Architects Overview Statement

Proposed Mixed Use Development

Brooks Parade

Belmont

8 October 2020

Introduction

This statement has been prepared by Charles De Bono, Architect, Registration No 7026 in preparation of a Development Application for a proposed development at Brooks Parade, Belmont. This statement should be read in conjunction with the Statement of Environmental Effects, Landscape Design Report and Visual Impact Assessment and all other reports that will be provided as part of the Development Application.

An assessment against Parts 3 & 4 of the SEPP 65 Apartment Design Code has been carried out and is enclosed as Appendix A – ASSESSMENT AGAINST PARTS 3 & 4 OF THE SEPP 65 APARTMENT DESIGN CODE.

Background Information

The various lots that comprise the site have been amalgamated by the owners over the past 14 years. The Owners, on the recommendation of the JRPP, acquired the last remaining isolated corner site in late December 2017.

Various schemes have been presented to Council over this period.

The most recent scheme prior to the current scheme was prepared by IRT. This proposal was abandoned by IRT following various meetings with Council and the SEPP 65 Design Review Committee on the grounds that the modifications requested made their proposal unviable.

A new developer appointed Coeve Design (VIC) ("Coeve") to investigate whether a Mixed Use Residential Development would be viable on the site in February 2013. The Developer has stipulated that approximately 150 residential apartments will make the project viable. This proposal was abandoned by the Developer following various meetings with Council and the SEPP 65 Design Review Committee on the grounds that no clear direction could be obtained from Council on what concessions would be provided to make the project viable.

In November 2013, Council's Strategic Development Department prepared a report entitled Review of the Town Centres DCP and Belmont Area Plan for 32 Brooks Parade Belmont. This report ("Belmont Town Centre Review" Report) submitted that a number of concessions, mainly to building set back and separation would be reasonable. The Report also recommended that there were reasonable grounds to increase the height limit on two buildings facing Brooks Parade.

In December 2019, Annand Associates Urban Design Pty Ltd prepared a report entitled 34-42 Brooks Parade / Urban Design Report. This report notes that *"...There is a case however, to allow an 8-story building in the S-W corner as a bookend to Belmont Towers. This would be justified by measuring the 22m to the top of the parapet, then permitting extra levels set well back and with reduced visual significance. A roof garden could be provided as well Building Height generally complies with Council controls with the exception of "Building A" which mirrors Belmont Towers ..."*

There have been a number of discussions and meetings between the owners, the consultants, and Council officers on the viability of developing this site.

As discussed at the various meetings, the current setbacks and building separation are such that they make any conforming development unviable. The density of a conforming development on this site is substantially less than that on adjoining sites as demonstrated in Coeve's report submitted to Council dated 9 July 2013 - Brooks Parade Development Proposal Review of DCP Block Control Plans, and recently approved Adjoining Developments.

The Owners appointed Coeve to prepare a Development Application for a Mixed Use Residential Development on the site. The brief included a stipulation that additional height should not be sought other than for the "book end" adjacent to Belmont Towers.

A Development Application was lodged with Council and reviewed by the JRPP in November 2017. The Application excluded the site on corner of Brooks Parade and Sharp Street, No 44 Brooks Parade (the Isolated Lot). The JRPP recommended that both owners meet and resolve the inclusion of the Isolated Site into the Application.

In late December 2017, the owners agreed to incorporate the Isolated Lot into the Application.

The Development Application was amended to incorporate the Isolated Lot and re-submitted to Council in December 2019. The JRPP recommended that the owners and Council meet to resolve various items.

The proposal has been workshopped with Council officers over the past few months and the design modified to incorporate various pertinent comments raised. We believe that the resultant design now meets both Council's and the Owners expectations.

This Statement is in response to the owner's design brief and now incorporates the Isolated Lot and the comments raised by Council. It considers the setbacks and heights discussed with Council's Officers as justifiable.

Principle 1: Context and Neighbourhood Character

Good design responds and contributes to its context. Context is the key natural and built features of an area, their relationship and the character they create when combined. It also includes social, economic, health and environmental conditions.

Responding to context involves identifying the desirable elements of an area's existing or future character. Well designed buildings respond to and enhance the qualities and identity of the area including the adjacent sites, streetscape and neighbourhood. Consideration of local context is important for all sites, including sites in established areas, those undergoing change or identified for change.

The amalgamated site is well known to Council and the DRC. The owners have now amalgamated all the individual lots generally bounded by the existing stormwater canal to the north, Brooks Parade to the west, Edgar Street to the east, and Sharp street to the south.

This amalgamation of the last outstanding lot and the various meetings with Council and the DRC have resulted in a modified design to that submitted recently.

A site analysis plan (Coeve Drg DA01) is included the amended Development Application.

The proposal can be described in general terms as follows:

- The subject site is located in an area of rapid re-development. Multi storey building completed recently within close proximity of the site include:
  - Santorini Apartments (6-storey and semi basement carpark)
  - Belmont Central (6-storey and semi basement carpark)
  - Deck Apartments (6-storey and semi basement carpark)
  - Belmont Warf Apartments (6-storey and semi basement carpark)
- There are no heritage or archaeological items on the subject site.
- Residential and visitors parking will be provided in a semi basement and full basement accessed off Edgar Street.
- It is not possible to provide at grade access (including compliance with the disability access requirements of the BCA) to the interactive commercial areas due to Council's Sea Level Rise policy. In order to satisfy this criteria and still meet Council's requirements split level retail units have been provided along sections of Edgar and Sharp Streets. The retail premises facing Brooks parade have been maintained at the podium level and the setback increased to provide ample decks fronting Brooks Parade. The decks are linked to the street level by means of stairs and DDA compliant ramps.
- Both the Brooks Parade retail premises and the split-level units facing Edgar and Sharp Streets are linked to the visitors' carpark by means of dedicated lifts.
- Significant deep root planting zones have been provided along the 3 street frontages and the canal to soften the transition between street level and the pedestrian precinct within the site.

- 4 individual buildings are proposed. Three of the buildings will be 6 storeys with the top 2 floors being set back further from the street frontages generally in compliance with Council's DCP and discussions with Council's Officers. The building in the south-east corner of the site (the closest interface to existing developments) is a 7-storey building which is also set back on the top floor.
- The massing is well balanced and the four towers have been off-set and separated to provide significant view vistas through the site from various angles and maintain the building separations recommended in the Apartment Design Guide and Council's Belmont Town Centre Review Report.
- The 7-storey building serves to lessen the impact of Belmont Towers as adequately argued in the various reports and studies referred to or included in this Development Application and Council's Belmont Town Centre Review Report.
- A sense of movement is created with the articulated facades and architectural detail.

The commercial areas facing onto Brooks Parade allow sufficient space for restaurants and cafes with significant outdoor seating with views over the lake. These areas are linked to the street level by means of stairs and DDA compliant ramps. Depending on Council's requirements, footpath dining can also be incorporated into the Brooks Street area as part of the individual Development Applications by the individual shop tenants.

Split level commercial areas have been provided along Sharp and Edgar Streets with the lower level providing street level access at grade.

In view of the above, we submit that the proposed development is appropriate in its context and generally complies with the objectives of Principle 1: Context and Neighbourhood Character of the Apartment Design Guide.

Principle 2: Built Form and Scale

Good design achieves a scale, bulk and height appropriate to the existing or desired future character of the street and surrounding buildings.

Good design also achieves an appropriate built form for a site and the building's purpose in terms of building alignments, proportions, building type, articulation and the manipulation of building elements. Appropriate built form defines the public domain, contributes to the character of streetscapes and parks, including their views and vistas, and provides internal amenity and outlook.

With the exception of the building on the corner site, the proposal complies in desired scale and character Council's DCP for tiered 6-storey buildings in 4 blocks on the site.

A 7-storey building is proposed for the south west corner of the site. The additional height serves to lessen the impact of Belmont Towers as adequately argued in the various reports and studies referred to or included in this Development Application and Council's own Review of the Town Centres DCP and Belmont Area Plan for 32 Brooks Parade Belmont and Annand Associates Urban Design Pty Ltd prepared a report entitled 34-42 Brooks Parade / Urban Design Report which are also included in the Development Application.

It should be noted that the proposed design is one story less than that discussed in Council's own Review of the Town Centres DCP and Belmont Area Plan for 32 Brooks Parade Belmont and Annand Associates Urban Design Pty Ltd prepared a report entitled 34-42 Brooks Parade / Urban Design Report.

The 4 buildings that comprise the propose development are well separated and articulated with large private balconies. The buildings are generally aligned to the various boundaries and not with one another thus further adding diversity to the overall massing.

Various heavily landscaped communal open spaces are proposed between the buildings, both at podium level and street level to provide various degrees of privacy and access to their users.

Significant deep root planting zones have been provided along the 3 street frontages to soften the transition between street level and the pedestrian precinct within the site.

A significant deep root planting zone has been provided along the entire length of the canal and extended significantly into the separation between the buildings. The landscaped area has been tiered up from the canal level to the podium level to soften this transition.

The height of the individual buildings and orientation ensure that adjoining properties are not unduly compromised in terms of solar access and privacy.

In view of the above, we submit that the built form and scale of the proposed development is appropriate in its context and generally complies with the objectives of Principle 2: Built Form and Scale of the Apartment Design Guide.

Principle 3: Density

Good design achieves a high level of amenity for residents and each apartment, resulting in a density appropriate to the site and its context.

Appropriate densities are consistent with the area's existing or projected population. Appropriate densities can be sustained by existing or proposed infrastructure, public transport, access to jobs, community facilities and the environment.

The owners do not wish to over develop the site and have provided us the opportunity to provide an intrinsically open design.

The area is generally being redeveloped in accordance with Council's guidelines. The DCP envisages the entire town centre to be re-developed with various buildings ranging in height from 6 storeys to 3 storeys. This inevitably means more and more apartments.

The proposed buildings comprise of a mix of 1, 2, and 3 bedroom apartments. The apartments are well designed and of a reasonable area. All car parking requirements and site facilities for both the apartments and the commercial areas are comfortably contained on-site.

The commercial areas provided can never compete for large corporate majors or mini major tenancies. These will remain in the adjoining Belmont Citi Centre. The commercial areas have been designed with this in mind and have been limited in depth to ensure that they are easily leased to a variety of uses.

It is envisaged that the commercial areas on the Ground Floor facing Brooks Parade and the lake will be leased as restaurants or cafes and facilities for kitchen exhausts, etc, have been incorporated into the design.

In total 707 m^2 of commercial space (excluding potential outdoor areas) has been provided which equates to a site coverage of 11% if the canal and the land to its north is excluded in the site area.

A Social Impact Assessment and an Economic Impact Assessment have been prepared for the original application and form part of this Development Application. The Social Impact Assessment notes

> *"... Belmont like other major town centres in Lake Macquarie is continuing to provide apartment living and mixed use developments. While this has been a strategic planning outcome identified by Council, the increasing number of apartments in Belmont (such as this proposed development) will continue to provide housing choice in the LGA...."*

The LEP and the DCP do not contemplate any measure of direct density control for the subject site. A review of surrounding developments indicates approximate FSR'S of 1.5 to 2.5:1. The FSR for the current proposal is about 1.5:1 including the additional floor in Building A (7 floors). This suggests that the proposal does not constitute an over development of the site.

It should be noted that the inclusion of an additional basement has provided greater flexibility with respect to density by allowing necessary parking to be distributed over more than one basement / semi-basement levels.

In view of the above, we submit that the density of the proposed development is appropriate in its context and generally complies with the objectives of Principle 3: Density of the Apartment Design Guide.

Principle 4: Sustainability

Good design combines positive environmental, social and economic outcomes. Good sustainable design includes use of natural cross ventilation and sunlight for the amenity and liveability of residents and passive thermal design for ventilation, heating and cooling reducing reliance on technology and operation costs. Other elements include recycling and reuse of materials and waste, use of sustainable materials, and deep soil zones for groundwater recharge and vegetation.

The buildings have been designed with regards to effective orientation and cross flow ventilation. As an example, the design does not incorporate any single aspect south facing apartments.

A full assessment of the proposed design against the recommendations in the Apartment Design Guide is tabulated in Coeve Design Drg DA51.

A full and comprehensive Stormwater Design and Report and BASIX Assessments are included in the Development Application.

In view of the above, we submit that the proposed design solution, particularly through the orientation and design of the units (solar access and ventilation), the provision of substantial areas of deep soil planting to assist in natural water absorption and reduce run off, and the selection of appropriate planting/landscaping generally complies with the objectives of Principle 4: Sustainability of the Apartment Design Guide.

Principle 5: Landscape

Good design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in attractive developments with good amenity. A positive image and contextual fit of well designed developments is achieved by contributing to the landscape character of the streetscape and neighbourhood.

Good landscape design enhances the development's environmental performance by retaining positive natural features which contribute to the local context, co-ordinating water and soil management, solar access, micro-climate, tree canopy, habitat values, and preserving green networks. Good landscape design optimises usability, privacy and opportunities for social interaction, equitable access, respect for neighbours' amenity, provides for practical establishment and long term management.

The 34-42 Brooks Parade / Urban Design Report prepared by Annand Associates Urban Design Pty Ltd provides a detailed analysis of the proposal against the ADG. Specifically, deep soil was addressed in the report. These provisions are also detailed within the provided landscape plans and sections.

As demonstrated in the Urban Design Report and the landscape plans, the revised proposal has incorporated design measures which address the objective of the desired deep soil zones, which included additional setbacks along Brooks Parade to provide larger deep soil areas as well as a deep soil area within the common podium. Additionally, the decks fronting Brooks Parade include design provisions to allow for and support healthy plant and tree growth. These deep soil areas contribute to the overall residential amenity and promote management of water and air quality.

As discussed above, deep soil planting zones of varying widths have been provided around the entire lengths of the 3 street frontages ie Brooks Parade and Sharp and Edgar Streets as well as the canal. This zone has been increased to 6.0m and 8.0m in various locations on Brooks Parade and the canal frontages. In addition, various areas of deep root planting, generally in excess of 10m x 10m, have been incorporated between the 4 buildings and in the centre of the site. The perimeter zones soften the transition between the footpaths and access to the residential and commercial areas which have been raised above street level in accordance with Council's Sea Level Rise policy.

