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PROPOSAL FOR A SHOP TOP HOUSING

At

51 KALANG ROAD ELENORA HEIGHTS

SEPP 65 REPORT



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Prepared by Fortey & Grant Architecture

SEPP 65 REPORT	1
PART 1 - DESIGN QUALITY PRINCIPLES	6
INTRODUCTION	6
PRINCIPLE 1: CONTEXT AND NEIGHBOURHOOD CHARACTER	6
PRINCIPLE 2: BUILT FORM AND SCALE.....	6
PRINCIPLE 3: DENSITY	7
PRINCIPLE 4: SUSTAINABILITY	7
PRINCIPLE 5: LANDSCAPE	8
PRINCIPLE 6: AMENITY	8
PRINCIPLE 7: SAFETY.....	8
PRINCIPLE 8: HOUSING DIVERSITY AND SOCIAL INTERACTION.....	9
PRINCIPLE 9: AESTHETICS	9
CONCLUSION	10
PART 2 - OBJECTIVES. CRITERIA AND DESIGN GUIDENCE	10
INTRODUCTION	10
OBJECTIVE 3A-1.....	10
SITE LOCATION	11
LOCAL CONTEXT	11
SITE CONTEXT	11
STREETSCAPE.....	11
ANALYSIS	11
The street setbacks are being established by the proposed design and are deemed desirable for the future character of the area by the current planning requirements.....	Error! Bookmark not defined.
OBJECTIVE 3B-1.....	11
STREET FRONTAGE.....	11
OBJECTIVE 3B-2.....	11
OBJECTIVE 3C-1	12
OBJECTIVE 3C-2	12
OBJECTIVE 3D-1.....	12
OBJECTIVE 3D-2.....	13
OBJECTIVE 3D-3.....	13
OBJECTIVE 3D-4.....	13

OBJECTIVE 3E-1	13
OBJECTIVE 3F-1	14
OBJECTIVE 3F-2	14
OBJECTIVE 3G-1.....	14
OBJECTIVE 3G-2.....	14
OBJECTIVE 3G-3.....	15
OBJECTIVE 3H-1.....	15
OBJECTIVE 3J-1	15
OBJECTIVE 3J-2	15
OBJECTIVE 3J-3	16
OBJECTIVE 3J-4	16
OBJECTIVE 4A-1.....	16
OBJECTIVE 4A-2.....	16
OBJECTIVE 4A-3.....	16
OBJECTIVE 4B-1.....	17
OBJECTIVE 4B-2.....	17
OBJECTIVE 4B-3.....	17
OBJECTIVE 4c-1.....	17
OBJECTIVE 4C-2	18
OBJECTIVE 4C-3	18
OBJECTIVE 4D-1.....	18
OBJECTIVE 4D-2.....	19
OBJECTIVE 4D-3.....	20
OBJECTIVE 4E-1	20
OBJECTIVE 4E-2	21
OBJECTIVE 4E-3	21
OBJECTIVE 4E-4	22
OBJECTIVE 4F-1	22
OBJECTIVE 4F-2	22

OBJECTIVE 4G-1.....	22
OBJECTIVE 4G-2.....	23
OBJECTIVE 4H-1.....	23
OBJECTIVE 4H-2.....	23
OBJECTIVE 4J-1	24
OBJECTIVE 4J-2	24
OBJECTIVE 4K-1.....	24
OBJECTIVE 4K-2.....	24
OBJECTIVE 4L-1	24
OBJECTIVE 4L-2	24
OBJECTIVE 4M-1.....	24
OBJECTIVE 4M-2	24
OBJECTIVE 4N-1.....	25
OBJECTIVE 4N-2.....	25
OBJECTIVE 4N-3.....	25
OBJECTIVE 4O-1.....	25
OBJECTIVE 4O-2.....	25
OBJECTIVE 4P-1.....	25
OBJECTIVE 4P-2	25
OBJECTIVE 4P-3.....	25
OBJECTIVE 4O-1.....	26
OBJECTIVE 4O-2.....	26
OBJECTIVE 4O-3.....	26
OBJECTIVE 4rR1	26
OBJECTIVE 4R-2.....	26
OBJECTIVE 4S-1	26
OBJECTIVE 4S-2	26
OBJECTIVE 4T-1.....	26
OBJECTIVE 4T-2.....	26

OBJECTIVE 4U-1.....	27
OBJECTIVE 4U-2.....	27
OBJECTIVE 4U-3.....	27
OBJECTIVE 4V-1.....	27
OBJECTIVE 4V-2.....	27
OBJECTIVE 4V-3.....	27
OBJECTIVE 4W-1	27
OBJECTIVE 4W-2	27
OBJECTIVE 4X-1	28
OBJECTIVE 4X-2	28
OBJECTIVE 4X-3	28

PART 1 - DESIGN QUALITY PRINCIPLES

INTRODUCTION

This report assesses the design of the proposed shop top housing at 51 Kalang Road, Elenora Heights in terms of the 9-design quality principles set out in SEPP 65.

