

RESPONSE TO APARTMENT DESIGN GUIDELINES - DESIGN PRINCIPLES

Principle 1: Context And Neighbourhood Character

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

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

Principle 1 Response

The design proposal is informed by the qualities of Leppington’s evolving urban landscape and its strategic role within Sydney’s South West Growth Area. The design responds to the site’s location south of Leppington Train Station and west of Rickard Road by creating a connected, mixed use precinct that strengthens pedestrian movement between future residential, retail and transport destinations. Building orientation and massing respond to the emerging town centre structure, future road extensions and the transition from former rural land to a higher density mixed-use urban environment, ensuring the development aligns with the aspirational future neighbourhood character.

The integration of public open spaces, activated ground plane uses, and a strong linear park network reinforces the identity of the area and contributes positively to the evolving public domain. The proposal supports Leppington’s transformation into a vibrant strategic centre associated with the Western Sydney Airport growth corridor by delivering high-quality architecture that is grounded in place, responsive to community aspirations and reflective of the area’s future urban character.

Principle 2: Built Form And Scale

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

Good design also achieves an appropriate built form for 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

Principle 2 Response

The eight distinct buildings are composed to respond to the site’s aspirational urban context and future town centre character. Building placement and heights are carefully calibrated to maintain solar access to public spaces, reinforce important pedestrian connections and provide an appropriate transition to surrounding future development. Articulation, modulation and facade depth provide visual interest and reduce the perceived bulk of the buildings, creating a refined architectural presence along Rickard Road Byron Road and the future extended street network.

Built form edges clearly define and activate the public domain, with podium elements responding to the human scale and supporting ground-floor retail, residential entries and communal uses. The overall composition establishes a contemporary identity that contributes positively to Leppington’s evolving skyline while ensuring high-quality internal amenity and outlook for residents.

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 an 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.

Principle 3 Response

The proposed density is strategically aligned with Leppington’s role as a growing strategic centre and its proximity to major public transport infrastructure, including Leppington Train Station, as well as future employment opportunities associated with the Western Sydney Airport corridor. Concentrating density on this centrally located site allows for efficient use of land, supports walkability and reinforces the emerging town centre structure and future retail and community amenity.

Importantly, the built form achieves an efficient yet balanced residential yield, with each tower core servicing approximately 6 to 7 apartments per floor. This represents a strong and well-considered density outcome that supports development feasibility while maintaining high standards of residential amenity, circulation efficiency and building functionality.

The strong provision of internal and external amenity ensures that increased density is achieved without compromising liveability. Generous access to sunlight, ventilation, open space and outlook, combined with diverse housing options including affordable and accessible dwellings, ensures that density contributes positively to both the precinct and the broader community. The proposal

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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.

Principle 4 Response

The proposal embraces sustainability through environmental performance, social equity and long-term economic value across the precinct. Passive design strategies such as building orientation and placement, cross ventilation, deep balconies and facade articulation improve thermal comfort and solar control while reducing reliance on mechanical systems. In addition, durable, low-maintenance materials and the use of prefabricated elements reduce waste and extend the precinct’s lifecycle performance.

Sustainability is also delivered socially and economically. The precinct offers diverse housing, including affordable and adaptable dwellings, ensuring equitable access and community inclusivity. Flexible floorplates and adaptable public spaces support changing needs over time, while planned retail and mixed-use components create ongoing economic value and support the emerging town centre. Through landscape-led design and the delivery of publicly accessible open spaces, the proposal strengthens community connection and enhances long-term liveability within Leppington’s growing urban environment.

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 usability, privacy and opportunities for social interaction, equitable access, respect for neighbour’s amenity, provides for practical establishment and long term management.

Principle 5 Response

The proposal places landscape at the heart of the precinct to create a climate-responsive and highly liveable environment. New canopy planting and landscaped public spaces contribute to a cooler microclimate, enhance biodiversity and reinforce the evolving green character of Leppington as it transitions from a rural landscape to a vibrant urban centre.

The coordination of water and soil management through sensitive design principles such as permeable surfaces, thoughtful drainage and layered planting improves overall environmental performance. Landscaped terraces, shaded walkways and passive recreation areas provide comfortable and equitable spaces for social interaction while maintaining privacy for adjoining properties and future neighbouring developments. In doing so, the landscape strategy strengthens ecological outcomes and delivers functional, attractive spaces that support long-term community use and stewardship.

Principle 6: Amenity

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

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

Good amenity is provided for neighbours and residents through appropriate setbacks, built forms and internal planning.

Principle 6 Response

Amenity has been carefully considered to ensure high-quality living environments for residents and welcoming public spaces for the broader Leppington community.

Apartments are planned with efficient layouts and access to outdoor areas. Building orientation and placement maximise natural light, cross ventilation and outlooks, while deep balconies improve thermal comfort and solar control. Acoustic and visual privacy are strengthened through thoughtful planning of core locations, setbacks and screening elements. A diverse range of apartment types accommodates different households, age groups and accessibility needs, including adaptable and accessible dwellings.

At the precinct level, appropriate building separation and sensitive massing ensure sunlight access to communal and public spaces while minimising overshadowing to neighbouring properties and future development sites. Active ground-floor uses, open-air connections and clear pedestrian circulation enhance safety, comfort and permeability, supporting both residents and visitors.

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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.

Principle 7 Response

Safety has been carefully considered through the design, with clear sightlines, intuitive circulation and strong passive surveillance embedded throughout the precinct. The arrangement of ground-floor retail, communal areas and residential lobbies ensures that public edges are consistently activated, providing natural oversight throughout the day and evening. Well-lit pedestrian routes, visible entries and clearly defined access points distinguish between public, semi-public and private areas, enhancing security while maintaining permeability.

The design also supports safe pedestrian movement through the evolving town centre by strengthening connections to surrounding streets, future road extensions and Leppington Train Station. Durable materials, high-quality lighting and clear wayfinding contribute to a safe, legible and easily maintained

Principle 8: Housing Diversity And Social Interaction

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

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

Principle 8 Response

The precinct offers a diverse range of housing options that respond directly to Leppington’s current and future community needs. This includes a mix of apartment sizes and configurations designed to accommodate a variety of household types, living arrangements and affordability requirements. The inclusion of adaptable and accessible apartments further ensures equitable access for residents with varying mobility needs.

Communal and public spaces are designed to encourage social interaction across different age groups and lifestyles. Landscaped communal open spaces, shaded seating areas and shared gathering spaces provide opportunities for informal meetings, recreation and community activity. The integration of retail and public domain improvements at ground level further supports an active and connected

Principle 9: Aesthetics

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

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

Principle 9 Response

The architectural language of the precinct is shaped by Leppington’s emerging urban identity and its transition from a rural landscape to a contemporary mixed-use centre. A balanced composition of forms, proportions and materials expresses the internal structure while contributing positively to the future character of Rickard Road and the surrounding town centre precinct. Varied textures, warm tones and facade articulation create visual depth and reduce the perceived scale of the buildings, ensuring the development remains refined, contextual and human-scaled.

The design draws from desirable local qualities, including the openness of the surrounding landscape, the integration of green spaces and the evolving urban rhythm of the future centre, while introducing contemporary detailing that reflects Leppington’s future-focused character within the Western Sydney growth corridor. Together, the buildings and public spaces form a cohesive and visually engaging environment that enhances the identity of the precinct

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ADG Ref	Item Description	Compliance	Notes
3A	Site Analysis	(Y/N)	
3A-1	Objective Site analysis illustrates that design decisions have been based on opportunities and constraints of the site conditions and their relationship to the surrounding context.		
(i)	Design Guidance : (i) Each element in the Site Analysis Checklist	Y	Refer to Architectural Design Report for further details
3B	Orientation	(Y/N)	
3B-1	Objective Building types and layouts respond to the streetscape and site while optimising solar access within the development.		
(i)	Design Guidance : Buildings along the street frontage define the street, by facing it and incorporating direct access from the street.	Y	
(ii)	Where the street frontage is to the east or west, rear buildings should be orientated to the north.	N/A	
(iii)	Where the street frontage is to the north or south, overshadowing to the south should be minimised and buildings behind the street frontage should be orientated to the east and west.	Y	
3B-2	Objective Overshadowing of neighbouring properties is minimised during mid winter		
(i)	Design Guidance : Living areas, private open space and communal open space should receive solar access in accordance with sections 3D Communal and public open space and 4A Solar and daylight access	Y	Building mass has been established with a balance between solar amenity and views towards Blue Mountains and beyond. The ADG allows for solar access to be reduced below the minimum required 70% for 3 hours between 9am - 3pm when considering certain site conditions. The buildings have been orientated to maximise views. The building mass and orientation has been designed to allow a balance between solar amenity and maximise views. Refer to Section 3D communal and public open space and 4A solar and daylight access for detailed assessment.
(ii)	Solar access to living rooms, balconies and private open spaces of neighbours should be considered	N/A	The proposal does not impact the solar access of any neighbouring existing buildings
(iii)	Where an adjoining property does not currently receive the required hours of solar access, the proposed building ensures solar access to neighbouring properties is not reduced by more than 20%	N/A	The proposal does not impact the solar access of any neighbouring existing buildings
(iv)	If the proposal will significantly reduce the solar access of neighbours, building separation should be increased beyond minimums contained in section 3F Visual privacy	N/A	The proposal does not impact the solar access of any neighbouring existing buildings
(v)	Overshadowing should be minimised to the south or down hill by increased upper level setbacks	Y	The setbacks to lower elevation are setback with a 20m linear park

