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13/09/2022

Peitra Creak
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Dear Peitra

**Re: 1 Gatacre Avenue and 1-5 Allison Avenue, Lane Cove – Development Application**

I, Ben Pomroy confirm that pursuant to Clause 29 (1 & 2) of the Environmental Planning and Assessment Regulation 2021 (EPA Reg), I am a qualified designer, which means a person registered as an architect in accordance with the Architects Act 2003, as defined by Clause 3 of the EPA Reg.

I directed the design of the proposed development stated above and I provide the accompanying explanation to verify that the proposed development achieves the design quality principles set out in Schedule 1 of the State Environmental Planning Policy No. 65 – Design Quality Principles.

I also provide the accompanying summary to verify, in terms of the Apartment Design Guide, how the proposed development achieves the objectives of Part 3 & 4 of that guide.

Yours sincerely,

Ben Pomroy
Principal

| | |
|---|---|
| Nominated Architect (NSW): | Ben Pomroy |
| Registration Number: | 7918 |

Encl. LEC Architectural Drawings

CC. Nicola Eason
Julie Horder





Rothe Lowman Property Pty Ltd
ABN 76 005 783 997

# SEPP 65 Design Quality Principles Statement

## 1 Gatacre Avenue and 1-5 Allison Avenue

## Lane Cove NSW

Project no. **221002** Status **TP** Rev **C** Date **13/09/2022**

## Principle 1: Context & 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.*

Comment:

The subject property comprises of two allotments addressing Allison Avenue and one allotment addressing Gatacre Avenue in the suburb of Lane Cove. The allotments currently hold a two-storey hotel with associated carpark, and a single storey house with carport.

This site is located 1km east of Lane Cove centre, across Pacific Highway from the south-west edge of the Artarmon commercial core. The subject site is one of a string in an R4 zone separating Pacific Highway and Longueville Road from a large R2 zone. The area has strong public transport connections to the city and beyond, offering a range of transit options for future residents.

The proposed development responds to the existing context and recognises the importance of transitioning between the scale and intensity of Pacific Highway, to the finer grain, landscaped character of the bungalows to the south-west.

The new building will contribute to the identity of the area with incorporation of high quality landscape and articulated built form to each facade, whilst at the same time will not dominate or be overbearing upon its adjoining neighbours or the streetscape, blending in with the future form.

## Principle 2: Built Form & 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 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 built form of the proposed development is appropriate within the Allison and Gatacre Avenue streetscapes, and achieves the objectives of the relevant built form controls. The building is nestled into the site at the northern edge to minimise impacts on residential neighbours, offering a large setback to the south and minimising the height of the building when viewed from the street

The building form has been developed with careful consideration to visual privacy, acoustic privacy, and solar access to northern units, and to visual privacy, overshadowing and outlook to southern units. The heavily constrained site required rigorous plan studies, leading to the building being designed from the inside-out. Unit orientations manage the constraints of the site by directing aspect to the sun and the views, and introducing screening to mediate overlooking.

The building facades have been articulated and setback to provide an appropriate level of visual bulk when viewed from surrounding areas and will achieve the desired future character of the area. The orientation maximises view potentials without being dominant to the streetscape or neighbouring lots.

## 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 proposed development density is appropriate for the site and existing urban context.

The site's allowable total FSR is 2.4:1, however a FSR of 2.05:1 is being proposed. A lower FSR is presented given the site conditions and appropriate bulk and scale in relation to both the streetscape and the residential neighbours. The development comprises residential uses of 6089.5 sqm, approximately 1028 sqm below the allowable GFA.

The site is well located for public transport to the city and beyond, and to local commercial and natural amenity.

## 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 reuse of materials and waste, use of sustainable materials and deep soil zones for groundwater recharge and vegetation.*

Comment:

The design makes efficient use of natural resources, energy and water throughout its full life cycle, including construction.

Energy efficient building response is developed through passive design and sun control elements. The building design is characterised by exceptional and dynamic qualities of space, natural light, air flow and solar access to achieve high personal comfort and low energy consumption.