Roof top gardens have been provided on all 4 buildings further enhancing the landscaped character and amenity of the buildings.

A deep soil area of approximately 150m^2 has been provided in the center of the site between all 4 buildings and the area heavily landscaped as shown on the landscape drawings.

The proposal provides 34% landscaped areas including planters and decks. It includes a deep soil area of 1,820m2 which is 28.4% of site area. This includes permeable timber deck areas which allow space for deep root activity. Even if the timber deck areas are excluded, the deep soil area is 1,295m2 (20.2%). This is well above the 15% recommended in the ADG and the lower figure recommended in the Belmont Town Centre Review Report.

A comprehensive landscape design and report is included in this Development Application.

In view of the above, we submit that the proposed landscape design, particularly through the extensive use of deep root planting and the use of appropriate planting/landscaping generally complies with the objectives of Principle 5: Landscape of the Apartment Design Guide.

Principle 6: Amenity

Good design positively influences internal and external amenity for residents and neighbours. Achieving good amenity contributes to positive living environments and resident well being.

Good amenity combines appropriate room dimensions and shapes, access to sunlight, natural ventilation, outlook, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts and service areas, and ease of access for all age groups and degrees of mobility.

The owners are a quality developer who believe in providing a quality product. The individual units have been designed with this in mind. In particular, it should be noted that:

- **NO** apartments with internal bedrooms have been provided.
- All 2-bedroom apartments are provided with 2 bathrooms.
- All balconies meet and generally exceed the minimum requirements.
- Cross ventilation is provided to the majority (76%) of apartments.
- All residential lift lobbies are provided with natural light.
- All buildings are provided with dedicated roof top gardens for use by the residents.
- 2 communal meeting rooms have been provided with access off the communal areas at Ground Floor level.

Details of the various criteria and the way in which they have been addressed are provided in the review of the Control Checklists and Rules of Thumb noted in SEPP 65 enclosed as Appendix A.

An overview assessment of the proposed design against the recommendations in the Apartment Design Guide is tabulated in Coeve Design (VIC) Drg DA51.

In view of the above, we submit that the amenity of the proposed development is appropriate in its context and generally complies with the objectives of Principle 6: Amenity of the Apartment Design Guide.

Principle 7: Safety

Good design optimises safety and security, within the development and the public domain. It provides for quality public and private spaces that are clearly defined and fit for the intended purpose. Opportunities to maximise passive surveillance of public and communal areas promote safety.

A positive relationship between public and private spaces is achieved through clearly defined secure access points and well lit and visible areas that are easily maintained and appropriate to the location and purpose.

The proposed development has addressed all issues relating to the safety of both future occupants and visitors. Commercial and residential areas are kept separate, and separate lifts service the commercial areas. Secure access will be provided to all lift lobbies. The building will be provided with a video intercom swipe card/key access system to provide secure access to the residential areas of the development generally in accordance with the CPTD report that forms part of this submission.

Balconies of living areas and some bedrooms overlook the communal private open spaces between the buildings thus providing passive surveillance.

The apartments on the Ground Floor are set up above the podium level and overlook the communal private open space between the buildings.

Direct access is provided from the secure carpark to the apartment lobbies for residents.

The visitors carpark is provided with a dedicated access lifts which are external to the residential carpark.

A crime prevention through environmental design report has been prepared and included in the Development Application. The recommendations of the crime prevention report will be included in the final detailed design.

In view of the above, we submit that the design of the proposed development is appropriate in its context and generally complies with the objectives of Principle 7: Safety of the Apartment Design Guide.

Principle 8: Housing Diversity and Social Interaction

Good design achieves a mix of apartment sizes, providing housing choice for different demographics, living needs and household budgets.

Well designed apartment developments respond to social context by providing housing and facilities to suit the existing and future social mix. Good design involves practical and flexible features, including different types of communal spaces for a broad range of people, providing opportunities for social interaction amongst residents.

The proposed mixed use development provides for a range of both future residents and activities as per the following:

- The proposed buildings comprise of a mix of 1, 2, and 3 bedroom apartments. The apartments are well designed, are of a reasonable area, and will cater for different price brackets.
- Outdoor dining areas and other activities are directly accessible from the footpath via the public spaces.
- Various user groups are accommodated within the development such as older people, people with disabilities and young people.
- The function of the development is supported by continual connectivity around the development. It will be well sign posted and allow ease of access for both residents and visitors.
- Various heavily landscaped communal open spaces are proposed on the Ground Floor podium between the buildings to provide various degrees of privacy to their users.
- The proposal addresses the lake views, providing a number of future occupants with access to this aspect together with visitors to the cafes and restaurants.

The quality of the proposed buildings will enable a high level of amenity for all users in a very central location; all activities within Belmont will be within easy distance to the development, however the proposal will draw users to it, for a variety of reasons.

In view of the above, we submit that the design of the proposed development is appropriate in its context and generally complies with the objectives of Principle 8: Housing Diversity and Social Interaction of the Apartment Design Guide.

Principle 9: Aesthetics

Good design achieves a built form that has good proportions and a balanced composition of elements, reflecting the internal layout and structure. Good design uses a variety of materials, colours and textures.

The visual appearance of well designed apartment development responds to the existing or future local context, particularly desirable elements and repetitions of the streetscape.

A range of materials and finishes are proposed. The floor plates are quite small and the buildings rely on proportion and articulation to provide shadows and interest.

Various materials and textures have been adopted to define specific areas, and different styles of louvers, both fixed and adjustable, have been incorporated into the design to further provide an ever changing external fabric of the building.

Detailed colour boards and colour perspectives are included in this Development Application.

In view of the above, we submit that the design of the proposed development is appropriate in its context and generally complies with the objectives of Principle 9: Aesthetics of the Apartment Design Guide.

Conclusion

The proposal has evolved from a desire by the owners to provide a quality building in Belmont that improves and enhances the surrounding area.

The owners initial brief required approximately 150 residential apartments. Whilst this number is achievable, the owners realise that it is not in the best interest of the project or the Belmont community and have revised their requirements to provide a reduced number of apartments and provide a greater diversity in the unit types.

The owners are a quality developer who believe in providing a quality product. The individual units have been designed with this in mind. In particular, it should be noted that:

- **NO** apartments with internal bedrooms have been provided.
- All 2-bedroom apartments are provided with 2 bathrooms.
- All balconies meet and generally exceed the minimum requirements.
- Cross ventilation is provided to the majority (76%) of apartments.

The proposal has successfully amalgamated all the blocks bounded by the canal, Brooks Parade, and Edgar and Sharp Streets thus incorporating the last isolated lot.

The proposal generally conforms with the recommendations of the Apartment Design Guide with the majority of the minimum criteria being well exceeded.

The proposal has been workshopped with Council officers over the past few months and the design modified to incorporate various pertinent comments raised.

The proposal now meets the heights recommended in Council's DCP for 3 of the 4 buildings. The additional height on the fourth building, Building A, is justifiable as it acts as a "book end" to match the existing Belmont Towers across Sharp Street to the North. The proposal does not meet the building setbacks and separation nominated in Council's DCP however it meets the intent of the DCP in that it provides 4 well designed and articulated buildings that provide separation and view corridors as originally envisaged. More importantly it meets the set back and building separation concessions discussed with Council officers, recommended in Council's Belmont Town Centre Review Report, and Annand Associates Urban Design Pty Ltd's Urban Design Report.

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Architects Overview Statement

Proposed Mixed Use Development
Brooks Parade
Belmont

Appendix A
ASSESSMENT AGAINST PARTS 3 & 4 OF THE SEPP 65 APARTMENT DESIGN CODE

32 BROOKS PARADE
ASSESSMENT AGAINST PARTS 3 & 4 OF THE APARTMENT DESIGN CODE

3A Site analysis	
Objective 3A-1 Site analysis illustrates that design decisions have been based on opportunities and constraints of the site conditions and their relationship to the surrounding context	
Design guidance	
Each element in the Site Analysis Checklist should be addressed (see Appendix 1)	The submitted architectural, landscape and stormwater control plans together with the SEE prepared by Monteath and Powys and the various reports included in the SEE is considered to have addressed all the items listed in the Checklist.
3B Orientation	
Objective 3B-1 Building types and layouts respond to the streetscape and site while optimising solar access within the development	
Design guidance	
Buildings along the street frontage define the street, by facing it and incorporating direct access from the street (see figure 3B.1)	The buildings face the 3 street frontages. Access to the residential buildings facing Edgar and Sharp Streets, Buildings C and D, is at grade at street level. Access to the commercial areas facing Edgar and Sharp Streets, is also at grade at street level. Access to the residential buildings facing Brooks Parade, Buildings A and B, are via the elevated podium required to meet Council's Sea Level Rise policy. Access to the commercial areas facing Brooks Parade is also via the elevated podium required to meet Council's Sea Level Rise policy but at a lower level.

Where the street frontage is to the east or west, rear buildings should be orientated to the north	There are no rear buildings as street frontage is provided on 3 sides of the site
Where the street frontage is to the north or south, overshadowing to the south should be minimised and buildings behind the street frontage should be orientated to the east and west (see figure 3B.2)	The buildings have been orientated to maximise units facing north. The units along Brooks Parade have been orientated to face the street frontage and the magnificent views over Lake Macquarie and mainly face west. All buildings are provided with a street frontage.
Objective 3B-2 Overshadowing of neighbouring properties is minimised during mid winter	
Design guidance	
Living areas, private open space and communal open space should receive solar access in accordance with sections 3D Communal and public open space and 4A Solar and daylight access Solar access to living rooms, balconies and private open spaces of neighbours should be considered	These items have been addressed in detail in the response to sections 3D Communal and public open space and 4A Solar and daylight access. There are no adjoining properties to the south, east, and west. The proposed development does not reduce any solar access to living rooms or balconies to buildings across Sharp Street to less than 3 hours in mid winter.

Where an adjoining property does not currently receive the required hours of solar access, the proposed building ensures solar access to neighbouring properties is not reduced by more than 20%	There are no adjoining properties to the south, east, and west. The shadows cast by the building only affect sections of the adjoining buildings facing Sharp Street in mid winter as follows: **Belmont Central** • Commercial Ground Floor from 1.00 pm to 3.00 pm • Residential First Floor from 1.30 pm to 3.00 pm • Residential Second Floor from to 2.30 pm to 3.00 pm • Residential Third Floor from to 3.00 pm **Belmont Towers** • Garages Ground Floor from 12.00 noon to 3.00 pm • Residential First Floor from 1.30 pm to 3.00 pm • Residential Second Floor from to 2.30 pm to 3.00 pm • Residential Third Floor from to 2.30 pm to 3.00 pm Shadow diagrams showing the effect on the adjoining buildings are shown on drawing DA24.
If the proposal will significantly reduce the solar access of neighbours, building separation should be increased beyond minimums contained in section 3F Visual privacy	Refer above. The proposal will not significantly reduce the solar access of neighbours
Overshadowing should be minimised to the south or down hill by increased upper level setbacks	The site is a level site and the buildings have been set back at Ground Floor level and at the upper levels

It is optimal to orientate buildings at 90 degrees to the boundary with neighbouring properties to minimise overshadowing and privacy impacts, particularly where minimum setbacks are used and where buildings are higher than the adjoining development	The site is a corner site bounded by streets on 3 sides and a canal on the fourth side. The properties on the north side of the canal comprise a lot reserved by Hunter Water for infrastructure and a residential lot to the north and east. The buildings do not overshadow either of these properties. The minimum set back of the building line at Ground Floor level from the southern side of the canal is 6m and 9m to the northern edge of the canal.
A minimum of 4 hours of solar access should be retained to solar collectors on neighbouring buildings	The shadows cast by the buildings only affect sections of the adjoining buildings facing Sharp Street and do not overshadow any solar collectors on neighbouring buildings.
3C Public domain interface	
Objective 3C-1 Transition between private and public domain is achieved without compromising safety and security	
Design guidance	
Terraces, balconies and courtyard apartments should have direct street entry, where appropriate	No apartments have been provided with direct access off the street and street frontages are mainly reserved for the commercial areas.
Changes in level between private terraces, front gardens and dwelling entries above the street level provide surveillance and improve visual privacy for ground level dwellings (see figure 3C.1)	The changes in level are set by Council's Sea Level Rise policy, as such the visual privacy of the residential apartments at Ground Floor level is not impaired.

Upper level balconies and windows should overlook the public domain	All the apartments on the upper levels that align with street alignment are provided with windows or balconies that overlook the public domain.
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	There are no front fences and walls along street frontages.
Length of solid walls should be limited along street frontages	Solid walls along the street frontages are limited to a small section of Edgar Street and no wall is greater than 6.8m in length.
Opportunities should be provided for casual interaction between residents and the public domain. Design solutions may include seating at building entries, near letter boxes and in private courtyards adjacent to streets	As the development is a mixed use development with commercial areas and courts facing onto the streets, the interaction between residents and the public domain as well as the various commercial areas has been catered for.
In developments with multiple buildings and/or entries, pedestrian entries and spaces associated with individual buildings/entries should be differentiated to improve legibility for residents, using a number of the following design solutions: • architectural detailing • changes in materials • plant species • colours	The entries to the individual buildings that comprise the development project forward from the building line as a portico and are by their very nature well defined. The materials and finishes proposed will be different from the adjoining areas. The landscaping proposed further defines the entries by means of planter beds and paving.

