

# APARTMENT DESIGN GUIDE CHECKLIST

PROJECT: BGZ4J | RESIDENTIAL FLAT BUILDING  
ADDRESS: 48 New Orleans Crescent, MAROUBRA  
CLIENT: Homes NSW  
DATE: Issue B | 23 04 2024

## Part 2 Developing Controls

ITEM	DESIGN CRITERIA	COMPLIANCE	DESIGN RESPONSE
2A Primary Controls			
Primary development controls include building height, floor space ratio, building depth, building separation and setbacks. See below responses to each control.			
2B Building Envelopes			
A building envelope is a three dimensional volume that defines the outermost part of a site that the building can occupy. Building envelopes set the appropriate scale of future development in terms of bulk and height relative to the streetscape, public and private open spaces, and block and lot sizes in a particular location.	A building envelope should be 25-30% greater than the achievable floor area (see section 2D Floor space ratio) to allow for building components that do not count as floor space but contribute to building design and articulation such as balconies, lifts, stairs and open circulation space.	COMPLIES	The GFA of the proposed building is 313sqm, the achievable floor are is 563sqm.
2C Building Height			
Height controls should be informed by decisions about daylight and solar access, roof design and use, wind protection, residential amenity and in response to landform and heritage.	The allowable gross floor area should only 'fill' approximately 70% of the building envelope (see section 2B Building envelopes).	COMPLIES	The GFA of the proposed building is 313sqm, the achievable floor are is 563sqm.
2D Floor Space Ratio			
Floor space ratio (FSR) is the relationship of the total gross floor area (GFA) of a building relative to the total site area it is built on. It indicates the intended density. FSR is a widely used method for estimating the development	The allowable gross floor area should only 'fill' approximately 70% of the building envelope (see section 2B Building envelopes	COMPLIES	The GFA of the proposed building is 313sqm, the achievable floor are is 563sqm.

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<i>potential of a site.</i>			
<b>2E Building Depth</b>			
<i>Building depth is an important tool for determining the development capacity of a site. It is the overall cross section dimension of a building envelope. Building depth dimensions typically include articulation such as projecting balconies, gallery access, eaves, overhangs, sun hoods,</i>	<i>Use a range of appropriate maximum apartment depths of 12-18m from glass line to glass line when precinct planning and testing development controls. This will ensure that apartments receive adequate daylight and natural ventilation and optimise natural cross ventilation</i>	<b>COMPLIES</b>	Maximum apartment depth in the development is 18.2m, however, all apartments have north aspect windows in the living areas and surpass minimum requirements for sunlight, and ventilation
<b>2F Building Separation</b>			
<i>Street setbacks establish the alignment of buildings along the street frontage, spatially defining the width of the street. Combined with building height and road reservation, street setbacks define the proportion and scale of the street and contribute to the character of the public domain.</i>	Minimum separation distances for buildings are: <i>Up to four storeys (approximately 12m):</i> 12m between habitable rooms/balconies 9m between habitable and nonhabitable rooms 6m between non-habitable rooms <i>Five to eight storeys (approximately 25m):</i> 18m between habitable rooms/balconies 12m between habitable and nonhabitable rooms 9m between non-habitable rooms	<b>VARIATION</b>	The development proposes a 5.5m separation between the stair/lobby wall (non habitable) to the dwelling to the north of the site. The development also proposes 5.6m separation between level 1 kitchen window (habitable) for units 03 and 05 to the neighbouring dwelling to the north.
<b>2G Street Setbacks</b>			
<i>Street setbacks establish the alignment of buildings along the street frontage, spatially defining the width of the street. Combined with building height and road reservation, street setbacks define the proportion and scale of the street and contribute to the character of the public domain</i>	Align street setbacks with building use. For example in mixed use buildings a zero street setback is appropriate	<b>COMPLIES</b>	Proposed development front setback is consistent with adjacent residential neighbours.
<b>2H Side and Rear Setbacks</b>			

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<i>Side and rear setbacks govern the distance of a building from the side and rear site boundaries and are related to the height of the building. They are important tools for achieving amenity for new development and buildings on adjacent sites.</i>	<i>Test side and rear setbacks with height controls for overshadowing of the site, adjoining properties and open spaces</i> <i>Test side and rear setbacks with the requirements for:</i> <ul style="list-style-type: none"> <li>• building separation and visual privacy</li> <li>• communal and private open space</li> <li>• deep soil zone requirements</li> </ul>	<b>COMPLIES</b>	The proposed development is setback 2.3-3.0m from the boundary to the south. While there is overshadowing, there is still adequate solar access for the neighbouring dwelling and its private open space.