The living areas of the apartments have been orientated to maximise sunlight, daylight and natural ventilation. All apartments are accessed from efficient corridors with access to natural light and ventilation. Overall the project has 50% (26) apartments with 2 hours' solar access between 9.00am and 3.00 pm. A further 7 apartments get 2 hours direct sunlight to bedrooms in mid-winter, a total of 63.4% (33) apartments that benefit from 2 hours solar access. There are several site conditions that preclude meeting the design criteria. The site is located on a south-west facing slope, offering views over tree tops towards the harbour and the city. The most significant views are oriented almost due south, while suburban views are available to the south-east and south-west. To the north the site is bounded by a service station and a commercial office building, which is subject to DA approval for a boarding house. The approved boarding house has a four storey wall setback 3m from the common boundary, and a 5$^{th}$ storey to the north. Pacific Highway is approximately 25m to the north-east, carrying 6 lanes of traffic and generating significant noise. Given these site constraints, it is considered that greater residential amenity can be achieved by orienting units to the south, while all endeavours have been taken to maintain high solar amenity to south facing units through the introduction of dual aspect apartments.

69.2% (36) apartments are naturally ventilated, by either cross or corner air flow. All the units have been designed to maximise natural cross ventilation, through the provision of dual aspect units and kitchens within 8 metres of windows. The development will not be reliant upon automatic climate control to provide appropriate amenity for residents.

The carbon footprint is further reduced by high efficiency air conditioning; energy efficient appliances; fittings and services such as water reduction showerheads; dual flush toilets; gas cook tops; microwave ovens; and energy efficient hot water systems. A solar panel system has been incorporated within the development to provide power to common area facilities such as lifts and lobbies.

Waste minimisation and recycling strategies have been incorporated into the development.

## 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, micro-climate, tree canopy, habitat values and preserving green networks.*

*Good landscape design optimises useability, privacy and opportunities for social interaction, equitable access, respect for neighbours' amenity and provides for practical establishment and long-term management.*

Comment:

The current hotel development on the site does not provide any areas of high-quality landscaping. The existing house at 5 Allison Avenue has a large landscaped backyard, which is the location of a generous deep soil pocket in the proposed scheme. Most of the deep soil planting will extend along the southern boundary to provide a continuation of the green band that runs through the backyards of the neighbouring houses. This also allows generous screening planting along the boundary to offer privacy to southern neighbours. Deep soil is also provided along both street frontages, which allows signature planting to the street.

The proposed development provides formal landscaped areas along the communal and private spaces on the ground plane, along with planter boxes at each of the terraced levels on the southern facade. The landscaping provided will contribute to the enjoyment of these areas and provide additional privacy screening to and from balconies and units.

The proposed development provides pockets of communal spaces within the landscaped area on the southern side of the site, taking advantage of the large setbacks to the building. This space provides for communal amenity that has good access to natural light during mid-winter at the western end. The primary communal open space is located on level 5 of the development to provide a variety of communal landscaped areas. Additional indoor and outdoor communal space is provided on the ground floor adjacent to the western lift lobby. This space provides sheltered BBQ and outdoor dining spaces set amongst the landscape.

Detailed landscape and deep soil calculation sheets are included in the proposal.

## 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 wellbeing.*

*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 architectural design provides enhanced amenity through the physical, spatial and environmental qualities of the development. The development comprises 52 residential apartments with the following mix:

- 14 x 1 beds (27%)
- 16 x 2 beds (31%)
- 15 x 3 beds (29%)
- 7 x 4 beds (13%)

Included in the development are 11 adaptable units (21%) and 42 Silver LHA units (80%)

A total of 105 car spaces are provided through out two levels of lower basements secure parking comprising 91 residential apartments' car spaces and 14 visitor car spaces, including parking for the adaptable apartments. Additional residential storage is provided in the car park.

The apartments have been designed to achieve solar access, natural ventilation, visual and acoustic privacy, storage, indoor and outdoor open space, diverse layouts, service areas, outlook and ease of access and mobility for all ages.

## 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.*

Comment:

The design of the development optimises safety and security, both internal to the development and to the public domain. Safety and security have also been considered in accordance with CPTED principles of surveillance, access, territorial reinforcement and space management.

The pedestrian entry points are highly visible from both the internal area of the development and the public domain which will allow safe access and egress from and to the building. The development has been designed with clear delineation between public, communal, and private space to encourage safe and comfortable movement through the site.

Controlled vehicular access to the building is provided by secure car park access from Allison Avenue, with direct access from the car park to the lift lobbies for residents and visitors.

