

# 854 Hunter Street Newcastle

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Addendum - ADG Response

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08rd June 2022

BATESSMART™



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08th June 2022

Architecture  
Interior Design  
Urban Design  
Strategy



Design Statement  
SEPP 65 Design Verification

Project: 854 Hunter Street, Newcastle  
Purpose: Design Statement  
Reference: Development Application - 854 Hunter Street

We confirm that Simon Swaney of Bates Smart directed the design of the enclosed Development Application and that Mr. Swaney is registered as an architect in accordance with the Architects Act 2003.

We confirm that in our professional opinion the proposed design is capable of achieving the design principles set out in State Environmental Planning Policy 65 – Design Quality of Residential Flat Development and has been designed with regard to the Apartment Design Guide (ADG).

Principle 1: Context and neighbourhood character

The development of the former Store site continues the revitalisation of the Wickham precinct initiated by NSW government’s plan for a major transport infrastructure hub for Newcastle

The proposal consists of a collection of high-quality buildings and landscaped public spaces seamlessly knitted together by a network of active laneways and plazas.

The proposed mixed-use retail, commercial and residential buildings at 854 Hunter Street will include a generous communal roof garden over the carpark offering exceptional amenity for the residential occupants. On the ground plane the proposal’s architecture draws on the precinct’s heritage reintroducing a series of laneways and open areas to create connected vibrant spaces for public benefit.

/ The design of the podium draws on several important contextual and historic references from both the former The Store buildings on the site and other heritage buildings in Hunter Street. The aim has been to develop a scheme that is respectful of the site’s eclectic past that doesn’t mimic or copy the original architectural language but interprets this history in a contemporary manner.  
/ The tower design is comprised of elements that perform both functional and environmental purposes to improve the apartment amenities and the building performance.  
/ The development massing extends the existing city grid along Hunter Street and reinforces the block character.  
/ The site’s north-south axis is oriented 26 degrees west of north, ensuring the longer site frontage has good solar aspects. The site also affords good views in all directions with the primary view corridor being to the north-east across the harbour towards Stockton Beach, Nobby’s Head and Newcastle CBD to the east.

Principle 2: Built form and scale

/ The height of the built form establishes an important urban marker indicating the entry point to the site and the connection through to the public transport interchange

/ The height of the stepped forms when read along Hunter Street, ensure the perceived tallest massing is at the key site entry at Cooper Plaza  
/ The creation of a new publicly accessible Plaza at Cooper Street provides a legible entry point to the precinct from Hunter Street, clearly denoting the significance of the site and the connection to the public transport  
/ The building form is shaped and tapered in plan to increase building separation and highlight the vertical proportions of the towers  
/ A stepped form to the roof top levels manipulates the scale and enhances the amenity of the upper apartments with larger terrace-style balconies and sweeping views.  
/ The introduction of soft curved edges to the proposal links the geometry of the towers with the carpark structure  
/ The soft edges reduce the perceived bulk and scale of the two towers by reducing the length of the visible facades  
/ The corners of the podium are also curved to consolidate the whole composition and to link with carpark

Principle 3: Density

/ The site has excellent access to all-public transport modes. The existing heavy rail terminates at the Newcastle Interchange which serves the wider regional centres as well as Sydney and Brisbane.  
/The new light rail system connects directly to the CBD of Newcastle, nearby Newcastle Beach and Newcastle East. A future westerly extension of this line is planned subject to further details.  
/In addition to rail network, the site now has the new Newcastle Bus Interchange (NBI) which provides connection to major local and regional bus routes.  
/The resulting pedestrian movement through the site promotes activation of key frontages based on legible connections through the development.

Principle 4: Sustainability

Areas of solid, insulated walls have been incorporated in the east and west towers, significantly improving the envelope’s thermal performance.  
High-performance double-glazed units attribute to thermal and acoustic comfort levels.  
The development will aspire to use of low embodied carbon materials, recycled materials and the reduction of construction waste.

High performance mechanical systems are incorporated to minimise operational energy use, and extensive landscaped areas ensure ample vegetation.

Predominantly durable materials are proposed. The podium consists of brick and powder-coated aluminium. The tower has powder-coated aluminium facade horizontals and verticals and exposed concrete edges. The detailing of screens in front of glazing will be developed to ensure a long functional life which can withstand the corrosive environment.

Principle 5: Landscape

The proposed plaza at Cooper Street creates a public space with landscaped element and retail frontages for external seating to food & beverage outlets. The activation of the plaza edge will act as an attractor and facilitate gathering at the key entry point to the precinct.

The proposal includes a large, landscaped recreation space to the top of the existing above-grade carpark structure. This area is a dedicated communal open space for use by the residents and includes active and passive spaces. This could include a tennis court, pool and other recreation amenities such as a children’s play, community garden and bbq facilities. This facility is directly connected with each residential tower giving ease of access from the apartments over.

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The area is north facing and will capture abundant natural light and with oblique views of the harbour and surrounding areas will be an important facility for relaxation and recreation for residents.

At the topmost level on each building there is a landscaped communal terrace or viewing deck proposed. These spaces add to the extensive communal facilities on offer at the carpark roof.

**Principle 6: Amenity**

The lower levels of each tower contain a diverse mix of apartment types, with different orientation and view aspects. Apartments are designed around a central core to maximise external frontage ensuring excellent views from all apartments. The floorplates are angled to direct outlook away from each other for the internal facing apartments.

The typical low rise apartment level consists of 9 apartments per core in the west tower & 8 apartments per level in the east tower.

Each apartment complies with the intent of the ADG in relation to minimum room sizes, balcony sizes, daylight access and kitchen distance from daylight amongst other controls. Each apartment contains a laundry and storage is split between internal areas within the apartment and a storage facility in the basement.

Each building is served by 3x lifts while a scissor stair provides dual access fire egress. Each building's corridor has natural daylight with views.

**Principle 7: Safety**

The podium design maximises passive surveillance of the streets below, whilst secure access to within the development is clearly defined and fit for purpose.

For façade maintenance, it has been confirmed that external facade maintenance and cleaning can be completed with the use of Rope Access/Industrial Abseiling considering the right height safety system is installed. This will be with the use of Davit arms and anchorage points.

To access the building where it steps down, access to the apartment for maintenance is written into the by-laws.

**Principle 8: Housing diversity and social interaction**

The design achieves a mix of apartment sizes with 66 1-bedroom apartment, 178 2-bedroom apartments, 100 3-bedroom apartments and 8 4-bedroom apartments, with a wide range of different apartment types. Generous communal facilities provide ample opportunities for interaction and responds well to a future social mix.

**Principle 9: Aesthetics**

/ The proposal incorporates an architectural roof feature expressed on the top of the building as a lightweight frame  
/ The architectural roof feature creates an expressive extension of the building's facade to enhance the perceived scale to the building  
/The architectural roof feature will contain plant and lift overruns as well as a viewing deck and the required balustrade.  
/ The facade design consists of a projecting horizontal slab edges defining the floors of the building with a finer grain series of vertical fins that provide articulation, depth and texture.  
/ The projecting facade elements provide both horizontal and vertical sunshading  
/ A series of stepped terraces create a dynamic built-form and provides enhanced amenity to the apartments

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The facade design uses a repetitive module of vertical sunshades, and glazing size to create a pattern and texture to the building facades.  
The subtle change in colour between buildings creates individual identity for each building.  
The colours are derived from the prevalent tones in the podium masonry to visually unify the tower and podium.

The following design concepts have been established from references to previous Store buildings and other heritage buildings along Hunter Street.

**1. Materiality**

As evident along Hunter Street a number of existing buildings and those explored in the case studies, brick facade are predominantly used at ground and podium of the context. The proposal suggests utilising facebrick facade to achieve texture and depth. The material is consistent with the residential typology of the buildings and creates a suitable texture and scale to enrich the 'urban' character within the precinct. Whilst the composition is more contemporary the selection of brick material helps to integrate the established podium structures of the adjacent context and heritage buildings of Cambridge Hotel and Quest apartments (Brewery) opposite.

**2. Composition**

The proposal utilises a number of architectural elements consistent with those found in prominent heritage buildings in Newcastle and others of that era.

**a. Vertical expression**

- the proposed scheme expresses the vertical brickwork in repetitive columns to create consistent primary order. This is clearly evident in buildings such as Fred Ash and this approach establishes rhythm and modulation along Hunter Street.

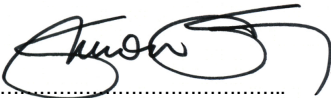
**b. Depth**

-the proposal introduces a secondary layer of solidity (spandrel) setback from primary vertical to create layering and depth of components nad materials.

**c. Arched fenestration**

-the proposal utilises a repetitive arched window that has a direct relationship with buildings along Hunter Street. The design intends to subtly re-interpret the previous buildings fenestration without mimicking or faking the building original architecture.