### Part 3 Siting the Development

ITEM	DESIGN CRITERIA	COMPLIANCE	DESIGN RESPONSE
<b>3A Site Analysis</b>			
<i>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</i>	<i>Design guidance</i> <i>Each element in the Site Analysis Checklist should be addressed (see Appendix 1)</i>	<b>COMPLIES</b>	
<b>3B Orientation</b>			
<i>Objective 3B-1 Building types and layouts respond to the streetscape and site while optimising solar access within the development</i>	<i>Design guidance</i> <i>Buildings along the street frontage define the street, by facing it and incorporating direct access from the street (see figure 3B.1)</i> <i>Where the street frontage is to the east or west, rear buildings should be orientated to the north</i> <i>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)</i>	<b>COMPLIES</b>	The building, pedestrian and vehicle access to the site al face and address the street. East-west orientation of the development ensures adequate solar access for all units.
<i>Objective 3B-2 Overshadowing of neighbouring properties is minimised during mid winter</i>	<i>Design guidance</i> <i>Living areas, private open space and communal open space should receive solar access in accordance with sections 3D Communal and public</i>	<b>COMPLIES</b>	As mentioned above, while overshadowing to he property to the south cannot be avoided, the property receives adequate solar access during the winter.

ITEM	DESIGN CRITERIA	COMPLIANCE	DESIGN RESPONSE
	<i>open space and 4A Solar and daylight access</i>		
<b>3C Public domain interface</b>			
<i>Objective 3C-1 Transition between private and public domain is achieved without compromising safety and security</i>	<i>Design guidance Terraces, balconies and courtyard apartments should have direct street entry, where appropriate 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)</i>	<b>COMPLIES</b>	Consistent with the streetscape, there is a low street fence on the front boundary, which provides some security without compromising passive surveillance to and from the street and apartment building.  Hydrant booster assemblies present to the street at a location that provides privacy to the ground floor bed rooms, without interfering with passive surveillance from POS and living areas to the front units.
<i>Objective 3C-2 Amenity of the public domain is retained and enhanced</i>	<i>Design guidance Planting softens the edges of any raised terraces to the street, for example above sub-basement car parking</i>	<b>COMPLIES</b>	Enhanced landscaping provided within the front setback, and offers a buffer for the vehicle driveway, above OSD bed.
<b>3D Communal and public open space</b>			
<i>Objective 3D-4 Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood</i>	<i>Design guidance The public open spaces 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</i>	<b>VARIATION</b>	Given the site location, scale of the development and neighbours, public open space is not provided in this development as this is consistent with the existing pattern of the neighbourhood. Coral Sea park is the public park central to the neighbourhood and is within walking distance.
<b>3E Deep soil zones</b>			
<i>Objective 3E-1 Deep soil zones provide areas on the site that allow</i>	<i>1. Deep soil zones are to meet the following minimum requirements:</i>	<b>COMPLIES</b>	Development meets required deep soil requirements (35.66sqm). Total provided deep soil is 78.98sqm.