Opportunities for people to be concealed should be minimised	Opportunities for concealment have been minimised and residential balconies are located either immediately above or to one side of the entries. A Crime Prevention Report has been prepared and forms part of the submission
Objective 3C-2 Amenity of the public domain is retained and enhanced	
Design guidance	
Planting softens the edges of any raised terraces to the street, for example above sub-basement car parking Mail boxes should be located in lobbies, perpendicular to the street alignment or integrated into front fences where individual street entries are provided	The site is subject to Council's Sea Level Rise policy and the commercial areas and residential apartments are set at approximately 1.1m and 1.6m above natural ground level respectively. In general, setbacks ranging from 2m to 8m are provided. These areas are generally dedicated to deep soil planting. Planting against the podium walls is tiered to further soften the visual bulk of the development.
The visual prominence of underground car park vents should be minimised and located at a low level where possible	All carpark venting is proposed to extend to the roof or be restricted to the internal communal area.
Substations, pump rooms, garbage storage areas and other service requirements should be located in basement car parks or out of view	All services are located within the basement. A chamber substation is proposed for the site and is located in the Ground Floor of Building D with the main electrical switchboard located in Building C.
Ramping for accessibility should be minimised by building entry location and setting ground floor levels in relation to footpath levels	The site is subject to Council's Sea Level Rise policy and the commercial areas is set at approximately 1.1m above natural ground level. Access is provided by means of stairs and DDA compliant ramps or lifts at the main access points.

Durable, graffiti resistant and easily cleanable materials should be used	Given that the building is set back from the street alignment and planting is provided in this setback, the building does not lend itself to graffiti attack. The lower sections of the podium will be treated with an anti graffiti paint.
Where development adjoins public parks, open space or bushland, the design positively addresses this interface and uses a number of the following design solutions: • street access, pedestrian paths and building entries which are clearly defined • paths, low fences and planting that clearly delineate between communal/private open space and the adjoining public open space • minimal use of blank walls, fences and ground level parking	The proposed development does not adjoin any public parks, open space or bushland. The pedestrian paths to the building entries are clearly defined with low level planting where appropriate to further define the entry. The interface between communal/private open spaces and the adjoining public open spaces are clearly defined and generally relate the podium level interface. No ground level car parking has been provided.
On sloping sites protrusion of car parking above ground level should be minimised by using split levels to step underground car parking	The site is a level site and no above ground carparking is provided.

3D Communal and public open space	
Objective 3D-1 An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping	
Design criteria	
1. Communal open space has a minimum area equal to 25% of the site (see figure 3D.3)	1. The communal open space is provided on the Ground Floor between the buildings and on the roofs of all 4 buildings. The secure communal open space on the Ground Floor and at roof level is 1498m^2 and 542m^2 respectively which equates to 24% AND 8% of the site area. This excludes the communal open space shared with the commercial areas or the boardwalk link.
2. Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid-winter)	2. The main area of communal open space that receives uninterrupted sunlight is the area on the Ground Floor between buildings B and C and to a lesser extent the between buildings A and D. The communal open spaces that receive direct sunlight for the majority of the day on 21 June (mid-winter) are the roof top areas
Design guidance	
Communal open space should be consolidated into a well designed, easily identified and usable area	The communal open spaces are well designed and landscaped. Refer Landscape Drawings
Communal open space should have a minimum dimension of 3m, and larger developments should consider greater dimensions	The minimum dimensions of the communal open spaces are well in excess of 3 m and is generally greater than 10m on the Ground Floor.

Communal open space should be co-located with deep soil areas	Sections of the communal open spaces are located over deep soil areas including an area of approximately 160m^2 in the centre of the site. The remainder is located over the residential and visitors' carparks and at roof top level, and, as such these arears are not co-located with deep soil areas.
Direct, equitable access should be provided to communal open space areas from common circulation areas, entries and lobbies	The communal open space on the Ground Floor is accessible from all lift lobbies. The communal open spaces on the roofs are accessible from the internal lifts of each building. The development will be an access controlled development and card access provided to the communal open spaces.
Where communal open space cannot be provided at ground level, it should be provided on a podium or roof	As noted above, the communal open spaces are generally located over the residential and visitors' carparks at Ground Floor podium level and at roof top level.
Where developments are unable to achieve the design criteria, such as on small lots, sites within business zones, or in a dense urban area, they 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	Design criteria has generally been met. Refer comments above. In addition, the development is located across Brooks Parade from the foreshore reserve and lake.

Objective 3D-2 Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting	
Design guidance	
Facilities are provided within communal open spaces and common spaces for a range of age groups (see also 4F Common circulation and spaces), incorporating some of the following elements: • seating for individuals or groups • barbecue areas • play equipment or play areas • swimming pools, gyms, tennis courts or common rooms	The communal open spaces have been designed for a range of age groups that will comprise the residents of the development and include the following elements: • seating for individuals or groups • barbecue areas • common rooms Detailed landscape plans have been prepared and are included in this submission.
The location of facilities responds to microclimate and site conditions with access to sun in winter, shade in summer and shelter from strong winds and down drafts	The location of facilities responds to microclimate and site conditions. Detailed landscape plans have been prepared and are included in this submission.
Visual impacts of services should be minimised, including location of ventilation duct outlets from basement car parks, electrical substations and detention tanks	The visual impact of services on the communal open spaces are minimal. No services are visible from the Ground Floor and the services are screened by 1800 high louver enclosures at roof top level.

Objective 3D-3 Communal open space is designed to maximise safety	
Design guidance	
Communal open space and the public domain should be readily visible from habitable rooms and private open space areas while maintaining visual privacy. Design solutions may include: • bay windows • corner windows • balconies	The communal open spaces are readily visible from windows of habitable rooms and balconies of the apartments. The finished floor level of the balconies and apartments are a minimum of 500 above the finished level of the communal open spaces thus providing visual privacy to the occupants of the apartments.
Communal open space should be well lit	The communal open spaces on the Ground Floor and at roof level are heavily landscaped and will be well lit.
Where communal open space/facilities are provided for children and young people they are safe and contained	There are no specific provisions for separate play areas for children and young children.

Objective 3D-4 Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood	
Design guidance	
The public open space should be well connected with public streets along at least one edge	No public open spaces have been provided as part of the proposal. Various areas of semi public open spaces have been provided off Brooks Parade, Edgar Street, and Sharp Street to service the commercial premises that will be leased as cafes as outdoor seating areas.
The public open space should be connected with nearby parks and other landscape elements	No public open spaces have been provided as part of the proposal. The development is well connected to the foreshore beyond across Brooks Parade.
Public open space should be linked through view lines, pedestrian desire paths, termination points and the wider street grid	No public open spaces have been provided as part of the proposal. The semi public open spaces are directly linked to the existing street frontages of Sharp and Edgar Streets and Brooks Parade.
Solar access should be provided year round along with protection from strong winds	No public open spaces have been provided as part of the proposal. The semi public open spaces are directly linked to the existing street frontages of Sharp and Edgar Streets and Brooks Parade.
Opportunities for a range of recreational activities should be provided for people of all ages	No public open spaces have been provided as part of the proposal.
A positive address and active frontages should be provided adjacent to public open space	No public open spaces have been provided as part of the proposal. As discussed above, various areas of semi public open spaces have been provided off Brooks Parade and Sharp Street to service the commercial premises that will be leased as cafes as outdoor seating areas. By their very nature, they form an integral part of the active frontages of the buildings.

Boundaries should be clearly defined between public open space and private areas	The boundaries between the semi public open spaces and the private areas are clearly delineated at the podium level.

<table>
<tr><td>3E Deep soil zones</td><td></td></tr>
<tr><td>Objective 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</td><td></td></tr>
<tr><td>Design criteria</td><td></td></tr>
<tr><td>1. Deep soil zones are to meet the following minimum requirements</td><td></td></tr>
<tr><td>
<table>
<tr><th>Site area</th><th>Minimum dimensions</th><th>Deep soil zone (% of site area)</th></tr>
<tr><td>less than 650m2</td><td>-</td><td rowspan="2">7%</td></tr>
<tr><td>650m2 - 1,500m2</td><td>3m</td></tr>
<tr><td>greater than 1,500m2</td><td>6m</td><td rowspan="2">15%</td></tr>
<tr><td>greater than 1,500m2 with significant existing tree cover</td><td>6m</td></tr>
</table>
</td><td>The 34-42 Brooks Parade / Urban Design Report prepared by Annand Associates Urban Design Pty Ltd provides a detailed analysis of the proposal against the ADG. Specifically, deep soil is addressed in the report. These provisions are also detailed within the provided landscape plans and sections.

As demonstrated in the Urban Design Report and the landscape plans which form part of this submission, the proposal incorporates design measures which address the objective of the desired deep soil zones, which included additional setbacks along Brooks Parade to provide larger deep soil areas as well as a deep soil area within the common podium. Additionally, the decks fronting Brooks Parade include design provisions to allow for and support healthy plant and tree growth. These deep soil areas contribute to the overall residential amenity and promote management of water and air quality.

The proposal includes a deep soil area of 1820m^2 which is 28.4% of site area. Note that this includes permeable timber deck areas. Even if the timber deck areas are excluded, the deep soil area is 1295m2 (20.23%).

This is well in excess of the minimum requirements. Set out in the ADG.</td></tr>
</table>

Design guidance	
On some sites it may be possible to provide larger deep soil zones, depending on the site area and context: • 10% of the site as deep soil on sites with an area of 650m^2 - 1,500m^2 • 15% of the site as deep soil on sites greater than 1,500m^2	As described above, in excess of 25% of the site is proposed as deep soil planting with a dimension in excess of 6m. This is well in excess of the minimum recommendations recommended in the ADG and that proposed in Council's Strategic Development Department prepared a report entitled Review of the Town Centres DCP and Belmont Area Plan for 32 Brooks Parade Belmont.
Deep soil zones should be located to retain existing significant trees and to allow for the development of healthy root systems, providing anchorage and stability for mature trees. Design solutions may include: • basement and sub basement car park design that is consolidated beneath building footprints • use of increased front and side setbacks • adequate clearance around trees to ensure long term health • co-location with other deep soil areas on adjacent sites to create larger contiguous areas of deep soil	The design envisages maintaining the majority of the existing trees on Edgar Street. There are no other significant trees that will be retained. The basement carpark has been designed so that it sits beneath building footprints and has been set back around the deep soil zones.

Achieving the design criteria may not be possible on some sites including where: • 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) • there is 100% site coverage or non-residential uses at ground floor level Where a proposal does not achieve deep soil requirements, acceptable stormwater management should be achieved and alternative forms of planting provided such as on structure	Although the design criteria has been met, a stormwater management plan has been prepared for the proposed development and forms part of this submission.

<table>
<tr><td>3F Visual privacy</td><td></td></tr>
<tr><td>Objective 3F-1
Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy</td><td></td></tr>
<tr><td>Design criteria</td><td></td></tr>
<tr><td>1. Separation between windows and balconies is provided to ensure visual privacy is achieved. Minimum required separation distances from buildings to the side and rear boundaries are as follows:

<table>
<tr><th>Building height</th><th>Habitable rooms and balconies</th><th>Non-habitable rooms</th></tr>
<tr><td>up to 12m (4 storeys)</td><td>6m</td><td>3m</td></tr>
<tr><td>up to 25m (5-8 storeys)</td><td>9m</td><td>4.5m</td></tr>
<tr><td>over 25m (9+ storeys)</td><td>12m</td><td>6m</td></tr>
</table>
</td><td>Separation between windows and balconies is provided in accordance with the table shown. In a limited number of cases separation from balconies is not fully compliant and the balconies have been screened in such instances. Separation distances are shown on drawing DA45.</td></tr>
</table>

Note: Separation distances between buildings on the same site should combine required building separations depending on the type of room (see figure 3F.2) Gallery access circulation should be treated as habitable space when measuring privacy separation distances between neighbouring properties	
Design guidance	
Generally one step in the built form as the height increases due to building separations is desirable. Additional steps should be careful not to cause a 'ziggurat' appearance	All four buildings have been stepped generally as discussed with Council and as shown on the drawings. Building A, has been stepped back once on the top floor to allow the building to act as a "book end" to the eight storey Belmont Towers to the south across Sharp Street.
For residential buildings next to commercial buildings, separation distances should be measured as follows: • for retail, office spaces and commercial balconies use the habitable room distances • for service and plant areas use the non-habitable room distances	The residential portions of the buildings at the same level as the commercial portions do not overlook one another.
New development should be located and oriented to maximise visual privacy between buildings on site and for neighbouring buildings. Design solutions include: • site layout and building orientation to minimise privacy impacts (see also section 3B Orientation) • on sloping sites, apartments on different levels have appropriate visual separation distances (see figure 3F.4)	The site is a corner site bounded by streets on 3 sides and a canal on the fourth side. The properties on the north side of the canal comprise a lot reserved by Hunter Water for infrastructure and a residential lot to the north and east. The minimum set back of the building line at Ground Floor level from the southern edge of the canal is 6m minimum and 9m minimum to the north edge of the canal.

Apartment buildings should have an increased separation distance of 3m (in addition to the requirements set out in design criteria 1) when adjacent to a different zone that permits lower density residential development to provide for a transition in scale and increased landscaping (figure 3F.5)	The site is not adjacent to a different zone that permits lower density residential development.
Direct lines of sight should be avoided for windows and balconies across corners	The buildings have been designed to avoid direct lines of sight between windows and balconies across corners. Where this occurs and the separations are less than those recommended in Design Criteria 3F.1, screens and fins have been provided to provide privacy without adversely affecting the amenity of the individual apartments.
No separation is required between blank walls	Blank walls are provided in limited locations and articulated in both plan and texture.

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, particularly habitable room windows. Design solutions may include: setbacks • solid or partially solid balustrades to balconies at lower levels • fencing and/or trees and vegetation to separate spaces • screening devices • bay windows or pop out windows to provide privacy in one direction and outlook in another • raising apartments/private open space above the public domain or communal open space • planter boxes incorporated into walls and balustrades to increase visual separation • pergolas or shading devices to limit overlooking of lower apartments or private open space • on constrained sites where it can be demonstrated that building layout opportunities are limited, fixed louvres or screen panels to windows and/or balconies	The site is subject to Council's Sea Level Rise policy which has set the level of the commercial areas at AHD 2.36m and the residential areas at AHD 2.86m, ie 0.5m higher. The communal open space on the Ground Floor is set at the commercial level and is set 0.5m below the finished floor level of the apartments on this floor. The balconies and windows are generally screened with dense planting in planter beds. The balustrades of the balconies will be a combination of solid balustrades and opaque glass balustrades to 1.1m above the finished level of the balconies. The communal open spaces at roof level are set back significantly from the building perimeter and located behind planter beds. There are no balconies or windows that are overlooked from the roof top communal open space.