Simon Swaney Reg. No. 7305



Simon Swaney  
Director



ADDENDUM - ADG COMPLIANCE

ADG Ref.	Item Description	Notes	Compliance
PART3 SITING THE DEVELOPMENT			
3A SITE ANALYSIS			
3A-1 p47	<b>Objective:</b> Site Analysis illustrates that design decisions have been based on opportunities & constraints of the site conditions & their relationship to the surrounding context.		✓
	Design Guidance	Considered	
	Each element in the Site Analysis Checklist is addressed.	YES	
3B ORIENTATION			
3B-1 p49	<b>Objective:</b> Building types & layouts respond to the streetscape & site while optimising solar access within the development		✓
	Design Guidance	Considered	
	Buildings along the street frontage define the street by facing it & incorporating direct access from the street	YES	
	Where the street frontage is to the east or west, rear buildings are orientated to the north	YES	
	Where the street frontage is to the north or south, over-shadowing to the south is minimised & buildings behind the street frontage are orientated to the east & west	YES	
3B-2 p49	<b>Objective:</b> Overshadowing of neighbouring properties is minimised during mid winter.		✓
	Design Guidance	Considered	
	Living areas, private open space & communal open space receive solar access in accordance with section 3D Communal & Public Open Space and section 4A Solar & Daylight Access	YES	
	Solar access to living rooms, balconies & private open spaces of neighbours are considered	YES	
	Where an adjoining property does not currently receive the required hours of solar access, the proposed building ensures solar access to neighbouring properties is not reduced by more than 20%	YES	
	If the proposal will reduce the solar access of neighbours, building separation is increased beyond minimums contained in 3F Visual Privacy	YES	
	Overshadowing is minimised to the south or downhill by increased upper level setbacks	YES	
	Buildings are orientated at 90 deg to the boundary with neighbouring properties to minimise overshadowing & privacy impacts, particularly where minimum setbacks are used & where buildings are higher than the adjoining development	YES	
	A minimum of 4 hours of solar access is retained to solar collectors on neighbouring buildings	YES	
3C PUBLIC DOMAIN INTERFACE			
3C-1 p51	<b>Objective:</b> Transition between private & public domain is achieved without compromising safety & security.		✓
	Design Guidance	Considered	
	Terraces, balconies and courtyard apartments have direct street entry, where appropriate	NA	
	Changes in level between private terraces, front gardens & dwelling entries above the street level provide surveillance & improve visual privacy for ground level dwellings	NA	
	Upper level balconies & windows overlook the public domain	YES	
	Front fences & walls along street frontages use visually permeable materials & treatments. Height of solid fences or walls is limited to 1m	YES	
	Length of solid walls is limited along street frontages	YES	
	Opportunities for casual interaction between residents & the public domain is provided for. Design solutions may include seating at building entries, near letter boxes & in private courtyards adjacent to streets	YES	

ADG Ref.	Item Description	Notes	Compliance
	In developments with multiple buildings and/or entries, pedestrian entries & spaces associated with individual buildings/entries are differentiated to improve legibility for residents, using the following design solutions: <ul style="list-style-type: none"><li>Architectural detailing</li><li>Changes in materials</li><li>Plant Species</li><li>Colours</li><li>Opportunities for people to be concealed are minimised</li></ul>		YES
3C-2 p53	<b>Objective:</b> Amenity of the public domain is retained & enhanced.		✓
	Design Guidance	Considered	
	Planting is used to soften the edges of any raised terraces to the street, for example above sub-basement car parking	NA	
	Mail boxes are located in lobbies, perpendicular to the street alignment or integrated into front fences where individual street entries are provided	YES	
	The visual prominence of underground car park vents is minimised & located at a low level where possible	NA	
	Substations, pump rooms, garbage storage areas & other service requirements are located in basement car parks or out of view	Substations and garbage storage areas are located on ground floor but are suitably screened and accessed off the laneway.	YES
	Ramping for accessibility is minimised by building entry location & setting ground floor levels in relation to footpath levels		YES
	Durable, graffiti resistant & easily cleanable materials are used	Brick and masonry are used at ground level	YES
	Where development adjoins public parks, open space or bushland, the design positively addresses this interface & uses the following design solutions: <ul style="list-style-type: none"><li>Street access, pedestrian paths &amp; building entries are clearly defined</li><li>Paths, low fences &amp; planting are clearly delineate between communal/private open space &amp; the adjoining public open space</li><li>Minimal use of blank walls, fences &amp; ground level parking</li></ul>		YES
	On sloping sites protrusion of car parking above ground level is minimised by using split levels to step underground car parking		NA
COMMUNAL & PUBLIC OPEN SPACE			
3D-1 p55	<b>Objective:</b> An adequate area of communal open space is provided to enhance residential amenity & to provide opportunities for landscaping.		✓
	Design Criteria		
1	Communal open space has a minimum area equal to 25% of the site	4021m <sup>2</sup> of communal open space is provided on L4 and 223m <sup>2</sup> on L28, 114m <sup>2</sup> on L30	✓
2	Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid winter)	Complies	✓
	Design Guidance	Considered	
	Communal open space is consolidated into a well designed, easily identified & usable area	Refer to design report and landscape report for details	YES
	Communal open space have a minimum dimension of 3m. Larger developments should consider greater dimensions		YES
	Communal open space are co-located with deep soil areas		YES
	Direct, equitable access are provided to communal open space areas from common circulation areas, entries & lobbies		YES
	Where communal open space cannot be provided at ground level, it is provided on a podium or roof		YES

ADDENDUM - ADG COMPLIANCE

ADG Ref.	Item Description	Notes	Compliance
	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 need to: <ul style="list-style-type: none"><li>Provide communal spaces elsewhere such as a landscaped roof top terrace or a common room</li><li>Provide larger balconies or increased private open space for apartments</li><li>Demonstrate good proximity to public open space &amp; facilities and/or provide contributions to public open space</li></ul>	Communal open space requirement is achieved	NA
3D-2 p57	<b>Objective:</b> Communal open space is designed to allow for a range of activities, respond to site conditions & be attractive and inviting		✓
	<b>Design Guidance</b>		Considered
	Facilities are provided within communal open spaces & common spaces for a range of age groups (see 4F Common Circulation & Spaces), incorporating the following: <ul style="list-style-type: none"><li>Seating for individuals or groups</li><li>Barbeque areas</li><li>Play equipment or play areas</li><li>Swimming pools, gyms, tennis courts or common rooms</li></ul>	Refer design report and landscape report	YES
	Location of facilities responds to microclimate & site conditions with access to sun in winter, shade in summer & shelter from strong winds & down drafts		YES
	Visual impacts of services are minimised, including location of ventilation duct outlets from basement car parks, electrical substations & detention tanks		YES
3D-3 p57	<b>Objective:</b> Communal open space is designed to maximise safety.		✓
	<b>Design Guidance</b>		Considered
	Communal open space & public domain should be readily visible from habitable rooms & private open space areas while maintaining visual privacy. Design solutions include: <ul style="list-style-type: none"><li>Bay windows</li><li>Corner windows</li><li>Balconies</li></ul>	North facing apartments overlook the communal open space however as the communal open space is separately located from the towers there is no privacy issue.	YES
	Communal open space is well lit		YES
	Communal open space/facilities that are provided for children & young people are safe and contained		YES
3D-4 p59	<b>Objective:</b> Public open space, where provided, responds to the existing pattern & uses of the neighbourhood.		✓
	<b>Design Guidance</b>		Considered
	Public open space is well connected with public streets along at least one edge		YES
	POS is connected with nearby parks & other landscape elements		YES
	POS is linked through view lines, pedestrian desire paths, termination points & the wider street grid		YES
	Solar access is provided year round along with protection from strong winds	Refer design report	YES
	Opportunities for a range of recreational activities is provided for people of all ages	Refer design report	YES
	Positive street address & active street frontages are provided adjacent to POS		YES
	Boundaries are clearly defined between POS & private areas		YES
3E	<b>DEEP SOIL ZONES</b>		
3E-1 p61	<b>Objective:</b> Deep soil zones are suitable for healthy plant & tree growth, improve residential amenity and promote management of water and air quality.		✓
	<b>Design Criteria</b>		

