

# MORFOSIS ARCHITECTS PTY LTD

31 July 2024

Re: DA Application

Project name: 28 & 30 McKay Avenue, MOOREBANK

SEPP 65 – Design Verification Statement REV A

Applicant – McKay Development

In respect to the above Development Application, we confirmed that the design of the development has been designed & prepared by a Registered Architect and that the intent of the design quality principles as set out in Part 2 of the SEPP No.65 – Design Quality of Residential Flat Development have been achieved for this development.

Below is a table demonstrating how the design meets the objectives.

Yours Sincerely,



Jean Ligadu

Associate.

# MORFOSIS ARCHITECTS PTY LTD

## SEPP 65 & ADG compliance table



REVISION REGISTER					
ISSUE	ISSUED FOR:	DATE	REVISION NO.	AUTHORISED	
				NAME / POSITION	SIGNATURE
1	Issue for DA	16/02/23	-	Jean Ligadu Associate	
2	Issue for DA	31/07/24	A	Jean Ligadu Associate	

Table 1 – Principles of SEPP 65

Principle	Response
<b>Principle 1: Context and neighbourhood character</b>	<p>The site is 1365.8 m2 fronting McKay Avenue to the South. The existing character is predominantly surrounded by a mix of building forms ranging from single and double storey brick dwellings of past eras. An approved DA with 5 storey apartments building at 32-34 McKay Avenue directly adjoins eastern boundaries. Directly on the opposite side of McKay Avenue is designated as B2 Local centre zoning and currently consist of Nuwara Public Primary School</p> <p>This development seeks to set the standard for future infill development quality and utility of amalgamation of sites. It is noted here that the desired future character is envisaged by the R4 zone planning control, a typical 6-storey apartments form can be proposed. It is also noted surrounding sites where existing dwellings are under-developed in terms of the allowable FSR and building height and that as a result, over time existing character will change as new 6 storey apartment buildings are developed. It is therefore more appropriate to consider the proposal within its likely future context, being contemporary 6 storey apartment buildings.</p> <p>The site is owned by McKay Development.</p> <p>This proposal is for 28 new apartments centrally arranged around a single access core. An underground car park provides all the site requirements for vehicles and is accessed via a main entry ramp off McKay Avenue. There is similarly a main pedestrian access point at street frontages, leading into a main communal lobby and linked through a private communal courtyard.</p> <p>The building has been articulated appropriately by a variety of articulation techniques; whilst still retain a consistent look and identification to both street frontages. The alignment of the primary building facades is parallel to the streets allowing active frontages and private courtyards.</p> <p>Street character is further enhanced with individual entrances to all ground level apartments via courtyard access from the street.</p>
<b>Principle 2: Built form and scale</b>	<p><b>Built Form</b></p> <p>The built form has been oriented along McKay Avenue, defining the street edge to maximise the light and views through the site. The arrangement also minimises the impact of the development on the north with open building forms, providing articulation and open views to a majority of apartments.</p> <p><b>Building Height</b></p> <p>The intent of the height controls set for the area limits apartment buildings at 6 storeys. This is to minimize the impact to existing development and provide a consistent future streetscape and desired character of neighbouring buildings. The development seeks a variation of the Clause 4.6 to Liverpool LEP 2008 with regards to building heights. Refer to separate report.</p> <p>The development proposes 6 storeys at street level (above a two basement levels) with the bottom floor generally meets street levels with reduced floor plates at Level 5 – 6. It is also noted the breach of height occurs on the roof level 6, where a highly beneficial covered communal open space with lift access, BBQ facilities and accessible toilet have been provided. The space has been intentionally located centrally, complimented with a perimeter of landscape planters, further minimizing the bulk impact. Above this will be the form the lift overrun, photovoltaic panels and roof plant screens. This is in keeping with the intent of the height control can be perceived in appearance of a 6 storey at street level and the central roof plant minimize the impact on its surrounding.</p> <p>The difference in building height on the east and west side allows a variety of scale within the site. Breaks in between buildings also allow view corridors for residents and.</p> <p><b>Setbacks</b></p> <p>Front Street Setback zone are in line with DCP have been established. The proposed building primary street setbacks are 5.5m designed to create more articulated façade to McKay Avenue.</p> <p>At key locations of the façade of street frontages, we have extended the building forms into the setback areas due to the angled site frontage to provide a more rectilinear forms, thus addressing urban design</p>