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<i>for and support healthy plant and tree growth. They improve residential amenity and promote management of water and air quality</i>	<i>Minimum Dimensions Greater than 1,500m<sup>2</sup> with significant existing tree cover 6m Deep soil zone (% of site area) 7%</i>		
<b>3F Visual Privacy</b>			
<i>Objective 3F-1 Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy</i>	<i>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: over 25m (9+ storeys) Habitable rooms and balconies-12m Non-habitable rooms-6m 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</i>	<b>COMPLIES</b>	Adequate screening provided to the proposed development, particularly from living rooms, balconies and lobbies that overlook neighbouring sites.
<b>3G Pedestrian access and entries</b>			
<i>Objective 3G-1 Building entries and pedestrian access connects to and addresses the public domain</i>	<i>Design guidance Multiple entries (including communal building entries and individual ground floor entries) should be provided to activate the street edge  Entry locations relate to the street and subdivision pattern and the existing pedestrian network  Building entries should be clearly identifiable and communal entries should be clearly distinguishable from private entries  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</i>	<b>COMPLIES</b>	<p>Pedestrian access to the site is consistent with the existing location of the access that is currently on site for the existing dwelling. The proposed pedestrian entry connects to the existing footpath network.</p> <p>Entry lobby is accessed via the carpark, and is distinguishable from the entry to the ground floor apartments which have their own gate to private open space.</p> <p>Frontage is limited on this site, and a primary pathway and entry is clearly delineated with sightlines to the carpark at the rear.</p>

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<b>3H Vehicle Access</b>			
<i>Objective 3H-1 Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes</i>	<p><i>Design guidance</i> Car park access should be integrated with the building's overall facade.</p> <p><i>Design solutions may include:</i></p> <ul style="list-style-type: none"> <li>• the materials and colour palette to minimise visibility from the street</li> <li>• security doors or gates at entries that minimise voids in the facade</li> <li>• where doors are not provided, the visible interior reflects the facade design and the building services, pipes and ducts are concealed</li> </ul>	<b>COMPLIES</b>	Carpark is recessed within the site behind the building line. Two separate access points have been provided for pedestrians and traffic for safety. The lobby is accessed via the carpark, with adequate safety measures for the safety of pedestrians including permanent shared zone markings as well as convex mirrors for sightlines.
<b>3J Bicycle and car parking</b>			
<i>Objective 3J-1 Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas</i>	<p><i>1. For development in the following locations:</i></p> <ul style="list-style-type: none"> <li>• 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</li> </ul> <p><i>The car parking needs for a development must be provided off street</i></p>	<b>COMPLIES</b>	The development complies with the Housing SEPP parking rates, and is within 400m to an accessible bus stop.

#### Part 4 Designing the Building

ITEM	DESIGN CRITERIA	COMPLIANCE	DESIGN RESPONSE
<b>Amenity</b>			
<b>4A Solar and Daylight access</b>			

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Objective 4A-1 To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space	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	COMPLIES	100% of units receive 3 hours of sun 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	COMPLIES	100% of units receive 3 hours of sun mid winter.
	3. A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid winter	COMPLIES	100% of units receive 3 hours of sun mid winter.
4B Natural Ventilation			
Objective 4B-3 The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents	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	COMPLIES	100% of units achieve cross ventilation requirements.
	2. Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line	COMPLIES	Maximum apartment depth is 8.7m
4C Ceiling heights			
Objective 4C-1 Ceiling height achieves sufficient natural ventilation and daylight access	1. Measured from finished floor level to finished ceiling level, minimum ceiling heights are: Habitable rooms 2.7m Non-habitable 2.4m	COMPLIES	2.7m FCL to all habitable rooms provided. 2.4m FCL to non habitable rooms provided.
4D Apartment size and layout			
Objective 4D-1 The layout of rooms within an apartment is functional, well organised and	1. Apartments are required to have the following minimum internal areas: 1 bedroom 50m <sup>2</sup>	COMPLIES	All apartments exceed minimum area requirements.

