

rothelowman

30/06/2022

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Dear Alistair

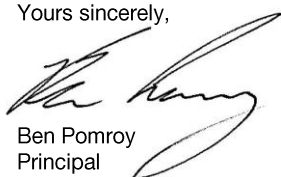
**Re: 4-8 Marshall, 1-5 Canberra, 2-8 Holdsworth Avenues, St Leonards**

I, Ben Pomroy confirm that pursuant to Clause 50(1AB) of the Environmental Planning and Assessment Regulation 2000 (**EPA Reg**), I am a qualified architect, 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. Sepp65 Statement  
ADG Objectives Review

CC. Clare Swan: Ethos Urban

Principals  
Shane Rothe, Kim Lowman,  
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Cowle, Jeff Brown, Duncan  
Betts, Ben Pomroy

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# SEPP 65 Design Quality Principles Statement

Area 1, 2 and 4 St Leonards South

4-8 Marshall, 1-5 Canberra, 2-8 Holdsworth  
Avenues

St Leonards, NSW 2065

Project no. /

**221089**

Status /

**DA**

Rev /

**A**

Date /

**30/06/2022**

## 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 the following 10 allotments: 4, 6, 8 Marshall Avenue, 1, 3 and 5 Canberra Avenue, 2, 4, 6 and 8 Holdsworth avenues, St Leonards. The properties address Canberra avenue to the East, Marshall avenue to the north, and Holdsworth avenue to the West. Along the sites southern boundary are existing residential housing lots.

The proposed development is anticipated in Councils DCP for the subject sites, which encompass 3 separate lot consolidations known as Area 1, Area 2 and Area 4. In addition, the site will provide the delivery of a new Public open space along the Marshall Avenue frontage.

The future neighbourhood character is one of medium and higher density residential development, and the project recognises that the locality is undergoing a transition towards higher densities and heights, as enabled by the planning controls which have been developed to encourage development and promote a liveable and sustainable city.

The ground levels of each building encourage street front activation and articulated built form, whilst at the same time will not dominate or be overbearing upon the adjoining neighbours, with the streetscape consistent with the future form of the area.

## 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 and matches the anticipated built form of the St Leonards South DCP masterplan. The site is comprised of 3 areas identified within the St Leonards South masterplan, namely Area 1, Area 2, Area 4 and the future public open space to Marshall Ave.

The built form proposed aligns with the building heights, setbacks and form across each Area set out within the DCP.

Tower 1 is defined as a single, articulated tower form that holds the required alignment to the green spine to its western edge. Its northern edge is broken into two distinct elements that setback from the adjacent property at 2 Marshall Avenue. The Eastern façade is heavily articulated to maximise solar access and views from the subject apartments, with the majority of the façade setback within that envisaged by the DCP envelopes. A street podium height of 3-4 storeys is proposed, well below the maximum anticipated in the DCP of 6-storeys, this enables the project to better fit with the existing context to the north and transition to the future context to the south. The southern boundary of the development is setback at or greater than the separation requirements anticipated under the ADG. An appropriate setback has been developed between the subject proposal and the existing house at 2 Marshall Avenue, with an extension of the public open space between the two sites providing an appropriate landscape buffer

Tower 2 is a lower, mid-rise building with a similar alignment to the green spine along its Eastern façade to respond to Tower 1. Its northern end is articulated as two forms to transition from the edge of the new public park, to holding the corner of the subject site on Holdsworth Avenue. The Western elevation to Holdsworth Avenue, presents as a 4-storey podium that transitions over levels 5 and 6 to the main tower form setback. This gradual transition allows for deeper shading devices to the sites western edge, and to enable alternative apartment layouts to these mid-rise levels. The southern edge is a 4-5 storey podium with transitioning setbacks across the 6-8<sup>th</sup> levels in accordance with the ADG.

Tower 4 is a low-rise building, with a similar western massing to Tower 2 with a gradual transition from a 4-storey podium to the 5<sup>th</sup> and 6<sup>th</sup> floors and tower above. The southern boundary transitions from a 4-storey podium through to the 8<sup>th</sup> storey setback, in accordance with the increasing setback requirements of the ADG. The eastern edge of Tower 4 is defined by the requirements of the green spine, with the northern façade of Tower 4 responding directly to the southern edge of Tower 2 with increasing setbacks throughout the 4<sup>th</sup> to 8<sup>th</sup> levels.

