Attachment 3 - Apartment Design Guide Assessment

Standards/controls	*Comment*	*Compliance*
Part 1 – Identifying the context		
1A Apartment building types	The proposal is as Shop Top Apartment Building that does not specifically reflect any of the apartment building type examples provided in the ADG.	Yes
1B Local character and context 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. A departure is sought in respect of building separation to the northern boundary which is considered to be acceptable in this instance.	Yes
1C Precincts and individual sites 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:		Yes
- Site amalgamation where appropriate	The site is an existing large site with a lengthy frontage to Atchison Street.	
- 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.	The site has a single frontage to Atchison Street. The development is not expected to have an unreasonable impact on the development potential of adjacent sites. There is the potential for the adjacent site to the immediate south of the subject land to be isolated by the proposal however the applicant has provided supporting documentation which indicates that, with amalgamation of the two southern sites (No.44 & 46 Atchison Street), these site could realise a reasonable development yield. Similarly, to the north, the two adjacent sites would require consolidation in order to achieve a reasonable development potential as envisaged by the planning controls.	

Standards/controls	*Comment*	*Compliance*
	The site is located with the City Centre precinct and well located with regard to the CBD and Wollongong railway station.	
Part 2 – Developing the controls		N/A
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.	Strategic planning tool intent noted.	
Part 3 Siting the development		
3A Site analysis		
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: - Site location plan - Aerial photograph - Local context plan - Site context and survey plan - Streetscape elevations and sections - Analysis A written statement explaining how the design of the proposed development has responded to the site analysis must accompany the development application.	Detailed site analysis plans provided with the DA material.	Yes
3B Orientation		Yes
Buildings must be oriented to maximise norther orientation, response to desired character, promote amenity for the occupant and adjoining properties, retain trees and open spaces and respond to contextual constraints such as overshadowing and noise. *Objective 3B-1:* *Building types and layouts respond to the streetscape and site while optimising solar access within the development* Design Guidance - Buildings should define the street by facing it and providing direct access.	Building faces the street; units above ground floor level are oriented towards the street, offering opportunities for surveillance of the street. Most units appear to enjoy good solar access. The proposed ground level retail/ commercial spaces address the street and whilst they are elevated due to the flooding constraint, access within tenancies is reasonably well resolved. The entrances are reasonably legible and the shop fronts provide for an active street frontage. The scale of the building responds to the desired future character sought to be achieved in the precinct as defined by the planning controls (floor space ratio, height, and building setbacks). The strategic local character and future	

Standards/controls	*Comment*	*Compliance*
	desired character of the site is set by Wollongong LEP 2009 (B3 zone, Clause 8.1 Objectives for development in Wollongong City Centre) and Chapter D13 of Wollongong DCP 2009 (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. Council's Landscape Architect has assessed the application and provided a satisfactory referral subject to conditions.	
Objective 3B-2 *Overshadowing of neighbouring properties is minimised during mid- winter* Design Guidance - 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	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. Given the zoning of the site and allowable heights and densities this is considered to be a reasonable outcome.	Yes
3C Public domain interface Key components to consider when designing the interface include entries, private terraces or balconies, fences and walls, changes in level, services locations and planting. The design of these elements can influence the real or perceived safety and security of residents, opportunities for social interaction and the identity of the development when viewed from the public domain *Objective 3C-1:* *Transition between private and public domain is achieved without compromising safety and security* Design Guidance - Terraces, balconies and courtyards should have direct street entry, where appropriate - Changes in level between private terraces etc above street level provide surveillance and improved visual privacy for ground level dwellings.	Active street frontage provided. Public domain to be treated with footpath paving and street tree planting in accordance with Council's City Centre Public Domain Technical Manual. Conditions are recommended in this regard. Residential balconies face the street frontage, providing opportunities for natural	Yes