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<i>provides a high standard of amenity</i>	2 bedroom 70m2 3 bedroom 90m2		
	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	COMPLIES	Window sizes are compliant.
<i>Objective 4D-2 Environmental performance of the apartment is maximised</i>	1. Habitable room depths are limited to a maximum of 2.5 x the ceiling height	COMPLIES	All habitable room depths are less than 2.5 x 2.7m FCL (6.75m)
	2. In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window	COMPLIES	Worst case apartment has a habitable room depth of 5.4m (<8m)
<i>Objective 4D-3 Apartment layouts are designed to accommodate a variety of household activities and needs</i>	1. Master bedrooms have a minimum area of 10m2 and other bedrooms 9m2 (excluding wardrobe space)	VARIATION	All master bedrooms exceed minimum 10sqm area with the exception of units 1.01 and 2.01 that have a master bedroom area of 9.5sqm
	2. Bedrooms have a minimum dimension of 3m (excluding wardrobe space)	COMPLIES	All bedrooms have at least a minimum width of 3m in each dimension.
	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	COMPLIES	All living areas exceed minimum widths.
	4. The width of cross-over or crossthrough apartments are at least 4m internally to avoid deep narrow apartment layouts	N/A	No cross through apartments proposed
<b>4E Private open space and balconies</b>			
<i>Objective 4E-1 Apartments provide appropriately sized private open space and balconies to enhance residential amenity</i>	1. All apartments are required to have primary balconies as follows: 1 bedroom apartments Minimum Area 8m2 Minimum Depth 2m 2 bedroom apartments	COMPLIES	All units exceed minimum area requirements.



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	<i>Minimum Area 10m2</i> <i>Minimum Depth 2m</i> <i>3+ bedroom apartments</i> <i>Minimum Area 12m2</i> <i>Minimum Depth 2.4m</i>		
<b>4F Common circulation and spaces</b>			
<i>Objective 4F-1 Common circulation spaces achieve good amenity and properly service the number of apartments</i>	<i>1. The maximum number of apartments off a circulation core on a single level is eight</i>	<b>COMPLIES</b>	Maximum number of apartments per core per level provided is 2.
<b>4G Storage</b>			
<i>Objective 4G-1 Adequate, well designed storage is provided in each apartment</i>	<i>1. In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided:</i> <i>1 bedroom apartments 6m3</i> <i>2 bedroom apartments 8m3</i> <i>3+ bedroom apartments 10m3</i> <i>At least 50% of the required storage is to be located within the apartment</i>	<b>COMPLIES</b>	Minimum storage requirements are met for all apartments.
<b>4H Acoustic privacy</b>			
<i>Objective 4H-1 Noise transfer is minimised through the siting of buildings and building layout</i>	<i>Design guidance</i> <i>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)</i> <i>Window and door openings are generally orientated away from noise sources</i>	<b>COMPLIES</b>	Bedrooms typically oriented away from the busier road and intersection to the north. Balconies and associated living areas sited facing the street where possible, otherwise to the rear boundary to the west where greater building separation is provided.
<b>4H Noise and pollution</b>			
<i>Objective 4J-1 In noisy or hostile environments the impacts of external noise and pollution are minimised through the careful siting and layout of buildings</i>	<i>Design guidance</i> <i>To minimise impacts the following design solutions may be used:</i> <ul style="list-style-type: none"> <li><i>• physical separation between buildings and the noise or pollution source</i></li> <li><i>• residential uses are located perpendicular to the noise</i></li> </ul>	<b>N/A</b>	Site not identified as being exposed to excessive noise – refer to acoustic report

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	<i>source and where possible buffered by other uses</i> <ul style="list-style-type: none"> <li>• 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</li> </ul>		
<b>Configuration</b>			
<b>4K Apartment mix</b>			
<i>Objective 4K-1 A range of apartment types and sizes is provided to cater for different household types now and into the future</i>	<i>Design guidance</i> <i>A variety of apartment types is provided</i>	<b>COMPLIES</b>	A mix of apartment sizes are provided (2x2B, 2x1B, 1xStudio)
<b>4M Facades</b>			
<i>Objective 4M-1 Building facades provide visual interest along the street while respecting the character of the local area</i>	<i>Design guidance</i> <i>Design solutions for front building facades may include:</i> <ul style="list-style-type: none"> <li>• a composition of varied building elements</li> <li>• a defined base, middle and top of buildings</li> <li>• revealing and concealing certain elements</li> </ul>	<b>COMPLIES</b>	Façade uses materials that are consistent with residential dwellings particularly in the area, with hebel and brick.
<b>4N Roof design</b>			
<i>Objective 4N-1 Roof treatments are integrated into the building design and positively respond to the street</i>	<i>Design guidance</i> <i>Roof design relates to the street. Design solutions may include:</i> <ul style="list-style-type: none"> <li>• special roof features and strong corners</li> <li>• use of skillion or very low pitch hipped roofs</li> <li>• breaking down the massing of the roof by using smaller elements to avoid bulk</li> <li>• using materials or a pitched form complementary to adjacent buildings</li> </ul>	<b>COMPLIES</b>	<p>Roofs are intentionally articulated to form 2 smaller, distinguishable forms from the street to reflect a scale that is sympathetic to the residential character of the neighbourhood.</p> <p>Discreet low roofs are also used between the skillion and gable roof forms to minimize the perceived scale of the building.</p>
<b>4O Landscape Design</b>			

