

Attachment 4 - Apartment Design Guide Assessment

<i>Standards/controls</i>	<i>Comment</i>	<i>Compliance</i>
Part 1 – Identifying the context		
<u>1A Apartment building types</u>	The proposal is as Shop Top Apartment Building; possibly reflects a perimeter block apartment/ tower apartment building type.	
<u>1B Local character and context</u> This guideline outlines how to define the setting and scale of a development, and involves consideration of the desired future character, common settings and the range of scales.	The strategic local character and future desired character of the site is set by Wollongong LEP 2009 (B3 Commercial Core and Clause 8.1 Objectives for development in Wollongong City Centre), Wollongong DCP 2009 (Chapter D13 Wollongong City Centre) Both LEP and DCP clauses are assessed in detail at Sections 2.1.5 and 2.3.1 of the assessment report; this includes discussion in relation to the departures sought in relation to floor space ratio and building separation (B3 zoned portion of the site), building height and FSR in respect of the B6 zoned portion of the site.	
<u>1C Precincts and individual sites</u> Individual sites: New development on individual sites within an established area should carefully respond to neighbouring development, and also address the desired future character at the neighbourhood and street scales. Planning and design considerations for managing this include: <ul style="list-style-type: none"> - Site amalgamation where appropriate - Corner site and sites with multiple frontages can be more efficient than sites with single frontages - Ensure the development potential for adjacent sites is retained - Avoid isolated sites that are unable to realise the development potential. 	Site amalgamation of a number of allotments and a portion of closed road reserve has already been undertaken. The site has frontages to Atchison, Ellen and Kenny Streets. The development is not expected to have an unreasonable impact on the development potential of adjacent sites. It does not appear that any isolated allotments will be created as a result of the development	

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<p>Part 2 – Developing the controls</p> <p>These guidelines include tools to support the strategic planning process when preparing planning controls, and aren't relevant to the development assessment of individual proposals.</p> <p>Part 3 Siting the development</p> <p>3A Site analysis</p> <p>Site analysis uses the following key elements to demonstrate that design decisions have been based on opportunities and constraints of the site conditions and their relationship to the surrounding context:</p> <ul style="list-style-type: none"> - Site location plan - Aerial photograph - Local context plan - Site context and survey plan - Streetscape elevations and sections - Analysis <p>A written statement explaining how the design of the proposed development has responded to the site analysis must accompany the development application.</p> <p>3B Orientation</p> <p>Objective 3B-1:</p> <p>Building types and layouts respond to the streetscape and site while optimising solar access within the development</p> <p>Objective 3B-2</p>	<p>The site is located with the City Centre precinct and well located with regard to the CBD and Wollongong railway station.</p> <p>Strategic planning tool intent noted.</p> <p>Some site analysis plans provided with the DA material.</p> <p>Site analysis remains insufficient for a development of this scale and does not detail how the applicant came to the proposed design based on the contextual constraints and opportunities.</p> <p>The DRP noted that, "this is a complex, large scale and flood prone site with great impact on context and adjacent public domain. Accordingly, it requires a comprehensive site and context analysis; this has not been submitted. Apart from a few additional axonometric illustrations, it would appear that no further site and context analysis has been provided. For a project of this scale, this remains unacceptable."</p> <p>Orientation of the towers and building forms is generally acceptable. However, as noted by the DRP, there is still no evidence to demonstrate how the development sits within the proposed streetscape. Building generally faces the street and provides direct access to it.</p> <p>Nine (9) existing trees will be retained; 3 trees within the neighbouring site to the north will be removed.</p> <p>An examination of the plans and supporting documentation indicates that</p>	<p>No</p>

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<p><i>Overshadowing of neighbouring properties is minimised during mid-winter</i></p> <p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - Overshadowing should be minimised to the south or down hill by increased upper level setbacks - Refer sections 3D & 4A below for solar access requirements - A minimum of 4 hours of solar access should be retained to solar collectors on neighbouring buildings <p><u>3C Public domain interface</u></p> <p><u>Objective 3C-1:</u></p> <p><i>Transition between private and public domain is achieved without compromising safety and security</i></p> <p><u>Objective 3C-2:</u></p> <p><i>Amenity of the public domain is retained and enhanced</i></p>	<p>only 45% of the units will receive compliant solar access.</p> <p>The shadow diagrams indicate lengthy shadows cast by the proposed building during mid-winter, as expected given the height of the proposed building and the orientation of the site. The separation distances between the towers is compliant however the bulk of the towers is excessive and contributes to additional overshadowing.</p> <p>Given the zoning of the site and allowable heights and densities, the extent of overshadowing is not considered to be unreasonably adverse.</p> <p>Street activation will be somewhat compromised by the elevated nature of the retail spaces, the configuration and width of the ramps and pedestrian colonnade, the wind amelioration measures required along the frontage of the building (at ground level) and the landscaping treatment of the frontages.</p> <p>The proposal has struggled to find a balance between activation of commercial spaces along Ellen St in particular, retaining existing trees, and managing stormwater/flooding constraints. There is no clear line of sight to shops and lobbies from the street frontage.</p> <p>The proposed design outcome is more in keeping with the originally approved plan, providing a solution which mitigates flood risk while still providing some retail exposure and access. The retention of trees is commended, but as noted above, clear lines of sight remain problematic, particularly to retail shops which will struggle with activation. The walkway/ loggia at the base of the building is visually and physically disconnected from the street which may give rise to safety</p>	

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<p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - Planting softens the edges of any raised terraces to the street (eg basement podium) - Mailboxes should be located in lobbies perpendicular to street alignment or integrated into front fences. - Garbage storage areas, substations, pump rooms and other service requirements should be located in basement car parks. - Durable, graffiti resistant materials should be used <p>Where development adjoins public parks or open space the design should address this interface.</p>	<p>concerns and hamper the viability of the proposed retail spaces.</p> <p>Planting to street edges proposed along with retention of existing trees inside the Ellen Street frontage of the site; landscaping to edges of raised terraces to the street edges is also proposed.</p> <p>Public domain works comprising paving and street tree planting will be required in accordance with Council's City Centre Public Domain Technical Manual. Conditions can be imposed in this regard if consent is granted.</p> <p>Letterboxes will be located within residential lobbies.</p> <p>Garbage storage areas, substation, fire services and the like are to be accommodated within the building in a manner which will not detract from its design quality.</p> <p>Durable materials generally proposed.</p> <p>Building entries are not particularly legible and hidden from view, particularly the residential lobbies.</p> <p>The visual connection between the retail spaces and the street will be somewhat obstructed by the wind baffles, change in levels, stairs, ramps, retaining walls and planter bed. Safety and security matters remain unresolved.</p>	
<p><u>3D Communal and public open space</u></p> <p><u>Objective 3D-1</u></p> <p><i>An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping</i></p> <p><u>Design Criteria</u></p> <p>1. Communal open space has a minimum area of 25% of the site area (ie 1617.25sqm)</p>	<p>The communal open space area is located on the podium (level 2) rooftop; the total area of the space is 1831sqm which is 28% of the site area.</p> <p>All areas of communal open space are accessible for residents via the lifts. The landscape plan makes provision for casual seating, BBQs, outdoor dining, childrens' play equipment and passive recreation areas.</p>	<p>Yes and no</p>

