

Design Verification Statement - Development Application

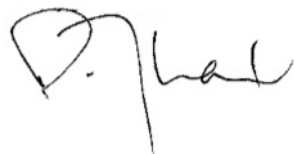
State Environmental Planning and Assessment Policy No. 65:
Design Quality of Residential Flat Development

project	Mixed Use Retail, Commercial and Apartment Building 464 - 470 King Street Newcastle
to	Newcastle City Council
prepared by	Philip Thalís, Registered Architect [NSW ARB registration number: #6780] Stuart Campbell, Registered Architect [NSW ARB registration number: #7545]
date	24 th March, 2016

In accordance with the SEPP 65 requirements;

- As the nominated qualified designers, we hereby verify that we led the design team, prepare the SEPP 65 Design Statement and reviewed all drawings for the Development Application which seeks consent to construct 197 apartments on top of a base of retail and commercial uses in a complex that includes two 20 storey towers in central Newcastle.
- We hereby verify that the proposal has been designed in accordance with the Design Quality Principles of the SEPP 65 and as the designer responsible for reviewing and providing design advice for the development, we hereby verify that the proposed design meets the principles of the SEPP 65.

Yours Faithfully,



Philip Thalís
Hill Thalís Architecture + Urban Projects PL



Stuart Campbell
CKDS

14th March, 2016

Job no 15.24 / PT / KH

464-470 King Street, Newcastle

SEPP 65 DESIGN QUALITY STATEMENT

1.0 CONTEXT AND NEIGHBOURHOOD CHARACTER

- The site is located in the heart of the ambitious new urban district planned at the long-neglected western end of central Newcastle, identified for higher density development near the new Wickham Interchange. Its position is ideal to take full advantage of the transport, shopping, public places and civic open spaces available in central Newcastle (see context and site analysis drawings ref DA-002, DA-003);
- The project's site comprises a single allotment 4 585m² in area, with a primary frontage to King Street to the south. It is currently occupied by a nondescript set of low-scale commercial buildings with a paved hardstand to the side. The design has been developed with extensive consultation with Council's Design Review Panel and the Government Architect's appointed Design Excellence Panel and is a considered response to the scale and character of site and the area's evolving urbanity;
- Consistent with the area's rezoning, the urban block will, over time, come to house a series of residential tower buildings. Building heights are likely to vary considerably, between 3 storeys up to 30 storeys. A scattering of heritage-listed buildings, primarily along Hunter Street just to the north of the site, will be interspersed with new towers and robust street wall buildings;
- The site's north-east boundary adjoins Cottage Creek which has the potential to become an important new public connection that would bisect this over-large urban block on the diagonal to make the entire area more walkable. It would also have the added benefit of improved pedestrian and cycle connections northward to the harbourfront, and southward to National Park. Consistent with Newcastle Urban Renewal Strategy for Cottage Creek, a 6 metre wide public way could, over time, be negotiated with Council along the entire canal frontage, which would feature an integrated landscape design. Such a space would have the immanent potential to connect from King to Hunter streets, and to create a vibrant and amenable new public space to cater for the hugely increased population who will presently come to call this area their neighbourhood;

- With the input of public authorities, the potential public way along the Cottage Creek frontage would be able to be readily extended in the future. The envisaged purchase of a small additional triangular lot on the corner of King Street and the creek would allow the public way to much better connect with King Street, while negotiations with Council and Hunter Water can readily realise the connection to Hunter Street, and make the entire route more generous;
- The layout responds appropriately to the site's various conditions. The project is articulated as a series of related but distinct forms and spaces with different urban presences;
 - To King Street, a 5 storey street wall building establishes a new scale and continuity to this broad boulevard, for the first time matching a confident architectural expression to its unfulfilled urban potential;
 - Along the Cottage Creek frontage on the site's eastern edge, a pair of slender towers address the potential public walkway, and define a new landscaped square between them;
 - The smaller southern tower marks the corner of the King Street and Cottage Creek, and mediates between the scale and urban presence of each frontage;
 - Behind the street wall and the towers is concealed a 4 storey above ground car park structure, which is surmounted by a generous landscaped podium. Atop this, a 3 /4 storey wing of apartments extends northward from the street wall building to help define this garden space as the prime communal focus for future residents;
- Within the new 66 metre permissible height controls, the two slender tower forms have footprints much smaller than the norm for such types. They address the new landscaped frontage along Cottage Creek, which means that they would have a separation of at least 24 metres from any future towers on the adjoining site to the east. This primary orientation to the north-east has multiple advantages in terms of access to sun and sea breeze, views and privacy, and address to the canal;
- The site planning and architectural form is based a well-considered urban design rationale;
 - The site planning efficiently uses its site to create a tight urban composition
 - The lower buildings to King Street relate to the DCP street wall objectives

- The new buildings relate to the LEP height limit, as the 20 storey facades comply with the 66 metre overall height, within which sits the well-articulated roof
- Lower buildings face the western and northern neighbours, as the taller building forms are set back a minimum of 12 metres from the site's perimeter.