Bedrooms, living spaces and other habitable rooms should be separated from gallery access and other open circulation space by the apartment's service areas	None of the apartments adjoin any gallery access or other open circulation areas.
Balconies and private terraces should be located in front of living rooms to increase internal privacy	All balconies and private terraces are located in front of, and with direct access to, the main living areas of the apartments. In some cases, secondary balconies are provided and these are provided with direct access to the bedrooms of the units they service.
Windows should be offset from the windows of adjacent buildings	Windows are generally offset from the windows of adjacent buildings. In addition, separation between windows is as recommended in part 3F-1. Refer comment on part 3F-1.
Recessed balconies and/or vertical fins should be used between adjacent balconies	In general, balconies have not been recessed into the buildings but project forward as elements to further articulate the buildings. Privacy between balconies and between balconies and adjoining apartment windows is provided by a combination of fixed screens, louver screens and fins as shown on the drawing that form part of this submission.

3G Pedestrian access and entries	
Objective 3G-1 Building entries and pedestrian access connects to and addresses the public domain	
Design guidance	
Multiple entries (including communal building entries and individual ground floor entries) should be provided to activate the street edge	The buildings face the 3 street frontages. Entries to the residential buildings facing Edgar and Sharp Streets, Buildings C and D, are at grade at street level. The entries to the residential buildings facing Brooks Parade, Buildings A and B, are via the elevated podium required to meet Council's Sea Level Rise policy. The entries are well defined and project forward from the front of the buildings to further define their presence.
Entry locations relate to the street and subdivision pattern and the existing pedestrian network	As discussed above, the entries of all 4 buildings are off the existing streets are well defined and project outwards.
Building entries should be clearly identifiable and communal entries should be clearly distinguishable from private entries	As discussed above, the entries of all 4 buildings are off the existing streets are well defined and project outwards.
Where street frontage is limited and multiple buildings are located on the site, a primary street address should be provided with clear sight lines and pathways to secondary building entries	The street address will be Brooks Parade for buildings A and B, Edgar Street for Building C and Sharp Street for Building D. The entries including locations of letterboxes, pathways and projecting awnings are shown on the drawings that form part of this application.

Objective 3G-2 Access, entries and pathways are accessible and easy to identify	
Design guidance	
Building access areas including lift lobbies, stairwells and hallways should be clearly visible from the public domain and communal spaces	As discussed above, the buildings' entries and lobbies are directly off the street frontages.
The design of ground floors and underground car parks minimise level changes along pathways and entries	As discussed above, the site is subject to Council's Sea Level Rise policy which has set the level of the commercial areas at AHD 2.36m and the residential areas at AHD 2.86m, ie approximately 1.1m to 1.6m higher than natural ground respectively. This has resulted in an elevated podium being created at the commercial flood level. A semi basement carpark and a full basement carpark below it are provided under the podium. On this basis, the change in levels are minimal, a 2/3 level below natural ground for the carpark and a 1/3 level above ground for the commercial areas. The treatment of the entries and access to the commercial area has been clarified in various sections above.
Steps and ramps should be integrated into the overall building and landscape design	As discussed above, the site is subject to Council's Sea Level Rise policy which has set the level of the commercial areas at AHD 2.36m and the residential areas at AHD 2.86m, ie approximately 1.1m to 1.6m higher than natural ground respectively. The podium is accessed at various points by means of stairs and DDA compliant ramps and lifts. These access points have been integrated into the landscape design that forms part of this submission.
For large developments ‘way finding’ maps should be provided to assist visitors and residents (see figure 4T.3)	‘Way finding’ maps will be provided to assist visitors and residents at the various access points and in the visitors car park.

For large developments electronic access and audio/video intercom should be provided to manage access	An audio/video intercom system will be provided to the 4 building entries, the carpark entries for visitors and access points between the visitors' carparks and the secure residential areas.
Objective 3G-3 Large sites provide pedestrian links for access to streets and connection to destinations	
Design guidance	
Pedestrian links through sites facilitate direct connections to open space, main streets, centres and public transport	All the individual buildings have direct access to the podium communal Private Open Space as well as access from the individual buildings to the adjoining streets. The podium communal Private Open Space is linked to all 3 street frontages by means of stairs and DDA compliant ramps or lifts. An existing bus stop is located on Brooks Parade and is within 50m from the access point off Brooks Parade.
Pedestrian links should be direct, have clear sight lines, be overlooked by habitable rooms or private open spaces of dwellings, be well lit and contain active uses, where appropriate	As discussed above, the site is subject to Council's Sea Level Rise policy which has set the level of the commercial areas at AHD 2.36m and the residential areas at AHD 2.86m, ie approximately 1.1m to 1.6m higher than natural ground. The podium is accessed at 3 points by means of stairs and DDA compliant ramps or lifts. The residential apartments finished floor level is 0.5m above the communal open space. This allows for supervision of the pedestrian links within the site from the habitable rooms and balconies on the Ground Floor without impinging on the privacy of these apartments.

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 access should be integrated with the building's overall facade. Design solutions may include: • the materials and colour palette to minimise visibility from the street • security doors or gates at entries that minimise voids in the facade • where doors are not provided, the visible interior reflects the facade design and the building services, pipes and ducts are concealed	The entry to the basement carpark has been restricted to 1 entry which is well set back from the street frontage. The colour of the door will match the surrounding walls.
Car park entries should be located behind the building line	The entry to the garage is well set back from the street frontage and building line.
Vehicle entries should be located at the lowest point of the site minimising ramp lengths, excavation and impacts on the building form and layout	The site is a level site with minimal fall over the site. As discussed above, the site is subject to Council's Sea Level Rise policy which has set the level of the commercial areas at AHD 2.36m and the residential areas at AHD 2.86m, ie approximately 1.1m to 1.6m higher than natural ground. This has resulted in an elevated podium being created at the commercial flood level. A semi basement carpark is provided under the podium. Flood barriers are proposed to ensure the basement does not flood.
Car park entry and access should be located on secondary streets or lanes where available	The carpark entry is located off a minor road. A traffic report confirming the suitability of the access points has been prepared and forms part of this submission.

Vehicle standing areas that increase driveway width and encroach into setbacks should be avoided	The driveway does not contain any vehicle standing areas. A traffic report confirming the suitability of the design has been prepared and forms part of this submission.
Access point locations should avoid headlight glare to habitable rooms	The access point has been located to minimise potential headlight glare to habitable rooms. The carpark entry / exit is opposite the roundabout and aligns with Herbert Street.
Adequate separation distances should be provided between vehicle entries and street intersections	The carpark entry / exit connects to an existing roundabout providing the fourth leg of the roundabout. A traffic report confirming the suitability of the access points has been prepared and forms part of this submission.
The width and number of vehicle access points should be limited to the minimum	Only 1 access point is proposed to provide separate entry / exit to the visitors and residential carparks. A traffic report confirming the suitability of the access points has been prepared and forms part of this submission.
Visual impact of long driveways should be minimised through changing alignments and screen planting	As discussed above, the site is subject to Council's Sea Level Rise policy which has set the level of the commercial areas at AHD 2.36m and the residential areas at AHD 2.86m, ie approximately 1.1m to 1.6m higher than natural ground. This has resulted in an elevated podium being created at the commercial flood level. A semi basement carpark is provided under the podium. On this basis, the change in levels are minimal, a 2/3 level below natural ground for the carpark and a 1/3 level above ground for the commercial areas. This has resulted in a relatively short driveway.
The need for large vehicles to enter or turn around within the site should be avoided	A loading dock is provided within the site boundary off Sharp Street. The dock is provided with a turn table to allow delivery vehicles with an overall length of 10m to enter and exit the site in a forward direction. A traffic report confirming the suitability of the loading dock and the impact on the traffic in Sharp Street has been prepared and forms part of this submission.

Garbage collection, loading and servicing areas are screened	As discussed above, a loading dock is provided within the site boundary off Sharp Street. This will accommodate garbage collection, loading and servicing of the site. A traffic report confirming the suitability of the loading dock and the impact on the traffic in Sharp Street has been prepared and forms part of this submission. The main garbage room is located in Basement B1. Access routes for garbage collection and removal are shown on Drawing DA46.
Clear sight lines should be provided at pedestrian and vehicle crossings	There are no pedestrian crossings adjacent to the vehicle access points.
Traffic calming devices such as changes in paving material or textures should be used where appropriate	The carpark entry / exit is a short run and does not form part of shared zones. As such, traffic calming devices are not proposed.
Pedestrian and vehicle access should be separated and distinguishable. Design solutions may include: • changes in surface materials • level changes • the use of landscaping for separation	The carpark entry / exit and pedestrian access routes are separate and do not form part of shared zones.

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 1. For development in the following locations: • on sites that are within 800 metres of a railway station or light rail stop in the Sydney Metropolitan Area; or • on land zoned, and sites within 400 metres of land zoned, B3 Commercial Core, B4 Mixed Use or equivalent in a nominated regional centre the minimum car parking requirement for residents and visitors is set out in the Guide to Traffic Generating Developments, or the car parking requirement prescribed by the relevant council, whichever is less The car parking needs for a development must be provided off street	Bicycle and motorcycle parking has been provided in accordance with Council's requirements as confirmed in the traffic report that forms part of this submission.
Design guidance	
Where a car share scheme operates locally, provide car share parking spaces within the development. Car share spaces, when provided, should be on site	A car share scheme is not applicable for the proposed development

Where less car parking is provided in a development, council should not provide on street resident parking permits	Car parking provided meets Council's requirements as confirmed in the traffic report that forms part of this submission.
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	Parking spaces for motorbikes have been provided to meet Council's requirements as confirmed in the traffic report that forms part of this submission.
Secure undercover bicycle parking should be provided that is easily accessible from both the public domain and common areas	Undercover bicycle parking has been provided in the carpark to meet Council's requirements. The bicycle facilities are reviewed and confirmed in the traffic report that forms part of this submission.
Conveniently located charging stations are provided for electric vehicles, where desirable	No charging stations are provided for electric vehicles.
Objective 3J-3 Car park design and access is safe and secure	
Design guidance	
Supporting facilities within car parks, including garbage, plant and switch rooms, storage areas and car wash bays can be accessed without crossing car parking spaces	All the supporting facilities within car parks, including garbage, plant and switch rooms, storage areas and the like can be accessed without crossing car parking spaces

Direct, clearly visible and well lit access should be provided into common circulation areas	The carparks will be well lit to meet Australian Standards and the Building Code of Australia.
A clearly defined and visible lobby or waiting area should be provided to lifts and stairs	The lifts are clearly identified and protected from vehicle movement
For larger car parks, safe pedestrian access should be clearly defined and circulation areas have good lighting, colour, line marking and/or bollards	The carparks will be well lit to meet Australian Standards and the Building Code of Australia. The pedestrian access areas will be clearly line marked as shown indicatively on drawing DA45.
Objective 3J-4 Visual and environmental impacts of underground car parking are minimised	
Design guidance	
Excavation should be minimised through efficient car park layouts and ramp design	As discussed above, the site is subject to Council's Sea Level Rise policy which has set the level of the commercial areas at AHD 2.36m and the residential areas at AHD 2.86m, ie approximately 1.1m to 1.6m higher than natural ground. This has resulted in an elevated podium being created at the commercial flood level. A semi basement carpark is provided under the podium and a second basement below it. The second basement level has been provided to increase the extent of deep soil available.
Car parking layout should be well organised, using a logical, efficient structural grid and double loaded aisles	The carpark layouts have been designed to maximise the number of spaces. The residential carpark adopts a perimeter zone and mainly double loaded aisles. The visitors' carpark adopts a double loaded aisle. The layouts have been reviewed and confirmed in the traffic report that forms part of this submission.

Protrusion of car parks should not exceed 1m above ground level. Design solutions may include stepping car park levels or using split levels on sloping sites	As discussed above, the site is subject to Council's Sea Level Rise policy which has set the level of the commercial areas at AHD 2.36m ie approximately 1.1m higher than natural ground. This has resulted in an elevated podium being created at the commercial flood level. The main basement carpark, the visitors and residential carpark is, as a result, a semi basement carpark under the podium with a second basement level below it.
Natural ventilation should be provided to basement and sub basement car parking areas	Given the extent and size of the residential carpark, it is proposed that it will be mechanically ventilated. The carpark will be fitted with CO monitors to minimise the mechanical ventilation required.
Ventilation grills or screening devices for car parking openings should be integrated into the facade and landscape design	Ventilation grills will be incorporated into the design of the facades and landscape design.
Objective 3J-5 Visual and environmental impacts of on-grade car parking are minimised	
Design guidance	
On-grade car parking should be avoided	No on-grade carparking is proposed.

Where on-grade car parking is unavoidable, the following design solutions are used: • parking is located on the side or rear of the lot away from the primary street frontage • cars are screened from view of streets, buildings, communal and private open space areas • safe and direct access to building entry points is provided • parking is incorporated into the landscape design of the site, by extending planting and materials into the car park space • stormwater run-off is managed appropriately from car parking surfaces • bio-swales, rain gardens or on site detention tanks are provided, where appropriate • light coloured paving materials or permeable paving systems are used and shade trees are planted between every 4-5 parking spaces to reduce increased surface temperatures from large areas of paving	No on-grade carparking is proposed.
Objective 3J-6 Visual and environmental impacts of above ground enclosed car parking are minimised	
Design guidance	
Exposed parking should not be located along primary street frontages	No exposed car parking is proposed

Screening, landscaping and other design elements including public art should be used to integrate the above ground car parking with the facade. Design solutions may include: • car parking that is concealed behind the facade, with windows integrated into the overall facade design (approach should be limited to developments where a larger floor plate podium is suitable at lower levels) • carparking that is 'wrapped' with other uses, such as retail, commercial or two storey Small Office/Home Office (SOHO) units along the street frontage (see figure 3J.9)	No above ground car parking is proposed.
Positive street address and active frontages should be provided at ground level	As discussed above, the site is subject to Council's Sea Level Rise policy which has set the level of the commercial areas at AHD 2.36m ie approximately 1.1m higher than natural ground. This has resulted in an elevated podium being created at the commercial flood level. The podium has also been set back from the street boundaries to meet Council's requirements. Active shopfronts have been created along Sharp and Edgar Streets and Brooks Parade at podium level.

