 Units

c. 1980

4-6 Ellis Street

4 Storeys

8 Units

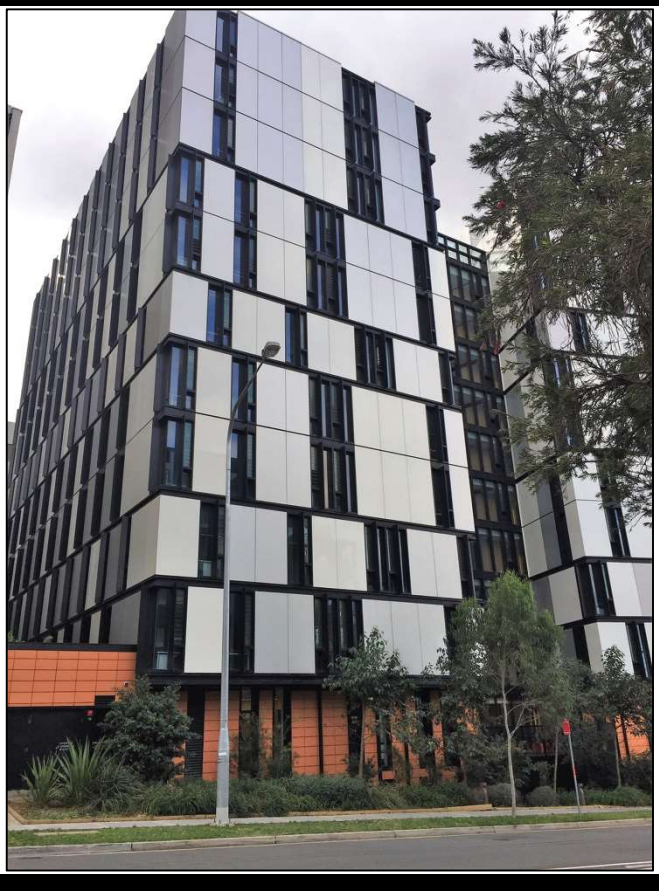
c. 2012

85 Albert Street

38 Storeys

Hotel Accommodation

c. 2015



73-77 Albert Street

11 Storeys

Student Accommodation

c. 2016

The Proposal

3 Ellis Street

Enabling:

15 Storeys

49 Metres

32 Units

The above illustrates the potential redevelopment that can be achieved on the site, subject to the LEP amendments proposed

2.1.3 Desired Future Character

The character of an area "*is created by the way built and natural elements in both the public realm and private domain interrelate with one another*" (DPE 2018), and is formed by the built forms, bulk, scale, height, landscaping and good design.

In its *Chatswood CBD Planning and Urban Design Strategy to 2036* (CCBDPUDS), Willoughby Council set the vision that "*Chatswood CBD will be confident, fine grain and green. It will be a diverse, vibrant, active and accessible place, with attractive places for residents, workers and visitors to enjoy*."

Chatswood is identified as a Strategic Centre in terms of population growth and economic activity. Willoughby Council has undertaken a number of studies and strategic plans to direct development towards urban renewal and infill development to achieve this objective. Recommendations from these studies include mechanisms to increase housing numbers and densities.

Figure 4 Chatswood CBD Planning and Urban Design Strategy to 2036

Source: Willoughby City Council

2.1.4 The Individual Site

The subject site comprises all Lots in SP 2715. The lot has a total area of 808.6m^2 and fronts Ellis Street. **Figure 5** places the site in its context relative to Chatswood CBD, high density development, recreation areas and public transport.

Figure 5 Aerial View of Site

Source: JW P

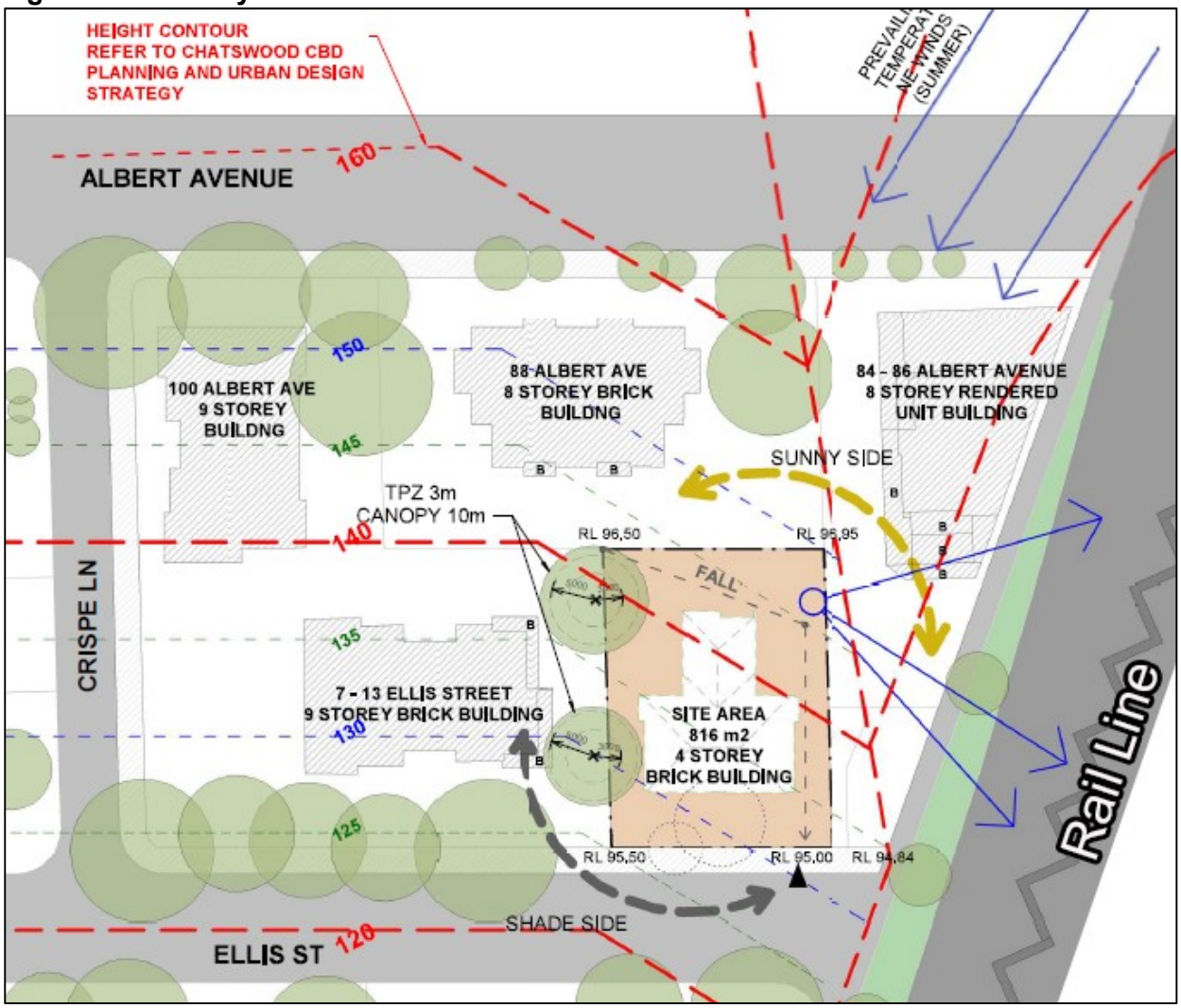
The site is bound by residential development of various heights and densities and contains an existing residential flat building.

