Attachment 5 DA-2016/591/C Compliance Table

65 Flinders Street, 73-75 Flinders Street, 74-76 Keira Street, 78-80 Keira Street, 80-84 Keira Street, 90 Keira Street, 87 Campbell Street WOLLONGONG

SEPP 65 APARTMENT DESIGN GUIDE

Standards/controls	*Comment*	*Comply?*
Part 1 – Identifying the context		
1A Apartment building types Generic apartment building types can be used to: - Determine the appropriate scale of future built form - Communicate the desired character of an area - Assist when testing envelope and development controls to achieve high amenity and environmental performance.	The development comprises a podium with a C-shaped tower situated around a central courtyard. The tower has frontage to Thomas Street and is set back from Keira Street.	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.	A context analysis was undertaken by the applicant and refined over successive Design Review Panel meetings. It models likely development on nearby sites and tests the proposed building form for compatibility in the neighbourhood.	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: - 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.	The site is comprised of multiple allotments, providing two street frontages. Consolidation of allotments is required. Adjoining sites maintain potential for redevelopment in accordance with WLEP 2009.	Yes
Part 2 – Developing the controls		
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.	Not applicable	N/a

Standards/controls	*Comment*	*Comply?*
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. A written statement explaining how the design of the proposed development has responded to the site analysis must accompany the development application.	Written statement provided. Site analysis plan provided. Consideration of adjoining and nearby development has been demonstrated. Survey undertaken. Aerial and existing streetscape photos provided.	Yes
3B Orientation Buildings must be oriented to maximise northern 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. *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	Access is provided at Thomas Street. Overshadowing complies with ADG requirements and is assisted by the site topography and location of the towers. Meets 2hr minimum in CBD.	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	Changes in level have been accommodated in the design. Building entries are adequately defined. Thomas Street has a deep forecourt allowing for the change in level from Keira Street.	Yes

Standards/controls	*Comment*	*Comply?*
street entry, where appropriate - Changes in level between private terraces etc. above street level provide surveillance and improved visual privacy for ground level dwellings. - 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 e.g. seating at building entries, near letterboxes etc.	Ground floor is comprised of commercial areas and residential common room. Parsons' Lane terraces provide surveillance within the site. There are no front fences; the building sits lower than Thomas Street, and the Keira Street new commercial building is built to the boundary.	
<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 (e.g. 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.	Street tree planting is required. Internal communal open space areas are landscaped. The garbage room is located in Basement 1. One substation has been identified on the Thomas Street elevation. A condition of consent is recommended requiring footpath works in accordance with Council's Public Domain Technical Manual.	
<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 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 <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. - Where developments are unable to achieve the design criteria, such as on small lots, sites within business	Minimum 25% of 4206m^2 site = 1056.5m^2. The principal outdoor communal open space area on Level 1 is approximately 300m^2. A 139m indoor communal room is also on Level 1. Additional communal spaces are: Parsons' Lane 374m^2, ground floor 97m^2 gym, Level 6 132m^2 outdoor and 28m^2 room. Total provided 1070m^{2,} which does not meet the minimum. Achieves minimum 2hrs (refer shadow diagram).	Yes

Standards/controls	*Comment*	*Comply?*
zones, or in a dense urban area, they should: · provide communal spaces elsewhere such as a landscaped roof top terrace or a common room · provide larger balconies or increased private open space for apartments · demonstrate good proximity to public open space and facilities and/or provide contributions to public open space		Yes
<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	Parsons' Lane contains seating. Whilst the remaining COS areas are generally not detailed, adequate opportunity for a range of facilities and experiences is provided.	
<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.	COS has good surveillance from private areas.	
<u>*Objective 3D-4*</u> *Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood* (N/A in most cases)		
<u>3E Deep soil zones</u>		
<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> 1. Deep soil zones for sites exceeding 1500m^2 are to meet the following minimum requirements: 7% of site area, 6m dimension <u>Design guidance:</u> - Deep soil zones should be located to retain existing significant trees. - Achieving design criteria may not be possible on some sites including where; there is 100% site coverage or non-residential uses at ground floor level or the location and building typology have limited or no space for deep soil at ground level (e.g. central business district, constrained sites, high density areas, or in centres).	Minimum dimension of 6.0m required, with minimum area of 294.42m^2 (7%). The landscape plan identifies location and species of tree planting. The DSZ is approximately 30m$^{2.}$ Additional planting on structure is proposed. This is considered satisfactory having regard to design guidance for CBD sites and ability to successfully plant trees in areas of these dimensions (refer landscape plan).	Yes

