



Part 3				
3A - Site Analysis				
Objective 3A – 1 Site analysis illustrates that design decisions have been based on opportunities and constraints of the site conditions and their relationship to the surrounding context				
		Yes	No	Notes
Design Guidance	Each element in the Site Analysis Checklist should be addressed (see Appendix 1)	✓	✓	text

3B – Orientation				
Objective 3B – 1 Building types and layouts respond to the streetscape and site while optimising solar access within the development.				
		Yes	No	Notes
Design Guidance	Buildings along the street frontage define the street, by facing it and incorporating direct access from the street (see figure 3B.1)	✓		
	Where the street frontage is to the east or west, rear buildings should be orientated to the north		✓	Street frontage to the south
	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 building is orientated to the north to maximise solar access. It proposes minimum additional overshadowing impact to the south
Objective 3B-2 Overshadowing of neighbouring properties is minimised during midwinter				
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	✓		No significant impact on solar access to adjacent properties.
	Solar access to living rooms, balconies and private open spaces of neighbours should be considered	✓		
	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%	✓		

	If the proposal will significantly reduce the solar access of neighbours, building separation should be increased beyond minimums contained in section 3F Visual privacy		✓	It does not significantly reduce the solar access of neighbouring buildings.
	Overshadowing should be minimised to the south or downhill by increased upper level setbacks	✓		
	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	✓		
	A minimum of 4 hours of solar access should be retained to solar collectors on neighbouring buildings	✓		

3C – Public Domain Interface

Objective 3C-1

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

		Yes	No	Notes
Design Guidance	Terraces, balconies and courtyard apartments should have direct street entry, where appropriate	✓		Entry from Foreshore
	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)	✓		
	Upper level balconies and windows should overlook the public domain	✓		
	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	✓		
	Length of solid walls should be limited along street frontages	✓		
	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	✓		
	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	✓		

	<ul style="list-style-type: none"> - plant species - colours 			
	Opportunities for people to be concealed should be minimised	✓		
Objective 3C-2 Amenity of public domain is retained and enhanced				
		Yes	No	Notes
Design Guidance	Planting softens the edges of any raised terraces to the street, for example above sub-basement car parking	✓		
	Mail boxes should be located in lobbies, perpendicular to the street alignment or integrated into front fences where individual street entries are provided	✓		Mailboxes next to entry of each lobby
	The visual prominence of underground car park vents should be minimised and located at a low level where possible	✓		
	Substations, pump rooms, garbage storage areas and other service requirements should be located in basement car parks or out of view	✓		
	Ramping for accessibility should be minimised by building entry locations and setting ground floor levels in relation to footpath levels	✓		
	Durable, graffiti resistant and easily cleanable materials should be used	✓		
	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 plating 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		✓	N/A – Flat Site

3D - Communal and public open space

Objective 3D-1

An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping.				
		Yes	No	Notes
Design Criteria	Communal open space has a minimum area equal to 25% of the site (See figure 3D.3)		✓	The approved communal open space area has a total area equal to 10.1% of the site
	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)	✓		
Design Guidance	Communal open space should be consolidated into a well-designed, easily identified and usable area	✓		
	Communal open space should have a minimum dimension of 3m, and larger developments should consider greater dimensions	✓		The communal open space has been carefully designed to create intimate spaces and offer shared amenities. In some locations this results in a minimum dimension of less than 3m.
	Communal open space should be co-located with deep soil areas		✓	Communal open space is on the roof top of the building and situated over the top of the basement. Not deep soil can be achieved in these locations.
	Direct, equitable access should be provided to communal open space areas from common circulation areas, entries and lobbies	✓		
	Where communal open space cannot be provided at ground level, it should be provided on a podium or roof	✓		
	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 	✓		
Objective 3D-2				
Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting				

		Yes	No	Notes
Design Guidance	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 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	✓		
	Visual impacts of services should be minimised, including location of ventilation duct outlets from basement car parks, electrical substations and detention tanks	✓		
Objective 3D-3 Communal open space is designed to maximise safety				
		Yes	No	Notes
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: <ul style="list-style-type: none"> - bay windows - corner windows - balconies 		✓	The communal open space is located on the rooftop and thus is not overlooked.
	Communal open space should be well lit	✓		
	Where communal open space/facilities are provided for children and young people they are safe and contained	✓		
Objective 3D-4 Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood				
		Yes	No	Notes
Design Guidance	The public open space should be well connected with public streets along at least one edge	✓		
	The public open space should be connected with nearby parks and other landscape elements	✓		
	Public open space should be linked through view lines, pedestrian desire paths, termination points and the wider street grid	✓		
	Solar access should be provided year round along with protection from strong winds	✓		

	Opportunities for a range of recreational activities should be provided for people of all ages	✓		
	A positive address and active frontages should be provided adjacent to public open space	✓		
	Boundaries should be clearly defined between public open space and private areas	✓		

3E – Deep Soil Zones

Objective 3E-1

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

			Ye s	N o	Notes	
Design Criteria	Deep soil zones are to meet the following minimum requirements.			✓	Approved Deep soil percentage at 5.7%	
	Site Area	Min Dimensions				Deep Soil Zone (% of site area)
	< 650m ²	-				7%
	650-1500m ²	3m				
	>1500m ²	6m				
	>1500m ² with significant existing tree cover	6m				
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 of 650m ² - 1,500m ² - 15% of the site as deep soil on sites greater than 1,500m ²			✓	N/A - Approved Deep soil percentage at 5.7%	

	<p>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:</p> <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 		✓	N/A – no significant planting on site – previously on grade carparking
	<p>Achieving the design criteria may not be possible on some sites including where:</p> <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 - 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 - Approved Deep soil percentage at 5.7%

3F – Visual Privacy

Objective 3F-1

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

		Yes	No	Notes												
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><th>Building Height</th><th>Habitable Room and Balconies</th><th>Non Habitable</th></tr><tr><td>Up to 12 (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>				Building Height	Habitable Room and Balconies	Non Habitable	Up to 12 (4 storeys)	6m	3m	Up to 25m (5-8 storeys)	9m	4.5m	Over 25m (9+ storeys)	12m	6m
	Building Height				Habitable Room and Balconies	Non Habitable										
	Up to 12 (4 storeys)				6m	3m										
	Up to 25m (5-8 storeys)				9m	4.5m										
Over 25m (9+ storeys)	12m	6m														
Note:																