ADG Ref.	Item Description	Notes	Compliance													
1	<p>Deep soil zones are to meet the following minimum requirements:</p> <table><tr><th>Site Area (sqm)</th><th>Minimum Dim. (m)</th><th>Deep Soil Zone (% of site area)</th></tr><tr><td>less than 650</td><td>-</td><td rowspan="3">7</td></tr><tr><td>650-1500</td><td>3</td></tr><tr><td>greater than 1500</td><td>6</td></tr><tr><td>greater than 1500 with significant existing tree cover</td><td>6</td><td></td></tr></table>	Site Area (sqm)	Minimum Dim. (m)	Deep Soil Zone (% of site area)	less than 650	-	7	650-1500	3	greater than 1500	6	greater than 1500 with significant existing tree cover	6		<p>Significant street tree planting is proposed, however due to the nature of the site as part of a transportation precinct, large areas of deep soil are not provided.</p> <p>Soil depth for planting on structures is allowed for in the communal open space.</p>	NO
Site Area (sqm)	Minimum Dim. (m)	Deep Soil Zone (% of site area)														
less than 650	-	7														
650-1500	3															
greater than 1500	6															
greater than 1500 with significant existing tree cover	6															
<b>Design Guidance</b>			<b>Considered</b>													
<p>On some sites it may be possible to provide larger deep soil zones, depending on the site area &amp; context:</p> <ul style="list-style-type: none"><li>10% of the site as deep soil on sites with an area of 650sqm - 1,500sqm</li><li>15% of the site as deep soil on sites greater than 1,500sqm</li></ul>		Refer landscape report														
<p>Deep soil zones are located to retain existing significant trees &amp; to allow for the development of healthy root systems, providing anchorage &amp; stability for mature trees. Design solutions may include:</p> <ul style="list-style-type: none"><li>Basement &amp; sub-basement car park design that is consolidated beneath building footprints</li><li>Use of increased front &amp; side setbacks</li><li>Adequate clearance around trees to ensure long term health</li><li>Co-location with other deep soil areas on adjacent sites to create larger contiguous areas of deep soil</li></ul>		Refer landscape report	YES													
<p>Achieving the design criteria may not be possible on some sites including where:</p> <ul style="list-style-type: none"><li>location &amp; 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)</li><li>there is 100% site coverage or non-residential uses at ground floor level</li></ul> <p>Where a proposal does not achieve deep soil requirements, acceptable stormwater management is achieved &amp; alternative forms of planting provided</p>			YES													
3F	<b>VISUAL PRIVACY</b>															
3F-1 p63	<b>Objective:</b> Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external & internal visual privacy.															
<b>Design Criteria</b>																
1	<p>Separation between windows &amp; balconies is provided to ensure visual privacy is achieved. Minimum required separation distances from buildings to the side &amp; rear boundaries are as follows:</p> <table><tr><th>Building Height (m)</th><th>Habitable Rooms &amp; Balconies. (m)</th><th>Non-Habitable Rooms (m)</th></tr><tr><td>up to 12 4 storeys)</td><td>6</td><td>3</td></tr><tr><td>up to 25 (5-8 storeys)</td><td>9</td><td>4.5</td></tr><tr><td>over 25 (9+ storeys)</td><td>12</td><td>6</td></tr></table> <p>Note: Separation distances between buildings on the same site should combine required building separations depending on the type of room.</p> <p>Gallery access circulation should be treated as habitable space when measuring privacy separation distances between neighbouring properties.</p>	Building Height (m)	Habitable Rooms & Balconies. (m)	Non-Habitable Rooms (m)	up to 12 4 storeys)	6	3	up to 25 (5-8 storeys)	9	4.5	over 25 (9+ storeys)	12	6	<p>The minimum separation between the upper volume of the east and west towers is 17.3m. The maximum separation between the towers is 31.9m. On average the separation complies with the control and maximises views and solar access for apartments. Apartments have been orientated to minimise overlooking.</p> <p>The minimum separation between the lower volume (garden apartments) is 16.1m and the maximum separation is 28.4m. On average the separation complies with the control. Planting and a setback glazing line have also been used to mitigate privacy concerns.</p>	Refer comments	
Building Height (m)	Habitable Rooms & Balconies. (m)	Non-Habitable Rooms (m)														
up to 12 4 storeys)	6	3														
up to 25 (5-8 storeys)	9	4.5														
over 25 (9+ storeys)	12	6														
<b>Design Guidance</b>			<b>Considered</b>													
<p>Generally as the height increases, one step in the built form is desirable due to building separations. Any additional steps do not to cause a 'ziggurat' appearance</p>		One step above 16m podium	YES													

ADDENDUM - ADG COMPLIANCE

ADG Ref.	Item Description	Notes	Compliance
	For residential buildings next to commercial buildings, separation distances are measured as follows:		
	· Retail, office spaces & commercial balconies use the habitable room distances		YES
	· Service & plant areas use the non-habitable room distances		
	New development are located & oriented to maximise visual privacy between buildings on site & for neighbouring buildings. Design solutions include:		
	· site layout & building are orientated to minimise privacy impacts (see 3B Orientation)		YES
	· on sloping sites, apartments on different levels have appropriate visual separation distances (see pg 63 figure 3F.4)		
	Apartment buildings have an increased separation distance of 3m (in addition to 3F-1 Design Criteria) when adjacent to a different zone that permits lower density residential development, to provide for a transition in scale & increased landscaping (pg 63 figure 3F.5)		NA
	Direct lines of sight are avoided for windows & balconies across corners		YES
	No separation is required between blank walls		NA
	<b>3F-2 p65 Objective:</b> Site & building design elements increase privacy without compromising access to light & air and balance outlook & views from habitable rooms & private open space.		✓
	<b>Design Guidance</b>		<b>Considered</b>
	Communal open space, common areas & access paths are separated from private open space & windows to apartments, particularly habitable room windows. Design solutions include:	Refer design report	
	· setbacks		
	· solid or partially solid balustrades on balconies at lower levels		
	· fencing and/or trees and vegetation to separate spaces		
	· screening devices		
	· bay windows or pop out windows to provide privacy in one direction & outlook in another		
	· raising apartments or private open space above the public domain or communal open space		
	· planter boxes incorporated into walls & 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 on windows and/or balconies		YES
	Bedrooms, living spaces & other habitable rooms are separated from gallery access & other open circulation space by the apartment's service areas		YES
	Balconies & private terraces are located in front of living rooms to increase internal privacy	Balconies are located on a case by case basis to respond to several factors including privacy, solar access, views and relationship to internal planning.	YES
	Windows are offset from the windows of adjacent buildings		YES
	Recessed balconies and/or vertical fins are used between adjacent balconies		YES
	<b>3G PEDESTRIAN ACCESS &amp; ENTRIES</b>		
	<b>3G-1 p67 Objective:</b> Building entries & pedestrian access connects to and addresses the public domain.		✓
	<b>Design Guidance</b>		<b>Considered</b>
	Multiple entries (including communal building entries & individual ground floor entries) activate the street edge		YES
	Entry locations relate to the street & subdivision pattern, and the existing pedestrian network		YES
	Building entries are clearly identifiable. Communal entries are clearly distinguishable from private entries		YES
	Where street frontage is limited, a primary street address should be provided with clear sight lines and pathways to secondary building entries		YES

ADG Ref.	Item Description	Notes	Compliance
<b>3G-2 p67</b>	<b>Objective:</b> Access, entries & pathways are accessible & easy to identify.		✓
	<b>Design Guidance</b>		<b>Considered</b>
	Building access areas including lift lobbies, stairwells & hallways are clearly visible from the public domain & communal spaces		YES
	The design of ground floors & underground car parks minimise level changes along pathways & entries		YES
	Steps & ramps are integrated into the overall building & landscape design		YES
	For large developments 'way finding' maps are provided to assist visitors & residents		YES
	For large developments electronic access & audio/video intercom are provided to manage access		YES
	<b>3G-3 p67 Objective:</b> Large sites provide pedestrian links for access to streets & connection to destinations.		✓
	<b>Design Guidance</b>		<b>Considered</b>
	Pedestrian links through sites facilitate direct connections to open space, main streets, centres & public transport		YES
<b>3H</b>	<b>3H-1 p69 Objective:</b> Vehicle access points are designed & located to achieve safety, minimise conflicts between pedestrians & vehicles and create high quality streetscapes.		✓
	<b>Design Guidance</b>		<b>Considered</b>
	Car park access is integrated with the building's overall facade. Design solutions include:		
	· materials & colour palette minimise visibility from street		
	· security doors/gates minimise voids in the facade		
	· where doors are not provided, visible interiors reflect facade design, and building services, pipes & ducts are concealed		YES
	Car park entries are located behind the building line		YES
	Vehicle entries are located at the lowest point of the site, minimising ramp lengths, excavation & impacts on the building form and layout		YES
	Car park entry & access are located on secondary streets or lanes where available		YES
	Vehicle standing areas that increase driveway width & encroach into setbacks are avoided		YES
	Access point is located to avoid headlight glare to habitable rooms		YES
	Adequate separation distances are provided between vehicle entries & street intersections		YES
	The width & number of vehicle access points are limited to the minimum		YES
	Visual impact of long driveways is minimised through changing alignments & screen planting		YES
	The need for large vehicles to enter or turn around within the site is avoided		YES
	Garbage collection, loading & servicing areas are screened		YES
	Clear sight lines are provided at pedestrian & vehicle crossings		YES
	Traffic calming devices, such as changes in paving material or textures, are used where appropriate		YES
	Pedestrian & vehicle access are separated & distinguishable. Design solutions include:		
	· Changes in surface materials		
	· Level changes		
	· Landscaping for separation		YES
<b>3J</b>	<b>BICYCLE &amp; CAR PARKING</b>		



ADDENDUM - ADG COMPLIANCE

ADG Ref.	Item Description	Notes	Compliance
3J-1 p71	<b>Objective:</b> Car parking is provided based on proximity to public transport in metropolitan Sydney & centres in regional areas.		
	<b>Design Criteria</b>		
	1 For development in the following locations:		
	<ul style="list-style-type: none"><li>on sites that are within 800m of a railway station or light rail stop in the Sydney Metropolitan Area; or</li><li>on land zoned, and sites within 400m of land zoned, B3 Commercial Core, B4 Mixed Use or equivalent in a nominated regional centre</li></ul>		
	the minimum car parking requirement for residents & 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.		
	<b>Design Guidance</b>		<b>Considered</b>
	Where a car share scheme operates locally, car share parking spaces are provided within the development.		NA
3J-2 p71	<b>Objective:</b> Parking & facilities are provided for other modes of transport.		
	<b>Design Guidance</b>		
	Conveniently located & sufficient numbers of parking spaces are provided for motorbikes & scooters		YES
	Secure undercover bicycle parking is provided & easily accessible from both public domain & common areas		YES
	Conveniently located charging stations are provided for electric vehicles, where desirable		NA
3J-3 p73	<b>Objective:</b> Car park design & access is safe and secure.		
	<b>Design Guidance</b>		
	Supporting facilities within car parks, including garbage, plant & switch rooms, storage areas & car wash bays can be accessed without crossing car parking spaces		YES
	Direct, clearly visible & well lit access is provided into common circulation areas		YES
	Clearly defined & visible lobby or waiting area is provided to lifts & stairs		YES
3J-4 p73	<b>Objective:</b> Visual & environmental impacts of underground car parking are minimised.		
	<b>Design Guidance</b>		
	Excavation minimised through efficient car park layouts & ramp design		YES
	Car parking layout is well organised, using a logical, efficient structural grid & double loaded aisles		YES
	Protrusion of car parks do not exceed 1m above ground level. Solution include stepping car park levels or using split levels on sloping sites		NA
3J-5 p75	<b>Objective:</b> Visual & environmental impacts of on-grade car parking are minimised.		
	<b>Design Guidance</b>		
	On-grade car parking is avoided	A DA approved on grade carpark services the development	NA