Standards/controls	*Comment*	*Comply?*
3F Visual privacy *Objective 3F-1* *Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual amenity.* Design Criteria: 1. For buildings up to 25m (5-8 storeys) the minimum required separation distances from buildings to the side and rear boundaries are as follows: · Up to 12m (Levels B1- 2) habitable rooms and balconies 6m and non-habitable rooms 3m. Separation distances between towers on same site should combine required building separations. · 12-25m (Levels 3-6) habitable rooms and balconies 9m and non-habitable rooms 4.5m. Separation distances between towers on same site should combine required building separations. Design Guidance - Apartment buildings should have an increased separation distance of 3m (in addition to the above requirements) when adjacent to a different zone that permits lower density residential development to provide for a transition in scale. - Direct lines of sight should be avoided for windows and balconies across corners - No separation is required between blank walls *Objective 3F-2:* *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* Design Guidance - 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 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	The site is surrounded by buildings of various heights in relation to the steep topography. Plan A04 shows heights of adjoining buildings, and separation is conformed via section and site plan. The proposed building separation is: Southern (Lot 854202) Up to 12m: min. 7.6m habitable & min. 9m non-habitable [complies] 12-25m: min. 7.6m habitable apts A304 & A504 [does not comply] & 13m non-habitable [complies] The non-complying setback to A304 and 504 is considered acceptable as the adjoining Lot 74 is narrow and unlikely to support a structure of any comparable height. Western (Lot B DP 65920, Lot A DP 417192, Lot 2 DP 510890 & Lot D DP 398161) Up to 12m: min. 6.6m habitable [complies] 12-25m: min. 8.9m habitable apts A301 & A501) [does not comply] The non-complying setback to A301 and A501 is considered acceptable as it is 10mm short. Northern (Lot 1 DP 742078 & Lot A DP 345880) Up to 12m: 5.06m habitable balcony [does not comply] 12-25m: min. 5.07m habitable balcony [does not comply] The non-complying setback to the northern allotment is considered acceptable as the existing adjoining building is built to the boundary. Aside from the proposed balcony, the northern apartment wall has only kitchen and bedroom windows. COS typically is separated by walls or planter boxes.	No

Standards/controls	*Comment*	*Comply?*
- Windows should be offset from the windows of adjoining buildings	No change in zone on adjoining land.	
3G Pedestrian access and entries		Yes
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. *Objective 3G-3* *Large sites provide pedestrian links for access to streets and connection to destinations*	Entry from Keira Stret is via the path and up stairs/lift to the central podium area at Parsons Lane. This path is not gated or secure and therefore open 24 hrs to non-residents. The path leads all the way up through the site to Thomas Street via an additional lift. Building entries on Keira Street are to the new commercial tenancy and existing heritage buildings. Thomas Street has the main building entry via the southern residential foyer. When within Parsons' Lane, the building may not be legible without signage due to the change in levels.	
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 - 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.	The driveway is located on Thomas Street.	Yes

Standards/controls	*Comment*	*Comply?*
3J Bicycle and car parking *Objective 3J-1* *Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas* Design Criteria On land zoned, and sites within 400m of land zoned B3 Commercial Core or B4 Mixed Use, or equivalent in a nominated regional centre; The minimum car parking requirement for residents and visitors is set out in the RMS Guide To Traffic Generating Development, or Council's car parking requirement, whichever is less. The car parking needs for a development must be provided off street. *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. *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 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. *Objective 3J-4* *Visual and environmental impact of underground car parking are minimised* Design Guidance - 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.	The land is located within the B4 zone and therefore, the lesser of RMS or WDCP 2009 applies to the residential component. In this case, the lesser is RMS. WDCP 2009 applies to the business/retail component. The applicant proposes 147 car parking spaces, which includes a surplus of 27 spaces. These have been included in GFA calculations. The final car parking is reflected in the draft condition of consent (no. 27) and is based on residential and business/retail rates in the ADG and WDCP 2009 as it applies to the City Centre B4 zone, including the surplus spaces. Total: cars 147, bicycles 49 and motorcycles 8. Car parking areas are accessible from lift lobbies. Garbage room is located in Basement 1. Collection vehicles can stand in loading bay near the garbage room. There is sufficient driveway width to allow other vehicles to pass while garbage vehicle is loading. Car parking entry is located in Thomas Street.	Yes Yes