Attachment A (see extract in **Figure 6**) is a Site Analysis Plan compiled in accordance with the direction of the *Apartment Design Guide*. The analysis includes:

- Solar access angle and direction
- Existing vegetation
- Direction of prevailing winds
- Views and vistas
- Maximum building heights as prescribed by CCBDPUDS
- Major sources of unrelated noise
- Site topography

The Site Analysis Plan provides a basis for informed development decisions.

Figure 6 Site Analysis Plan



Source: Stanisic Architects (annotated by JWP)

3 Principle 2: Built Form and Scale

3.1 Building Controls

The development controls proposed by the Proposal are site spedcifically derived from Principles within the *Apartment Design Guide* relating to:

- building envelopes;
- building heights;
- floor space ratio;
- building depth;
- building separation; and
- setbacks.

Building Envelopes

A building envelope should be of appropriate scale for future development in terms of bulk and height relative to the lot size, streetscape and desired future character of the location. Additionally, the *ADG* suggest that, in total, the building envelope should be no more than 25-30% greater than the achievable floor area.

Figure 7 Chatswood Skyline

Source: JWP

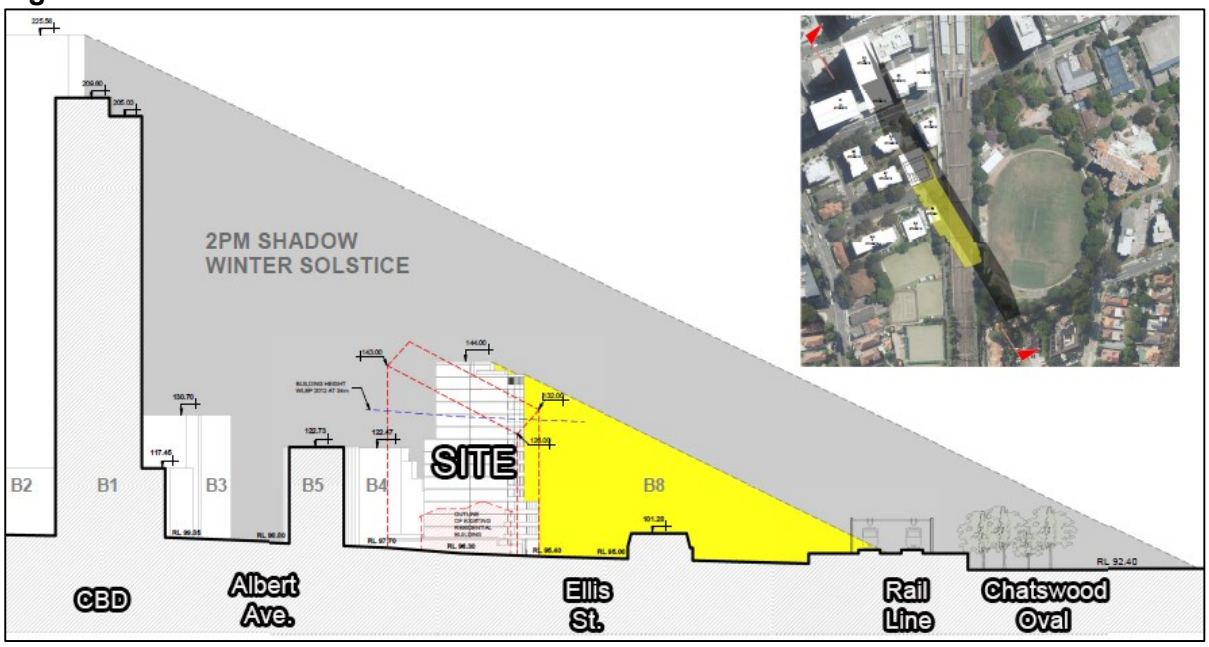
Building Height - Proposed Maximum of 49 metres (15 Storeys)

Key considerations for establishing building height controls include:

- the landform of the site,
- the potential for daylight and solar access,
- the potential for overshadowing of existing and adjoining developments, and
- Impacts on current and future streetscape.

Existing development in the area varies from single (1) to nine (9) storeys on the same block, and up to 30 storeys on land off Albert Street, to the north of the site. Survey of the ground levels relative to the site indicate that the site is located on a descending slope from Albert Street in the north, to Ellis St in the south, as illustrated in **Attachment B** and **Figure 8**.