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 identity of the area including the adjacent sites, streetscape and neighbourhood. Consideration of local context is important for all sites, including sites in established areas, those undergoing change or identified for change.

The site is irregularly shaped. It is located on Kalang Road at the southern edge of the shopping centre. The site adjoins a neighbouring property to the north and this northern neighbour defines the current southern extent of Elenora Heights shops. Kalang Road supports local traffic and wraps around the site to the south. The western part of the site facing Kalang Road is the primary frontage. The proposed design addresses the primary frontage as well as the secondary frontages to the south and the public reserve to the south east. The site slopes steeply down from north to south and from west to east. The design places the main pedestrian entrance on primary frontage to the west and the vehicular entrance is positioned on the southern part of Kalang Road where it does not conflict with pedestrian traffic associated with Elenora Heights Shops.

All the land to the north has been developed as shops. This commercial zoning is extended to 51 Kalang Road. The site contains a freestanding 2 storey house. The desired future character of the area as indicated by the zoning. 51 Kalang road is to be developed as part of and an extension to the existing commercial area. The proposed building fits with this desired future character. As such the proposed development type is permissible under current Councils Codes. The proposed development fits into the context of the current commercial development.

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 surrounding buildings.

Good design also achieves an appropriate built form for the 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.

The proposed building is built up to and sometimes exceeds the 11m-height plane. The building exceeds the height due to the sloping nature of the site and the overrun of the lift. It is not a result of overdevelopment as the storey limit and setback

requirements have been met. The places where the height plane is exceeded tend to be in the centre of the site where they do not impact on the building's bulk.

The scale of the building is appropriate for itself and the existing development to the north.

The proposed building is setback from its East, South and Western boundaries in a manner consistent with the requirements of council's DCP. There is no setback to the north as that is the desired setbacks for shops adjacent to each other. The public land and roadways on the East, South and Western boundaries achieve the 6 and 9m setbacks required in the Apartment Design Guide in relation to buildings that may be constructed in the future on the sites in both these directions.

The proposed elevations are strongly articulated into forms that step the building's form in relation to the site's contours and the setbacks required by the council's DCP. These articulated forms are emphasised in different materials and fenestration. All elevations are different and demonstrate a response to the varying requirements of solar access, views and privacy the site's various aspects offer. The height of the building does not get emphasised by the sloping site as the proposed design steps back in relation to the changing levels on the ground.

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 the context.

Appropriate densities are sustainable and consistent with the existing density in an area or, in precincts undergoing a transition, are consistent with the stated desired future density. Sustainable densities respond to the regional context, availability of infrastructure, public transport, community facilities and environmental quality.

The Existing site contains 1 dwelling. The development proposes 5 residential units and 2 commercial units at ground level. Of the residential units 3 are 1-bed units, 1 is a 2-bed unit and 1 is a 3-bed unit. This density is encouraged in this area by local government planning and therefore considered appropriate. The apartment mix reflects the opinions of real estate agents for what is most desirable in that location. The proposed density is also supported by the site's proximity to shops employment and public transport. Creating residential units above commercial units is good for the patronage of Elenora Heights Shops and the diversity of housing types in the area.

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 costs. Other elements include recycling and re-use of materials and waste, use of sustainable materials and deep soil zones for groundwater recharge and vegetation.

4 out of 5 units get sun at some time of the day for a min of two hours. There is an oversupply of cross-ventilated units. No units have a single aspect single aspect facing south. The windows are oriented for good solar access. Solar access is controlled with louvers and large overhangs to avoid dependence on mechanical ventilation, heating and cooling.

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, co-ordinating water and soil management, solar access, microclimate, 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 for practical establishment and long-term management.

The shop top housing development proposed will have the effect of reducing the amount of landscaping from the amount currently supported. The landscaping has been supplied in the setbacks required in councils DCP and these setbacks control the amount of landscaping the development can provide. The deep soil has been located on the western side boundary where it helps to separate the proposed design from the street and maintain the substantial mature street tree. As the last commercial development in the commercial row the proposal provides substantially more landscaped area than the shops to the north and creates a transition zone via the landscaping to the residential development to the south.

