

APARTMENT DESIGN GUIDELINE			
ref	item description		compliance
PART 3	SITING THE DEVELOPMENT		
3A	SITE ANALYSIS		
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		✓
	Design Guidance		Considered
	Each element in the Site Analysis Checklist should be addressed (see Appendix 1)		YES
3B	ORIENTATION		
3B-1	Objective: Building types and layouts respond to the streetscape and site while optimising solar access within the development		✓
	Design Guidance		Considered
	Buildings along the street frontage define the street, by facing it and incorporating direct access from the street (see figure 3B.1)	The building alignment respects the existing development pattern and directly addresses the street and future developments. Generous pedestrian access is provided from the street.	YES
	Where the street frontage is to the east or west, rear buildings should be orientated to the north	Street frontage is to the north, west and south side. Building openings oriented towards north-south orientation.	YES
	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 (see figure 3B.2)	The street frontage is to the north, west and south with minimal shadows cast to the larger development to the east and south.	YES
3B-2	Objective: Overshadowing of neighbouring properties is minimised during mid winter		✓
	Design Guidance		Considered
	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	Living areas, private open space and communal open space have been oriented to receive solar access.	YES
	Solar access to living rooms, balconies and private open spaces of neighbours should be considered	Refer to Shadow diagrams.	YES
	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%	Refer to above	YES
	If the proposal will significantly reduce the solar access of neighbours, building separation should be increased beyond minimums contained in section 3F Visual privacy	Refer to above	YES
	Overshadowing should be minimised to the south or downhill by increased upper level setbacks	Most of the building is to be setback 4m from the southern boundary. Split in the buildings introduced to minimize the shadow impact.	YES
	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	Refer to above.	YES
	A minimum of 4 hours of solar access should be retained to solar collectors on neighbouring buildings	No solar collectors on the neighbouring properties.	NA
3C	PUBLIC DOMAIN INTERFACES		
3C-1	Objective: Transition between private and public domain is achieved without compromising safety and security		✓
	Design Guidance		Considered

Terraces, balconies and courtyard apartments should have direct street entry, where appropriate	Street-facing apartments with POS at grade will have visual connection to public domain to promote security.	YES
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 (see figure 3C.1)	Private terraces enjoy a good level of visual privacy while allowing for passive surveillance of the public domain.	YES
Upper level balconies and windows should overlook the public domain	Upper-level balconies and windows overlook the public domain.	YES
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	There are no fences on the front boundary. Fences with easterly neighbour will use combination of solid and vegetation screening to provide visual privacy. Gates at pedestrian and vehicle entries are visually permeable. Solid walls are used to enclose the sub-floor storage and rooms – this will be screened with landscaping.	YES
Length of solid walls should be limited along street frontages	No solid wall fences along street frontages. Solid walls only used to enclose the sub floor storage, rooms and parking facilities.	YES
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.	Bicycle parking and seating provided at ground level, a private terrace faces the public domain.	YES
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: <ul style="list-style-type: none">- architectural detailing- changes in materials- plant species- colours	There is only one building entry.	YES
Opportunities for people to be concealed should be minimised	Sightlines into public and communal spaces are maintained throughout. The transition from the public domain into the residential lobbies have clear sightlines. Communal open areas are overlooked by private balconies.	YES
Objective: Amenity of the public domain is retained and enhanced		✓
Design Guidance		Considered
Planting softens the edges of any raised terraces to the street, for example above sub-basement car parking	Solid walls are used to enclose the sub-floor storage and rooms – this will be visually softened with landscaping.	YES
Mail boxes should be located in lobbies, perpendicular to the street alignment or integrated into front fences where individual street entries are provided	Mail boxes are to be integrated into the structure adjacent the main pedestrian entry perpendicular to the street alignment.	YES
The visual prominence of underground car park vents should be minimised and located at a low level where possible	The underground carp park vents will be located on ground level, visually softened with landscaping.	YES
Substations, pump rooms, garbage storage areas and other service requirements should be located in basement car parks or out of view	Substation, pump room, garbage storage area is located in the basement away from public view.	YES
Ramping for accessibility should be minimised by building entry location and setting ground floor levels in relation to footpath levels	Ground floor levels is set only around 100mm following natural surrounding level.	YES
Durable, graffiti resistant and easily cleanable materials should be used	Durable materials such as blocks are to be used. The largest solid walls facing the public domain are to be set behind a deep landscape zone making them less attractive targets for vandals.	YES
Where development adjoins public parks, open space or bushland, the design positively addresses this interface and uses a number of the following design solutions:		NA

	<ul style="list-style-type: none"> - 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 		
	On sloping sites protrusion of car parking above ground level should be minimised by using split levels to step underground car parking	Underground car parking is set into the slope of the site with minimal ramping. Protrusion above ground is to be visually softened with landscaping.	YES
3D	COMMUNAL AND PUBLIC OPEN SPACE		
3D-1	Objective: An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping		✓
	Design criteria		
	1. Communal open space has a minimum area equal to 25% of the site (see figure 3D.3)	193m ² (35%) of communal open space is provided (139m ² is required). Given the small size of the development with only 6 units, and the provision of generously sized private open spaces, the area of communal space is adequate.	✓
	2. Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours	Communal open space will receive minimum of 2 hours sun. Refer to shadow diagrams.	✓
	Design Guidance	Considered	
	Communal open space should be consolidated into a well designed, easily identified and usable area	The communal open space has been provided at the sides of the development with easy access directly from the site entrance.	YES
	Communal open space should have a minimum dimension of 3m, and larger developments should consider greater dimensions	The communal open space is 3m wide.	YES
	Communal open space should be co-located with deep soil areas	Deep soil areas are provided within the communal space.	NO
	Direct, equitable access should be provided to communal open space areas from common circulation areas, entries and lobbies	The communal open space has been provided at the sides of the development with easy, level access directly from the site entrance.	YES
	Where communal open space cannot be provided at ground level, it should be provided on a podium or roof	Communal open space is provided at ground level. Council discourage the communal or private open space on roof to protect surrounding development from possible visual / audio interference.	YES
	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: <ul style="list-style-type: none"> - 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 	Given the small size of the development with only 6 units, and the provision of generously sized private open space and proximity to external public open space/facilities. The area of communal space is adequate.	YES
3D-2	Objective: Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting		✓
	Design Guidance	Considered	
	Facilities are provided within communal open spaces and common spaces for a range of age groups (see also 4F Common circulation and spaces), incorporating some of the following elements: <ul style="list-style-type: none"> - seating for individuals or groups - barbecue areas - play equipment or play areas - swimming pools, gyms, tennis courts or common rooms 	The communal open space at ground level is designed to allow for various uses and group sizes with extensive planting to encourage social interactions and informal gathering.	YES