Standards/controls	*Comment*	*Comply?*
- Ventilation grills or screening devices should be integrated into the façade and landscape design. <u>*Objective 3J-5*</u> *Visual and environmental impacts of on-grade car parking are minimised* - On grade car parking should be avoided - Design guidelines provided where it's unavoidable <u>*Objective 3J-6*</u> *Visual and environmental impacts of ground enclosed car parking are minimised* - Exposed parking should not be located along primary street frontages - Positive street address and active street frontages should be provided at ground level. ***Part 4 – Designing the building - Amenity*** **<u>4A Solar and daylight access</u>** <u>*Objective 4A-1*</u> *To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space* <u>Design Criteria</u> 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. 1. A maximum of 15% of apartments in a building receive no direct sunlight between 9am and 3pm at mid-winter <u>Design Guidance</u> - 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. <u>*Objective 4A-2*</u> *Daylight access is maximised where sunlight is limited* <u>Design Guidance</u> - Courtyards, skylights and high level windows (sill heights of 1500m or greater) are used only as secondary light sources in habitable rooms	Shadow diagrams are provided. The SEPP 65 design verification statement confirms 71% of apartments achieve 2hrs sunlight to living areas. 8% would receive no direct sunlight between 9am and 3pm. Window hoods and balcony projections are provided to some apartments.	Yes

Standards/controls	*Comment*	*Comply?*
Objective 4A-3 *Design incorporates shading and glare control, particularly for warmer months* Design Guidance Design features can include: - Balconies - Shading devices or planting - Operable shading - High performance glass that minimises external glare		
4B natural ventilation *Objective 4B-1* *All habitable rooms are naturally ventilated.* 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.	The SEPP 65 verification statement confirms 63% of apartments achieve cross-flow ventilation.	Yes
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.		
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.		
4C Ceiling heights *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	All apartments have minimum 2.7m to habitable. Thomas Street commercial areas have a 3.5m ceiling height, approx.	Yes

Standards/controls	*Comment*	*Comply?*
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.	2.7m in heritage buildings.	
4D Apartment size and layout		
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: Studio – 35m^2 1 bed – 50m^2 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. 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 Design Guidance: - Where minimum areas are not met, need to demonstrate the usability and functionality of the space with realistically scaled furniture layouts and circulation areas.	A schedule of units has been provided. Apartment sizes all exceed ADG size requirements. The SEPP 65 verification confirms all habitable windows exceed 10% of floor area.	Yes
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 increases in room depths. - Where possible, bathrooms and laundries should have	All habitable rooms are less than 2.5 x ceiling height. All kitchens (work/preparation area) are less than 8m from a window.	Yes

Standards/controls	*Comment*	*Comply?*
an external openable window. - Main living spaces should be oriented towards the primary outlook. <u>*Objective 4D-3*</u> *Apartment layouts are designed to accommodate a variety of household activities and needs* <u>Design Criteria:</u> 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 is at least 4m internally to avoid deep narrow apartment layouts. <u>Design Guidance:</u> - 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.	Master bedrooms exceed 10m^2, and are generally 3.5mx4m inc. wardrobe. All living rooms exceed 3.6m wide.	Yes
<u>4E Private open space and balconies</u> <u>*Objective 4E-1*</u> *Apartments provide appropriately sized private open space and balconies to enhance residential amenity* 1. Minimum balcony depths are: 1 bedroom: minimum area 8m2, minimum depth 2m 2 bedroom: minimum area 10m2, minimum depth 2m 3+ bedroom: minimum area 12m2, minimum depth 2.4m 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 <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	The SEPP 65 statement contains a schedule of units. The majority of apartments comply, with some 2 bedroom exceptions: A202, A302, A402, A502, B201, B301, B401, B501, B601 - 2 beds and 8m^2 [does not comply] No balcony depth is less than 2.4m. The non-complying balcony depth is acceptable as the balcony depth exceeds the minimum and these balconies are located on the western side, where climate conditions might be unfavourable at certain times.	No