All architectural treatments and colour and material palettes have been developed to distinguish the differing programmatic uses. Individual apartments are legible within the overall composition of the building, and communal spaces are similarly identified. The articulated street wall forms of each building and tower creates a strong visual presence and order to the streetscape.

The building facades have been articulated and setback to provide an appropriate street condition when viewed from surrounding areas and will achieve the desired future character of the area.

### 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 context, with the nominated controls for the site under the LEP varying across the three Areas and multiple lots that form the subject site.

In accordance with advice from councils planning officers, the FSR calculations for both Area 2 and Area 4 will be undertaken as an aggregate of both sites. This is to provide a more appropriate built form transition between the surrounding context and achieve a higher level of amenity to apartments within each building.

In regards to the three relevant areas, the proposed GFA is as follows.

Area 1 – Site area 2,736.5sqm, FSR control of 3.85:1 and a height limit of 65m, with a proposed GFA of 10,535.5sqm. (proposed FSR of 3.85:1)

Area 2 – Site area 2,320.5sqm, FSR control of 3.55:1 and a height limit of 53m, with a proposed GFA of 8,525.8sqm (proposed FSR of 3.67:1)

Area 4 – Site area 1,670.5sqm, FSR control of 3.55:1 and a height limit of 44m, with a proposed GFA of 5,642.3sqm (proposed FSR of 3.37:1)

Area 2 and Area 4 have an identical FSR control, the maximum permissible GFA across both sites will be aggregated. The combined site area of Area 2 and Area 4 is 3,991sqm, with an FSR of 3.55:1 the maximum GFA is 14,168.1sqm. The proposed aggregate GFA of Area 2 and Area 4 is 14,161.1sqm.

The design proposal therefore complies with both the maximum GFA provisions, and maximum height in metres for each part of the development.

## 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 cycle, including construction.

Energy efficient building response is developed through passive design and sun control elements. The building design is characterised by an external architecture that responds to the specific climatic conditions of Northern Sydney. Apartments have been designed to take advantage of key aspects, and maximising opportunities for passive natural ventilation through corner, or multi-level dwellings. This approach will create 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. Living areas of the apartments are orientated to the North-East and North-West where possible to achieve excellent solar access and district views. Where apartments are orientated to the West, deep façade and shading devices are incorporated.

Significant overshadowing impacts have been analysed and demonstrated in the attached urban design review. The result of these overshadowing impacts, combined with significant views from the site to the south lead to a slight shortfall in the target of Solar accessible apartments. Overall, the project has 64% (149) Residential apartments with 2 hours' solar access between 9.00am and 3.00 pm. To maximise the available solar access to all dwellings, the project contains less than 2% apartments with no sun in mid-winter, with over 70% of apartments within the development achieved 1hr 45mins of solar access at the winter solstice.

The layout and breakup of the development into three separate buildings, and use of a high quantity of cross through layouts results in 68.5% (159) Residential apartments being cross-ventilated, by either cross or corner air flow.

A high-performance average of over 6.4 star NatHERS rating is achieved for all dwellings on the site, with a high quantity of dwellings achieving 7 stars. The carbon footprint is further reduced by energy efficient appliances: high efficiency integrated refrigerators, dishwashers and washing machines, microwave ovens; fittings and services such as water reduction showerheads, dual flush toilets, gas cook tops, and energy efficient hot water systems. Detailed provisions are included within the accompanying ESD report.

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 sites masterplan seeks to create significant landscape areas for the use of the public through delivery of a public park of 1,300sqm, and in addition significant communal open space areas for private use by residents of the development. A multitude of landscape open spaces are provided on the site to achieve this.

The green spine area of the development is provided with greater than 50% deep soil landscaping in accordance with the site Landscape Masterplan. This allows for significant existing and future tree planting areas. A multitude of active and passive communal open spaces have been designed into the green spine area,

Street frontages and side boundaries are intensely landscaped to provide high quality visual outlook for residents on the subject site and provide separation and privacy between developments on adjacent blocks.