	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	The communal space offers access to both sunlight and deep shading. Local vegetation sheltered the space from winds.	YES												
	Visual impacts of services should be minimised, including location of ventilation duct outlets from basement car parks, electrical substations and detention tanks	Services are concealed entirely within the basement.	YES												
3D-3	Objective: Communal open space is designed to maximise safety		✓												
	Design Guidance	Considered													
	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: <ul style="list-style-type: none">- bay windows- corner windows- balconies	The public domain and communal open space are visible from private balconies and windows.	YES												
	Communal open space should be well lit	The communal open space will be lit at night.	YES												
	Where communal open space/facilities are provided for children and young people they are safe and contained	The communal open space will be enclosed and safe for use by children.	YES												
3D-4	Objective: Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood		NA												
	Design Guidance	Considered													
	The public open space should be well connected with public streets along at least one edge		NA												
	The public open space should be connected with nearby parks and other landscape elements		NA												
	Public open space should be linked through view lines, pedestrian desire paths, termination points and the wider street grid		NA												
	Solar access should be provided year round along with protection from strong winds		NA												
	Opportunities for a range of recreational activities should be provided for people of all ages		NA												
	A positive address and active frontages should be provided adjacent to public open space		NA												
	Boundaries should be clearly defined between public open space and private areas		NA												
3E	DEEP SOIL ZONES														
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		✓												
	Design criteria 1. Deep soil zones are to meet the following minimum requirements:	The minimum requirement of deep soil zone under the ADG for the site is 39m ² (7%). The proposal will satisfy this requirement.													
	<table><tr><th>Site area</th><th>Minimum dimensions</th><th>Deep soil zone (% of site area)</th></tr><tr><td>less than 650m2</td><td>-</td><td rowspan="4">7%</td></tr><tr><td>650m2 - 1,500m2</td><td>3m</td></tr><tr><td>greater than 1,500m2</td><td>6m</td></tr><tr><td>greater than 1,500m2 with significant existing tree cover</td><td>6m</td></tr></table>	Site area	Minimum dimensions	Deep soil zone (% of site area)	less than 650m2	-	7%	650m2 - 1,500m2	3m	greater than 1,500m2	6m	greater than 1,500m2 with significant existing tree cover	6m		
Site area	Minimum dimensions	Deep soil zone (% of site area)													
less than 650m2	-	7%													
650m2 - 1,500m2	3m														
greater than 1,500m2	6m														
greater than 1,500m2 with significant existing tree cover	6m														
	Design Guidance	Considered													

	On some sites it may be possible to provide larger deep soil zones, depending on the site area and context: <ul style="list-style-type: none">- 10% of the site as deep soil on sites with an area of 650m2 - 1,500m2- 15% of the site as deep soil on sites greater than 1,500m2	NA												
	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: <ul style="list-style-type: none">- 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	Deep soil zones located adjacent/ underneath existing mature trees to allow for the development of healthy root systems, providing anchorage and stability of the trees.												
	Achieving the design criteria may not be possible on some sites including where: <ul style="list-style-type: none">- 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	NA												
	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													
3F	VISUAL PRIVACY													
3F-1	Objective: Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy	✓												
	Design criteria 1. Separation between windows and balconies is provided to ensure visual privacy is achieved. Minimum required separation distances from buildings to the side and rear boundaries are as follows: <table><tr><th>Building height</th><th>Habitable rooms and balconies</th><th>Non-habitable rooms</th></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> Note: Separation distances between buildings on the same site should combine required building separations depending on the type of room (see figure 3F.2) Gallery access circulation should be treated as habitable space when measuring privacy separation distances between neighbouring properties	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	There is a minimum separation of 6.3m between adjacent first floor balcony at 25 Waine St and proposed windows. These windows are living and bedroom windows. Potential privacy impacts are mitigated by the use of heavy screening on the east façade facing the adjoining windows.
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												
	Design Guidance	Considered												
	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	One step in the built form is proposed at the top-most storey.												
	For residential buildings next to commercial buildings, separation distances should be measured as follows: <ul style="list-style-type: none">- for retail, office spaces and commercial balconies use the habitable room distances- for service and plant areas use the non habitable room distances	NA												
	New development should be located and oriented to maximise visual privacy between buildings on site and for neighbouring buildings. Design solutions include: <ul style="list-style-type: none">- site layout and building orientation to minimise privacy impacts (see also section 3B Orientation)	The building is set away from neighbouring buildings. The opening orientation is appropriate for the shape of the site.												

	- on sloping sites, apartments on different levels have appropriate visual separation distances (see figure 3F.4)	
	Apartment buildings should have an increased separation distance of 3m (in addition to the 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 (figure 3F.5)	NA
	Direct lines of sight should be avoided for windows and balconies across corners	Direct lines of sight are avoided. There are no views across corners between apartments.
	No separation is required between blank walls	YES
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	✓
	Design Guidance	Considered
	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: <ul style="list-style-type: none">- 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	Apartment windows generally face away from communal areas. Partially solid balustrades and concrete block screens are used where there is some interface between public and private.
	Bedrooms, living spaces and other habitable rooms should be separated from gallery access and other open circulation space by the apartment's service areas	Bedrooms and living spaces are generally separated from the circulation gallery by kitchen, internal stairs or multi-purpose rooms.
	Balconies and private terraces should be located in front of living rooms to increase internal privacy	All units have balconies in front of living spaces.
	Windows should be offset from the windows of adjacent buildings	Windows are separated from adjacent buildings as noted in 3F-1.
	Recessed balconies and/or vertical fins should be used between adjacent balconies	Vertical fins / screen used between adjacent balconies.
3G	PEDESTRIAN ACCESS AND ENTRIES	
3G-1	Objective: Building entries and pedestrian access connects to and addresses the public domain	✓
	Design Guidance	Considered
	Multiple entries (including communal building entries and individual ground floor entries) should be provided to activate the street edge	Distinct street entries into the site is provided with paths leading to the building entries acting as an extension of the public domain.
	Entry locations relate to the street and subdivision pattern and the existing pedestrian network	Entry to the development is clearly accessible from the pedestrian footpath.
	Building entries should be clearly identifiable and communal entries should be clearly distinguishable from private entries	The communal building entries lead into distinct communal lobbies. Private entries may only be accessed from within the communal lobbies.
	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	There is only one building on the site.