Standards/controls	*Comment*	*Comply?*
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.		
Objective 4E-3 *Primary private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building* Design Guidance - 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.	All POS is located off living areas. No full width glass balustrades Screen/louvres on south eastern balconies	
Objective 4E-4 *Private open space and balcony design maximises safety* Design Guidance - Changes in ground levels or landscaping are minimised.		
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.	Maximum number of apartments is 8. Two lifts service the apartments (Lobbies A and B).	Yes
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.	Lift lobbies and foyers provide adequate areas for interaction.	Yes

Standards/controls	*Comment*	*Comply?*
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 1 bedroom: 6m^3 2 bedroom: 8m^3 3+ bedroom: 10m^3 At least 50% of the required storage is to be located within the apartment *Objective 4G-2* *Additional storage is conveniently located, accessible and nominated for individual apartments* Design Guidance: - Storage not located within apartments should be allocated to specific apartments.	Storage is located within apartments. Also, the basement car park contains storage areas. This is comprised of areas separate to parking spaces and also adjacent individual spaces.	Yes
4H Acoustic privacy *Objective 4H-1* *Noise transfer is minimised through the siting of buildings and building layout* Design Guidance - Adequate building separation is required (see section 2F 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. *Objective 4H-2* *Noise impacts are mitigated within apartments through layout and acoustic treatments* Design Guidance - 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 apartment layout places wardrobes and bathrooms against each other. The principal noise source for most apartments is likely to be balconies, which are generally offset and/or protected with some screening. Podium level apartments are likely to experience some noise transmission from communal open space areas, despite landscaping. It is expected that future by-laws would address hours of use of the communal outdoor areas, including Parsons' Lane.	Yes
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*	Construction is required in accordance with Building Code of Australia, which requires noise	Yes

Standards/controls	*Comment*	*Comply?*
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. ***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 **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	seals and insulation. Road noise source from Keira Street is unlikely to be significant given setbacks. The development incorporates 1, 2 and 3 bedroom apartments. 10.84% (9) apartments are identified as capable of adaptation. Not applicable – no ground floor apartments are proposed as required by WLEP 2009.	Yes N/a

Standards/controls	*Comment*	*Comply?*
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 **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 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. *Objective 4M-2* *Building functions are expressed by the facade* Design guidance - Building entries should be clearly defined	A schedule of finishes has been provided however the colour choice of strong bright green is questionable in terms of the Keira Street heritage precinct. A condition of consent is recommended requiring alternative colours and materials, endorsed by the applicant's heritage consultant.	No

Standards/controls	*Comment*	*Comply?*
4N Roof design *Objective 4N-1* *Roof treatments are integrated into the building design and positively respond to other street* Design guidance - Roof design should use materials and a pitched form complementary to the building and adjacent buildings. *Objective 4N-2* *Opportunities to use roof space for residential accommodation and open space are maximised* Design guidance - 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 *Objective 4N-3* *Roof design incorporates sustainability features* Design guidance - Roof design maximises solar access to apartments during winter and provides shade during summer	The roof is flat as the floor below takes the building to maximum height. Non trafficable roof.	No
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 plans by Ochre Landscape Architects have been provided. Planting and maintenance details are provided.	Yes
4P Planting on Structures *Objective 4P-1* *Appropriate soil profiles are provided*	A small 30m^2 area of true deep soil zone is provided. The remainder of	Yes

Standards/controls	*Comment*	*Comply?*
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 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	site landscaping is on structure. A variety of plants is proposed and contributes to specific character/purpose of the communal open space areas. Large and medium shrubs are proposed on the communal open space/private open space interface.	
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 *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 *Objective 4Q-3* *Apartment layouts are flexible and accommodate a range of lifestyle needs* Design guidance - Apartment design incorporates flexible design solutions	10.84 % of apartments are identified as adaptable dwellings. This complies with WDCP 2009.	Yes
4R Adaptive reuse		