Principle	Response
	<p>to address the street. These façade elements, balconies and awnings over building entry in the form of a glazed roof to further activate critical street views. As for the ground floor units, similar approach to setback encroachment adopted to above forms. The paved areas for the private open spaces of the units are part of landscape treatment</p> <p>The side and rear setbacks have been generally complied with the building separation requirements of ADG and DCP, having well considered to address privacy and solar access future neighbouring buildings</p> <p><b>Façade Articulation</b></p> <p>The buildings have a common identity of form with variations in façade and balconies articulation allowing variations in form and hierarchy. Fine details of screenings, colours and materials further breaks up the scale to a typical domestic one.</p> <p>The design of typical floor plates allows the majority of apartments to have access to mid-Winter sun, with a variety of screening to protect the apartments from Summer sun.</p> <p>Ground floor units assist in providing a common street address and bring the scale down to meet the street. Private fenced courtyards with front gate entries with permeable fence in front further buffers the buildings to the street.</p> <p>The main building and the lower-level connections allow a protected communal landscape area to be maintained, yet still allowing ample light into the area for comfort and recreation.</p>
<b>Principle 3: Density</b>	<p>The proposed development falls within the LEP R4 – High Density Residential zone and designated under Affordable Rental Housing SEPP which aims to provide for the housing needs and affordability of the community as well as providing a variety of housing types within close proximities to public transport hubs and centres.</p> <p>The site has an area of 1,365.8m<sup>2</sup>. The proposal is for 28 apartments on the site achieve an FSR of 1.63:1 inclusive of the bonus FSR. The site, while maximized under ARH SEPP, comfortably houses this number of dwellings and allows for shared facilities that can be used by the residents. The building layout combined with the minimum separation requirements allows a positive outlook, solar access and amenity for residents.</p>
<b>Principle 4: Sustainability</b>	<p>We have designed the proposed development considering passive solar principles.</p> <p>The building forms were developed to maximise solar access into apartments orientated East-West and North-South. 85.71% of units achieve 2 hours minimum or more of sun in midwinter between 9am to 3pm.</p> <p>We have maximised natural ventilation for the majority of apartments with dual aspect frontages and corner units. 85.71% of the apartments achieve natural cross ventilation.</p> <p>Additional sustainable initiatives for waste management are provided with recycling points on each floor through chutes. Water efficient fittings, water re-use, and indigenous planting that requires low irrigation.</p>
<b>Principle 5: Landscape</b>	<p>Landscape has been carefully considered and is fully integrated into the design. The landscape design improves the site setting as it features ample landscaped communal open space wrapping around the Southeast corner of the site, open to the sun yet protected from the street.</p> <p>Outside the basement extent there is allowance made for deep soil planting zone at 15.38% to the north and south of the site. This will allow large canopy of trees also acting as a privacy buffer for the development with irrigation considered.</p> <p>Adjoining the public domain are appropriately landscaped with trees and screening hedge softening the streetscape treatment and ensure adequate privacy for the ground floor private open spaces. Behind this landscaped screening, a 1.8m high permeable fencing is provided to maximized privacy further.</p> <p>A communal landscaped area also combines hard and soft landscaped areas with BBQ and recreation on paved areas and planting in above slab planters. This aims to optimized landscape outlook amenity for residents, usability, privacy and recreation with equitable access by providing active and passive</p>

Principle	Response
	spaces, with a variety of local native plantings and shrubs to create interest. Refer to landscape documentation for further information.
Principle 6: Amenity	<p>The development strives for apartments with maximum amenity, with 85.71% achieving 2 hours of sunlight in midwinter and similarly, 85.71% of apartments cross ventilated.</p> <p>The apartments have been designed according to ADG, SEPP ARH and DCP requirements and have a bathroom and kitchen which can be altered for accessible compliance and the majority are open plan to allow for ease of movement within the space.</p> <p>All visual privacy has been well considered with balconies, internal layouts planning and windows placement optimised. Introduction of privacy screens where deemed required to mitigate further any direct overlooking where appropriate.</p> <p>The proposed development provides a variety of amenities for Waste/ recycling, BBQ / entertaining areas at common open space as well as hard and soft landscaped areas.</p>
Principle 7: Safety	<p>The best deterrent against crime is surveillance. The apartments look onto both street frontages, and the internal communal areas benefit from passive surveillance in combination with controlled security entrances to these areas and main communal lift lobby. In combination the public domain and internal public areas have many means of non-intrusive surveillance.</p> <p>Apartment layout is designed to provide a simple clear layout of internal access ways. The main entry of the building is readily identifiable from both street frontages and only a short distance from the communal lift lobbies.</p> <p>Subtle external lighting will be provided to ensure surveillance is maintained during the night.</p>
Principle 8: Housing diversity and social interaction	<p>The development will contribute to the Affordable Rental Housing SEPP in a positive way both socially and economically, bringing a variety of people to live in the area and contribute financially to the local businesses by future occupants' needs.</p> <p>The development provides an opportunity for a diverse range of people to form a community, in a wide range of Studio, 1, 2, and 3 bedroom dwellings which reflect different household requirements. There is a predominance of 1 and 2 bedroom units, to reflect current market which aims to be suitable for rental and or purchase, thus maximizing affordability</p> <p>A total of 10% of the development is provided as adaptable apartments, allowing for further diversity in the community. All common areas are fully accessible and available for use by all residents and their guests. 50% of the total GFA have been designated as Affordable housing which consist of 15 out of 28 units in total</p>
Principle 9: Aesthetics	<p>The proposed development will offer entry level apartments with the look and feel of higher end developments, through the use of regular materials used in innovative ways of combinations and complexity to allow a desirable dwelling environment.</p> <p>Architectural expressions are modern and contemporary which highlights important streetscape facades and prominent corners addressing key street views.</p> <p>The overall building forms sets a comfortable scale to address the street is well articulated with appropriate hierarchy. To reduce the bulk and bring down the scale, an emphasis on the central glazed 'spine' indent consisting of lift lobbies juxtaposed the façade into four components provide a distinctive character, appropriate to the future development intent.</p> <p>The main building material used on the facades of all buildings will be rendered wall – combined in a variety of natural colours, tones and textures in combination with an accent colour to bring vibrancy to the building forms. The glass balustrade helps to define a rhythm to the built form achieving a balance of textures.</p>