(vi)	It is optimal to orientate buildings at 90 degrees to the boundary with neighbouring properties to minimise overshadowing and privacy impacts, particularly where minimum setbacks are used and where buildings are higher than the adjoining development	N/A	
(vii)	A minimum of 4 hours of solar access should be retained to solar collectors on neighbouring buildings	N/A	
3C	Public Doman Interface	(Y/N)	
3C-1	Objective Transition between private and public domain is achieved without compromising safety and security.		
(i)	Design Guidance : Terraces, balconies and courtyard apartments should have direct street entry, where appropriate	N/A	Residential levels start from level 02 and level 03
(ii)	Changes in level between private terraces, front gardens and dwelling entries above the street level provide surveillance and improve visual privacy for ground level dwellings	N/A	
(iii)	Upper level balconies and windows should overlook the public domain	Y	
(iv)	Front fences and walls along street frontages should use visually permeable materials and treatments. The height of solid fences or walls should be limited to 1m	N/A	
(v)	Length of solid walls should be limited along street frontages	Y	Solid walls are minimised around the perimeter of the site and are largely limited to the footprints of the towers. Street activation is achieved through a variety of retail tenancies and multiple tower entry points. In addition, two through-site links run through the development, creating a permeable and activated ground plane.
(vi)	Opportunities should be provided for casual interaction between residents and the public domain. Design solutions may include seating at building entries, near letter boxes and in private courtyards adjacent to streets	Y	Refer to Landscape Plans prepared by Sturt Noble

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(vii)	In developments with multiple buildings and/or entries, pedestrian entries and spaces associated with individual buildings/entries should be differentiated to improve legibility for residents, using a number of the following design solutions: • Architectural Detailing • Changes In Materials • Plant Species • Colours	Y	The podium entries are located in two different through site links (east-west) and have distinctive materiality and detailing.
(viii)	Opportunities for people to be concealed should be minimised	Y	The ground plane have been designed to achieve a high level of passive surveillance through active programs both on the street levels and above
3C-2	Objective Amenity of the public domain is retained and enhanced.		
(i)	Design Guidance : Planting softens the edges of any raised terraces to the street, for example above sub-basement car parking	N/A	
(ii)	Mail boxes should be located in lobbies,perpendicular to the street alignment or integrated into front fences where individual street entries are provided	Y	Can comply
(iii)	The visual prominence of underground car park vents should be minimised and located at a low level where possible	Y	The carpark vents are concealed and not directly visible to pedestrians.
ADG Ref	Item Description	Compliance	Notes
(iv)	Substations, pump rooms, garbage storage areas and other service requirements should be located in basement car parks or out of view	Y	Concealed within building and in basement levels
(v)	Ramping for accessibility should be minimised by building entry location and setting ground floor levels in relation to footpath levels	Y	Equitable access is provided to all residential entries.
(vi)	Durable, graffiti resistant and easily cleanable should be used	Y	All materials proposed are durable and materials
(vii)	Where development adjoins public parks, open space or bushland, the design positively addresses this interface and uses a number of the following design solutions: • Street access, pedestrian paths and building entries which are clearly defined • Paths, low fences and planting that clearly delineate between communal/private open space and the adjoining public open space • Minimal use of blank walls, fences and ground level parking	Y	The proposal has a linear park to the North and woodleand reserve to the south corner. Street activation is maximised towards these frontages. Communal open spaces are located on a different level and not adjoining the public parks.
(vii)	On sloping sites protrusion of car parking above ground level should be minimised by using split levels to step underground car parking	Y	
3D	Communal and Public Open Space	(Y/N)	

3D-1	Objective An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping.		
(a)	Design Criteria : Communal open space has a minimum area equal to 25% of the site	Y	The proposed COS is 48% of Site area
(b)	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)	Y	Majority of the COS is North facing and therefore receives more than 2hrs of solar.
(i)	Design Guidance : Communal open space should be consolidated into a well designed, easily identified and usable area	Y	Communal open space is on a consolidated area in level 01 and level 02 and is protected.
(ii)	Communal open space should have a minimum dimension of 3m, and larger developments should consider greater dimensions	Y	Refer to architectural drawings
(iii)	Communal open space should be co-located with deep soil areas	N	Communal open spaces are located above the retail podium where as the deep soil zone is co located with the public open space.
(iv)	Direct, equitable access should be provided to communal open space areas from common circulation areas, entries and lobbies	Y	Refer to architectural drawings
(v)	Where communal open space cannot be provided at ground level, it should be provided on a podium or roof	Y	Communal open space is currently located st level 01 and level 02

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(VI)	Where developments are unable to achieve the design criteria, such as on small lots, sites within business zones, or in a dense urban area, they should: • Provide communal spaces elsewhere such as a landscaped roof top terrace or a common room • Provide larger balconies or increased private open space for apartments • Demonstrate good proximity to public open space and facilities and/or provide contributions to public open space	Y	The current proposal provides an extensive amount of public open space with a large amount of active retail street frontage and dwelling areas. Refer to urban design principles and communal open space section in the urban design report for more detail. Interior common space has also been provided at the COS level.
3D-2	Objective Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting.		
(i)	Design Guidance : Facilities are provided within communal open spaces and common spaces for a range of age groups, incorporating some of the following elements: • Seating for individuals or groups • Barbecue areas • Play equipment or play areas • Swimming pools, gyms, tennis courts or common rooms	Y	Refer to residential amenity section for more detail into the types of facilities provided.
(ii)	The location of facilities responds to microclimate and site conditions with access to sun in winter, shade in summer and shelter from strong winds and down drafts	Y	
(iii)	Visual impacts of services should be minimised, including location of ventilation duct outlets from basement car parks, electrical substations and detention tanks	Y	No communal spaces are impacted by the view towards services.
3D-3	Objective Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting.		
(i)	Design Guidance : Communal open space and the public domain should be readily visible from habitable rooms and private open space areas while maintaining visual privacy. Design solutions may include: • Bay Windows • Corner Windows • Balconies	Y	Refer to the architectural design report and architectural drawings for further detail.
(ii)	Communal open space should be well lit	Y	
(iii)	Where communal open space/facilities are provided for children and young people they are safe and contained	Y	The communal open space is located above the public domain and is protected with a balustrade/fence at the edge.
3D-4	Objective Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood.		
(i)	Design Guidance : The public open space should be well connected with public streets along at least one edge	Y	Refer to the architectural design report and architectural drawings for further detail.

(ii)	The public open space should be connected with nearby parks and other landscape elements	Y	Refer to the architectural design report and architectural drawings for further detail.										
(iii)	Public open space should be linked through view lines, pedestrian desire paths, termination points and the wider street grid	Y	Refer to public domain sections within the urban design report										
(iv)	Solar access should be provided year round along with protection from strong winds	Y											
(v)	Opportunities for a range of recreational activities should be provided for people of all ages	Y	Wide range of retail opportunities is provided and will allow for a range of activities for people of all ages										
(vi)	A positive address and active frontages should be provided adjacent to public open space	Y	The eight residential addresses will be highly visible from the streets and public plaza.										
(vii)	Boundaries should be clearly defined between public open space and private areas	Y	The whole ground plane is highly activated and permeable, all private areas are located on a different level										
3E	Deep Soil Zones	(Y/N)											
3E-1	Objective 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.												
(a)	Design Criteria : Deep soil zones are to meet the following minimum requirements:	Y	Complies with 8.3% of site area. Refer to Architectural Drawings.										
	<table><tr><td>Site Area</td><td>Minimum Dimensions</td><td>Deep Soil Zone (% of site area)</td></tr><tr><td>Less than 650m²</td><td>-</td><td rowspan="3">7%</td></tr><tr><td>650m² - 1500m²</td><td>3m</td></tr><tr><td>Greater than 1500m²</td><td>6m</td></tr></table>	Site Area	Minimum Dimensions	Deep Soil Zone (% of site area)	Less than 650m²	-	7%	650m² - 1500m²	3m	Greater than 1500m²	6m		
Site Area	Minimum Dimensions	Deep Soil Zone (% of site area)											
Less than 650m²	-	7%											
650m² - 1500m²	3m												
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(i)	Design Guidance : On some sites it may be possible to provide larger deep soil zones, depending on the site area and context: • 10% of the site as deep soil on sites with an area Y of 650m2 - 1,500m2 • 15% of the site as deep soil on sites greater than 1,500m	N	Refer to comment in 3E -1 (a)
(ii)	Deep soil zones should be located to retain existing significant trees and to allow for the development of healthy root systems, providing anchorage and stability for mature trees. Design solutions may include: • Basement and sub basement car park design that is consolidated beneath building footprints • Use of increased front and side setbacks • Adequate clearance around trees to ensure long term health • Co-location with other deep soil areas on adjacent sites to create larger contiguous areas of deep soil	N	Refer to ILP Layouts and Architectural Drawings. Matured trees are proposed along the Linear Park.
(iii)	Achieving the design criteria may not be possible on some sites including where: • The location and building typology have limited or no space for deep soil at ground level (e.g. central business district, constrained sites, high density areas, or in centres) • There is 100% site coverage or non-residential uses at ground floor level Where a proposal does not achieve deep soil requirements, acceptable stormwater management should be achieved and alternative forms of planting provided such as on structure	N/A	
3F	Visual Privacy	(Y/N)	
3F-1	Objective Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy.		