ADG Ref.	Item Description	Notes	Compliance
	Where on-grade car parking is unavoidable, the following design solutions are used:		
	<ul style="list-style-type: none"><li>Parking is located on the side or rear of the lot away from the primary street frontage</li><li>Cars are screened from view of streets, buildings, communal &amp; private open space areas</li><li>Safe &amp; direct access to building entry points is provided</li><li>Parking is incorporated into the landscape design, by extending planting &amp; materials into the car park space</li><li>Stormwater run-off is managed appropriately from car parking surfaces</li><li>Bio-swales, rain gardens or on site detention tanks are provided, where appropriate</li><li>Light coloured paving materials or permeable paving systems are used. Shade trees are planted between every 4-5 parking spaces to reduce increased surface temperatures to large areas of paving</li></ul>		YES
3J-6 p75	<b>Objective:</b> Visual & environmental impacts of above ground enclosed car parking are minimised.		
	<b>Design Guidance</b>		
	Exposed parking is not located along primary street frontages		YES
	Screening, landscaping & other design elements including public art are used to integrate the above ground car parking with the facade. Design solutions include:		
	<ul style="list-style-type: none"><li>Car parking that is concealed behind facade, with windows integrated into the overall facade design (limited to developments where larger floor plate podium is suitable at lower levels)</li><li>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</li></ul>		YES
	Positive street address & active frontages are provided at ground level		YES
PART4 DESIGNING THE BUILDING			
4A SOLAR & DAYLIGHT ACCESS			
4A-1 p79	<b>Objective:</b> To optimise number of apartments receiving sunlight to habitable rooms, primary windows & private open space.		
	<b>Design Criteria</b>		
	1	Living rooms & private open spaces of at least 70% of apartments in a building receive a minimum of 2 hrs direct sunlight between 9am - 3pm at mid winter in Sydney Metropolitan Area and in Newcastle and Wollongong local government areas	71% of apartments receive 2 hours of direct sunlight to their living rooms. In order to provide better amenity the balconies have been located off the corners of the building where they can be protected from the high wind conditions present in the locality. As a result 59% of apartments receive 2 hours of direct sunlight to their living rooms and private open spaces.
	2	In all other areas, living rooms & private open spaces of at least 70% of apartments in a building receive a minimum of 3 hrs direct sunlight between 9 am - 3 pm at mid winter	NA
	3	A maximum of 15% of apartments in a building receive no direct sunlight between 9 am - 3 pm at mid winter	12% of apartments receive no direct sunlight
	<b>Design Guidance</b>		
	The design maximises north aspect. The number of single aspect south facing apartments is minimised		
	Single aspect, single storey apartments have a northerly or easterly aspect	6 out of 17 apartments on a typical floor have a single aspect. One of these faces South and one faces West.	YES
	Living areas are located to the north and service areas to the south & west of apartments		

ADDENDUM - ADG COMPLIANCE

ADG Ref.	Item Description	Notes	Compliance
	To optimise direct sunlight to habitable rooms & balconies a number of the following design features are used: <ul style="list-style-type: none"><li>Dual aspect apartments</li><li>Shallow apartment layouts</li><li>Two storey &amp; mezzanine level apartments</li><li>Bay windows</li></ul>	Dual aspect apartments provided to corners.	YES
	To maximise the benefit to residents of direct sunlight within living rooms & private open spaces, a minimum of 1sqm of direct sunlight, measured at 1m above floor level, is achieved for at least 15 minutes		YES
	Achieving the design criteria may not be possible where: <ul style="list-style-type: none"><li>greater residential amenity can be achieved along a busy road or rail line by orientating the living rooms away from the noise source</li><li>on south facing sloping sites</li><li>significant views are oriented away from the desired aspect for direct sunlight</li></ul> Design drawings need to demonstrate how site constraints & orientation preclude meeting Design Criteria & how the development meets the objective.		NA
4A-2 p81	<b>Objective:</b> Daylight access is maximised where sunlight is limited.		✓
	<b>Design Guidance</b>		Considered
	Courtyards, skylights & high level windows (with sills of 1,500mm or greater) are used only as a secondary light source in habitable rooms		NA
	Where courtyards are used: <ul style="list-style-type: none"><li>Use is restricted to kitchens, bathrooms &amp; service areas</li><li>Building services are concealed with appropriate detailing &amp; materials to visible walls</li><li>Courtyards are fully open to the sky</li><li>Access is provided to the light well from communal area for cleaning &amp; maintenance</li><li>Acoustic privacy, fire safety &amp; minimum privacy separation distances (see 3F Visual Privacy) are achieved</li></ul>		NA
	Opportunities for reflected light into apartments are optimised through: <ul style="list-style-type: none"><li>Reflective exterior surfaces on buildings opposite south facing windows</li><li>Positioning windows to face other buildings or surfaces (on neighbouring sites or within site) that will reflect light</li><li>Integrating light shelves into the design</li><li>Light coloured internal finishes</li></ul>		NA
4A-3 p81	<b>Objective:</b> Design incorporates shading & glare control, particularly for warmer months.		✓
	<b>Design Guidance</b>		Considered
	A number of the following design features are used: <ul style="list-style-type: none"><li>Balconies or sun shading that extend far enough to shade summer sun, but allow winter sun to penetrate living areas</li><li>Shading devices such as eaves, awnings, balconies, pergolas, external louvres &amp; planting</li><li>Horizontal shading to north facing windows</li><li>Vertical shading to east &amp; particularly west facing windows</li><li>Operable shading to allow adjustment &amp; choice</li><li>High performance glass that minimises external glare off windows, with consideration given to reduce tint glass or glass with a reflectance level below 20% (reflective films are avoided)</li></ul>	Refer design report for details.	YES
4B	<b>NATURAL VENTILATION</b>		
4B-1 p83	<b>Objective:</b> All habitable rooms are naturally ventilated.		✓
	<b>Design Guidance</b>		Considered
	The building's orientation maximises capture & use of prevailing breezes for natural ventilation in habitable rooms		YES
	Depths of habitable rooms support natural ventilation		YES

ADG Ref.	Item Description	Notes	Compliance
	The area of unobstructed window openings should be equal to at least 5% of the floor area served		YES
	Light wells are not the primary air source for habitable rooms		NA
	Doors & openable windows maximise natural ventilation opportunities by using the following design solutions: <ul style="list-style-type: none"><li>Adjustable windows with large effective openable areas</li><li>Variety of window types that provide safety &amp; flexibility such as awnings &amp; louvres</li><li>Windows that occupants can reconfigure to funnel breezes into apartment, such as vertical louvres, casement windows &amp; externally opening doors</li></ul>	Operable windows are provided to all habitable rooms.	YES
4B-2 p83	<b>Objective:</b> The layout & design of single aspect apartments maximises natural ventilation.		✓
	<b>Design Guidance</b>		Considered
	Apartment depths limited to maximise ventilation & airflow		YES
	Natural ventilation to single aspect apartments is achieved with the following design solutions: <ul style="list-style-type: none"><li>Primary windows are augmented with plenums and light wells (generally not suitable for cross ventilation)</li><li>Stack effect ventilation, solar chimneys or similar used to naturally ventilate internal building areas or rooms such as bathrooms &amp; laundries</li><li>Courtyards or building indentations have a width to depth ratio of 2:1 or 3:1 to ensure effective air circulation &amp; avoid trapped smells</li></ul>		YES
4B-3 p85	<b>Objective:</b> Number of apartments with natural cross vent is maximised to create comfortable indoor environments for residents.		
	<b>Design Criteria</b>		
	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	50% of apartments are cross ventilated in the first nine storeys of the building.	
	2 Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line	NA	✓
	<b>Design Guidance</b>		Considered
	The building includes dual aspect apartments, cross through apartments & corner apartments, and limited apartment depths	The building features a large number of dual aspect corner apartments.	YES
	In cross-through apartments, external window & door opening sizes/ areas on one side of an apartment (inlet side) are approximately equal to the external window & door opening sizes/areas on the other side of the apartment (outlet side)		NA
	Apartments are designed to minimise the number of corners, doors & rooms that might obstruct airflow		YES
	Apartment depths, combined with appropriate ceiling heights, maximise cross ventilation & airflow		YES
4C	<b>CEILING HEIGHTS</b>		
4C-1 p87	<b>Objective:</b> Ceiling height achieves sufficient natural ventilation & daylight access.		✓
	<b>Design Criteria</b>		