	<p>Separation distances between buildings on the same site should combine required building separations depending on the type of room (see figure 3F.2)</p> <p>Gallery access circulation should be treated as habitable space when measuring privacy separation distances between neighbouring properties.</p>			
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	✓		
	<p>For residential buildings next to commercial buildings, separation distances should be measured as follows:</p> <p>for retail, office spaces and commercial balconies use the habitable room distances</p> <p>for service and plant areas use the non-habitable room distances</p>	✓		
	<p>New development should be located and oriented to maximise visual privacy between buildings on site and for neighbouring buildings. Design solutions include:</p> <p>site layout and building orientation to minimise privacy impacts (see also section 3B Orientation)</p> <p>- on sloping sites, apartments on different levels have appropriate visual separation distances (see figure 3F.4)</p>	✓		
	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)	✓		
	Direct lines of sight should be avoided for windows and balconies across corners	✓		
	No separation is required between blank walls	✓		
<p>Objective 3F-2</p> <p>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</p>				
		Yes	No	Notes
Design Guidance	<p>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:</p> <ul style="list-style-type: none"> - setbacks - solid or partially solid balustrades to balconies at lower levels 	✓		

	<ul style="list-style-type: none"> - 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 			
	Bedrooms, living spaces and other habitable rooms should be separated from gallery access and other open circulation space by the apartment's service areas	✓		
	Balconies and private terraces should be located in front of living rooms to increase internal privacy	✓		Living rooms to some apartments are adjacent to the balconies to maximise sunlight and utilise the existing facades.
	Windows should be offset from the windows of adjacent buildings	✓		
	Recessed balconies and/or vertical fins should be used between adjacent balconies	✓		

3G – Pedestrian Access and Entries

Objective 3G-1

Building entries and pedestrian access connects to and address the public domain

		Yes	No	Notes
Design Guidance	Multiple entries (including communal building entries and individual ground floor entries) are provided to activate the street edge	✓		
	Entry locations relate to the street and subdivision pattern and the existing pedestrian network	✓		
	Building entries are clearly identifiable. Communal entries are clearly distinguishable from private entries	✓		
	Where street frontage is limited and multiple buildings are located on the site, a primary street address is provided with clear sight lines and pathways to secondary building entries	✓		

Objective 3G-2 Access, entries and pathways are equitable and easy to identify				
		Yes	No	Notes
Design Guidance	Building access areas including lift lobbies, stairwells and hallways are clearly visible from the public domain and communal spaces	✓		
	The design of ground floors and underground car parks minimise level changes along pathways and entries	✓		
	Steps and ramps are integrated into the overall building and landscape design	✓		
	For large developments 'way finding' maps should be provided to assist visitors and residents (see figure 4T.3)	✓		
	For large developments electronic access and audio/video intercom should be provided to manage access	✓		
Objective 3G-3 Pedestrian links through developments provide access to streets and connect destinations				
		Yes	No	Notes
Design Guidance	Pedestrian links through sites facilitate direct connections to open space, main streets, centres and public transport	✓		Site through link to foreshore
	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	✓		

3H – Vehicle Access				
Objective 3H-1 Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes				
		Yes	No	Notes
Design Guidance	Car park access is integrated with the building's overall facade, design solutions may include: <ul style="list-style-type: none"> - the materials and colour palette 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 	✓		
	Car park entries are located behind the building line	✓		
	Vehicle entries are located at the lowest point of the site minimising ramp lengths,	✓		

	excavation and impacts on the building form and layout			
	Car park entry and access is located on secondary streets or lanes where available	✓		
	Vehicle standing areas that increase driveway width and encroach into setbacks should be avoided	✓		
	Access point locations avoid headlight glare to habitable rooms	✓		
	Adequate separation distances are provided between vehicular entries and street intersections	✓		
	The width and number of vehicle access points is limited to the minimum	✓		
	Visual impact of long driveways is minimised through changing alignments and screen planting	✓		
	The requirement for large vehicles to enter or turnaround within the site is avoided	✓		
	Garbage collection, loading and servicing areas are screened	✓		
	Clear sight lines should be provided at pedestrian and vehicle crossings	✓		
	Traffic calming devices such as changes in paving material or textures should be used where appropriate	✓		
	Pedestrian and vehicle access should be separated and distinguishable. Design solutions may include: <ul style="list-style-type: none"> - changes in surface materials - level changes - the use of landscaping for separation 	✓		

3J – Bicycle and Car Parking

Objective 3J-1

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

		Ye s	N o	Notes
Design Criteria	For development in the following locations: <ul style="list-style-type: none"> - 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 proposal exceeds the maximum requirement of the DCP. It is noted in the traffic report that the road network can accommodate the increase in traffic and would not result in detrimental traffic impacts

	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			
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
	Where less car parking is provided in a development, council should not provide on street resident parking permits		✓	N/A
Objective 3J-2 Parking and facilities are provided for other modes of transport				
		Yes	No	Notes
Design Guidance	Conveniently located and sufficient numbers of parking spaces should be provided for motorbikes and scooters	✓		
	Secure undercover bicycle parking should be provided that is easily accessible from both the public domain and common areas	✓		
	Conveniently located charging stations are provided for electric vehicles, where desirable	✓		Charge stations provided to residents
Objective 3J-3 Car park design and access is safe and secure				
		Yes	No	Notes
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	✓		
	Direct, clearly visible and well lit access should be provided into common circulation areas	✓		
	A clearly defined and visible lobby or waiting area should be provided to lifts and stairs	✓		
	For larger car parks, safe pedestrian access should be clearly defined and circulation areas have good lighting, colour, line marking and/or bollards	✓		
Objective 3J-4 Visual and environmental impacts of underground car parking are minimised				
		Yes	No	Notes
Design Guidance	Excavation should be minimised through efficient car park layouts and ramp design	✓		

	Car parking layout should be well organised, using a logical, efficient structural grid and double loaded aisles	✓		
	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		✓	N/A – carpark in lockup garages and basement
	Natural ventilation should be provided to basement and sub-basement car parking areas	✓		Hit and miss brickwork integrated into building façade
	Ventilation grills or screening devices for car parking openings should be integrated into the facade and landscape design	✓		

Objective 3J-5

Visual and environmental impacts of on-grade car parking are minimised

		Yes	No	Notes
Design Guidance	On-grade car parking should be avoided	✓		
	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-swailes, 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

Objective 3J-6

Visual and environmental impacts of above ground enclosed car parking are minimised

		Yes	No	Notes
Design Guidance	Exposed parking should not be located along primary street frontages	✓		
	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 	✓		The carpark entry and façade has been carefully designed to complement the overall building forms and enhance the streetscape.