(a)	Design Criteria : 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: <table><tr><td>Building Height</td><td>Habitable Rooms and Balconies</td><td>Non-habitable Rooms</td></tr><tr><td>Up to 12m (4 Storeys)</td><td>6m</td><td>3m</td></tr><tr><td>Up to 25m (5-8 Storeys)</td><td>9m</td><td>4.5m</td></tr><tr><td>Over 25m (9+ Storeys)</td><td>12m</td><td>6m</td></tr></table> Separation distances between buildings on the same site should combine required building separations depending on the type of room. Gallery access circulation should be treated as habitable space when measuring privacy separation distances between neighbouring properties.	Building Height	Habitable Rooms and Balconies	Non-habitable Rooms	Up to 12m (4 Storeys)	6m	3m	Up to 25m (5-8 Storeys)	9m	4.5m	Over 25m (9+ Storeys)	12m	6m	Y	Windows and balconies to the towers are arranged to achieve visual privacy.
Building Height	Habitable Rooms and Balconies	Non-habitable Rooms													
Up to 12m (4 Storeys)	6m	3m													
Up to 25m (5-8 Storeys)	9m	4.5m													
Over 25m (9+ Storeys)	12m	6m													
(i)	Design Guidance : Generally one step in the built form as the height increases due to building separations is desirable. Additional steps should be careful not to cause a ‘ziggurat’ appearance	N/A													
(ii)	For residential buildings next to commercial buildings, separation distances should be measured as follows: • For retail, office spaces and commercial balconies use the habitable room distances • For service and plant areas use the non- habitable room distances	N/A	The neighbouring commercial and retail area are located at the lower levels of the podium.												
(iii)	New development should be located and oriented to maximise visual privacy between buildings on site and for neighbouring buildings. Design solutions include: • Site layout and building orientation to minimise privacy impacts • On sloping sites, apartments on different levels have appropriate visual separation distances	N/A													
(iv)	Apartment buildings should have an increased separation distance of 3m (in addition to the (iv) requirements set out in design criteria 1) when adjacent to a different zone that permits lower density residential development to provide for a transition in scale and increased landscaping	N/A													
(v)	Direct lines of sight should be avoided for windows and balconies across corners	N/A													
(vi)	No separation is required between blank walls	N/A													
3F-2	Objective 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.														

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(i)	Design Guidance : Communal open space, common areas and access paths should be separated from private open space and windows to apartments, particularly habitable room windows. Design solutions may include: • Setbacks • Solid or partially solid balustrades to balconies at lower levels • Fencing and/or trees and vegetation to separate spaces • Screening devices • Bay windows or pop out windows to provide privacy in one direction and outlook in another • Raising apartments/private open space above the public domain or communal open space • Planter boxes incorporated into walls and balustrades to increase visual separation • Pergolas or shading devices to limit overlooking of lower apartments or private open space • On constrained sites where it can be demonstrated that building layout opportunities are limited, fixed louvres or screen panels to windows and/or balconies	Y	Refer to the architectural design report and architectural drawings for further detail. COS is located at level 01 and level 02
(ii)	Bedrooms, living spaces and other habitable rooms should be separated from gallery access and other open circulation space by the apartment’s service areas	Y	Refer to architectural drawings for further detail.
(iii)	Balconies and private terraces should be located in front of living rooms to increase internal privacy	Y	All balconies are located in front of living rooms. Refer to architectural drawings for further detail.
(iv)	Windows should be offset from the windows of adjacent buildings	Y	Refer to architectural drawings for further detail.
(v)	Recessed balconies and/or vertical fins should be used between adjacent balconies	Y	No adjacent balconies are in this development
3G	Pedestrian Access and Entries	(Y/N)	
3G-1	Objective Building entries and pedestrian access connects to and addresses the public domain.		
(i)	Design Guidance : Multiple entries (including communal building entries and individual ground floor entries) should be provided to activate the street edge	Y	The street edge is highly activated by retail and other entries.
(ii)	Entry locations relate to the street and subdivision pattern and the existing pedestrian network	N/A	
(iii)	Building entries should be clearly identifiable and communal entries should be clearly distinguishable from private entries	Y	Refer to the architectural design report and architectural drawings for further detail.

(iv)	Where street frontage is limited and multiple buildings are located on the site, a primary street address should be provided with clear sight lines and pathways to secondary building entries	Y	Residential street frontages have clear sightlines from the street to its lobby entrance.
3G-2	Objective Access, entries and pathways are accessible and easy to identify.		
(i)	Design Guidance : Building access areas including lift lobbies, stairwells and hallways should be clearly visible from the public domain and communal spaces	Y	Refer to the architectural design report and architectural drawings for further detail.
(ii)	The design of ground floors and underground car parks minimise level changes along pathways and entries	Y	
(iii)	Steps and ramps should be integrated into the overall building and landscape design	Y	
(iv)	For large developments ‘way finding’ maps should be provided to assist visitors and residents	Y	
(v)	For large developments electronic access and audio/video intercom should be provided to manage access	Y	
3G-3	Objective Large sites provide pedestrian links for access to streets and connection to destinations.		
(i)	Pedestrian links through sites facilitate direct Connections to open space, main streets, centres and public transport	Y	There are two main through site links to connect the site. Refer to architectural drawings and design report for further details.
(ii)	Pedestrian links should be direct, have clear sight lines, be overlooked by habitable rooms or private open spaces of dwellings, be well lit and contain active uses, where appropriate	Y	
3H	Vehicle Access	(Y/N)	
3H-1	Objective Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes.		
(i)	Design Guidance : Car park access should be integrated with the building’s overall facade. Design solutions may include: • The materials and colour palette to minimise visibility from the street • Security doors or gates at entries that minimise voids in the facade • Where doors are not provided, the visible interior reflects the facade design and the building services, pipes and ducts are concealed	Y	Vehicular entry is located off Byron Road Extension and is highly visible for ease of wayfinding. Refer to the architectural design report and architectural drawings for further detail.
(ii)	Car park entries should be located behind the building line	Y	

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(iii)	Vehicle entries should be located at the lowest point of the site minimising ramp lengths, excavation and impacts on the building form and layout	Y	The proposed residential driveway location is provided on the lowest Point. Whereas, one of the retail car parking entry is proposed to the higher side of the site for better circulation. Refer to architectural Drawings.
(iv)	Car park entry and access should be located on secondary streets or lanes where available	Y	
(v)	Vehicle standing areas that increase driveway width and encroach into setbacks should be avoided	Y	
(vi)	Access point locations should avoid headlight glare to habitable rooms	Y	The residential apartment level is located at level 02 and level 03.
(vii)	Adequate separation distances should be provided between vehicle entries and street intersections	Y	
(viii)	The width and number of vehicle access points should be limited to the minimum	Y	
(viii)	Visual impact of long driveways should be minimised through changing alignments and screen planting	N/A	
(x)	The need for large vehicles to enter or turn around within the site should be avoided	Y	Large vehicle access has been consolidated to a single side of the development to improve circulation efficiency and minimise conflicts within the site.
(xi)	Garbage collection, loading and servicing areas are screened	Y	Waste collection and loading dock ares is screened and not part of the main facade.
(xii)	Clear sight lines should be provided at pedestrian and vehicle crossings	Y	
(xiii)	Traffic calming devices such as changes in paving material or textures should be used where appropriate	Y	
(xiii)	Pedestrian and vehicle access should be separated and distinguishable. Design solutions may include: • Changes in surface materials • Level changes • The use of landscaping for separation	Y	Refer to the public domain design, architectural design report and landscape design report for further details
3J	Bicycle and Car parking	(Y/N)	
3J-1	Objective Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas.		
(a)	Design Criteria 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)	Design Guidance : Where a car share scheme operates locally, provide car share parking spaces within the development. Car share spaces, when provided, should be on site	N/A	
(ii)	Where less car parking is provided in a development, council should not provide on street resident parking permits	Y	Refer to Traffic Impact Assessment report for further detail.
3J-2	Objective Parking and facilities are provided for other modes of transport		
(i)	Design Guidance : Conveniently located and sufficient numbers of parking spaces should be provided for motorbikes and scooters	Y	Refer to Traffic Impact Assessment report for further detail.
(ii)	Secure undercover bicycle parking should be provided that is easily accessible from both the public domain and common areas	Y	Bicycle parking is provided in the basement
(iii)	Conveniently located charging stations are provided for electric vehicles, where desirable	Y	Provision is made within basements for electric vehicle charging
3J-3	Objective Car park design and access is safe and secure.		
(i)	Design Guidance : Supporting facilities within car parks, including garbage, plant and switch rooms, storage areas and car wash bays can be accessed without crossing car parking spaces	N	Supporting facilities can all be access without crossing car parking spaces.
(ii)	Direct, clearly visible and well lit access should be provided into common circulation areas	Y	
(iii)	A clearly defined and visible lobby or waiting area should be provided to lifts and stairs	Y	
(iv)	For larger car parks, safe pedestrian access should be clearly defined and circulation areas have good lighting, colour, line marking and/or bollards	Y	
3J-4	Objective Visual and environmental impacts of underground car parking are minimised.		
(i)	Design Guidance : Excavation should be minimised through efficient car park layouts and ramp design	Y	
(ii)	Car parking layout should be well organised, using a logical, efficient structural grid and double loaded aisles	Y	Refer to the architectural design report and architectural drawings for further detail.