ADDENDUM - ADG COMPLIANCE

ADG Ref.	Item Description	Notes	Compliance	
1	Measured from finished floor level to finished ceiling level, minimum ceiling heights are:		✓	
	Minimum Ceiling Height for apt and mixed-used buildings (m)			
	Habitable rooms	2.7		
	Non-habitable rooms	2.4		
	For 2 storey apts	2.7 for main living area floor 2.4 for second floor, where its area does not exceed 50% of the apt area		
	Attic spaces	1.8 at edge of room with 30deg minimum ceiling slope		
	If located in mixed-used areas	3.3 for ground and first floor to promote future flexibility of use		
	These minimums do not preclude higher ceilings if desired			
	Design Guidance			Considered
	Ceiling height accommodates use of ceiling fans for cooling & heat distribution	Capable of complying		YES
4C-2 p87	Objective: Ceiling height increases the sense of space in apartments & provides for well proportioned rooms.		✓	
Design Guidance			Considered	
A number of the following design solutions are used:				
· Hierarchy of rooms in apartment is defined using changes in ceiling heights & alternatives such as raked or curved ceilings, or double height spaces			YES	
· Well proportioned rooms are provided, for example, smaller rooms feel larger & 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 & coordination of bulkhead location above non-habitable areas, such as robes or storage, can assist				
4C-3 p87	Objective: Ceiling heights contribute to the flexibility of building use over the life of the building.		✓	
Design Guidance			Considered	
Ceiling heights of lower level apartments should be greater than the minimum required by Design Criteria allowing flexibility & conversion to non-residential uses		4 floor podium allows for commercial and retail use	YES	
4D APARTMENT SIZE & LAYOUT				
4D-1 p89	Objective: The layout of rooms within apartment is functional, well organised & provides a high standard of amenity.		✓	
Design Criteria				
1	Apartments have the following minimum internal areas:		✓	
Apartment Type		Minimum Internal Area (sqm)		
Studio		35		
1 Bedroom		50		
2 Bedroom		70		
3 Bedroom		90		
The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5sqm each.				
A fourth bedroom & further additional bedrooms increase the minimum internal area by 12sqm each				
2	Every habitable room has 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 & air is not borrowed from other rooms			✓
Design Guidance				Considered

ADG Ref.	Item Description	Notes	Compliance
	Kitchen is not located as part of the main circulation space in larger apartments (such as hallway or entry space)		YES
	A window is visible from any point in a habitable room	Some open plan media spaces may not have a direct line of site to a window, however the apartments are considered suitably proportioned to provide sufficient light and ventilation.	YES
	Where minimum areas or room dimensions are not met, apartments demonstrate that they are well designed and demonstrate the usability & functionality of the space with realistically scaled furniture layouts & circulation areas.		YES
4D-2 p89	<b>Objective:</b> Environmental performance of the apartment is maximised.		✓
	<b>Design Criteria</b>		
1	Habitable room depths are limited to a maximum of 2.5 x the ceiling height		✓
2	In open plan layouts (living, dining & kitchen are combined) maximum habitable room depth is 8m from a window	In some larger apartments the distance is slightly more than 8m	✓
	<b>Design Guidance</b>		Considered
	Greater than minimum ceiling heights allow for proportional increases in room depth up to the permitted max depths		NA
	All living areas & bedrooms are located on the external face of building		YES
	Where possible: <ul style="list-style-type: none"><li>· bathrooms &amp; laundries have external openable window</li><li>· main living spaces are oriented toward the primary outlook &amp; aspect and away from noise sources</li></ul>		YES
4D-3 p91	<b>Objective:</b> Apartment layouts are designed to accommodate a variety of household activities & needs.		✓
	<b>Design Criteria</b>		
1	Master bedrooms have a minimum area of 10sqm & other bedrooms 9sqm (excluding wardrobe space)	Master bedrooms have a minimum area of 10sqm in 2 and 3 bedroom apartments.	✓
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"><li>· 3.6m for studio &amp; 1 bedroom apartments</li><li>· 4m for 2 &amp; 3 bedroom apartments</li></ul>		✓
4	The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts		NA
	<b>Design Guidance</b>		Considered
	Access to bedrooms, bathrooms & laundries is separated from living areas minimising direct openings between living & service areas	Bathrooms and laundries are separated from main living areas. Some bedrooms are located off the living room but the location of doors has been carefully considered to maintain privacy.	YES
	All bedrooms allow a minimum length of 1.5m for robes		YES
	Main bedroom of apartment or studio apartment is provided with a wardrobe of minimum 1.8m L x 0.6m D x 2.1m H		YES
	Apartment layouts allow flexibility over time, design solutions include: <ul style="list-style-type: none"><li>· Dimensions that facilitate a variety of furniture arrangements &amp; removal</li><li>· Spaces for a range of activities &amp; privacy levels between different spaces within the apartment</li><li>· Dual master apartments</li><li>· Dual key apartments</li></ul> Note: dual key apartments which are separate but on the same title are regarded as two sole occupancy units for the purposes of the BCA & for calculating mix of apartments		YES
	<ul style="list-style-type: none"><li>· Room sizes &amp; proportions or open plans (rectangular spaces 2:3 are more easily furnished than square spaces 1:1)</li></ul>		
	<ul style="list-style-type: none"><li>· Efficient planning of circulation by stairs, corridors &amp; through rooms to maximise the amount of usable floor space in rooms</li></ul>		

ADDENDUM - ADG COMPLIANCE

ADG Ref.	Item Description	Notes	Compliance															
4E	PRIVATE OPEN SPACE & BALCONIES																	
4E-1 p93	<b>Objective:</b> Apartments provide appropriately sized private open space & balconies to enhance residential amenity.		✓															
1	<b>Design Criteria</b>																	
	All apartments are required to have primary balconies as follows:																	
	<table><thead><tr><th>Apartment Type</th><th>Minimum Area (sqm)</th><th>Minimum Depth (m)</th></tr></thead><tbody><tr><td>Studio</td><td>4</td><td>-</td></tr><tr><td>1 Bedroom</td><td>8</td><td>2</td></tr><tr><td>2 Bedroom</td><td>10</td><td>2</td></tr><tr><td>3+ Bedroom</td><td>12</td><td>2.4</td></tr></tbody></table>			Apartment Type	Minimum Area (sqm)	Minimum Depth (m)	Studio	4	-	1 Bedroom	8	2	2 Bedroom	10	2	3+ Bedroom	12	2.4
	Apartment Type	Minimum Area (sqm)	Minimum Depth (m)															
	Studio	4	-															
	1 Bedroom	8	2															
	2 Bedroom	10	2															
	3+ Bedroom	12	2.4															
	The minimum balcony depth to be counted as contributing to the balcony area is 1m																	
	For apartments at ground level or on podium or similar, a private open space is provided instead of a balcony. It must have minimum area of 15sqm & minimum depth of 3m																	
✓																		
<b>Design Guidance</b>																		
Increased communal open space are 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 where:																		
<ul style="list-style-type: none"><li>consistently high wind speeds at 10 storeys &amp; above</li><li>close proximity to road, rail or other noise sources</li><li>exposure to significant levels of aircraft noise</li><li>heritage &amp; adaptive reuse of existing buildings</li></ul>																		
In these situations,																		
<ul style="list-style-type: none"><li>juliet balconies,</li><li>operable walls,</li><li>enclosed wintergardens</li><li>bay windows</li></ul>																		
are appropriate. Other amenity benefits for occupants are provided in the apartments or in the development or both. Natural ventilation is also demonstrated																		
4E-2 p93	<b>Objective:</b> Primary private open space & balconies are appropriately located to enhance liveability for residents		✓															
4E-2 p93	<b>Design Guidance</b>																	
	Primary open space & balconies are located adjacent to the living room, dining room or kitchen to extend the living space																	
	POS & balconies predominantly face north, east or west																	
	POS & balconies are orientated with the longer side facing outwards or be open to the sky to optimise daylight access into adjacent rooms																	
	Balconies are orientated on a case by case basis to respond to several factors including privacy, solar access, views and relationship to internal planning. Where possible balconies have been orientated with the longer side facing outwards.																	
	YES																	
4E-3 p95	<b>Objective:</b> Private open space & balcony design is integrated into & contributes to the overall architectural form & detail of the building		✓															
4E-3 p95	<b>Design Guidance</b>																	
	Solid, partially solid or transparent fences & balustrades are selected to respond to the location. They are designed to allow views & passive surveillance of the street while maintaining visual privacy & allowing for a range of uses on the balcony. Solid & partially solid balustrades are preferred																	
	Full width full height glass balustrades alone are generally not desirable																	
	Projecting balconies are integrated into the building design. The design of soffits are considered																	
	Refer design report for details																	