Table 2 –Provisions of ADG

Objective	Design Guidance / Criteria	Compliance / Comment
<b>PART 3: Siting the Development</b>		
<b>3A Site Analysis</b>		
<b>Objective 3A-1</b> Site analysis illustrates that design decisions have been based on opportunities and constraints of the site conditions and their relationship to the surrounding context		Complies. The opportunities and constraints of the site have been considered and building location form and scale have been designed in respect to them.
<b>3B Orientation</b>		
<b>Objective 3B-1</b> Building types and layouts respond to the streetscape and site while optimising solar access within the development	<ul style="list-style-type: none"> <li>Buildings along the street frontage define the street, by facing it and incorporating direct access from the street.</li> <li>Where the street frontage is to the east or west, rear buildings should be orientated to the north.</li> <li>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.</li> </ul>	<p>Complies. The building faces south and aligns to McKay Avenue with direct street entries.</p> <p>Not applicable.</p> <p>Solar access is enhanced with increased setbacks towards the north which allows greater outlook and visual amenity, while minimising overshadowing</p>
<b>Objective 3B-2</b> Overshadowing of neighbouring properties is minimised during mid winter	<ul style="list-style-type: none"> <li>Living areas, private open space and communal open space should receive solar access.</li> <li>Solar access to living rooms, balconies and private open spaces of neighbours should be considered.</li> <li>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%.</li> <li>Overshadowing should be minimised to the south or downhill by</li> </ul>	<p>Complies. The orientation and location of the building has been aligned to both street setbacks as much as possible to avoid adverse overshadowing towards the east and west neighbouring properties.</p> <p>The required building separation has been allowed to the future neighbouring properties, and is only 4 storeys high with reduced storeys towards the south thereby minimising overshadowing.</p> <p>A detailed shadow study analysis confirms current neighbouring properties will receive minimum 2 hours of solar access to windows to living areas, balconies and common open space.</p>

Objective	Design Guidance / Criteria	Compliance / Comment
	increased upper level setbacks.	
<b>3C Public Domain Interface</b>		
<b>Objective 3C-1</b> Transition between private and public domain is achieved without compromising safety and security	<ul style="list-style-type: none"> <li>• Direct access to ground floor dwellings with changes in level to allow for privacy.</li> <li>• Upper level balconies and windows should overlook the public domain.</li> <li>• Front fences and walls along street frontages should use visually permeable materials and treatments.</li> <li>• Length of solid walls should be limited along street frontages.</li> <li>• Opportunities should be provided for casual interaction between residents and the public domain.</li> <li>• In developments with multiple buildings and/or entries, pedestrian entries and spaces associated with individual buildings/entries should be differentiated.</li> <li>• Opportunities for people to be concealed should be minimised.</li> </ul>	<p>Complies. The interaction between the private and public domain has been carefully considered with respect to the security needs of the residents. These are private terraces to all ground floor apartments which separate them from the street and provide a hierarchy of levels for differentiation. These ground floor apartments have direct access to the street.</p> <p>All upper level balconies overlook either the public street or the communal landscaped podium.</p> <p>Private terraces utilise 1.8m high partially solid fencing for privacy and security</p> <p>Solid walls overall are broken down strategically with window punctuation, balcony treatment and screening.</p> <p>Interaction by residents to the public realm occurs through use of the main and side street entrance and communal pedestrian entries link through east-west of the development promoting casual interaction.</p> <p>Street entry will be identifiable and easy to navigate.</p> <p>Landscaping measures remove the ability for people to be concealed from view.</p>
<b>Objective 3C-2</b> Amenity of the public domain is retained and enhanced	<ul style="list-style-type: none"> <li>• Planting softens the edges of any raised terraces.</li> </ul>	<p>Complies. The streetscape is provided with a continuous landscaped screening in the form of a low height planter box reduce the visual impact of raised terraces on Ground Floor.</p>