Standards/controls	*Comment*	*Compliance*
	surveillance.	
- Front fences and walls along street frontages should use visually permeable materials and treatments. The height of solid fences or walls should be limited to 1m. - Opportunities should be provided casual interaction between residents and the public domain eg seating at building entries, near letterboxes etc	The ground floor is raised due to flood affectation which provides opportunities for surveillance of the street from the ground level commercial tenancies. The design provides for the glazed tenancies to be a dominant element of the façade.	
<u>*Objective 3C-2:*</u> *Amenity of the public domain is retained and enhanced* <u>Design Guidance</u> - 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 - Where development adjoins public parks or open space the design should address this interface.	The amenity of the public domain will be vastly improved by development of the site in the manner proposed. The development will provide for active ground floor uses and an active street presence. Public domain works comprising paving and street tree planting will also enhance the public domain. 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. Mailboxes located within the residential lobby. Durable materials proposed.	
<u>3D Communal and public open space</u> <u>*Objective 3D-1*</u> *An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping* <u>Design Criteria</u> 1.Communal open space has a minimum area of 25% of the site area (ie 683.3sqm)	The principal communal open space located on the Level 2 podium at the rear of the tower has an area of 672qm. There is also a communal roof garden on the rooftop (Level 18) which has an area of 122sqm. Both areas of communal open space are accessible for residents from the lobby via the lifts. The landscape plan makes provision for casual seating, along with possible locations for a BBQ and outdoor dining. In addition to outdoor area, it is also proposed to provide a common room on Level 18.	Yes

Standards/controls	*Comment*	*Compliance*
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	The communal open space areas will both receive between sufficient sunlight between 9am and 3pm as required. Some shade will be offered to sections of the COS via planting and structures.	
<u>Design Guidance</u> - Communal open space should be consolidated into a well designed, usable area. - Minimum dimension of 3m - Should be co-located with deep soil areas - Direct & equitable access required - Where not possible at ground floor it should be located at podium or roof level.	The two communal open space areas in combination achieve the minimum area required for the site and satisfy the required dimension requirements. The design and treatment will provide for well designed, usable areas. Direct and equitable access is available to both communal open space areas.	
<u>*Objective3D-2*</u> *Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting*		
<u>Design guidance</u> - Facilities to be provided in communal open spaces for a range of age groups, and may incorporate seating, barbeque areas, play equipment, swimming pools	Provision made for a BBQ, casual seating and possible outdoor dining within the COS areas.	
<u>*Objective 3D-3*</u> *Communal open space is designed to maximise safety*		
<u>Design guidance</u> - Communal open space should be visible from habitable rooms and POS areas and should be well lit.	The principal useable part of the communal open space will be visible from units located above and nearby individual private open space areas.	
<u>3E Deep soil zones</u>		**No** *
<u>*Objective 3E-1*</u> *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.* <u>Design Criteria:</u>	There is some DSZ provided within the rear (western) portion of the site to the rear of the building. Some landscaped area is also provided in the area over and around the drainage easement; though this does not constitute DSZ per se. Within the B3 Commercial Core there is less expectation that DSZ can be achieved and rather planting on structure is expected due to the zero boundary setbacks expected. There is generous planting on structure proposed on the podium around and within the communal open space area	Acceptable in B3 zone

Standards/controls	*Comment*	*Compliance*
1. Deep soil zones are to meet the following minimum requirements: Site area / Minimum dimensions / Deep soil zone (% of site area) less than 650m² / - / 7% 650m² - 1,500m² / 3m greater than 1,500m² / 6m greater than 1,500m² with significant existing tree cover / 6m <u>Design guidance:</u> - Deep soil zones should be located to retain existing significant trees. **<u>3F Visual privacy</u>** *<u>Objective 3F-1</u>* *Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual amenity.* <u>Design Criteria:</u> 1. Minimum required separation distances from buildings to the side and rear boundaries are as follows: 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 <u>Design Guidance</u> - Direct lines of sight should be avoided - No separation is required between blank walls	and on some terraces. <u>Northern boundary</u> - ground and mezzanine are built to the boundary to achieve a continuous street wall as required by the street frontage height controls in the DCP. Solid blank walls are proposed. Units within Levels 2 - 5 are setback a minimum of 2.107m from the northern boundary. Walls are however solid/ blank with the exception of two narrow translucent screened bedroom windows. Balconies to the building edge are also screened. No separation to blank walls is accepted by ADG. **Setback to communal open space on L2 is 0m.** Units within L6 – setback >9m as required; however the setback to the edge of the **terrace is a minimum of 4.5m which is less than that required (6m).** The landscape plan however makes provision for dense planting to the boundaries of the terrace which will offer protection from direct overlooking at that level and this will also offer some softening of the building form. L7 – L18 - 12m and greater setback to walls and balconies. <u>Southern boundary</u> – ground and mezzanine are built to the boundary in part to achieve a continuous street wall as required by the street frontage height controls in the DCP. Solid blank walls proposed to boundary. Units within Levels 2 - 3 are setback 6.5m	**No – variations identified in bold in column to the left.** Variation sought in relation northern setback for L6 terrace; the setback from the southern boundary for the L2 balcony; and to the principal communal open space on L2 podium to the north, south and to the western boundary. Variation are considered acceptable as discussed