3G-2	Objective: Access, entries and pathways are accessible and easy to identify		✓
	Design Guidance	Considered	
	Building access areas including lift lobbies, stairwells and hallways should be clearly visible from the public domain and communal spaces	Distinct street entries into the site are provided with paths leading to the building entries acting as an extension of the public domain.	YES
	The design of ground floors and underground car parks minimise level changes along pathways and entries	The existing levels along the street alignment and pedestrian pathway are to be generally maintained.	YES
	Steps and ramps should be integrated into the overall building and landscape design	Ramps to the habitable level do not dominate the design, but gently wing the building.	YES
	For large developments 'way finding' maps should be provided to assist visitors and residents (see figure 4T.3)		NA
	For large developments, electronic access and audio/video intercom should be provided to manage access	Audio/video intercom will be provided adjacent to the building entry points.	YES
3G-3	Objective: Large sites provide pedestrian links for access to streets and connection to destinations		NA
	Design Guidance	Considered	
	Pedestrian links through sites facilitate direct connections to open space, main streets, centres and public transport 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	NA NA	
3H	VEHICLE ACCESS		
3H-1	Objective: Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes		✓
	Design Guidance	Considered	
	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	The car park entry is recessed under the main building façade. The use of material and colour given a base for the proposed façade, while at the same time provide integration with the surrounding neighbourhood. Security gates provide visual screen to promote security.	YES
	Car park entries should be located behind the building line	The car park entry is recessed under the main building façade, well behind the front massing.	YES
	Vehicle entries should be located at the lowest point of the site minimising ramp lengths, excavation and impacts on the building form and layout	The vehicle entry is at the lowest point of the site, with minimal ramping required.	YES
	Car park entry and access should be located on secondary streets or lanes where available		NA
	Vehicle standing areas that increase driveway width and encroach into setbacks should be avoided	No vehicle standing areas are proposed.	YES
	Access point locations should avoid headlight glare to habitable rooms	Headlight glare will be limited to below the upper-ground apartment level	YES
	Adequate separation distances should be provided between vehicle entries and street intersections		NA
	Visual impact of long driveways should be minimised through changing alignments and screen planting	No long driveways are proposed.	YES
	The width and number of vehicle access points should be limited to the minimum	Only 1 vehicle access point is proposed.	YES

	The need for large vehicles to enter or turn around within the site should be avoided	No large vehicles entry or turn around within the site.	YES
	Garbage collection, loading and servicing areas are screened	Garbage collection is kerbside as is standard for this street.	YES
	Clear sight lines should be provided at pedestrian and vehicle crossings	2.5x2m sightlines have been provided either side of the driveway in compliance with Australian Standards.	YES
	Traffic calming devices such as changes in paving material or textures should be used where appropriate		NA
	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	The driveway intersects the pedestrian path on Waine Street and is clearly distinguished from the pedestrian zones with a kerb and gutter. Pedestrian access is via separated paths.	YES
3J	BICYCLE AND CAR PARKING		
3J-1	Objective: Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas		✓
	Design criteria		
	1. For development in the following locations: - on sites that are within 800 metres of a railway station or light rail stop in the Sydney Metropolitan Area; or - on land zoned, and sites within 400 metres of land zoned, B3 Commercial Core, B4 Mixed Use or equivalent in a nominated regional centre the minimum car parking requirement for residents and visitors is set out in the Guide to Traffic Generating Developments, or the car parking requirement prescribed by the relevant council, whichever is less.	The site is served by a bus stop 400m away on Pittwater Road. Proximity to public transport links will encourage use of public transport and car sharing. As such, the car parking provided is adequate for the development.	✓
	The car parking needs for a development must be provided off street		
	Design Guidance	Considered	
	Where a car share scheme operates locally, provide car share parking spaces within the development. Car share spaces, when provided, should be on site		NA
	Where less car parking is provided in a development, council should not provide on street resident parking permits		NA
3J-2	Objective: Parking and facilities are provided for other modes of transport		NA
	Design Guidance	Considered	
	Conveniently located and sufficient numbers of parking spaces should be provided for motorbikes and scooters		NA
	Secure undercover bicycle parking should be provided that is easily accessible from both the public domain and common areas	The proposed development makes provisions for bicycle storage.	YES
	Conveniently located charging stations are provided for electric vehicles, where desirable		NA
3J-3	Objective: Car park design and access is safe and secure		✓
	Design Guidance	Considered	
	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	Supporting facilities accessible without crossing car parking spaces.	YES
	Direct, clearly visible and well lit access should be provided into common circulation areas		YES
	A clearly defined and visible lobby or waiting area should be provided to lifts and stairs	Lobbies are provided directly adjacent to the lift and stairs and are clearly visible at the points of building entry.	YES

	For larger car parks, safe pedestrian access should be clearly defined and circulation areas have good lighting, colour, line marking and/or bollards	YES
3J-4	Objective: Visual and environmental impacts of underground car parking are minimised	✓
	Design Guidance	Considered
	Excavation should be minimised through efficient car park layouts and ramp design	The parking basement is cut into the natural slope with minimal ramping required. YES
	Car parking layout should be well organised, using a logical, efficient structural grid and double loaded aisles	YES
	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	The parking basement is cut into the natural slope with the front-facing portion below natural ground level. YES
	Natural ventilation should be provided to basement and sub basement car parking areas	The basement is to be mechanically ventilated. NA
	Ventilation grills or screening devices for car parking openings should be integrated into the facade and landscape design	The basement is to be mechanically ventilated with vent openings integrated into the façade design. YES
3J-5	Objective: Visual and environmental impacts of on-grade car parking are minimised	✓
	Design Guidance	Considered
	On-grade car parking should be avoided	YES
	Where on-grade car parking is unavoidable, the following design solutions are used: <ul style="list-style-type: none">- 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	No on-grade parking is proposed. NA
3J-6	Objective: Visual and environmental impacts of above ground enclosed car parking are minimised	NA
	Design Guidance	Considered
	Exposed parking should not be located along primary street frontages	NA
	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: <ul style="list-style-type: none">- 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 (see figure 3J.9)	NA
	Positive street address and active frontages should be provided at ground level	NA

PART 4	DESIGNING THE BUILDING		
4A	SOLAR AND DAYLIGHT ACCESS		
4A-1	Objective: To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space		✓
	Design criteria		
	1. Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas	83% (5/6) of dwellings receive a minimum of 2 hours of solar access between 9am and 3pm mid-winter.	✓
	2. In all other areas, living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 3 hours direct sunlight between 9 am and 3 pm at mid winter		NA
	3. A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid winter	16% (1/6) of dwelling receive no direct sunlight to living areas between 9am and 3pm mid-winter.	
	Design Guidance	Considered	
	The design maximises north aspect and the number of single aspect south facing apartments is minimised	All units have 2 or 3 open facades.	YES
	Single aspect, single storey apartments should have a northerly or easterly aspect	All apartments have multiple aspects.	YES
	Living areas are best located to the north and service areas to the south and west of apartments		YES
	To optimise the direct sunlight to habitable rooms and balconies a number of the following design features are used: <ul style="list-style-type: none">- dual aspect apartments- shallow apartment layouts- two storey and mezzanine level apartments- bay windows		YES
	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		YES
	Achieving the design criteria may not be possible on some sites. This includes: <ul style="list-style-type: none">- 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		NA
	Design drawings need to demonstrate how site constraints and orientation preclude meeting the design criteria		YES
4A-2	Objective: Daylight access is maximised where sunlight is limited		✓
	Design Guidance	Considered	
	Courtyards, skylights and high level windows (with sills of 1,500mm or greater) are used only as a secondary light source in habitable rooms		YES
	Where courtyards are used : <ul style="list-style-type: none">- 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		NA
	Opportunities for reflected light into apartments are optimised through:		YES