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<p>2. 50% direct sunlight provided to principal usable part of communal open space for a minimum of 2 hours between 9am and 3pm on 21 June</p> <p><u>Objective 3D-2</u></p> <p><i>Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - Facilities to be provided in communal open spaces for a range of age groups, and may incorporate seating, barbeque areas, play equipment, swimming pool <p><u>Objective 3D-3</u></p> <p><i>Communal open space is designed to maximise safety</i></p> <p><u>Design guidance</u></p> <p>Communal open space should be visible from habitable rooms and POS areas and should be well lit.</p>	<p>The communal open space areas will all receive between sufficient sunlight between 9am and 3pm as required. Some shade will be offered to sections of the COS via planting and structures.</p> <p>The design and treatment is generally satisfactory though the DRP recommended some changes to the landscaping scheme to improve the quality of the space; see Attachment 5. Provision has been made for BBQs, outdoor dining areas, casual seating and a childrens' play area within the COS.</p> <p>The COS will be visible from units located above and nearby individual private open space areas. No lighting indicated on plans but could be dealt with via conditions of consent if consent is granted to the development.</p> <p>Top of wall details around planter beds is not sufficient to prevent climb and fall hazards for children. However, a 1.8m wind treatment barrier is proposed around the entire development. This is not detailed in the architectural or landscape plans and has ramifications for the elevations and other design elements at COS level which have not been resolved.</p> <p>Width of planting around POS in architectural plans is inconsistent with landscaping plans, but appears to now be sufficient to maximise safety and visual privacy to units POS.</p>	
<p><u>Objective 3D-4</u></p> <p>Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood</p>	<p>The public landscaping and walkways provide a different streetscape pattern than those running down Kenny and Atchison Streets, in response to flooding issues. Details should be provided which show how the proposed design is likely to interface with future developments to the north, following the amalgamation of other sites. Detail still has not been provided.</p>	<p>No</p>

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<p>3E Deep soil zones</p> <p><u>Objective 3E-1</u></p> <p><i>3E-1 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.</i></p> <p><u>Design Criteria:</u></p> <ol style="list-style-type: none"> 1. Deep soil zone is 7% of site area with a minimum dimension of 6m <p><u>Design guidance:</u></p> <ul style="list-style-type: none"> - Deep soil zones should be located to retain existing significant trees. 	<p>The plans provide for DSZ along the southern boundary of the site adjacent to Ellen Street. The landscaped component will allow for the retention of existing trees and additional planting. Structural elements occupy some of the space, including the walkway around the base of the building, columns, ramps and stairs.</p> <p>Deeps soil zone to Ellen St now meets the minimum requirement of 7% but not that of 6m in depth. Due to the site's location this is likely an acceptable outcome, particularly in regard to retaining major existing trees.</p> <p>There is additional planting on structure proposed in and around the COS and outdoor play areas of the child care centre on Level 2.</p> <p>It is noted that the earlier approved scheme for the site did not provide any DSZ.</p>	Yes												
<p>3F Visual privacy</p> <p><u>Objective 3F-1</u></p> <p><i>Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual amenity.</i></p> <p><u>Design Criteria:</u></p> <ol style="list-style-type: none"> 1. Minimum required separation distances from buildings to the side and rear boundaries are as follows: <table border="1"> <thead> <tr> <th>Building height</th><th>Habitable rooms and balconies</th><th>Non-habitable rooms</th></tr> </thead> <tbody> <tr> <td>up to 12m (4 storeys)</td><td>6m</td><td>3m</td></tr> <tr> <td>up to 25m (5-8 storeys)</td><td>9m</td><td>4.5m</td></tr> <tr> <td>over 25m (9+ storeys)</td><td>12m</td><td>6m</td></tr> </tbody> </table> <p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - Direct lines of sight should be avoided 	Building height	Habitable rooms and balconies	Non-habitable rooms	up to 12m (4 storeys)	6m	3m	up to 25m (5-8 storeys)	9m	4.5m	over 25m (9+ storeys)	12m	6m	<p>Required:</p> <p>No separation is required between blank walls</p> <p>Up to 12m (4 storeys) – 6m (habitable rooms & balconies) 3m (non – habitable rooms)</p> <p>Up to 25m (5-8 storeys) – 9m (habitable rooms & balconies) 4.5m (non-habitable rooms and balconies).</p> <p>Over 25m (9 + storeys) - 12m (habitable rooms & balconies) and 6m (to non-habitable rooms and balconies).</p> <p>Proposed:</p> <p><u>To northern boundary –</u></p>	<p>No – variations identified in bold in column to the left.</p> <p>Variations justified by the applicant and are considered to be reasonable in this instance.</p> <p>Note: earlier approved development involved</p>
Building height	Habitable rooms and balconies	Non-habitable rooms												
up to 12m (4 storeys)	6m	3m												
up to 25m (5-8 storeys)	9m	4.5m												
over 25m (9+ storeys)	12m	6m												

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<p>- No separation is required between blank walls</p>	<p>G-L2 Nil setback to the northern boundary for levels G-2; this is supported for podiums where a blank wall is provided to the shared boundary, as proposed.</p> <p>L2 COS Setback to communal open space on L2 is 1.2m to the northern boundary (6m required) with landscape buffer between and 1.8m high wall on boundary</p> <p>L3-6 ~ 12.4m to western tower (min 6m and 9m required) Min ~15.5m to eastern tower (min 6m and 9m required)</p> <p>L6 – 16 Eastern tower = min ~15.5m– complies Western tower = min 12m – complies</p> <p>Level 17 – Eastern tower – rooftop POS areas – min ~ 16.6m Western tower min 12m</p> <p><u>To western boundary</u></p> <p>G-L1 Nil setback to the western boundary for levels G-2; this is supported for podiums where a blank wall is provided to the shared boundary, as proposed.</p> <p>L2 COS – setback 1.2m to the western boundary (6m required) with landscape buffer and 1.8m high wall on boundary provided</p> <p>L3-6 ~ 26m min;</p> <p>L7- 16 Approx. ~ 26m min from nearest balcony</p>	<p>similar variations.</p>

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<p><i>Objective 3F-2:</i></p> <p><i>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</i></p> <p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - Communal open space, common areas and access paths should be separated from private open space and windows to apartments. Design solutions include: <ul style="list-style-type: none"> • Setbacks, • Solid or partly solid balustrades to balconies • Fencing or vegetation to separate spaces • Screening devices • Raising apartments/private open space above the public domain • Planter boxes incorporated into walls and balustrades to increase visual separation • Pergolas or shading devices to limit overlooking • Only on constrained sites where it's demonstrated that building layout opportunities are limited – fixed louvres or screen panels • Windows should be offset from the windows of adjoining buildings <p><u>3G Pedestrian access and entries</u></p>	<p>Setback to communal open space on L2 is 1.2m though there are 1.8m high solid podium walls to the edges and landscape planter beds to the edge of the COS which will reduce overlooking from this level.</p> <p>The setback between the towers is more than 12m which is compliant.</p> <p>Generally acceptable, however additional information should be provided regarding size of planting around POS of podium apartments and impacts on solar access, particularly as planting beds to POS appear to be insufficient in width.</p>	<p>Yes</p>