ADG Ref.	Item Description	Notes	Compliance
	Operable screens, shutters, hoods & pergolas are used to control sunlight & wind	Refer design report for details	YES
	Balustrades are set back from the building or balcony edge where overlooking or where safety is an issue		YES
	Downpipes & balcony drainage are integrated with the overall facade & building design		YES
	Air-conditioning units are located on roofs, in basements, or fully integrated into the building design	AC is located in a central plant on the roof.	YES
	Where clothes drying, storage or air conditioning units are located on balconies, they are screened & integrated in the building design		NA
	Ceilings of apartments below terraces are insulated to avoid heat loss		YES
	Water & gas outlets are provided for primary balconies & private open space		YES
4E-4 p95	<b>Objective:</b> Private open space & balcony design maximises safety		✓
	<b>Design Guidance</b>		<b>Considered</b>
	Changes in ground levels or landscaping are minimised		YES
	Balcony design & detailing avoids opportunities for climbing & falling		YES
4F	<b>COMMON CIRCULATION &amp; SPACES</b>		
4F-1 p97	<b>Objective:</b> Common circulation spaces achieve good amenity & properly service the number of apartments		✓
	<b>Design Criteria</b>		
1	The maximum number of apartments off a circulation core on a single level is eight	Some levels have 9 apartments off a core. This has been mitigated by providing corridor widths in excess of the minimum requirement and providing natural light and views from the common circulation spaces.	MOSTLY COMPLIES
2	For buildings of 10 storeys & over, the maximum number of apartments sharing a single lift is 40	High speed lifts are proposed to eliminate overly long wait times for lift service.	
	<b>Design Guidance</b>		<b>Considered</b>
	Greater than minimum requirements for corridor widths and/or ceiling heights allow comfortable movement & access particularly in entry lobbies, outside lifts & at apartment entry doors	1.8m wide corridors provided to typical apartment floors and 2.0m width to lift lobbies.	YES
	Daylight & natural ventilation are provided to all common circulation spaces that are above ground	Provided to all typical apartment floors	YES
	Windows are provided in common circulation spaces & are adjacent to the stair or lift core or at the ends of corridors	Provided to all typical apartment floors	YES
	Longer corridors greater than 12m in length from the lift core are articulated. Design solutions include: <ul style="list-style-type: none"><li>Series of foyer areas with windows &amp; spaces for seating</li><li>Wider areas at apartment entry doors &amp; varied ceiling heights</li></ul>		YES
	Common circulation spaces maximise opportunities for dual aspect apartments, including multiple core apartment buildings & cross over apartments		NA
	Achieving Design Criteria for the number of apartments off a circulation core may not be possible. Where development is unable to achieve this, a high level of amenity for common lobbies, corridors & apartments is demonstrated, including: <ul style="list-style-type: none"><li>Sunlight &amp; natural cross ventilation in apartments</li><li>Access to ample daylight &amp; natural ventilation in common circulation spaces</li><li>Common areas for seating &amp; gathering</li><li>Generous corridors with greater than minimum ceiling heights</li><li>Other innovative design solutions that provide high levels of amenity</li></ul>		YES
	Where Design Criteria 1 is not achieved, no more than 12 apartments should be provided off a circulation core on a single level	Maximum of 9 apartments per core.	YES
	Primary living room or bedroom windows do not open directly onto common circulation spaces, open or enclosed. Visual & acoustic privacy from common circulation spaces to any other rooms are carefully controlled		YES

ADDENDUM - ADG COMPLIANCE

ADG Ref.	Item Description	Notes	Compliance										
4F-2 p99	<b>Objective:</b> Common circulation spaces promote safety & provide for social interaction between residents		✓										
	<b>Design Guidance</b>		Considered										
	Direct & legible access are provided between vertical circulation points & apartment entries by minimising corridor or gallery length to give short, straight, clear sight lines		YES										
	Tight corners & spaces are avoided		YES										
	Circulation spaces are well lit at night		YES										
	Legible signage are provided for apartment numbers, common areas & general wayfinding		YES										
	Incidental spaces, eg space for seating in a corridor, at a stair landing, or near a window are provided		YES										
	In larger developments, community rooms for activities such as owners corporation meetings or resident use, are provided & are co-located with communal open space		YES										
	Where external galleries are provided, they are more open than closed above the balustrade along their length		NA										
4G	<b>STORAGE</b>												
4G-1 p101	<b>Objective:</b> Adequate, well designed storage is provided in each apartment		✓										
	<b>Design Criteria</b>												
	1	In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided:											
	<table><tr><th>Apartment Type</th><th>Storage Size Volume (cubic m)</th></tr><tr><td>Studio</td><td>4</td></tr><tr><td>1 Bedroom</td><td>6</td></tr><tr><td>2 Bedroom</td><td>8</td></tr><tr><td>3+ Bedroom</td><td>10</td></tr></table>		Apartment Type	Storage Size Volume (cubic m)	Studio	4	1 Bedroom	6	2 Bedroom	8	3+ Bedroom	10	✓
	Apartment Type	Storage Size Volume (cubic m)											
	Studio	4											
	1 Bedroom	6											
	2 Bedroom	8											
	3+ Bedroom	10											
At least 50% of the required storage is to be located within the apartment													
<b>Design Guidance</b>		Considered											
Storage is accessible from either circulation or living areas		YES											
Storage provided on balconies (in addition to the minimum balcony size) is integrated into the balcony design, weather proofed & screened from view from the street		NA											
Left over space such as under stairs is used for storage		YES											
4G-2 p101	<b>Objective:</b> Additional storage is conveniently located, accessible & nominated for individual apartments		✓										
	<b>Design Guidance</b>		Considered										
	Storage not located in apartments is secure and clearly allocated to specific apartments		YES										
	Storage is provided for larger & less frequently accessed items		YES										
	Storage space in internal or basement car parks is provided at the rear or side of car spaces or in cages, such that allocated car parking remains accessible		YES										
	If communal storage rooms are provided they are accessible from common circulation areas of the building		YES										
	Storage not located in apartment is integrated into the overall building design & not visible from public domain		YES										
4H	<b>ACOUSTIC PRIVACY</b>												
4H-1 p103	<b>Objective:</b> Noise transfer is minimised through the siting of buildings & building layout		✓										
	<b>Design Guidance</b>		Considered										
	Adequate building separation is provided within the development & from neighbouring buildings/adjacent uses (see 2F Building Separation & 3F Visual Privacy)	Refer acoustic report for details.	YES										

ADG Ref.	Item Description	Notes	Compliance
	Window & door openings are orientated away from noise sources	Window and door openings have been positioned on a case by case basis to respond to views, ventilation and apartment amenity, where possible windows have been positioned away from noise sources. Refer separate acoustic report for details.	YES
	Noisy areas within buildings including building entries & corridors are located next to or above each other while quieter areas are located next to or above quieter areas		YES
	Storage, circulation areas & non-habitable rooms are located to buffer noise from external sources		YES
	The number of party walls (shared with other apartments) are limited & are appropriately insulated		YES
	Noise sources such as garage doors, driveways, service areas, plant rooms, building services, mechanical equipment, active communal open spaces & circulation areas should be located at least 3m away from bedrooms		YES
4H-2 p103	<b>Objective:</b> Noise impacts are mitigated within apartments through layout & acoustic treatments		✓
	<b>Design Guidance</b>		Considered
	Internal apartment layout separates noisy spaces from quiet spaces, using a number of the following design solutions: <ul style="list-style-type: none"><li>Rooms with similar noise requirements are grouped together</li><li>Doors separate different use zones</li><li>Wardrobes in bedrooms are co-located to act as sound buffers</li></ul>		YES
	Where physical separation cannot be achieved, noise conflicts are resolved using the following design solutions: <ul style="list-style-type: none"><li>Double or acoustic glazing</li><li>Acoustic seals</li><li>Use of materials with low noise penetration properties</li><li>Continuous walls to ground level courtyards where they do not conflict with streetscape or other amenity requirements</li></ul>	Refer acoustic report for details.	YES
4J	<b>NOISE &amp; POLLUTION</b>		
4J-1 p105	<b>Objective:</b> In noisy or hostile environments impacts of external noise & pollution are minimised through careful siting & layout		✓
	<b>Design Guidance</b>		Considered
	To minimise impacts the following design solutions are used: <ul style="list-style-type: none"><li>Physical separation between buildings &amp; the noise or pollution source</li><li>Residential uses are located perpendicular to the noise source &amp; where possible buffered by other uses</li><li>Non-residential buildings are sited to be parallel with the noise source to provide a continuous building that shields residential uses &amp; communal open spaces</li><li>Non-residential uses are located at lower levels vertically separating residential component from noise or pollution source. Setbacks to the underside of residential floor levels are increased, relative to traffic volumes &amp; other noise sources</li><li>Buildings respond to both solar access &amp; noise. Where solar access is away from noise source, non-habitable rooms will provide a buffer</li><li>Where solar access is in the same direction as the noise source, dual aspect apartments with shallow building depths are preferred</li><li>Landscape design reduces the perception of noise &amp; acts as a filter for air pollution generated by traffic &amp; industry</li></ul>	Refer acoustic report for details	YES
	Where developments are unable to achieve Design Criteria, alternatives are considered in the following areas: <ul style="list-style-type: none"><li>Solar &amp; daylight access</li><li>Private open space &amp; balconies</li><li>Natural cross ventilation</li></ul>		
4J-2 p105	<b>Objective:</b> Appropriate noise shielding or attenuation techniques for building design, construction & choice of materials are used to mitigate noise transmission		✓