A landscape plan has been provided with this application

PRINCIPLE 6: AMENITY

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

The unit designs are 100% SEPP 65 compliant or exceed minimum SEPP 65 requirements. The development places housing in a convenient and walkable location to shops and transport. The top units access filtered views of the Pacific Ocean in the distance to the east.

The balconies are often oversized due to compliance with council's DCP stepped setbacks. The location of balconies maximises solar access.

PRINCIPLE 7: SAFETY

Good design optimises safety and security, within the development and the public domain. It provides for quality public and private spaces that are clearly defined and fit for the intended purpose. Opportunities 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.

Approximately half the units proposed can perform the role of passive surveillance of the street. The entry to the units is direct and visible.

The entry can be surveyed by the apartments above it and directly from the street. Shop top housing increases the times commercial areas are legitimately occupied. Private and public space is well defined throughout the development. Private residential space is secured and separated from the public domain. The pedestrian and vehicular entrances separate with pedestrian access taking precedence.

All building entrances, pathways and driveway will have automatic night lighting. The basement and stairwell will have timer controlled on demand/movement triggered lighting as the case requires. This will optimise safety, security and energy efficiency in those areas.

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.

The shop top housing model is all about promoting housing diversity and social interaction due to it's deliberate mixing of different land uses. The proposed development achieves this desired outcome.

PRINCIPLE 9: AESTHETICS

Good design achieves a built form that has good proportions and a balanced composition of element, 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, particularly desirable elements and repetitions of streetscape.

The detailed design of the proposed buildings is of high quality and is likely to appeal to potential buyers. The proposal uses modern forms and a limited materials pallet to pick out major features on the elevation and points of entry. The use of sandstone cladding to the lowest floor walls gives the building a base that steps with the site contours and provides detail and texture to match the planters and planting provided at this level. Sun shading and fenestration add to the level of detail and texture of the proposed building. The external detailing makes an individual statement of the building. The angled balcony elements respond to the geometry of the site. The

stepping of the elevation reduces the building's bulk and impact on the surrounding area.

The building elements, materials and colours to be used are consistent with those generally found in quality developments of this type. The Materials schedule demonstrates that the texture of the materials to be used, as well as the materials themselves and their colouring are consistent with one another and are an improvement on those found in the immediate area. The photomontage also demonstrates this.

The deliberate and consistent manipulation of balconies, finishes and fenestration break up the building into more domestic size pieces. This avoids the heavy and institutional look of a symmetrical façade. It also fits the design to the slope of the land through the stepping forms created.

CONCLUSION

The proposed design satisfies all the principals of good design and sets a high standard for the desired future development of the area. The design achieves these outcomes with a minimal impact on the existing area.

PART 2 – OBJECTIVES, CRITERIA AND DESIGN GUIDENCE

INTRODUCTION

This report assesses the design of a proposed residential flat building at 93-95 Henry Parry Drive against the Design Quality objectives of Sepp 65 2015.

OBJECTIVE 2G Street Setbacks

Street setbacks establish the alignment of buildings along the street frontage, spatially defining the width of the street. The street setbacks established by existing residential house development do not match those promoted by council's development controls for this area. The proposed design meets the street setbacks required in plan by Council. The heights at the required setbacks are also met. There are small height non-compliances that arise from the site's slope. These non-compliances have no impact on the site and surrounding area. The proposed building's relationship with the height planes is documented in the architectural drawings.

OBJECTIVE 2H Side and Rear Setbacks

Side and rear setbacks govern the distance of a building from the side and rear boundaries and are related to the height of the building.

The proposed design meets the setbacks required in plan by Council. The heights at the required setbacks are also met. There are small height non-compliances that arise from the site's slope. These non-compliances have no impact on the site and surrounding area. The proposed building's relationship with the height planes is documented in the architectural drawings.

OBJECTIVE 3A-1

Site Analysis illustrates that design decisions have been based on opportunities and constraints of the site conditions and their relationship to the surrounding context.

SITE LOCATION

The site is located on an elevated position with filtered views of the Pacific Ocean to the southeast. Additional balconies not required for solar access compliance access these views

LOCAL CONTEXT

The site is at the end of a row of shops. The design terminates the commercial development along Kalang road and eases the transition of built form towards the residential housing dominant in the south.