Part 4 Designing the building	
4A Solar and daylight access	
Objective 4A-1 To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space	
Design criteria	
1. Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas	NA
2. In all other areas, living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 3 hours direct sunlight between 9 am and 3 pm at mid winter	73% of the apartment living rooms and private open spaces receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid winter. A detailed tabulation is provided in drawing DA51.
3. A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid winter	17 apartments (14%) receive no direct sunlight between 9 am and 3 pm at mid winter.
Design guidance	
The design maximises north aspect and the number of single aspect south facing apartments is minimised	The design maximises north aspect apartments. As discussed above there are no single aspect south facing apartments.

Single aspect, single storey apartments should have a northerly or easterly aspect	As discussed above, no single aspect, single storey apartments have a southern or western aspect. All Single aspect, single storey apartments should have a northerly or easterly aspect.
Living areas are best located to the north and service areas to the south and west of apartments	Where possible all apartments with a north aspect are designed with their living areas are best located to the north. Service areas are generally provided to the rear of the apartment.
To optimise the direct sunlight to habitable rooms and balconies a number of the following design features are used: • dual aspect apartments • shallow apartment layouts • two storey and mezzanine level apartments • bay windows	The design incorporates the following features: • The majority of apartments are dual aspect apartments with 76% being provided with cross ventilation • All apartments are shallow apartments with depths of habitable rooms from an openable window being a maximum of 8m • No two storey and mezzanine level apartments are provided A detailed tabulation is provided in drawing DA51.
To maximise the benefit to residents of direct sunlight within living rooms and private open spaces, a minimum of $1m^2$ of direct sunlight, measured at 1m above floor level, is achieved for at least 15 minutes	As discussed above, 73% of the apartment living rooms and private open spaces receive a minimum of 3 hours direct sunlight between 9 am and 3 pm at mid winter. A detailed tabulation is provided in drawing DA51.

Achieving the design criteria may not be possible on some sites. This includes: • where greater residential amenity can be achieved along a busy road or rail line by orientating the living rooms away from the noise source • on south facing sloping sites • where significant views are oriented away from the desired aspect for direct sunlight Design drawings need to demonstrate how site constraints and orientation preclude meeting the design criteria and how the development meets the objective	The site provides magnificent views over the lake to the south west. These views are orientated away from the desired aspect for direct sunlight. The buildings have been designed to take into consideration the significant views from the apartments facing the lake across Brooks Parade whilst still meeting the overall requirements of this section.
Objective 4A-2 Daylight access is maximised where sunlight is limited	
Design guidance	
Courtyards, skylights and high level windows (with sills of 1,500mm or greater) are used only as a secondary light source in habitable rooms	No apartments utilise courtyards, skylights and high level windows (with sills of 1,500mm or greater) as a primary light source in habitable rooms.

Where courtyards are used : • use is restricted to kitchens, bathrooms and service areas • building services are concealed with appropriate detailing and materials to visible walls • courtyards are fully open to the sky • access is provided to the light well from a communal area for cleaning and maintenance • acoustic privacy, fire safety and minimum privacy separation distances (see section 3F Visual privacy) are achieved	No apartments utilise courtyards
Opportunities for reflected light into apartments are optimised through: • Reflective Exterior Surfaces On Buildings Opposite South Facing Windows • positioning windows to face other buildings or surfaces (on neighbouring sites or within the site) that will reflect light • integrating light shelves into the design • light coloured internal finishes	Opportunities for reflected light into apartments have been optimised in the design through • generally, the external surfaces of the buildings facing south facing windows are generally light in colour • all internal finishes will be light coloured

Objective 4A-3 Design incorporates shading and glare control, particularly for warmer months	
Design guidance	
A number of the following design features are used: • balconies or sun shading that extend far enough to shade summer sun, but allow winter sun to penetrate living areas • shading devices such as eaves, awnings, balconies, pergolas, external louvres and planting • horizontal shading to north facing windows • vertical shading to east and particularly west facing windows • operable shading to allow adjustment and choice • high performance glass that minimises external glare off windows, with consideration given to reduced tint glass or glass with a reflectance level below 20% (reflective films are avoided)	The design incorporates the following design features: • The balconies on most apartments have been designed to provide shade from summer sun, but allow winter sun to penetrate living areas • shading devices incorporate eaves, balconies, and external louvers • Adjustable horizontal sliding louvers are provided on the balconies of a number of apartments • All glazing will be installed in accordance with the requirements of the BASIX assessment prepared for the project that forms part of this submission

4B Natural ventilation	
Objective 4B-1 All habitable rooms are naturally ventilated	
Design guidance	
The building's orientation maximises capture and use of prevailing breezes for natural ventilation in habitable rooms	The building's orientation maximises capture and use of prevailing breezes for natural ventilation in habitable rooms. A detailed tabulation is provided in drawing DA51.
Depths of habitable rooms support natural ventilation	The depths of habitable rooms support natural ventilation
The area of unobstructed window openings should be equal to at least 5% of the floor area served	The area of unobstructed window openings is equal to at least 5% of the floor area served
Light wells are not the primary air source for habitable rooms	The design does not incorporate any light wells
Doors and openable windows maximise natural ventilation opportunities by using the following design solutions: • adjustable windows with large effective openable areas • a variety of window types that provide safety and flexibility such as awnings and louvres • windows which the occupants can reconfigure to funnel breezes into the apartment such as vertical louvres, casement windows and externally opening doors	Doors and openable windows have been designed to maximise natural ventilation whilst still complying with the Building Code of Australia.

Objective 4B-2 The layout and design of single aspect apartments maximises natural ventilation	
Design guidance	
Apartment depths are limited to maximise ventilation and airflow (see also figure 4D.3)	Apartment depths meet the criteria set out in figure 4D.3 and no habitable areas are greater than 8m deep from an openable window or door. In some apartments, non-habitable areas such as bathrooms and laundries are located beyond this zone.
Natural ventilation to single aspect apartments is achieved with the following design solutions: • primary windows are augmented with plenums and light wells (generally not suitable for cross ventilation) • stack effect ventilation / solar chimneys or similar to naturally ventilate internal building areas or rooms such as bathrooms and laundries • courtyards or building indentations have a width to depth ratio of 2:1 or 3:1 to ensure effective air circulation and avoid trapped smells	As discussed above, 91 apartments representing 76% of all apartments are provided with cross ventilation. A detailed tabulation is provided in drawing DA51. The design does not utilise light wells, solar chimneys, courtyards or the like to achieve these figures.

Objective 4B-3 The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents	
Design criteria	
1. At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed	1. As discussed above, 91 apartments representing 76% of all apartments are provided with cross ventilation. None of the buildings are ten storeys or greater.
2. Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line	2. No cross-over apartments are included in the proposal. No cross-through apartments exceed 18m, measured glass line to glass line.
Design guidance	
The building should include dual aspect apartments, cross through apartments and corner apartments and limit apartment depths	The buildings include dual aspect apartments, cross through apartments and corner apartments which limit apartment depths.
In cross-through apartments external window and door opening sizes/areas on one side of an apartment (inlet side) are approximately equal to the external window and door opening sizes/areas on the other side of the apartment (outlet side) (see figure 4B.4)	The corner and cross through apartments are provided with opening areas well in excess of the requirements of Objective 4B-1.

Apartments are designed to minimise the number of corners, doors and rooms that might obstruct airflow	In general, the majority of corner apartments are designed to provide cross ventilation through the main living areas.
Apartment depths, combined with appropriate ceiling heights, maximise cross ventilation and airflow	As discussed above, apartment depths meet the criteria set out in figure 4D.3 and no habitable areas are greater than 8m deep from an openable window or door. Ceiling heights in habitable rooms have been designed to be 2.7m.

<table>
<tr><td>4C Ceiling heights</td><td></td></tr>
<tr><td>Objective 4C-1
Ceiling height achieves sufficient natural ventilation and daylight access</td><td></td></tr>
<tr><td>Design criteria</td><td></td></tr>
<tr><td>1. Measured from finished floor level to finished ceiling level, minimum ceiling heights are:

<table>
<tr><th colspan="2">Minimum ceiling height
for apartment and mixed use buildings</th></tr>
<tr><td>Habitable rooms</td><td>2.7m</td></tr>
<tr><td>Non-habitable</td><td>2.4m</td></tr>
<tr><td>For 2 storey apartments</td><td>2.7m for main living area floor
2.4m for second floor, where its area does not exceed 50% of the apartment area</td></tr>
<tr><td>Attic spaces</td><td>1.8m at edge of room with a 30 degree minimum ceiling slope</td></tr>
<tr><td>If located in mixed used areas</td><td>3.3m for ground and first floor to promote future flexibility of use</td></tr>
</table>
</td><td>As discussed above, ceiling heights in habitable rooms have been designed to be 2.7m.
Non-habitable rooms have been designed to be 2.4m.
No 2 storey apartments or attic spaces are included in the design.</td></tr>
</table>

These minimums do not preclude higher ceilings if desired	
Design guidance	
Ceiling height can accommodate use of ceiling fans for cooling and heat distribution	As discussed above, ceiling heights in habitable rooms have been designed as 2.7m. This height will allow the installation of ceiling fans.
Objective 4C-2 Ceiling height increases the sense of space in apartments and provides for well proportioned rooms	
Design guidance	
A number of the following design solutions can be used: • the hierarchy of rooms in an apartment is defined using changes in ceiling heights and alternatives such as raked or curved ceilings, or double height spaces • well proportioned rooms are provided, for example, smaller rooms feel larger and more spacious with higher ceilings • ceiling heights are maximised in habitable rooms by ensuring that bulkheads do not intrude. The stacking of service rooms from floor to floor and coordination of bulkhead location above non-habitable areas, such as robes or storage, can assist	The design incorporates the following design solutions: • Ceiling heights in habitable areas are 2.7m • Habitable rooms are well proportioned and the width to height ratio is greater than 1 • Service areas such as bathrooms and laundries are generally stacked on each other and located to the rear of the apartments and against the core sections of the buildings

Objective 4C-3 Ceiling heights 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 (see figure 4C.1)	The sections of the buildings facing Sharp Street and Brooks Parade have been provided with commercial areas. given that significant retail and commercial premises are provided on adjoining properties, there is no demand for future conversion of residential sections into non-residential uses.

<table>
<tr><td>4D Apartment size and layout</td><td></td></tr>
<tr><td>Objective 4D-1
The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity</td><td></td></tr>
<tr><td>Design criteria</td><td></td></tr>
<tr><td>1. Apartments are required to have the following minimum internal areas:

<table><tr><th>Apartment type</th><th>Minimum internal area</th></tr><tr><td>Studio</td><td>35m^2</td></tr><tr><td>1 bedroom</td><td>50m^2</td></tr><tr><td>2 bedroom</td><td>70m^2</td></tr><tr><td>3 bedroom</td><td>90m^2</td></tr></table>
The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m^2 each</td><td>The apartment areas generally comply and mainly exceed the minimum internal areas described in Objective 4D-1</td></tr>
<tr><td>A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m^2 each</td><td>No apartments are provided with a fourth bedroom</td></tr>
</table>

2. 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 room 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. No habitable rooms rely on borrowed light from other rooms.
Design guidance	
Kitchens should not be located as part of the main circulation space in larger apartments (such as hallway or entry space)	All kitchens are located in their own defined areas and are not located as part of the main circulation space such as hallway or entry space.
A window should be visible from any point in a habitable room	A window or door is visible from any point in a habitable room. In a limited number of kitchens minor blind spots exist but the rear wall of a kitchen is generally less than 8m from an openable window or door
Where minimum areas or room dimensions are not met, apartments need to demonstrate that they are well designed and demonstrate the usability and functionality of the space with realistically scaled furniture layouts and circulation areas. These circumstances would be assessed on their merits	As discussed above, the habitable rooms meet the criteria of Objective 4D-1

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 the ceiling height	As discussed above, apartment depths meet the criteria set out in figure 4D.3 and no habitable areas are greater than 8m deep from an openable window or door. In some apartments, non-habitable areas such as bathrooms and laundries are located beyond this zone.
2. In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window	As discussed above, apartment depths meet the criteria set out in figure 4D.3 and no habitable areas are greater than 8m deep from an openable window or door. In some apartments, non-habitable areas such as bathrooms and laundries are located beyond this zone.
Design guidance	
Greater than minimum ceiling heights can allow for proportional increases in room depth up to the permitted maximum depths	As discussed above ceiling heights are maintained at 2.7m in habitable rooms.
All living areas and bedrooms should be located on the external face of the building	All living areas and bedrooms are located on the external face of the building.

4D Apartment size and layout	
Where possible: • bathrooms and laundries should have an external openable window • main living spaces should be oriented toward the primary outlook and aspect and away from noise sources	As discussed above, the site is bounded by Edgar Street to the east, Sharp Street to the south, Brooks Parade to the west and a canal to the north. The design incorporates 4 buildings on the site. The service zones are located to the rear of the units against the central cores of the buildings. Only a limited number of bathrooms have been located on the external perimeter of the buildings. The main living spaces have been located on the external perimeter of the buildings. Given that the site is bounded on 3 sides by public streets, and the primary outlook to the north and the west, some apartments may be susceptible to street noise. An acoustic report has been prepared and the recommendations will be incorporated into the design. The acoustic report forms part of this submission.
Objective 4D-3 Apartment layouts are designed to accommodate a variety of household activities and needs	
Design criteria	
1. Master bedrooms have a minimum area of $10m^2$ and other bedrooms $9m^2$ (excluding wardrobe space)	In general, the Master Bedrooms and other bedrooms exceed the minimum dimensions in this design criteria.
2. Bedrooms have a minimum dimension of 3m (excluding wardrobe space)	The majority of second bedrooms have minimum dimensions of 3.0m x 3.2m which provides a minimum overall area of greater than $9m^2$. Master bedrooms generally have minimum dimensions of 3m x 3.6-3.9m which provides a minimum overall area of greater than $10m^2$.