A large communal open space area is provided at upper ground level to Tower 1 with an open air pool area and several enclosed communal rooms for use of all residents within the development.

Tower 2 contains a podium communal area with internal and external rooms directly connected to the main building lobby and orientated to address the public park and access northern light.

The roof of both Tower 2 and Tower 4 are provided with direct lift access to landscaped communal open areas for the use by residents.

A total area of 1353.5sqm of deep soil (25% of the nett developable) is provided across the development. In addition to this, a new 1,300sqm public park is being created, along with a structured deep soil area of 840sqm. These areas combined creating opportunities for healthy growth of new canopy trees. The landscaping and external amenity spaces provided will contribute to the enjoyment of these areas.

## 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 232 residential apartments with a mix of 46 x 1 beds (19.8%), 103 x 2 beds (44.5%), 40 x 3 beds (17.3%), 15 x 4 beds (6.4%) and 28 affordable 2-Bed apartments (12%).

A total of 314 car spaces are provided through-out two levels of basements with secure parking comprising 278 residential apartments' car spaces and 36 visitor car spaces including parking for the accessible and adaptable apartments.

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.

The internal size of each apartment room is at or above the minimums set out in the Apartment Design Guide, with the internal layouts focused on generous living areas, and high levels of access to natural light.

## 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 to avoid hidden corners or concealment points with secure gates provided to any deep recesses within the building form. The apartment and corridor layouts encourage passive surveillance over the street and communal open spaces.

Controlled vehicular access to the building is provided by a single secure car park access points from Canberra Avenue, with direct access from the car park to the lift lobbies for residents, the audio intercom system at the main entry lobby, car park entry to communicate with residents and key card access for residents.

## 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:

The development comprises of a diverse range of apartment types, sizes and configurations. A range of apartment sizes from smaller 1 and 2-bedroom apartments, to larger 3 and 4 bedroom apartments are provided.

Alternative configurations of dwellings provide for a wider demographic, including family terrace style dwellings that have large private ground floor open spaces. Roof top two-storey dwellings create a high amenity apartment, with private open spaces on the roof top. In the podium levels a diverse series of one and two storey apartments are also provided with generous external terraces to create an alternative living arrangement. Apartment configurations are similarly offered with many corner, or dual aspect arrangements.

Affordable housing is included within the development to account for the needs of the existing, and future local community, and to provide for key-workers in the St Leonards area.

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.

## 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 positive elements of the existing neighbourhood.

An extensive material palette has been developed that responds to each of the surrounding streets existing and future contexts, along with colours and tones that reflect the existing vegetation of each street.

The three buildings have been designed with unique design languages that respond to their context. The lower scale podium treatment mediates between the existing lower scale housing in the precinct, transitioning to the future taller developments around the site. The activation of the streetscape is provided through warmer, higher texture finishes to the ground floor town homes.

The building is grounded in its context through the use of extensive sandstone walls and planters that reflect the existing natural conditions in the area. The podium itself is formed from natural finish concrete upstand planting and expressed columns that create a deep colonnade connecting to the ground plane.

The podium treatments of the buildings along Holdsworth avenue respond to the heights of the existing street tree canopy, and in order to provide solar protection to the west. The colour palette in the mid-rise levels create a transition through the introduction of warmer metallic elements and charcoal expressed structure to stitch the mid-rise to the concrete podium.

The tower forms themselves are then designed to create different and unique responses in form and shaping to each tower, and each orientation. Deep shading projections are created to West and north, with an increase in the solid/void ratio to suit thermal performance requirements.

In addition to the expressed finished concrete edges, is applied a deep bronze toned screening language that provides a deep shade element to all exposed glazing facing west. This creates a sense of movement and shadow across the facades throughout the day.

The detail materials palette has been prepared for the application, and these materials reference the natural tones and colours of the surrounding landscape.

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 through the use of rich but simple material selections, proportions and simple building forms.