2.0 BUILT FORM AND SCALE

- Consistent with the pattern of buildings in the vicinity, the new buildings are set out orthogonally to the King Street and western side boundaries. The proposed setbacks, massing, indentations and fin walls, screening and internal planning are configured to protect the amenity and privacy of neighbouring properties;
- The two fan-shaped towers look north-eastern and address the angled creek frontage. The small footprint of the towers, the splayed balconies and the articulation of the base means that many apartments will enjoy corner positions, with extended sunshine and extensive views;
- The pair of residential towers has very small floor plates compared to the norm for such types. The King Street tower has a total floor plate (including balconies) of just 536.8 m², with 6 apartments on the lower floors and only 3 per floor on the upper levels. The Canal Tower has a slightly larger floor plate of 582 m², with 5 apartments on the lower floors and only 2 per floor on the upper most levels;
- The separation between the towers is slightly less than that set out in the ADG, being between 16 metres and 22.5 metres. However this is mitigated by a number of factors: the major orientation to the towers being n-e/ s-w, resulting in the side elevations facing each other. These side elevations have secondary living room windows, kitchen, bedroom and bathroom windows – they are in all cases the secondary frontage for the apartments. Solid wall panels and external vertical louvres are also provided for privacy and solar control;
- The site planning is based around creating generous public and communal landscape spaces. This means that every unit will have an outlook to at least one new landscape space;
- The considered site planning ensures surveillance of the street, the canal frontage's communal landscape, courtyards and roof terraces for all apartments, and respects the amenity and privacy of neighbours when they in time come to redevelop.

3.0 DENSITY

- The proposal is entirely consistent with the LEP height and floor space controls.
- The proposed density of 4.0:1 is less than the permitted FSR of 5.0:1 or 5.5:1 with the 10% Design Excellence Bonus. The density is deployed to best address the specific site conditions and constitutes an efficient use of precious urban land. The proposed density and dwelling mix will be appropriate in the local context, and the development provides a suitable mix of accommodation to support the shifting needs of the population over the next century (a likely lifespan for such an apartment project);
- The proposal contains 197 new apartments that provide a mix of accommodation, which cater for contemporary requirements and comply with current standards. The overall breakdown of the mix includes 4 x studios (2.03%), 109 x 1 bed, some with studios (54.77%), 40 x 2 bed (20.30%), 41 x 3 bed (20.60%), 3 x 5 bed (1.52%).
- The following accommodation is proposed;

Podium Buildings facing King Street with a wing along the western boundary

- 2 x 1 bedroom flat floor apartments with direct access from the podium and private gardens
- 10 x 1 bedroom flat floor apartments with north facing balconies
- 1 x 1 bedroom 2 storey apartments with north facing courtyard
- 2 x 2 bedroom flat floor apartments with direct access from the podium and private gardens
- 8 x 2 bedroom 2 storey apartments with direct access from the podium and north facing private gardens
- 8 x 3 bedroom two storey apartments, each with 2 balconies
- 458m² Commercial Space
- 255m² Retail Space

King Street Tower

- 32 x 1 bedroom flat floor apartments with north east facing balconies
- 32 x 1 bedroom + study flat floor apartments with north east facing balconies
- 10 x 1 bedroom flat floor apartments with balconies (silver level)
- 10 x 3 bedroom flat floor apartments with 3 orientations
- 6 x 3 bedroom flat floor apartments with north east facing balconies
- 175m² Retail Space

Canal Tower

- 4 x studio flat floor apartments with north east facing balconies (silver level)
- 22 x 1 bedroom + study flat floor apartments with north east facing balconies (silver level)
- 22 x 2 bedroom flat floor apartments with north east facing balconies
- 8 x 2 bedroom flat floor apartments with 3 orientations (silver level)
- 9 x 3 bedroom + study flat floor apartments with 3 orientations
- 8 x 3 bedroom + study flat floor apartments with north east facing balconies
- 3 x 5 bedroom + study flat floor apartments with 3 orientations and north east facing balconies (silver level)
- 192m² Retail Space
- Each apartment is designed to fit its specific situation within the overall site plan, providing light, air, amenity, privacy, and a panoramic, green or screened outlook;
- The proposed density and mix will be appropriate in the evolving urban context in such a well-served context, and acknowledge the site's existing urban qualities and urban potential. Given the proximity to transport, schools, the harbourfront, parks, and shopping centres across King Street and along Hunter Street, this site is ideal for such a positive contemporary apartment proposal.