Objective	Design Guidance / Criteria	Compliance / Comment
	<ul style="list-style-type: none"> <li>Mail boxes should be located in lobbies.</li> <li>The visual prominence of underground car park vents should be minimised.</li> <li>Substations, pump rooms, garbage storage areas and other service requirements should be located in basement car parks or out of view.</li> <li>Ramping for accessibility should be minimised by building entry location and setting ground floor levels in relation to footpath levels.</li> <li>Durable, graffiti resistant and easily cleanable materials should be used.</li> <li>On sloping sites protrusion of car parking above ground level should be minimised.</li> </ul>	<p>Mailboxes have been provided to street entry, corresponding to the Lift lobby provided for the development.</p> <p>Car park vents are all exhausted above roof level.</p> <p>Chutes are located within the building on each floor off the lift lobbies. A new substation is proposed to McKay Avenue. Planting measure can be employed to help blend the substation into the landscape where possible.</p> <p>The car park is located primarily underground, and the landscape levels outside its extent are graded to ensure ease of transitioning to the podium area</p> <p>Materials within reach of the ground plane are generic in nature and can be easily cleaned or covered in the event of graffiti.</p>
<b>3D Communal and Public Open Space</b>		
<b>Objective 3D-1</b> An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping	<p><b>Design Criteria</b></p> <ul style="list-style-type: none"> <li>Communal open space has a minimum area equal to 25% of the site.</li> <li>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).</li> </ul> <p><b>Design Guidance</b></p> <ul style="list-style-type: none"> <li>Communal open space should be consolidated into a well-designed, easily identified and usable area.</li> </ul>	<p>Complies. The proposal comprises of 607m<sup>2</sup> or 44% of communal open space on deep soil and partly podium. The principal usable part of the communal open space which is located on the ground level west will achieve minimum 2 hours of sunlight in mid-winter for 50% of its area from 9am to 3pm</p> <p>There are a variety of communal outdoor facilities such as BBQ, covered rooftop seating areas and accessible toilet facilities which are integrated well in to the landscaping and roofscape. Included in this area are tree and shrub species to co-exist and provide visual interest and privacy.</p> <p>There are significant deep soil landscaped areas external to the landscaped podium on the north and south of the site as part of the common open space. This will connect visually from both street frontages and the main pedestrian link. The landscaped area is easily trafficable and provides a vital communal</p>



Objective	Design Guidance / Criteria	Compliance / Comment
	<ul style="list-style-type: none"> <li>Communal open space should have a minimum dimension of 3m.</li> <li>Communal open space should be co-located with deep soil areas.</li> </ul>	<p>connection point for the residents</p> <p>Pergola and landscape with appropriate plantings on podium and roof level and will provide a more intimate and sheltered area for communal gatherings.</p>
<b>Objective 3D-2</b> Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting		Complies. The communal open spaces have been designed to cater for a range of activities such as BBQ, seating and walking opportunities
<b>Objective 3D-3</b> Communal open space is designed to maximise safety		Complies. These spaces have been designed with respect to safety for all types of residents that this development caters for. All communal spaces are fully accessible, and the majority of landscaping measures include gentle gradients for planting
<b>Objective 3D-4</b> Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood		Not applicable
<b>3E Deep Soil Zones</b>		
<b>Objective 3E-1</b> Deep soil zones provide areas on the site that allow for and support healthy plant and tree growth. They improve residential amenity and promote management of water and air quality	Deep soil zones are to have minimum width of 6m and minimum of 7% of site area	<p>Partially Complies – The SEPP ARH takes precedence over the ADG in respect to minimum width and areas. SEPP ARH areas adopted which dictate min 15% of the site areas with a dimension of minimum 3m requirements.</p> <p>There is a total of 210.01m<sup>2</sup> (15.38% ) deep soil planting provided with 172.60m<sup>2</sup> (82.19%) located to the rear of the site. This development allows possibilities for extensive planting of substantial trees being grown for privacy to the neighbours and residents.</p>
<b>3F Visual Privacy</b>		
<b>Objective 3F-1</b> Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of	<p><b>Design Criteria</b></p> <p>Separation between windows and balconies is provided to ensure visual</p>	<p>Complies.</p> <p>The separation for the building is 6m (up to 4 storeys) from the Western and</p>