# Apartment Design Guide Objectives – Part 3 & 4

4-8 Marshall, 1-5 Canberra, 2-8 Holdsworth  
Avenues St Leonards

Project no. / **221089**      Status / **DA**      Rev / **A**      Date / **30/06/2022**

Revision	Date		Notes – Revisions are noted in bold italics	
A	30/6/2022		DA 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 context study.
Orientation	Objective 3B-1 Building types and layouts respond to the streetscape and site while optimising solar access within the development		Yes	The proposed buildings are aligned to the street grid and create a block-defining urban form. This street grid seeks to maximise solar access to the main public and private communal open spaces. The building forms, and the detail layouts of the apartments seek to optimise the solar access available to the defined building envelopes.
	Objective 3B-2 Overshadowing of neighbouring properties is minimised during mid-winter		Yes	The Design proposal is in accordance with the Building envelopes set out as part of the DCP and Masterplan for the area. As such, the proposed developments have been designed to sit within these envelopes in order to match or reduce the quantity of overshadowing to developments to the south of the subject site.
Public Domain Interface	Objective 3C-1 Transition between private and public domain is achieved without compromising safety and security		Yes	Access from the public street to the building entries are straight, clear and legible, providing safe access to the proposed development.  Pedestrian paths are provided through the site. The Ground floor terrace type apartments create high levels of activation to all the street interfaces.
	Objective 3C-2 Amenity of the public domain is retained and enhanced		Yes	The public domain of all adjacent streets is enhanced with distinct, and prominent building entries. The building entries are legible and all services, loading and car parking, where possible, are in secure zones behind screening, and out of view of the public domain.

	Objective	Design Criteria	Objective Achieved	Comment		
Communal and Public Open Space	Objective 3D-1 An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping	Communal open space has a minimum area equal to 25% of the site (see figure 3D.3) Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid-winter)	Yes	The communal open spaces achieve the 25% minimum as identified in the communal open space drawings. The communal open space will include high quality landscaping and place making features such as plantings, bench seating, BBQ and dining areas, promoting high amenity and useability of the space.  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  Detail diagrams are attached in the Architectural drawing package.		
	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 and landscape 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. They are overlooked by private terraces and upper-level apartments, promoting passive surveillance.		
	Objective 3D-4 Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood		Yes	A new public open space is provided at the northern end of the site, in accordance with the St Leonards South Landscape Masterplan.		
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 exceeds the minimum requirement of 25% of the site area. The dimensions of the deep soil zones exceed the minimum 6m dimension for 7% of the site as required under the Apartment Design Guide.  The deep soil zones will host significant tree plantings. 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 landscape architect's drawings	
		Site Area	Min Dimensions			Deep Soil Zone (% of Site Area)
		Less than 650m <sup>2</sup>	-			7%
		650m <sup>2</sup> -1500m <sup>2</sup>	3m			
		Greater than 1500m <sup>2</sup>	6m			
		Greater than 1500m <sup>2</sup> 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	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:		Yes	The Apartment Design Guide provides an 'Objective', followed by 'Design Criteria' and also 'Design Guidance'. The Apartment Design Guide provides that these perform the following role:	

Objective	Design Criteria			Objective Achieved	Comment
<p><i>Note: Separation distances between buildings on the same site should combine required building separations depending on the type of room</i></p>	Building Height	Habitable rooms and balconies	Non-habitable rooms		<p>1. A description of the topic and an explanation of its role and importance 2. <b>Objectives</b> that describe the desired design outcomes 3. <b>Design criteria</b> that provide the measurable requirements for how an objective can be achieved. 4. <b>Design guidance</b> that provides advice on how the objectives and design criteria can be achieved through appropriate design responses, or in cases where design criteria cannot be met.</p> <p>Objective 3F-1 of the ADG states the following:</p> <p><i>Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy</i></p> <p>Therefore, the desired outcome is to 'achieve reasonable levels of external and internal visual privacy'. The Design Criteria provides a measurable standard which, if satisfied, is one method for demonstrating that this objective is achieved. The measurable standard is a separation distance from the boundary of 6 metres for habitable rooms and balconies up to 4 storeys, and 9 metres for habitable rooms and balconies from 5-8 storeys. This measurable standard is one method for demonstrating the achievement of the desired design outcome of the Objective but does not preclude an alternative method for achieving this objective.</p> <p>In this instance, the proposal adopts meets or exceeds these minimum setback dimensions between all residential buildings.</p> <p>Breaks in the building form are proposed between buildings 2, and 4 where carefully placed windows and privacy screens are proposed in order to meet the objectives of the Apartment Design Guide.</p> <p>Accordingly, the proposed design successfully satisfies Objective 3F-1 of the ADG in those reasonable levels of external and internal visual privacy are achieved by the application.</p>
	Up to 12m (4 storeys)	6m	3m		
	Up to 25m (5-8 storeys)	9m	4.5m		
	Over 25m (9+ storeys)	12m	6m		
<p><i>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</i></p>				Yes	<p>The comprehensive solar and view analysis has allowed for buildings to be sited, and heights modulated, to take advantage of key views and solar access. Privacy between</p>