	<ul style="list-style-type: none"> - reflective exterior 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 		
4A-3	Objective: Design incorporates shading and glare control, particularly for warmer months		✓
	Design Guidance	Considered	
	<p>A number of the following design features are used:</p> <ul style="list-style-type: none"> - balconies or sun shading that extend far enough to shade summer sun, but allow winter sun to penetrate living areas - shading devices such as eaves, awnings, balconies, pergolas, external louvres and planting - horizontal shading to north facing windows - vertical shading to east and particularly west facing windows - operable shading to allow adjustment and choice - high performance glass that minimises external glare off windows, with consideration given to reduced tint glass or glass with a reflectance level below 20% (reflective films are avoided) 	<p>Balconies and floor slab provide deep shade in warmer months and allow light and warmth into penetrate the proposed apartments in cooler months.</p>	YES
4B	NATURAL VENTILATION		
4B-1	Objective: All habitable rooms are naturally ventilated		✓
	Design Guidance	Considered	
	The building's orientation maximises capture and use of prevailing breezes for natural ventilation in habitable rooms	100% of apartments are naturally cross ventilated	YES
	Depths of habitable rooms support natural ventilation		YES
	The area of unobstructed window openings should be equal to at least 5% of the floor area served		YES
	Light wells are not the primary air source for habitable rooms		YES
	<p>Doors and openable windows maximise natural ventilation opportunities by using the following design solutions:</p> <ul style="list-style-type: none"> - adjustable windows with large effective openable areas - a variety of window types that provide safety and flexibility such as awnings and louvres <p>windows which the occupants can reconfigure to funnel breezes into the apartment such as vertical louvres, casement windows and externally opening doors</p>		YES
4B -2	Objective: The layout and design of single aspect apartments maximises natural ventilation		✓
	Design Guidance	Considered	
	Apartment depths are limited to maximise ventilation and airflow (see also figure 4D.3)	Apartment depths are kept to the minimum depth possible to comfortably accommodate a lounge, dining and kitchen in a single living module.	YES
	<p>Natural ventilation to single aspect apartments is achieved with the following design solutions:</p> <ul style="list-style-type: none"> - 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 		NA
4B-3	Objective: The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents		✓

Design criteria														
1. At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed	100% of apartments are naturally cross ventilated	✓												
2. Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line	The apartment depth is less than 8m.	✓												
Design Guidance		Considered												
The building should include dual aspect apartments, cross through apartments and corner apartments and limit apartment depths		YES												
In cross-through apartments external window and door opening sizes/areas on one side of an apartment (inlet side) are approximately equal to the external window and door opening sizes/areas on the other side of the apartment (outlet side) (see figure 4B.4)		YES												
Apartments are designed to minimise the number of corners, doors and rooms that might obstruct airflow		YES												
Apartment depths, combined with appropriate ceiling heights, maximise cross ventilation and airflow		YES												
4C	CEILING HEIGHTS													
4C-1	Objective: Ceiling height achieves sufficient natural ventilation and daylight access	✓												
Design criteria														
1. Measured from finished floor level to finished ceiling level, minimum ceiling heights are:		✓												
<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</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>		Minimum ceiling height for apartment and mixed use buildings		Habitable rooms	2.7m	Non-habitable	2.4m	For 2 storey apartments	2.7m for main living area floor 2.4m for second floor, where its area does not exceed 50% of the apartment area	Attic spaces	1.8m at edge of room with a 30 degree minimum ceiling slope	If located in mixed used areas	3.3m for ground and first floor to promote future flexibility of use	
Minimum ceiling height for apartment and mixed use buildings														
Habitable rooms	2.7m													
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For 2 storey apartments	2.7m for main living area floor 2.4m for second floor, where its area does not exceed 50% of the apartment area													
Attic spaces	1.8m at edge of room with a 30 degree minimum ceiling slope													
If located in mixed used areas	3.3m for ground and first floor to promote future flexibility of use													
These minimums do not preclude higher ceilings if desired														
Ceiling height to living rooms and bedrooms is 2.7m minimum.		✓												
Ceiling heights to bathrooms are 2.4m minimum.														
Design Guidance		Considered												
Ceiling height can accommodate use of ceiling fans for cooling and heat distribution		YES												
4C-2	Objective: Ceiling height increases the sense of space in apartments and provides for well-proportioned rooms	✓												
Design Guidance		Considered												
A number of the following design solutions can be used:		YES												
<ul style="list-style-type: none">- 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														

4C-3	Objective: Ceiling heights contribute to the flexibility of building use over the life of the building		✓										
	Design Guidance	Considered											
	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 (see figure 4C.1)	NA											
4D	APARTMENT SIZE AND LAYOUT												
4D-1	Objective: The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity		✓										
	Design criteria												
	1. Apartments are required to have the following minimum internal areas:	A range of apartment sizes are proposed and meet or exceed the minimum internal areas. Proposed areas: 3 bedrooms (2bath + 1powder) – 109-116m ² (50%) 3 bedrooms (3bath) – 111-114m ² (50%)	✓										
	<table><tr><th>Apartment type</th><th>Minimum internal area</th></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>	Apartment type	Minimum internal area	Studio	35m2	1 bedroom	50m2	2 bedroom	70m2	3 bedroom	90m2		
Apartment type	Minimum internal area												
Studio	35m2												
1 bedroom	50m2												
2 bedroom	70m2												
3 bedroom	90m2												
	The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m2 each A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m2 each												
	2. Every habitable room must have a window in an external wall with a total minimum glass area of not less than 10% of the floor area of the room. Daylight and air may not be borrowed from other rooms		✓										
	Design Guidance	Considered											
	Kitchens should not be located as part of the main circulation space in larger apartments (such as hallway or entry space)	Kitchens are separated from the main circulation space	YES										
	A window should be visible from any point in a habitable room	Windows are visible from any point in a habitable room	YES										
	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	All habitable rooms meet minimum room dimensions and areas. Refer to plan drawings	NA										
4D-2	Objective: Environmental performance of the apartment is maximised		✓										
	Design criteria												
	1. Habitable room depths are limited to a maximum of 2.5 x the ceiling height		✓										
	2. In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window	Habitable room depths are less than 8m from a window.	✓										
	Design Guidance	Considered											
	Greater than minimum ceiling heights can allow for proportional increases in room depth up to the permitted maximum depths	NA											
	All living areas and bedrooms should be located on the external face of the building	All living areas and bedrooms are located on the external face of the building	YES										
	Where possible: - bathrooms and laundries should have an external openable window - main living spaces should be oriented toward the primary outlook and aspect and away from noise sources	YES											
4D-3	Objective: Apartment layouts are designed to accommodate a variety of household activities and needs		✓										