4.0 SUSTAINABILITY

- The intensive development of this well-located site within easy walk to the new station interchange promotes Compact City planning principles and is consistent with a raft of planning policies and best planning practices;
- In addition to the substantial residential accommodation, the proposal has a mix of retail and commercial spaces addressing the street and new canal frontage, that will add diversity to the area and promote live / work and recreational opportunities;
- Beyond compliance with BASIX's numerical standards, the site planning and building design maximise the benefits of passive solar design to the dwellings, exceeding ADG minimum standards;
- 123 of the new 197 dwellings (62.4%) are north-facing and receive mid-winter sun for more than 3 hours between 8am and 3pm on 22 June. 175 of the new 197 dwellings (88.8%) receive mid-winter sun for the required 2 hours between 8am and 3pm on 22 June. The remaining 22 of the new 197 dwellings (11%) receive at least 1 hour of mid

winter sun between 8am and 3pm on 22 June. The scheme performs well in excess of the 2 hour 70% target in the ADG. No living rooms face only to the south;

The site planning and building design ensure excellent environmental performance;

- All dwellings (100%) have courtyards and balconies open to northern, north-eastern or western orientation;
- There are no (0%) single orientation south apartments;
- All living rooms (100%) open directly to courtyards or balconies, which offer protection from direct sun to interiors in summer;
- 30 dwellings (15%) have three orientations for prolonged access to daylight;
- Sun control is achieved by balconies, vertical louvres, awnings and the like provided to most windows, appropriate to orientation. This strategy provides passive winter heating, better insulation, and reduces exposure to southerly winds while optimising privacy;

The buildings are designed to maximise natural ventilation as a high percentage of dwellings have excellent cross ventilation;

- 129 units (65.5%) have openable windows in at least two orientations for excellent cross ventilation. When the ADG dispensation on units above level 9 is factored in, the percentage rises to 153 units (77.66%), which is well in excess of the 60% cross ventilation requirement in the ADG;
- 16 out of 197 (8%) are two storeys, thus benefiting from stack effect ventilation.
- Every dwelling facing King Street (15 out of 15 -100%) has the advantage of a second orientation to the sun and away from street noise;
- In many recent buildings of this type and density, kitchens, and bathrooms are frequently internalised. This unnecessarily increases reliance on artificial lighting and mechanical ventilation at all times in such service spaces. By contrast, even on such a high density site this proposal is designed to maximise daylight and fresh air to service spaces;
- 197 of the 197 kitchens (100%) have openable windows, whereas the ADG suggests only 25%;
- 132 of the 312 bathrooms (42%) have natural light and ventilation;

- All apartments have a range of openable windows, doors and toplights, which will allow future occupants control of their internal environment. Allied to the cross and stack ventilation provided by the shallow floor plan, there is no need to rely on air-conditioning for the dwellings;
- All common areas on all levels (100%) are day-lit and naturally ventilated.

5.0 LANDSCAPE

- Even constrained urban sites can have evocative landscapes – this site's landscape strategy is a centrepiece of the site planning, with significant public domain and communal landscape initiatives;
- The landscape design is by one of Australia's leading landscape design practices, Jane Irwin Landscape Architects, who have already carried out award-winning projects for Newcastle Council. In addition to this statement, JILA have supplied a detailed landscape design description as part of the application;
- There are two major public domain initiatives that will have benefits well beyond the site, with landscape at their core;
 - A new 6 metre wide public way can be created for the full length of the available site along Cottage Creek, with the distinct possibility to realise a full block connection all the way from King Street to Hunter Street. This opens further possibilities to rethink the environment of the canal as a more positive element for Newcastle. This space would be able to readily accommodate pedestrian and cycle use in a shareway configuration, set in new landscape planted in deep soil. Private landscape areas adjoin these potential new public areas, demarcated by a change in level and material;
 - Along the entire King Street frontage, there is the opportunity to rethink the generous space of this important but somewhat neglected boulevard, which is a major entry to the centre of Newcastle. The landscape architect has proposed works in the street – to soften the hard, paved nature of the King Street pedestrian environment. New street tree planting, coordinated with WSUD initiatives, is proposed within the parking lane. These works can be coordinated with Council during the DA assessment stage;
- Two major vegetated communal spaces are proposed that will significantly enhance living in this high density site, with landscape at their core;

- Beyond the 6 metre wide public way, that in future could be acquired Council along Cottage Creek, there will be additional areas of communal landscape, also in deep soil. These areas will be raised to demarcate them from the public space and allow outdoor seating for the shops. Beyond and open to the main residential entry, a more sheltered garden will have open fences and lush planting;
- On the extensive podium above the car park structure is an expansive communal landscaped space. Due to the available depth of the car park structure there will be a minimum of 600mm depth of soil, rising to more than a metre depth in places. This green oasis in the heart of the site is readily accessed from every residential core, and is directly addressed by the podium units. Additionally many units will overlook this space, providing a treasured green foreground;
- On the western boundary above the car park structure there is also a 6 metre wide band of landscaped private courtyards, which open directly to the 3 units on this side. The 11 units that address the communal courtyard also have small private front gardens, with gates for easy access to this pleasant space;

The scheme significantly increases the area available for deep soil landscape on the site over the current built and paved situation. The proposal creates 1,100m² (24%) of deep soil landscape space along the Cottage Creek frontage, which could become in part new public domain, in part communal space.