	<p>limited to developments where a larger floor plate podium is suitable at lower levels)</p> <ul style="list-style-type: none"> - 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) 			
	<p>Positive street address and active frontages should be provided at ground level</p>	✓		

Part 4

4A – Solar and Daylight Access

Objective 4A-1

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

		Yes	No	Notes
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	✓		80% Compliance achieved due to north facing façade and zero overshadowing from surrounding buildings.
	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			N/A
	3. A maximum of 15% of apartments in a building receive no direct sunlight between 9am and 3 pm at mid winter	✓		5.5% of apartments receive no direction sun between 9am and 3 pm at mid winter
Design Guidance	The design maximises north aspect and the number of single aspect south facing apartments is minimised	✓		
	Single aspect, single storey apartments should have a northerly or easterly aspect	✓		
	Living areas are best located to the north and service areas to the south and west of apartment	✓		
	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 	✓		
	To maximise the benefit to residents of direct sunlight within living rooms and private open spaces, a minimum of 1m ² of direct sunlight, measured at 1m above floor level, is achieved for at least 15 minutes	✓		
	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 		✓	Design Criteria is achieved.

	Design drawings need to demonstrate how site constraints and orientation preclude meeting the design criteria and how the development meets the objective			
Objective 4A-2 Daylight access is maximised where sunlight is limited				
		Yes	No	Notes
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	✓		
	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 		✓	N/A
	Opportunities for reflected light into apartments are optimised through: <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 	✓		
Objective 4A-3 Design incorporates shading and glare control, particularly for warmer months				
		Yes	No	Notes
Design Guidance	A number of the following design features are used: <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)			
--	--	--	--	--

4B – Natural Ventilation

Objective 4B-1

All habitable rooms are naturally ventilated

		Ye s	N o	Notes
Design Guidance	The building's orientation maximises capture and use of prevailing breezes for natural ventilation in habitable rooms	✓		
	Depths of habitable rooms support natural ventilation	✓		
	The area of unobstructed window openings should be equal to at least 5% of the floor area served	✓		
	Light wells are not the primary air source for habitable rooms	✓		
	Doors and openable windows maximise natural ventilation opportunities by using the following design solutions: <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 - windows which the occupants can reconfigure to funnel breezes into the apartment such as vertical louvres, casement windows and externally opening doors 	✓		Awnings provided in every living room

Objective 4B-2

The layout and design of single aspect apartments maximises natural ventilation

		Ye s	N o	Notes
Design Guidance	Apartment depths are limited to maximise ventilation and airflow (see also figure 4D.3)	✓		
	Natural ventilation to single aspect apartments is achieved with the following design solutions: <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 	✓		

Objective 4B-3

The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents				
		Yes	No	Notes
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	✓		74% compliance achieved
	2. Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line	✓		
Design Guidance	The building should include dual aspect apartments, cross through apartments and corner apartments and limit apartment depths	✓		
	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)	✓		
	Apartments are designed to minimise the number of corners, doors and rooms that might obstruct airflow	✓		
	Apartment depths, combined with appropriate ceiling heights, maximise cross ventilation and airflow	✓		

4C – Ceiling Heights			
Objective 4C-1 Ceiling height achieves sufficient natural ventilation and daylight access			
	Yes	No	Notes

Design Criteria	1. Measured from finished floor level to finished ceiling level, minimum ceiling heights are:	✓			
	Minimum ceiling height (for apartment and mixed use buildings)				
	Habitable rooms				2.7m
	Non-habitable				2.4m
	For 2 storey apartments				2.7m for main living area floor 2.4m for second floor, where its area does not exceed 50% of the apartment area
	Attic spaces				1.8m at edge of room with a 30 people degree minimum ceiling slope
	If located in mixed use areas				3.3m for ground and first floor to promote future flexibility of use
	These minimums do not preclude higher ceilings if desired				
Design Guidance	Ceiling height can accommodate use of ceiling fans for cooling and heat distribution	✓			
Objective 4C-2 Ceiling height increases the sense of space in apartments and provides for well-proportioned rooms					
		Yes	No	Notes	
Design Guidance	A number of the following design solutions can be used: <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	✓			
Objective 4C-3 Ceiling heights contribute to the flexibility of building use over the life of the building					
		Yes	No	Notes	
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 (see figure 4C.1)			
--	--	--	--	--

4D Apartment size and layout					
Objective 4D-1					
The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity					
		Yes	No	Notes	
Design Criteria	1. Apartments are required to have the following minimum internal areas:		✓		
	Apartment Type	Minimum Internal Area			
	Studio	35m ²			
	1 bedroom	50m ²			
	2 bedroom	70m ²			
	3 bedroom	90m ²			
The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m ² each					
A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m ² 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	Kitchens should not be located as part of the main circulation space in larger apartments (such as hallway or entry space)		✓		
	A window should be visible from any point in a habitable room		✓		
	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		✓		
Objective 4D-2					
Environmental performance of the apartment is maximised					
		Yes	No	Notes	
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		✓		