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<i>Objective 4O-1 Landscape design is viable and sustainable</i>	<i>Recommended tree planting in deep soil zones Greater than 1,500m2 1 large tree or 2 medium trees per 80m2 of deep soil zone</i>	<b>COMPLIES</b>	Large trees are proposed in the rear setback, as well as in the front setback. Two additional street trees are proposed in the verge in front of the building to add to the visual amenity of the street.
<b>Building</b>			
<b>4Q Universal Design</b>			
<i>Objective 4Q-1 Universal design features are included in apartment design to promote flexible housing for all community members</i>	<i>Design guidance Developments achieve a benchmark of 20% of the total apartments incorporating the Livable Housing Guideline's silver level universal design features</i>	<b>COMPLIES</b>	All units achieve minimum silver universal design
<i>Objective 4Q-2 A variety of apartments with adaptable designs are provided</i>	<i>Design guidance Adaptable housing should be provided in accordance with the relevant council policy</i>	<b>COMPLIES</b>	One adaptable unit is provided for the development (unit 1.01)
<i>Objective 4Q-3 Apartment layouts are flexible and accommodate a range of lifestyle needs</i>	<i>Design guidance Apartment design incorporates flexible design solutions which may include: • rooms with multiple functions • dual master bedroom apartments with separate bathrooms • larger apartments with various living space options • open plan 'loft' style apartments with only a fixed kitchen, laundry and bathroom</i>	<b>COMPLIES</b>	All units have open plan living room layouts for flexibility.
<b>4S Mixed Use</b>			
<i>Objective 4S-1 Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement</i>	<i>Design guidance Mixed use development should be concentrated around public transport and centres</i>	N/A	Development is not mixed use (residential only)
<i>Objective 4S-2 Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents</i>	<i>Design guidance Residential circulation areas should be clearly defined. Design solutions may include: • residential entries are separated from commercial</i>	N/A	No commercial areas are proposed (residential only)

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	<p>entries and directly accessible from the street</p> <p><i>Design Criteria Compliance Design Response</i></p> <ul style="list-style-type: none"> <li>• commercial service areas are separated from residential components</li> <li>• residential car parking and communal facilities are separated or secured</li> <li>• security at entries and safe pedestrian routes are provided</li> <li>• concealment opportunities are avoided</li> </ul>		
<b>4T Awnings and signage</b>			
<i>Objective 4T-1 Awnings are well located and complement and integrate with the building design</i>	<p><i>Design guidance</i></p> <p>Awnings should be located along streets with high pedestrian activity and active frontages</p>	N/A	Given the site location and front setbacks, awnings re not deemed appropriate
<i>Objective 4T-2 Signage responds to the context and desired streetscape character</i>	<p><i>Design guidance</i></p> <p>Signage should be integrated into the building design and respond to the scale, proportion and detailing of the development</p>	<b>COMPLIES</b>	Given site context in a residential street, signage is discreet and limited to the building address and post box identification.
<b>4U Energy efficiency</b>			
<i>Objective 4U-1 Development incorporates passive environmental design</i>	<p><i>Design guidance</i></p> <p>Adequate natural light is provided to habitable rooms (see 4A Solar and daylight access)</p> <p>Well located, screened outdoor areas should be provided for clothes drying</p>	<b>COMPLIES</b>	Refer to 4A – all units exceed minimum solar access requirements.
<i>Objective 4U-2 Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer</i>	<p><i>Design guidance</i></p> <p>A number of the following design solutions are used:</p> <p>the use of smart glass or other technologies on north and west elevations</p> <ul style="list-style-type: none"> <li>• thermal mass in the floors and walls of north facing rooms is maximised</li> <li>• polished concrete floors, tiles or timber rather than carpet</li> <li>• insulated roofs, walls and floors and seals on window</li> </ul>	<b>COMPLIES</b>	<p>Tiles proposed for living and kitchen areas, lobbies.</p> <p>All walls, floors and ceilings to achieve the required insulation – refer to BASIX and NatHERS certificates.</p> <p>External shading hoods provided to windows, particularly to west facing bedroom windows</p>