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(iii)	Protrusion of car parks should not exceed 1m above ground level. Design solutions may include stepping car park levels or using split levels on sloping sites	Y	Carparking is proposed in basement levels
(iv)	Natural ventilation should be provided to basement and sub basement car parking areas	N	Mechanical ventilation is provided to basement levels
(v)	Ventilation grills or screening devices for car parking openings should be integrated into the facade and landscape design	Y	Complies and is integrated with the external facade.
3J-5	Objective Visual and environmental impacts of on-grade car parking are minimized.		
(i)	Design Guidance : Where on-grade car parking is unavoidable, the following design solutions are used: • parking is located on the side or rear of the lot away from the primary street frontage • cars are screened from view of streets, buildings, communal and private open space areas • safe and direct access to building entry points is provided • parking is incorporated into the landscape design of the site, by extending planting and materials into the car park space • stormwater run-off is managed appropriately from car parking surfaces • bio-swales, rain gardens or on site detention tanks are provided, where appropriate • light coloured paving materials or permeable paving systems are used and shade trees are planted between every 4-5 parking spaces to reduce increased surface temperatures from large areas of paving	N/A	No ongrade parking is provided.
3J-6	Objective Visual and environmental impacts of on-grade car parking are minimised.		
(i)	Design Guidance : Exposed parking should not be located along primary street frontage	Y	
(ii)	Screening, landscaping and other design elements including public art should be used to integrate the above ground car parking with the facade. Design solutions may include: car parking that is concealed behind the facade, with windows integrated into the overall facade design (approach should be limited to developments where a larger floor plate podium is suitable at lower levels) car parking that is 'wrapped' with other uses, such as retail, commercial or two storey Small Office/Home Office (SOHO) units along the street frontage	Y	Carparking is on the Basement Levels.
(iii)	Positive street address and active frontages should be provided at ground level	Y	
4A	Solar and Daylight Access	(Y/N)	
4A-1	Objective To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space.		

(a)	Design Criteria : 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.	Y	The scheme complies with the solar requirements Refer to the solar amenity section of the urban design report for more detail.
(b)	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	While this control applies to development within the Sydney Metropolitan Area and the Newcastle and Wollongong LGAs
(c)	A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid winter	Y	Refer to the solar amenity section of the urban design report for more detail.
(i)	Design Guidance : The design maximises north aspect and the number of single aspect south facing apartments is minimised	Y	The project maximised the number of northern, eastern and western aspect units and only has few south facing apartment on a typical apartment across eight towers.
(ii)	Single aspect, single storey apartments should have a northerly or easterly aspect	N	Some single aspect apartments faces the west and East because of views and amenity to the internal layouts.
(iii)	Living areas are best located to the north and service areas to the south and west of apartments	Y	The location of living areas balance between view amenity and solar amenities
(iv)	To optimise the direct sunlight to habitable rooms and balconies a number of the following design features are used: • dual aspect apartments • shallow apartment layouts • two storey and mezzanine level apartments • bay windows	Y	Refer to the architectural design report and architectural drawings for further detail.
(v)	To maximise the benefit to residents of direct sunlight within living rooms and private open spaces, a minimum of 1m2 of direct sunlight, measured at 1m above floor level, is achieved for at least 15 minutes	Y	Refer to the architectural design report and architectural drawings for further detail.

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(vi)	Achieving the design criteria may not be possible on some sites. This includes: • where greater residential amenity can be achieved along a busy road or rail line by orientating the living rooms away from the noise source • on south facing sloping sites • where significant views are oriented away from the desired aspect for direct sunlight Design drawings need to demonstrate how site constraints and orientation preclude meeting the design criteria and how the development meets the objective	Y	Significant blue mountain views are orientated towards west.
4A-2	Objective Daylight access is maximised where sunlight is limited		
(i)	Design Guidance : Courtyards, skylights and high level windows (with sills of 1,500mm or greater) are used only as a secondary light source in habitable rooms	N/A	
(ii)	Where courtyards are used : • use is restricted to kitchens, bathrooms and service areas • building services are concealed with appropriate detailing and materials to visible walls • courtyards are fully open to the sky • access is provided to the light well from a communal area for cleaning and maintenance • acoustic privacy, fire safety and minimum privacy separation distances (see section 3F Visual privacy) are achieved	N/A	
(ii)	Opportunities for reflected light into apartments are optimised through: • reflective exteriors surfaces on buildings opposite south facing windows • positioning windows to face other buildings or surfaces (on neighbouring sites or within the site) that will reflect light • integrating light shelves into the design • light coloured internal finishes	Y	
4A-3	Objective Design incorporates shading and glare control, particularly for warmer months		
(i)	Design Guidance : A number of the following design features are used: • balconies or sun shading that extend far enough to shade summer sun, but allow winter sun to penetrate living areas • horizontal shading to north facing windows • vertical shading to east and particularly west facing windows • high performance glass	Y	Refer to the architectural design report and architectural drawings for further detail.

4B	Natural Ventilation	(Y/N)	
4B-1	Objective All habitable rooms are naturally ventilated		
(i)	Design Guidance : The building's orientation maximises capture and use of prevailing breezes for natural ventilation in habitable rooms	Y	Refer to the architectural design report and architectural drawings for further detail.
(ii)	Depths of habitable rooms support natural ventilation	Y	
(iii)	The area of unobstructed window openings should be equal to at least 5% of the floor area served	Y	Refer to the architectural design report and architectural drawings for further detail.
(iv)	Light wells are not the primary air source for habitable rooms	N/A	
(v)	Doors and openable windows maximise natural ventilation opportunities by using the following design solutions: • adjustable windows with large effective openable areas • a variety of window types that provide safety and flexibility such as awnings and louvres • windows which the occupants can reconfigure to funnel breezes into the apartment such as vertical louvres, casement windows and externally opening doors	Y	
4B-2	Objective The layout and design of single aspect apartments maximises natural ventilation		
(i)	Design Guidance : Apartment depths are limited to maximise ventilation and airflow	Y	Refer to the architectural design report and architectural drawings for further detail.

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(ii)	Natural ventilation to single aspect apartments is achieved with the following design solutions: • primary windows are augmented with plenums and light wells (generally not suitable for cross ventilation) • stack effect ventilation / solar chimneys or similar to naturally ventilate internal building areas or rooms such as bathrooms and laundries • courtyards or building indentations have a width to depth ratio of 2:1 or 3:1 to ensure effective air circulation and avoid trapped smells	N/A	
4B-3	Objective		
	The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents.		
(a)	Design Criteria : 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.	Y	66% of residential apartments achieve natural cross ventilation, complying with ventilation controls.
(b)	Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line.	Y	Refer to the architectural design report and architectural drawings for further detail.
(i)	Design Guidance : The building should include dual aspect apartments, cross through apartments and corner apartments and limit apartment depths	Y	Refer to the architectural design report and architectural drawings for further detail.
(ii)	In cross-through apartments external window and door opening sizes/areas on one side of an (ii) apartment (inlet side) are approximately equal to the external window and door opening sizes/areas on the other side of the apartment (outlet side)	Y	
(iii)	Apartments are designed to minimise the number of corners, doors and rooms that might obstruct airflow	Y	
(iv)	Apartment depths, combined with appropriate ceiling heights, maximise cross ventilation and airflow	Y	
4C	Ceiling Heights	(Y/N)	
4C-1	Objective		
	Ceiling height achieves sufficient natural ventilation and daylight access.		