Standards/controls	*Comment*	*Compliance*
	to walls and **4.5m to balcony** on level 2 (6m required). In order to overcome this area of non-compliance, the applicant has suggested that a condition be imposed requiring all trafficable areas of the balcony be setback at least 6m from the southern boundary. This will not reduce the availability of POS to the appurtenant units to less than that required by the ADG. **Setback to communal open space on L2 is 0m;** L4 and 5 are setback 12m to walls and 9.5m to edge of balconies (9m required); L6 – L8 – 12m setback to walls and balconies (9m required); L9 – L18 – more than 12m proposed to walls and balconies. <u>Western boundary</u> – ground and mezzanine are built to the boundary as required (blank walls); Setbacks to Levels 2 and above (measured to walls) are greater than 12m to the western boundary. **Setback to communal open space on L2 is 0m though there is extensive planting to its edges which will reduce overlooking at this level.** Balconies are all setback a minimum distance of 12.58m to all parts of the building above 25m high where a 12m setback is required. In conclusion, the objectives of 3F are considered to be achieved as adequate levels of internal and external privacy would be achieved via the applicant's proposed northern elevation window treatments and balcony screen as landscaping works around the Level 2 podium communal open space.	
<u>*Objective 3F-2:*</u> *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* <u>Design Guidance</u> - Communal open space, common areas and access paths should be separated from private open space and windows to apartments. Design solutions include: · Setbacks, · Solid or partly solid balustrades to	A defensive design approach has been taken to the northern elevation of the building to levels 2 – 5 with minimal openings proposed. Good solar access will however be available to the end units as these are shallow and are designed to face east and west. Screening devices are to be used in part for shading, privacy and fenestration. Planting to be provided to the edges of the level 2 podium (principal COS) to provide	

Standards/controls	*Comment*	*Compliance*
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	screening of the communal open space and vice versa from the western boundary.	
3G Pedestrian access and entries *Objective 3G-1* *Building entries and pedestrian access connects to and addresses the public domain* Design Guidance - 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. *Objective 3G-2* *Access, entries and pathways are accessible and easy to identify* Design Guidance - 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.	Multiple entries are proposed to activate the street edge. Entries clearly identifiable. Proposed entry addresses the public domain. Ground floor level is elevated due to flooding. Lift and stair access is provided to all dwellings from the basement and ground floor level. Access points are clearly visible. The development makes provision for access to be obtained to the elevated ground floor plate (inclusive of commercial spaces and the residential lobby) via either stairs or platform lifts. The proposal initially included a ramp at the street frontage however the Design Review Panel recommended its removal and replacement. Steps and platform lifts are integrated into	Yes

Standards/controls	*Comment*	*Compliance*
	the overall building and landscape design as required.	
Objective 3G-3 *Large sites provide pedestrian links for access to streets and connection to destinations*	No through-site link required.	
3H Vehicle access *Objective 3H-1* *Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes* Design Guidance		Yes
- 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.	Proposed car park entry is behind the building line. Headlight glare is not expected to be an issue. Proposed driveway location removed from the nearest intersection. Loading/ service areas all screened from view. Vehicle and pedestrian access separated. Roller shutters proposed within the building. Driveway and vehicular entry width is acceptable.	
3J Bicycle and car parking *Objective 3J-2* *Parking and facilities are provided for other modes of transport* Design Guidance - Conveniently located and sufficient numbers of parking spaces should be provided for motorbikes and scooters - Secure undercover bicycle parking should be provided that is easily accessible from both the public domain and common areas.	Adequate vehicle, motor bike and bicycle parking provided meeting the requirements of the Metropolitan Sub Regional car parking rates in the RTA Guide to Traffic Generating Development in respect of the residential component of the development and the rates specified in Chapter E3 of WDCP 2009 for the commercial component of the development. Parking to be provided in part on grade, within the ground level and 2 levels of basement parking. Appropriate resident bicycle security arrangements are proposed.	Yes
Objective 3J-3 *Car park design and access is safe and secure* Design Guidance - Supporting facilities within car parks (garbage rooms, storage areas, car wash bays) can be accessed without	Supporting facilities generally adequately located. Basement layout is appropriate with regard	