	Objective	Design Criteria	Objective Achieved	Comment
				apartments has been considered in the building separation and internal space planning.
Pedestrian Access and Entries	<i>Objective 3G-1 Building entries and pedestrian access connects to and addresses the public domain</i>		Yes	Each building has a clear entrance to that addresses the footpath and public domain. Care has been taken to create legible and permeable access for pedestrians throughout the development.
	<i>Objective 3G-2 Access, entries and pathways are accessible and easy to identify</i>		Yes	Building lobbies to each building are identified through double height volumes and covered communal spaces. Broad pedestrian entrance paths framed with landscaping along with expressive colour treatments identify each of the 3 building entrances.
	<i>Objective 3G-3 Large sites provide pedestrian links for access to streets and connection to destinations</i>		Yes	The site is provided with entrances from each of the street frontages, and high levels of internal pedestrian connectivity across each of the communal open spaces.
Vehicle Access	<i>Objective 3H-1 Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes</i>		Yes	Car park and loading access points are consolidated to minimise interruption to street frontages. The vehicle access point is clear and legible, and separated from pedestrian entries to separate the movements of each.
Bicycle and Car Parking	<i>Objective 3J-1 Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas</i>	<i>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.</i>	Yes	Car parking has been provided to comply with the requirements of the Lane Cove DCP.
	<i>Objective 3J-2 Parking and facilities are provided for other modes of transport</i>		Yes	Secure visitor bicycle parking is provided in the basements. All storage cages in the basements are large enough to accommodate bicycles for residential bicycle parking.
	<i>Objective 3J-3 Car park design and access is safe and secure</i>		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	Design Criteria	Objective Achieved	Comment
				Non-residential spaces are clearly identified and separated from residential parking spaces with boom gates and access control.
	<i>Objective 3J-4 Visual and environmental impacts of underground car parking are minimised</i>		Yes	The Carpark entry ramps are integrated within the ground plane landscaping strategy, with elevated planters over the entry to each carpark to minimise the visual presentation to the street.  The Carpark entry point has been located on the lowest point on the subject site to minimise its appearance from the public domain.
	<i>Objective 3J-5 Visual and environmental impacts of on-grade car parking are minimised</i>		N/A	-
	<i>Objective 3J-6 Visual and environmental impacts of above ground enclosed car parking are minimised</i>		Yes	Where the steep terrain of the site exposes part of the basement carparking, this area is heavily planted and enclosed with high quality finishes.
Solar and Daylight Access	<i>Objective 4A-1 To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space</i>	<i>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</i>	Partial	64% of apartments achieve two hours of solar access between 9am and 3pm in midwinter. Please refer to a breakdown of solar access per unit in the architectural drawings and a detailed solar analysis in the Urban Design Report
		<i>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</i>	N/A	
		<i>A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid-winter</i>	Yes	Less than 2% of the apartments receive no direct sun.
	<i>Objective 4A-2 Daylight access is maximised where sunlight is limited</i>		N/A	
	<i>Objective 4A-3 Design incorporates shading and glare control, particularly for warmer months</i>		Yes	The articulated facades are designed for summer shading with deep balconies, and bris soleil devices to protect exposed glazing without complicated mechanical systems.
Natural Ventilation	<i>Objective 4B-1 All habitable rooms are naturally ventilated</i>		Yes	Openable windows are proposed for all habitable rooms.
	<i>Objective 4B-2 The layout and design of single aspect apartments maximises natural ventilation</i>		Yes	Single Aspect apartments are minimised throughout the masterplan. Openable windows are proposed for all habitable rooms.