(a)	Design Criteria : Measured from finished floor level to finished ceiling level, minimum ceiling heights are: <table><tr><td colspan="2">Minimum ceiling height for apartment and mixed use buildings</td></tr><tr><td>Habitable rooms</td><td>2.7m</td></tr><tr><td>Non- Habitable rooms</td><td>2.4m</td></tr><tr><td>For 2 storey apartments</td><td>2.7m for main living area floor 2.4m for second floor, where its area does not exceed 50% of the apartment area</td></tr><tr><td>Attic spaces</td><td>1.8m at edge of room with a 30 degree minimum ceiling slope</td></tr><tr><td>If located in mixed used areas</td><td>3.3m for ground and first floor to promote future flexibility of use</td></tr></table> These minimums do not preclude higher ceilings if desired.	Minimum ceiling height for apartment and mixed use buildings		Habitable rooms	2.7m	Non- Habitable rooms	2.4m	For 2 storey apartments	2.7m for main living area floor 2.4m for second floor, where its area does not exceed 50% of the apartment area	Attic spaces	1.8m at edge of room with a 30 degree minimum ceiling slope	If located in mixed used areas	3.3m for ground and first floor to promote future flexibility of use	Y	Refer to the facade design in architectural report and architectural drawings for further detail
Minimum ceiling height for apartment and mixed use buildings															
Habitable rooms	2.7m														
Non- Habitable rooms	2.4m														
For 2 storey apartments	2.7m for main living area floor 2.4m for second floor, where its area does not exceed 50% of the apartment area														
Attic spaces	1.8m at edge of room with a 30 degree minimum ceiling slope														
If located in mixed used areas	3.3m for ground and first floor to promote future flexibility of use														
(i)	Design Guidance : Ceiling height can accommodate use of ceiling fans for cooling and heat distribution	N	Air-condition is provided for all units												
4C-2	Objective Ceiling height increases the sense of space in apartments and provides for well proportioned rooms.														
(i)	Design Guidance : A number of the following design solutions can be used: • The hierarchy of rooms in an apartment is defined using changes in ceiling heights and alternatives such as raked or curved ceilings, or double height spaces • Well proportioned rooms are provided, for example, smaller rooms feel larger and more spacious with higher ceilings • Ceiling heights are maximised in habitable rooms by ensuring that bulkheads do not intrude. The stacking of service rooms from floor to floor and coordination of bulkhead location above non-habitable areas, such as robes or storage, can assist	Y													
4C-3	Objective Ceiling heights contribute to the flexibility of building use over the life of the building.														
(i)	Design Guidance : Ceiling heights of lower level apartments in centres should be greater than the minimum required by the design criteria allowing flexibility and conversion to non-residential uses	Y	Residential levels don't begin until level 02and 03. All uses below have been allocated a suitable height.												
4D	Apartment Size & Layouts	(Y/N)													
4D-1	Objective The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity.														

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(a)	Design Criteria : Apartments are required to have the following minimum internal areas: <table><tr><td>Apt Types</td><td></td></tr><tr><td>Studio</td><td>35m²</td></tr><tr><td>1 Bedroom</td><td>50m²</td></tr><tr><td>2 Bedroom</td><td>70m²</td></tr><tr><td>3 Bedroom</td><td>90m²</td></tr></table> The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m2 each A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m2 each	Apt Types		Studio	35m²	1 Bedroom	50m²	2 Bedroom	70m²	3 Bedroom	90m²	Y	All units exceed the minimum areas. Refer to the architectural design report and architectural drawings for further detail..
Apt Types													
Studio	35m²												
1 Bedroom	50m²												
2 Bedroom	70m²												
3 Bedroom	90m²												
(i)	Design Guidance : Kitchens should not be located as part of the main circulation space in larger apartments (such as hallway or entry space)	Y											
(ii)	A window should be visible from any point in a habitable room	Y											
(iii)	Where minimum areas or room dimensions are not met apartments need to demonstrate that they are well designed and demonstrate the usability and functionality of the space with realistically scaled furniture layouts and circulation areas. These circumstances would be assessed on their merits	Y	All units exceed the minimum areas. Refer to the architectural design report and architectural drawings for further detail.										
4D-2	Objective Environmental performance of the apartment is maximised.												
(a)	Design Criteria : Habitable room depths are limited to a maximum of 2.5x the ceiling height.	Y											
(b)	In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window.	Y											
(i)	Design Guidance : Greater than minimum ceiling heights can allow for proportional increases in room depth up to the permitted maximum depths	Y	Refer to the architectural design report and architectural drawings for further detail.										
(i)	All living areas and bedrooms should be located on the external face of the building	Y											
4D-3	Objective Apartment layouts are designed to accommodate a variety of household activities and needs.												
(a)	Design Criteria : Master bedrooms have a minimum area of 10m2 and other bedrooms 9m2 (excluding wardrobe space)	Y	Refer to the architectural design report and architectural drawings for further detail.										

(b)	Bedrooms have a minimum dimension of 3m (excluding wardrobe space)	Y	
(c)	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	Y	
(d)	The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts	N/A	
(i)	Design Guidance : Access to bedrooms, bathrooms and laundries is separated from living areas minimising direct openings between living and service areas	Y	Refer to the architectural design report and architectural drawings for further detail.
(ii)	All bedrooms allow a minimum length of 1.5m for robes	Y	
(iii)	The main bedroom of an apartment or a studio apartment should be provided with a wardrobe of a minimum 1.8m long, 0.6m deep and 2.1m high	Y	
(iv)	Apartment layouts allow flexibility over time, design solutions may include: • Dimensions that facilitate a variety of furniture arrangements and removal • Spaces for a range of activities and privacy levels between different spaces within the apartment • Dual master apartments • Dual key apartments Note: dual key apartments which are separate N/A but on the same title are regarded as two sole occupancy units for the purposes of the Building Code of Australia and for calculating the mix of apartments • Room sizes and proportions or open plans (rectangular spaces (2:3) are more easily furnished than square spaces (1:1)) • Efficient planning of circulation by stairs, corridors and through rooms to maximise the amount of usable floor space in rooms	Y	
4E	Private Open Space and Balconies	(Y/N)	
4E-1	Objective Apartments provide appropriately sized private open space and balconies to enhance residential amenity.		

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(a)	Design Criteria : All apartments are required to have primary balconies as follows: <table><tr><th>Apt Types</th><th>Min Area</th><th>Min Depth</th></tr><tr><td>Studio</td><td>4m²</td><td>-</td></tr><tr><td>1 Bedroom</td><td>8m²</td><td>2m²</td></tr><tr><td>2 Bedroom</td><td>10m²</td><td>2m²</td></tr><tr><td>3 Bedroom</td><td>12m²</td><td>2.4m²</td></tr></table> The minimum balcony depth to be counted as contributing to the balcony area is 1m	Apt Types	Min Area	Min Depth	Studio	4m²	-	1 Bedroom	8m²	2m²	2 Bedroom	10m²	2m²	3 Bedroom	12m²	2.4m²	N	All apartments have balconies that achieve the minimum areas. Refer to the architectural design report and architectural drawings for further detail.
Apt Types	Min Area	Min Depth																
Studio	4m²	-																
1 Bedroom	8m²	2m²																
2 Bedroom	10m²	2m²																
3 Bedroom	12m²	2.4m²																
(b)	For apartments at ground level or on a podium or similar structure, a private open space is provided instead of a balcony. It must have a minimum area of 15m2 and a minimum depth of 3m.	N/A																
(i)	Design Guidance : Increased communal open space should be provided where the number or size of balconies are reduced	N/A																
(ii)	Storage areas on balconies is additional to the minimum balcony size	N/A																
(ii)	Balcony use may be limited in some proposals by: • Consistently high wind speeds at 10 storeys and above • Close proximity to road, rail or other noise sources • Exposure to significant levels of aircraft noise • Heritage and adaptive reuse of existing buildings In these situations, juliet balconies, operable walls, enclosed wintergardens or bay windows may be appropriate.	Y	Refer to the architectural drawings and wind Report for further detail.															
4E-2	Objective Primary private open space and balconies are appropriately located to enhance liveability for residents.																	
(i)	Design Guidance : Primary open space and balconies should be located adjacent to the living room, dining room or kitchen to extend the living space	Y	Refer to the architectural design report and architectural drawings for further detail.															
(ii)	Private open spaces and balconies predominantly face north, east or west	Y	Refer to the architectural design report and architectural drawings for further detail.															
(iii)	Primary open space and balconies should be orientated with the longer side facing outwards or be open to the sky to optimise daylight access into adjacent rooms	Y																
4E-3	Objective Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building.																	
(i)	Design Guidance : Solid, partially solid or transparent fences and balustrades are selected to respond to the location. They are designed to allow views and passive surveillance of the street while maintaining visual privacy and allowing for a range of uses on the balcony. Solid and partially solid balustrades are preferred.	Y	Refer to the architectural design report and architectural drawings for further detail.															

(ii)	Full width full height glass balustrades alone are generally not desirable	N	The east tower residential levels only begin on level 17 and therefore has no privacy issue from the street. Glass balustrades are used in the east tower to maximise views towards the water and to Rumbalara Reserve.
(iii)	Projecting balconies should be integrated into the building design and the design of soffits considered	Y	
(iv)	Operable screens, shutters, hoods and pergolas are used to control sunlight and wind	N/A	
(v)	Balustrades are set back from the building or balcony edge where overlooking or safety is an issue	N/A	
(vi)	Downpipes and balcony drainage are integrated with the overall facade and building design	Y	
(vii)	Air-conditioning units should be located on roofs, in basements, or fully integrated into the building design	Y	Refer to the architectural design report and architectural drawings for further detail.
(viii)	Where clothes drying, storage or air conditioning units are located on balconies, they should be screened and integrated in the building design	Y	All air conditioning units have been designed to be integrated in the building design.
(viii)	Ceilings of apartments below terraces should be insulated to avoid heat loss	Y	
(x)	Water and gas outlets should be provided for primary balconies and private open space	Y	
4E-4	Objective Private open space and balcony design maximises safety.		
(i)	Design Guidance : Changes in ground levels or landscaping are minimised	Y	
(ii)	Design and detailing of balconies avoids opportunities for climbing and falls	Y	
4F	Common Circulation & Spaces	(Y/N)	
4F-1	Objective Common circulation spaces achieve good amenity and properly service the number of apartments.		
(a)	Design Criteria : The maximum number of apartments off a circulation core on a single level is eight	Y	
(b)	For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40	Y	Complies, Refer to the architectural design report and architectural drawings for further detail.
(i)	Design Guidance : Greater than minimum requirements for corridor widths and/or ceiling heights allow comfortable movement and access particularly in entry lobbies, outside lifts and at apartment entry doors	Y	All corridors on typical levels are 1600mm. Entry lobby ceiling height is approximately to3.5m - 5m .