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<p><u>Objective 3G-1</u></p> <p><i>Building entries and pedestrian access connects to and addresses the public domain</i></p> <p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - Multiple entries should be provided to activate the street edge. - Buildings entries should be clearly identifiable and communal entries should be clearly distinguishable from private entries. 	<p>While the residential lobbies are improved from previous designs, the two residential lobbies provided in the last application have been replaced with four split cores for the two towers. Ideally the residential lobbies would connect the lift cores, however this has not been resolved in design, resulting in small retail tenancies which might be unviable in the proposed location on the edge of the CBD.</p> <p>Additionally, multiple residential lobbies are not visible from the street, hidden behind planting, retaining walls and wind screens making them hard to identify.</p> <p>Finally, the childcare centre entrance from the COS is excessively inset within the building and should likely line up with the shallower inset above.</p>	No
<p><u>Objective 3G-2</u></p> <p><i>Access, entries and pathways are accessible and easy to identify</i></p> <p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - Building access areas should be clearly visible from the public domain and communal spaces - Steps and ramps should be integrated into the overall building and landscape design. 	<p>The ground floor entrances are mostly accessible. However, as noted the residential lobbies are now split between four lobbies, not all of which are clearly visible from the street. The ramps do not comply with accessibility standards.</p> <p>Additionally, the childcare centre accessway on the podium level (connecting to the COS) is a highly inset doorway which is continued up the building, likely to be an unpleasant space which is not highly visible. As noted elsewhere this should align with the new inset on levels above</p>	No
<p><u>Objective 3G-3</u></p> <p><i>Large sites provide pedestrian links for access to streets and connection to destinations</i></p> <p>3H Vehicle access</p>	<p>No through-site link is required nor desired.</p>	N/A
<p><u>Objective 3H-1</u></p> <p><i>Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes</i></p>	<p>Proposed car park entries are positioned behind the building line on the Kenny and Atchison Street frontages of the site.</p>	Yes

<i>Standards/controls</i>	<i>Comment</i>	<i>Compliance</i>
<p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - Car park entries should be located behind the building line - Access point locations should avoid headlight glare to habitable rooms - Garbage collection, loading and service areas should be screened - Vehicle and pedestrian access should be clearly separated to improve safety. - Where possible, vehicle access points should not dominate the streetscape and be limited to the minimum width possible. 	<p>Proposed driveway location setback from the nearest intersections.</p> <p>Loading/ service areas all contained within the basement levels and accordingly are screened from view.</p> <p>Vehicle and pedestrian access separated. Domestic vehicle entry separated from larger vehicle entry.</p> <p>Roller shutters proposed within the building and recessed into the facade.</p> <p>Driveway and vehicular entry width is acceptable on Atchison Street frontage. Compliant manoeuvring is available to and within carparking areas and loading zones.</p> <p>Atchison Street driveway has been moved to retain the street tree which is commendable.</p>	
<p><u>3J Bicycle and car parking</u></p> <p><u>Objective 3J-2</u></p> <p><i>Parking and facilities are provided for other modes of transport</i></p> <p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - Conveniently located and sufficient numbers of parking spaces should be provided for motorbikes and scooters - Secure undercover bicycle parking should be provided that is easily accessible from both the public domain and common areas. 	<p>Parking rates are compliant. Adequate vehicle and motor bike parking provided meeting relevant requirements as outlined Attachment 7 with regard to Chapter E3 of WDCP 2009. All parking is to be provided within the basement parking levels and on Level 1.</p> <p>Motorbike and bicycle parking provided. End of trip facilities provided. Bicycle spaces and motorcycle spaces have been provided; however, ideally these should be located more conveniently on the residential parking level or alongside storage for residential amenity.</p>	Yes
<p><u>Objective 3J-3</u></p> <p><i>Car park design and access is safe and secure</i></p> <p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - Supporting facilities within car parks (garbage rooms, storage areas, car wash bays) can be accessed without crossing parking spaces 	<p>Supporting facilities generally adequately located.</p> <p>Basement and level 1 car parking layout is appropriate with regard to safety and security.</p> <p>Roller shutter proposed within the basement. If approved, it is recommended that proposed any roller shutters be permeable to improve ventilation.</p> <p>Basement car parking levels to be mechanically ventilated and the plans</p>	

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<ul style="list-style-type: none"> - A clearly defined and visible lobby or waiting area should be provided to lifts and stairs. - Permeable roller doors allow for natural ventilation and improve the safety of car parking areas by enabling passive surveillance. <p><u>Objective 3J-4</u></p> <p><i>Visual and environmental impact of underground car parking are minimised</i></p> <p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - Excavation should be minimised through efficient carpark layouts and ramp design. - Protrusion of carparks should not exceed 1.0m above ground level. - Natural ventilation should be provided to basement and sub-basement car parking areas. - Ventilation grills or screening devices should be integrated into the façade and landscape design. 	<p>show the locations of mechanical ventilation and ducting.</p> <p>Access appears to be compliant, safe and secure with roller doors and swipe access. However it should be detailed how childcare and retail visitors will access the swipe facility when picking up children or shopping.</p> <p>Basement/ car park walls are to be built to the side and rear boundaries.</p> <p>Car park layout appears to be reasonably efficient.</p>	
<p><u>Objective 3J-5</u></p> <p><i>Visual and environmental impact of on-grade car parking are minimised</i></p>	<p>No on-grade parking proposed.</p>	<p>Yes</p>
<p><u>Objective 3J-6</u></p> <p>Visual and environmental impacts of above ground enclosed car parking are minimised</p>	<p>Above grade parking is either screened or sleeved to the façade, generally minimising the impact to the streetscape.</p>	<p>Yes</p>
<p>Part 4 – Designing the building – Amenity</p> <p><u>4A Solar and daylight access</u></p> <p><u>Objective 4A-1</u></p> <p><i>To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space</i></p> <p><u>Design Criteria</u></p> <p>1. Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of two (2) hours</p>	<p>The applicant has provided solar access diagrams indicating that 70% of the apartments achieve appropriate solar access (living rooms and private open spaces receive a minimum of 2 hours</p>	<p>No</p>