	Objective	Design Criteria		Objective Achieved	Comment
	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.  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	Single-aspect apartments have been designed with open-plan layouts and wide frontages to maximise any available natural ventilation. At least 60% of apartments are naturally cross-ventilated.  Cross through apartments are limited to 18m in depth Please refer to a breakdown of cross-ventilation per unit in the architectural drawings.
		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 throughout the development are a minimum of 3200mm.  The floor-to-floor heights of the residential levels allow 2700mm ceilings to all living areas and bedrooms.  Two storey apartments are proposed with bedroom levels less than 50% of the overall apartment area having ceiling heights of a minimum 2.4m high.  2400mm high ceiling zones are proposed over kitchen preparation areas to enable adequate space for services.
		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 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 flat ceilings in living areas and bedrooms.		
Objective 4C-3 Ceiling heights contribute to the flexibility of building use over the life of the building	N/A	-			
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 apartment sizes indicated in the architectural drawings.
		Apartment Types	Minimum Internal Area		
		Studio	35m²		

Objective	Design Criteria		Objective Achieved	Comment
	1 Bedroom	50m <sup>2</sup>		
	2 Bedroom	70m <sup>2</sup>		
	3 Bedroom	90m <sup>2</sup>		
	The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m <sup>2</sup> each. A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m <sup>2</sup> 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	
	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	
	Bedrooms have a minimum dimension of 3m (excluding wardrobe space)		Yes	
	Living rooms or combined living/dining rooms have a minimum width of: 3.6m for studio and 1-bedroom apartments 4m for 2- and 3-bedroom apartments		Yes	
	The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts		Yes	



	Objective	Design Criteria	Objective Achieved	Comment
Private Open Space and Balconies	<i>Objective 4E-1 Apartments provide appropriately sized private open space and balconies to enhance residential amenity</i>	<i>All apartments are required to have primary balconies as follows:</i>	Yes	Please refer to balcony sizes indicated in the architectural drawings.  Large service zones have been allocated for clustering of AC units away from some private balconies.  Many dwellings have dual balconies and as such can fit the AC units whilst still complying with minimum area requirements.
		<i>Dwelling type      Minimum Area      Minimum Depth</i>		
		<i>Studio                      4m<sup>3</sup>                      -</i>		
		<i>1 bedroom                8m<sup>3</sup>                      2m</i>		
		<i>2 bedrooms              10m<sup>3</sup>                    2m</i>		
		<i>3+ bedrooms            12m<sup>3</sup>                    2.4m</i>		
		<i>The minimum balcony depth to be counted as contributing to the balcony area is 1m</i>		
		<i>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<sup>2</sup> and a minimum depth of 3m.</i>	Yes	As above
	<i>Objective 4E-2 Primary private open space and balconies are appropriately located to enhance liveability for residents</i>		Yes	All primary balconies and terraces are located adjacent to a living space.
	<i>Objective 4E-3 Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building</i>		Yes	The balconies form an integral part of the building design, with their expression forming a key part of defining the legibility of the building as residential in nature and creating the architectural form.
	<i>Objective 4E-4 Private open space and balcony design maximises safety</i>		Yes	All balconies can meet the minimum safety provisions
Common Circulation and Spaces	<i>Objective 4F-1 Common circulation spaces achieve good amenity and</i>	<i>The maximum number of apartments off a circulation core on a single level is eight</i>	Partial	The maximum number of units off a single core on any level is nine on a single level of one building. For all other levels, and other buildings the quantity of apartments per floor range from