## 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 and providing opportunities for social interaction among residents.*

Comment:

All residential units and basement parking areas are accessible by lift, and close regard has been made in the design to ensure that an appropriate number of units could be adopted to suit the needs of people with disabilities or the elderly.

The building offers a variety of apartment configurations ranging from compact 1-bedroom apartments, to large two storey, terrace style apartments on the ground floor. The unit mix includes 1-bed, 2-bed, 2-bed + mpr, 3-bed, 3-bed + mpr and 4-bed. The eastern wing holds cross-through units with compact corridors shared between 2 units, while the west wing has a more traditional core arrangement with single aspect units.

A variety of communal spaces are provided including internal and external spaces both at ground level, and on the common roof top area.

## 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 a well-designed apartment development responds to the existing or future local context, particularly desirable elements and repetitions of the streetscape.*

Comment:

An appropriate composition of building elements, material textures and colours have been utilized to reflect the natural palette and scale of the existing neighbourhood.

The development has been designed to promote visual interest and avoid blank unarticulated walls, while keeping acoustic and privacy requirements in mind. The stepped façade towards Pacific Highway provides a balance of acoustic privacy from the busy street, and visual privacy from the service station and proposed boarding house, while providing visual interest to the street scape. The angling and stepping of terraces to the south is a response to moderating overlooking while also acting to provide better aspect and views.

The development will positively contribute to the desired future character of the area. The design responds well to the present and future character of the surrounding area using rich but simple material selections, proportions and carefully articulated building forms.

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# Apartment Design Guide Objectives – Part 3 & 4

## 1 Gatacre Avenue & 1-5 Allison Avenue Lane Cove

| Project no. | Status | Rev | Date |
|---|---|---|---|
| 221002 | TP | D | 13/09/2022 |

| Revision | Date | Notes – *Revisions are noted in bold italics* |
|---|---|---|
| A | 20/08/2021 | RFI Response |
| B | 22/07/2022 | LEC Issue |
| C | 10/08/2022 | Amended LEC Issue |
| D | 13/09/2022 | Amended LEC Issue |

| | Objective | Design Criteria | Objective Achieved | Comment |
|---|---|---|---|---|
| Part 3 Siting the Development | | | | |
| Site Analysis | *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* | | Yes | An extensive site analysis, site concept and masterplan has been completed based on a multi-layer urban design and contest study. Further details are available in the Architectural Design Report |
| Orientation | *Objective 3B-1 Building types and layouts respond to the streetscape and site while optimising solar access within the development* | | Yes | The proposed building is shaped with consideration to existing alignments on both street frontages, with an increasing setback towards the residential uses. A mix of single and double loaded layouts optimises solar access to ensure most units get direct sun in mid-winter. |
| | *Objective 3B-2 Overshadowing of neighbouring properties is minimised during mid-winter* | | Yes | The proposed building is set towards the northern edge of the site to minimise overshadowing on southern neighbours. The southern edge of the building steps down and is shaped to assist solar access to neighbours along both streets.<br>The subject site is separated from neighbouring properties with a road to the south-west, providing appropriate separation to reduce overshadowing to neighbouring properties. |
| Public Domain Interface | *Objective 3C-1 Transition between private and public domain is achieved without compromising safety and security* | | Yes | Access from the public streets to the building entries are straight, clear and legible, providing safe access to the proposed development. |
| | *Objective 3C-2 Amenity of the public domain is retained and enhanced* | | Yes | The public domain of both adjacent streets is enhanced with increased landscaping and activation through private terraces and lobby entries. The building entries are legible and all services, loading and car parking, where possible, are located in secure zones behind screening. |
| | *Objective 3D-1 An adequate area of communal open space is provided* | *Communal open space has a minimum area equal to 25% of the site (see figure 3D.3)* | Yes | The communal open space meets the 25% minimum as identified in the architectural package. The communal open |