SITE CONTEXT

The site is shaped like a slice of Pizza with the curved edged being the western frontage on Kalang road. Kalang Road supports local traffic and is the primary frontage. The site falls from north to south along this frontage. The secondary frontage is to the south east on the public reserve. The design places the main pedestrian entrance on the primary frontage as north as possible and the vehicular entrance is relegated further south.

STREETSCAPE

The commercial streetscape on Kalang Road consists of an irregular assortment of older 2 storey shops and newer 3 storey shop top housing. The proposed design seeks to extend and terminate the shop top housing format to the extent allowable in council's DCP.

ANALYSIS

With a large bulky neighbour built to the boundary to the north the solar access is limited to the East and West. The street tree is an important part of. The streetscape and the transition from commercial to housing development. Water views distant and filtered to the east and south east from the upper stories. The local shops and transport are positive resource for people living in this area.

The proposed building maximises the numbers of units acquiring solar access. The units and basement are positioned away from the street tree to maintain it's existence. Water views are achieved from the balconies in the top floor setback. The front door to the residential units has been located as close as possible to the existing shops and in a position where it does not impact on the working of the proposed shops at ground level.

OBJECTIVE 3B-1

Building Types and layouts respond to the streetscape and site while optimising solar access within the development.

STREET FRONTAGE

The primary street frontage faces west. 3 of the 5 units face west. All the proposed units have a western or eastern orientation for solar access. 4 out of 5 units also have a southern orientation. Vehicular access from the south west does not interfere with solar access, views or privacy.

OBJECTIVE 3B-2

Overshadowing is minimised during mid winter.

The proposed development does not overshadow any developments as the shadows cast by the development fall on Kalang road or the public reserve. Shadow diagrams and views have been provided to demonstrate this.

OBJECTIVE 3C-1

Transition between private and public domain is achieved without compromising safety and security.

The pedestrian entrance is clearly visible on the western elevation. Pathways to and from this entrance are not obstructed but the commercial activities proposed at the ground level of the development.

Upper level balconies overlook the public domain. These balconies have the opportunity to casually interact with people in the public domain. The development is too small in scale to offer more in this regard. There are no public areas on site where people can conceal themselves.

OBJECTIVE 3C-2

Amenity of the public domain is retained and enhanced.

The development provides planting on its boundaries to soften the transition between public and private domains. The mailboxes are located next to pedestrian entrance lobby, on the street boundary and perpendicular to the street. Garbage areas and plant rooms are located out of site in the basement. The materials chosen for the building are durable and graffiti resistant.

OBJECTIVE 3D-1

An Adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping.

<i>Design criteria</i>	
1.	Communal open space has a minimum area equal to 25% of the site (see figure 3D.3)
2.	Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid winter)

The small scale of the development makes the provision of communal open space difficult to do any meaningful of useful way. Communal open space at ground level is limited by building setbacks and the size of the site. The commercial uses at ground level effectively take up the role of community open space. Unit G1 is provided with an extensive terrace and landscaping with access to afternoon sun making it an ideal location for a restaurant or café.

OBJECTIVE 3D-2

Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting.

The commercial ground floor takes up the role of community open space in shop top housing of this size.

OBJECTIVE 3D-3

Communal open space is designed to maximise safety.

There are no safety issues arising from the communal open space provided.

OBJECTIVE 3D-4

Public open space. Where provided is responsive to the existing pattern and uses of the neighbourhood.

The building has been designed to allow the large street tree to the west to be maintained. This has created a large landscaped space at the front of the site to be enjoyed by the public and residents.

OBJECTIVE 3E-1

Deep soil zones provide areas on the site that allow and support healthy plant and tree growth. They improve residential amenity and promote management of water and air quality.

Design criteria		
1. Deep soil zones are to meet the following minimum requirements:		
Site area	Minimum dimensions	Deep soil zone (% of site area)
less than 650m ²	-	7%
650m ² - 1,500m ²	3m	
greater than 1,500m ²	6m	
greater than 1,500m ² with significant existing tree cover	6m	

The site area is 661.7m² the site is required to provide 7% of the site area as Deep soil. The proposed development provides 130.9m² or 19% of the site as deep soil. With a min dimension of 3m this amount decreases to 9m² or 14%. This amount still complies. The basement is consolidated under the building footprint. The proposed deep soil is located adjacent to the deep soil of the neighbours to the east and west. The development's appearance will not suffer from the proposed amount of deep soil as most of the deep soil on located on the primary frontage

OBJECTIVE 3F-1

Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal privacy.