Standards/controls	*Comment*	*Compliance*
crossing parking spaces - 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.	to safety and security. Roller shutter proposed within the basement. If approved, it is recommended that proposed any roller shutters be permeable to improve ventilation. No details provided in relation to mechanical ventilation; impose conditions in relation to provision of appropriate mechanical ventilation and ducting.	
<u>*Objective 3J-4*</u> *Visual and environmental impact of underground car parking are minimised* <u>Design Guidance</u> - 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.	Basement/ car park walls are to be built to the side and rear boundaries. Car park layout appears to be reasonably efficient.	
<u>*Objective 3J-5*</u> *Visual and environmental impact of on-grade car parking are minimised* <u>Design Guidance</u> - On-grade car parking should be avoided; - Where unavoidable, the following design solutions should be used – parking is located on the side or rear of the lot away from the primary street frontage - Cars are screened from view of streets, buildings, communal and private open space areas - Safe and direct access to building entry points is provided - Parking is incorporated into the landscaping design of the site - Stormwater run-off is appropriately managed - Light coloured paving materials or permeable paving systems are used and shade trees are planted to reduce increased surface temperatures from	Some on-grade parking proposed to the rear of the building; will not be visible from the street frontage; directly accessible via the ground floor entry. Permeable paving system and landscaping of the on-grade parking area is proposed.	

Standards/controls	*Comment*	*Compliance*
large areas of paving		
Part 4 – Designing the building - Amenity		
4A Solar and daylight access		Yes
Objective 4A-1		
To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space		
Design Criteria		
1. Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of two (2) hours direct sunlight between 9am and 3pm in mid-winter in Wollongong LGA.	The applicant has provided evidence that at least 70% of the units can achieve appropriate solar access (living rooms and private open spaces receive a minimum of 2 hours sunlight between 9am-3pm mid-Winter.)	
1. A maximum of 15% of apartments in a building receive no direct sunlight between 9am and 3pm at mid winter		
Design Guidance	There are no single aspect south-facing units; all units are generally orientated towards the east or west and a number of dual aspect units are proposed. Most apartments are shallow which will allow for good sunlight penetration.	
- 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 $1m^2$ of direct sunlight measured at 1m above floor level, is achieved for at least 15 minutes.		
Objective 4A-2		
Daylight access is maximised where sunlight is limited	Sunlight is not limited in this instance.	
Design Guidance		
- Courtyards, skylights and high level windows (sill heights of 1500m or greater) are used only as secondary light sources in habitable rooms		
Objective 4A-3		
Design incorporates shading and glare control, particularly for warmer months	Glare control is provided in the form of screens and louvre systems and landscape planter beds in the cases of some terraces and balconies.	
Design Guidance		
Design features can include:		

Standards/controls	*Comment*	*Compliance*
- Balconies - Shading devices or planting - Operable shading - High performance glass that minimises external glare		
4B Natural ventilation		Yes
Objective 4B-1		
All habitable rooms are naturally ventilated.	Units have been generally been designed to achieve cross ventilation.	
Design Guidance		
- 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.		
Objective 4B-2		
The layout and design of single aspect apartments maximises natural ventilation		
Design Guidance		
- Single aspect apartments should use design solutions to maximise natural ventilation.	There are a number of single aspect units. These are generally shallow and are designed around balconies which should assist in maximising ventilation.	
Objective 4B-3		
The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents		
Design Criteria:		
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.	33 units will achieve cross ventilation (ie 61.1% of the 54 units in the first nine storeys); overall a total of 77.2% (71 out of the 92 residential apartments) will be naturally cross ventilated	
4C Ceiling heights		Yes
Objective 4C-1		
Ceiling height achieves sufficient natural ventilation and daylight access		
Design Criteria		
1. Minimum 2.7m for habitable rooms and 2.4m for non-habitable rooms	Minimum ceiling height of 2.7m proposed to habitable (all) rooms.	