6.0 AMENITY

- All dwellings have well-proportioned internal living spaces that open directly to private courtyards, balconies and terraces. Most (88.8%) dwellings benefit from 2 hours of north sun for internal and external living spaces;
- All dwellings have generous private outdoor spaces in the form of courtyards or balconies. 34 of the 197 dwellings (17%) have at least two private outside spaces;
- In addition to the balconies off all living rooms, 124 of the 197 (63%) main bedrooms benefit from a direct opening to a balcony or courtyard. This arrangement also allows a loop of circulation within many apartments, increasing their sense of spaciousness, openness to the outside, and sunlight;
- In conformity with the SEPP 65 Design Code, all habitable spaces have 2.7 metre high ceilings, as 3.1 metres floor to floor is provided. 16 units (8%) have higher volumes in their stairs and 5 units (2.5%) have higher ceiling heights in their living rooms;

- A thin cross section is adopted throughout, maximising the buildings' perimeter and therefore windows and available orientations. The depth is typically 12 m for two tower buildings, and a maximum of 13.5 metres for the podium units. In contrast, SEPP 65 Design Code allows a maximum of 18 metres depth of glass to glass;
- All the common lobbies have natural light and ventilation at all levels. Particular care has been taken with the section and detailed design of the communal spaces;
- 47 (23%) silver level adaptable dwellings are provided to allow choices for people with disabilities, in excess of the minimum stipulated by the ADG;
- In addition to the storage within the apartments, many have additional storage cages in the car parking levels;
- Common garbage rooms have been provided in the car park convenient to the cores. The rooms are discreetly located and are to be mechanically ventilated.

7.0 SAFETY

- The apartments, commercial and retail spaces will provide excellent animation and passive surveillance of the street and canal frontages, whereas currently there is minimal activation or passive surveillance along this 95 metre long street frontage;
- The main entry to the site is clearly denoted and provides a secure access with full height doors linked to intercom access at the street. The grand entry leads to an architectural promenade of the common circulation, which comes in contact with a range of the landscape spaces. A concierge will be stationed in the main lobby for extended periods;
- Within the site, entry to all apartments is from clearly defined routes integrated with landscape spaces. Each apartment's entry door is clearly legible to the common space;
- Lighting to the common stair voids and to the grand main entry to the building will animate the façade at night;
- The services and escapes are discreetly handled to minimise their impact on the common areas and footpath environment and to maximise landscape and residential space.

8.0 HOUSING DIVERSITY AND SOCIAL INTERACTION

- With Council's input, the future creation of the public way as the Cottage Creek promenade would become one of the major public domain initiatives over private land in recent decades in central Newcastle. This walkway will become a key part of the new greenway link between National Park to the south and the harbourfront to the north, and will be of lasting benefit to all residents, workers and visitors to the central districts of Newcastle;
- The proposed development is extremely well located in relation to major public transport, shopping centres, parks, schools and existing services. The new Wickham Station interchange will be located nearby, the new light rail route will be convenient and there are existing bus services in the streets. Ample bike parking is provided, and the site is within easy walk of many destinations. This well-serviced location should minimise reliance on the use of private motor vehicles;
- In contrast to many new developments in the LGA that comprise standard units, the proposal an extraordinarily wide range of apartment types, sizes and configurations to encourage a diversity of housing options to attract future residents. The smallest studio is 39.1m², whereas the largest 5 bedder is 292.5m², with a plethora of types and sizes in between;
- The additional generous communal garden spaces can become a great asset for future residents and their visitors, and should engender a sense of community, provide recreational opportunities and the chance for easy socialisation;
- Particular care has been taken with the detailed design of all common spaces. The entries are clearly denoted, expressed as breezeways forming open-ended slots;
- In addition to the apartments above, retail and commercial spaces at lower levels will diversify the use of the site, and offer potential live / work and shopping opportunities;
- The building will be served by discretely placed common facilities, including a large landscaped courtyard at podium level, garbage and service rooms, storage, and dedicated bicycle spaces within the podium. A common WC and gardener's areas are provided on the communal podium terrace level, where they would be of most convenience;