| | Objective | Design Criteria | | | Objective Achieved | Comment |
|---|---|---|---|---|---|---|
| Communal and Public Open Space | *to enhance residential amenity and to provide opportunities for landscaping* | *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)* | | | | space will include high quality landscaping and place making features such as plantings, bench seating, water features, dining and terraces promoting high amenity and useability of the space.<br>50% of the principal useable parts of the communal open space achieve a minimum of 2 hours direct sunlight between 9:00 am and 3:00pm |
| | *Objective 3D-2 Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting* | | | | Yes | Communal open spaces provide a selection of sub-spaces with varying uses, to allow for simultaneous use by multiple groups. The architectural package and landscape architect's drawings articulate the open space and landscaping strategy. |
| | *Objective 3D-3 Communal open space is designed to maximise safety* | | | | Yes | Communal open spaces are clearly defined and legible with open areas. Both ground floor and roof terrace spaces are overlooked by upper level apartments providing passive surveillance. |
| | *Objective 3D-4 Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood* | | | | - | N/A |
| Deep Soil Zones | *Objective 3E-1 Deep soil zones provide areas on the site that allow for and support healthy plant and tree growth. They improve residential amenity and promote management of water and air quality* | *Deep soil zones are to meet the following minimum requirements:* | | | Yes | The deep soil area equals 25% of the site area, which exceeds the required minimum. This includes 14.5% of the site area provided in zones with a minimum dimension of 6m.<br>The deep soil zones will host significant tree plantings along with other planting on structures in other parts of the site. It is located to continue the green band formed by backyards of neighbouring properties, and to allow quality screen planting to houses on the lower slope.<br>The formal deep soil zones are supplemented by structured planting with appropriately scaled tree and plant species. The extent of deep soil is presented in the architectural package. |
| | | *Site Area* | *Min Dimensions* | *Deep Soil Zone (% of Site Area)* | | |
| | | *Less than 650m²* | *-* | *7%* | | |
| | | *650m²-1500m²* | *3m* | | | |
| | | *Greater than 1500m²* | *6m* | | | |
| | | *Greater than 1500m² with significant tree cover* | *6m* | | | |
| Visual Privacy | *Objective 3F-1 Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy*<br>*Note: Separation distances between buildings on the same site should combine required building* | *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:* | | | Part | The façade along the northern boundary has been carefully articulated to orient views to Gatacre Avenue on the north, allowing a predominantly blank wall condition to the boundary. High level windows have been provided to the 3m setback to increase solar access, with balconies at the 6m setback and bedrooms beyond.<br>The northern façade maintains this language to level 4 and steps back at level five to habitable rooms, although only four |
| | | *Building Height* | *Habitable rooms and balconies* | *Non-habitable rooms* | | |

| | Objective | Design Criteria | | | Objective Achieved | Comment |
|---|---|---|---|---|---|---|
| | *separations depending on the type of room* | *Up to 12m (4 storeys)* | *6m* | *3m* | | to five storeys are visible above ground due to the steep slope of the site.<br><br>The southern façade is setback in two storey increments, each step creating a terraced planters as an extension of the dep soil planting. Steps in this wall allow the introduction of windows with lateral views, which prevent overlooking to neighbouring properties. The predominant building line meets the setback controls, with some balconies extending into the planter zone. |
| | | *Up to 25m (5-8 storeys)* | *9m* | *4.5m* | | |
| | | *Over 25m (9+ storeys)* | *12m* | *6m* | | |
| | *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 private open space* | | | | Yes | The comprehensive solar and view analysis has allowed for the building to be sited, and heights modulated, to take advantage of keys views and solar access. Privacy between apartments has been considered in the building separation and internal space planning. |
| Pedestrian Access and Entries | *Objective 3G-1 Building entries and pedestrian access connects to and addresses the public domain* | | | | Yes | All apartment lobbies address the streets with gatehouses to demarcate the entries. Care has been taken to create legible and permeable access for pedestrians throughout the development |
| | *Objective 3G-2 Access, entries and pathways are accessible and easy to identify* | | | | Yes | Gatehouses and canopies serve to express the entry points to the site and to the lift lobbies. Pathways through the communal space provide clear and legible access to the lobbies. |
| | *Objective 3G-3 Large sites provide pedestrian links for access to streets and connection to destinations* | | | | Yes | The design creates a connected ground floor link for residents between the two main street frontages, and the main communal open space. |
| Vehicle Access | *Objective 3H-1 Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes* | | | | Yes | Car park and loading is consolidated on Allison Avenue to minimise interruption to street frontages. The vehicle access point is clear and legible, and separate to the pedestrian entries. |
| Bicycle and Car Parking | *Objective 3J-1 Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas* | *For development in the following locations:*<br>*on sites that are within 800 metres of a railway station or light rail stop in the Sydney Metropolitan Area; or*<br>*on land zoned, and sites within 400 metres of land zoned, B3 Commercial Core, B4 Mixed Use or equivalent in a nominated regional centre*<br>*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* | | | Yes | Car parking has been provided in accordance with the Lane Cove Council DCP requirements as is detailed in the Traffic Report. |