Standards/controls	*Comment*	*Compliance*
Objective 4C-2 *Ceiling height increases the sense of space in apartments and provides for well-proportioned rooms* *Objective 4C-3* *Ceiling height contribute to the flexibility of building use over the life of the building* Design Guidance - Ceiling heights of lower level apartments in centres should be greater than the minimum required by the design criteria allowing flexibility and conversion to non-residential uses.		
4D Apartment size and layout		Yes
Objective 4D-1 *The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity* Design Criteria: 1. Minimum internal areas: 2 bed – 70m^2 3 bed – 90m^2 The minimum internal areas include only 1 bathroom. Additional bathrooms increase the minimum internal areas by 5m^2 each. A fourth bedroom and further additional bedrooms increase the minimum internal by 12m^2.	Apartment size and layout is generally functional, well organised and provides a reasonable standard of amenity for future residents. The unit layout has been considered by the Design Review Panel and is considered to be acceptable. A number of amendments were made to the plans to provide improvements in this regard. All units achieve compliance with the minimum internal areas specified.	
2. 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	All habitable rooms have adequate windows.	
Objective 4D-2 *Environmental performance of the apartment is maximised* Design Criteria: 1. Habitable room depths are limited to a maximum of 2.5 x ceiling height 2. In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window. Design Guidance: - Greater than the minimum ceiling heights can allow proportionate	Habitable room depths comply. Unit depths comply 2.7m ceiling heights proposed. Most units within the proposal are designed with	

Standards/controls	*Comment*	*Compliance*
increases in room depths. - Where possible, bathrooms and laundries should have an external openable window.	bathrooms and laundries without external opening windows to allow all habitable rooms to achieve access to external windows.	
- Main living spaces should be oriented towards the primary outlook.	Living spaces are oriented towards the west and east to take advantage of outlook.	
Objective 4D-3 *Apartment layouts are designed to accommodate a variety of household activities and needs*		
Design Criteria: 1. Master bedrooms have a minimum area of $10m^2$ and other bedrooms $9m^2$ (excl wardrobe space) 2. Bedrooms have minimum dimension of 3m (excl wardrobe) 3. Living rooms have minimum width of: - 3.6m for studio and 1 bed apartments and - 4m for 2+ beds. 4. The width of the crossover or cross through apartments are at least 4m internally to avoid deep narrow apartment layouts.	Bedroom and living room dimensions are adequate.	
Design Guidance: - Access to bedrooms, bathrooms and laundries is separated from living areas - Minimum 1.5m length for bedroom wardrobes - Main bedroom apartment: minimum 1.8m long x 0.6m deep x 2.1m high wardrobe - Apartment layouts allow for flexibility over time, including furniture removal, spaces for a range of activities and privacy levels within the apartments.		
4E Private open space and balconies *Objective 4E-1* *Apartments provide appropriately sized private open space and balconies to enhance residential amenity* 1. Minimum balcony depths are:	All balcony areas achieve the minimum area and depth requirements	Yes

Standards/controls	*Comment*	*Compliance*
<table><tr><th>Dwelling type</th><th>Minimum area</th><th>Minimum depth</th></tr><tr><td>Studio apartments</td><td>4m²</td><td>-</td></tr><tr><td>1 bedroom apartments</td><td>8m²</td><td>2m</td></tr><tr><td>2 bedroom apartments</td><td>10m²</td><td>2m</td></tr><tr><td>3+ bedroom apartments</td><td>12m²</td><td>2.4m</td></tr></table> The minimum balcony depth to be counted as contributing to the balcony area is 1m.		
2. Ground level apartment POS must have minimum area of 15m^2 and min. depth of 3m	No ground level apartments proposed	
<u>*Objective 4E-2*</u> *Primary private open space and balconies are appropriately located to enhance liveability for residents*		
<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 of all units are located adjoining and accessible from living/dining areas.	
- POS & Balconies should be oriented with the longer side facing outwards to optimise daylight access into adjacent rooms.	Adequate solar access appears to be available to the private open space areas.	
<u>*Objective 4E-3*</u> *Primary private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building*		
<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.	Balconies designed to articulate the façade. A variety of materials are proposed, including solid fin walls, glass and louvre screens in part.	
<u>*Objective 4E-4*</u> *Private open space and balcony design maximises safety*		
<u>Design Guidance</u> - Changes in ground levels or landscaping are minimised.		