9.0 AESTHETICS

- The architectural design will bring a distinguished presence to the Newcastle streetscape and skyline, as it has been subject to extensive external design review. The scheme has a considered material palette that considers aesthetics, durability and maintenance. Refer to detail design drawings DA-501 to DA-507;
- The design has been developed with extensive consultation with Council's Design Review Panel and the Government Architect's appointed Design Excellence Panel and is a considered response to the scale and character of site and the area's evolving urbanity;
- The site arrangement brings into a tight composition the calming horizontal of the linear King Street podium, against which is contrasted the vertical forms of the two slender towers that address Cottage Creek;
- The King Street façade is a grand urban façade, in the tradition of street wall buildings that define and reinforce the space of the street. The façade has a calm arrangement of horizontal projections, which are calibrated by a range of minor and major vertical elements, the largest of which signifies the main entry to the complex;
- The towers' broad north-east facades facing the harbour and the city, and slender south-west facades facing Newcastle's hinterland both have a striking expression of open and screened balconies, with full height columns and concrete and glass balustrades. The balconies provide deeply-modelled areas of shade in contrast to the flatter side elevations;
- The towers' side facades have horizontal architectural expression that integrates overhangs and shading into the north facing windows along these façades. Full-height window assemblies, vertical louvres and cladding panels sit between the expressed slab edges adopted for the upper parts of the building;
- The proposed architectural character expresses in a positive way the environmental and amenity objectives embodied in the design.

CONCLUSION

- The design achieves a high quality architectural, urban design and landscape resolution, and signals the revitalisation of the central areas in Newcastle;

- The design has been developed with extensive consultation with Council's Design Review Panel and the Government Architect's appointed Design Excellence Panel and is a considered response to the scale and character of site and the area's evolving urbanity.
- The site is the ideal setting for a coordinated residential project, and the project provides a **model for the envisaged redevelopment of west Newcastle**.
- The site is well situated adjacent the transport, recreational, civic and shopping centres and is thus **ideally located for urban consolidation**.
- With Council's involvement, the project can incorporate an **important new public way along Cottage Creek**, bisecting this large block on the oblique to make the area more walkable and better integrated with harbour access.
- The **scale mediates between** the scale of the envisaged taller buildings and retained heritage and other buildings, and signals the planned transformation of the area's urban character.
- The project has a **distinctive architectural character, scale and silhouette** that will be an appropriate addition to Newcastle's urban landscape.
- The combination of fine tower forms and street wall buildings provides an **appropriate model** for matching higher density housing with high amenity locations.
- The retail and commercial uses have direct address and activation to the street and canal frontages.
- **Environmentally Sustainable Design (ESD)** issues have been holistically incorporated into the project.
- The **landscape design is fully integrated** with the site planning, and embellishes the new public space along Cottage Creek, the King Street frontage and car park podium.
- The proposal **consolidates communal courtyard spaces** in the heart of the block, for the shared enjoyment of residents and neighbours.
- The project incorporates **a diversity of residential accommodation**, incorporating the principles of adaptability, to increase the housing choices available in Newcastle.

- The proposal satisfactorily considers the privacy and amenity of the neighbouring properties, and **respects their redevelopment potential by applying appropriate setbacks.**
- The project will create a **high quality residential environment** for future residents, with very good amenity well above ADG requirements.
- The resolution of urban, architectural, environmental and social design considerations demonstrates that the proposal is an **appropriate fit to its site and context.**



Philip Thalys

Architect; NSW ARB number: #6780

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Stuart Campbell

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Director, CKDS Architecture

29th March, 2016
Job no 15.24 / PT

SEPP 65
DESIGN QUALITY STATEMENT

1.0 OBJECTIVES

OBJECTIVE	SUMMARY	ACTIONS	Compliance
	SITING		
3A-1	Site Analysis illustrates that design decisions have been based upon the opportunities and constraints of the site.	The site is extremely well located to public transport, services and amenity. The massing of the proposal responds to the major changes proposed in this inner urban context.	Yes
3B-1	Building types and layouts respond to the streetscape and site while optimising solar access within the development	Street wall height, south facing frontage, podium units all have northern aspect to the living areas facing out to a landscaped podium.	Yes
3B-2	Overshadowing of neighbouring properties is minimised during mid winter	King Street, to the south, presents as a very wide street and therefore no over shadowing to buildings across it is envisaged. Cottage Creek provides a buffer to neighbouring properties to the east. To the West exists a commercial building that will receive sunlight after midday in mid winter.	Yes
3C-1	Transition between private and public domain is achieved without compromising safety and security	The King Street façade has been developed so that it has a high level of visual permeability at upper levels – which allows for a strong and lively engagement between the public and private realm, while maintaining the safety and security of domestic space.	Yes
3C-2	Amenity of the public domain is retained and enhanced	The King Street façade makes a very positive contribution to a	Yes