Design criteria		YES																
1. Master bedrooms have a minimum area of 10m2 and other bedrooms 9m2 (excluding wardrobe space)	3 Bedroom apartments - Master bedrooms = 11-15m ² - Other bedrooms = 9m ² min.		✓															
2. Bedrooms have a minimum dimension of 3m (excluding wardrobe space)	3m minimum width is provided to all bedrooms.		✓															
3. Living rooms or combined living/dining rooms have a minimum width of: - 3.6m for studio and 1 bedroom apartments - 4m for 2 and 3 bedroom apartments	Combined living/dining is a minimum of 4m wide.		✓															
4. The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts	Minimum apartment width in 4.6m internally.	YES																
Design Guidance		Considered																
Access to bedrooms, bathrooms and laundries is separated from living areas minimising direct openings between living and service areas		YES																
All bedrooms allow a minimum length of 1.5m for robes	All bedrooms are provided with wardrobes of 1.8m long or greater.	YES																
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	All main bedrooms are provided with wardrobes of 1.8m long or greater.	YES																
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 - 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	Internal apartment layouts have been planned with careful consideration of furnishing. Living areas are spacious enough for different configuration of furniture layout and internal corridors and circulation have been minimised.	YES																
4E PRIVATE OPEN SPACE AND BALCONIES																		
4E-1	Objective: Apartments provide appropriately sized private open space and balconies to enhance residential amenity		✓															
Design criteria																		
1. All apartments are required to have primary balconies as follows:		Each dwelling has access to a secure private balcony with a minimum area that meets or exceeds the minimum requirement. Apartment balcony depths will comfortably accommodate a suitably sized table and chairs.	✓															
	<table><tr><th>Dwelling type</th><th>Minimum area</th><th>Minimum depth</th></tr><tr><td>Studio apartments</td><td>4m2</td><td>-</td></tr><tr><td>1 bedroom apartments</td><td>8m2</td><td>2m</td></tr><tr><td>2 bedroom apartments</td><td>10m2</td><td>2m</td></tr><tr><td>3+ bedroom apartments</td><td>12m2</td><td>2.4m</td></tr></table>	Dwelling type	Minimum area	Minimum depth	Studio apartments	4m2	-	1 bedroom apartments	8m2	2m	2 bedroom apartments	10m2	2m	3+ bedroom apartments	12m2	2.4m		
Dwelling type	Minimum area	Minimum depth																
Studio apartments	4m2	-																
1 bedroom apartments	8m2	2m																
2 bedroom apartments	10m2	2m																
3+ bedroom apartments	12m2	2.4m																
The minimum balcony depth to be counted as contributing to the balcony area is 1m																		
2. For apartments at ground level or on a podium or similar structure, a private open space is provided instead of a balcony. It must have a minimum area of 15m2 and a minimum depth of 3m		The ground level apartment on the northern side is provided with a generous private terrace of 37 & 42 m ²	✓															
Design Guidance		Considered																
Increased communal open space should be provided where the number or size of balconies are reduced		The number and size of balconies are not reduced.	YES															
Storage areas on balconies is additional to the minimum balcony size		Storage areas are not proposed on balconies	YES															

	Balcony use may be limited in some proposals by: <ul style="list-style-type: none">- 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, and other amenity benefits for occupants should also be provided in the apartments or in the development or both. Natural ventilation also needs to be demonstrated	NA
4E-2	Objective: Primary private open space and balconies are appropriately located to enhance liveability for residents	✓
	Design Guidance	Considered
	Primary open space and balconies should be located adjacent to the living room, dining room or kitchen to extend the living space	YES
	Private open spaces and balconies predominantly face north, east or west	YES
	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	YES
4E-3	Objective: Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building	✓
	Design Guidance	Considered
	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	YES
	Full width full height glass balustrades alone are generally not desirable	YES
	Projecting balconies should be integrated into the building design and the design of soffits considered	YES
	Operable screens, shutters, hoods and pergolas are used to control sunlight and wind	NA
	Balustrades are set back from the building or balcony edge where overlooking or safety is an issue	NA
	Downpipes and balcony drainage are integrated with the overall facade and building design	YES
	Air-conditioning units should be located on roofs, in basements, or fully integrated into the building design	YES
	Where clothes drying, storage or air conditioning units are located on balconies, they should be screened and integrated in the building design	YES
	Ceilings of apartments below terraces should be insulated to avoid heat loss	YES
	Water and gas outlets should be provided for primary balconies and private open space	YES

4E-4	Objective: Private open space and balcony design maximises safety			✓
	Design Guidance		Considered	
	Changes in ground levels or landscaping are minimised	Landscaped communal open space is to be designed following natural levels.	YES	
	Design and detailing of balconies avoids opportunities for climbing and falls	Designed to comply with BCA requirements	YES	
4F	COMMON CIRCULATION AND SPACES			
4F-1	Common circulation spaces achieve good amenity and properly service the number of apartments			✓
	Design criteria			
	1. The maximum number of apartments off a circulation core on a single level is eight	3 apartments are accessed from the circulation core on each level.	✓	
	2. For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40	One lift is provided for 6 apartments	✓	
	Design Guidance		Considered	
	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	The circulation spaces are generous and open to natural light and air. The area provided in front of the lift is 2-2.35m deep.	YES	
	Daylight and natural ventilation should be provided to all common circulation spaces that are above ground	The gallery has been designed as a covered open space with a high level of amenity. The space has access to natural ventilation and daylight.	YES	
	Windows should be provided in common circulation spaces and should be adjacent to the stair or lift core or at the ends of corridors	Complies	YES	
	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 for seating wider areas at apartment entry doors and varied ceiling heights	There are no long corridors. The common areas are a series of foyers linked by the common stair.	NA	
	Design common circulation spaces to maximise opportunities for dual aspect apartments, including multiple core apartment buildings and cross over apartments		NA	
	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 - 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	Complies	YES	
	Where design criteria 1 is not achieved, no more than 12 apartments should be provided off a circulation core on a single level	Complies	YES	
	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	No primary living spaces or bedrooms open onto common circulation spaces.	YES	
4F-2	Objective: Common circulation spaces promote safety and provide for social interaction between residents			✓
	Design Guidance		Considered	
	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	Clear sight lines exist between all circulation points and apartment entries.	YES	
	Tight corners and spaces are avoided	All circulation spaces are more than 1.2m wide with no tight corners.	YES	
	Circulation spaces should be well lit at night	The circulation gallery will be well lit.	YES	