Figure 8 Section Model of Local Area - Albert St to Chatswood Oval



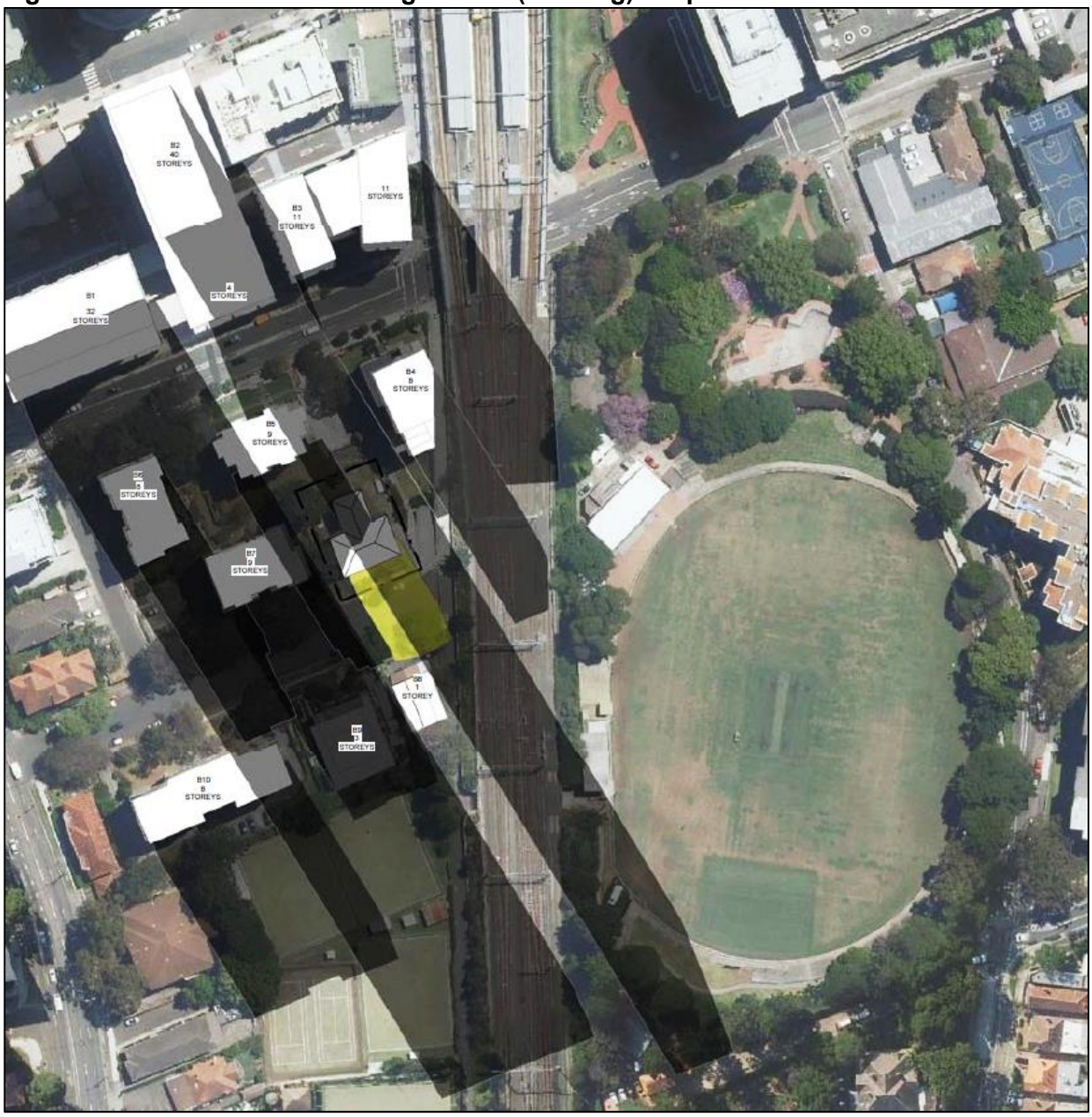
Source: Stanisic Architects (annotated by JWP)

This changing landform results in exaggerated height differences in development across the area. Refer to survey results at **Attachment C**.

An assessment has been undertaken as to the potential impacts of the Proposal on overshadowing of the surrounding public open space land during the daylight hours of 11am until 2pm during Winter (CCBDPUDS and WLEP). The outcomes of the overshadowing model are accurate, as they are based on ground level surveys and validated by photographs taken at the relevant times on 22nd June 2018 (as 21st June was overcast).

As shown in **Attachment D** and **Figure 9**, existing development in the area contributes significantly to the overshadowing of adjoining development and public open space.

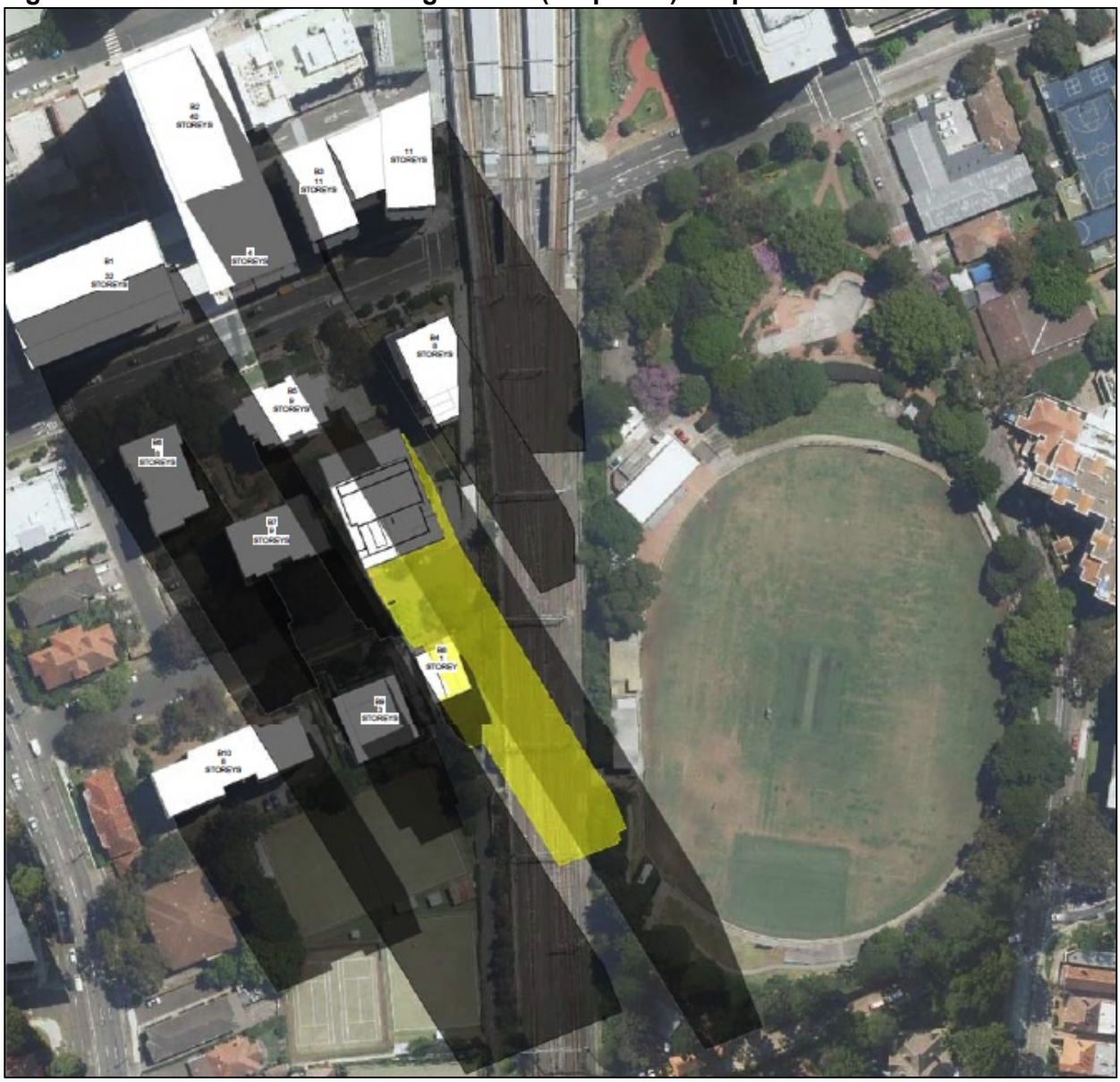
Figure 9 Model of Overshadowing Effects (Existing) at 2pm on 21 June



Source: Stanisic Architects

The images in **Attachment E** and in extract below (**Figure 10**) illustrate the extent and locations of the potential additional impacts of the proposed development controls (shown **yellow).** The investigations demonstrate beyond any doubt that there is minimal additional impact on surrounding properties, and no additional overshadowing of public recreation land, should the site be redeveloped in a manner that is both ADG compliant and in accordance with the Proposal.