Standards/controls	Comment	Compliance
<p>direct sunlight between 9am and 3pm in mid-winter in Wollongong LGA.</p> <p>1. A maximum of 15% of apartments in a building receive no direct sunlight between 9am and 3pm at mid winter</p> <p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - The design maximises north aspect and the number of single aspect south facing apartments is minimised - To optimise the direct sunlight to habitable rooms and balconies, the following design features are used: Dual aspect, Shallow apartment layouts Bay windows - To maximise the benefit to residents, a minimum of 1m² of direct sunlight measured at 1m above floor level, is achieved for at least 15 minutes 	<p>sunlight between 9am-3pm mid-Winter). However, there are a significant number of east-facing units that are dependent upon solar access between 9am and 11am to meet minimum ADG requirements. These units have been shown as receiving a minimum of 2hours solar access. However, the suns eye view diagram provided do not clearly show that the living room windows of these units still receive solar access at 11am.</p> <p>Further, a number of units have been shown as providing a minimum of 2 hours solar access however they all have south facing balconies that receive no solar access.</p> <p>On this basis, 123 of the proposed 272 (45%) units are currently demonstrating a minimum of 2 hours solar access is being provided to living areas and areas of private open space, between 9am and 3pm, mid winter.</p> <p>The current proposal therefore fails to demonstrate compliance with ADG solar access requirements.</p> <p>A number of units appear to have a depth greater than 8m measured from the rear wall of kitchens to the nearest window; these may suffer reduced solar access and ventilation/</p>	
<p><u>Objective 4A-2</u></p> <p><i>Daylight access is maximised where sunlight is limited</i></p>	<p>Sunlight is not limited in this instance.</p>	N/A
<p><u>Objective 4A-3</u></p> <p><i>Design incorporates shading and glare control, particularly for warmer months</i></p>	<p>No detail provided. Generally, balconies overshadow north-facing windows in summer but no protection is providing for the large amounts of western facing glazing and single Low-E glazing does not meet environmental requirements.</p>	No
<p><u>4B Natural ventilation</u></p> <p><u>Objective 4B-1</u></p>	<p>All habitable rooms have windows for natural ventilation.</p>	Yes

Standards/controls	Comment	Compliance
<p><i>All habitable rooms are naturally ventilated.</i></p> <p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - A building's orientation should maximise the prevailing winds for natural ventilation in habitable rooms - The area of unobstructed window openings should be equal to at least 5% of the floor area served. - Doors and openable windows should have large openable areas to maximise ventilation. <p><u>Objective 4B-2</u></p> <p><i>The layout and design of single aspect apartments maximises natural ventilation</i></p> <p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - Single aspect apartments should use design solutions to maximise natural ventilation. <p><u>Objective 4B-3</u></p> <p><i>The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents</i></p> <p><u>Design Criteria:</u></p> <ol style="list-style-type: none"> 1. 60% of apartments are naturally cross ventilated in the first nine storeys 2. Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line. <p>4C Ceiling heights</p> <p><u>Objective 4C-1</u></p> <p><i>Ceiling height achieves sufficient natural ventilation and daylight access</i></p> <p><u>Design Criteria</u></p> <ol style="list-style-type: none"> 1. Minimum 2.7m for habitable rooms and 2.4m for non-habitable rooms <p><u>Objective 4C-2</u></p>	<p>Building depth appears to be around 24m—well in excess of the 18m recommendation</p> <p>The number of single aspect apartments has been reduced which is commendable, however as noted elsewhere, there are issues regarding the design of many single aspect apartments that remain including POS depth, apartment dimensions, liveability, etc as outlined elsewhere.</p> <p>Ventilation issues have been resolved through splitting the cores and providing two cross through apartments to achieve cross ventilation in excess of 60%.</p> <p>However, the new design has resulted in a building which is even bulkier, in excess of 24m wide at points. While cross-through apartments remain at 18m from glazing to glazing, the overall form is bulky and not supported.</p> <p>Minimum ceiling height of 2.7m proposed to habitable (all) rooms.</p>	<p>No</p> <p>Yes</p>

Standards/controls	Comment	Compliance
<p><i>Ceiling height increases the sense of space in apartments and provides for well-proportioned rooms</i></p> <p><u>Objective 4C-3</u></p> <p><i>Ceiling height contribute to the flexibility of building use over the life of the building</i></p> <p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - Ceiling heights of lower level apartments in centres should be greater than the minimum required by the design criteria allowing flexibility and conversion to non-residential uses. 	<p>However, there are major concerns about the floor-to-floor height from ground to the first floor. The loading dock requires 4.5m clear headroom, but the floor above is 4.7m above, which is unlikely to allow the structural depth required for the spans in the loading dock.</p> <p>Additionally, delivery and service areas as well as bicycle parking areas on the ground floor have a ceiling height of 2.4m which is extremely tight. There appears to be some resolution which is required to solve the changing floor heights, which may result in raising the floor plate, further exceeding the height limit for the western tower.</p>	
<p><u>4D Apartment size and layout</u></p> <p><u>Objective 4D-1</u></p> <p><i>The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity</i></p> <p><u>Design Criteria:</u></p> <ol style="list-style-type: none"> 1. Minimum apartment size: <ol style="list-style-type: none"> a. Studio 35sqm b. 1-bedroom 50sqm c. 2-bedroom 70sqm d. 3-bedroom 90sqm 2. Every habitable room must have a window with a total minimum glass area of not less than 10% of the floor area of the room. <p>Every habitable room must have a window in an external wall with a total minimum glass area of at least 10% of the floor area of the room</p>	<p>There are numerous issues to be resolved in regard to apartment layouts. The following living room areas appear to be non-compliant:</p> <ul style="list-style-type: none"> • On levels 2-5: U4.5, U4.6, U4.11 and U4.20 • On levels 6-15: U9.10 and U9.18. • On levels 9-17: U9.5 and U9.6. • It also appears in many locations that kitchens and/or storage areas reduce the width of living rooms, making them non-compliant. This should be addressed as per comments below. <p>Otherwise bedrooms mostly appear to be compliant (though one unit appears to have an undersized master bedroom).</p> <p>Multiple apartments do not appear to meet the minimum dimensions required due to the curved nature of the building, where many have been dimensioned at the widest not shallowest point. For example:</p> <ul style="list-style-type: none"> • U4.10, U4.12 and U4.17 are all dimensioned at their widest point and do not meet 2m depth generally. 	<p>No</p>

Standards/controls	Comment	Compliance
	<ul style="list-style-type: none"> • U4.9 does not meet 2m depth. • U9.4 does not appear to meet the 2m depth at any point except during the 1.4m wide snorkel to a bedroom window. • U9.7 is dimensioned as 2m deep but is predominantly less than 1.2m deep. • Similarly, U9.2, U9.4, U9.8, U9.13, U9.14, and U9.17 will also be difficult to furnish to provide additional liveability or amenity. <p>Note: These issues are replicated across multiple floor plates, resulting in approximately 9 times as many non-compliances as listed.</p> <p>Many of the apartments are highly constrained by the relationship of internal spaces to the undulating façade. Many units do not appear to have sufficient space for living arrangements to function as proposed.</p> <p>Redesign to overcome this issue is likely to result in further amendments to increase unit depths, leading to even greater building width and additional visual bulk, which would be untenable.</p> <p>Many of the proposed units appear unable to comfortably accommodate furniture as proposed. These units include:</p> <ul style="list-style-type: none"> - U2.2 (Level 2), U4.8 (living has no outlook), U4.9, U4.15 (dining has no outlook), and U4.16 (levels 2 – 5). - many units throughout the towers, at all levels, have furniture placed against glazing, necessitated by lack of internal dimensions (depth and/or width). Apart from constraining outlook, this measure appears to prevent access to balconies in a number of cases. - the curved corners of the towers impact on many units, greatly constraining furniture layouts and compliance with minimal ADG spatial requirements. Eg. units U2.1, U2.6, and U2.9 on level 2, U4.5, 	