| | Objective | Design Criteria | Objective Achieved | Comment |
|---|---|---|---|---|
| | | *The car parking needs for a development must be provided off street.* | | |
| | *Objective 3J-2 Parking and facilities are provided for other modes of transport* | | Yes | Secure bicycle parking and motorcycle parking is provided in the basements in accordance with Lane Cove DCP. |
| | *Objective 3J-3 Car park design and access is safe and secure* | | Yes | The car parks are secured with electronic, automated doors triggered by residents. The aisles are clear and unobstructed with clear lines of site to fire stairs and to lift entrances. |
| | *Objective 3J-4 Visual and environmental impacts of underground car parking are minimised* | | Yes | The levels of the building are set from the lower topographical points to minimise any visual and overshadowing impacts of the building. The car park layout is efficient with double-loaded aisles and consolidated ramping |
| | *Objective 3J-5 Visual and environmental impacts of on-grade car parking are minimised* | | - | N/A |
| | *Objective 3J-6 Visual and environmental impacts of above ground enclosed car parking are minimised* | | - | N/A |
| Solar and Daylight Access | *Objective 4A-1 To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space* | *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* | No | At least 50% of living rooms and balconies achieve two hours of solar access between 9am and 3pm in midwinter. 63% of apartments achieve two hours solar access between 9am and 3pm in midwinter when considering bedrooms in addition to living rooms. The site constraints, including its location on a south facing slope, the significant views to the south, and the acoustic issues and proximity of neighbours, precludes the project from compliance with the objective as greater amenity is offered by orienting to the south. Please refer to a breakdown of solar access in the architectural package |
| | | *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* | N/A | |
| | | *A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid-winter* | Yes | A high proportion of dual aspect apartments have been provided to limit the number of apartments with a solely southern aspect. |
| | *Objective 4A-2 Daylight access is maximised where sunlight is limited* | | Yes | Generous windows have been provided to multiple aspects of units with limited solar access to ensure high indoor amenity. |
| | *Objective 4A-3 Design incorporates shading and glare control, particularly for warmer months* | | Yes | The articulated facades are designed for summer shading with deep recesses and limited northern glazing. West facing windows are provided with vertical screens oriented to the south to provide shade from the hot summer afternoon sun. |
| | *Objective 4B-1 All habitable rooms are naturally ventilated* | | Yes | Openable windows are proposed for all bedrooms, living rooms and multi-purpose rooms. Where study nooks are |

| | Objective | Design Criteria | | Objective Achieved | Comment |
|---|---|---|---|---|---|
| Natural Ventilation | | | | | provided, they have generous opening to the primary living space. |
| | *Objective 4B-2 The layout and design of single aspect apartments maximises natural ventilation* | | | Yes | Single aspect apartments are designed with open-plan layouts, wide frontages and large openings to balconies to maximise natural ventilation |
| | *Objective 4B-3 The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents* | *At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building.*<br>*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* | | Yes | The proposal is in exceedance of the minimum cross ventilation numbers at 69.2%. Please refer to a breakdown of cross-ventilation per unit in the architectural package<br>Apartment depths are limited to less than 8m to habitable rooms for all single-aspect apartments. Cross-through apartments do not exceed 18m measured glass line to glass line. |
| | | *Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line* | | | |
| Ceiling Height | *Objective 4C-1 Ceiling height achieves sufficient natural ventilation and daylight access* | *Measured from finished floor level to finished ceiling level, minimum ceiling heights for apartment and mixed-use buildings are:* | | Yes | The floor-to-floor heights of the building allow 2700 ceilings to all living areas and bedrooms. |
| | | *Habitable Rooms* | *2.7m* | | |
| | | *Non-Habitable* | *2.4m* | | |
| | | *For 2 Storey Apartments* | *2.7m for main living area floor*<br>*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 use areas* | *3.3m for ground and first floor to promote future flexibility of use* | | |
| | *Objective 4C-2 Ceiling height increases the sense of space in apartments and provides for well-proportioned rooms* | | | Yes | Bulkheads are to be minimised as much as possible, with bulkheads typically limited to kitchens and corridors. |
| | *Objective 4C-3 Ceiling heights contribute to the flexibility of building use over the life of the building* | | | Yes | 2.7m ceilings are maximised throughout the units |