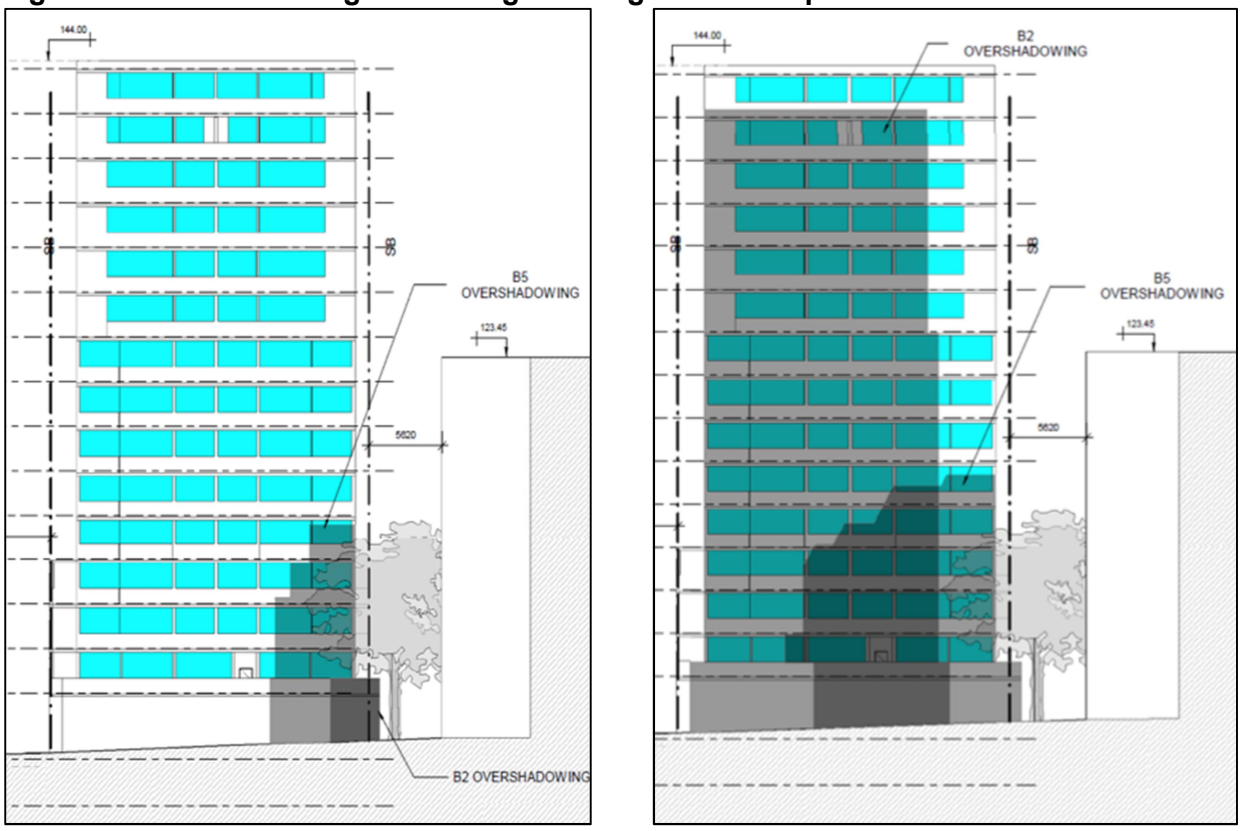
Figure 10 Model of Overshadowing Effects (Proposed) at 2pm at 21 June



Source: Stanisic Architects

An assessment of the overshadowing impacts resulting from surrounding development on a built form on the site that is both ADG compliant and in accordance with the Proposal, indicates that direct solar access can be achieved for the majority of such a built form for at least 2 hours between 9am and 3pm. Less than 15% of the form does not receive any direct sunlight as shown in **Attachment F** and in extract in **Figure 11**.

Figure 11 Overshadowing of Existing Buidlings at 1 and 2pm on 21 June



Source: Stanisic Architects

The resulting built form will provide additional passive supervission of the public open spaces, recreation areas and public pathways to the south and east, as well as take advantage of views across the city of Chatswood, the Sydney skyline to the south, and the Chatswood urban areas to the west.