Standards/controls	Comment	Compliance
<p><u>Objective 4D-2</u></p> <p><i>Environmental performance of the apartment is maximised</i></p> <p><u>Design Criteria:</u></p> <p>3. Habitable room depths are limited to a maximum of 2.5 x ceiling height</p> <p>4. In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window.</p> <p><u>Design Guidance:</u></p> <p>5. Greater than the minimum ceiling heights can allow proportionate increases in room depths.</p> <p>6. Where possible, bathrooms and laundries should have an external openable window.</p> <p>Main living spaces should be oriented towards the primary outlook.</p> <p><u>Objective 4D-3</u></p> <p><i>Apartment layouts are designed to accommodate a variety of household activities and needs</i></p>	<p>U4.6, U4.9, U4.11, U4.17 and U4.20 on levels 3 – 5 and U9.5, U9.6, U9.9, U9.10, U9.15 and U9.18 (levels 6 – 15), and many units above.</p> <p>- due to structure, configuration, and width, it is not clear how access from living areas and across balconies is provided in units U4.2, U4.4, U4.14 and U4.19 (levels 3 – 5), U9.4, U9.8, U9.14 and U9.17 (levels 6 – 15), U16.4 and U16.8 (level 16) and U17.4 and U17.8 (level 17).</p> <p>- many units incorporate snorkel portions of bedrooms, which do not comply with the ADG. These units include U2.8 (level 2), U4.4, U4.6, U4.11 and U4.19 (levels 3 – 5), U9.4, U9.6, U9.8, U9.10, U9.14 and U9.17 (levels 6 – 15) U16.4, U16.6 and U16.8 (level 16) and U17.4, U17.6 and U17.8 (level 17).</p> <p>Many units appear to exceed the maximum depth guide and several open plan units feature habitable room depths more than 8m from a window</p> <p>Note layout issues raised above.</p>	<p></p> <p>No</p> <p>No</p>

Standards/controls	Comment	Compliance
<p><u>Design Criteria:</u></p> <p>7. Master bedrooms have a minimum area of 10m² and other bedrooms 9m² (excl wardrobe space)</p> <p>8. Bedrooms have minimum dimension of 3m (excl wardrobe)</p> <p>9. Living rooms have minimum width of:</p> <ul style="list-style-type: none"> - 3.6m for studio and 1 bed apartments and - 4m for 2+ beds. <p>10. The width of the crossover or cross through apartments are at least 4m internally to avoid deep narrow apartment layouts.</p> <p><u>Design Guidance:</u></p> <p>11. Access to bedrooms, bathrooms and laundries is separated from living areas</p> <p>12. Minimum 1.5m length for bedroom wardrobes</p> <p>13. Main bedroom apartment: minimum 1.8m long x 0.6m deep x 2.1m high wardrobe</p> <p>Apartment layouts allow for flexibility over time, including furniture removal, spaces for a range of activities and privacy levels within the apartments.</p>	<p>The livable unit plan provided appears not to comply with standard accessibility requirements; for example, the nib and width requirements in the entry and bedroom areas require review. It is also not clear how access to the balcony is provided from the living room and a pinch point in the balcony is far too narrow to allow movement across its length.</p> <p>The adaptable units need further redesign so that adaption can be achieved without major alterations to plumbing and waterproofing of bathrooms.</p>	
<p><u>4E Private open space and balconies</u></p> <p><u>Objective 4E-1</u></p> <p><i>Apartments provide appropriately sized private open space and balconies to enhance residential amenity</i></p> <p>1. Minimum balcony depths are:</p>	<p>Multiple apartments do not appear to meet the minimum dimensions required due to the curved nature of the building, where many have been dimensioned at the widest not shallowest point. For example:</p> <ul style="list-style-type: none"> • U4.10, U4.12 and U4.17 are all dimensioned at their widest point and do not meet 2m depth generally. • U4.9 does not meet 2m depth. • U9.4 does not appear to meet the 2m depth at any point except 	<p>No</p>

Standards/controls			Comment	Compliance
Dwelling type	Minimum area	Minimum depth		
Studio apartments	4m ²	-		
1 bedroom apartments	8m ²	2m		
2 bedroom apartments	10m ²	2m		
3+ bedroom apartments	12m ²	2.4m		
The minimum balcony depth to be counted as contributing to the balcony area is 1m.				
2. Podium level apartment POS must have minimum area of 15m ² and min. depth of 3m				
<u>Objective 4E-2</u> <i>Primary private open space and balconies are appropriately located to enhance liveability for residents</i> <u>Design Guidance</u> - Primary private open space and balconies should be located adjacent to the living room, dining room or kitchen to extend the living space. - POS & Balconies should be oriented with the longer side facing outwards to optimise daylight access into adjacent rooms.				
<u>Objective 4E-3</u> <i>Primary private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building</i> <u>Design Guidance</u> - A combination of solid and transparent materials balances the need for privacy with surveillance of the public domain - Full width glass balustrades alone are not desirable - Operable screens etc are used to control sunlight and wind, and provide increased privacy for occupancy while allowing for storage and external clothes drying.				
			during the 1.4m wide snorkel to a bedroom window.	
			<ul style="list-style-type: none">U9.7 is dimensioned as 2m deep but is predominantly less than 1.2m deep.Similarly, U9.2, U9.4, U9.8, U9.13, U9.14, and U9.17 will also be difficult to furnish to provide additional liveability or amenity.	
			These issues are replicated across multiple floor plates, resulting in approximately 9 times as many non-compliances as listed.	
			Balcony design is generally poor – designed to fit into the designed floor plate form surrounding minimum internal floor plates. Often they do not extend living spaces with the majority of area located outside bedrooms. As above many do not meet minimum dimensions and will likely be difficult to furnish.	
			Generally, the balconies do not detract from the architectural form of the development.	

Standards/controls	Comment	Compliance
<p><u>Objective 4E-4</u></p> <p><i>Private open space and balcony design maximises safety</i></p> <p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - Changes in ground levels or landscaping are minimised. 	<p>Generally acceptable with appropriate planting as per landscape plan (not architectural plans).</p>	<p>Yes</p>
<p><u>4F Common circulation and spaces</u></p> <p><u>Objective 4F-1</u></p> <p><i>Common circulation spaces achieve good amenity and properly service the number of apartments.</i></p> <p><u>Design Criteria</u></p> <ol style="list-style-type: none"> 1. The maximum number of apartments off a circulation core on a single level is eight 2. For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40. <p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - Long corridors greater than 12m in length should be articulated through the use of windows or seating. - Primary living rooms or bedroom windows should not open directly onto common circulation spaces, whether open or enclosed. Visual and acoustic privacy from common circulation spaces should be controlled. 	<p>The standard floor plate of both towers includes 9 units, with 10 units on the lower floors.</p> <p>The 4 lifts serve 138 units in the western tower, and 135 in the eastern tower which is satisfactory, with no more than 75 units shared between two lifts.</p>	<p>Yes</p>
<p><u>Objective 4F-2</u></p> <p><i>Common circulation spaces promote safety and provide for social interaction between residents</i></p> <p><u>Design Guidance:</u></p> <p>Incidental spaces can be used to provide seating opportunities for residents, and promotes opportunities for social interaction.</p>	<p>Generally, the design of common circulation spaces is greatly improved on that of the earlier iterations of the scheme, and now receive natural ventilation and light.</p> <p>It would be beneficial in any redesign to not have doors facing one another in corridors to maintain privacy.</p>	<p>Yes and no</p>
<p><u>4G Storage</u></p> <p><u>Objective 4G-1</u></p>		