Design Guidance	Greater than minimum ceiling heights can allow for proportional increases in room depth up to the permitted maximum depths	✓		
	All living areas and bedrooms should be located on the external face of the building	✓		
	Where possible: <ul style="list-style-type: none"> - 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 	✓		
Objective 4D-3 Apartment layouts are designed to accommodate a variety of household activities and needs				
		Yes	No	Notes
Design Criteria	1. Master bedrooms have a minimum area of 10m ² and other bedrooms 9m ² (excluding wardrobe space)	✓		
	2. Bedrooms have a minimum dimension of 3m (excluding wardrobe space)	✓		
	3. Living rooms or combined living/dining rooms have a minimum width of: <ul style="list-style-type: none"> - 3.6m for studio and 1 bedroom apartments - 4m for 2 and 3 bedroom apartments 	✓		
	4. The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts	✓		
Design Guidance	Access to bedrooms, bathrooms and laundries is separated from living areas minimising direct openings between living and service areas	✓		
	All bedrooms allow a minimum length of 1.5m for robes	✓		
	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	✓		
	Apartment layouts allow flexibility over time, design solutions may include: <ul style="list-style-type: none"> - 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 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 	✓		

	<ul style="list-style-type: none"> - 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 			
--	--	--	--	--

4E – Private Open Space and Balconies

Objective 4E-1

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

				Yes	No	Notes
Design Criteria	All apartments are required to have primary balconies as follows:			✓		
	Dwelling Type	Minimum Area	Minimum Depth			
	Studio Apartments	4m ²	-			
	1 bedroom apartments	8m ²	2m			
	2 bedroom apartments	10m ²	2m			
	3+ bedroom apartments	12m ²	2.4m			
	The minimum balcony depth to be counted as contributing to the balcony area is 1m					
	For apartments at ground level or on a podium or similar structure, a private open space is provided instead of a balcony. It must have a minimum area of 15m ² and a minimum depth of 3m			✓		
Design Guidance	Increased communal open space should be provided where the number or size of balconies are reduced			✓		
	Storage areas on balconies is additional to the minimum balcony size			✓		
	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			
Objective 4E-2 Primary private open space and balconies are appropriately located to enhance liveability for residents				
		Yes	No	Notes
Design Guidance	Primary open space and balconies should be located adjacent to the living room, dining room or kitchen to extend the living space	✓		
	Private open spaces and balconies predominantly face north, east or west	✓		
	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	✓		
Objective 4E-3 Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building				
		Yes	No	Notes
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	✓		Solid brick balustrades on street frontage.
	Full width full height glass balustrades alone are generally not desirable	✓		No residential Glass Balustrades, Aluminium balusters and brickwork used.
	Projecting balconies should be integrated into the building design and the design of soffits considered	✓		
	Operable screens, shutters, hoods and pergolas are used to control sunlight and wind	✓		
	Balustrades are set back from the building or balcony edge where overlooking or safety is an issue	✓		
	Downpipes and balcony drainage are integrated with the overall facade and building design	✓		
	Air-conditioning units should be located on roofs, in basements, or fully integrated into the building design	✓		
	Where clothes drying, storage or air conditioning units are located on balconies,			N/A

	they should be screened and integrated in the building design			
	Ceilings of apartments below terraces should be insulated to avoid heat loss	✓		
	Water and gas outlets should be provided for primary balconies and private open space	✓		Water provided to all balconies; Water & Gas provided to terrace apartments.
Objective 4E-4 Private open space and balcony design maximises safety				
		Yes	No	Notes
Design Guidance	Changes in ground levels or landscaping are minimised	✓		
	Design and detailing of balconies avoids opportunities for climbing and falls	✓		

4F – Common Circulation and Spaces				
Objective 4F-1 Common circulation spaces achieve good amenity and properly service the number of apartments				
		Yes	No	Notes
Design Criteria	1. The maximum number of apartments off a circulation core on a single level is eight	✓		
	2. For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40			N/A - building under 10 storeys
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	✓		
	Daylight and natural ventilation should be provided to all common circulation spaces that are above ground	✓		
	Windows should be provided in common circulation spaces and should be adjacent to the stair or lift core or at the ends of corridors	✓		
	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			N/A
	Design common circulation spaces to maximise opportunities for dual aspect apartments, including multiple core apartment buildings and cross over apartments	✓		
	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			N/A

	apartments should be demonstrated, including: <ul style="list-style-type: none"> - 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 			
	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
	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	✓		

Objective 4F-2

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

		Yes	No	Notes
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	✓		
	Tight corners and spaces are avoided	✓		
	Circulation spaces should be well lit at night	✓		
	Legible signage should be provided for apartment numbers, common areas and general wayfinding	✓		
	Incidental spaces, for example space for seating in a corridor, at a stair landing, or near a window are provided	✓		Furniture in common ground floor lobbies and communal areas to be provided
	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	✓		
	Where external galleries are provided, they are more open than closed above the balustrade along their length	✓		

4G – Storage

Objective 4G-1

Adequate, well designed storage is provided in each apartment

	Yes	No	Notes
--	-----	----	-------

Design Criteria	In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided:	✓												
	<table><tr><th>Dwelling type</th><th>Storage size</th></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	Studio apartments	4m3	1 bedroom apartments	6m3	2 bedroom apartments	8m3	3 bedroom apartments	10m3
	Dwelling type				Storage size									
	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	Storage is accessible from either circulation or living areas	✓												
	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										
	Left over space such as under stairs is used for storage	✓												
Objective 4G-2														
Additional storage is conveniently located, accessible and nominated for individual apartments														
		Yes	No	Notes										
Design Guidance	Storage not located in apartments is secure and clearly allocated	✓												
	Storage is provided for larger and less frequently accessed items, where practical	✓												
	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	✓												
	If communal storage rooms are provided they should be accessible from common circulation areas of the building	✓												
	Storage not located in an apartment is integrated into the overall building design and not visible from the public domain	✓												

4H – Acoustic Privacy

Objective 4H-1

Noise transfer is minimised through the siting of buildings and building layout

		Yes	No	Notes
Design Guidance	Adequate building separation is provided within the development and from neighbouring buildings / adjacent uses (also see section 2F Building separation and section 3F Visual Privacy)	✓		
	Window and door openings are generally orientated away from noise sources	✓		

	Noisy areas within buildings including building entries and corridors are located next to or above each other and quieter areas next to or above quieter areas	✓		
	Storage, circulation areas and non-habitable rooms are located to buffer noise from external sources	✓		
	The number of party walls (walls shared with other apartments) are limited and are appropriately insulated	✓		
	Noise sources such as garage doors, driveways, service areas, plant rooms, building services, mechanical equipment, active communal open spaces and circulation areas are located at least 3m away from bedrooms	✓		
Objective 4H-2 Noise impacts are mitigated through internal apartment layout and acoustic treatments				
		Yes	No	Notes
Design Guidance	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 	✓		
	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	✓		

4J – Noise and Pollution				
Objective 4J-1 In noisy or hostile environments the impacts of external noise and pollution are minimised through the careful siting and layout of buildings				
		Yes	No	Notes
Design Guidance	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 	✓		

	<ul style="list-style-type: none"> - 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, nonhabitable 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 			
	<p>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:</p> <ul style="list-style-type: none"> - solar and daylight access - private open space and balconies - natural cross ventilation 	✓		Noted – refer to notes above.