	Legible signage should be provided for apartment numbers, common areas and general wayfinding		YES										
	Incidental spaces, for example space for seating in a corridor, at a stair landing, or near a window are provided		NA										
	In larger developments, community rooms for activities such as owners corporation meetings for resident use should be provided and are ideally co-located with communal open space		NA										
	Where external galleries are provided, they are more open than closed above the balustrade along their length		NA										
4G	STORAGE												
4G-1	Objective: Adequate, well designed storage is provided in each apartment		✓										
	Design criteria 1. In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided:	Storage areas to all apartments comply with minimum volumes. Additionally, storage cages are provided within the basement car parking area.											
	<table><tr><td>Dwelling type</td><td>Storage size volume</td></tr><tr><td>Studio apartments</td><td>4m3</td></tr><tr><td>1 bedroom apartments</td><td>6m3</td></tr><tr><td>2 bedroom apartments</td><td>8m3</td></tr><tr><td>3+ bedroom apartments</td><td>10m3</td></tr></table>	Dwelling type	Storage size volume	Studio apartments	4m3	1 bedroom apartments	6m3	2 bedroom apartments	8m3	3+ bedroom apartments	10m3		
Dwelling type	Storage size volume												
Studio apartments	4m3												
1 bedroom apartments	6m3												
2 bedroom apartments	8m3												
3+ bedroom apartments	10m3												
	At least 50% of the required storage is to be located within the apartment												
	Design Guidance		Considered										
	Storage is accessible from either circulation or living areas	All storage areas within the apartment are accessible from either circulation or living areas.	YES										
	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		NA										
	Left over space such as under stairs is used for storage		YES										
4G-2	Objective: Additional storage is conveniently located, accessible and nominated for individual apartments		✓										
	Storage not located in apartments is secure and clearly allocated to specific apartments	Secure mesh storage cages in the basement are to be clearly allocated to specific apartments.	YES										
	Storage is provided for larger and less frequently accessed items	Storage cages in the basement are at least 2.8m high and on slab to ensure large items can be easily stored and accessed.	YES										
	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	Allocated storage cages are located in a dedicated space and not obscuring any car parking space.	YES										
	If communal storage rooms are provided they should be accessible from common circulation areas of the building		NA										
	Storage not located in an apartment is integrated into the overall building design and is not visible from the public domain	Not more than 50% of the required storage is provided in clearly allocated chain wire storage cages in the basement and is not visible from the public domain.	YES										
4H	ACOUSTIC PRIVACY												
4H-1	Objective: Noise transfer is minimised through the siting of buildings and building layout		✓										
	Design Guidance		Considered										
	Adequate building separation is provided within the development and from neighbouring buildings/adjacent uses (see also section 2F Building separation and section 3F Visual privacy)	Refer to Section 3F. The building is sited so that all apartments have adequate	YES										

		separation from opposing developments and likely noise sources.	
	Window and door openings are generally orientated away from noise sources	The site is in a conventional low-medium density residential setting without any sources of excessive noise.	YES
	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	The circulation gallery is stacked on each level and apartment layouts are generally positioned vertically to allow similar uses to also stack above each other.	YES
	Storage, circulation areas and non-habitable rooms should be located to buffer noise from external sources	Primary living spaces are generally set away from apartment with non-habitable spaces used as a buffer.	YES
	The number of party walls (walls shared with other apartments) are limited and are appropriately insulated	Party walls are .	NA
	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	Noise-generating services are concealed on ground level within the basement away from bedrooms. All bedrooms are positioned away from communal areas.	YES
4H-2	Objective: Noise impacts are mitigated within apartments through layout and acoustic treatments		✓
	Design Guidance	Considered	
	Internal apartment layout separates noisy spaces from quiet spaces, using a number of the following design solutions: <ul style="list-style-type: none">- rooms with similar noise requirements are grouped together- doors separate different use zones- wardrobes in bedrooms are co-located to act as sound buffers	Noisy spaces are separated from quiet spaces. Noisier spaces are grouped together.	YES
	Where physical separation cannot be achieved noise conflicts are resolved using the following design solutions: <ul style="list-style-type: none">- 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		NA
4J	NOISE AND POLLUTION		
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		✓
	Design Guidance	Considered	
	To minimise impacts the following design solutions may be used: <ul style="list-style-type: none">- 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 (see figure 4J.4)- landscape design reduces the perception of noise and acts as a filter for air pollution generated by traffic and industry	The site is in a conventional medium-high density residential setting without any sources of excessive noise.	YES
	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: <ul style="list-style-type: none">- solar and daylight access		NA

	<ul style="list-style-type: none"> - private open space and balconies - natural cross ventilation 		
4J-2	Objective: Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission		✓
	Design Guidance	Considered	
	Design solutions to mitigate noise include: <ul style="list-style-type: none"> - 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 	The site is in a conventional medium-high density residential setting without any sources of excessive noise.	YES
4K	APARTMENT MIX		
4K-1	Objective: A range of apartment types and sizes is provided to cater for different household types now and into the future		✓
	Design Guidance	Considered	
	A variety of apartment types is provided	Given the small size of the development one apartment type is proposed which meet and exceed the minimum internal areas. Proposed areas: 3 Bedroom (3 bath) – 111 - 114m ² 3 Bedroom (2 bath + 1 powder) – 109 - 116 m ²	YES
	The apartment mix is appropriate, taking into consideration: <ul style="list-style-type: none"> - 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 		YES
	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	6 out of 6 of the apartments feature flexible rooms augmenting the living spaces.	YES
4K-2	Objective: The apartment mix is distributed to suitable locations within the building		✓
	Design Guidance	Considered	
	Different apartment types are located to achieve successful facade composition and to optimise solar access (see figure 4K.3)	Apartment footprints are stacked vertically creating a balanced façade composition and allow equitable solar access between units.	YES
	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		NA
4L	GROUND FLOOR APARTMENTS		
4L-1	Objective: Street frontage activity is maximised where ground floor apartments are located		✓
	Design Guidance	Considered	
	Direct street access should be provided to ground floor apartments		NA
	Activity is achieved through front gardens, terraces and the facade of the building. Design solutions may include: <ul style="list-style-type: none"> - 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 	The front-facing, upper-ground apartment directly addresses the street. It's private terrace also addresses the street from behind the common landscaped zone.	YES
	Retail or home office spaces should be located along street frontages		NA
	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		NA