Objective	Design Guidance / Criteria	Compliance / Comment
<p>external and internal visual privacy</p> <p>Note: Separation distances between buildings on the same site should combine required building separations depending on the type of room</p>	<p>privacy is achieved. Minimum required separation distances from habitable rooms and balconies to the side and rear boundaries are as follows:</p> <ul style="list-style-type: none"> <li>Up to 12m/4 storeys: 6m</li> <li>Up to 25m/5-8 storeys: 9m</li> <li>Over 25m (9+storeys): 12m</li> </ul> <p>Separation distances between buildings on the same site should combine required building separations depending on the type of room (see Figure 3F.2 in the ADG).</p>	<p>Eastern boundaries which meets the minimum 6m requirements under the ADG. In comparison towards the North, a separation of 8m is provided under the DCP allowing further good separation. However, the north facing ground level courtyards have a boundary setback of 5.6m, with an encroachment of 0.4m to the 6m ADG separation. This minor encroachment is acceptable given the courtyard screen fence and boundary fence will provide visual privacy while allow allows solar amenity without overlooking neighbouring apartments.</p> <p>The separation for the building is 9m (from 5-6 storeys) from boundaries, allowing good visual privacy from future neighbours to the north, west and south. This is consistent with minimum 18m building separation for habitable – habitable allowed for.</p>
<b>Objective 3F-2</b> 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>Complies. Further to building separation privacy between the buildings is through the use a combination of aluminium screens and blade walls on the balcony edges.</p>
<b>3G Pedestrian Access and Entries</b>		
<b>Objective 3G-1</b> Building entries and pedestrian access connects to and addresses the public domain		<p>Complies. The pedestrian entries are identifiable from the street; it is a two-point entries for McKay Avenue with the main entrance, security glass door enclosed lobbies and side entrance, a secured gate</p>
<b>Objective 3G-2</b> Access, entries and pathways are accessible and easy to identify		<p>Complies. The pedestrian entries thoroughfare is fully open to air and interlinks with the communal courtyard. Security between the public and private domain has been made via visibility permeable fencing at street entrances, allowing pedestrian links through the site to remain highly visible and easily navigated. All entries are accessible..</p>

Objective	Design Guidance / Criteria	Compliance / Comment
<b>Objective 3G-3</b> Large sites provide pedestrian links for access to streets and connection to destinations		Not applicable.
<b>3H Vehicle Access</b>		
<b>Objective 3H-1</b> Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes		Complies. The primary vehicle access point is clearly defined and separate to the pedestrian entry. The internal ramp is located on the lowest part of the site, allowing the opening to be minimised in relation to the street overall. It is fully open to sky without side walls allowing pedestrian links at street to remain highly visible and easily navigated.
<b>3J Bicycle and Car Parking</b>		
<b>Objective 3J-1</b> Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas	<p>For development in the following locations:</p> <ul style="list-style-type: none"> <li>on sites that are within 800 metres of a railway station or light rail stop in the Sydney Metropolitan Area; or</li> <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</li> <li>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> <li>The car parking needs for a development must be provided off street.</li> </ul>	Complies. Adequate car parking is provided in a common underground basement arrangement, refer to the traffic report.
<b>Objective 3J-2</b> Parking and facilities are provided for other modes of transport		Complies. Private car and visitor parking is provided along with bicycle parking
<b>Objective 3J-3</b> Car park design and access is safe and secure		Complies. Access into the car park is secured.

Objective	Design Guidance / Criteria	Compliance / Comment
<b>Objective 3J-4</b> Visual and environmental impacts of underground car parking are minimised		Complies. The car park is fully underground with the setback areas surrounding the entrance, strategically located on the low point of topography and landscaped to minimise visual impact.
<b>Objective 3J-5</b> Visual and environmental impacts of on-grade car parking are minimised		Complies. There is no on grade parking for the development.
<b>Objective 3J-6</b> Visual and environmental impacts of above ground enclosed car parking are minimised		Complies. There is no enclosed above ground parking.
<b>Part 4 – Designing the Building</b>		
<b>4A Solar and Daylight Access</b>		
<b>Objective 4A-1</b> To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space	<b>Design Criteria</b>  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.	Complies. At least 85.71% apartments receive a minimum of 2 hours in midwinter between 9am – 3pm.
	A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid-winter.	Complies. 14.28% of apartments receive no direct sunlight between 9am and 3pm in mid-winter.
<b>Objective 4A-2</b> Daylight access is maximised where sunlight is limited.		Complies. All apartments receive sunlight.
<b>Objective 4A-3</b> Design incorporates shading and glare control, particularly for warmer months.		Complies. Where appropriate, the apartments have overhangs and screening to control glare and provide shading in the summer months.
<b>4B Natural Ventilation</b>		
<b>Objective 4B-1</b> All habitable rooms are naturally ventilated		Complies. All habitable rooms are naturally ventilated – all bedrooms have windows or sliding doors to balconies.

Objective	Design Guidance / Criteria	Compliance / Comment
<b>Objective 4B-2</b> The layout and design of single aspect apartments maximises natural ventilation		Complies. The single aspect apartments have been designed to maximise natural ventilation. Wherever possible single aspect apartments have inset balconies to allow the greatest opportunity to allow pressure driven cross ventilation
<b>Objective 4B-3</b> The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents	<b>Design Criteria</b>  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. At least 85.71% of apartments are cross ventilated via maximising through apartment design or building corner positions
	Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line	Complies. All cross ventilated apartments measure less than 18m in total length to meet the requirement - measured glass line to glass line.
<b>4C Ceiling Heights</b>		
<b>Objective 4C-1</b> Ceiling height achieves sufficient natural ventilation and daylight access	<b>Design Criteria</b>  Measured from finished floor level to finished ceiling level, minimum ceiling heights are: <ul style="list-style-type: none"> <li>Habitable: 2.7m</li> <li>Non habitable: 2.4m</li> </ul>	Complies. All habitable ceilings are minimum 2.7m and non-habitable are 2.4m.  An increased ceiling height on ground and first floor is applicable to mixed use developments. This is a residential development only hence this requirement does not apply.