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(ii)	Daylight and natural ventilation should be provided to all common circulation spaces that are above ground	Y	Both towers have a though window opening in the lift lobbies that could provide daylight and natural ventilation throughout the day.
(iii)	Windows should be provided in common circulation spaces and should be adjacent to the stair or lift core or at the ends of corridors	Y	
(iv)	Longer corridors greater than 12m in length from the lift core should be articulated. Design solutions may include: • A series of foyer areas with windows and spaces Y for seating • Wider areas at apartment entry doors and varied ceiling heights	N	
(v)	Design common circulation spaces to maximise opportunities for dual aspect apartments, including multiple core apartment buildings and cross over apartments	N/A	
(vi)	Achieving the design criteria for the number of apartments off a circulation core may not be possible. Where a development is unable to achieve the design criteria, a high level of amenity for common lobbies, corridors and apartments should be demonstrated, including: • Sunlight and natural cross ventilation in apartments Y• Access to ample daylight and natural ventilation in common circulation spaces • Common areas for seating and gathering • Generous corridors with greater than minimum ceiling heights • Other innovative design solutions that provide high levels of amenity	N/A	
(vii)	Where design criteria 1 is not achieved, no more than 12 apartments should be provided off a circulation core on a single level	N/A	
(viii)	Primary living room or bedroom windows should not open directly onto common circulation spaces, whether open or enclosed. Visual and acoustic privacy from common circulation spaces to any other rooms should be carefully controlled	Y	
4F-2	Objective Common circulation spaces promote safety and provide for social interaction between residents.		
(i)	Design Guidance : Direct and legible access should be provided between vertical circulation points and apartment entries by minimising corridor or gallery length to give short, straight, clear sight lines	Y	Refer to the architectural design report and architectural drawings for further detail.
(ii)	Tight corners and spaces are avoided	Y	
(iii)	Circulation spaces should be well lit at night	Y	
(iv)	Legible signage should be provided for apartment numbers, common areas and general wayfinding	Y	
(v)	Incidental spaces, for example space for seating in a corridor, at a stair landing, or near a window are provided	N	
(vi)	In larger developments, community rooms for activities such as owners corporation meetings or resident use should be provided and are ideally co-located with communal open space	N	

(vii)	Where external galleries are provided, they are more open than closed above the balustrade along their length		N/A										
4G	Storage (Y/N)												
4G-1	Objective Adequate, well designed storage is provided in each apartment.												
(a)	Design Criteria : In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided: <table border="1"><tr><td>Apt Types</td><td>Storage Size Volume</td></tr><tr><td>Studio</td><td>4m³</td></tr><tr><td>1 Bedroom</td><td>6m³</td></tr><tr><td>2 Bedroom</td><td>8m²</td></tr><tr><td>3 Bedroom</td><td>10m²</td></tr></table> At least 50% of the required storage is to be located within the apartment	Apt Types	Storage Size Volume	Studio	4m³	1 Bedroom	6m³	2 Bedroom	8m²	3 Bedroom	10m²	Y	Refer to the ADG storage section in the report and architectural drawings for further detail.
Apt Types	Storage Size Volume												
Studio	4m³												
1 Bedroom	6m³												
2 Bedroom	8m²												
3 Bedroom	10m²												
(i)	Design Guidance : Storage is accessible from either circulation or living areas	Y	Refer to the architectural drawings for further detail.										
(ii)	Storage provided on balconies (in addition to the minimum balcony size) is integrated into the balcony design, weather proof and screened from view from the street	N/A	No storage is provided on balconies										
(iii)	Left over space such as under stairs is used for storage	N/A											
4G-2	Objective Common circulation spaces promote safety and provide for social interaction between residents.												
(i)	Design Guidance : Storage not located in apartments is secure and clearly allocated to specific apartments	Y	Secured storage cages will be clearly allocated and located in basement carpark levels										
(ii)	Storage is provided for larger and less frequently accessed item	Y											
(iii)	Storage space in internal or basement car parks is provided at the rear or side of car spaces or in cages so that allocated car parking remains accessible	Y	Refer to the architectural drawings for further detail.										
(iv)	If communal storage rooms are provided they should be accessible from common circulation areas of the building	Y	Storage cages located in basement carpark.										
(v)	Storage not located in an apartment is integrated into the overall building design and is not visible from the public domain	Y	Storage cages located in basement carpark.										

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4H	Acoustic Privacy	(Y/N)	
4H-1	Objective		
	Noise transfer is minimised through the siting of buildings and building layout.		
(i)	Design Guidance : Adequate building separation is provided within the development and from neighbouring buildings/adjacent uses	Y	
(ii)	Window and door openings are generally orientated away from noise sources	Y	
(iii)	Noisy areas within buildings including building entries and corridors should be located next to or above each other and quieter areas next to or above quieter areas	Y	
(iv)	Storage, circulation areas and non-habitable rooms should be located to buffer noise from external sources	Y	
(v)	The number of party walls (walls shared with other apartments) are limited and are appropriately insulated	Y	
(vi)	Noise sources such as garage doors, driveways, service areas, plant rooms, building services, mechanical equipment, active communal open spaces and circulation areas should be located at least 3m away from bedrooms	Y	Refer to the architectural drawings for further detail.
4H-2	Objective		
	Noise impacts are mitigated within apartments through layout and acoustic treatments.		
(i)	Design Guidance : Internal apartment layout separates noisy spaces from quiet spaces, using a number of the following design solutions: • Rooms with similar noise requirements are grouped together • Doors separate different use zones • Wardrobes in bedrooms are co-located	Y	
(ii)	Where physical separation cannot be achieved noise conflicts are resolved using the following design solutions: • Double or acoustic glazing • Acoustic seals • Use of materials with low noise penetration properties • Continuous walls to ground level courtyards where they do not conflict with streetscape or other amenity requirements	Y	
4J	Noise & Pollution	(Y/N)	
4J-1	Objective		
	In noisy or hostile environments the impacts of external noise and pollution are minimised through the careful siting and layout of buildings.		

(i)	Design Guidance : To minimise impacts the following design solutions may be used: • physical separation between buildings and the noise or pollution source • residential uses are located perpendicular to the noise source and where possible buffered by other uses • non-residential buildings are sited to be parallel with the noise source to provide a continuous building that shields residential uses and communal open spaces • non-residential uses are located at lower levels vertically separating the residential component from the noise or pollution source. Setbacks to the underside of residential floor levels should increase relative to traffic volumes and other noise sources • buildings should respond to both solar access and noise. Where solar access is away from the noise source, non- habitable rooms can provide a buffer • where solar access is in the same direction as the noise source, dual aspect apartments with shallow building depths are preferable • landscape design reduces the perception of noise and acts as a filter for air pollution generated by traffic and industry	Y	Non-residential uses are located at lower levels vertically separating the residential component from the street .
(ii)	Achieving the design criteria in this Apartment Design Guide may not be possible in some situations due to noise and pollution. Where developments are unable to achieve the design criteria, alternatives may be considered in the following areas: • solar and daylight access • private open space and balconies • natural cross ventilation	N/A	
4J-2	Objective		
	Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission.		
(i)	Design Guidance : Design solutions to mitigate noise include: • Limiting the number and size of openings facing noise sources • Providing seals to prevent noise transfer through gaps • Using double or acoustic glazing, acoustic louvres or enclosed balconies (wintergardens) • Using materials with mass and/or sound insulation or absorption properties e.g. solid balcony balustrades, external screens and soffits	Y	
4K	Apartment Mix	(Y/N)	
4K-1	Objective		
	A range of apartment types and sizes is provided to cater for different household types now and into the future.		