		streetscape currently showing signs of vandalism and decay. Common and private open spaces engage with the streetfront. Passive surveillance is improved, without overly exposing the apartments to the harsh conditions of King Street.	
3D-1	An adequate area of communal open space is provided to enhance residential amenity and provide opportunities for landscaping	Ample landscaped communal open space is provided. The compact common garden area provides access to all apartments. Each apartment has private open space. All apartments share use of a common utility area.	Yes
3D-2	Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting	Detailed consideration has been given to the design of the common entry landscape space, to be an evocative and welcoming environment	Yes
3D-3	Communal open space is designed to maximise safety	Units are positioned to provide passive surveillance to the communal open space on top of the podium.	Yes
3D-4	Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood	Not applicable	NA
3E-1	Deep soil zones allow for and support healthy plant growth. Min. deep soil zones <650sqm No min. dimensions 7% site area 650 – 1500 3m min dimension 7% site area ≥ 1500 6m min dimension 7% site area	Generous garden areas have been provided as a percentage of the site. Approximately 17% of the site area is now deep soil garden area.	Yes
3F-1	Adequate building separation distances are shared equitably between neighbouring sites to achieve reasonable levels of external and internal visual privacy Height Habitable rooms/balconies Non habitable rooms Up to 12m 6m 3m	The towers generally have a 12m setback to the neighbouring boundaries to set up a 24m building separation for future development on surrounding sites. Podium apartments generally have a 6m setback to boundaries. The separation between the two towers is slightly less than the ADG, being between 16m and 22.5m. However this is mitigated	Yes

	Up to 25m >25m	9m 12m	4.5m 6m	by a number of factors: the major orientation to the towers being n-e/ s-w, resulting in the side elevations facing each other. These side elevations have secondary living room windows, kitchen, bedroom and bathroom windows – they are in all cases the secondary frontage for the apartments. Solid wall panels and external vertical louvres are also provided for privacy and solar control	
3F-2	Site and building design elements increase privacy without compromising access to light and air and balance outlook and views between habitable rooms and private open space.			Solid balustrades to decks are generally set at 700h with tapering balustrades to the tower decks opening out to the views	Yes
3G-1	Building entries and pedestrian access connects to and addresses the public domain			There are two distinct building entries, one for the towers and the other for the podium units. Both open directly from the public footpath on King Street.	Yes
3G-2	Access, entries and pathways are accessible and easy to identify			The use of splayed walls, large ceiling heights and voids have been incorporated into the design of the entries. These, in combination with street awnings, act as way finding and address the street and public domain with a change of scale.	Yes
3G-3	Large sites provide pedestrian links for access to streets and connection to destinations			Subject authority concurrence and approvals, the proposal allows for a potential through-block connection to Hunter Street	Yes
3H-1	Vehicle access points are designed to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes			A single kerb crossing, with minimal width for all vehicles proposed to enter the site has been designed for the car park entry. This is located to the westernmost boundary away from the most intense pedestrian activity on the site.	Yes
3J-1	Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas			Car parking has been designed to the Newcastle DCP as per the requirements for inner city developments.	Yes
3J-2	Parking and facilities are provided for other modes of transport			Mortorcycle and bicycle parking is available within the building and landscape design to DCP requirements.	Yes
3J-3	Car park design and access is safe and secure			Security system will be provided along with two secure shutters	Yes

		within the building	
3J-4	Visual and environmental impacts of underground car parking are minimised	The carparking is sleeved by commercial, retail and residential accommodation to the main street and creek elevations. A zero lot line wall is provided to the other boundaries, the intent of which is that future and existing development will match this alignment.	Yes
3J-5	Visual and environmental impacts of on-grade car parking are minimised	As above	Yes
3J-6	Visual and environmental impacts of above ground enclosed car parking are minimised	As above	Yes
	DESIGNING THE BUILDING		
4A-1	Optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space All other areas – a min. of 3 hours A max. of 15% receive no sun in mid winter	88.8% of the apartments achieve the minimum 2hrs required sunlight in mid winter to the living areas. 62.4 % achieve 3hrs of sunlight mid winter. All units will receive at least 1 hour of sun in min winter.	Yes
	2 hours min sunlight midwinter in Sydney/Newcastle/Wollongong	See above	Yes
	All other areas a min. of 3 hours	See above	Yes
4A-2	Daylight access is maximised where sunlight is limited	In accordance with the guidance contained in the ADG, the exterior and interior spaces have been given light coloured finishes	Yes
4A-3	Design incorporates shading and glare control, particularly for warmer months	All north-facing windows are recessed into the façade to provide overhangs for solar control.	Yes
4B-1	All habitable rooms are naturally ventilated	All habitable rooms are naturally ventilated, and many have multiple windows in different facades	Yes
4B-2	The layout and design of single aspect apartments maximises natural ventilation	Complies	Yes