4L-2	Objective: Design of ground floor apartments delivers amenity and safety for residents			✓
	Design Guidance		Considered	
	Privacy and safety should be provided without obstructing casual surveillance. Design solutions may include: <ul style="list-style-type: none"> - elevation of private gardens and terraces above the street level by 1-1.5m (see figure 4L.4) - landscaping and private courtyards - window sill heights that minimise sight lines into apartments - integrating balustrades, safety bars or screens with the exterior design 	The front-facing, upper-ground apartment's private terrace is lowered below street level and addresses the street from behind the common landscaped zone. Privacy to residents achieved by visual screening from landscape design.	YES	
	Solar access should be maximised through: <ul style="list-style-type: none"> - high ceilings and tall windows - trees and shrubs that allow solar access in winter and shade in summer 		NA	
4M	FACADES			
4M-1	Objective: Building facades provide visual interest along the street while respecting the character of the local area			✓
	Design Guidance		Considered	
	Design solutions for front building facades may include: <ul style="list-style-type: none"> - 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 	The building expression responds to the site conditions and location. <p>The building expresses solid and voids and a composition of mixed materials and finishes.</p> <p>The building has a solid base which is softened with landscaping, a middle that expresses the uses within, and a lighter, recessed top which allows the building height to express the transition from the R3 zone down to the opposite R2 zone.</p>	YES	
	Building services should be integrated within the overall facade		YES	
	Building facades should be well resolved with an appropriate scale and proportion to the streetscape and human scale. Design solutions may include: <ul style="list-style-type: none"> - 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	Refer to above	YES	
	Building facades relate to key datum lines of adjacent buildings through upper level setbacks, parapets, cornices, awnings or colonnade heights	There are no established setback or height patterns	NA	
	Shadow is created on the facade throughout the day with building articulation, balconies and deeper window reveals		YES	
4M-2	Objective: Building functions are expressed by the facade			
	Design Guidance		Considered	
	Building entries should be clearly defined	Pedestrian pathways flank the building leading to well-defined building entries.	YES	
	Important corners are given visual prominence through a change in articulation, materials or colour, roof expression or changes in height		NA	
	The apartment layout should be expressed externally through facade features such as party walls and floor slabs		YES	
4N	ROOF DESIGN			
4N-1	Objective: Roof treatments are integrated into the building design and positively respond to the street			✓

	Design Guidance	Considered
	Roof design relates to the street. Design solutions may include: <ul style="list-style-type: none">- 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	YES
	Roof treatments should be integrated with the building design. Design solutions may include: <ul style="list-style-type: none">- roof design proportionate to the overall building size, scale and form- roof materials compliment the building- service elements are integrated	YES
4N-2	Objective: Opportunities to use roof space for residential accommodation and open space are maximised	✓
	Design Guidance	Considered
	Design guidance Habitable roof space should be provided with good levels of amenity. Design solutions may include: <ul style="list-style-type: none">- penthouse apartments- dormer or clerestory windows- openable skylights	YES
	Open space is provided on roof tops subject to acceptable visual and acoustic privacy, comfort levels, safety and security considerations	NA
4N-3	Objective: Roof design incorporates sustainability features	
	Design Guidance	Considered
	Roof design maximises solar access to apartments during winter and provides shade during summer. Design solutions may include: <ul style="list-style-type: none">- the roof lifts to the north- eaves and overhangs shade walls and windows from summer sun	YES
	Skylights and ventilation systems should be integrated into the roof design	YES
4O	LANDSCAPE DESIGN	
4O-1	Objective: Landscape design is viable and sustainable	✓
	Design Guidance	Considered
	Landscape design should be environmentally sustainable and can enhance environmental performance by incorporating: <ul style="list-style-type: none">- diverse and appropriate planting- bio-filtration gardens- appropriately planted shading trees- areas for residents to plant vegetables and herbs- composting- green roofs or walls	Extensive landscaping to the front and rear of the site. Refer to Landscape plans YES
	Ongoing maintenance plans should be prepared	YES
	Microclimate is enhanced by: <ul style="list-style-type: none">- 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	Refer to Landscape plans YES

Tree and shrub selection considers size at maturity and the potential for roots to compete (see Table 4)	Extensive landscaping to the front and rear of the site.	YES
	Refer to Landscape plans	
Site Area (m ²)	Recommended Tree Planting	
Up to 850	1 medium tree per 50m ² of deep soil zone	
850 - 1,500	1 large tree or 2 medium trees per 90m ² of deep soil zone	
Greater than 1,500	1 large tree or 2 medium trees per 80m ² of deep soil zone	

40-2	Objective: Landscape design contributes to the streetscape and amenity	✓
	Design Guidance	Considered
	Landscape design responds to the existing site conditions including: <ul style="list-style-type: none">- changes of levels- views- significant landscape features including trees and rock outcrops	YES
	Significant landscape features should be protected by: <ul style="list-style-type: none">- tree protection zones (see figure 4O.5)- appropriate signage and fencing during construction	YES
	Plants selected should be endemic to the region and reflect the local ecology	YES
4P	PLANTING ON STRUCTURE	
4P-1	Objective: Appropriate soil profiles are provided	✓
	Design Guidance	Considered
	Structures are reinforced for additional saturated soil weight	YES
	Soil volume is appropriate for plant growth, considerations include: <ul style="list-style-type: none">- modifying depths and widths according to the planting mix and irrigation frequency- free draining and long soil life span tree anchorage	YES
	Minimum soil standards for plant sizes should be provided in accordance with Table 5	YES
4P-2	Objective: Plant growth is optimised with appropriate selection and maintenance	✓
	Design Guidance	Considered
	Plants are suited to site conditions, considerations include: <ul style="list-style-type: none">- drought and wind tolerance- seasonal changes in solar access- modified substrate depths for a diverse range of plants- plant longevity	YES
	A landscape maintenance plan is prepared	YES
	Irrigation and drainage systems respond to: <ul style="list-style-type: none">- changing site conditions- soil profile and the planting regime- whether rainwater, stormwater or recycled grey water is used	YES
4P-3	Objective: Planting on structures contributes to the quality and amenity of communal and public open spaces	✓
	Design Guidance	Considered
	Building design incorporates opportunities for planting on structures. Design solutions may include: <ul style="list-style-type: none">- green walls with specialised lighting for indoor green walls- wall design that incorporates planting	Planting on structure is provided on the perimeter of the upper ground level YES

	<ul style="list-style-type: none"> - green roofs, particularly where roofs are visible from the public domain - planter boxes <p>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</p>		
4Q	UNIVERSAL DESIGN		
4Q-1	Objective: Universal design features are included in apartment design to promote flexible housing for all community members		✓
	Design Guidance	Considered	
	Developments achieve a benchmark of 20% of the total apartments incorporating the Liveable Housing Guideline's silver level universal design features	33.33% of the total apartments (2/6) incorporate the Liveable Housing Guideline's silver level universal design features.	YES
4Q-2	Objective: A variety of apartments with adaptable designs are provided		✓
	Design Guidance	Considered	
	Adaptable housing should be provided in accordance with the relevant council policy		YES
	Design solutions for adaptable apartments include: <ul style="list-style-type: none"> - 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 		YES
4Q-3	Objective: Apartment layouts are flexible and accommodate a range of lifestyle needs		✓
	Design Guidance	Considered	
	Apartment design incorporates flexible design solutions which may include: <ul style="list-style-type: none"> - 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 		YES
4R	ADAPTIVE REUSE		
4R-1	Objective: New additions to existing buildings are contemporary and complementary and enhance an area's identity and sense of place		NA
	Design Guidance	Considered	
	Design solutions may include: <ul style="list-style-type: none"> - 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 Additions to heritage items should be clearly identifiable from the original building New additions allow for the interpretation and future evolution of the building		
4R-2	Objective: Adapted buildings provide residential amenity while not precluding future adaptive reuse		NA
	Design Guidance	Considered	
	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: <ul style="list-style-type: none"> - generously sized voids in deeper buildings 		