| | Objective | Design Criteria | | Objective Achieved | Comment |
|---|---|---|---|---|---|
| Apartment Size and Layout | *Objective 4D-1 The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity* | *Apartments are required to have the following minimum internal areas:* | | Yes | Please refer to the plans in the architectural package |
| | | *Apartment Types* | *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 5m$^2$ each.*<br>*A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m$^2$ each* | | | |
| | | *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* | | | |
| | *Objective 4D-2 Environmental performance of the apartment is maximised* | *Habitable room depths are limited to a maximum of 2.5 x the ceiling height* | | Yes | Unit layouts and facades have been considered together to provide good distribution of natural light. Living and dining rooms generally have a maximum depth of 8000mm, supported by 2700mm ceilings. |
| | | *In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window* | | Yes | |
| | *Objective 4D-3 Apartment layouts are designed to accommodate a variety of household activities and needs* | *Master bedrooms have a minimum area of 10m2 and other bedrooms 9m2 (excluding wardrobe space)* | | Yes | Room sizes meet or exceed minimum dimensions in all units. Some eat in kitchens are provided and therefore widths are inconsistent with living rooms. |
| | | *Bedrooms have a minimum dimension of 3m (excluding wardrobe space)* | | Yes | |
| | | *Living rooms or combined living/dining rooms have a minimum width of:*<br>*3.6m for studio and 1-bedroom apartments*<br>*4m for 2- and 3-bedroom apartments* | | Yes | |

| | Objective | Design Criteria | | | Objective Achieved | Comment |
|---|---|---|---|---|---|---|
| | | *The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts* | | | Yes | |
| Private Open Space and Balconies | *Objective 4E-1 Apartments provide appropriately sized private open space and balconies to enhance residential amenity* | *All apartments are required to have primary balconies as follows:* | | | Yes | Please refer to the plans in the architectural package |
| | | *Dwelling type* | *Minimum Area* | *Minimum Depth* | | |
| | | *Studio* | *4m$^3$* | *-* | | |
| | | *1 bedroom* | *8m$^3$* | *2m* | | |
| | | *2 bedrooms* | *10m$^3$* | *2m* | | |
| | | *3+ bedrooms* | *12m$^3$* | *2.4m* | | |
| | | *The minimum balcony depth to be counted as contributing to the balcony area is 1m* | | | | |
| | | *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 15m$^2$ and a minimum depth of 3m.* | | | Part | All ground level units are provided with one or more terraces with a minimum size of 15sqm. Most units achieve a minimum depth where the ground floor terrace is the primary outdoor space. |
| | *Objective 4E-2 Primary private open space and balconies are appropriately located to enhance liveability for residents* | | | | Yes | All primary balconies and terraces are located adjacent to a living space. |
| | *Objective 4E-3 Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building* | | | | Yes | The balconies form an integral part of the building design. |
| | *Objective 4E-4 Private open space and balcony design maximises safety* | | | | Yes | All balconies can meet the minimum safety provisions |
| Common Circulation and Spaces | *Objective 4F-1 Common circulation spaces achieve good amenity and* | *The maximum number of apartments off a circulation core on a single level is eight* | | | Yes | The maximum number of units off a single core on any level is 8. |