Objective	Design Guidance / Criteria	Compliance / Comment
	<ul style="list-style-type: none"> <li>Ground/First Floors: 3.3m</li> </ul>	
<b>Objective 4C-2</b> Ceiling height increases the sense of space in apartments and provides for well-proportioned rooms		Complies. Rooms are well proportioned and the apartments are stacked wherever possible for majority of the levels, which will help achieve bulkhead minimisation overall.
<b>Objective 4C-3</b> Ceiling heights contribute to the flexibility of building use over the life of the building		Not applicable. Not located in mixed use area.
<b>4D Apartment Size and Layout</b>		
<b>Objective 4D-1</b> The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity	<b>Design Criteria</b>  Apartments are required to have the following minimum internal areas: <ul style="list-style-type: none"> <li>Studio: 35sqm</li> <li>1 bed: 50sqm</li> <li>2 bed: 70sqm</li> <li>3 bed: 90sqm</li> </ul> The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5sqm each.  A fourth bedroom and further additional bedrooms increase the minimum internal area by 12sqm each.	Partially Complies – The SEPP ARH takes precedence over the ADG in respect to minimum unit sizes. SEPP ARH areas adopted which dictate min areas without indicating bathroom requirements.  Minimum sizes under nominated apartments under SEPP ARH ;  1 bed: 50sqm  2 bed: 70sqm  3 bed: 95sqm  All other apartments complies to ADG requirements. Refer to SEE for further clarifications.
	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.	Complies. All habitable rooms have significant window openings greater than

Objective	Design Guidance / Criteria	Compliance / Comment
	Daylight and air may not be borrowed from other rooms	10% of the floor area.
<b>Objective 4D-2</b> Environmental performance of the apartment is maximised	<b>Design Criteria</b>  Habitable room depths are limited to a maximum of 2.5 x the ceiling height.	Complies. Habitable rooms have a depth less than 6.75m for 2.7m heights.
	In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window	Complies. In combined open plan layout, maximum room depth is 8m from glazing line.
<b>Objective 4D-3</b> Apartment layouts are designed to accommodate a variety of household activities and needs	<b>Design Criteria</b>  Master bedrooms have a minimum area of 10sqm and other bedrooms 9sqm (excluding wardrobe space)	Complies. All master bedrooms area greater than 10sqm and other bedrooms greater than 9sqm.
	Bedrooms have a minimum dimension of 3m (excluding wardrobe space)	Complies.
	Living rooms or combined living/dining rooms have a minimum width of: <ul style="list-style-type: none"> <li>• 3.6m for studio and 1 bedroom apartments</li> <li>• 4m for 2 and 3 bedroom apartments</li> </ul>	Complies.
	The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts	Not applicable.
<b>4E Private Open Space and Balconies</b>		
<b>Objective 4E-1</b> Apartments provide appropriately sized private open space and balconies to enhance residential amenity	<b>Design Criteria</b>  All apartments are required to have primary balconies as follows:  Minimum area:	Complies  –Minimum sizes;

Objective	Design Guidance / Criteria	Compliance / Comment
	<ul style="list-style-type: none"> <li>Studio: 4sqm</li> <li>1 bed: 8sqm</li> <li>2 bed: 10sqm</li> <li>3 bed: 12sqm</li> </ul> <p>Minimum depth:</p> <ul style="list-style-type: none"> <li>Studio: -</li> <li>1 bed: 2m</li> <li>2 bed: 2m</li> <li>3 bed: 2.4m</li> </ul> <p>The minimum balcony depth to be counted as contributing to the balcony area is 1m</p>	<p>1 bed: 8sqm</p> <p>2 bed: 10sqm</p> <p>3 bed: 13sqm</p> <p>Minimum depth;</p> <p>1 bed: 2m</p> <p>2 bed: 2m</p> <p>3 bed: 2m</p> <p>Complies. Refer Architectural Detailed Plans.</p>
	<p>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 15sqm and a minimum depth of 3m.</p>	<p>Complies. Min POS for apartment on ground or podium vary in size depending on the apartment, with minimum depth of 3.0m</p>
<b>Objective 4E-2</b> Primary private open space and balconies are appropriately located to enhance liveability for residents.		Complies. The private open space relates to the apartment design
<b>Objective 4E-3</b> Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building.		Complies. The private courtyards and balconies have been designed so that they are the envelope of the building.
<b>Objective 4E-4</b> Private open space and balcony design maximises safety.		Balcony design incorporates a combination of handrails with opaque glass panel and solid masonry, enhancing safety for residents.