ADDENDUM - ADG COMPLIANCE

ADG Ref.	Item Description	Notes	Compliance
	<b>Design Guidance</b>		<b>Considered</b>
	Design solutions to mitigate noise include: <ul style="list-style-type: none"><li>Limiting the number &amp; size of openings facing noise sources</li><li>Providing seals to prevent noise transfer through gaps</li><li>Using double or acoustic glazing, acoustic louvres or enclosed balconies (wintergardens)</li><li>Using materials with mass and/or sound insulation or absorption properties eg solid balcony balustrades, external screens &amp; soffits</li></ul>	Refer acoustic report for details.	YES
<b>4K</b>	<b>APARTMENT MIX</b>		
<b>4K-1</b> p107	<b>Objective:</b> A range of apartment types & sizes is provided to cater for different household types now & into the future		✓
	<b>Design Guidance</b>		<b>Considered</b>
	A variety of apartment types is provided		YES
	The apartment mix is appropriate, taking into consideration: <ul style="list-style-type: none"><li>Distance to public transport, employment &amp; education centres</li><li>Current market demands &amp; projected future demographic trends</li><li>Demand for social &amp; affordable housing</li><li>Different cultural &amp; socioeconomic groups</li></ul>		YES
	Flexible apartment configurations are provided to support diverse household types & stages of life including single person households, families, multi-generational families & group households		YES
<b>4K-2</b> p107	<b>Objective:</b> The apartment mix is distributed to suitable locations within the building		✓
	<b>Design Guidance</b>		<b>Considered</b>
	Different apartment types are located to achieve successful facade composition & to optimise solar access		YES
	Larger apartment types are located on ground or roof level where there is potential for more open space, and on corners where more building frontage is available		YES
<b>4L</b>	<b>GROUND FLOOR APARTMENTS</b>	not applicable	
<b>4M</b>	<b>FACADES</b>		
<b>4M-1</b> p111	<b>Objective:</b> Building facades provide visual interest along the street while respecting the character of the local area		✓
	<b>Design Guidance</b>		<b>Considered</b>
	Design solutions for front building facades include: <ul style="list-style-type: none"><li>Composition of varied building elements</li><li>Defined base, middle &amp; top of buildings</li><li>Revealing &amp; concealing certain elements</li></ul>	Refer design report	YES
	Building services are integrated within the overall facade		YES
	Building facades are well resolved with appropriate scale & proportion to streetscape & with consideration of human scale. Solutions include: <ul style="list-style-type: none"><li>Well composed horizontal &amp; vertical elements</li><li>Variation in floor heights to enhance the human scale</li><li>Elements that are proportional &amp; arranged in patterns</li><li>Public artwork or treatments to exterior blank walls</li><li>Grouping of floors or elements such as balconies &amp; windows on taller buildings</li></ul>	Refer design report	YES
	Building facades relate to key datum lines of adjacent buildings through upper level setbacks, parapets, cornices, awnings or colonnade heights	Refer design report	YES
	Shadow is created on the facade throughout the day with building articulation, balconies & deeper window reveals	Refer design report	YES
<b>4M-2</b> p111	<b>Objective:</b> Building functions are expressed by the facade		✓
	<b>Design Guidance</b>		<b>Considered</b>
	Building entries are clearly defined		YES

ADG Ref.	Item Description	Notes	Compliance
	Important corners are given visual prominence through change in articulation, materials or colour, roof expression or changes in height		YES
	Apartment layout is expressed externally through facade features such as party walls & floor slabs		YES
<b>4N</b>	<b>ROOF DESIGN</b>		
<b>4N-1</b> p113	<b>Objective:</b> Roof treatments are integrated into the building design & positively respond to the street		✓
	<b>Design Guidance</b>		<b>Considered</b>
	Roof design relates to the street. Design solutions include: <ul style="list-style-type: none"><li>Special roof features &amp; 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 pitched form complementary to adjacent buildings</li></ul>	Refer design report	YES
	Roof treatments are integrated with the building design. Design solutions include: <ul style="list-style-type: none"><li>Roof design is in proportion to the overall building size, scale &amp; form</li><li>Roof materials compliment the building</li><li>Service elements are integrated</li></ul>	Refer design report	YES
<b>4N-2</b> p113	<b>Objective:</b> Opportunities to use roof space for residential accommodation & open space are maximised		✓
	<b>Design Guidance</b>		<b>Considered</b>
	Habitable roof space are provided with good levels of amenity. Design solutions include: <ul style="list-style-type: none"><li>Penthouse apartments</li><li>Dormer or clerestory windows</li><li>Openable skylights</li></ul>		NA
	Open space is provided on roof tops subject to acceptable visual & acoustic privacy, comfort levels, safety & security considerations		YES
<b>4N-3</b> p113	<b>Objective:</b> Roof design incorporates sustainability features		✓
	<b>Design Guidance</b>		<b>Considered</b>
	Roof design maximises solar access to apartments during winter & provides shade during summer. Design solutions include: <ul style="list-style-type: none"><li>Roof lifts to the north</li><li>Eaves &amp; overhangs shade walls &amp; windows from summer sun</li></ul>		YES
	Skylights & ventilation systems are integrated into the roof design		NA
<b>4O</b>	<b>LANDSCAPE DESIGN</b>		
<b>4O-1</b> p115	<b>Objective:</b> Landscape design is viable & sustainable		✓
	<b>Design Guidance</b>		<b>Considered</b>
	Landscape design is environmentally sustainable & can enhance environmental performance by incorporating: <ul style="list-style-type: none"><li>Diverse &amp; appropriate planting</li><li>Bio-filtration gardens</li><li>Appropriately planted shading trees</li><li>Areas for residents to plant vegetables &amp; herbs</li><li>Composting</li><li>Green roofs or walls</li></ul>	Refer landscape report	YES
	Ongoing maintenance plans are prepared		YES
	Microclimate is enhanced by: <ul style="list-style-type: none"><li>Appropriately scaled trees near the eastern &amp; western elevations for shade</li><li>Balance of evergreen &amp; deciduous trees to provide shading in summer &amp; sunlight access in winter</li><li>Shade structures such as pergolas for balconies &amp; courtyards</li></ul>	Refer landscape report	YES
	Tree & shrub selection considers size at maturity & the potential for roots to compete.	Refer landscape report	YES

ADDENDUM - ADG COMPLIANCE

ADG Ref.	Item Description	Notes	Compliance							
4O-2 p115	<b>Objective:</b> Landscape design contributes to streetscape & amenity									
	<b>Design Guidance</b>		<b>Considered</b>							
	Landscape design responds to the existing site conditions including: <ul style="list-style-type: none"><li>Changes of levels</li><li>Views</li><li>Significant landscape features including trees &amp; rock outcrops</li></ul>	Refer landscape report	YES							
	Significant landscape features are protected by: <ul style="list-style-type: none"><li>Tree protection zones</li><li>Appropriate signage &amp; fencing during construction</li></ul>		YES							
	Plants selected are endemic to region & reflect local ecology		YES							
4P	<b>PLANTING ON STRUCTURES</b>									
4P-1 p117	<b>Objective:</b> Appropriate soil profiles are provided									
	<b>Design Guidance</b>		<b>Considered</b>							
	Structures are reinforced for additional saturated soil weight		YES							
	Soil volume is appropriate for plant growth, including: <ul style="list-style-type: none"><li>Modifying depths &amp; widths according to planting mix &amp; irrigation frequency</li><li>Free draining &amp; long soil life span</li><li>Tree anchorage</li></ul>		YES							
	Minimum soil standards for plant sizes should be provided in accordance with: <table><thead><tr><th>Site Area (sqm)</th><th>Recommended Tree Planting</th></tr></thead><tbody><tr><td>Up to 850</td><td>1 medium tree per 50sqm of deep soil zone</td></tr><tr><td>850 - 1,500</td><td>1 large tree or 2 medium trees per 90sqm of deep soil zone</td></tr><tr><td>Greater than 1,500</td><td>1 large tree or 2 medium trees per 80sqm of deep soil zone</td></tr></tbody></table>	Site Area (sqm)	Recommended Tree Planting	Up to 850	1 medium tree per 50sqm of deep soil zone	850 - 1,500	1 large tree or 2 medium trees per 90sqm of deep soil zone	Greater than 1,500	1 large tree or 2 medium trees per 80sqm of deep soil zone	
Site Area (sqm)	Recommended Tree Planting									
Up to 850	1 medium tree per 50sqm of deep soil zone									
850 - 1,500	1 large tree or 2 medium trees per 90sqm of deep soil zone									
Greater than 1,500	1 large tree or 2 medium trees per 80sqm of deep soil zone									
4P-2 p117	<b>Objective:</b> Plant growth is optimised with appropriate selection & maintenance									
	<b>Design Guidance</b>		<b>Considered</b>							
	Plants are suited to site conditions, considerations include: <ul style="list-style-type: none"><li>Drought &amp; wind tolerance</li><li>Seasonal changes in solar access</li><li>Modified substrate depths for a diverse range of plants</li><li>Plant longevity</li></ul>	Refer to landscape report	YES							
	A landscape maintenance plan is prepared		YES							
	Irrigation & drainage systems respond to: <ul style="list-style-type: none"><li>Changing site conditions</li><li>Soil profile &amp; planting regime</li><li>Whether rainwater, stormwater or recycled grey water is used</li></ul>		YES							
4P-3 p117	<b>Objective:</b> Planting on structures contributes to the quality & amenity of communal & public open spaces									
	<b>Design Guidance</b>		<b>Considered</b>							
	Building design incorporates opportunities for planting on structures. Design solutions include: <ul style="list-style-type: none"><li>Green walls with specialised lighting for indoor green walls</li><li>Wall design that incorporates planting</li><li>Green roofs, particularly where roofs are visible from the public domain</li><li>Planter boxes</li></ul> Note: structures designed to accommodate green walls should be integrated into the building facade & consider the ability of the facade to change over time	Refer landscape and design report	YES							
4Q	<b>UNIVERSAL DESIGN</b>									