4B-3	The number of apartments with cross ventilation is maximised At least 60% of apartments are naturally cross ventilated Over all depth of cross over apartments in 18m max.	77.66% of dwellings are cross ventilated. Maximum building depth in the entire scheme is 14.5m.	Yes Yes
4C-1	Ceiling height achieves sufficient natural ventilation and daylight access. Min height of – Habitable rooms 2.7m Non habitable rooms 2.4m Two storey apartments 2.7m main living floor 2.4m for second floor (max. 50% area) Attic spaces 1.8m at edge of room 30° ceiling slope	All habitable rooms have ceiling heights of $\geq 2.7\text{m}$ All non habitable rooms have ceiling heights of $\geq 2.4\text{m}$	Yes Yes
4C-2	Ceiling height increases the sense of space in apartments and provides for well proportioned rooms	Proposal has adequate floor to ceiling heights, see above	Yes
4C-3	Ceiling height contributed to flexibility of building use over the life of the building	Ceiling heights comply	Yes
4D-1	Layout of rooms within an apartment is functional, well organised and provides a high standard of amenity	Layout of rooms is functional, articulated to make best use of the design's character and provide a high standard of amenity	Yes
	Min. areas Studio 35sqm 1 bed 50sqm 2 bed 70sqm 3 bed 90sqm	Complies Complies Complies Complies	Yes
	Every habitable room must have a window in an external wall with a total minimum glass area of not less than 10% of the floor area of the room. Daylight and air may not be borrowed from other rooms.	All habitable rooms have ample operable windows in excess of the 10% minimum requirement.	Yes

4D-2	Environmental performance of the apartment is maximised	See above	Yes
	Habitable room depths are limited to a maximum of 2.5 x the ceiling height	Given the thin cross section design, all habitable room depths easily exceed these requirements	Yes
	In open plan layouts the maximum habitable room depth is 8m from a window	Complies	Yes
4D-3	Apartment layouts are designed to accommodate a variety of household activities and needs	Layouts are compact but flexible	Yes
	Master bedrooms have a minimum area of 10sqm and other bedrooms 9sqm (excluding wardrobes)	Complies	Yes
	Bedrooms have a minimum dimension of 3m (excluding robes)	Complies	Yes
	Living rooms or open plan living have min width of 3.6m for studios/1beds 4m for 2/3beds	Complies	Yes
	Width of cross over apartments are at least 4m internally to avoid narrow layouts	Not applicable	NA
4E-1	Apartments provide appropriately sized private open space and balconies to enhance residential amenity	All dwellings have generous private outdoor spaces in the form of courtyards or balconies. 34 of the 197 dwellings (17%) have at least two private outside spaces .	Yes
	Primary balconies Studio 4sqm 1 bed 8sqm 2m min depth 2 bed 10sqm 2m min depth 3 bed 12sqm 2.4m min depth	Complies Complies with studio rate due to site circumstances Complies Balcony depth varies from 750mm to 3,400mm to provide multiple options for outdoor space, particularly up high.	Yes
	Apartments at ground level or on podium have a private open space instead of a balcony. Minimum area is 15sqm and minimum depth is 3m	Complies	Yes
4E-3	Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the	All balconies are designed and detailed as integral components of the façades. Balconies are designed to allow for enjoyment	Yes

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	building	of outdoor space, without over exposure to traffic noise, wind, or overlooking of the private open space of other units or neighbouring sites.	
4E-4	Private open space and balcony design maximises safety	All balconies to be designed and constructed in accordance with the BCA	Yes
4F-1	Common circulation spaces achieve good amenity and properly service the number of apartments	All apartments can easily access the generous common landscaped space that is open to the sky	Yes
	Maximum number of apartments off a circulation core on a single level is 8	Maximum of 6 dwellings off a single core	Yes
	For buildings 10 + storeys, maximum number of apartments sharing a single lift is 40	Complies.	Yes
4F-2	Common circulation spaces promote safety and provide for social interaction between residents	Circulation is direct and legible and secured at the street front. The common garden space are open, and planted to form a lively and engaging space that celebrates the daily routine of 'homecoming'.	Yes
4G-1	Adequate, well designed storage is provided in each apartment	All apartments are provided with storage external to kitchens and bedrooms, and will also have access to storage areas within the carpark space.	Yes
	Studios 4m3 1 bed 6m3 2 bed 8m3 3 + 10m3	Complies	Yes
4G-2	Additional storage is conveniently located, accessible and nominated for individual apartments.	Complies	Yes
4H-1	Noise transfer is minimised through the siting of buildings and building layout	Most apartments on site are located away from the major traffic noise. Apartments on the street frontage are designed so that secondary openings are always available on the quiet side of the building. All wall construction and glazing is in accordance	Yes

		with the Acoustic Engineer's recommendations	
4H-2	Noise impacts are mitigated within apartments through layout and acoustic treatments	All separating construction to be in accordance with the BCA	Yes
4J-1	In noisy or hostile environments the impacts of external noise and pollution are minimised through careful siting and layout of buildings	Most apartments are oriented north, north-east or east, away from the traffic noise sources on site. Every apartment that has a King Street frontage, also has secondary orientations to the east or north, away from street noise where there is the opportunity to achieve natural ventilation from the non street side of the building. Street noise has been assessed by an Acoustic Engineer + recommendations adopted.	Yes
4J-2	Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission.	All the recommendations of the Acoustic Engineer's report have been adopted.	Yes
4K-1	A range of apartment types and sizes is provided to cater for different household types now and into the future.	The proposal contains a mix of studio, one, two, three, five bedroom units of varying configurations and character.	Yes
4K-2	The apartment mix is distributed to suitable locations within the building.	Different apartment types are located to best utilise and accommodate the site's best attributes.	Yes
4L-1	Street frontage activity is maximised where ground floor apartments are located.	Not applicable – no ground floor apartments facing the main road – King Street	Yes
4L-2	Design of ground floor apartments delivers amenity and safety for residents	No ground floor apartments face the street. All dwellings facing the landscaped podium have private gardens.	Yes
4M-1	Building facades provide visual interest along the street while respecting the character of the local area.	The street façade sets up a street wall height that will be continued through future developments. Articulation to the facade is achieved through winter gardens and residential scaled materials such as brick work.	Yes
4M-2	Building functions are expressed by the façade	The building entry is clearly defined with an increased ceiling height and splayed entry wall. The main entry is also positioned	Yes