Figure 12 View South from the Site at 49m Elevation

Source: JW P

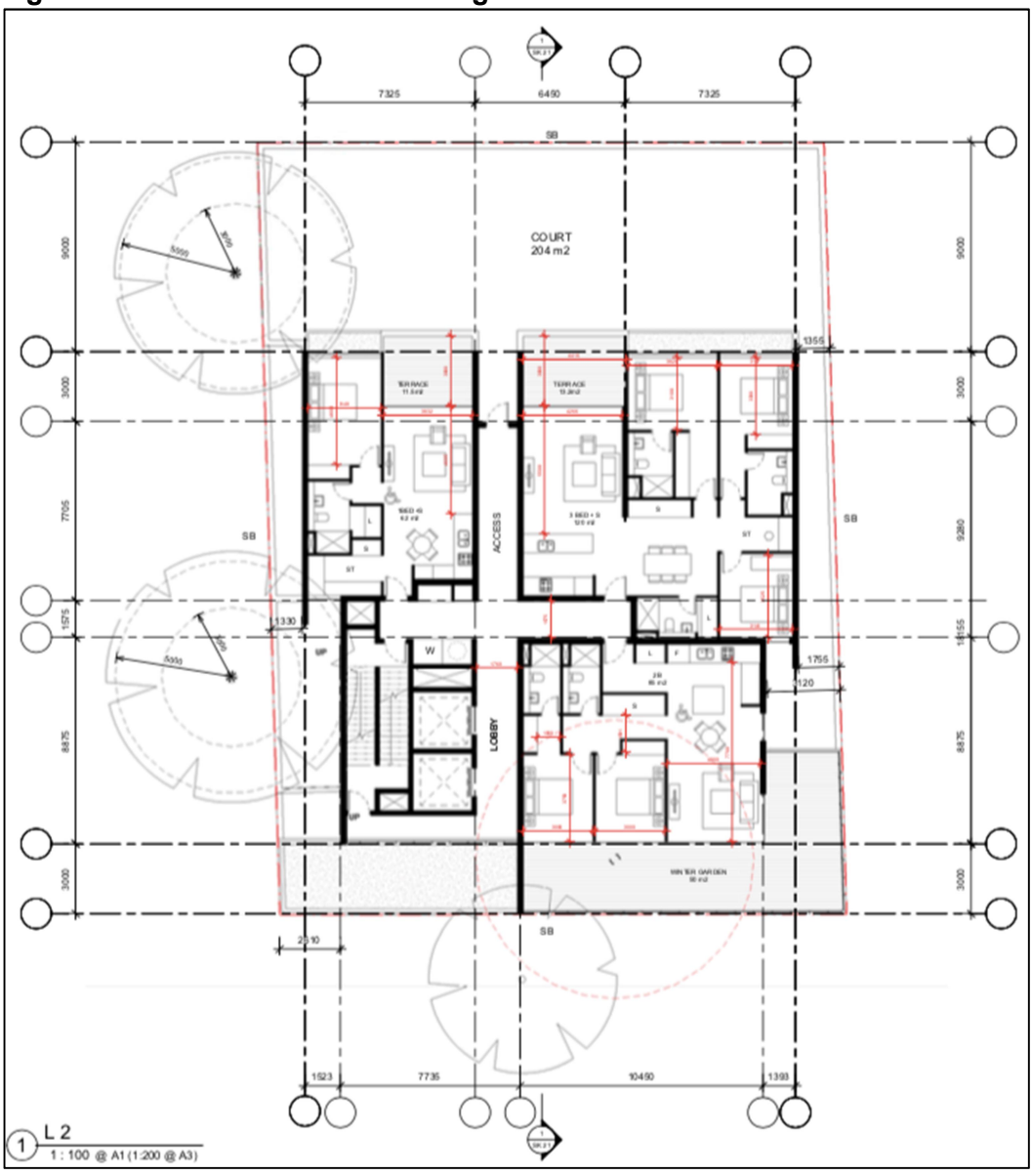
Floor Space Ratio - Proposed Maximum of 5.1:1

The Floor Space Ratio is the theoretical maximum capacity of the land for development, and should be based on a tested building envelope. Key considerations for establishing the ideal floor space ratio controls include:

- the potential building heights,
- the potential building envelope, and
- the potential site area.

The proposed building height as justified above is included in the below floor space ratio calculation. The proposed building setbacks are derived from the existing and potential streetscape, separation distances and built forms as recommended by the ADG. **Attachment G** and **Figure 13** illustrate the resulting setbacks for the site.

Figure 13 Level 2 Plan with Building Setbacks



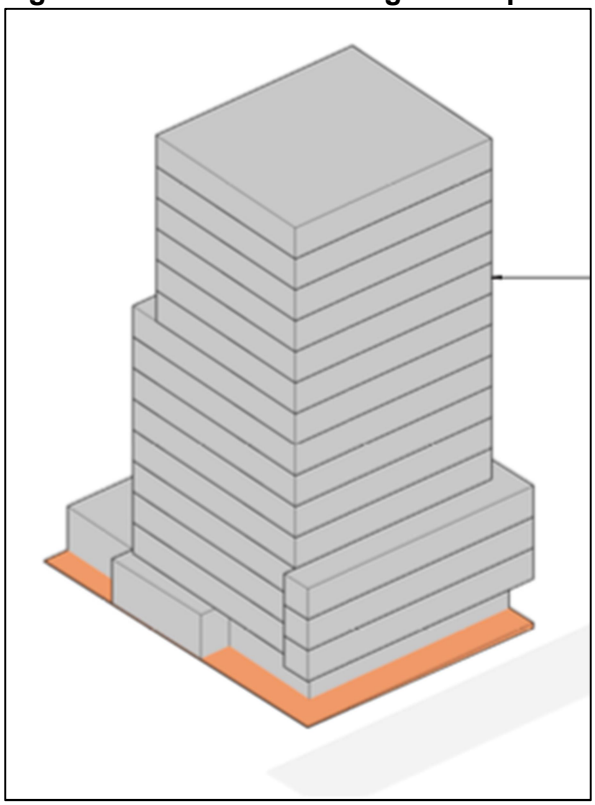
Source: Stanisic Architects

The front building setback of 3m is a product of a combination of the existing and desired future streetscape. The side setback to the west is formulated from the suggested separation distances between buildings by the *Apartment Design Guideline*, being 6 metres between non-habitable rooms; resulting in 3m on each side of the boundary at levels up to 12m. The setback is gradually increased as the height of the building increases up to 12m at heights over 25m.

The site location is unique in that while it is not strictly a corner lot; the dimensions of the adjoining lot to the east are such that it is not practical for building to the extent of similar building lines, hence a zero setback may be proposed.

The rear setback of 12m is calculated using the ADG setback principles of building separation and design building depth. The resultant of these criteria is included in **Attachment H** and in extract in **Figure 14**. These separation distances reflect the potential future streetscape, based on the likelihood for change of the adjoining buildings.

Figure 14 Indicative Building Envelope



Source: Stanisic Architects

The proposed building depth of 21m is sufficient to allow suitable apartment layouts:

- Ensuring the apartments have adequate daylight and natural ventilation, and
- Reducing the number of south-facing apartments

Attachment I and **Figure 15** provides indicative floor layouts and solar access diagrams for a suitable development layout. Comment on the potential apartment sizes and layout are further discussed under *Principle 6: Amenity* below.

Figure 15 Indicative Solar Access and Ventilation

Source: Stanisic Architects

The results of the recommended building setbacks and depths demonstrate that a suitable floor plate area is achieveable. Using this data, the FSR may be calculated as suggested by the ADG as 70% of the maximum building envelope – the allowable gross floor area.

The maximum building envelope is identified through the total potential footprint of the site (plate) and the number of storeys permissible from the maximum permissible building height (49m = 15 Storeys). The allowable gross floor area on subject site is 4,315m (6,164m x 0.7). With the lot size of 800m^2, the resulting FSR is 5.1:1.

$$FSR = \frac{\text{Floor Plates x 0.7 x No. Storeys}}{\text{Site Area}}$$

4 Principle 3: Density

Minimum Lot Size – Proposed Site Specific Minimum 800m^2

The minimum lot size of the land should be of a suitable size to incorporate an appropriate built form and building envelope for the desired purpose.