3. Living rooms or combined living/dining rooms have a minimum width of: • 3.6m for studio and 1 bedroom apartments • 4m for 2 and 3 bedroom apartments	Widths of living rooms in some of the apartments are marginally below this standard, but this is offset by larger than required areas of the apartments and the general amenity of the apartments.
4. The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts	As discussed above, there are no cross over apartments proposed.
Design guidance	
Access to bedrooms, bathrooms and laundries is separated from living areas minimising direct openings between living and service areas	In some of the apartments and in particular in the 1-bedroom apartments, some of the bedrooms, kitchens, etc are accessed directly off one side of the living and dining area. A full wall along the length of the apartment is provided to allow for the placement of wall cabinets and other similar furniture
All bedrooms allow a minimum length of 1.5m for robes	All bedrooms are provided with robe space in excess of 1.5m and in most apartments the robe space is considerably greater
The main bedroom of an apartment or a studio apartment should be provided with a wardrobe of a minimum 1.8m long, 0.6m deep and 2.1m high	The main bedrooms in all apartments are provided with a robe space in excess of 1.8m long x 0.6m wide. The robes have been designed with a minimum height of 2.4m with the walk in robes being considerably greater. In the majority of apartments, the robe space is considerably greater.

Apartment layouts allow flexibility over time, design solutions may include: • dimensions that facilitate a variety of furniture arrangements and removal • spaces for a range of activities and privacy levels between different spaces within the apartment • dual master apartments • dual key apartments *Note: dual key apartments which are separate but on the same title are regarded as two sole occupancy units for the purposes of the Building Code of Australia and for calculating the mix of apartments* • room sizes and proportions or open plans (rectangular spaces (2:3) are more easily furnished than square spaces (1:1)) • efficient planning of circulation by stairs, corridors and through rooms to maximise the amount of usable floor space in rooms	Apartment layouts have been designed to allow for a flexible furniture layout. In general, the living and dining areas of apartments have been combined with a rectangular ratio approximately 1:1.5 to 1.8. No dual key apartments are proposed. In general, internal corridors have been minimised and the bulk of the apartment areas are usable spaces.

<table>
<tr><td>4E Private open space and balconies</td><td></td></tr>
<tr><td>Objective 4E-1
Apartments provide appropriately sized private open space and balconies to enhance residential amenity</td><td></td></tr>
<tr><td>Design criteria</td><td></td></tr>
<tr><td>1. All apartments are required to have primary balconies as follows:

<table><tr><th>Dwelling type</th><th>Minimum area</th><th>Minimum depth</th></tr><tr><td>Studio apartments</td><td>4m^2</td><td>-</td></tr><tr><td>1 bedroom apartments</td><td>8m^2</td><td>2m</td></tr><tr><td>2 bedroom apartments</td><td>10m^2</td><td>2m</td></tr><tr><td>3+ bedroom apartments</td><td>12m^2</td><td>2.4m</td></tr></table>
The minimum balcony depth to be counted as contributing to the balcony area is 1m</td><td>All apartments are provided with primary balconies in excess of the minimum requirements set out in this Objective and in a number of apartments the areas are more than double the minimum recommended. A detailed tabulation of balcony areas is provided in drawing DA51.

The minimum balcony depth counted as contributing to the balcony area is generally greater than 1m</td></tr>
<tr><td>2. For apartments at ground level or on a podium or similar structure, a private open space is provided instead of a balcony. It must have a minimum area of 15m^2 and a minimum depth of 3m</td><td>All apartments on the Ground Floor are elevated a minimum of 0.5m above the podium level to meet the level set by Council's Sea Level Rise policy and are therefore considered balconies.</td></tr>
</table>

Design guidance	
Increased communal open space should be provided where the number or size of balconies are reduced	As discussed above, the balcony number and sizes are well in excess of the requirements of Objective E3-1. The communal open space provided is also well in excess of that recommended in Objective 3D-1
Storage areas on balconies is additional to the minimum balcony size	As discussed above, although the balcony number and sizes are well in excess of the requirements of Objective E3-1, it is not recommended that storage be provided on balconies.
Balcony use may be limited in some proposals by: • consistently high wind speeds at 10 storeys and above • close proximity to road, rail or other noise sources exposure to significant levels of aircraft noise • heritage and adaptive reuse of existing buildings In these situations, juliette balconies, operable walls, enclosed winter gardens or bay windows may be appropriate, and other amenity benefits for occupants should also be provided in the apartments or in the development or both. Natural ventilation also needs to be demonstrated	As discussed above, the proposed buildings are not in excess of 10 storeys and the buildings are not in a heritage conservation area or as part of an adaptive reuse of existing buildings.

Objective 4E-2 Primary private open space and balconies are appropriately located to enhance liveability for residents	
Design guidance	
Primary open space and balconies should be located adjacent to the living room, dining room or kitchen to extend the living space	The balconies are located adjacent to and with direct access from the living / dining areas of the apartments and within close proximity to the majority of kitchens.
Private open spaces and balconies predominantly face north, east or west	The private open spaces and balconies predominantly face north, east or west. As discussed above, only 4 apartments representing 3% of the apartments are provided with balconies that predominantly face south
Primary open space and balconies should be orientated with the longer side facing outwards or be open to the sky to optimise daylight access into adjacent rooms	The primary open space and balconies are orientated with the longer side facing outwards. In the corner apartments, the balconies generally wrap around the external corner providing 2 faces facing outwards.

Objective 4E-3 Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building	
Design guidance	
Solid, partially solid or transparent fences and balustrades are selected to respond to the location. They are designed to allow views and passive surveillance of the street while maintaining visual privacy and allowing for a range of uses on the balcony. Solid and partially solid balustrades are preferred	As discussed above, the site is bounded by Edgar Street to the east, Sharp Street to the south, Brooks Parade to the west and a canal to the north. The predominant views are to the south west to Lake Macquarie and to a lesser extent to the north west over the adjoining Hunter Water land. The balconies of the residential apartments that overlook the streets are located at First Floor level thus providing passive surveillance of the streets while maintaining visual privacy due to their location at approximately 4.6m above street level. The balconies are well in excess of the minimum standards. Generally, the balustrades are a combination of solid balustrades, glass balustrades, glass louvers and fixed aluminium louvers and have been provided with partitions and screens where appropriate to provide visual privacy from other apartments where required.
Full width full height glass balustrades alone are generally not desirable	There are no full height glass balustrades as the sole balustrade for any apartment as shown on the elevations shown on drawings A11, A12, A13, A14, and A15. A number of balconies particularly in Buildings A, B and C include continuous glass balconies 1.0m high to maximise the view
Projecting balconies should be integrated into the building design and the design of soffits considered	The balconies have been integrated into the design. the following options have been adopted: • framing of the balconies to provide defined projections and articulation • breaking up of balconies into individual runs • long runs have been avoided or broken up where appropriate • Provision of glass louvered winter gardens in specific apartments

Operable screens, shutters, hoods and pergolas are used to control sunlight and wind	Screening and solar control is provided by a combination of the following elements: • horizontal sliding screens • overhanging hoods and balconies • fixed louvers • projecting horizontal and vertical fins
Balustrades are set back from the building or balcony edge where overlooking or safety is an issue	As discussed above, overlooking has been adequately addressed in response to Objective 3F2 above. All balconies have been designed to comply with the Building Code of Australia to ensure no safety issues or non-compliance arise.
Downpipes and balcony drainage are integrated with the overall facade and building design	Downpipes and balcony drainage will be integrated into the overall facade and building design as part of the detailed construction documentation.
Air-conditioning units should be located on roofs, in basements, or fully integrated into the building design	Dedicated screened plant areas are provided on the roof of all 4 buildings and adequate risers have been provided to allow access for piping to any mechanical plant located on the roof.
Where clothes drying, storage or air conditioning units are located on balconies, they should be screened and integrated in the building design	It is not proposed that any clothes drying, storage or air conditioning units are located on balconies.
Ceilings of apartments below terraces should be insulated to avoid heat loss	Any ceilings below terraces and in particular where the building is tier back will be insulated in accordance with the BASIX Assessment that forms part of this submission.
Water and gas outlets should be provided for primary balconies and private open space	The owners will provide purchasers with the option to install water and gas outlets for primary balconies and private open space as part of the sales programme.

Objective 4E-4 Private open space and balcony design maximises safety	
Design guidance	
Changes in ground levels or landscaping are minimised	As discussed above, the site is subject to Council's Sea Level Rise policy which has set the level of the commercial areas at AHD 2.36m ie approximately 1.1m higher than natural ground. This has resulted in an elevated podium being created at the commercial flood level. The podium has also been set back to meet deep soil and Council's requirements. This setback has been heavily landscaped and tiered as shown in the Landscaping plans that form part of this submission.
Design and detailing of balconies avoids opportunities for climbing and falls	As discussed above, the balconies have been designed to meet the requirements of the Building Code of Australia and do not provide the opportunity for climbing and resultant falls.
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	The maximum number of apartments in any of the four buildings off a circulation core on a single level is not greater than eight.
2. For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40	as discussed above, none of the buildings are 10 storeys and over. In any case, the maximum number of apartments in any one building (Building C) is 38 apartments.

Design guidance	
Greater than minimum requirements for corridor widths and/ or ceiling heights allow comfortable movement and access particularly in entry lobbies, outside lifts and at apartment entry doors	The entries to the buildings are considerably wider than the minimum standards required. The width of corridors meet the requirements of AS1428.1. A Disability Access Report has been prepared and form part of this submission.
Daylight and natural ventilation should be provided to all common circulation spaces that are above ground	Daylight and natural ventilation is provided to the common circulation spaces that are above the Ground Floor in all the buildings. The building cores have been designed to minimise their length.
Windows should be provided in common circulation spaces and should be adjacent to the stair or lift core or at the ends of corridors	Windows are provided to the common circulation spaces in all buildings. The building cores have been designed to minimise their length. Window views are shown on drawing DA45.
Longer corridors greater than 12m in length from the lift core should be articulated. Design solutions may include: • a series of foyer areas with windows & spaces for seating • wider areas at apartment entry doors and varied ceiling heights	Where corridors are greater than 12m from the lift core, additional full height windows have been provided and the corridor articulated.
Design common circulation spaces to maximise opportunities for dual aspect apartments, including multiple core apartment buildings and cross over apartments	As discussed above, the development comprises 4 buildings. The buildings vary between 6 apartments per floor to 2 apartments per floor. 91 apartments representing 76% are provided with cross ventilation which has been achieved by adopting dual aspect and cross flow apartments.
Achieving the design criteria for the number of apartments off a circulation core may not be possible. Where a development is unable to achieve the design criteria, a high level of amenity for common lobbies, corridors and apartments should be demonstrated, including:	As discussed above, the design criteria has been more than achieved.

• sunlight and natural cross ventilation in apartments • access to ample daylight and natural ventilation in common circulation spaces • common areas for seating and gathering • generous corridors with greater than minimum ceiling heights • other innovative design solutions that provide high levels of amenity	
Where design criteria 1 is not achieved, no more than 12 apartments should be provided off a circulation core on a single level	As discussed above design criteria 1 has been achieved.
Primary living room or bedroom windows should not open directly onto common circulation spaces, whether open or enclosed. Visual and acoustic privacy from common circulation spaces to any other rooms should be carefully controlled	Only 2 apartments open directly onto common circulation spaces. No bedroom windows open directly onto common circulation spaces.

Objective 4F-2 Common circulation spaces promote safety and provide for social interaction between residents	
Design guidance	
Direct and legible access should be provided between vertical circulation points and apartment entries by minimising corridor or gallery length to give short, straight, clear sight lines	The corridors are generally straight runs with clear sight lines from the lifts to the apartment entries. Where this has not been achieved in Building B, all corridors are provided with full height windows at the end of each corridor.
Tight corners and spaces are avoided	Tight spaces and corners are minimised and circulation complies with AS AS1428.1. A Disability Access Report has been prepared and form part of this submission.
Circulation spaces should be well lit at night	Circulation spaces will be well lit.
Legible signage should be provided for apartment numbers, common areas and general wayfinding	Legible signage will be provided for apartment numbers, floor levels and building identification. Wayfinding signage will be provided at Ground Floor level in the communal open space and in the Basement carparks.
Incidental spaces, for example space for seating in a corridor, at a stair landing, or near a window are provided	As discussed above, the corridors service between 2 and 6 apartments only. As such the use of seating in the corridors is not applicable.
In larger developments, community rooms for activities such as owners corporation meetings or resident use should be provided and are ideally co-located with communal open space	Whist the development could be considered a largish development in the Newcastle region, it is not a large development by any standards. Nevertheless, 2 community rooms are provided.
Where external galleries are provided, they are more open than closed above the balustrade along their length	No external galleries are provided as a means of access in the residential levels.