Objective 4J-2

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

		Yes	No	Notes
Design Guidance	<p>Design solutions to mitigate noise include:</p> <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 	✓		

4K – Apartment Mix

Objective 4K-1

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

	Yes	No	Notes
--	-----	----	-------

Design Guidance	A variety of apartment types is provided	✓		
	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 	✓		
	Flexible apartment configurations, such as dual key apartments, are provided to support diverse household types and stages of life including single person households, families, multi-generational families and group households	✓		
Objective 4K-2 The apartment mix is distributed to suitable locations within the building				
		Yes	No	Notes
Design Guidance	Different apartment types are located to achieve successful facade composition and to optimise solar access. See figure 4A.3	✓		
	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	✓		

4L – Ground Floor Apartments				
Objective 4L-1 Street frontage activity is maximised where ground floor apartments are located				
		Yes	No	Notes
Design Guidance	Direct street access should be provided to ground floor apartments	✓		
	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 and foyer entrances to ground floor apartments - private open space is next to the street - doors and windows face the street 	✓		
	Retail or home office spaces are located along street frontages	✓		
	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		✓	Ground floor apartments do not have direct street Frontage. Larger ceiling heights and studies are however provided.

Objective 4L-2 Design of ground floor apartments delivers amenity and safety for residents				
		Yes	No	Notes
Design Guidance	Privacy and safety is provided without obstructing causal surveillance. Design solutions may include: <ul style="list-style-type: none"> - elevation of private gardens and terraces above the street level by 1m – 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 	✓		
	Solar access is 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 	✓		

4M – Facades				
Objective 4M – 1 Building facades provide visual interest along the street respecting the character of the local area				
		Yes	No	Notes
Design Guidance	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 the buildings - Revealing and concealing certain elements - Changes in texture, material, detail and colour to modify the prominence of elements 	✓		Use of different bricks and paint colours to distinguish lower and upper datums
	Building services should be integrated within the overall façade	✓		
	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 	✓		

	Building facades relate to key datum lines of adjacent buildings through upper level setbacks, parapets, cornices, awnings or colonnade heights	✓		
	Shadow is created on the façade throughout the day with building articulation, balconies and deeper window reveals	✓		
Objective 4M – 2 Building functions are expressed by the façade				
		Yes	No	Notes
Design Guidance	Building entries should be clearly defined	✓		
	Important corners are given visual prominence through a change in articulation, materials or colour, roof expression or changes in height	✓		
	The apartment layout should be expressed externally through façade features as party walls and floor slabs	✓		

4N – Roof Design				
Objective 4N – 1 Roof treatments are integrated into the building design and positively respond to the street				
		Yes	No	Notes
Design Guidance	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 	✓		
	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 complement the building - Service elements are integrated 	✓		Brick Parapet and secondary metal deck roof designed for longevity and additional waterproofing
Objective 4N – 2 Opportunities to use roof space for residential accommodation and open space are maximised				
		Yes	No	Notes
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 	✓		

	Open space is provided on roof tops subject to acceptable visual and acoustic privacy, comfort levels, safety and security considerations	✓		
Objective 4N – 3 Roof design incorporates sustainability features				
		Yes	No	Notes
Design Guidance	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 	✓		
	Skylights and ventilation systems should be integrated into the roof design	✓		

4O – Landscape Design				
Objective 4O – 1 Landscape design is viable and sustainable				
		Yes	No	Notes
Design Guidance	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 	✓		
	Ongoing maintenance plans should be prepared	✓		
	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 	✓		
	Tree and shrub selection considers size at maturity and the potential for roots to complete (see table 4)	✓		
Objective 4O – 2 Landscape design contributes to the streetscape and amenity				
		Yes	No	Notes

Design Guidance	Landscape design responds to the existing site conditions including: - Changes of levels - Views - Significant landscape features including trees and rock outcrops	✓		
	Significant landscape features should be protected by: - Tree protection zones (see figure 40.5) - Appropriate signage and fencing during construction	✓		
	Plants selected should be endemic to the region and reflect the local ecology	✓		

4P – Planting on Structures				
Objective 4P – 1 Appropriate soil profiles are provided				
		Yes	No	Notes
Design Guidance	Structures are reinforced for additional saturated soil weight	✓		
	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	✓		
	Minimum soil standards for plant sizes should be provided in accordance with Table 5	✓		
Objective 4P – 2 Plant growth is optimised with appropriate selection and maintenance				
		Yes	No	Notes
Design Guidance	Plants are suited to site conditions, considerations include: - Drought and wind tolerance - Seasonal changes in solar access - Modified substrate depths for diverse range of plants - Plant longevity	✓		
	A landscape maintenance plan is prepared	✓		
	Irrigation and drainage systems respond to : - Changing site conditions - Soil profile and the planting regime - Whether rainwater, stormwater r recycled grey water is used	✓		
4P – Planting on Structures				
Objective 4P – 3				

Planting on structure contributes to the quality and amenity of communal and public open spaces				
		Yes	No	Notes
Design Guidance	<p>Building design incorporates opportunities for planting on structures. Design solutions may include:</p> <ul style="list-style-type: none"> - Green walls with specialised lighting for indoor green walls - All design that incorporates planting - Green roofs, particularly where roofs are visible from public domain - Planter boxes <p>Note: structures designed to accommodate green walls should be integrated into the building façade and consider the ability of the façade to change over time</p>	✓		