Standards/controls	*Comment*	*Compliance*
4F Common circulation and spaces *Objective 4F-1* *Common circulation spaces achieve good amenity and properly service the number of apartments.* Design Criteria 1. The maximum number of apartments off a circulation core on a single level is eight 2. For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40. Design Guidance - 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. *Objective 4F-2* *Common circulation spaces promote safety and provide for social interaction between residents* Design Guidance: - Incidental spaces can be used to provide seating opportunities for residents, and promotes opportunities for social interaction.	2 - 9 apartments on each level; serviced by 2 lifts. 92 units share 2 lifts Corridors are lengthy though are partly articulated and have access to natural light via windows. Some amendments were made to the corridors in response to recommendations of the Design Review Panel. Unit entries are appropriately located with regard to circulation spaces. No living or bedroom window openings to common circulation spaces. Some seating within L2 lobby. Common circulation areas are proposed to be well lit with natural light and access to natural ventilation.	Yes
4G Storage *Objective 4G-1* *Adequate, well designed storage is provided in each apartment* 1. In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided	Storage Required: 1 bed 13 x $6m^3$ = $78m^3$ 2 bed 63 x $8m^3$ = $504m^3$ 3 bed 16 x 10 = $160m^3$ Total required: $742m^3$ Individual storage lockers are proposed within the basement levels and also within the level 1 mezzanine level. Additional storage also provided for internal to units. Overall quantum of storage provision is compliant. It is recommended that a condition be	Yes

Standards/controls	*Comment*	*Compliance*
<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> At least 50% of the required storage is to be located within the apartment	imposed to ensure apartment dedication occurs to the residential storage lockers.	
<u>*Objective 4G-2*</u> *Additional storage is conveniently located, accessible and nominated for individual apartments* <u>Design Guidance:</u> - Storage not located within apartments should be allocated to specific apartments.	Individual secure storage units proposed for each unit; impose condition to ensure apartment dedication to the residential storage lockers occurs.	
<u>4H Acoustic privacy</u> <u>*Objective 4H-1*</u> *Noise transfer is minimised through the siting of buildings and building layout* <u>Design Guidance</u> - 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. - Noise sources such as garage doors, plant rooms, active communal open spaces and circulation areas should be located at least 3m away from bedrooms.	The main source of external noise intrusion is the south coast rail line which is within 150m of the site. An acoustic report supplied with the application details noise attenuation measures required to provide for appropriate internal amenity. Condition implementation of the recommendations of the report and verify compliance with the noise criteria prior to occupation.	Yes
<u>*Objective 4H-2*</u> *Noise impacts are mitigated within apartments through layout and acoustic treatments* <u>Design Guidance</u> - 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.	Internal layout provides for appropriate internal acoustic amenity within individual units. The majority of each floor has matching room types to the rooms below / above and adjoining.	

Standards/controls	*Comment*	*Compliance*
4J Noise and pollution *Objective 4J-1* *In noisy or hostile environments the impacts of external noise and pollution are minimised through the careful siting and layout of buildings* Design Guidance - Minimise impacts through design solutions such as physical separation from the noise or pollution source, *Objective 4J-2* *Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission* Design guidance: - Design solutions include limiting openings to noise sources & providing seals to prevent noise transfer.	Noise attenuation is required in order to provide for appropriate internal acoustic amenity given the proximity of the south coast railway line. Impose conditions requiring implementation of the recommendations of the acoustic report provided with the DA.	Yes, with conditions
Part 4 – Designing the building - Configuration		
4K Apartment mix *Objective 4K-1* *A range of apartment types and sizes is provided to cater for different household types now and into the future* Design guidance - 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 - Flexible apartment configurations are provided to support diverse household types and stages of life *Objective 4K-2* *The apartment mix is distributed to suitable locations within the building* Design guidance - 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	A variety of apartment types are proposed including 1, 2 and 3 bedroom units. 10 of the units (>10% of the 92 proposed) are adaptable units. A combination of 1, 2 and 3 bedroom adaptable units are proposed. In addition, a number of extra units incorporate the Livable Housing Guidelines silver level universal design features. The largest units are proposed on the upper levels of the building where access to extensive views will be available.	Yes