Design criteria

1. Separation between windows and balconies is provided to ensure visual privacy is achieved. Minimum required separation distances from buildings to the side and rear boundaries are as follows:

Building height	Habitable rooms and balconies	Non-habitable rooms
up to 12m (4 storeys)	6m	3m
up to 25m (5-8 storeys)	9m	4.5m
over 25m (9+ storeys)	12m	6m

Note: Separation distances between buildings on the same site should combine required building separations depending on the type of room (see figure 3F.2)

Gallery access circulation should be treated as habitable space when measuring privacy separation distances between neighbouring properties

Due to the road reserve and Kalang Road the required separation distances will be met despite the proposed 3m setbacks in places.

OBJECTIVE 3F-2

Site and building design elements increase privacy without compromising access to light and air and balance outlook and views from habitable rooms and provide open space.

The design attempts to orient as many units as possible towards the sun. The best strategy to achieve this is to maximise the number of units on the west elevation where sun is achievable. The design of units on the west includes splayed walls and angled roofs to share the limited sun available.

OBJECTIVE 3G-1

Building entries and pedestrian access connects to and addresses the public domain.

The front door to the proposed building connects directly to the footpath of the local shops at Elenora Heights.

OBJECTIVE 3G-2

Access, entries and pathways are accessible and easy to identify.

Access to lift lobbies and is clearly visible from the public domain. Hallways are at a minimum due to the small scale of the development. The entrance lobby is located

on the contour providing level access to Kalang Road. There are no steps or ramps at the entrance inside the site boundary.

OBJECTIVE 3G-3

Large site provides pedestrian links for access to streets and connection to destinations.

The design is too small to provide meaningful connections to meaningful destinations.

OBJECTIVE 3H-1

Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes.

Car park access is separately located on Kalang Road south of the pedestrian entrance. As most of the pedestrian traffic will heading north from the proposed building towards shops and transport the position of the Vehicular access reduces conflicts with pedestrian access further. The vehicular entry is integrated into the landscape as it seeks to maintain existing ground levels. Cars and Loading vehicles can safely enter and exit the site in a forward direction.

OBJECTIVE 3J-1

Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas.

Design criteria

1. For development in the following locations:

- on sites that are within 800 metres of a railway station or light rail stop in the Sydney Metropolitan Area; or
- on land zoned, and sites within 400 metres of land zoned, B3 Commercial Core, B4 Mixed Use or equivalent in a nominated regional centre

the minimum car parking requirement for residents and visitors is set out in the Guide to Traffic Generating Developments, or the car parking requirement prescribed by the relevant council, whichever is less

The car parking needs for a development must be provided off street

The car park space numbers proposed comply with the minimum required. A traffic engineering report has been supplied with this application

OBJECTIVE 3J-2

Parking and facilities are provided for other modes of transport.

The correct amount of bicycle and motorbike spaces has been provided for in the basement.

OBJECTIVE 3J-3

Car park design and access is safe and secure.

Supporting facilities in the basement are located centrally around the lift core and stairs. The car park level is simply designed, small and easily navigated. The lift and stairs have been provided with a clearly indicated and safe lobby.

OBJECTIVE 3J-4

Visual and environmental impacts of underground car parking are minimised.

The car park is designed to be underground or hidden from view by the retained landscape to the western boundary. The car park is naturally ventilated.

OBJECTIVE 4A-1

To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space.

<i>Design criteria</i>	
1.	Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas
2.	In all other areas, living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 3 hours direct sunlight between 9 am and 3 pm at mid winter
3.	A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid winter

80% of units get 3 hours sun and no apartments receive no sun at all.

All apartments have shallow layouts to maximise natural light and solar access.

OBJECTIVE 4A-2

Daylight access is maximised where sunlight is limited.

Sunlight is not limited but daylight access is maximised through the shallow unit layouts.

OBJECTIVE 4A-3

Design incorporates shading and glare control, particularly for warmer months.

The proposed balconies extend far enough to provide shade from the summer sun. Shading devices have been used on windows as required. Vertical shading devices have been used on the western windows.

OBJECTIVE 4B-1

All habitable rooms are naturally ventilated.

The proposed design's orientation maximises the capture and use of prevailing breezes for natural ventilation in habitable rooms. Habitable rooms are located on the corners of the building to facilitate natural ventilation. The depth of habitable rooms support natural ventilation. Rooms are well supplied with operable window areas in excess of 5% of room floor area. Light wells are not required in the design.