		at the bottom of the vertical break in the Tower.	
4N-1	Roof treatments are integrated into the building design and respond positively to the street.	Podium roofs have been designed to be simple and act as the fifth elevation as they are viewed from the tower units. The roofs to the towers are kept at a minimal pitch (generally flat) to allow the undulating planning character of the towers to become evident when viewed from the ground plane.	Yes
4N-2	Opportunities to use roof space for residential accommodation and open space are maximised.	The podium apartments have been designed to address and connect to a very extensive landscaped communal podium.	Yes
4N-3	Roof design incorporates sustainability features	The roof of the building incorporates services that will be screened to protect them both visually and from exposure.	Yes
4O-1	Landscape design is viable and sustainable	The landscape design and species selection makes intelligent use of native species for all garden spaces	Yes
4O-2	Landscape design contributes to the streetscape and amenity	Street trees and public landscaping has been selected and designed by the landscape Architect to contribute to the streetscape	Yes
4P-1	Appropriate soil profiles are provided		Yes
4P-2	Plant growth is optimised with appropriate selection and maintenance	Plants have been selected by the Landscape Architect to suit the site conditions.	Yes
4P-3	Planting on structures contributes to the quality and amenity of communal and public open spaces		Yes
4Q-1	Universal design features are included in apartment design to promote flexible housing for all community members	47 (23%) silver level adaptable dwellings are provided to allow choices for people with disabilities, in excess of the minimum stipulated by the ADG	Yes
4Q-2	A variety of apartments with adaptable designs are provided		Yes
4Q-3	Apartment layouts are flexible and accommodate a range of lifestyle needs	A good mix of apartment types are provided, with many atypical units that respond to the site's particular opportunities. 23% of units are LHD compliant	Yes
4R-1	New additions to existing buildings are contemporary and	Not applicable	Yes

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	complementary and enhance an areas identity and sense of place		
4R-2	Adapted buildings provide residential amenity while not precluding future adaptive reuse	Not applicable	Yes
4S-1	Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement.	Ground floor retail with commercial space above has been designed to address and activate both king street and the canal.	Yes
4S-2	Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents		Yes
4T-1	Awnings are well located and complement and integrate with building design	A street awning is provided over the building entry and is integrated with the street façade design	Yes
4T-2	Signage responds to the context and desired streetscape character	Signage has been incorporated into the building frontage.	Yes
4U-1	Development incorporates passive environmental design	Beyond compliance with BASIX's numerical standards, the site planning and building design maximise the benefits of passive solar design to the dwellings, exceeding ADG minimum standards.	Yes
4U-2	Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer		Yes
4U-3	Adequate natural ventilation minimises the need for mechanical ventilation	All apartments are naturally cross-ventilated.	Yes
4V-1	Potable water use is minimised	A water tank is provided for irrigation and toilet flushing in the development. Water efficient appliances and tapware will be installed in compliance with the BASIX assessment.	Yes
4V-2	Urban stormwater is treated on site before being discharged to receiving waters	In accordance with DCP	Yes
4V-3	Flood management systems are integrated into site design	In accordance with DCP	Yes
4W-1	Waste storage facilities are designed to minimise impacts on the	Waste storage is located near the street for easy access for	Yes

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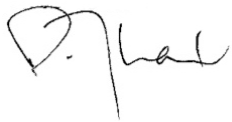
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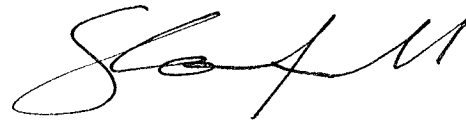
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	streetscape, building entry and amenity of residents	collection – but screened by suitable windows – opaque at lower levels, with glazing at high levels only.	
4W-2	Domestic waste is minimised by providing safe and convenient source separation and recycling		Yes
4X-1	Building design detail provides protection from weathering		Yes
4X-2	Systems and access enable ease of maintenance		Yes
4X-3	Material selection reduces ongoing maintenance costs	Robust and durable materials have been specified.	Yes

The project will create a high quality residential environment for future residents, with very good amenity well above ADG requirements.



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