Standards/controls	Comment	Compliance										
<p><i>Adequate, well designed storage is provided in each apartment</i></p> <p>1. In addition to storage in kitchens, bathrooms and bedrooms, the following storage is required; 50% of which is to be within the apartment:-</p> <table><tr><th>Dwelling type</th><th>Storage size volume</th></tr><tr><td>Studio apartments</td><td>4m³</td></tr><tr><td>1 bedroom apartments</td><td>6m³</td></tr><tr><td>2 bedroom apartments</td><td>8m³</td></tr><tr><td>3+ bedroom apartments</td><td>10m³</td></tr></table> <p><u>Objective 4G-2</u></p> <p><i>Additional storage is conveniently located, accessible and nominated for individual apartments</i></p> <p><u>Design Guidance:</u></p> <p>Storage not located within apartments should be allocated to specific apartments.</p> <p><u>4H Acoustic privacy</u></p> <p><u>Objective 4H-1</u></p> <p><i>Noise transfer is minimised through the siting of buildings and building layout</i></p> <p><u>Design Guidance</u></p> <ul style="list-style-type: none">- Adequate building separation is required (see also section 3F above).- Noisy areas within buildings should be located next to or above each other and quieter areas next to or above quieter areas.- Storage, circulation areas and non-habitable rooms should be located to buffer noise from external sources. <p>Noise sources such as garage doors, plant rooms, active communal open spaces and circulation areas should be located at least 3m away from bedrooms.</p>	Dwelling type	Storage size volume	Studio apartments	4m ³	1 bedroom apartments	6m ³	2 bedroom apartments	8m ³	3+ bedroom apartments	10m ³	<p>Internal storage is now technically compliant but often remains poorly designed and integrated in apartments, with concern that these spaces will be “value engineered” away during construction. Any redesign should meaningfully integrate storage within walls so it does not appear “stuck on”, disrupting flows in apartments.</p> <p>Generally acceptable, however in large developments such as this it may be beneficial to further split up storage areas to make them easier to find and demarcate, as well as serving fewer people for safety and security.</p> <p>The main source of external noise intrusion is the south coast rail line which is approximately 230m from the site. Given the distance of the site to the railway line, an acoustic report was not considered necessary. A condition is recommended in relation to the acoustic performance of the units if consent is granted to the development.</p> <p>Building siting is appropriate with regarding to noise transfer between buildings.</p>	<p>Yes</p>
Dwelling type	Storage size volume											
Studio apartments	4m ³											
1 bedroom apartments	6m ³											
2 bedroom apartments	8m ³											
3+ bedroom apartments	10m ³											

Standards/controls	Comment	Compliance
<p><u>Objective 4H-2</u></p> <p><i>Noise impacts are mitigated within apartments through layout and acoustic treatments</i></p> <p><u>Design Guidance</u></p> <p>In addition to mindful siting and orientation of the building, acoustic seals and double or triple glazing are effective methods to further reduce noise transmission.</p>	<p>Internal layout generally provides for appropriate internal acoustic amenity within and between individual units.</p> <p>The majority of each floor has matching room types to the rooms below / above and adjoining.</p> <p>It is recommended that conditions be imposed in relation to mechanical plant and exhaust ventilation systems to ensure that noise transmission from such plant and equipment is appropriately dealt with.</p>	Yes
<p><u>4J Noise and pollution</u></p> <p><u>Objective 4J-1</u></p> <p><i>In noisy or hostile environments the impacts of external noise and pollution are minimised through the careful siting and layout of buildings</i></p> <p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - Minimise impacts through design solutions such as physical separation from the noise or pollution source, <p><u>Objective 4J-2</u></p> <p><i>Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission</i></p> <p>Part 4 – Designing the building – Configuration</p> <p><u>4K Apartment mix</u></p> <p><u>Objective 4K-1</u></p> <p><i>A range of apartment types and sizes is provided to cater for different household types now and into the future</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - A variety of apartment types is provided - The apartment mix is appropriate, taking into consideration the location of public transport, market demands, demand for affordable housing, different cultural/social groups 	<p>The site is not located in a noisy or hostile environment.</p>	N/A
<p><u>Objective 4K-1</u></p> <p><i>A range of apartment types and sizes is provided to cater for different household types now and into the future</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - A variety of apartment types is provided - The apartment mix is appropriate, taking into consideration the location of public transport, market demands, demand for affordable housing, different cultural/social groups 	<p>There are only 5 x 3 bedroom units (1% of the overall unit mix which is less than that required by the DCP) The applicant contends that there is no market demand for units of this type in the locality.</p> <p>28 of the units are identified as ‘adaptable’ units and an additional 28 are indicated as having been designed to the liveable housing standard. The internal layout of such units is however poor and appears non-compliant with the applicable standards.</p>	No

Standards/controls	Comment	Compliance
<ul style="list-style-type: none"> - Flexible apartment configurations are provided to support diverse household types and stages of life <p><u>Objective 4K-2</u></p> <p><i>The apartment mix is distributed to suitable locations within the building</i></p> <p><u>Design guidance</u></p> <p>Larger apartment types are located on the ground or roof level where there is potential for more open space and on corners where more building frontage is available</p>	<p>Only 1 bedroom adaptable units are proposed which is less than desirable.</p> <p>The floor plans of apartments are standardised across levels and generally do not cater to a wide range of household typologies.</p> <p>While the number of 1BR/ studio apartments is compliant with the DCP, there is little flexibility in the design, and no dual key arrangements are proposed, and only 5 family style (3BR) units have been included.</p>	
<p><u>Objective 4L-2</u></p> <p><i>The apartment mix is distributed to suitable locations within the building</i></p> <p><u>Design guidance</u></p> <p>Larger apartment types are located on the ground or roof level where there is potential for more open space and on corners where more building frontage is available</p>	<p>All 3 bedroom apartment are on the top level of the eastern tower designed as “penthouses” and 1 bedroom units are generally located on lower levels. No consideration has been given to affordable family units on the podium.</p>	
<p><u>4L Ground floor apartments</u></p> <p><u>Objective 4L-1</u></p> <p><i>Street frontage activity is maximised where ground floor apartments are located</i></p> <p><u>Objective 4L-2</u></p> <p><i>Design of ground floor apartments delivers amenity and safety for residents</i></p>	<p>N/A, no ground floor apartments</p>	<p>N/A</p>
<p><u>4M Facades</u></p> <p><u>Objective 4M-1</u></p> <p><i>Building facades provide visual interest along the street while respecting the character of the local area</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - To ensure that building elements are integrated into the overall building form and façade design - The front building facades should include a composition of varied 	<p>The applicant has provided a colour and materials schedule with the DA.</p> <p>Front building façade features a combination of building elements and a mixture of materials and details.</p>	<p>No</p>