OBJECTIVE 4B-2

The layout and design of single aspect apartments maximises natural ventilation.

There are no light wells in the design. Habitable rooms are located near corners to facilitate cross ventilation.

OBJECTIVE 4B-3

The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents.

<i>Design criteria</i>	
1.	At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed
2.	Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line

80% of units are naturally cross ventilated. No apartments are deeper than 18m

OBJECTIVE 4c-1

Ceiling height achieves sufficient natural ventilation and daylight access.

Design criteria

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

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

These minimums do not preclude higher ceilings if desired

All apartments contain habitable rooms with 2.7m ceiling heights. Non-habitable room ceiling heights are 2.4m.

OBJECTIVE 4C-2

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

The hierarchy of rooms is defined with habitable rooms having taller ceilings than non-habitable rooms. Services are stacked preventing bulkheads from intruding into desirable ceiling heights.

OBJECTIVE 4C-3

Ceiling height contributes to the flexibility of building use over the life of the building.

Then ceiling heights in the commercial areas are 3.3m

OBJECTIVE 4D-1

The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity.

Design criteria

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

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

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

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

2. Every habitable room must have a window in an external wall with a total minimum glass area of not less than 10% of the floor area of the room. Daylight and air may not be borrowed from other rooms

There are no studio apartments. All proposed 1-bedroom unit areas are more than 50m². The 2 bedroom is more than 70m². The 3-bedroom unit is more than 90m². All apartments with unsuits have an additional 5m². Every habitable room has a window in an external wall greater than 10% of the room's floor area. Kitchens have not been located as part of the main circulation space. All windows are visible from all parts of all habitable rooms.

OBJECTIVE 4D-2

Environmental Performance of the apartment is maximised.

Design criteria	
1.	Habitable room depths are limited to a maximum of 2.5 x the ceiling height
2.	In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window

All habitable room depths are less than $2.7 \times 2.5 = 6.75\text{m}$. None of the open plan living layouts are deeper than 8m. Bathrooms contain external operable windows where possible. Living and bedroom areas are located on the external face of the building. The main living spaces are oriented towards the primary outlook and solar access.

OBJECTIVE 4D-3

Apartment layouts are designed to accommodate a variety of household activities and needs.

Design criteria	
1.	Master bedrooms have a minimum area of 10m^2 and other bedrooms 9m^2 (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: <ul style="list-style-type: none"> • 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

All master bedrooms have a minimum area greater than 10m^2 . All other bedrooms have a minimum area of 9m^2 . All bedrooms have a min dimension of 3m. All 1-bedroom apartments have a minimum width of 3.6m. All 2 and 3 bedroom units have a minimum dimension of 4m. Bedrooms, bathrooms and laundries do not give direct access to living areas. All bedroom robes are more than 1.5m long. All main bedroom robes are greater than 1.8m long in their non-adapted form. The apartment layouts allow for flexible furnishing and contain efficient circulation.

OBJECTIVE 4E-1

Apartments provide appropriately sized private open space and balconies to enhance residential amenity.

Design criteria

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

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

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

2. For apartments at ground level or on a podium or similar structure, a private open space is provided instead of a balcony. It must have a minimum area of 15m² and a minimum depth of 3m

All 1-bedroom apartments have balcony areas greater than 8m². The 2-bedroom apartment has a balcony area greater than 10m². The 3-bedroom apartment has a balcony area greater than 12m². All balconies have a minimum depth greater than 1m. Due to the slope of the site there are effectively no units on ground level.

OBJECTIVE 4E-2

Primary private open space and balconies are appropriately located to enhance liveability for residents.

Primary open spaces are located near the living rooms to extend living areas for all apartments. All primary open spaces face east and west. Primary open spaces are located with the long side facing outwards. Air conditioning is located on the roof.

OBJECTIVE 4E-3

Primary open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building.

Balconies are positioned to respond to their location on site and on the building. They are designed to allow views and passive surveillance of the street while maintaining visual privacy and various uses of the balcony. The balcony design is integrated into

the forms of the building. There is ample room on the balconies for effective clothes drying.

OBJECTIVE 4E-4

Private open space and balcony design maximises safety.

Changes in ground levels or landscaping are minimised. Design and detailing of balconies avoid opportunities for climbing and falls.

OBJECTIVE 4F-1

Common circulation spaces achieve good amenity and properly service the number of apartments.