4Q – Universal Design				
Objective 4Q – 1 Universal design features are included in apartment design to promote flexible housing for all community members				
		Yes	No	Notes
Design Guidance	Developments achieve a benchmark of 20% of the total apartment incorporating the Liveable Housing Guideline's silver level universal design features	✓		
Objective 4Q – 2 A variety of apartments with adaptable designs are provided				
		Yes	No	Notes
Design Guidance	Adaptable housing should be provided in accordance with the relevant council policy	✓		
	<p>Design solutions for adaptable apartments include:</p> <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 	✓		
Objective 4Q – 3 Apartment layouts are flexible and accommodate a range of lifestyle needs				
		Yes	No	Notes
Design Guidance	<p>Apartments design incorporates flexible design solutions which may include:</p> <ul style="list-style-type: none"> - Rooms with multiple functions - Dual master bedroom apartments with separate bathrooms 	✓		

	<ul style="list-style-type: none"> - Larger apartments with various living space options - Open plan 'loft' style apartments with only a fixed kitchen, laundry and bathroom 			
--	--	--	--	--

4R – Adaptive Reuse

Objective 4R – 1

New additional to existing buildings are contemporary and complementary and enhance an area's identity and sense of place

		Yes	No	Notes
Design Guidance	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	✓		

Objective 4R – 2

Adapted buildings provide residential amenity while not precluding future adaptive reuse

		Yes	No	Notes
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: <ul style="list-style-type: none"> - Generously sized voids in deeper buildings - Alternative apartment types when orientation is poor - Using additions to expand the existing building envelope 	✓		
	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: <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 			N/A – no existing building

	<ul style="list-style-type: none"> - 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

Objective 4S – 1

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

		Yes	No	Notes
Design Guidance	Mixed use development should be concentrated around public transport and centres	✓		
	Mixed use developments positively contribute to the public domain. Design solutions may include: <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 	✓		

Objective 4S – 2

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

		Yes	No	Notes
Design Guidance	Residential circulation areas should be clearly defined. Design solutions may include: <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 - Concealment opportunities are avoided 	✓		
	Landscape communal open space should be provided at podium or roof levels	✓		

4T – Awnings and Signage

Objective 4T – 1

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

	Yes	No	Notes
--	-----	----	-------

Design Guidance	Awnings should be located along streets with high pedestrian activity and active frontages		✓	Setback from street edge, no awning provided
	A number of the following design solutions are used: <ul style="list-style-type: none"> - Continuous awnings are maintained and provided in areas with 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 	✓		Residential lobbies and retail tenancies sit recessed providing weather protected entrances.
	Awnings should be located over building entries for building address and public domain amenity	✓		
	Awnings relate to residential windows, balconies, street tree planting, power poles and street infrastructure	✓		
	Gutters and down pipes should be integrated and concealed	✓		
	Lighting under awnings should be provided for pedestrian safety	✓		
Objective 4T – 2 Signage responds to the context and desired streetscape character				
		Yes	No	Notes
Design Guidance	Signage should be integrated into the building design and respond to the scale, proportion and detailing of the development	✓		
	Legible and discrete way finding should be provided for larger developments	✓		
	Signage is limited to being on and below awnings and in single façade sign on the primary street frontage	✓		

4U – Energy Efficiency				
Objective 4U – 1 Development incorporates passive environmental design				
		Yes	No	Notes
Design Guidance	Adequate natural light is provided to habitable rooms (see 4A Solar and daylight access)	✓		
	Well located, screened outdoor areas should be provided for clothes drying	✓		Where possible. Solid balcony upstands have been provided to allow balcony drying facilities

				to be screened from the public domain.
--	--	--	--	--

Objective 4U – 2

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

		Yes	No	Notes
Design Guidance	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 floor, 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 	✓		
	Provision of consolidated heating and cooling infrastructure should be located in a centralised location (e.g. the basement)	✓		

Objective 4U – 3

Adequate natural ventilation minimises the need for mechanical ventilation

		Yes	No	Notes
Design Guidance	A number of the following design solution 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 inhabitable rooms and as many non-habitable rooms, common areas and circulation spaces as possible 	✓		

4V – Water Management and Conservation

Objective 4V – 1

Potable water use is minimised

		Yes	No	Notes
Design Guidance	Water efficient fittings, appliances and wastewater reuse should be incorporated	✓		
	Apartments should be individually metered	✓		
	Rainwater should be collected, stored and reused on site	✓		Refer BASIX certificate
	Drought tolerant, low water use plants should be used within landscaped areas	✓		

Objective 4V – 2

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

		Yes	No	Notes
Design Guidance	Water sensitive urban design systems are designed by a suitably qualified professional	✓		
	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 	✓		
Objective 4V – 3 Flood management systems are integrated into site design				
		Yes	No	Notes
Design Guidance	Detention tanks should be located under paved areas, driveways or in basement car parks	✓		
	On large sites parks or open spaces are designed to provide temporary on site detention basins			N/A

4W – Waste Management				
Objective 4W – 1 Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents				
		Yes	No	Notes
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	✓		
	Waste and recycling storage areas should be well ventilated	✓		
	Circulation design allows bins to be easily manoeuvred between storage and collection points	✓		
	Temporary storage should be provided for large bulk items such as mattresses	✓		
	A waste management plan should be prepared	✓		
Objective 4W – 2 Domestic waste is minimised by providing safe and convenient source separation and recycling				
		Yes	No	Notes
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	✓		

	Communal waste and recycling rooms are in convenient and accessible locations related to each vertical core	✓		
	For mixed use developments, residential waste and recycling storage areas and access should be separate and secure from other uses	✓		
	Alternative waste disposal methods such as composting should be provided		✓	

4X – Building Maintenance

Objective 4X – 1

Building design detail provides protection from weathering

		Yes	No	Notes
Design Guidance	<p>A number of the following design solutions are used:</p> <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 	✓		