Standards/controls	*Comment*	*Comply?*
Objective 4R-1 *New additions to existing buildings are contemporary and complementary and enhance an area's identity and sense of place*	Alterations to two heritage buildings are proposed.	Yes
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 and centres - Mixed use developments positively contribute to the public domain. *Objective 4S-2* *Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents* Design guidance - Residential circulation areas should be clearly defined. - Landscaped communal open space should be provided at podium or roof levels	The development contains commercial tenancies at ground floor Thomas and Keira Streets and residential above. Separate services, access and facilities are provided for residential and non-residential tenants. The heritage buildings would rely on waste services and car parking within the main building. Strata subdivision is not proposed in this application.	Yes
4T Awnings and signage *Objective 4T-1* *Awnings are well located and complement and integrate with the building design* Design guidance - Awnings should be located along streets with high pedestrian activity and active frontages *Objective 4T-2* *Signage responds to the context and desired streetscape character* Design guidance - Signage should be integrated into the building design and respond to the scale, proportion and detailing of the development	Awnings are integrated in to the building design. No specific signage is proposed. Signage will require separate development consent unless exempt.	Yes
Part 4 – Designing the building - Configuration		
4U Energy efficiency *Objective 4U-1* *Development incorporates passive environmental design* Design guidance - Adequate natural light is provided to habitable rooms	A BASIX certificate and solar access report have been submitted.	Yes

Standards/controls	*Comment*	*Comply?*
(see 4A Solar and daylight access) *Objective 4U-2* *Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer* Design Guidance - Provision of consolidated heating and cooling infrastructure should be located in a centralised location *Objective 4U-3* *Adequate natural ventilation minimises the need for mechanical ventilation*		
4V Water management and conservation *Objective 4V-1* *Potable water use is minimised* *Objective 4V-2* *Urban stormwater is treated on site before being discharged to receiving waters* Design guidance - Water sensitive urban design systems are designed by a suitably qualified professional *Objective 4V-3* *Flood management systems are integrated into site design* Design guidance - Detention tanks should be located under paved areas, driveways or in basement car parks	A Water Sensitive Urban Design strategy is required to be implemented.	Yes
4W Waste management *Objective 4W-1* *Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents* Design guidance - Common waste and recycling areas should be screened from view and well ventilated *Objective 4W-2* *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	A waste management plan has been provided. Waste storage and collection would occur in Basement 1, which is accessible by all commercial tenants and residents.	Yes

Standards/controls	*Comment*	*Comply?*
areas		
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*	All plant areas are located within parking levels. Service risers are centralised. Access to service areas is provided. Windows can be cleaned via balconies.	Yes

CHAPTER D13 – WOLLONGONG CITY CENTRE

The site is located within the Wollongong City Centre, as defined in WLEP 2009 and WDCP 2009. Chapter D13 applies to the development and prevails over other parts of the DCP where there is any inconsistency. Relevant provisions are addressed in Table 2 below.

Table 2: WDCP 2009

2 Building form

Objectives/controls	*Comment*	*Satisfactory?*
2.1 General		
Building form and character refers to the individual elements of building design that collectively contribute to the character and appearance of the built environment. Wollongong City Centre LEP includes provisions for land use, building heights and sun access planes, floor space ratio and design excellence. The building form provisions are intended to encourage high quality design for new buildings, balancing character of Wollongong with innovation and creativity. The resulting built form and character of new development should contribute to an attractive public domain in central Wollongong and produce a desirable setting for its intended uses.	Building separation does not in part strictly comply with WLEP 2009 or the ADG, however is acceptable. Council's Design Review Panel has reviewed the development on two occasions. The final revised proposal satisfactorily resolves DRP concerns.	Yes
2.2 Building to street alignment and street setbacks		
B4 zone: 4m minimum setback Flinders Street.	Nil setback to Keira Street (continues existing street pattern) and minimum 4.4m to Thomas Street. setback provided.	Yes
2.4 Building depth and bulk		
Maximum 900m^2 floor plate size and 18m depth for residential outside the Commercial Core that is above 12m height	Floor plate exceeds 900m^2 and 18m depth, however is acceptable as environmental performance is satisfactory.	No
2.5 Side and rear building setbacks and building separation		
Up to 12m Residential uses (habitable rooms and balconies) up to 12m in height: minimum 6m side setback and 6m rear setback Residential uses (non-habitable rooms) up to 12m in height: minimum 3m side and 4.5m rear setback 12-24m Residential uses (habitable rooms and balconies) between 12m and 24m in height: minimum 9m side setback and 9m rear setback Residential uses (non-habitable rooms) between	Refer ADG for setbacks. WDCP setback requirements in part exceed the ADG requirements. Where that applies, compliance with the ADG is considered satisfactory.	No