<i>Design criteria</i>	
1.	The maximum number of apartments off a circulation core on a single level is eight
2.	For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40

The maximum number of apartments off a circulation core on a single level is less than eight. The building is under 10 stories and the number of apartments sharing a single lift is less than 40. Corridor widths are 1.6 and 1.8m. Corridors are provided with and natural ventilation. Windows are provided to the common circulation spaces. Corridors are less than 12m in length. Corridor design allows almost all the apartments to be dual aspect. Primary living rooms do not open directly onto common circulation spaces.

OBJECTIVE 4F-2

Common circulation spaces promote safety and provide for social interaction between residents.

Direct and legible access is provided between vertical circulation points and apartment entries by minimising corridor length and providing short, straight, and clear sight lines.

OBJECTIVE 4G-1

Adequate well-designed storage is provided in each apartment.

Design criteria

1. In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided:

Dwelling type	Storage size volume
Studio apartments	4m ³
1 bedroom apartments	6m ³
2 bedroom apartments	8m ³
3+ bedroom apartments	10m ³

At least 50% of the required storage is to be located within the apartment

Over 6m³ of storage has been provided to the 1-bed apartments. Over 8m³ of storage has been provided to the 2-bed apartment. Over 10m³ of storage has been provided to the 3-bed apartment. 50% of the minimum storage requirement has been provided within the apartments. Storage is accessible from living and circulation areas.

OBJECTIVE 4G-2

Additional storage is conveniently located, accessible, and nominated for individual apartments.

The storage not located in the apartments is secure and clearly allocated to specific apartments. Storage is provided for larger and less frequently accessed items. Storage not located in an apartment is integrated into the overall building's design.

OBJECTIVE 4H-1

Noise transfer is minimised through the siting of buildings and their layout.

Adequate building separation is provided from the neighbouring buildings. Window and door openings are generally oriented away from noise sources where they can be. Noisy areas within the building are located next to and above each other as are quiet areas. Storage areas are located within apartments as a buffer between noisy and quieter areas. Party walls are sound insulated in accordance with the BCA.

OBJECTIVE 4H-2

Noise impacts are mitigated within apartment through layout and acoustic treatments.

Rooms with similar noise requirements are grouped together. Doors separate different use zones. Wardrobes in bedrooms act as a sound buffer.

OBJECTIVE 4J-1

In noisy or hostile environments, the impacts of external noise and pollution are minimised through the careful siting and layout of buildings.

This part of Gosford does not suffer from any particular amount of noise or pollution.

OBJECTIVE 4J-2

Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission.

The number and size of openings facing the eastern neighbours are limited in size and number. The building is constructed in concrete, the mass of which helps to mitigate noise transfer.

OBJECTIVE 4K-1

A range of apartment types and sizes is provided to cater for different household types now and into the future.

A variety of apartment types have been provided. The apartment mix is appropriate taking it consideration the distances to shops and transport, the scale of the proposed development and the current real estate market.

OBJECTIVE 4K-2

The apartment mix is distributed to suitable locations within the building.

Different apartment types are located to achieve successful façade composition and to optimise solar access.

OBJECTIVE 4L-1

Street frontage activity is maximised where ground floor apartments are located.

Shop top housing does not allow ground floor apartments.
Street frontage activity is promoted by the commercial activities at the ground floor

OBJECTIVE 4L-2

Design of ground floor apartments delivers amenity and safety for residents.

Shop top housing does not allow ground floor apartments.
Street frontage activity is promoted by the commercial activities at the ground floor

OBJECTIVE 4M-1

Building facades provide visual interest along the street while respecting the character of the local area.

The design provides building facades composed of varied building elements and materials in keeping with the scale of the building and the proposed future local character of the area. Building services are integrated within the building envelope. The buildings façade is well resolved with an appropriate scale and proportion to the streetscape and human scale.

OBJECTIVE 4M-2

Building functions are expressed by the facade.

The building's entry is clearly defined. Important corners in the building are given prominence. Apartment layout is expressed externally through façade features.

OBJECTIVE 4N-1

Roof treatments are integrated into the building design and positively respond to the street.

Roof design is dominated by the angled balcony roofs that are a function of solar access and the site.

OBJECTIVE 4N-2

Opportunities to use roof space for residential accommodation and open space are maximised.

Roof spaces have been minimised by council's height plan requirements.

OBJECTIVE 4N-3

Roof design incorporates sustainable features.

The roof design allows for good overhangs to glazed areas.