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	<i>and door openings</i> • overhangs and shading devices such as awnings, blinds and screens		
<b>4V Water management and conservation</b>			
Objective 4V-1 Potable water use is minimised	<i>Design guidance</i> <i>Water efficient fittings, appliances and wastewater reuse should be incorporated. Apartments should be individually metered Rainwater should be collected, stored and reused on site. Drought tolerant, low water use plants should be used within landscaped areas.</i>	COMPLIES	Native, low maintenance planting proposed – refer to landscape architects drawings. Fittings are as per BASIX requirements to meet efficiency standards. Rainwater tanks are proposed to collect rainwater and are to be used for irrigation.
Objective 4V-2 Urban stormwater is treated on site before being discharged to receiving waters	<i>Design guidance</i> <i>Water sensitive urban design systems are designed by a suitably qualified professional</i>	COMPLIES	Rainwater tank in conjunction with OSD bed are utilized on-site to control the release of water to the greater stormwater system
<b>4W Waste management</b>			
Objective 4W-1 Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents	<i>Design guidance</i> <i>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</i>	COMPLIES	Waste management report prepared by IDG provided. Rubbish bins are located behind the building line, and are screened to be discreet.
Objective 4W-2 Domestic waste is minimised by providing safe and convenient source separation and recycling	<i>Design guidance</i> <i>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 .</i>	COMPLIES	Adequate number of dedicated recycling bins are provided for the development. Bin storage areas for the development are well ventilated (open) and easily accessible from the ground floor lobby.

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	<i>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</i>		
<b>4X Building maintenance</b>			
<i>Objective 4X-1 Building design detail provides protection from weathering</i>	<p><i>Design guidance</i>  A number of the following design solutions are used:</p> <ul style="list-style-type: none"> <li>• roof overhangs to protect walls</li> <li>• hoods over windows and doors to protect openings</li> <li>• detailing horizontal edges with drip lines to avoid staining of surfaces</li> <li>• methods to eliminate or reduce planter box leaching</li> <li>• appropriate design and material selection for hostile locations</li> </ul>	<b>COMPLIES</b>	Hoods provided over some windows, drip lines to all overhangs to be detailed.
<i>Objective 4X-2 Systems and access enable ease of maintenance</i>	<p><i>Design guidance</i>  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.</p>	<b>COMPLIES</b>	Windows to be cleaned internally.
<i>Objective 4X-3 Material selection reduces ongoing maintenance costs</i>	<p><i>Design guidance</i>  A number of the following design solutions are used:</p> <ul style="list-style-type: none"> <li>• sensors to control artificial lighting in common circulation and spaces</li> <li>• natural materials that weather well and improve with time such as face brickwork</li> <li>• easily cleaned surfaces that are</li> </ul>	<b>COMPLIES</b>	External materials are deemed to be hard wearing and robust (brick and hebel)

ITEM	DESIGN CRITERIA	COMPLIANCE	DESIGN RESPONSE
	<i>graffiti resistant</i> <i>• robust and durable materials and finishes are used in locations which receive heavy wear and tear, such as common circulation areas and lift interiors</i>		