Objective 4X – 2

Systems and access enable ease of maintenance

		Yes	No	Notes
Design Guidance	Window design enables cleaning from the inside of the building	✓		
	Building maintenance systems should be incorporated and integrated into the design of the building form, roof and façade	✓		
	Design solutions do not require external scaffolding for maintenance access	✓		
	Manually operated systems such as blinds, sunshades and curtains are used in preference to mechanical systems	✓		
	Centralised maintenance, services and storage should be provided for communal open space areas within the building	✓		

Objective 4X – 3

Material selection reduces ongoing maintenance costs

		Yes	No	Notes
Design Guidance	<p>A number of the following design solutions are used:</p> <ul style="list-style-type: none"> - Sensors to control artificial lighting in common circulation and spaces 	✓		

	<ul style="list-style-type: none"> - 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 finished are used in locations which receive heavy wear and tear, such as common circulation areas and lift interiors 			
--	---	--	--	--

APPENDIX 1

Site analysis checklist

Documentation	Required information	Provided	
		Yes ✓	No x
Site location	Broad map or aerial photo showing site location in relation to surrounding centres, shops, civic/community facilities and transport	✓	
Aerial photograph	Colour aerial photographs of site in its context	✓	
Local context plan	Plan(s) of the existing features of the wider context including - adjoining properties and the other side of the street, that show:	✓	
	- pattern of buildings, proposed building envelopes, setbacks and subdivision pattern	✓	
	- land use and building typologies of adjacent and opposite buildings in the street	✓	
	- movement and access for vehicles, servicing, pedestrians and cyclists	✓	
	- topography, landscape, open spaces and vegetation	✓	
	- significant views to and from the site	✓	
	- significant noise sources in the vicinity of the site, particularly vehicular traffic, train, aircraft and industrial noise	✓	
Site context and survey plan	Plan(s) of the existing site based on a survey drawing showing the features of the immediate site including:	✓	
	- boundaries, site dimensions, site area, north point	✓	
	- topography, showing relative levels and contours at 0.5 metre intervals for the site and across site boundaries where level changes exist, any unique natural features such as rock outcrops, watercourses, existing cut or fill, adjacent streets and sites	✓	
	- location and size of major trees on site and relative levels where relevant, on adjacent properties and street trees	✓	
	- location and use of existing buildings or built features on the site	✓	
	- location and important characteristics of adjacent public, communal and private open spaces	✓	
	- location and height of existing windows, balconies, walls and fences on adjacent properties facing the site, as well as parapet and ridge lines	✓	
	- pedestrian and vehicular access points, driveways and features such as service poles, bus stops, fire hydrants etc.	✓	

	<ul style="list-style-type: none">- location of utility services, including easements and drainage	✓	
	<ul style="list-style-type: none">- location of any other relevant features		
Documentation	Required information	Provided	
		Yes ✓	No x
Streetscape elevations and sections	Photographs or drawings of the site in relation to the streetscape and along both sides of any street that the development fronts, that show:	✓	
	<ul style="list-style-type: none">- overall height (storeys, metres) and important parapet/datum lines- of adjacent buildings	✓	
	<ul style="list-style-type: none">- patterns of building frontage, street setbacks and side setbacks	✓	
	<ul style="list-style-type: none">- planned heights	✓	
Analysis	Plan that synthesises and interprets the context, streetscape and site documentation into opportunities and constraints that generate design parameters, including the following information:	✓	
	<ul style="list-style-type: none">- orientation and any overshadowing of the site and adjoining properties by neighbouring structures (excludes vegetation). The winter sun path should also be shown between 9 am and 3 pm on 21 June	✓	
	<ul style="list-style-type: none">- identification of prevailing wind	✓	
	<ul style="list-style-type: none">- the geotechnical characteristics of the site and suitability of the proposed development	✓	
	<ul style="list-style-type: none">- the public domain interface and street setback	✓	
	<ul style="list-style-type: none">- relationship to and interface with adjacent properties, including side- and rear setbacks	✓	
	<ul style="list-style-type: none">- ventilation for the subject site and immediate neighbours	✓	
	<ul style="list-style-type: none">- proposed building footprint location	✓	
	<ul style="list-style-type: none">- retained and proposed significant trees and deep soil zones	✓	
	<ul style="list-style-type: none">- proposed communal open space	✓	
	<ul style="list-style-type: none">- proposed car park footprint and depth	✓	
	<ul style="list-style-type: none">- proposed building entries	✓	
	<ul style="list-style-type: none">- supporting written material - this should include technical advice from specialists involved in the development process including landscape architects, arborists, geotechnical engineers and/or contamination specialists where applicable	✓	

APPENDIX 2

Pre-development application design proposal checklist

Documentation	Required information	Provided	
		Yes (✓)	No (x)
Development details	A summary of the proposal that establishes the: <ul style="list-style-type: none"> - Floor space ratio - Building height in metres and storeys - Number and mix of apartments - Number of car parking spaces - Indicative percentage of apartments receiving the minimum level of cross ventilation and daylight access 	✓	
Design quality statement	A draft statement of key points that establishes how the proposal satisfies the design quality principles of State Environmental Planning Policy No. 65	✓	
Precedents	Images of precedents relevant to the proposal such as: <ul style="list-style-type: none"> - streetscape concept - landscape design - communal open spaces use - building elements such as entries, balconies, materials 	✓	
Site analysis	Prepared consistent with Appendix 1 of the Apartment Design Guide	✓	
Site plan	A drawing to scale showing: <ul style="list-style-type: none"> - any proposed site amalgamation or subdivision - the indicative footprint of the proposal - setbacks and building separation dimensions - site entry points - areas of communal open space and private open space - indicative locations of planting and deep soil zones including retained or - proposes significant trees - interface with public domain 	✓	
Floor plans	Drawings to scale showing: <ul style="list-style-type: none"> - the internal building layout and unit type distribution for the ground floor, - representative middle floor, and the top floor - typical car park layout - sample unit plans with furniture layouts, key room depth dimensions and balcony sizes 	✓	
Building mass elevations	Drawing to scale showing the basic massing of the proposal in the context of the adjacent three properties, or for 50m in each direction, on each elevation. This drawing should show, in diagrammatic form: <ul style="list-style-type: none"> - the composition of the elevations including ground level, roof form, and articulation of massing of the overall building - pattern of buildings and spaces between buildings along the street - the profile of any existing buildings 	✓	
Sections	A drawing to scale showing: <ul style="list-style-type: none"> - the proposal and adjacent buildings - the relationship of the proposal to the ground plane, streets, open spaces and deep soil zones 	✓	