Key considerations for establishing the ideal lot size controls include:

- the potential use of the land,
- the potential building envelope, and
- the potential achievable amenity.

The current lot size is 808.6m^2. As discussed above, the site is able to provide a building envelope and a built form of suitable dimensions consistent with the principles of the ADG. The assumption in the WLEP 2012 that 1,100m^2 is an ideal minimum lot size does not take into account site specific attributes such as the ability to reduce setbacks and vary building seperation; for example, no building potential on adjoining part of the lot east of the site, and non glazed side walls, enable reduced side setbacks in full compliance with the ADG.

In the publicly exhibited *Chatswood CBD Planning and Urban Design Strategy*, the consultants appoined by Council (Architectus) specifically noted (page 178 and 179) that (**underline** added for emphasis):

- increased floorspace potential on smaller sites is often difficult to realise as providing commercially viable floorplaces sizes and good separation between towers cannot be **generally** realised.
- The **minimum lot size for towers in Central Sydney (decided following over 40 representitive site tests) was concluded at 800sqm**.
- If other site sizes are to be considered for additional FSR, **detailed site testing is necessary** to demonstrate this.
- Particularly for central locations, **a long term view should be taken and strategic land in centres which is close to transport should not be artificially limited to an extent that in the future, houses and jobs have to be provided further from centres and transport**.

The Design Quality Principles suggest that the densities of an area should reflect the areas existing or projected population.

As noted in the *Greater Sydney Regional Plan* and the *North District Plan,* the number of dwellings in the Chatswood area should increase by 1,250 by 2021. Redevelopment is supported by existing public and private investment in state and local infrastructure including public transport, community facilities and associated areas of employment.

5 Principle 4: Sustainability

The design quality principles identify sustainability in terms of environmental, social and economic outcomes.

Socially and economically, the Proposal will facilitate an optimum use of land within the walkable catchment of employment and recreation areas, which in turn encourages social interaction and connectivity among residents and the community.

Willoughby Council's Economic Development Study projected a base level employment increase of approximately 6,500 people by 2041. In terms of travel related costs, the EDS found that the majority of workers travelled by private vehicle with an estimated cost of $23 pp/per trip.

The Proposal can considerably reduce the cost of travel and the number of *vehicle kilometres travelled* by:

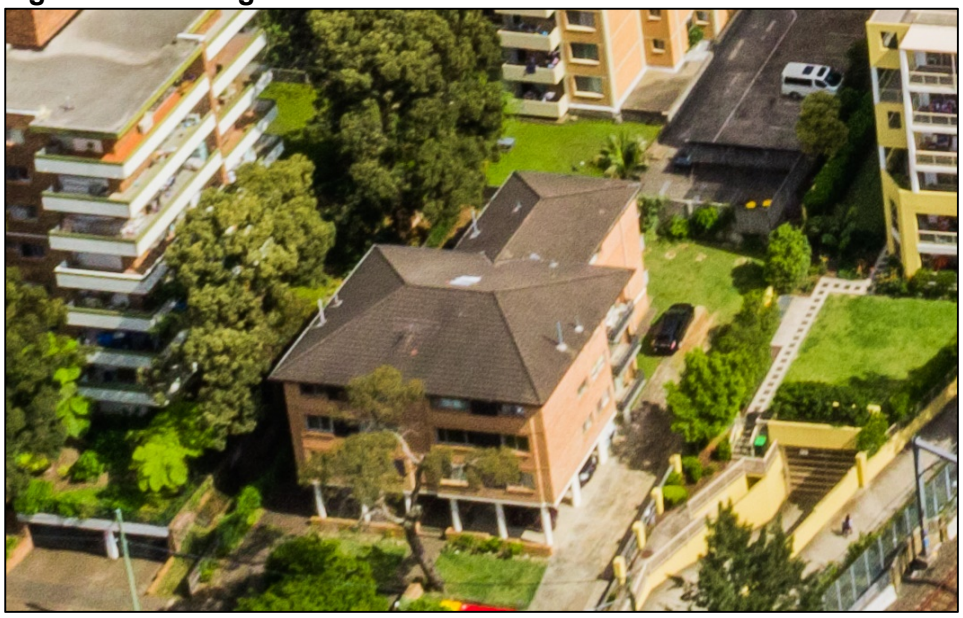
- providing housing within the walkable(and cylceable) catchment of a major employment centre; and
- by enablling a greater number of persons to live within a 5 minute walk of a major public transport interchange, reducing (or negating) the expense of private car ownership.

The inherent environmental benefits of increasing population density within the wakable catchment of employment, recreation areas and public transport are complimented by the ability to achieve a built form that is ADG compliant with ample sunlight and cross ventilation, and passive solar design principles to support low energy use..

6 Principle 5: Landscape

Details of landscaping in the development can be finalised in accordance with Councils Development Control Plan, an ADG compliant design is able to retain existing established trees which will contribute to the landscape and streetscape character of the area, while additional deep soil plantings zones could be incorporated into setback areas of greater than 3m in width.

Figure 16 Existing Established Trees



Source: JW Planning

Figure 17 Streetscape Landscaping

Source: JW Planning

7 Principle 6: Amenity

Amenity within a development is connected to:

- Solar and daylight access
- Natural ventilation
- Apartment size and layout
- Private open space and balconies
- Acoustic privacy

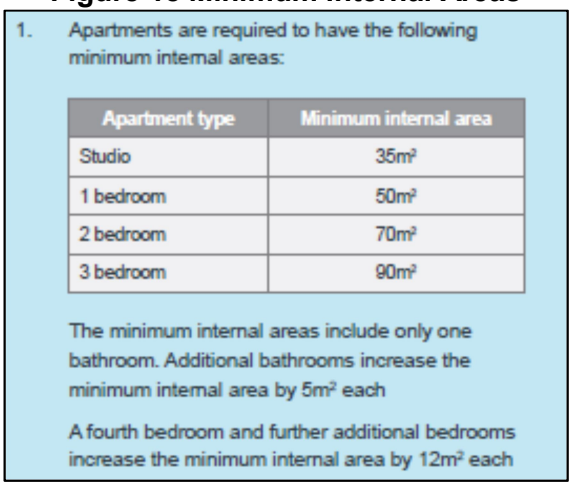
Solar access and natural ventilation has been discussed in response to Principle 2.