| | Objective | Design Criteria | Objective Achieved | Comment |
|---|---|---|---|---|
| | *properly service the number of apartments* | *For buildings of 10-storeys and over, the maximum number of apartments sharing a single lift is 40* | N/A | This core holds two lifts and benefits from natural light and ventilation. The core serves 35 units so and additional lift is provided such that the maximum number of apartments served per lift is 18<br><br>The east wing holds units and is served by two lifts, with typically 2 units served by a dedicated core on each level.<br>The development is well served by lifts overall, with 4 lifts serving 52 units, and average of 13 units per lift. |
| | *Objective 4F-2 Common circulation spaces promote safety and provide for social interaction between residents* | | Yes | The ground floor lobbies have been designed to allow a direct, clear and legible access from the street. |
| Storage | *Objective 4G-1 Adequate, well designed storage is provided in each apartment* | *In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided:*<br>*Dwelling Type* — *Storage size volume*<br>*Studio* — *4m³*<br>*1 bedroom* — *6m³*<br>*2 bedrooms* — *8m³*<br>*3+ bedrooms* — *10m³*<br>*At least 50% of the required storage is to be located within the apartment* | Yes | All apartment storage meets or exceeds the minimum standard.<br>Most units have more than 50% of the storage internal to the unit. Each apartment also has been a basement storage cage.<br>Please refer to a per-unit schedule of internal storage sizes in the architectural package |
| | *Objective 4G-2 Additional storage is conveniently located, accessible and nominated for individual apartments* | | Yes | Secure basement storage is clearly and accessibly located in the car park. |
| Acoustic Privacy | *Objective 4H-1 Noise transfer is minimised through the siting of buildings and building layout* | | Yes | Care has been taken to avoid major acoustic clashes. The façade facing Pacific Highway has been designed as a barrier to the traffic noise. Apartments on this aspect have been designed to orient towards the north-west, with deeply inset wrap around balconies to mitigate road noise impacts.<br>The loading dock is fully, enclosed within the building to minimise noise transfer. |
| | *Objective 4H-2 Noise impacts are mitigated within apartments through layout and acoustic treatments* | | Yes | Care has been taken to co-locate similar room types where possible and to use buffers, such as wardrobes, between different spaces. |
| Noise and Pollution | *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* | | Yes | The building presents a predominantly solid façade to Pacific Highway with limited glazing. The stepped form of the northern façade allows units along this edge to orient along the site boundary and away from the noise source. |
| | *Objective 4J-2 Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission* | | Yes | Please refer to the acoustic report for details |

| | Objective | Design Criteria | Objective Achieved | Comment |
|---|---|---|---|---|
| Apartment Mix | *Objective 4K-1 A range of apartment types and sizes is provided to cater for different household types now and into the future* | | Yes | The building provides a mix of one to four-bedroom apartments to meet market needs. A range of apartments are provided with additional multi-purpose rooms to further diversify housing choice within the development. |
| | *Objective 4K-2 - The apartment mix is distributed to suitable locations within the building* | | Yes | Apartment types are mixed throughout the building and across the levels |
| Ground Floor Apartments | *Objective 4L-1 Street frontage activity is maximised where ground floor apartments are located* | | Yes | At ground level, individual apartment terrace entries are proposed where possible to further activate the street frontage. |
| | *Objective 4L-2 Design of ground floor apartments delivers amenity and safety for residents* | | Yes | A mix of layered landscape, fencing and walls provides a permeable and varied street frontage that allows casual surveillance of the streets and the building entries. |
| Facades | *Objective 4M-1 Building facades provide visual interest along the street while respecting the character of the local area* | | Yes | Care has been taken to ensure proportionally-balanced-buildings which fit within the grain of the surrounding existing and future context. A consistent palette of materials is applied in different ways to each façade to respond to its unique opportunities and constraints. |
| | *Objective 4M-2 Building functions are expressed by the facade* | | Yes | Each of the facades pursues a different agenda of expressing solid/void, pattern and materiality to address privacy, solar access and views. The macro-forms of each towerette are reflected in the detailing and fenestration, expressing the internal layout through a hierarchy of openings. |
| Roof Design | *Objective 4N-1 Roof treatments are integrated into the building design and positively respond to the street* | | Yes | The roof forms are consistent with the language of the façade. |
| | *Objective 4N-2 Opportunities to use roof space for residential accommodation and open space are maximised* | | Yes | Where possible, roof spaces and the ground plane are given over to communal open spaces |
| | *Objective 4N-3 Roof design incorporates sustainability features* | | Yes | Roof areas will be intensively thermally insulated to maximise passive thermal comfort in the upper-most apartments. The flat roof allows for provision of a solar panel system. |
| Landscape Design | *Objective 4O-1 Landscape design is viable and sustainable* | | Yes | The landscape design has a focus on amenity with the inclusion of key place making elements such as seating and terraces. Simple design elements, high quality materiality of hardscaping along with an appropriate mix of native and introduced plant species will be a long lasting, easy to maintain landscape which can be adapted to suit a variety of uses over time. |
| | *Objective 4O-2 Landscape design contributes to the streetscape and amenity* | | Yes | The landscape design maximises the amenity of the communal open space by balancing planted areas with areas for residents to relax or interact. |