APPENDIX 3

Development application – recommended documentation checklist

Documentation	Required information	Provided	
		Yes (✓)	No (x)
Development details	A summary document that provides the key details of the development proposal. It contains information such as the:	✓	
	- floor space ratio of the development	✓	
	- number, mix, size and accessibility of apartments	✓	
	- number of car parking spaces for use (residential, retail, accessible, visitor etc.)	✓	
	- percentage of cross ventilation and daylight compliance	✓	
Statement of Environmental Effects	In addition to the consent authorities requirements:	✓	
	- An explanation of the design in terms of the design quality principles set out in Schedule 1 of <i>State Environmental Planning Policy No 65 - Design Quality of Residential Apartment Development</i>	✓	
	- If the proposed development is within an area where the built form and density is changing, statements about how the proposed development responds to the existing context and contributes to desired future character of the area	✓	
	- Description of how the proposed development achieves the relevant objectives and design criteria of the Apartment Design Guide	✓	
Site analysis	Prepared consistent with Appendix 1 of the Apartment Design Guide	✓	
Site plan	A scale drawing showing:		
	- any proposed site amalgamation or subdivision	✓	
	- location of any proposed buildings or works in relation to setbacks, building envelope controls and building separation dimensions	✓	
	- proposed finished levels of land in relation to existing and proposed buildings and roads	✓	
	- pedestrian and vehicular site entries and access	✓	
	- interface of the ground floor plan with the public domain and with open spaces within the site	✓	
	- areas of communal open space and private open space	✓	
	- indicative locations of planting and deep soil zones including retained or proposed significant trees	✓	

Documentation	Required information	Provided	
		Yes (✓)	No (x)
Landscape plan	A scale drawing showing:	✓	
	- the building footprint of the proposal including pedestrian, vehicle and service access	✓	
	- trees to be removed shown dotted	✓	
	- trees to remain with their tree protection zones (relative to the proposed development)	✓	
	- deep soil zones and associated tree planting	✓	
	- areas of planting on structure and soil depth	✓	
	- proposed planting including species and size	✓	
	- details of public space, communal open space and private open space	✓	
	- external ramps, stairs and retaining wall levels	✓	
	- security features and access points	✓	
	- built landscape elements (fences, pergolas, walls, planters and water features)	✓	
	- ground surface treatment with indicative materials and finishes	✓	
	- site lighting	✓	
	- water management and irrigation concept design	✓	
	- external ramps, stairs and retaining wall levels	✓	
Floor plans	A scale drawing showing:	✓	
	- all levels of the building including roof plan	✓	
	- layout of entries, circulation areas, lifts and stairs, communal spaces, and service rooms with key dimensions and RLs	✓	
	- apartment plans with apartment numbers and areas, all fenestration, typical furniture layouts for each apartment type, room dimensions and intended use and private open space dimensions	✓	
	- accessibility clearance templates for accessible units and common spaces	✓	
	- visual privacy separation shown and dimensions where necessary	✓	
	- vehicle and service access, circulation and parking	✓	
	- storage areas	✓	
	- layout of entries, circulation areas, lifts and stairs, communal spaces, and service rooms with key dimensions and RLs	✓	
	- apartment plans with apartment numbers and areas, all fenestration, typical furniture layouts for each apartment type, room dimensions and intended use and private open space dimensions	✓	
		Provided	

Documentation	Required information	Yes (✓)	No (x)
Elevations	A scale drawing showing:	✓	
	- proposed building height and RL lines	✓	
	- building height control	✓	
	- setbacks or envelope outline	✓	
	- building length and articulation	✓	
	- the detail and features of the facade and roof design	✓	
	- any existing buildings on the site	✓	
	- building entries (pedestrian, vehicular and service)	✓	
	- profile of buildings on adjacent properties or for 50m in each direction, whichever is most appropriate	✓	
	- setbacks or envelope outline	✓	
	- building length and articulation	✓	
Sections	A scale drawing showing:	✓	
	- proposed building height and RL lines	✓	
	- building height control	✓	
	- setbacks or envelope outline	✓	
	- adjacent buildings	✓	
	- building circulation	✓	
	- the relationship of the proposal to the ground plane, the street and open spaces particularly at thresholds	✓	
	- the location and treatment of car parking	✓	
	- the location of deep soil and soil depth allowance for planting on structure (where applicable)	✓	
	- building separation within the development and between neighbouring buildings	✓	
	- ceiling heights throughout the development	✓	
	- detailed sections of the proposed facades	✓	
	- the location and treatment of car parking	✓	

Documentation	Required information	Provided	
		Yes (✓)	No (x)
Solar access study	Where required, graphic documentation at winter solstice (21 June) at a minimum of hourly intervals showing:	✓	
	- number of hours of solar access to the principal communal open space	✓	
	- number of hours of solar access to units within the proposal and tabulation of results	✓	
	- overshadowing of existing adjacent properties and overshadowing of future potential development where neighbouring sites are planned for higher density	✓	
	- elevation shadows if shadow is likely to fall on neighbouring windows, openings or solar panels	✓	
Cross ventilation study	Where required, graphic documentation of unobstructed path of air movement through dual aspect apartments and tabulation of results	✓	
Material and finishes board	A sample board of the proposed external materials, finishes and colours of the proposal, keyed to elevations	✓	
Illustrative views	Photomontages or similar rendering or perspective drawings illustrating the proposal in the context of surrounding development. <i>Note: Illustrative views need to be prepared using a perspective that relates to the human eye. Where a photomontage is prepared, it should use a photo taken by a full frame camera with a 50mm lens and 46 degree angle of view</i>	✓	
Models	- A three dimensional computer generated model showing views of the development from adjacent streets and buildings	✓	
	- A physical model that shows the massing of the proposal that includes relevant context (particularly for developments of 20 apartments or more, or on contentious sites) if required by the consent authority	✓	