	Objective	Design Criteria	Objective Achieved	Comment
	<i>properly service the number of apartments</i>	<i>For buildings of 10-storeys and over, the maximum number of apartments sharing a single lift is 40</i>	N/A	2 to 8. On all levels, corridors are provided with multiple points of access to natural light and ventilation to the lobby. No building within the development contains greater than 30 apartments served from a single lift core with all buildings containing two lifts.
	<i>Objective 4F-2 Common circulation spaces promote safety and provide for social interaction between residents</i>		Yes	The ground floor lobby for each building has been designed to allow a direct, clear and legible access from each public street.
Storage	<i>Objective 4G-1 Adequate, well designed storage is provided in each apartment</i>	<i>In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided:</i>	Yes	All apartment storage meets or exceeds the minimum standard. All units have 50% of the storage internal to the unit. Each apartment also has been a basement storage cage within a communal storage area, or individual cage adjacent the parking space. Please refer to a per-unit schedule of internal storage sizes in the architectural drawings.
		<i>Dwelling Type</i>		
		<i>Studio</i>		
		<i>1 bedroom</i>		
		<i>2 bedrooms</i>		
		<i>3+ bedrooms</i>		
		<i>At least 50% of the required storage is to be located within the apartment</i>		
	<i>Objective 4G-2 Additional storage is conveniently located, accessible and nominated for individual apartments</i>		Yes	Secure basement storage is clearly and accessibly located in the car park.
Acoustic Privacy	<i>Objective 4H-1 Noise transfer is minimised through the siting of buildings and building layout</i>		Yes	Care has been taken to avoid major acoustic clashes and limiting windows onto narrow spaces.
	<i>Objective 4H-2 Noise impacts are mitigated within apartments through layout and acoustic treatments</i>		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	<i>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</i>		N/A	-
	<i>Objective 4J-2 Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission</i>		N/A	-
Apartment Mix	<i>Objective 4K-1 A range of apartment types and sizes is provided to cater for different household types now and into the future</i>		Yes	The building provides a mix of 1, 2, and 3 and 4 bedroom apartments to meet market needs. Multi-storey apartments are provided on ground floor locations with large private ground floor terraces, along with roof top dwellings that locate living spaces on the upper floor to maximise amenity. Affordable housing is provided within the development to provide for the needs of the surrounding community and to meet the requirements of the DCP

	Objective	Design Criteria	Objective Achieved	Comment
	<i>Objective 4K-2 - The apartment mix is distributed to suitable locations within the building</i>		Yes	Apartment types are mixed throughout the buildings.
Ground Floor Apartments	<i>Objective 4L-1 Street frontage activity is maximised where ground floor apartments are located</i>		Yes	Ground level terrace style apartments are provided on each of the project's street frontages, with private access gates, and terraces to activate the streetscape.
	<i>Objective 4L-2 Design of ground floor apartments delivers amenity and safety for residents</i>		Yes	Ground floor courtyards are provided with 1.5m high fencing and gates that provide secure private open spaces. Landscape screening enhances their visual privacy.
Facades	<i>Objective 4M-1 Building facades provide visual interest along the street while respecting the character of the local area</i>		Yes	Care has been taken to ensure proportionally-balanced-buildings which fit within the surrounding future context. A diverse mix of façade typologies has been developed for this project to give each form a unique presence.
	<i>Objective 4M-2 Building functions are expressed by the facade</i>		Yes	Each façade confidently addresses its specific function through varying materials and forms, with high proportions of glazing expressing retail and commercial functions in contrast to the more solid residential component.  An aesthetic has been developed that clearly connects the precinct but expresses the residential nature of the primary building forms.
Roof Design	<i>Objective 4N-1 Roof treatments are integrated into the building design and positively respond to the street</i>		Yes	The roof has been carefully integrated into the overall aesthetic of the facades and neighbouring context. Landscaped roof-top spaces, and two storey dwellings in some of the towers amplify the connection of the roof to the levels below.
	<i>Objective 4N-2 Opportunities to use roof space for residential accommodation and open space are maximised</i>		Yes	Roof top spaces have been designed to maximise both communal and private open spaces.
	<i>Objective 4N-3 Roof design incorporates sustainability features</i>		Yes	Roof areas will be intensively thermally insulated to maximise passive thermal comfort in the upper-most apartments. All rooftops are provided with large planting areas to minimise stormwater run-off.
Landscape Design	<i>Objective 4O-1 Landscape design is viable and sustainable</i>		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.
	<i>Objective 4O-2 Landscape design contributes to the streetscape and amenity</i>		Yes	The landscape design maximises the amenity of the communal open space by balancing planted areas with areas for residents to relax or interact.
	<i>Objective 4P-1 Appropriate soil profiles are provided</i>		Yes	The landscape has been designed with tree planting on-structure and large trees in deep soil zones alongside lower