| | Objective | Design Criteria | Objective Achieved | Comment |
|---|---|---|---|---|
| | | | | The streetscape landscape design provides layered plantings to allow an appropriate transition between public and private spaces |
| Planting on Structures | *Objective 4P-1 Appropriate soil profiles are provided* | | Yes | The landscape has been designed with tree planting on-structure and large trees in deep soil zones alongside lower planting zones and shrubs in appropriately sized bases. |
| | *Objective 4P-2 Plant growth is optimised with appropriate selection and maintenance* | | Yes | The landscape has been designed with a diverse range of native and exotic species appropriate to the various areas and planting opportunities. |
| | *Objective 4P-3 Planting on structures contributes to the quality and amenity of communal and public open spaces* | | Yes | Landscape design includes a variety of plantings to soften the communal open space areas. |
| Universal Design | *Objective 4Q-1 Universal design features are included in apartment design to promote flexible housing for all community members* | | Yes | 80% of apartments are capable of achieving the Liveable Housing Guidelines silver level. Please refer to a per-unit schedule of LHG compliance in the architectural package |
| | *Objective 4Q-2 A variety of apartments with adaptable designs are provided* | | Yes | 20% of the units are adaptable with accessible car space. There are a mix of adaptable apartment types |
| | *Objective 4Q-3 Apartment layouts are flexible and accommodate a range of lifestyle needs* | | Yes | The design offers a diverse range of apartment types and layouts |
| Adaptive Reuse | *Objective 4R-1 New additions to existing buildings are contemporary and complementary and enhance an area's identity and sense of place* | | - | N/A |
| | *Objective 4R-2 Adapted buildings provide residential amenity while not precluding future adaptive reuse* | | - | N/A |
| Mixed Use | *Objective 4S-1 Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement* | | - | N/A |
| | *Objective 4S-2 Residential levels of the building are integrated within the development, and safety and amenity are maximised for residents* | | - | N/A |
| Awnings and Signage | *Objective 4T-1 Awnings are well located and complement and integrate with the building design* | | Yes | Awnings are provided over the site entries to provide weather protection to mailboxes and entry gates. The design references materiality and form in the facade |
| | *Objective 4T-2 Signage responds to the context and desired streetscape character* | | Yes | Building identification signage will be located the site entries, adjacent to the proposed letterboxes. |
| Energy Efficiency | *Objective 4U-1 Development incorporates passive environmental design* | | Yes | Passive environmental design features are provided including large tree planting and water elements in the landscape for reduction of temperature. The building design allows for high thermal mass properties |
| | *Objective 4U-2 Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer* | | Yes | The stepped building form allows a high portion of apartments to access the winter sun despite the proximity of the northern neighbour the articulated building façade and deep balconies to each apartment provide for shading in summer and solar |

| | Objective | Design Criteria | Objective Achieved | Comment |
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| | | | | access in winter. Vertical screening has been provided to south-west facades to mitigate the effects of hot afternoon sun in summer. |
| | *Objective 4U-3 Adequate natural ventilation minimises the need for mechanical ventilation* | | Yes | Refer to BASIX assessment |
| Water Management and Conservation | *Objective 4V-1 Potable water use is minimised* | | Yes | Refer to BASIX assessment |
| | *Objective 4V-2 Urban stormwater is treated on site before being discharged to receiving waters* | | Yes | Refer to civil engineer's details |
| | *Objective 4V-3 Flood management systems are integrated into site design* | | - | N/A |
| Waste Management | *Objective 4W-1 Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents* | | Yes | Waste management is handled entirely within the building envelope to minimise impact on the streetscape |
| | *Objective 4W-2 Domestic waste is minimised by providing safe and convenient source separation and recycling* | | Yes | Separate recycling facilities are provided. Refer to Waste Management Report |
| Building Maintenance | *Objective 4X-1 Building design detail provides protection from weathering* | | Yes | Robust finishes have been selected for maintenance and high-durability |
| | *Objective 4X-2 Systems and access enable ease of maintenance* | | Yes | Most of the plant and services are located within the building form. A small area of roof top plant will be accessed from the roof terrace. |
| | *Objective 4X-3 Material selection reduces ongoing maintenance costs* | | Yes | Where possible, high- durability, pre-finished, untreated or natural-finish materials are proposed for building facades. |