Standards/controls	Comment	Compliance
<p>building elements, textures, materials, detail and colour and a defined base, middle and top of building.</p> <ul style="list-style-type: none"> - Building services should be integrated within the overall facade - Building facades should be well resolved with an appropriate scale and proportion to the streetscape and human scale. - To ensure that new developments have facades which define and enhance the public domain and desired street character. 	<p>Concern raised by DRP in relation to the form and finish of the building generally; refer to design review at Attachment 5. Specific concerns relate to the bulk of the towers, excessive unscreened glazing to the towers; use of performance glazing which is liable to be very dark; new vertical blades are only added to tower ends - it may be better to integrate more vertical elements to enhance language and better recognize the residential – rather than commercial - nature of the proposal; the columns are poorly integrated at ground and first floor levels; the building appears to be very dark at podium and upper levels and this appears excessive; the glazed faceted balustrade at the top of the very large residential towers appears very weak; either the balustrade should be setback so as not to be visible or replaced with a solid spandrel to match lower levels.</p> <p>Further, the use of higher quality textured materials (such as brick and tile in preference to painted render) should be incorporated at street level (particularly retaining walls and the areas surrounding the vehicular entries, to contribute to a higher quality aesthetic, reduce maintenance and discourage graffiti.</p> <p>Blank, nil set back walls proposed abutting the northern boundary may be visible from the street for the foreseeable future. Higher quality materials / finishes should be provided to the sections of these walls that will be visible from the public domain.</p> <p>Building services are integrated into the façade in a manner which will not reduce the design quality of the building.</p> <p>Awnings are not proposed to be provided extending across the public footpaths however there is an awning proposed as well as a podium undercroft which extends outwards at differing depths towards the street frontages, covering the walkway below.</p>	

<i>Standards/controls</i>	<i>Comment</i>	<i>Compliance</i>
<p><u>Objective 4M-2</u></p> <p><i>Building functions are expressed by the facade</i></p> <p><u>Design guidance</u></p> <p>Building entries should be clearly defined</p> <p>4N Roof design</p> <p><u>Objective 4N-1</u></p> <p><i>Roof treatments are integrated into the building design and positively respond to street</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - Roof design should use materials and a pitched form complementary to the building and adjacent buildings. <p><u>Objective 4N-2</u></p> <p><i>Opportunities to use roof space for residential accommodation and open space are maximised</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - Habitable roof space should be provided with good levels of amenity. - Open space is provided on roof tops subject to acceptable visual and acoustic privacy, comfort levels, safety and security considerations <p><u>Objective 4N-3</u></p> <p><i>Roof design incorporates sustainability features</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - Roof design maximises solar access to apartments during winter and provides shade during summer <p>4O Landscape design</p> <p><u>Objective 4O-1</u></p> <p><i>Landscape design is viable and sustainable</i></p> <p><u>Design guidance</u></p>	<p>Differing glass and material choices are proposed between the commercial podium and residential towers.</p> <p>The residential lobbies are poorly marked.</p> <p>Roof detail is generally lacking with little information regarding services, etc. A more detailed plan of roofs (including Tower 2) should be submitted.</p> <p>No – roof is used for services and appears to have the lift overrun missing as the lift should address service level for the transport of bulky/heavy items.</p> <p>No detail provided for this iteration of design. “Stormwater shaft” does not appear to connect with roof drainage – detail regarding its use should be provided</p> <p>Improvements have been recommended by the DRP in relation to the treatment of the COS area.</p>	<p>No</p> <p>Yes</p> <p>No</p>

Standards/controls	Comment	Compliance
<ul style="list-style-type: none"> - Landscape design should be environmentally sustainable and can enhance environmental performance - Ongoing maintenance plans should be prepared 	<p>The landscape plan does not reflect the full extent of the wind mitigation measures proposed in the wind study, which includes recommendations for 2-3m high baffles and dense tall planting to ground floor landscape beds. The installation of the wind screens may compromise the street trees which are to be retained – this should be verified by an arborist.</p> <p>The wind study also requires the provision of a 1.8m wide screen (of different materials) around the entire COS. This will affect the elevations to the streetscape, including planting details (such as draping landscaping falling over southern boundary).</p>	
<p><u>Objective 4O-2</u></p> <p><i>Landscape design contributes to the streetscape and amenity</i></p>	<p>Detail should be provided to show that the planting is viable due to the various services below ground.</p>	
<p><u>4P Planting on Structures</u></p> <p><u>Objective 4P-1</u></p> <p><i>Appropriate soil profiles are provided</i></p>	<p>Previous concerns raised in relation to soil depth on the podium rooftop COS appear to be resolved, however as noted above there is concern there could be a knock-on effect from insufficient loading zone heights which will likely be removed from planting areas.</p>	
<p><u>Objective 4P-2</u></p> <p><i>Plant growth is optimised with appropriate selection and maintenance</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - Plants are suited to site conditions 	<p>Generally acceptable</p>	
<p><u>Objective 4P-3</u></p> <p><i>Planting on structures contributes to the quality and amenity of communal and public open spaces</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - Building design incorporates opportunities for planting on structures. Design solutions may include: 	<p>Generally acceptable</p> <p>Landscape design is generally satisfactory though some improvements have been recommended by the DRP in relation to the treatment of the COS area and podium rooftop.</p>	<p>Yes</p>

Standards/controls	Comment	Compliance
<ul style="list-style-type: none"> • green walls with specialised lighting for indoor green walls • wall design that incorporates planting • green roofs, particularly where roofs are visible from the public domain • planter boxes 	<p>It is noted that the elevations appear to be misleading in regards to the extent of planting on structure.</p> <p>If approved, conditions should be imposed in relation to specific podium/ on structure planting matters including conditions relating to the design, implementation and ongoing maintenance of the planters proposed within the development to ensure their success</p>	
<p><u>4Q Universal design</u></p> <p><u>Objective 4Q-1</u></p> <p><i>Universal design features are included in apartment design to promote flexible housing for all community members</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - A universally designed apartment provides design features such as wider circulation spaces, reinforced bathroom walls and easy to reach and operate fixtures <p><u>Objective 4Q-2</u></p> <p><i>A variety of apartments with adaptable designs are provided</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - Adaptable housing should be provided in accordance with the relevant council policy <p><u>Objective 4Q-3</u></p> <p><i>Apartment layouts are flexible and accommodate a range of lifestyle needs</i></p>	<p>28 adaptable and 28 liveable apartments are indicated on the plans.</p> <p>However, liveable apartments do not meet requirements. A pinch point of only 900mm is provided in hallways (required to be 1m). Additionally, no detail of door widths has been provided and toilets should be located in corners. Demonstration of space at bedroom door overlaps with bed.</p> <p>28 of the units (10.2% of the 272 proposed) are identified as adaptable units. All of these are 1 bedroom units however the liveable apartments are predominantly 2 bed.</p> <p>The applicant has provided an access consultant report verifying that the adaptable units can achieve compliance with the relevant standard. However, adaptable apartments should not require an entire rearrangement of plumbing in the bathroom to achieve adaptability – this is near impossible in concrete apartment buildings without significant cost and inconvenience to both the resident and their neighbours in the apartment below</p> <p>Adaptable apartments are 1 bed, while liveable apartments are 2 bed. While this</p>	<p>No</p>