Objectives/controls	*Comment*	*Satisfactory?*
12m and 24m in height: minimum 4.5 side setback and 4.5m rear setback Commercial uses up to 24m in height: minimum 3m side setback and 9m rear setback		
2.6 Mixed used buildings		
Minimum 3.3m ceiling heights for commercial space	Commercial ceiling heights are 3.5 floor to floor.	Yes
Separate commercial service areas from residential access Locate clearly demarcated residential entries from the public street	The car parking levels provide separate residential and service areas The residential entries are identifiable.	
2.7 Deep soil zone		
Minimum 15% of site area shall be deep soil zone For a residential component of mixed use buildings, required deep soil zone may be reduced.	15% of 4306m^2 = 630.9m^2 This requirement exceeds the amount required by the ADG. DSZ appears approx. 30m^2 and is acceptable as the ADG allows non DSZ in high density urban environments	No
2.8 Landscape design		
A landscape plan must be provided.	Council's landscape officer has no objection	Yes
2.9 Planting on structures		
Provide soil depth appropriate for plant type and structure	Council's landscape officer has no objection	Yes

3 Pedestrian amenities

Objectives/controls	*Comment*	*Satisfactory ?*
3.3 Active street frontages		
Residential developments are to provide a clear street address and direct pedestrian access off the primary street front, and allow for residents to overlook all surrounding streets	The placement of commercial space on the lower level of the development allows for active uses at ground level. Upper level balconies overlook Thomas Street.	Yes
3.4 Safety and security		
Ensure adequate lighting, surveillance and good lines of sight. Provide security access where required.	Crime prevention is addressed in the Statement of Environmental Effects. Secure access is likely to be installed at lift lobbies.	Yes
3.6 Vehicular footpath crossings		
One vehicle access point only will generally be permitted.	One driveway is proposed in Thomas Street. RMS has indicated they have no objection to the arrangement.	Yes

3.8 Building exteriors		
Adjoining buildings should be considered. Balconies should be provided. External walls should be articulated. External materials should be of high quality and durable.	A revised schedule of external finishes is required prior to issue of the Construction Certificate.	Yes
3.9 Advertising and signage		
	It is recommended a condition of consent is applied requiring separate development consent for specific signs. This is required to ensure visual cohesion for the commercial elevations.	Yes
3.10 Views and view corridors		
Maintain and enhance views to the foreshore and escarpment, where practical.	The site is located within the distant panoramic view corridor identified in figure 3.12. The proposed height complies with the maximum 24m permitted in WLEP 2009. Escarpment views would be available from the development, however would block some views from existing apartments in Thomas Street.	Yes

4 Access, parking and servicing		
Objectives/controls	*Comment*	*Satisfactory ?*
4.2 Pedestrian access and mobility		
Main building entry should be clearly visible. Development must provide at least one main pedestrian entrance with convenient barrier free access in all developments to at least the ground floor. Development must provide continuous access paths of travel from all public roads and spaces as well as unimpeded internal access. Building entrance levels and footpaths must comply with the longitudinal and cross grades specified in AS 1428.1:2001, AS/NZS 2890.1:2004 and the Disability Discrimination Act.	The land slopes down from Thomas Street towards Keira Street. Barrier-free pedestrian access is available in Thomas and Keira Streets.	Yes
4.3 Vehicular driveways and manoeuvring areas		
All vehicles must enter and exit in forward direction with maximum 3-point turn. Driveway widths and dimensions and car space widths and dimensions must comply with Australian Standards. Semi-pervious materials on driveway to provide for stormwater filtration.	RMS and Council's traffic engineer have no objection to the proposed development. Standard conditions of consent regarding compliance with Australian Standards are recommended.	Yes