<table>
<tr><td></td><td></td></tr>
<tr><td>4G Storage</td><td></td></tr>
<tr><td>Objective 4G-1
Adequate, well designed storage is provided in each apartment</td><td></td></tr>
<tr><td>Design criteria</td><td></td></tr>
<tr><td>1. In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided:

<table><tr><th>Dwelling type</th><th>Storage size volume</th></tr><tr><td>Studio apartments</td><td>4m^3</td></tr><tr><td>1 bedroom apartments</td><td>6m^3</td></tr><tr><td>2 bedroom apartments</td><td>8m^3</td></tr><tr><td>3+ bedroom apartments</td><td>10m^3</td></tr></table>
At least 50% of the required storage is to be located within the apartment</td><td>Significant storage has been provided within the apartments, as dedicated storage areas on the individual floors in Building A, and within the Basement residential carpark.</td></tr>
</table>

Design guidance	
Storage is accessible from either circulation or living areas	Storage is accessible from either circulation or living areas. Some of the storage in the Basement carpark is accessible from, and will be dedicated to, the car park associated with the apartment.
Storage provided on balconies (in addition to the minimum balcony size) is integrated into the balcony design, weather proof and screened from view from the street	Although the balconies exceed the minimum standards, it is not proposed that any storage will be provided on the balconies.
Left over space such as under stairs is used for storage	All left over spaces have been integrated into the storage provided.
Objective 4G-2 Additional storage is conveniently located, accessible and nominated for individual apartments	
Design guidance	
Storage not located in apartments is secure and clearly allocated to specific apartments	Storage on the residential floors and in the Basement carpark will be clearly identified and allocated to specific apartments.
Storage is provided for larger and less frequently accessed items	With the exception of a limited number of storage units attached to individual carparks, all storage units have a minimum dimension of 1.0m thus providing adequate storage for larger and less frequently accessed items.
Storage space in internal or basement car parks is provided at the rear or side of car spaces or in cages so that allocated car parking remains accessible	In a number of cases, storage spaces in the Basement carpark are provided at the rear and to a lesser degree, to the side of car spaces so that allocated car parking remains accessible. All other storage is provided in separate cages with their own individual access

If communal storage rooms are provided they should be accessible from common circulation areas of the building	All storage spaces are individual units. Where these are located in dedicated areas, they are accessible from common circulation areas of the buildings.
Storage not located in an apartment is integrated into the overall building design and is not visible from the public domain	None of the storage spaces are visible from the public domain.
4H Acoustic privacy	
Objective 4H-1 Noise transfer is minimised through the siting of buildings and building layout	
Design guidance	
Adequate building separation is provided within the development and from neighbouring buildings/adjacent uses (see also section 2F Building separation and section 3F Visual privacy)	Building separation has been addressed in response to the various objectives above.
Window and door openings are generally orientated away from noise sources	As discussed above, the site is bounded by Edgar Street to the east, Sharp Street to the south, Brooks Parade to the west and a canal to the north. The design incorporates 4 buildings on the site. The main living spaces have been located on the external perimeter of the buildings. Given that the site is bounded on 3 sides by public streets, and the primary outlook to the north and the west, some apartments may be susceptible to street noise. An acoustic report has been prepared and the recommendations will be incorporated into the design. The acoustic report forms part of this submission.

Noisy areas within buildings including building entries and corridors should be located next to or above each other and quieter areas next to or above quieter areas	Building corridors are located above one another. The 4 entries are located below apartments. These areas will be acoustically treated to buffer noise in accordance with the recommendations of the acoustic report that forms part of this submission.
Storage, circulation areas and non-habitable rooms should be located to buffer noise from external sources	As discussed above, the apartments have been designed so that the main living spaces and bedrooms are located on the external perimeter of the buildings and the wet areas against the core this providing a buffer between the circulation areas and the habitable rooms.
The number of party walls (walls shared with other apartments) are limited and are appropriately insulated	As discussed above, the number of apartments on any one floor is no greater than 6 and in most cases significantly less. Party walls will be constructed to meet the requirements of the Building Code of Australia and the recommendations of the acoustic report that forms part of this submission.
Noise sources such as garage doors, driveways, service areas, plant rooms, building services, mechanical equipment, active communal open spaces and circulation areas should be located at least 3m away from bedrooms	The garage door and driveway is located below a corridor and some distance away from bedrooms and well in excess of 3m. As discussed above, the residential Ground Floor is set 0.5m above the communal open areas. These areas have been heavily landscaped to provide both visual and acoustic privacy.

Objective 4H-2 Noise impacts are mitigated within apartments through layout and acoustic treatments	
Design guidance	
Internal apartment layout separates noisy spaces from quiet spaces, using a number of the following design solutions: • rooms with similar noise requirements are grouped together • doors separate different use zones • wardrobes in bedrooms are co-located to act as sound buffers	Internal apartment layouts have been designed to generally separate noisy spaces from quiet spaces, using some of the following design solutions: • doors separate different use zones • wardrobes in bedrooms are co-located to act as sound buffers Where possible wardrobes have been utilised to provide a buffer from bathrooms and kitchens. Where possible (although not in all cases) adjoining apartment layouts have been designed on a "Bedroom to Bedroom" and “Living to Living" basis.
Where physical separation cannot be achieved, noise conflicts are resolved using the following design solutions: • double or acoustic glazing • acoustic seals • use of materials with low noise penetration properties • continuous walls to ground level courtyards where they do not conflict with streetscape or other amenity requirements	As discussed above, party walls will be constructed to meet the requirements of the Building Code of Australia. An acoustic report has been prepared and forms part of this submission. The recommendations of the acoustic report will be incorporated into the construction of the buildings.

4J Noise and pollution	
Objective 4J-1 In noisy or hostile environments the impacts of external noise and pollution are minimised through the careful siting and layout of buildings	
Design guidance	
To minimise impacts the following design solutions may be used: • physical separation between buildings and the noise or pollution source • residential uses are located perpendicular to the noise source and where possible buffered by other uses • non-residential buildings are sited to be parallel with the noise source to provide a continuous building that shields residential uses and communal open spaces • non-residential uses are located at lower levels vertically separating the residential component from the noise or pollution source. Setbacks to the underside of residential floor levels should increase relative to traffic volumes and other noise sources • buildings should respond to both solar access and noise. Where solar access is away from the noise source, non-habitable rooms can provide a buffer • where solar access is in the same direction as the noise source, dual aspect apartments with shallow building depths are preferable (see figure 4J.4)	The development is not located in a noisy or hostile environment. Notwithstanding the above, an acoustic report has been prepared and forms part of this submission. The recommendations of the acoustic report will be incorporated into the construction of the buildings.

• landscape design reduces the perception of noise and acts as a filter for air pollution generated by traffic and industry	
Achieving the design criteria in this Apartment Design Guide may not be possible in some situations due to noise and pollution. Where developments are unable to achieve the design criteria, alternatives may be considered in the following areas: • solar and daylight access • private open space and balconies • natural cross ventilation	As discussed above, the development is not located in a noisy or hostile environment. Notwithstanding the above, an acoustic report has been prepared and forms part of this submission. The recommendations of the acoustic report will be incorporated into the construction of the buildings.
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 to mitigate noise include: • limiting the number and size of openings facing noise sources • providing seals to prevent noise transfer through gaps • using double or acoustic glazing, acoustic louvres or enclosed balconies (wintergardens) • using materials with mass and/or sound insulation or absorption properties e.g. solid balcony balustrades, external screens and soffits	As discussed above, the site is bounded by Edgar Street to the east, Sharp Street to the south, Brooks Parade to the west and a canal to the north. The design incorporates 4 buildings on the site. The main living spaces have been located on the external perimeter of the buildings. Given that the site is bounded on 3 sides by public streets, and the primary outlook to the north and the west, some apartments may be susceptible to street noise. An acoustic report has been prepared and the recommendations will be incorporated into the design. The acoustic report forms part of this submission.

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	A variety of apartment types are provided. A detailed tabulation is provided in drawing DA51.
The apartment mix is appropriate, taking into consideration: • the distance to public transport, employment and education centres • the current market demands and projected future demographic trends • the demand for social and affordable housing • different cultural and socioeconomic groups	The apartment mix takes into account the socio-economic demographics of the area. A Social Impact Assessment has been prepared and forms part of this submission
Flexible apartment configurations are provided to support diverse household types and stages of life including single person households, families, multi-generational families and group households	As discussed above, a variety of apartment types are provided to cater for owners and occupiers ranging from the rental market to the more mature owner occupier.

Objective 4K-2 The apartment mix is distributed to suitable locations within the building	
Design guidance	
Different apartment types are located to achieve successful facade composition and to optimise solar access (see figure 4K.3)	Different apartment types have been located to achieve successful facade composition and to optimise solar access. In general, main living areas have been orientated to the north and east, the exceptions being the apartments that face onto Brooks Parade which have been orientated to the south west to maximise the views over the lake.
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	As discussed above, all apartments are elevated from the podium and the balconies are identical in size to those above.
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	As discussed above, the building is a mixed use development with commercial areas fronting Edgar and Sharp Streets, and Brooks Parade. No apartments with direct street access have been provided.

Activity is achieved through front gardens, terraces and the facade of the building. Design solutions may include: • both street, foyer and other common internal circulation entrances to ground floor apartments • private open space is next to the street • doors and windows face the street	As discussed above, the building is a mixed use development with commercial areas fronting Edgar and Sharp Streets, and Brooks Parade. No apartments with direct street access have been provided.
Retail or home office spaces should be located along street frontages	As discussed above, the building is a mixed use development with commercial areas fronting Edgar and Sharp Streets, and Brooks Parade. No dedicated home offices are provided.
Ground floor apartment layouts support small office home office (SOHO) use to provide future opportunities for conversion into commercial or retail areas. In these cases provide higher floor to ceiling heights and ground floor amenities for easy conversion	As discussed above, no dedicated home offices are provided.

Objective 4L-2 Design of ground floor apartments delivers amenity and safety for residents	
Design guidance	
Privacy and safety should be provided without obstructing casual surveillance. Design solutions may 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	As discussed above, the site is subject to Council's Sea Level Rise policy which has set the level of the commercial areas at AHD 2.36m and the residential areas 0.5m higher at AHD 2.86m, ie approximately 1.1m and 1.6m higher than natural ground respectively. This has resulted in an elevated podium being created at the commercial flood level. The residential apartments on the podium has also been set back from the street boundaries to meet Council's requirements and Council's Strategic Development Department report entitled Review of the Town Centres DCP and Belmont Area Plan for 32 Brooks Parade Belmont. Window cill heights of the Ground Floor apartments are therefore set at approximately 2.5m above street level which provides passive surveillance without affecting the privacy of the apartments. The balustrades, fenestration and commercial shopfronts have been integrated into the overall 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	As discussed above, solar access has been addressed in response to the relevant objectives.

4M Facades	
Objective 4M-1 Building facades provide visual interest along the street while respecting the character of the local area	
Design guidance	
Design solutions for front building facades may include: • a composition of varied building elements • a defined base, middle and top of buildings • revealing and concealing certain elements • changes in texture, material, detail and colour to modify the prominence of elements	As discussed above, the project consists of 4 individual buildings on a raised podium. The buildings are set back from the street and tiered back at the upper levels. A range of textures and materials are proposed as indicated on the drawings and finishes board that form part of this submission. Articulation and shading is achieved by the intrinsic forms of the buildings and by projecting balconies, fins, a combination of fixed and sliding louvers and a limited amount of glass louvered winter gardens.
Building services should be integrated within the overall facade	It is not proposed that any services be attached to the facade of the building and all downpipes will be recessed from the main facades.
Building facades should be well resolved with an appropriate scale and proportion to the streetscape and human scale. Design solutions may include: • well composed horizontal and vertical elements • variation in floor heights to enhance the human scale • elements that are proportional and arranged in patterns • public artwork or treatments to exterior blank walls • grouping of floors or elements such as balconies and windows on taller buildings	As discussed above, the project consists of 4 individual buildings on a raised podium. The buildings are set back from the street and tiered back at the upper levels. The buildings are not necessarily square to one another and follow in the main the street alignments. A range of textures and materials are proposed as indicated on the drawings and finishes board that form part of this submission. Articulation and shading is achieved by the intrinsic forms of the buildings and by projecting balconies, fins and a combination of fixed and sliding louvers.

Building facades relate to key datum lines of adjacent buildings through upper level setbacks, parapets, cornices, awnings or colonnade heights	The building facades do not necessarily relate to the adjoining buildings. The building to the east is the rear section and loading dock of Belmont Citi Shopping Centre which consists of a blank pre-cast wall. The building to the south west is Belmont Towers which is an 8 storey tower block constructed in the seventies with minimal articulation. The building relates to the more recent Belmont Central to the south in that it is similar in tiering and the horizontal treatment of balconies.
Shadow is created on the facade throughout the day with building articulation, balconies and deeper window reveals	As discussed above, the buildings are heavily articulated through the intrinsic forms of the buildings and by projecting balconies, fins and a combination of fixed and sliding louvers. Moreover, a number of windows have been provided with projecting surrounds to further provide the impression of deeper reveals. These elements combine to cast a myriad of shadows.
Objective 4M-2 Building functions are expressed by the facade	
Design guidance	
Building entries should be clearly defined	As discussed above, the building entries are clearly defined, project from the face of the buildings, and are treated with different finishes from the surrounding areas.
Important corners are given visual prominence through a change in articulation, materials or colour, roof expression or changes in height	Various corners and in particular on the upper floors have been treated differently from the remainder of the buildings.
The apartment layout should be expressed externally through facade features such as party walls and floor slabs	The buildings have been designed as individual buildings with significant articulation, as such it has not been necessary to express the apartment layouts on the facades.

4N Roof design	
Objective 4N-1 Roof treatments are integrated into the building design and positively respond to the street	
Design guidance	
Roof design relates to the street. Design solutions may include: • special roof features and strong corners • use of skillion or very low pitch hipped roofs • breaking down the massing of the roof by using smaller elements to avoid bulk • using materials or a pitched form complementary to adjacent buildings	As discussed above, 3 of the buildings are tiered back on the Fourth Floor. The roof design of these buildings has been integrated into the overall design and is an extension in part of the wall treatment. The fourth building, Building A, has been stepped back once on the top floor to allow the building to act as a "book end" to the eight storey Belmont Towers to the south across Sharp Street. The roofs have been designed to incorporate roof top gardens with perimeter planter boxes set back from the building perimeter edges.
Roof treatments should be integrated with the building design. Design solutions may include: • roof design proportionate to the overall building size, scale and form • roof materials compliment the building • service elements are integrated	As discussed above, the buildings are tiered back on the fourth floor. The roof design has been integrated into the overall design and is an extension in part of the wall treatment. All service areas, lift over runs and access are well set back from the building perimeter and are screened.

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. Design solutions may include: • penthouse apartments • dormer or clerestory windows • openable skylights	The buildings have been designed to provide roof top communal open spaces to maximise the views over Lake Macquarie. The balustrade lines consist of planter boxes and are well set back from the building line and will not be discernible from street level.
Open space is provided on roof tops subject to acceptable visual and acoustic privacy, comfort levels, safety and security considerations	As discussed above, the roof top communal open spaces are designed to maximise the views over Lake Macquarie. The balustrade line is well set back from the building line and will not be discernible from street level. Access will be via the lifts servicing the buildings.
Objective 4N-3 Roof design incorporates sustainability features	
Design guidance	
Roof design maximises solar access to apartments during winter and provides shade during summer. Design solutions may include: • the roof lifts to the north • eaves and overhangs shade walls and windows from summer sun	As discussed above, the buildings have been designed to provide roof top communal open spaces to maximise the views over Lake Macquarie. The balustrade lines consist of planter boxes and are well set back from the building line and will not be discernible from street level. The design does not any overshadowing or privacy issues to the apartments below.