	Objective	Design Criteria	Objective Achieved	Comment
Planting on Structures				planting zones and shrubs in appropriately sized bases. Details are provided in the landscape architects documentation
		<i>Objective 4P-2 Plant growth is optimised with appropriate selection and maintenance</i>	Yes	The landscape has been designed with a diverse range of native and species appropriate to the various areas and planting opportunities.
		<i>Objective 4P-3 Planting on structures contributes to the quality and amenity of communal and public open spaces</i>	Yes	Landscape design includes a variety of plantings to soften the communal open space areas. All Landscape areas on structure are provided with tree planting areas.
Universal Design		<i>Objective 4Q-1 Universal design features are included in apartment design to promote flexible housing for all community members</i>	Yes	At least 20% of apartments can achieve the Liveable Housing Guidelines silver level. Please refer to a per-unit schedule of LHA compliance in the architectural drawings.
		<i>Objective 4Q-2 A variety of apartments with adaptable designs are provided</i>	Yes	20% of the units are adaptable with accessible car space.
		<i>Objective 4Q-3 Apartment layouts are flexible and accommodate a range of lifestyle needs</i>	Yes	The design offers a diverse range of apartment types
Adaptive Reuse		<i>Objective 4R-1 New additions to existing buildings are contemporary and complementary and enhance an area's identity and sense of place</i>	N/A	-
		<i>Objective 4R-2 Adapted buildings provide residential amenity while not precluding future adaptive reuse</i>	N/A	-
Mixed Use		<i>Objective 4S-1 Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement</i>	N/A	-
		<i>Objective 4S-2 Residential levels of the building are integrated within the development, and safety and amenity are maximised for residents</i>	N/A	-
Awnings and Signage		<i>Objective 4T-1 Awnings are well located and complement and integrate with the building design</i>	N/A	-
		<i>Objective 4T-2 Signage responds to the context and desired streetscape character</i>	Yes	Building identification signage will be located at the building entrances on the three street frontages
Energy Efficiency		<i>Objective 4U-1 Development incorporates passive environmental design</i>	Yes	Passive environmental design features are provided including large tree planting and water elements in the landscape for reduction of temperature.  Deep setback façade elements are provided throughout the scheme to provide protection from direct solar exposure. High levels of cross ventilation are provided to apartments along with natural ventilation to common circulation corridors.
		<i>Objective 4U-2 Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer</i>	Yes	The general orientation of buildings in a north-south axis assists with solar access and shading for all of the apartments. The articulated building façade, screening elements and balconies to each apartment provide shading in summer and solar access in winter.

	Objective	Design Criteria	Objective Achieved	Comment
				The facade of each building facing west has been heavily articulated and designed to reduce heat gain in summer through careful sizing of windows, and integration of Solar shading devices.
	<i>Objective 4U-3 Adequate natural ventilation minimises the need for mechanical ventilation</i>		Yes	Refer to BASIX assessment
Water Management and Conservation	<i>Objective 4V-1 Potable water use is minimised</i>		Yes	Refer to BASIX assessment
	<i>Objective 4V-2 Urban stormwater is treated on site before being discharged to receiving waters</i>		Yes	Refer to civil engineer's details
	<i>Objective 4V-3 Flood management systems are integrated into site design</i>		Yes	Refer to civil engineer's details
Waste Management	<i>Objective 4W-1 Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents</i>		Yes	Waste management is handled entirely within the building envelope to minimise impact on the streetscape.
	<i>Objective 4W-2 Domestic waste is minimised by providing safe and convenient source separation and recycling</i>		Yes	Separate recycling facilities and rooms for each apartment are provided. Refer to Waste Management Report
Building Maintenance	<i>Objective 4X-1 Building design detail provides protection from weathering</i>		Yes	Robust finishes have been selected for maintenance and high durability. Where possible natural finish materials are incorporated to reduce requirements for refinishing in the future.
	<i>Objective 4X-2 Systems and access enable ease of maintenance</i>		Yes	Hatch access is provided to all rooftop plant and equipment. Other services areas are located on the ground floor or within the basements.
	<i>Objective 4X-3 Material selection reduces ongoing maintenance costs</i>		Yes	Where possible, high- durability, pre-finished, untreated or natural-finish materials are proposed for building facades.