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(i)	Design Guidance : A variety of apartment types is provided	Y	
(ii)	The apartment mix is appropriate, taking into consideration: • the distance to public transport, employment and education centres • the current market demands and projected future demographic trends • the demand for social and affordable housing • different cultural and socioeconomic groups	Y	The apartment mix provided in the two towers have been consulted with marketing sales and coordinated with demographic demands in Leppington.
(iii)	Flexible apartment configurations are provided to support diverse household types and stages of life including single person households, families, multi-generational families and group households	N/A	
4K-2	Objective The apartment mix is distributed to suitable locations within the building.		
(i)	Design Guidance : Different apartment types are located to achieve successful facade composition and to optimise solar access	Y	Refer to the architectural design report and architectural drawings for further detail.
(ii)	Larger apartment types are located on the ground or roof level where there is potential for more open space and on corners where more building frontage is available	Y	Larger apartments are all located on the corners and roof areas of the development.
4L	Ground Floor Apartments	(Y/N)	
4L-1	Objective Street frontage activity is maximised where ground floor apartments are located.		
(i)	Design Guidance : Direct street access should be provided to ground floor apartments	N/A	
(ii)	Activity is achieved through front gardens, terraces and the facade of the building. Design solutions may include: • Both street, foyer and other common internal circulation entrances to ground floor apartments • Private open space is next to the street • Doors and windows face the street	N/A	
(iii)	Retail or home office spaces should be located along street frontages	N/A	
(iv)	Ground floor apartment layouts support small office home office (SOHO) use to provide future opportunities for conversion into commercial or retail areas. In these cases provide higher floor to ceiling heights and ground floor amenities for easy conversion	N/A	
4L-2	Objective Design of ground floor apartments delivers amenity and safety for residents.		

(i)	Design Guidance : Privacy and safety should be provided without obstructing casual surveillance. Design solutions may include: • elevation of private gardens and terraces above the street level by 1-1.5m • landscaping and private courtyards • window sill heights that minimise sight lines into apartments • integrating balustrades, safety bars or screens with the exterior design	N/A	
(ii)	Solar access should be maximised through: • high ceilings and tall windows • trees and shrubs that allow solar access in winter and shade in summer	N/A	
4M	Facades	(Y/N)	
4M-1	Objective Building facades provide visual interest along the street while respecting the character of the local area.		
(i)	Design Guidance : Design solutions for front building facades may include: • a composition of varied building elements • a defined base, middle and top of buildings • revealing and concealing certain elements • changes in texture, material, detail and colour to modify the prominence of elements	Y	Refer to the façade design in architectural design report and architectural drawings for further detail.
(ii)	Building services should be integrated within the overall facade	Y	
(iii)	Building facades should be well resolved with an appropriate scale and proportion to the streetscape and human scale. Design solutions may include: • well composed horizontal and vertical elements • variation in floor heights to enhance the human scale • elements that are proportional and arranged in patterns • public artwork or treatments to exterior blank walls • grouping of floors or elements such as balconies and windows on taller buildings	Y	Refer to the façade design in architectural design report and architectural drawings for further detail.
(iv)	Building facades relate to key datum lines of adjacent buildings through upper level setbacks, parapets, cornices, awnings or colonnade heights	N/A	
(v)	Shadow is created on the facade throughout the day with building articulation, balconies and deeper window reveals	Y	

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4M-2	Objective		
	Building functions are expressed by the facade.		
(i)	Design Guidance : Building entries should be clearly defined	Y	Refer to the façade design in architectural design report and architectural drawings for further detail.
(ii)	Important corners are given visual prominence through a change in articulation, materials or colour, roof expression or changes in height	Y	
(iii)	The apartment layout should be expressed externally through facade features such as party walls and floor slabs	Y	
4N	Roof Design	(Y/N)	
4N-1	Objective		
	Roof treatments are integrated into the building design and positively respond to the street.		
(i)	Design Guidance : Roof design relates to the street. Design solutions may include: • special roof features and strong corners • use of skillion or very low pitch hipped roofs • breaking down the massing of the roof by using smaller elements to avoid bulk • using materials or a pitched form complementary to adjacent buildings	Y	Articulation to walls and parapets to conceal services and reduce scale of bulk
(ii)	Roof treatments should be integrated with the building design. Design solutions may include: • roof design proportionate to the overall building size, scale and form • roof materials compliment the building • service elements are integrated	Y	Refer to the architectural design report and architectural drawings for further detail.
4N-2	Objective		
	Opportunities to use roof space for residential accommodation and open space are maximised.		
(i)	Design Guidance : Habitable roof space should be provided with good levels of amenity. Design solutions may include: • penthouse apartments • dormer or clerestory windows • openable skylights	N	No habitable spaces provided on roof top.
(ii)	Open space is provided on roof tops subject to acceptable visual and acoustic privacy, comfort levels, safety and security considerations	Y	
4N-3	Objective		
	Roof design incorporates sustainability features.		

(i)	Design Guidance : Roof design maximises solar access to apartments during winter and provides shade during summer. Design solutions may include: • the roof lifts to the north • eaves and overhangs shade walls and windows from summer sun	Y	Photovoltaic solar panels are provided at the rooftop. Refer to the ESD strategy in the architectural design report and architectural drawings for further detail.
(ii)	Skylights and ventilation systems should be integrated into the roof design	Y	
4O	Landscape Design	(Y/N)	
4O-1	Objective		
	Landscape design is viable and sustainable.		
(i)	Design Guidance : Landscape design should be environmentally sustainable and can enhance environmental performance by incorporating: • diverse and appropriate planting • bio-filtration gardens • appropriately planted shading trees • areas for residents to plant vegetables and herbs • composting • green roofs or walls	Y	Refer to Landscape Design Report and Architectural design report for further details.
(ii)	Ongoing maintenance plans should be prepared	Y	
(iii)	Microclimate is enhanced by: • appropriately scaled trees near the eastern and western elevations for shade • a balance of evergreen and deciduous trees to provide shading in summer and sunlight access in winter • shade structures such as pergolas for balconies and courtyards	Y	Refer to Landscape Design Report and Architectural design report for further details.
(iv)	Tree and shrub selection considers size at maturity and the potential for roots to compete	Y	
4O-2	Objective		
	Landscape design contributes to the streetscape and amenity		
(i)	Design Guidance : Landscape design responds to the existing site conditions including: • changes of levels • views • significant landscape features including trees and rock outcrops	Y	Refer to Landscape Design Report and Architectural design report for further details.

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(ii)	Significant landscape features should be protected by: • tree protection zones • appropriate signage and fencing during construction	Y	A significant fig tree is retained and the tree protection zone is maintained to ensure health of the tree. Refer to Arborist Report and Landscape Design Report for further details.
(iii)	Plants selected should be endemic to the region and reflect the local ecology	Y	
4P	Planting On Structures	(Y/N)	
4P-1	Objective Appropriate soil profiles are provided.		
(i)	Design Guidance : Structures are reinforced for additional saturated soil weight	Y	
(ii)	Soil volume is appropriate for plant growth, considerations include: • modifying depths and widths according to the planting mix and irrigation frequency • free draining and long soil life span • tree anchorage	Y	Refer to Landscape report.
(iii)	Minimum soil standards for plant sizes should be provided in accordance with Table 5	Y	Refer to Landscape report.
4P-2	Objective Plant growth is optimised with appropriate selection and maintenance.		
(i)	Design Guidance : Plants are suited to site conditions, considerations include: • drought and wind tolerance • seasonal changes in solar access • modifiedsubstratedepthsforsdiverserangeofplants • plant longevity	Y	Refer to Arborist Report and Landscape Design Report for further details.
(ii)	A landscape maintenance plan is prepared	Y	Refer to Landscape report.
(iii)	Irrigation and drainage systems respond to: • Changing site conditions • Soil profile and the planting regime • Whether rainwater, stormwater or recycled grey water is used	Y	Refer to Arborist Report and Landscape Design Report for further details.
4P-3	Objective Planting on structures contributes to the quality and amenity of communal and public open spaces.		

(i)	Design Guidance : Building design incorporates opportunities for planting on structures. Design solutions may include: • Green walls with specialised lighting for indoor green walls • Wall design that incorporates planting • Green roofs, particularly where roofs are visible Y from the public domain • Planter boxes Note: structures designed to accommodate green walls should be integrated into the building facade and consider the ability of the facade to change over time	Y	Refer to Landscape Design Report and Architectural Design Report for further details.
4Q	Universal Design	(Y/N)	
4Q-1	Objective Universal design features are included in apartment design to promote flexible housing for all community members		
(i)	Design Guidance : Developments achieve a benchmark of 20% of the total apartments incorporating the Housing Guideline’s silver level universal design features	Y	20% of Silver Level apartments are provided within the development. Refer to BCA Report and Architectural Drawings for further details.
4Q-2	Objective A variety of apartments with adaptable designs are provided.		
(i)	Design Guidance : Adaptable housing should be provided in accordance with the relevant council policy	Y	10% of Adaptable apartments are provided within the development. Refer to BCA Report and Architectural Drawings for further details.
(ii)	Design solutions for adaptable apartments include: • convenient access to communal and public areas • high level of solar access • minimal structural change and residential amenity loss when adapted • larger car parking spaces for accessibility • parking titled separately from apartments or shared car parking arrangements	Y	
4Q-3	Objective Apartment layouts are flexible and accommodate a range of lifestyle needs		
(i)	Design Guidance : Apartment design incorporates flexible design solutions which may include: • Rooms with multiple functions • Dual master bedroom apartments with separate bathrooms • Larger apartments with various living space options • Open plan ‘loft’ style apartments with only a fixed kitchen, laundry and bathroom	N	