4.4 On-site parking		
Parking must be on-site and meet AS2890.1 2004 (as amended).	Parking , including calculations, is discussed in relation to the ADG above.	Yes
4.5 Site facilities and services		
Provide mailboxes in one accessible location. Locate satellite dish and telecommunication antennae, air conditioning units, ventilation stacks and any ancillary structures: I) Away from the street frontage, and ii) Integrated into the roof scape design All development is to adequately accommodate waste handling and storage on-site. The development must ensure that adequate provision has been made for all essential services including water, sewerage, electricity and telecommunications and stormwater drainage.	Mailboxes can be accommodated in residential lobbies. Waste storage is proposed in Basement 1. Utility connection approvals are required prior to Construction Certificate.	Yes
5 Environmental management		
Objectives/controls	*Comment*	*Satisfactory ?*
5.2 Energy efficiency and conservation		
New dwellings are to comply with SEPP (BASIX)	A BASIX certificate has been provided	Yes
5.3 Water conservation		
New dwellings are to comply with SEPP (BASIX)	A BASIX certificate has been provided	Yes
5.4 Reflectivity		
Visible light reflectivity from building materials used on facades of new buildings should not exceed 20%.	Light reflectivity is not a concern.	Yes
5.6 Waste and recycling		
A site waste minimisation and management plan is required.	A site waste minimisation and management plan has been provided.	Yes
6 Residential development standards		
Objectives/controls	*Comment*	*Satisfactory ?*
6.1 SEPP 65 and residential flat design code		
SEPP 65 controls are adopted	Refer SEPP 65 discussion	Yes
6.2 Housing choice and mix		
Minimum 10% of all units are to be capable of adaptation	9 (i.e. 10.84%) units are adaptable	Yes
6.6 Basement Carparks		
The roof of any basement podium, measured to the top of any solid wall located on the podium, must not be greater than 1.2m above natural or	The car parking levels are designed to accommodate the slope of the site, and incorporate basement areas.	Yes

Objectives/controls	*Comment*	*Satisfactory ?*
finished ground level, when measured at any point on the outside walls of the building. Where height of basement podium is less than 1.2m above ground level, the basement may be located on the boundary. Any portion which exceeds 1.2m, must be set back from boundaries by a ratio of 1:1, with a minimum setback of 1.5m. Ventilation structures and air conditioning ducts must be located away from windows of habitable rooms and private open space areas. Basements must be protected from inundation by 100-year ARI flood levels.	Services are shown on each parking level.	
<u>6.7 Communal open space</u>		
Minimum $5m^2$ of communal open space is required for each apartment in developments containing more than 10 apartments	83 apartments are proposed i.e. $415m^2$. The communal spaces exceed this amount.	Yes
<u>6.8 Private open space</u>		
Private open space in the form of balcony or terrace is required for each apartment	All residential apartments are provided with private open space in the form of a balcony or terrace.	Yes
<u>6.9 Overshadowing</u>		
Adjacent residential buildings and their public spaces must receive at least 3 hours of direct sunlight between 9.00am and 3.00pm on 21 June. The design of the development must have regard to the existing and proposed level of sunlight which is received by living areas and private open space areas of adjacent dwellings. Sensitive design must aim to retain the maximum amount of sunlight for adjacent residents. Council will place greatest emphasis on the retention of sunlight within the lower density residential areas. In areas undergoing change, the impact of overshadowing on development likely to be built on adjoining sites must be considered, in addition to the impacts on existing development.	A shadow diagram has been provided.	Yes
<u>6.10 Solar access</u>		
Shading devices should be utilised where necessary, particularly where windows of habitable rooms are located on the western elevation. The living rooms and private open space of at least 70% of apartments should receive a minimum of three hours of direct sunlight between 9.00am and 3.00pm. The number of single aspect apartments with a southerly aspect (south-westerly to south-easterly) is limited to a maximum of 10% of the total number of apartments proposed.	The ADG requires minimum 2hrs. The development complies with ADG requirements and is considered satisfactory. Shading devices are proposed.	Yes

Objectives/controls	*Comment*	*Satisfactory ?*
6.11 Natural ventilation A minimum of sixty percent (60%) of all residential apartments shall be naturally cross ventilated.	62% of apartments would receive cross-ventilation.	Yes
6.12 Visual privacy The internal layout of buildings should be designed to minimise any direct overlooking impacts occurring upon habitable rooms and private balcony/open space courtyards, wherever possible by separating communal open space and public domain areas from windows of rooms, particularly sleeping room and living room areas.	Where communal open space is located adjacent to private open space, screening and landscaping provides adequate separation.	Yes
8 Works in the public domain Any works within the public domain are to be in accordance with the Public Domain Technical Manual (Appendix 2 WDCP 2009)	Council's landscape officer has reviewed the proposed public domain works and has no objection. A standard condition requiring compliance with the Public Domain Technical Manual is recommended.	Yes

Special areas: the site is located within the Keira Street special use area. Whilst Council's heritage officer is of the view that the proposed building bulk at times conflicts with the recommendations for the special area, it is noted that the recent construction of 10 Thomas Street introduces a different architectural setting than that contemplated by the WDCP 2009 controls. In that regard, the proposed conditions of consent are considered to adequately provide for the alterations and conservation of the two heritage buildings within the site.