Objective	Design Guidance / Criteria	Compliance / Comment
<b>4F Common Circulation and Spaces</b>		
<b>Objective 4F-1</b> Common circulation spaces achieve good amenity and properly service the number of apartments	<b>Design Criteria</b>  The maximum number of apartments off a circulation core on a single level is eight.	Complies. Maximum number of apartments off a circulation core is five.
	For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40.	Not applicable.
<b>Objective 4F-2</b> Common circulation spaces promote safety and provide for social interaction between residents		Well-lit with natural day lighting and easily navigable corridors are common throughout the design. Good visibility from end to end corridor is typical in design.
<b>4G Storage</b>		
<b>Objective 4G-1</b> Adequate, well designed storage is provided in each apartment	<b>Design Criteria</b>  In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided: <ul style="list-style-type: none"> <li>• Studio: 4m3</li> <li>• 1 bed: 6m3</li> <li>• 2 bed: 8m3</li> <li>• 3 bed: 10m3</li> </ul> At least 50% of the required storage is to be located within the apartment.	Complies  Minimum sizes;  1 bed: 6 m3  2 bed: 8 m3  3 bed: 10 m3  With a maximum of 50% of this area in the basement. Refer Storage Calculation Schedule

Objective	Design Guidance / Criteria	Compliance / Comment
<b>Objective 4G-2</b> Additional storage is conveniently located, accessible and nominated for individual apartments.		Complies. Additional storage is provided in the basement; in most instances it's located in front of their designated car spots, or along perimeter walls.
<b>4H Acoustic Privacy</b>		
<b>Objective 4H-1</b> Noise transfer is minimised through the siting of buildings and building layout.		Complies. The apartments are oriented along street setback and rear boundaries allowing maximum internal acoustic separation. Additionally the balcony / building edge articulation diffuses and deflects ambient and residential noise levels.
<b>Objective 4H-2</b> Noise impacts are mitigated within apartments through layout and acoustic treatments.		Where possible, apartment design has incorporated acoustic isolation into layouts especially where a living room adjoins a bedroom. Additionally the apartments are vertically stacked wherever possible to keep quieter bedroom areas grouped.
<b>4J Noise and Pollution</b>		
<b>Objective 4J-1</b> In noisy or hostile environments the impacts of external noise and pollution are minimised through the careful siting and layout of buildings.		Complies. The development provides 5.5m primary street setback requirements to McKay Avenue.
<b>Objective 4J-2</b> Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission.		Complies. As noted above, balcony / building edge articulation similarly diffuses and deflects ambient and street noise levels. Textures and solidity in façade materials also assist in diffusion of noise transfer.
<b>4K Apartment Mix</b>		
<b>Objective 4K-1</b> A range of apartment types and sizes is provided to cater for different household types now and into the future.		Complies. The development provides a mix of 1, 2 and 3 bedroom apartments.
<b>Objective 4K-2</b> The apartment mix is distributed to suitable locations within the building		Complies. A mix of 1, 2 and 3 bedroom units are accommodated across all buildings allowing for a thorough mix of all demographics and accessibility.
<b>4L Ground Floor Apartments</b>		

Objective	Design Guidance / Criteria	Compliance / Comment
<b>Objective 4L-1</b> Street frontage activity is maximised where ground floor apartments are located		Complies. All ground floor apartments contain fenced terraces with direct entry from street level. Typically these are located behind landscaped planters
<b>Objective 4L-2</b> Design of ground floor apartments delivers amenity and safety for residents		Complies. The typical apartment terraces are raised from the street level where topography allows. Permeable fencing additionally allows casual surveillance.
<b>4M Facades</b>		
<b>Objective 4M-1</b> Building facades provide visual interest along the street while respecting the character of the local area		Complies. The development employs a variety of contrasting finishes, tones and textures to bring vibrancy to the building forms. Contrasting screening highlights important facades and prominent corners which address key street views. The glass balustrade and vertical screen blades helps to define a rhythm to the built form achieving a balance of textures.
<b>Objective 4M-2</b> Building functions are expressed by the facade		Building entrances are highlighted and visible from key street corner locations. Directly above, a fully glazed façade to the typical level lift lobbies provides a further open visual outlook towards the public realm whilst maximise natural daylight and exterior views
<b>4N Roof Design</b>		
<b>Objective 4N-1</b> Roof treatments are integrated into the building design and positively respond to the street		Complies. The building roofs relate to the overall building forms,
<b>Objective 4N-2</b> Opportunities to use roof space for residential accommodation and open space are maximised.		Complies. The roof over underground car park is provided with landscape treatment on podium, in addition to deep soil planting
<b>Objective 4N-3</b> Roof design incorporates sustainability features		Complies. The non-trafficable concrete roof would be able to collect rainwater for re-use in landscape irrigation
<b>4O Landscape Design</b>		
<b>Objective 4O-1</b> Landscape design is viable and sustainable		Complies. Landscape design is viable and sustainable using low maintenance