Standards/controls	*Comment*	*Compliance*
4L Ground floor apartments *Objective 4L-1* *Street frontage activity is maximised where ground floor apartments are located* Design guidance - Direct street access should be provided to ground floor apartments - Activity is achieved through front gardens, terraces and the facade of the building. - Ground floor apartment layouts support small office home office (SOHO) use to provide future opportunities for conversion into commercial or retail areas. In these cases provide higher floor to ceiling heights and ground floor amenities for easy conversion *Objective 4L-2* *Design of ground floor apartments delivers amenity and safety for residents* Design guidance - The design of courtyards should balance the need for privacy of ground floor apartments with surveillance of public spaces. Design solutions include: • elevation of private gardens and terraces above the street level by 1-1.5m (see figure 4L.4) • landscaping and private courtyards • window sill heights that minimise sight lines into apartments • integrating balustrades, safety bars or screens with the exterior design - Solar access should be maximised through: • high ceilings and tall windows • trees and shrubs that allow solar access in winter and shade in summer	N/A, no ground floor apartments	N/A
4M Facades *Objective 4M-1* *Building facades provide visual interest along the street while respecting the character of the local area* Design guidance - To ensure that building elements are integrated into the overall building form	The applicant has provided a colour and materials schedule with the DA. The	Yes

Standards/controls	*Comment*	*Compliance*
and façade design - The front building facades should include a composition of varied building elements, textures, materials, detail and colour and a defined base, middle and top of building. - 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.	schedule is considered generally acceptable. Front building façade features a combination of building elements and a mixture of materials; the building provides for a clearly defined base, middle and top. Building services are integrated into the façade in a manner which will not reduce the design quality of the building. Commercial glazed shopfronts will occupy the majority of the street frontage of the ground and first floor level, providing for street activation and commercial/ retail presence. Entries are well defined and access is reasonably well resolved considering the ground floor plate is elevated due to flooding. Awning provided to part of the street frontage.	
<u>*Objective 4M-2*</u> *Building functions are expressed by the facade* <u>Design guidance</u> - Building entries should be clearly defined	Building composition defines the base, middle and top/ tower as required. Refer to design review at **Attachment 4.** The proposed building entries are reasonably well defined.	
<u>4N Roof design</u> <u>*Objective 4N-1*</u> *Roof treatments are integrated into the building design and positively respond to street* <u>Design guidance</u> - Roof design should use materials and a pitched form complementary to the building and adjacent buildings. <u>*Objective 4N-2*</u> *Opportunities to use roof space for residential accommodation and open space are maximised* <u>Design guidance</u> - 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	The roof design is appropriate. No roof top services are indicated on the plans though conditions are recommended in relation to this issue.	Yes, with conditions

Standards/controls	*Comment*	*Compliance*
Objective 4N-3 *Roof design incorporates sustainability features* Design guidance - Roof design maximises solar access to apartments during winter and provides shade during summer		
4O Landscape design *Objective 4O-1* *Landscape design is viable and sustainable* Design guidance - Landscape design should be environmentally sustainable and can enhance environmental performance - Ongoing maintenance plans should be prepared *Objective 4O-2* *Landscape design contributes to the streetscape and amenity* Design guidance - Landscape design responds to the existing site conditions including: • changes of levels • views • significant landscape features	Landscape design is generally satisfactory. Satisfies relevant provisions and is satisfactory to Council's Landscape Section.	Yes
4P Planting on Structures *Objective 4P-1* *Appropriate soil profiles are provided* Design guidance - Structures are reinforced for additional saturated soil weight - Minimum soil standards for plant sizes should be provided in accordance with Table 5 *Objective 4P-2* *Plant growth is optimised with appropriate selection and maintenance* Design guidance - Plants are suited to site conditions *Objective 4P-3* *Planting on structures contributes to the quality and amenity of communal and*	Council's Landscape Officer has reviewed the proposal and the submitted Landscape Plan and has provided a satisfactory referral subject to conditions including those detailing specific podium/ on structure planting matters.	Yes

Standards/controls	*Comment*	*Compliance*
public open spaces Design guidance - Building design incorporates opportunities for planting on structures. Design solutions may include: • 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		
4Q Universal design *Objective 4Q-1* *Universal design features are included in apartment design to promote flexible housing for all community members* Design guidance - A universally designed apartment provides design features such as wider circulation spaces, reinforced bathroom walls and easy to reach and operate fixtures		Yes
Objective 4Q-2 *A variety of apartments with adaptable designs are provided* Design guidance - Adaptable housing should be provided in accordance with the relevant council policy	10 of the units (>10% of the 92 proposed) are adaptable units. A combination of 1, 2 and 3 bedroom adaptable units are proposed. In addition, a number of extra units incorporate the Livable Housing Guidelines silver level universal design features.	
Objective 4Q-3 *Apartment layouts are flexible and accommodate a range of lifestyle needs* Design guidance - Apartment design incorporates flexible design solutions	Applicant has provided an access consultant report verifying that the adaptable units can achieve compliance with the relevant standard. .	
4S Mixed use *Objective 4S-1* *Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement* Design guidance - Mixed use development should be concentrated around public transport	Mixed use proposal. Active street frontage is provided and development will contribute	Yes