Based on the indicative floor layout (see **Figure 15**), a high level of amenity is achievable for residents through ample solar access, larger private open space areas on associated balconies, nearby public recreation and open space areas, and city views from the site.

The indicative apartment floorplans included in **Attachment G** demonstrate that ADG compliant apartments are able to exceed the minimum recommended internal area and achieve the required minimum window/glassed area for each apartment, as prescribed by the ADG (see extract in **Figures 18-20**).

Additionally, each apartment would be able to achieve greater than the minimum area for private open space and balconies.

Figure 18 Minimum Internal Areas



1. Apartments are required to have the following minimum internal areas:

Apartment type	Minimum internal area
Studio	35m²
1 bedroom	50m²
2 bedroom	70m²
3 bedroom	90m²

The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m² each

A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m² each

Figure 19 Additional Design Criteria

Design criteria	
1.	Master bedrooms have a minimum area of 10m² and other bedrooms 9m² (excluding wardrobe space)
2.	Bedrooms have a minimum dimension of 3m (excluding wardrobe space)
3.	Living rooms or combined living/dining rooms have a minimum width of: • 3.6m for studio and 1 bedroom apartments • 4m for 2 and 3 bedroom apartments
4.	The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts

Figure 20 Balcony Areas

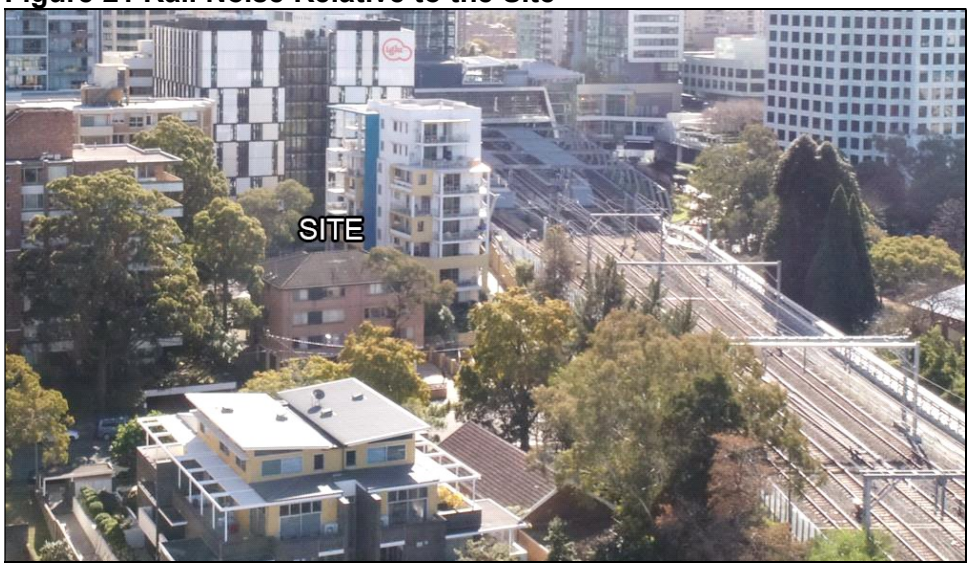
1. All apartments are required to have primary balconies as follows:

Dwelling type	Minimum area	Minimum depth
Studio apartments	4m²	-
1 bedroom apartments	8m²	2m
2 bedroom apartments	10m²	2m
3+ bedroom apartments	12m²	2.4m

The minimum balcony depth to be counted as contributing to the balcony area is 1m

The only potential for an impact on the amenity of the site is acoustic and vibration related noise from the nearby railway. Nonethelss, redvelopment in accordance with the ADG is able to incorporate design elements to protect residents from the acoustic impacts of the rail through window glazing and blank party walls where necessary.

Figure 21 Rail Noise Relative to the Site



Source: JWP

8 Principle 7: Safety

The resulting development can incorporate measures to assist in the safety and security of residents and the public. Redevlelopment in accordance with the ADG is be required to address the principles of Crime Prevention Through Environmental Design to ensure optimal personal safety outcomes of residents.

The site is not subject to other typical threats, hazards or danger that would otherwise place a limit on increases to population densities in this area.

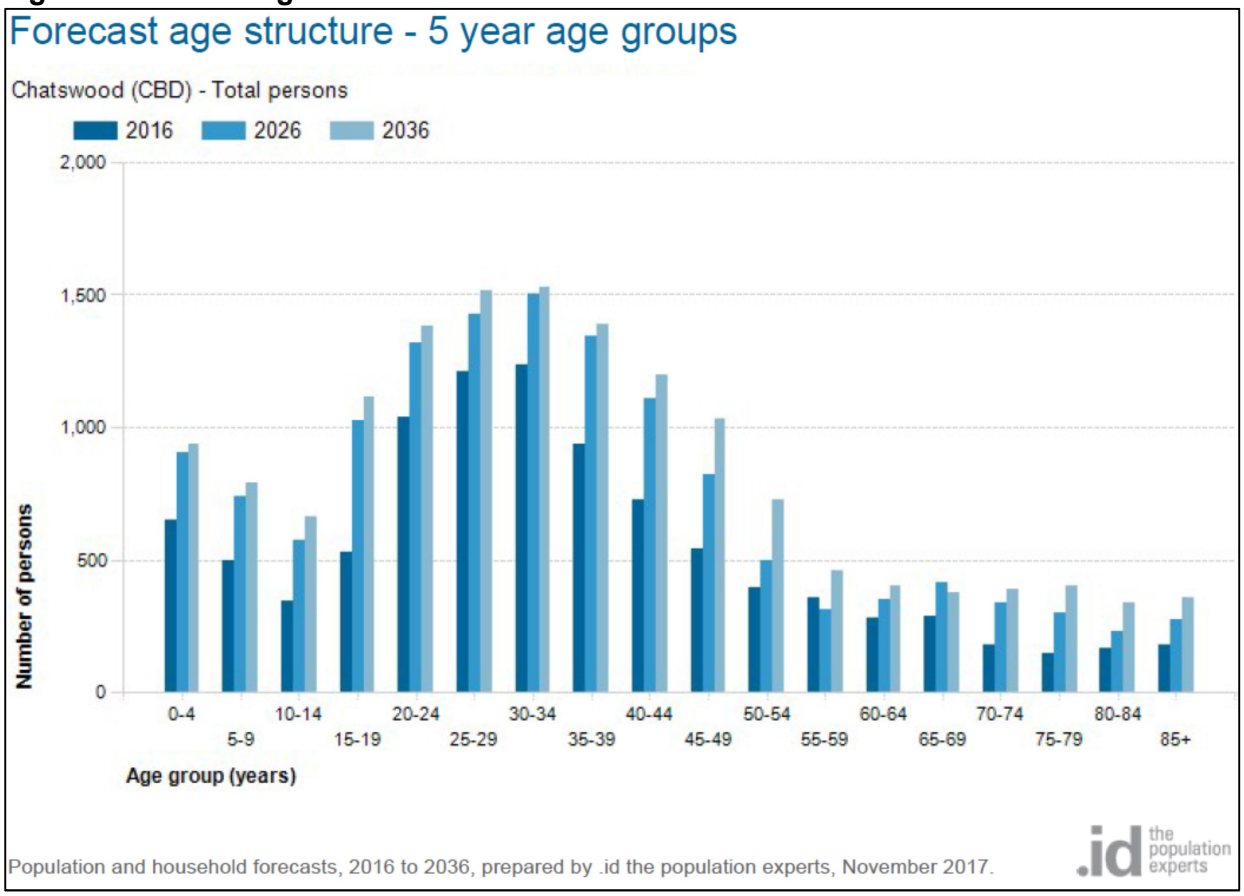
9 Principle 8: Housing Diversity and Social Interaction