Objective	Design Guidance / Criteria	Compliance / Comment
		native plants where possible with diverse and appropriate planting and trees, suitable for the microclimate. Refer to landscape documentation.
<b>Objective 4O-2</b> Landscape design contributes to the streetscape and amenity		Complies. A continuous landscape screening hedging is provided with feature trees of native species provided at deep soil areas. Refer to landscape documentation.
<b>4P Planting on Structures</b>		
<b>Objective 4P-1</b> Appropriate soil profiles are provided		Complies. Appropriate soil profiles are provided. Refer to landscape documentation.
<b>Objective 4P-2</b> Plant growth is optimised with appropriate selection and maintenance		Complies. Plants selections are local hardy native plants suitable for the region with low maintenance and drought tolerance. Refer to landscape documentation.
<b>Objective 4P-3</b> Planting on structures contributes to the quality and amenity of communal and public open spaces		Complies. Varying heights of planter boxes with a combination of trees and shrubs provided promoting interesting outlook and good amenity. Seatings, decking, bbq facilities in combination of adequate shading trees further enhance the open spaces. Refer to landscape documentation.
<b>4Q Universal Design</b>		
<b>Objective 4Q-1</b> Universal design features are included in apartment design to promote flexible housing for all community members		Complies. Open plan layouts are incorporated wherever possible and a majority of habitable rooms allow for a variety of furniture layouts. Laundries and bathrooms are conveniently located and easily accessed.
<b>Objective 4Q-2</b> A variety of apartments with adaptable designs are provided		Complies. Overall 10% of apartments are adaptable in layout
<b>Objective 4Q-3</b> Apartment layouts are flexible and accommodate a range of lifestyle needs		Complies. Apartments are designed with open plan living and allowance for rooms to be multi-functional for a wide variety of residents' needs.

Objective	Design Guidance / Criteria	Compliance / Comment
<b>4R Adaptive Reuse</b>		
<b>Objective 4R-1</b> New additions to existing buildings are contemporary and complementary and enhance an area's identity and sense of place		Not applicable.
<b>Objective 4R-2</b> Adapted buildings provide residential amenity while not precluding future adaptive reuse		Not applicable.
<b>4S Mixed Use</b>		
<b>Objective 4S-1</b> Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement		Not applicable.
<b>Objective 4S-2</b> Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents		Not applicable.
<b>4T Awnings and Signage</b>		
<b>Objective 4T-1</b> Awnings are well located and complement and integrate with the building design		Complies. The main pedestrian entry awning provides both a positive address to the street, and a shelter from the elements. It links both street addresses with the lift lobby interior
<b>Objective 4T-2</b> Signage responds to the context and desired streetscape character		Unique location numbering will identify well with the building as a positive street address.
<b>4U Energy Efficiency</b>		
<b>Objective 4U-1</b> Development incorporates passive environmental design		Complies. The buildings have been designed with consideration to solar access for apartments and natural light and ventilation via breezeways into the corridors.
<b>Objective 4U-2</b> Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer		Complies. Where appropriate, sunshade screening utilized to respond to building orientation as well as their dual role in providing visual privacy. Deep balconies also provide shading relief while still allowing mid-Winter sun amenity.

Objective	Design Guidance / Criteria	Compliance / Comment
<b>Objective 4U-3</b> Adequate natural ventilation minimises the need for mechanical ventilation		Complies. Cross ventilation is achieved to 85.72% of apartments.
<b>4V Water Management and Conservation</b>		
<b>Objective 4V-1</b> Potable water use is minimised		Complies. Sustainable water usage appliances can be used for the development overall.
<b>Objective 4V-2</b> Urban stormwater is treated on site before being discharged to receiving waters		Complies. Refer to stormwater documentation.
<b>Objective 4V-3</b> Flood management systems are integrated into site design		Complies. Refer to stormwater documentation.
<b>4W Waste Management</b>		
<b>Objective 4W-1</b> Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents		Complies. All waste management and storage occurs in the basement area including scheduled council collections. Refer to Waste Management Report
<b>Objective 4W-2</b> Domestic waste is minimised by providing safe and convenient source separation and recycling		Complies. Chute waste disposal is provided for general and recycled waste management using a chute diverter. This enhances and promotes effective recycling for residents and makes the task easy and convenient. Refer to Waste Management Report
<b>4X Building Maintenance</b>		
<b>Objective 4X-1</b> Building design detail provides protection from weathering		Complies. Robust external facebrick, concrete and render materials combined with deep reveal glazing allow for maximum protection from the elements. Deep balconies also assist to protect against weathering.
<b>Objective 4X-2</b> Systems and access enable ease of maintenance		Complies. Most sliding doors are on a balcony it makes cleaning very accessible. All other glazing which is out of reach on the facade will be able to be maintained by abseiling cleaning crews over smaller areas.
<b>Objective 4X-3</b> Material selection reduces ongoing maintenance costs		Complies. The use of robust external cladding materials will minimise the

Objective	Design Guidance / Criteria	Compliance / Comment
		required maintenance for the life of the development. Other screen and balustrade materials will be chosen to allow a longer maintenance free lifespan whist keeping their original appearance.