ADG Ref.	Item Description	Notes	Compliance
4Q-1 p119	<b>Objective:</b> Universal design features are included in apartment design to promote flexible housing for all community members		✓
	<b>Design Guidance</b>		Considered
	Developments achieve a benchmark of 20% of the total apartments incorporating the Livable Housing Guideline's silver level universal design features	19.2% of apartments incorporate the Liveable Housing guidelines for silver level	YES
4Q-2 p119	<b>Objective:</b> A variety of apartments with adaptable designs are provided		✓
	<b>Design Guidance</b>		Considered
	Adaptable housing should be provided in accordance with the relevant council policy	No adaptable apartment requirement for Newcastle City Council	NA
	Design solutions for adaptable apartments include: <ul style="list-style-type: none"><li>Convenient access to communal &amp; public areas</li><li>High level of solar access</li><li>Minimal structural change &amp; residential amenity loss when adapted</li><li>Larger car parking spaces for accessibility</li><li>Parking titled separately from apartments or shared car parking arrangements</li></ul>		NA
4Q-3 p119	<b>Objective:</b> Apartment layouts are flexible & accommodate a range of lifestyle needs		✓
	<b>Design Guidance</b>		Considered
	Flexible design solutions include: <ul style="list-style-type: none"><li>Rooms with multiple functions</li><li>Dual master bedroom apartments with separate bathrooms</li><li>Larger apartments with various living space options</li><li>Open plan 'loft' style apartments with only a fixed kitchen, laundry &amp; bathroom</li></ul>		YES
4R	ADAPTIVE REUSE		
4S	MIXED USE		
4S-1 p123	<b>Objective:</b> Mixed use developments are provided in appropriate locations & provide active street frontages that encourage pedestrian movement.		✓
	<b>Design Guidance</b>		Considered
	Mixed use development are concentrated around public transport & centres	Refer design report	YES
	Mixed use developments positively contribute to the public domain. Design solutions include: <ul style="list-style-type: none"><li>Development addresses the street</li><li>Active frontages provided</li><li>Diverse activities &amp; uses</li><li>Avoiding blank walls at the ground level</li><li>Live/work apartments on the ground floor level, rather than commercial</li></ul>	Refer design report	YES
4S-2 p123	<b>Objective:</b> Residential levels of the building are integrated within the development. Safety & amenity is maximised.		✓
	<b>Design Guidance</b>		Considered
	Residential circulation areas are clearly defined. Solutions include: <ul style="list-style-type: none"><li>Residential entries separated from commercial entries &amp; directly accessible from the street</li><li>Commercial service areas separated from residential components</li><li>Residential car parking &amp; communal facilities separated or secured</li><li>Security at entries &amp; safe pedestrian routes are provided</li><li>Concealment opportunities are avoided</li></ul>		YES
	Landscaped communal open space are provided at podium or roof		YES
4T	AWNING & SIGNAGE		

ADDENDUM - ADG COMPLIANCE

ADG Ref.	Item Description	Notes	Compliance
4T-1 p125	<b>Objective:</b> Awnings are well located and complement & integrate with the building design.		✓
	<b>Design Guidance</b>		<b>Considered</b>
	Awnings are located along streets with high pedestrian activity & active frontages		YES
	A number of the following design solutions are used:		YES
	· Continuous awnings are maintained & provided in areas with an existing pattern		
	· Height, depth, material & form complements existing street character		
	· Protection from sun & rain is provided		
	· Awnings are wrapped around secondary frontages of corner sites		
	· Awnings are retractable in areas without an established pattern		
Awnings are located over building entries for building address & public domain amenity		YES	
Awnings relate to residential windows, balconies, street tree planting, power poles & street infrastructure		YES	
Gutters & down pipes are integrated and concealed		YES	
Lighting under awnings is provided for pedestrian safety		YES	
4T-2 p125	<b>Objective:</b> Signage responds to context & desired streetscape character.		✓
	<b>Design Guidance</b>		<b>Considered</b>
	Signage is integrated into building design & respond to scale, proportion & detailing of the development		YES
	Legible & discrete way finding is provided for larger developments		YES
Signage is limited to being on & below awnings, and single facade sign on primary street frontages		YES	
4U	<b>ENERGY EFFICIENCY</b>		
4U-1 p127	<b>Objective:</b> Development incorporates passive environmental design.		✓
	<b>Design Guidance</b>		<b>Considered</b>
	Adequate natural light is provided to habitable rooms (see 4A Solar & Daylight Access)		YES
Well located, screened outdoor areas are provided for clothes drying		Energy efficient dryers are proposed in lieu	YES
4U-2 p127	<b>Objective:</b> Passive solar design is incorporated to optimise heat storage in winter & reduce heat transfer in summer.		✓
	<b>Design Guidance</b>		<b>Considered</b>
	A number of the following design solutions are used:		YES
	· Use of smart glass or other on north & west elevations		
· Thermal mass maximised in floors & walls of north facing rooms			
· Polished concrete floors, tiles or timber rather than carpet			
· Insulated roofs, walls & floors. Seals on window & door openings			
· Overhangs & shading devices such as awnings, blinds & screens			
Provision of consolidated heating & cooling infrastructure is located in a centralised location (eg basement)		Central Plant is located on the rooftop and will be suitably screened.	YES
4U-3 p127	<b>Objective:</b> Adequate natural ventilation to minimise the need for mechanical ventilation.		✓
	<b>Design Guidance</b>		<b>Considered</b>
A number of the following design solutions are used:		YES	
· Rooms with similar usage are grouped together			
· Natural cross ventilation for apartments is optimised			
· Natural ventilation is provided to all habitable rooms & as many non-habitable rooms, common areas & circulation spaces as possible			
4V	<b>WATER MANAGEMENT &amp; CONSERVATION</b>		

ADG Ref.	Item Description	Notes	Compliance
4V-1 p129	<b>Objective:</b> Potable water use is minimised.		✓
	<b>Design Guidance</b>		<b>Considered</b>
	Water efficient fittings, appliances & wastewater reuse are incorporated		YES
	Apartments are individually metered		YES
	Rainwater is collected, stored & reused on site	Rainwater will be collected and stored for reuse from the communal roof recreation area on level 05.	YES
	Drought tolerant, low water use plants are used within landscaped areas	Refer landscape report for details.	YES
4V-2 p129	<b>Objective:</b> Urban stormwater is treated on site before being discharged to receiving waters.		✓
	<b>Design Guidance</b>		<b>Considered</b>
	Water sensitive urban design systems are designed by a suitably qualified professional		YES
	A number of the following design solutions are used: <ul style="list-style-type: none"><li>· Runoff is collected from roofs &amp; balconies in water tanks and plumbed into toilets, laundry &amp; irrigation</li><li>· Porous &amp; open paving materials is maximised</li><li>· On site stormwater &amp; infiltration, including bio-retention systems such as rain gardens or street tree pits</li></ul>	Rainwater will be collected and stored for reuse from the communal roof recreation area on level 05.	YES
4V-3 p129	<b>Objective:</b> Flood management systems are integrated into site.		✓
	<b>Design Guidance</b>		<b>Considered</b>
	Detention tanks are located under paved areas, driveways or in basement car parks		YES
	On large sites, parks or open spaces are designed to provide temporary on site detention basins	Large landscaped open space contributes to flood management	YES
4W	<b>WASTE MANAGEMENT</b>		
4W-1 p131	<b>Objective:</b> Waste storage facilities are designed to minimise impacts on streetscape, building entry & amenity of residents.		✓
	<b>Design Guidance</b>		<b>Considered</b>
	Adequately sized storage areas for rubbish bins are located discreetly away from the front of the development or in basement car park		YES
	Waste & recycling storage areas are well ventilated		YES
	Circulation design allows bins to be easily manoeuvred between storage & collection points		YES
	Temporary storage are provided for large bulk items such as mattresses		YES
	Waste management plan is prepared		YES
4W-2 p131	<b>Objective:</b> Domestic waste is minimised by providing safe & convenient source separation & recycling.		✓
	<b>Design Guidance</b>		<b>Considered</b>
	All dwellings have a waste & recycling cupboard or temporary storage area of sufficient size to hold two days worth of waste & recycling		YES
	Communal waste & recycling rooms are in convenient & accessible locations related to each vertical core		YES
	For mixed use developments, residential waste & recycling storage areas & access is separate & secure from other uses	Separate bin rooms are provided for residential, retail and commercial	YES
	Alternative waste disposal methods such as composting is provided	Not suitable for city centre location	NA
4X	<b>BUILDING MAINTENANCE</b>		
4X-1 p133	<b>Objective:</b> Building design detail provides protection from weathering.		✓
	<b>Design Guidance</b>		<b>Considered</b>



ADDENDUM - ADG COMPLIANCE

ADG Ref.	Item Description	Notes	Compliance
	A number of the following design solutions are used: <ul style="list-style-type: none"><li>Roof overhangs to protect walls</li><li>Hoods over windows &amp; doors to protect openings</li><li>Detailing horizontal edges with drip lines to avoid staining surfaces</li><li>Methods to eliminate or reduce planter box leaching</li><li>Appropriate design &amp; material selection for hostile locations</li></ul>	Refer design report for details	YES
4X-2 p133	<b>Objective:</b> Systems & access enable ease of maintenance.		✓
	<b>Design Guidance</b>		Considered
	Window design enables cleaning from the inside of the building	Sliding glass doors to balconies and louvres can be cleaned internally. Remaining windows will be cleaned via a building maintenance strategy.	YES
	Building maintenance systems are incorporated & integrated into the design of the building form, roof & facade		YES
	Design does not require external scaffolding for maintenance access		YES
	Manually operated systems such as blinds, sunshades & curtains are used in preference to mechanical systems		YES
	Centralised maintenance, services & storage are provided for communal open space areas within the building		YES
4X-3 p133	<b>Objective:</b> Material selection reduces ongoing maintenance costs.		✓
	<b>Design Guidance</b>		Considered
	A number of the following design solutions are used: <ul style="list-style-type: none"><li>Sensors to control artificial lighting in common circulation &amp; spaces</li><li>Natural materials that weather well &amp; improve with time, such as face brickwork</li><li>Easily cleaned surfaces that are graffiti resistant</li><li>Robust &amp; durable materials &amp; finishes in locations which receive heavy wear &amp; tear such as common circulation areas &amp; lift interiors</li></ul>		YES