Standards/controls	*Comment*	*Compliance*
and centres - Mixed use developments positively contribute to the public domain. <u>*Objective 4S-2*</u> *Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents* <u>Design guidance</u> - Residential circulation areas should be clearly defined. - Landscaped communal open space should be provided at podium or roof levels	positively to the public domain. The location of the development site is appropriate with regard to accessibility and availability of public transport. Separate circulation / entries are provided to the residential and commercial components of the development; clearly defined. Communal open space areas provided at podium and rooftop as required.	
<u>4T Awnings and signage</u> <u>*Objective 4T-1*</u> *Awnings are well located and complement and integrate with the building design* <u>Design guidance</u> - Awnings should be located along streets with high pedestrian activity and active frontages <u>*Objective 4T-2*</u> *Signage responds to the context and desired streetscape character* <u>Design guidance</u> - Signage should be integrated into the building design and respond to the scale, proportion and detailing of the development	An awning is proposed along part of the length of the street frontage. Conditions are recommended requiring compliance with the standards in Chapter D13 of WDCP 2009. No specific signage proposed.	Yes
Part 4 – Designing the building - Configuration		
<u>4U Energy efficiency</u> <u>*Objective 4U-1*</u> *Development incorporates passive environmental design* <u>Design guidance</u> - Adequate natural light is provided to habitable rooms (see 4A Solar and daylight access) <u>*Objective 4U-2*</u>	The applicant has obtained a BASIX certificate which confirms that the proposed development will achieve the required energy efficiency and thermal comfort targets of the SEPP. Adequate natural light will be provided to all habitable rooms. Further addressed above at 4A. Heat gain for west facing living rooms and balconies has been addressed through the	Yes

Standards/controls	*Comment*	*Compliance*
Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer <u>Design Guidance</u> - Provision of consolidated heating and cooling infrastructure should be located in a centralised location <u>*Objective 4U-3*</u> *Adequate natural ventilation minimises the need for mechanical ventilation*	use of some screening/ louvre systems. Plant room located within the basement. Refer to discussion above at 4B in relation to natural ventilation.	
<u>4V Water management and conservation</u> <u>*Objective 4V-1*</u> *Potable water use is minimised* <u>*Objective 4V-2*</u> *Urban stormwater is treated on site before being discharged to receiving waters* <u>Design guidance</u> - Water sensitive urban design systems are designed by a suitably qualified professional <u>*Objective 4V-3*</u> *Flood management systems are integrated into site design* <u>Design guidance</u> - Detention tanks should be located under paved areas, driveways or in basement car parks	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. This relates to both energy and water efficiency (4U and 4V). 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. 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.	Yes
<u>4W Waste management</u> <u>*Objective 4W-1*</u> *Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents* <u>Design guidance</u> - Common waste and recycling areas should be screened from view and well ventilated <u>*Objective 4W-2*</u>	The applicant proposes waste storage on the ground floor to the rear of the commercial spaces (ie screened from view). Compactors are proposed and collection via the internal loading dock will	Yes

Standards/controls	*Comment*	*Compliance*
Domestic waste is minimised by providing safe and convenient source separation and recycling Design guidance - Communal waste and recycling rooms are in convenient and accessible locations related to each vertical core - For mixed use developments, residential waste and recycling storage areas and access should be separate and secure from other uses - Alternative waste disposal, such as composting, can be incorporated into the design of communal open space areas	be available. Waste will be transported to the garbage room from the residential units via the garbage chutes. A common storage room is proposed to service both the commercial and residential components of the development which is intended to be accessible only from the commercial spaces. Residents will transport waste to the waste room via the garbage chute.	
4X Building maintenance *Objective 4X-1* *Building design detail provides protection from weathering* Design guidance - Design solutions such as roof overhangs to protect walls and hoods over windows and doors to protect openings can be used. *Objective 4X-2* *Systems and access enable ease of maintenance* Design guidance - Window design enables cleaning from the inside of the Building *Objective 4X-3* *Material selection reduces ongoing maintenance costs easily cleaned surfaces that are graffiti resistant*	The applicant proposes to use durable and cleanable materials. 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.	Yes