CHAPTER B1 – RESIDENTIAL DEVELOPMENT

These controls are superseded by Chapter D13 and the ADG.

CHAPTER B3 – MIXED USE DEVELOPMENT

The building contains commercial tenancies in the new Keira Street one-storey building and on the ground floor of Thomas Street. These offer active use at ground level and do not exceed the maximum individual floor area set by WLEP 2009. A future café has been identified on the northern Thomas Street elevation, which directly adjoins seating, landscaping and the through-site link.

Separate waste and car parking facilities are provided for commercial tenants.

CHAPTER B4 – DEVELOPMENT IN BUSINESS ZONES

The proposed commercial tenancies are consistent with the hierarchy controls for the Wollongong City Centre.

CHAPTER E1 – ACCESS FOR PEOPLE WITH A DISABILITY

Barrier-free access is provided to commercial and residential parts of the building. Communal open space and basement services are also accessible.

CHAPTER E2 - CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN

CPTED is addressed in the Statement of Environmental Effects. Security arrangements have not been detailed at development application stage, but access control is expected on residential floors and shared facilities like storage and waste rooms.

Integrated building features such as floorplan layout and the through site link adequately provides passive surveillance. It is recommended that adequate lighting and internal courtyard fencing within the Parsons Lane area is installed, as this is a communal area.

CHAPTER E3 – CAR PARKING, ACCESS, SERVICING/LOADING FACILITIES AND TRAFFIC MANAGEMENT

The applicant proposes surplus car parking, which has been included in gross floor area calculations. The ADG specifies that the lesser of RMS and WDCP 2009 rates apply, which in this case is the RMS rates.

All car parking is provided within three basement levels, accessed only from Thomas Street. Council and RMS has no objection to the basement layout, manoeuvring areas or driveway location.

CHAPTER E7 – WASTE MANAGEMENT

Separate commercial and residential waste rooms are located in Basement 1. A condition of consent is recommended requiring all waste storage and collection to occur within the building.

CHAPTER E11 – HERITAGE CONSERVATION

It is acknowledged in the GML Heritage reports and by Council's heritage officer that the construction of a 24m building of this scale directly behind the Keira Street heritage buildings and in proximity to St Michael's Church and heritage buildings in Stewart Street is likely to have an adverse impact on the character of this area. However, WLEP 2009 does not legislate a reduced height or floor space ratio for this unique site. The building bulk has been reduced somewhat as a result of the Design Review Panel (DRP) process, and in particular the Thomas Street elevation now has more modulation and articulation. Building separation to the south has increased marginally, however does not strictly comply with the ADG or WLEP 2009 in all areas. Building separation was considered by the DRP and the variable nature of the existing boundary conditions was acknowledged.

Some aspects of management of the two on-site heritage buildings are unresolved at this time, however are addressed in conditions of consent. These conditions include;

- Detailed schedule of works regarding BCA compliance
- Completion of all conservation works recommended in the GML Heritage reports
- Archival recording
- Preparation of an implementation plan
- Costed maintenance program
- Revised schedule of external finishes

CHAPTER E14 – STORMWATER MANAGEMENT

A drainage concept plan has been provided and is acceptable. Conditions of consent are recommended with regard to stormwater disposal.

CHAPTER E15 – WATER SENSITIVE URBAN DESIGN

The stormwater concept contains water sensitive urban design strategy. A condition of consent is recommended which requires installation of the measures prior to issue of the Occupation certificate.

CHAPTER E17 – PRESERVATION AND MANAGEMENT OF TREES AND VEGETATION

Tree removal is proposed as shown on the landscape plan and discussed in the arborist report prepared by Allied Tree Consultancy. Council's landscape officer has no objection to the proposed tree removal.

CHAPTER E21 – DEMOLITION

Demolition of all structures (with the exception of partial demolition of the heritage buildings) is proposed. A demolition work plan has been provided. Conditions of consent are recommended which relate to asbestos handling and disposal, neighbour notification of demolition and liaison with WorkSafe NSW.