Results from the 2016 Census for the Chatswood area reveal the composition of the local population and household structures. Notably, ***the Average household size is 2.6 persons***, primarily made up of Single Couples and Couples with Children. The ***average age of residents is 34 years*** while only 16.3% of residents are 14 years of age or younger and 12.8% aged over 65 years.

The Department of Planning & Environment population projections predict that the ***average household size will decrease to 2.52 persons by 2036***, yet the total number of implied dwellings will increase ***by 6,450 from 2016***.

The population age profile suggests that while the overall number of residents is increasing, the age mix of the residents is also changing, with the most dramatic increases being in the age groups between 15 and 54 – correlating with the increasing student and working population.

Figure 22 Forcast Age Structure - Chatswood



Source: iD

The 2016 Census reports that the Median Personal and Household incomes of Chatswood residents is ***higher than the Australian average***, yet around 23% of households commit more than 30% of their household income to rental payments and 7% commit more than 30% of their income to mortgage payments. The ***median mortgage payment in the Chatswood area is 140% of the Australian average***, possibly reflecting a ***premium in property prices*** for that location.

This Proposal will enable redevlopment with flexibility to incorporate a range of apartment types and sizes. These can include 1, 2 and 3 bedroom units and accessible variations of each which can contribute to the overall supply and affordability of accommodation in the area.

10 Principle 9: Aesthetics

Aesthetics can play an important role in a developments contribution to the streetscape character and the satisfaction of residents.

The appearance of the height, bulk and scale of an ADG compliant building in accordance with the Proposal can vary depending on observation points.

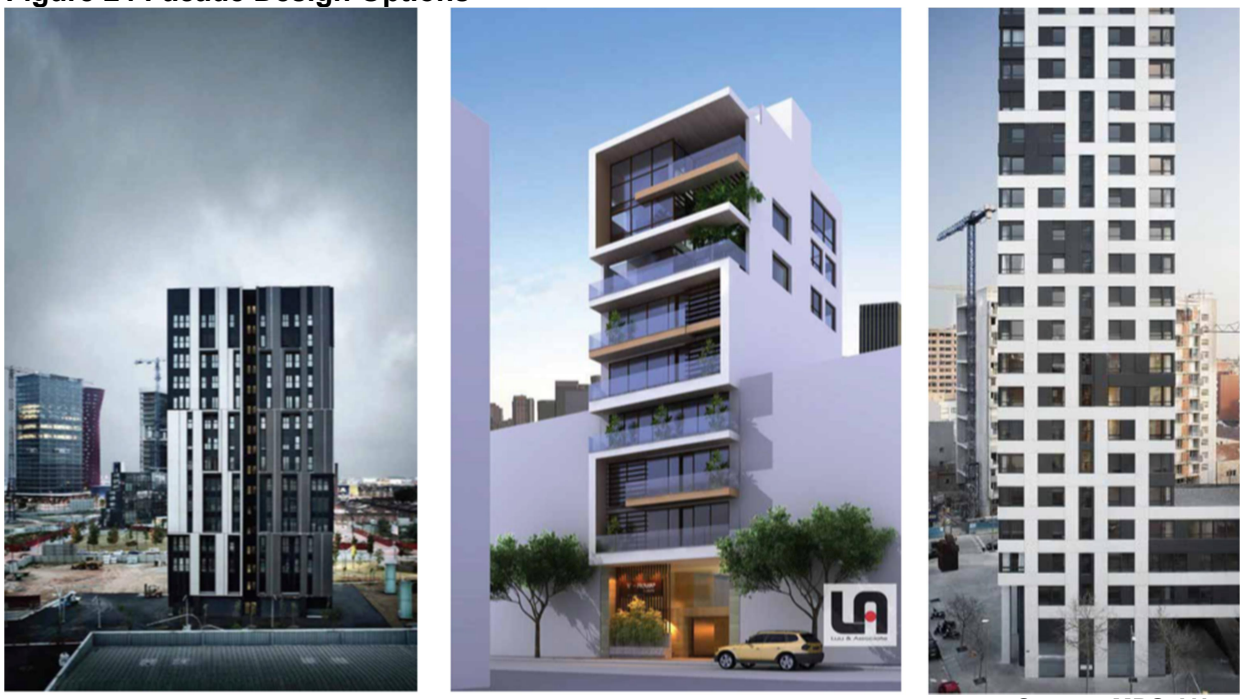
To enable proper consideration of the possible aesthetic outcome of the Proposal, a montage provides a scaled view of the site from local public areas.

Figure 23 Bulk and Scale Montage

Source: Digital Line

A number of potential façade themes that could apply in the redevelopment of the site are provided in **Figure 24**.

Figure 24 Facade Design Options



Source: MPG AU

11 Conclusion

The Proposal does not provide for a particular design outcome or built form, nor does the Proposal rely on particular materials, textures or overall visual appearance.

However the Proposal will incentivise redevelopment that will in turn, facilitate:

- new and aesthetically interesting additions to the urban fabric of Chatswood, without detracting from the established treed streetscapes;
- modern floor space with contemporary architectural expression to provide a sense of place and pride to residents and the broader community; and
- capacity for an additional 23 or so households to reside in a location that is not dependant on car ownership or usage, thus catering for population growth in a central location without adding to the congestion which is not in the broader public interest.

And as demonstrated within this report, site specific modelling (as recommended by Council's concultants, Architectus) confirms that the Proposal to amend the LEP in the manner indicated enables ADG compliant redevelopment without creating any additional overshadowing impact on the public recreation areas.