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4R	Adaptive Reuse	(Y/N)
4R-1	Objective New additions to existing buildings are contemporary and complementary and enhance an area’s identity and sense of place.	
(i)	Design Guidance : Design solutions may include: • New elements to align with the existing building • Additions that complement the existing character, siting, scale, proportion, pattern, form and detailing • Use of contemporary and complementary materials, finishes, textures and colours	N/A
(ii)	Additions to heritage items should be clearly identifiable from the original building	N/A
(iii)	New additions allow for the interpretation and future evolution of the building	N/A
4R-2	Objective New additions to existing buildings are contemporary and complementary and enhance an area’s identity and sense of place.	
(i)	Design Guidance : Design features should be incorporated sensitively into adapted buildings to make up for any physical limitations, to ensure residential amenity is achieved. Design solutions may include: • Generously sized voids in deeper buildings • Alternative apartment types when orientation is poor • Using additions to expand the existing building envelope	N/A
(ii)	Some proposals that adapt existing buildings may not be able to achieve all of the design criteria in this Apartment Design Guide. Where developments are unable to achieve the design criteria, alternatives could be considered in the following areas: • Alternatives to providing deep soil where less than the minimum requirement is currently available on the site • Building and visual separation • Common circulation	N/A
4S	Mixed Use	(Y/N)
4S-1	Objective Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement.	
(i)	Design Guidance : Mixed use development should be concentrated around public transport and centres	Y

(ii)	Mixed use developments positively contribute to the public domain. Design solutions may include: • Development addresses the street • Active frontages are provided • Diverse activities and uses • Avoiding blank walls at the ground level • Live/work apartments on the ground floor level, rather than commercial	Y	Refer to Architectural design report and architectural drawings for further details.
4S-2	Objective Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents.		
(i)	Design Guidance : Residential circulation areas should be clearly defined. Design solutions may include: • Residential entries are separated from commercial entries and directly accessible from the street • Commercial service areas are separated from residential components • Residential car parking and communal facilities are separated or secured • Security at entries and safe pedestrian routes are provided • Concealment opportunities are avoided	Y	The residential lobby and hotel lobby are segregated from the retail areas. The hotel has a direct entry from street. Refer to Architectural design report and architectural drawings for further details.
(ii)	Landscaped communal open space should be provided at podium or roof levels	Y	Landscaped communal open space is provided at podium. Refer to Architectural design report and architectural drawings for further details.
4T	Awnings & Signage	(Y/N)	
(i)	Design Guidance : Awnings should be located along streets with high pedestrian activity and active frontages	Y	Refer to Architectural design report and architectural drawings for further details.
(ii)	A number of the following design solutions are used: • Continuous awnings are maintained and provided in areas with an existing pattern • Height, depth, material and form complements the existing street character • Protection from the sun and rain is provided • Awnings are wrapped around the secondary frontages of corner sites • Awnings are retractable in areas without an established pattern	Y	Building has continuous awnings and covered colonnade to provide protection in high traffic areas
(iii)	Awnings should be located over building entries for building address and public domain amenity	Y	
(iv)	Awnings relate to residential windows, balconies, street tree planting, power poles and street infrastructure	Y	
(v)	Gutters and down pipes should be integrated and concealed	Y	Stormwater management is concealed behind facade and parapet.

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(vi)	Lighting under awnings should be provided for pedestrian safety	Y	
4T-2	Objective Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents.		
(i)	Design Guidance : Signage should be integrated into the building design and respond to the scale, proportion and detailing of the development	Y	Refer to Facade Details in the Architectural design report and architectural drawings for further details.
(ii)	Legible and discrete way finding should be provided for larger developments	Y	
(iii)	Signage is limited to being on and below awnings and a single facade sign on the primary street frontage	Y	
4U	Energy Efficiency	(Y/N)	
4U-1	Objective Development incorporates passive environmental design.		
(i)	Design Guidance : Adequate natural light is provided to habitable rooms	Y	Refer to Facade Details in the Architectural design report and architectural drawings for further details.
(ii)	Well located, screened outdoor areas should be provided for clothes drying	Y	
4U-2	Objective Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer.		
(i)	Design Guidance : A number of the following design solutions are used: • The use of smart glass or other technologies on north and west elevations • Thermal mass in the floors and walls of north facing rooms is maximised • Polished concrete floors, tiles or timber rather than carpet • Insulated roofs, walls and floors and seals on window and door openings • Overhangs and shading devices such as awnings, blinds and screens	Y	Building will meet minimum requirements. Refer to BASIX.
(ii)	Provision of consolidated heating and cooling infrastructure should be located in a centralised location (e.g. the basement)	Y	Individual condenser decks will be provided for each level.
4U-3	Objective Adequate natural ventilation minimises the need for mechanical ventilation.		

(i)	Design Guidance : A number of the following design solutions are used: • Rooms with similar usage are grouped together • Natural cross ventilation for apartments is optimised • Natural ventilation is provided to all habitable rooms and as many non-habitable rooms, common areas and circulation spaces as possible	Y	
4V	Water Management & Conservation	(Y/N)	
4V-1	Objective Potable water use is minimised.		
(i)	Design Guidance : Water efficient fittings, appliances and wastewater reuse should be incorporated	Y	Refer to BASIX
(ii)	Apartments should be individually metered	Y	
(iii)	Rainwater should be collected, stored and reused on site	Y	Refer to specialists report for further details.
(iv)	Drought tolerant, low water use plants should be used within landscaped areas	Y	Refer to Landscape Report
4V-2	Objective Urban stormwater is treated on site before being discharged to receiving waters.		
(i)	Design Guidance : Water sensitive urban design systems are designed by a suitably qualified professional	Y	Refer to BASIX report
(ii)	A number of the following design solutions are used: • Run off is collected from roofs and balconies in water tanks and plumbed into toilets, laundry and irrigation • Porous and open paving materials is maximised • On site stormwater and infiltration, including bio-retention systems such as rain gardens or street tree pits	Y	Refer to specialists report for further details.
4V-3	Objective Flood management systems are integrated into site design.		
(i)	Design Guidance : Detention tanks should be located under paved areas, driveways or in basement car parks	Y	

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(ii)	On large sites parks or open spaces are designed to provide temporary on site detention basins	N/A	
4W	Waste Management	(Y/N)	
4W-1	Objective		
	Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents		
(i)	Design Guidance : Adequately sized storage areas for rubbish bins should be located discreetly away from the front of the development or in the basement car park	Y	All waste storage areas are located in the basement levels. Refer to Architectural design report and architectural drawings for further details.
(ii)	Waste and recycling storage areas should be well ventilated	Y	Refer to Service Report
(iii)	Circulation design allows bins to be easily manoeuvred between storage and collection points	Y	
(iv)	Temporary storage should be provided for large bulk items such as mattresses	Y	
(v)	A waste management plan should be prepared	Y	Refer to Waste Report.
4W-2	Objective		
	Domestic waste is minimised by providing safe and convenient source separation and recycling.		
(i)	Design Guidance : All dwellings should have a waste and recycling cupboard or temporary storage area of sufficient size to hold two days worth of waste and recycling	Y	
(ii)	Communal waste and recycling rooms are in convenient and accessible locations related to each vertical core	Y	
(iii)	For mixed use developments, residential waste and recycling storage areas and access should be separate and secure from other uses	Y	Hotel waste rooms and storage is located on a different level and area. Refer to Architectural design report and architectural drawings for further details.
(iv)	Alternative waste disposal methods such as composting should be provided	Y	Allowed for future use of FOGO bins.
4X	Building Maintenance	(Y/N)	
4X-1	Objective		
	Building design detail provides protection from weathering.		
(i)	Design Guidance : A number of the following design solutions are used: • Roof overhangs to protect walls • Hoods over windows and doors to protect openings • Detailing horizontal edges with drip lines to avoid staining of surfaces • Methods to eliminate or reduce planter box leaching • Appropriate design and material selection for hostile locations	Y	Implementation of Facade Articulation has been used to protect the building from northern and east and western solar gains. Use of materials have been carefully considered to enhance the comfort and durability of buildings

4X-2	Objective		
	Systems and access enable ease of maintenance.		
(i)	Design Guidance : Window design enables cleaning from the inside of the building	N	
(ii)	Building maintenance systems should be incorporated and integrated into the design of the building form, roof and facade	N	
(iii)	Design solutions do not require external scaffolding for maintenance access	Y	
(iv)	Manually operated systems such as blinds, sunshades and curtains are used in preference to mechanical systems	N/A	We do not use mechanical Systems.
(v)	Centralised maintenance, services and storage should be provided for communal open space areas within the building	Y	
4X-3	Objective		
	Material selection reduces ongoing maintenance costs.		
(i)	Design Guidance : A number of the following design solutions are used: • Sensors to control artificial lighting in common circulation and spaces • Natural materials that weather well and improve with time such as face brickwork • Easily cleaned surfaces that are graffiti resistant • Robust and durable materials and finishes are used in locations which receive heavy wear and tear, such as common circulation areas and lift interiors	Y	All materials specified are durable. Refer to the materiality section in the Architectural design report and architectural drawings for further details.