	<ul style="list-style-type: none"> - alternative apartment types when orientation is poor - using additions to expand the existing building envelope <p>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:</p> <ul style="list-style-type: none"> - where there are existing higher ceilings, depths of habitable rooms could increase subject to demonstrating access to natural ventilation, cross ventilation (when applicable) and solar and daylight access (see also sections 4A Solar and daylight access and 4B Natural ventilation) - alternatives to providing deep soil where less than the minimum requirement is currently available on the site - building and visual separation – subject to demonstrating alternative design approaches to achieving privacy - common circulation - car parking - alternative approaches to private open space and balconies 	
4S	MIXED USE	
4S-1	<p>Objective: Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement</p>	
	Design Guidance	Considered
	<p>Mixed use development should be concentrated around public transport and centres.</p> <p>Mixed use developments positively contribute to the public domain.</p> <p>Design solutions may include:</p> <ul style="list-style-type: none"> - 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 	NA
4S-2	<p>Objective: Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents</p>	
	Design Guidance	Considered
	<p>Residential circulation areas should be clearly defined. Design solutions may include:</p> <ul style="list-style-type: none"> - 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 <p>Landscaped communal open space should be provided at podium or roof levels</p>	NA
4T	AWNINGS AND SIGNAGE	
4T-1	<p>Objective: Awnings are well located and complement and integrate with the building design</p>	✓
	Design Guidance	Considered
	<p>Awnings should be located along streets with high pedestrian activity and active frontages</p>	NA
	<p>A number of the following design solutions are used:</p> <ul style="list-style-type: none"> - 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 	NA

	Awnings should be located over building entries for building address and public domain amenity		NA
	Awnings relate to residential windows, balconies, street tree planting, power poles and street infrastructure		NA
	Gutters and down pipes should be integrated and concealed		NA
	Lighting under awnings should be provided for pedestrian safety		NA
4T-2	Objective: Signage responds to the context and desired streetscape character		✓
	Design Guidance		Considered
	Signage should be integrated into the building design and respond to the scale, proportion and detailing of the development		NA
	Legible and discrete way finding should be provided for larger developments		NA
	Signage is limited to being on and below awnings and a single facade sign on the primary street frontage		NA
U	ENERGY EFFICIENCY		
4U-1	Objective: Development incorporates passive environmental design		✓
	Design Guidance		Considered
	Adequate natural light is provided to habitable rooms (see 4A Solar and daylight access)		YES
	Well located, screened outdoor areas should be provided for clothes drying	Front facing balconies have abundant solar access and can be utilised for clothes drying away from public view.	YES
4U-2	Objective: Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer		✓
	Design Guidance		Considered
	A number of the following design solutions are used: <ul style="list-style-type: none">- 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		YES
	Provision of consolidated heating and cooling infrastructure should be located in a centralised location (e.g. the basement)		YES
4U-3	Objective: Adequate natural ventilation minimises the need for mechanical ventilation		✓
	Design Guidance		Considered
	A number of the following design solutions are used: <ul style="list-style-type: none">- 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		YES
4V	WATER MANAGEMENT AND CONVERSATION		
4V-1	Objective: Potable water use is minimised	BASIX assessment and stormwater plans in accordance with Northern Beaches Council DCP requirements have been provided.	✓

	Design Guidance		Considered
	Water efficient fittings, appliances and wastewater reuse should be incorporated		YES
	Apartments should be individually metered		YES
	Rainwater should be collected, stored and reused on site		YES
	Drought tolerant, low water use plants should be used within landscaped areas		YES
4V-2	Objective: Urban stormwater is treated on site before being discharged to receiving waters	Stormwater plans in accordance with Northern Beaches Council DCP requirements have been provided.	✓
	Design Guidance		Considered
	Water sensitive urban design systems are designed by a suitably qualified professional		YES
	A number of the following design solutions are used: <ul style="list-style-type: none">- runoff 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		YES
4V-3	Objective: Flood management systems are integrated into site design	Stormwater plans in accordance with Northern Beaches Council DCP requirements have been provided. The site is not flood affected.	✓
	Design Guidance		Considered
	Detention tanks should be located under paved areas, driveways or in basement car parks		YES
	On large sites parks or open spaces are designed to provide temporary on site detention basins		NA
4W	WASTE MANAGEMENT		
4W-1	Objective: Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents		✓
	Design Guidance		Considered
	Adequately sized storage areas for rubbish bins should be located discreetly away from the front of the development or in the basement car park	A waste room is located in the basement, completely concealed from view.	YES
	Waste and recycling storage areas should be well ventilated. Circulation design allows bins to be easily manoeuvred between storage and collection points	The room is ventilated and located adjacent to the driveway for ease of manoeuvring to the street kerb.	YES
	Temporary storage should be provided for large bulk items such as mattresses	Refer to waste management report.	NA
	A waste management plan should be prepared		YES
4W-2	Objective: Domestic waste is minimised by providing safe and convenient source separation and recycling		✓
	Design Guidance		Considered
	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	Refer to waste management report.	NA
	Communal waste and recycling rooms are in convenient and accessible locations related to each vertical core	The waste room is easily accessible.	YES
	For mixed use developments, residential waste and recycling storage areas and access should be separate and secure from other uses		NA
	Alternative waste disposal methods such as composting should be provided		NA

4X	BUILDING MAINTENANCE		
4X-1	Objective: Building design detail provides protection from weathering		✓
	Design Guidance	Considered	
	A number of the following design solutions are used: <ul style="list-style-type: none">- 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	YES	
4X-2	Objective: Systems and access enable ease of maintenance		✓
	Design Guidance	Considered	
	Window design enables cleaning from the inside of the building	YES	
	Building maintenance systems should be incorporated and integrated into the design of the building form, roof and facade	YES	
	Design solutions do not require external scaffolding for maintenance access	YES	
	Manually operated systems such as blinds, sunshades and curtains are used in preference to mechanical systems	YES	
	Centralised maintenance, services and storage should be provided for communal open space areas within the building	YES	
4X-3	Objective: Material selection reduces ongoing maintenance costs		✓
	Design Guidance	Considered	
	A number of the following design solutions are used: <ul style="list-style-type: none">- 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	YES	