<i>Standards/controls</i>	<i>Comment</i>	<i>Compliance</i>
<u>Design guidance</u> Apartment design incorporates flexible design solutions 4R Adaptive reuse 4S Mixed use <u>Objective 4S-1</u> <i>Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement</i> <u>Design guidance</u> <ul style="list-style-type: none"> - Mixed use development should be concentrated around public transport and centres - Mixed use developments positively contribute to the public domain. <u>Objective 4S-2</u> <i>Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents</i> <u>Design guidance</u> <ul style="list-style-type: none"> - Residential circulation areas should be clearly defined. - Landscaped communal open space should be provided at podium or roof levels 4T Awnings and signage <u>Objective 4T-1</u> <i>Awnings are well located and complement and integrate with the building design</i> <u>Design guidance</u> <ul style="list-style-type: none"> - Awnings should be located along streets with high pedestrian activity and active frontages <u>Objective 4T-2</u>	provides some flexibility, as listed above apartment layouts are not suitable. N/A The location of the development site is appropriate with regard to zoning, proximity to the city centre and availability of public transport. The viability of very small retail tenancies is questioned in this location, being at the periphery of the city centre. There is a child care centre immediately adjacent to the site. Residential entries are concealed from view which is problematic. Separate circulation / entries are provided to the residential and commercial components of the development. Residential entries are however concealed from view of the street. Landscaped communal open space areas provided at podium as required. The awning strategy is generally acceptable (despite not being in line with the pedestrian realm and the desired street wall), however there is an awkward relationship between the lower awning	 N/A Yes and no Yes

<i>Standards/controls</i>	<i>Comment</i>	<i>Compliance</i>
<p><i>Signage responds to the context and desired streetscape character</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - Signage should be integrated into the building design and respond to the scale, proportion and detailing of the development <p>Part 4 – Designing the building - Configuration</p> <p><u>4U Energy efficiency</u></p> <p><u>Objective 4U-1</u></p> <p><i>Development incorporates passive environmental design</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - Adequate natural light is provided to habitable rooms (see 4A Solar and daylight access) <p><u>Objective 4U-2</u></p> <p><i>Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer</i></p> <p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - Provision of consolidated heating and cooling infrastructure should be located in a centralised location <p><u>Objective 4U-3</u></p>	<p>and tower overhang. Detailed contextual analysis required to determine whether this is a suitable design response.</p> <p>It is noted that the previously approved scheme for the site did not incorporate footpath awnings.</p> <p>No specific signage proposed.</p> <p>The development incorporates few passive environmental design features.</p> <p>The NatHERs certificate is inaccurate and misleading, which brings into doubt the achievement of the energy efficiency targets indicated on the BASIX certificate.</p> <p>No bathrooms or laundries have external windows for natural ventilation, relying heavily on mechanical ventilation strategies.</p> <p>Solar impacts on large expanses of west-facing glazing and balconies remain unresolved, contributing to heat gain and affecting internal thermal comfort, thereby reducing energy efficiency.</p> <p>45% of the units appear to achieve satisfactory solar access; refer to 4A discussion above. Solar access to the COS and CCF will be compliant with applicable controls.</p> <p>On such a large proposal, the lack of incorporation of basic energy efficiency measures is a poor response and shows a lack of commitment to sustainable design.</p> <p>Plant rooms are located within the ground floor and on the roof of the towers.</p> <p>No bathrooms or laundries have external windows for natural ventilation, relying</p>	<p>No</p>

<i>Standards/controls</i>	<i>Comment</i>	<i>Compliance</i>
<i>Adequate natural ventilation minimises the need for mechanical ventilation</i>	heavily on mechanical ventilation strategies.	
<u>4V Water management and conservation</u>		
<u>Objective 4V-1</u>		
<i>Potable water use is minimised</i>	The applicant has obtained a BASIX certificate which confirms that the proposed development will meet the NSW Government requirements for sustainability if built in accordance with the commitments set out in the certificate. It is noted that no detail has been provided within the BASIX certificate in relation to rainwater collection.	No
<u>Objective 4V-2</u>		
Urban stormwater is treated on site before being discharged to receiving waters	The applicant has provided a Water Sensitive Urban Design plan with the development which has been reviewed by Council's Environmental Officer who has deemed it consistent with the water quality objectives of WDCP 2009 Chapter E15. Conditions are recommended in this regard.	Yes
<u>Design guidance</u>		
- Water sensitive urban design systems are designed by a suitably qualified professional		
<u>Objective 4V-3</u>		
<i>Flood management systems are integrated into site design</i>	The stormwater design is satisfactory and the design makes provision for the required flood mitigation and management. The flood management system is integrated into the building/ site design. The proposed arrangement is satisfactory to Council's Stormwater Engineers.	Yes
<u>Design guidance</u>		
Detention tanks should be located under paved areas, driveways or in basement car parks		
<u>4W Waste management</u>		No
<u>Objective 4W-1</u>		
<i>Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents</i>	The applicant proposes waste storage within the basement levels. Separate waste storage rooms are available for the commercial and residential components of the development. Collection is proposed to occur from the internal loading dock however there appears to be no access available to the dock from the western waste room in Basement Level 1.	
<u>Design guidance</u>		
Common waste and recycling areas should be screened from view and well ventilated		

<i>Standards/controls</i>	<i>Comment</i>	<i>Compliance</i>
<p><u>Objective 4W-2</u></p> <p><i>Domestic waste is minimised by providing safe and convenient source separation and recycling</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - Communal waste and recycling rooms are in convenient and accessible locations related to each vertical core - For mixed use developments, residential waste and recycling storage areas and access should be separate and secure from other uses <p>Alternative waste disposal, such as composting, can be incorporated into the design of communal open space areas</p> <p>4X Building maintenance</p> <p><u>Objective 4X-1</u></p> <p><i>Building design detail provides protection from weathering</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - Design solutions such as roof overhangs to protect walls and hoods over windows and doors to protect openings can be used. <p><u>Objective 4X-2</u></p> <p><i>Systems and access enable ease of maintenance</i></p> <p><u>Design guidance</u></p> <p>Window design enables cleaning from the inside of the Building</p> <p><u>Objective 4X-3</u></p> <p><i>Material selection reduces ongoing maintenance costs easily cleaned surfaces that are graffiti resistant</i></p>	<p>Waste will be transported to the garbage room from the residential units via the garbage chutes.</p> <p>Garbage chute provided for general waste on each floor, however the provided plans do not appear to match the WMP's detailing of recycling and organic waste separation as only one chute is provided.</p> <p>Separation of materials should be provided on each floor.</p> <p>No detail provided, however multiple facades are exposed tinted glass, which is likely to weather and need regular cleaning by a licenced professional.</p> <p>A large number of windows are unable to be accessed from balconies or terraces for ease of cleaning so other cleaning methods will be required to be employed.</p> <p>Material selection generally appropriate with regard to graffiti resistance and cleaning. However the use of higher quality textured materials (such as brick and tile in preference to painted render) should be incorporated at street level (particularly to retaining walls and the areas surrounding the vehicular entries, to contribute to a higher quality aesthetic, reduce maintenance and discourage graffiti.</p>	<p>Yes & no</p>