OBJECTIVE 4O-1

Landscape design is viable and sustainable.

The landscape design complies with BASIX requirements for water usage and plant species.

OBJECTIVE 4O-2

Landscape design contributes to streetscape amenity.

The landscape design responds to change in levels. The significant street tree is to be kept by the proposed design.

OBJECTIVE 4P-1

Appropriate soil profiles are provided.

There is nothing more complex than planter boxes being proposed. The details of these are contained in the Landscape Architect's drawings. The planters have been provided to soften hard surfaces and lines in the design.

OBJECTIVE 4P-2

Plant growth is optimised with appropriate selection and maintenance.

Plants have been selected for their suitability to site conditions.

OBJECTIVE 4P-3

Planting on structures contributes to the quality and amenity of communal and public spaces.

The building design incorporates opportunities for planting on the structure in the form of planter boxes.

OBJECTIVE 4O-1

Universal design features are included in apartment design to promote flexible housing for all community members.

The design provides the required number of liveable apartments.

OBJECTIVE 4O-2

A variety of apartments with adaptable designs are provided.

The design provides the required number of adaptable apartments.

OBJECTIVE 4O-3

Apartment layouts are flexible and accommodate a range of lifestyle needs.

Open plan living areas allow occupants to inhabit spaces as they choose.

OBJECTIVE 4R1

New additions to existing buildings are contemporary and complimentary and enhance an area's identity and sense of place.

Not Applicable.

OBJECTIVE 4R-2

Adapted buildings provide residential amenity while not precluding future adaptive reuse.

Not Applicable.

OBJECTIVE 4S-1

Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement.

The development is shop top housing which provides active street frontages and encourages pedestrian movement.

OBJECTIVE 4S-2

Residential levels of a building are integrated within the development, and safety and amenity are maximised for the residents.

Unintentional interaction between the housing and shops contained in the proposed development has been minimised through the location of the residential front door.

OBJECTIVE 4T-1

Awnings are well located and complement and integrate with the building design.

Awnings have been used as shading for north and east facing windows and doors. Awnings have been provided to the outdoor space associated with the ground floor commercial use.

OBJECTIVE 4T-2

Signage responds to the context and desired streetscape character.

Not Applicable.

OBJECTIVE 4U-1

Development incorporates passive environmental design.

Well-located outdoor areas are provided for clothes drying.

OBJECTIVE 4U-2

Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer.

The development uses thermal glazing technology as per the BASIX report. The thermal mass of the concrete walls and floors are utilised to stabilise temperatures internally. The roofs and floors are insulated thermally. The building incorporates overhangs and shading devices to control solar access.

OBJECTIVE 4U-3

Adequate natural ventilation minimises the need for mechanical ventilation.

Natural cross ventilation is optimised by the design all rooms that can have a window do so. Natural ventilation is provided to all habitable rooms.

OBJECTIVE 4V-1

Potable water use is minimised.

Water efficient fittings and equipment are to be installed as per the BASIX specification. Apartments are individually metered. Rainwater is collected and re-used on site. Drought tolerant, low water use plants are used on site as per BASIX requirements.

OBJECTIVE 4V-2

Urban stormwater is treated on site before being discharged to receiving waters.

Rainwater retention tanks are incorporated in the buildings design.

OBJECTIVE 4V-3

Flood management systems are integrated into the site design.

Rainwater Detention tanks are incorporated in the buildings design

OBJECTIVE 4W-1

Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents.

The waste and recycling area is located below ground and near kerbside pickup area. The communal waste and recycling room location is located conveniently near the lift for the residents.

OBJECTIVE 4W-2

Domestic waste is minimised by providing safe and convenient separation and recycling.

All dwellings will be fitted with waste bins in the kitchens that allow for the sorting of different types of waste. The communal waste and recycling room is located conveniently near the building's central circulation core.

OBJECTIVE 4X-1

Building design detail provides protection from weathering.

Balcony terraces protect the larger areas of glass. Smaller windows are protected with the louvers provided. Parapets, windowsills and window heads are to be provided with drip lines.

OBJECTIVE 4X-2

Systems and access enable ease of maintenance.

Window design enables cleaning of both sides from inside. Manually operated sunshades are employed in preference to mechanical ones.

OBJECTIVE 4X-3

Materials selection reduces ongoing maintenance costs.

The building is built out of concrete, which is a stable, and long-lasting material, Concrete wall are easily cleaned and graffiti resistant. The areas of sandstone cladding weather well and improve with time.