Skylights and ventilation systems should be integrated into the roof design	No skylights are proposed. The ventilation system is integrated into the projecting lift and stair elements.
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 by incorporating: • diverse and appropriate planting • bio-filtration gardens • appropriately planted shading trees • areas for residents to plant vegetables and herbs • composting • green roofs or walls	A detailed landscape design has been prepared and forms part of this submission. The design incorporates planting and shading trees that conform to Council's guidelines.
Ongoing maintenance plans should be prepared	An on-going maintenance plan for the building in general and the landscaping in particular will be prepared as part of the construction phase of the project.
Microclimate is enhanced by: • appropriately scaled trees near the eastern and western elevations for shade • a balance of evergreen and deciduous trees to provide shading in summer and sunlight access in winter • shade structures such as pergolas for balconies and courtyards	As discussed above, a detailed landscape design has been prepared and forms part of this submission. The design incorporates appropriately scaled trees and a balance of evergreen and deciduous trees that conform to Council's guidelines.

Tree and shrub selection considers size at maturity and the potential for roots to compete (see Table 4)	As discussed above, a detailed landscape design has been prepared and forms part of this submission. The design conforms to Council's guidelines and the tree and shrub selection takes into account the size at maturity and the potential for roots to compete.
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 including trees and rock outcrops	As discussed above, a detailed landscape design has been prepared and forms part of this submission. The design conforms to Council's guidelines. The design takes into account the changes in level in the design with tiered landscaping and similar elements along the perimeter of the podium. There are no significant landscape features including trees and rock outcrops.
Significant landscape features should be protected by: • tree protection zones (see figure 4 O.5) • appropriate signage and fencing during construction	A number of existing trees external to the site will be retained as indicated on the landscape plans that form part of this submission. The trees will be protected by tree protection zones and appropriate signage and fencing during the construction phase of the project.
Plants selected should be endemic to the region and reflect the local ecology	As discussed above, a detailed landscape design has been prepared and forms part of this submission. The design conforms to Council's guidelines.

4P Planting on structures	
Objective 4P-1 Appropriate soil profiles are provided	
Design guidance	
Structures are reinforced for additional saturated soil weight	The planter boxes on the podium are located on a suspended slab as are the planter boxes at roof top level. The slabs will be designed to take into account the saturated soil weight.
Soil volume is appropriate for plant growth, considerations include: • modifying depths and widths according to the planting mix and irrigation frequency • free draining and long soil life span • tree anchorage	As discussed above, a detailed landscape design has been prepared and is included in this submission. The planter beds were designed by the landscape architect to ensure that the depths and widths are suitable for the planting mix and irrigation frequency and are free draining to ensure long soil life span. Tree anchorage details are provided on the landscaping plans.
Minimum soil standards for plant sizes should be provided in accordance with Table 5	As discussed above, a detailed landscape design has been prepared and is included in this submission. The minimum soil standards will be met where applicable or modified in accordance with industry standards.

Objective 4P-2 Plant growth is optimised with appropriate selection and maintenance	
Design guidance	
Plants are suited to site conditions, considerations include: • drought and wind tolerance • seasonal changes in solar access • modified substrate depths for a diverse range of plants • plant longevity	As discussed above, a detailed landscape design has been prepared and is included in this submission. The design has been prepared to conform with Council's guidelines and incorporate the intent of this objective.
A landscape maintenance plan is prepared	As discussed above, an on-going maintenance plan for the building in general and the landscaping in particular will be prepared as part of the construction phase of the project.
Irrigation and drainage systems respond to: • changing site conditions • soil profile and the planting regime • whether rainwater, stormwater or recycled grey water is used	The detailed design of the drainage system for the planter beds and other landscaped areas will be carried out as part of the construction phase of the project and will incorporate the intent of this objective.

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 Note: structures designed to accommodate green walls should be integrated into the building facade and consider the ability of the facade to change over time	As discussed above, the majority of the communal open space is located over the basement carpark at podium level and at roof top level. The layout of these areas have been designed by a landscape architect and incorporate shaded BBQ areas, seating, and planter boxes of varying shapes and depths.
4Q Universal design	
Objective 4Q-1 Universal design features are included in apartment design to promote flexible housing for all community members	
Design guidance	
Developments achieve a benchmark of 20% of the total apartments incorporating the Livable Housing Guideline's silver level universal design features	The development achieves a benchmark of 20% of the total apartments incorporating the Livable Housing Guideline's silver level universal design features as confirmed in the Disability Access Report that forms part of this submission

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	As discussed above, a Traffic Report and a Disability Access Report have been prepared and form part of this submission. Both reports confirm that adaptable housing and parking is provided in accordance with Council's policy.
Design solutions for adaptable apartments include: • convenient access to communal and public areas • high level of solar access • minimal structural change and residential amenity loss when adapted • larger car parking spaces for accessibility • parking titled separately from apartments or shared car parking arrangements	The design and proposed conversion of the adaptable units are shown on drawings DA55 and DA56. The modifications are acceptable for the proposed conversions are acceptable and do not affect the structural integrity of the buildings. Carparks that confirm with the standards described in the Disability Access Report are shown on drawings DA01 and DA02. The majority of adaptable apartments face north and east with no apartments facing south.

Objective 4Q-3 Apartment layouts are flexible and accommodate a range of lifestyle needs	
Design guidance	
Apartment design incorporates flexible design solutions which may include: • rooms with multiple functions • dual master bedroom apartments with separate bathrooms • larger apartments with various living space options • openplan 'loft' style apartments with only a fixed kitchen, laundry and bathroom	The individual apartments have been designed to cater for a variety of age groups and users. In general, all living and dining areas have been combined as an open plan to provide flexibility with furniture layouts. Whist no dual master bedrooms have been provided, all 2-bedroom and 3-bedroom apartments are provided with ensuites in addition to a separate bathroom.

4R Adaptive reuse	
Objective 4R-1 New additions to existing buildings are contemporary and complementary and enhance an area's identity and sense of place	
Design guidance	
Design solutions may include: • new elements to align with the existing building • additions that complement the existing character, siting, scale, proportion, pattern, form and detailing • use of contemporary and complementary materials, finishes, textures and colours	The project is not an adaptive re-use of an existing building and does not integrate any existing buildings into the design, and as such this objective is not applicable.
Additions to heritage items should be clearly identifiable from the original building	The project is not an adaptive re-use of an existing building and does not integrate any existing buildings into the design, and as such this objective is not applicable.
New additions allow for the interpretation and future evolution of the building	The project is not an adaptive re-use of an existing building and does not integrate any existing buildings into the design, and as such this objective is not applicable.

Objective 4R-2 Adapted buildings provide residential amenity while not precluding future adaptive reuse	
Design guidance	
Design features should be incorporated sensitively into adapted buildings to make up for any physical limitations, to ensure residential amenity is achieved. Design solutions may include: • generously sized voids in deeper buildings • alternative apartment types when orientation is poor • using additions to expand the existing building envelope	The project is not an adaptive re-use of an existing building and does not integrate any existing buildings into the design, and as such this objective is not applicable.

Some proposals that adapt existing buildings may not be able to achieve all of the design criteria in this Apartment Design Guide. Where developments are unable to achieve the design criteria, alternatives could be considered in the following areas: • where there are existing higher ceilings, depths of habitable rooms could increase subject to demonstrating access to natural ventilation, cross ventilation (when applicable) and solar and daylight access (see also sections 4A Solar and daylight access and 4B Natural ventilation) • alternatives to providing deep soil where less than the minimum requirement is currently available on the site • building and visual separation–subject to demonstrating alternative design approaches to achieving privacy • common circulation • car parking • alternative approaches to private open space and balconies	The project is not an adaptive re-use of an existing building and does not integrate any existing buildings into the design, and as such this objective is not applicable.

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	The site is located in Council's Town Centres DCP as a designated mixed use development. It is located on a bus route and adjacent to an existing shopping centre.
Mixed use developments positively contribute to the public domain. Design solutions may include: • development addresses the street • active frontages are provided • diverse activities and uses • avoiding blank walls at the ground level • live/work apartments on the ground floor level, rather than commercial	As discussed above, the site is a corner site bounded by streets on 3 sides and a canal on the fourth side. Commercial areas face Edgar and Sharp Streets, and Brooks Parade providing an active street frontages. No extensive blank walls are provided on any of the street frontages

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. Design solutions may include: • residential entries are separated from commercial entries and directly accessible from the street • commercial service areas are separated from residential components • residential car parking and communal facilities are separated or secured • security at entries and safe pedestrian routes are provided • concealment opportunities are avoided	As discussed above, the development comprises 4 separate residential buildings. The residential entries are well defined and are separated from the commercial areas. The visitors carpark is totally separate from the residential carpark with its own separate lift access to the podium. The entries are well defined and secure and safe pedestrian routes are provided.
Landscaped communal open space should be provided at podium or roof levels	As discussed above, landscaped communal open space is provided at both podium level and on the roof top areas of each building.

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	As discussed above, the buildings have been set back from the street boundaries in accordance with Council's DCP, discussions with Council officers, and with the recommendations proposed in Council's Strategic Development Department report entitled Review of the Town Centres DCP and Belmont Area Plan for 32 Brooks Parade Belmont.
A number of the following design solutions are used: • continuous awnings are maintained and provided in areas with an existing pattern • height, depth, material and form complements the existing street character • protection from the sun and rain is provided • awnings are wrapped around the secondary frontages of corner sites • awnings are retractable in areas without an established pattern	The buildings have been set back from the street boundaries in accordance with Council's DCP and more importantly with the discussions held with Council officers, and the recommendations proposed in Council's Strategic Development Department report entitled Review of the Town Centres DCP and Belmont Area Plan for 32 Brooks Parade Belmont. Awnings and / or balconies have been provided over all commercial arears facing the streets.
Awnings should be located over building entries for building address and public domain amenity	As discussed above, the residential entries project forward from the facades of the buildings and are roofed over.

Awnings relate to residential windows, balconies, street tree planting, power poles and street infrastructure	As discussed above, the buildings have been set back from the street boundaries in accordance with Council's DCP, with the discussions held with Council officers, and with the recommendations proposed in Council's Strategic Development Department report entitled Review of the Town Centres DCP and Belmont Area Plan for 32 Brooks Parade Belmont. Other than for the minor projection over the entry to Building D, there are no projecting awnings over the streets.
Gutters and down pipes should be integrated and concealed	Gutters and downpipes will be integrated into the design at Construction Certificate stage.
Lighting under awnings should be provided for pedestrian safety	Lighting will be provided under all awnings and to both the communal open spaces and all other open areas.
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	All signage relating to the commercial areas will be integrated into the tenancy fitouts and will be subject to separate Applications.
Legible and discrete way finding should be provided for larger developments	As discussed above, wayfinding signage will be provided at Ground Floor level in the communal open space and in the Basement carparks.
Signage is limited to being on and below awnings and a single facade sign on the primary street frontage	As discussed above, all signage relating to the commercial areas will be integrated into the tenancy fitouts and will be subject to separate Development Applications.

4U Energy efficiency	
Objective 4U-1 Development incorporates passive environmental design	
Design guidance	
Adequate natural light is provided to habitable rooms (see 4A Solar and daylight access)	All habitable rooms are provided with external windows.
Well located, screened outdoor areas should be provided for clothes drying	It is not proposed that any outdoor areas will be provided for clothes drying.
Objective 4U-2 Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer	
Design guidance	
A number of the following design solutions are used: • the use of smart glass or other technologies on north and west elevations • thermal mass in the floors and walls of north facing rooms is maximised • polished concrete floors, tiles or timber rather than carpet • insulated roofs, walls and floors and seals on window and door openings • overhangs and shading devices such as awnings, blinds	As discussed above, a BASIX certificate has been prepared and forms part of this submission. The building has been designed to minimise reliance on mechanical heating and cooling. Walls, floors and roofs will be insulated in accordance with the BASIX certificate. The majority of doors and windows have been provided with a combination of overhanging canopies vertical and horizontal fins, horizontal and vertical louvers, and sliding horizontal sliding screens.

and screens	
Provision of consolidated heating and cooling infrastructure should be located in a centralised location (e.g. the basement)	A centralised HWS is proposed for each of the buildings and individual HWS on balconies are not proposed.
Objective 4U-3 Adequate natural ventilation minimises the need for mechanical ventilation	
Design guidance	
A number of the following design solutions are used: • rooms with similar usage are grouped together • natural cross ventilation for apartments is optimised • natural ventilation is provided to all habitable rooms and as many non-habitable rooms, common areas and circulation spaces as possible	As discussed above, 91 apartments representing 76% are provided with cross ventilation. All habitable rooms are provided with openable windows or doors on the exterior facades of the buildings. In addition, 67 of the apartments representing 56% of the kitchens are provided with openable windows.
4V Water management and conservation	
Objective 4V-1 Potable water use is minimised	
Design guidance	
Water efficient fittings, appliances and wastewater reuse should be incorporated	As discussed above, a BASIX certificate has been prepared and forms part of this submission. The certificate nominates a number of energy saving devices including water efficient fittings and storm water reuse.

Apartments should be individually metered	At this stage, Hunter Water do not support individual metering for the apartments. Provision will be made at detailed design stage for the installation of individual meters in the future.
Rainwater should be collected, stored and reused on site	As discussed above, a BASIX certificate has been prepared and forms part of this submission. The certificate nominates storm water reuse.
Drought tolerant, low water use plants should be used within landscaped areas	As discussed above, a landscape design has been prepared and forms part of this submission. The planting complies with Council's requirements in relation to the species of drought tolerant, low water use plants
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	A storm water management plan has been prepared by a qualified and experienced engineer and forms part of this submission.
A number of the following design solutions are used: • runoff is collected from roofs and balconies in water tanks and plumbed into toilets, laundry and irrigation • porous and open paving materials is maximised • on site stormwater and infiltration, including bio-retention systems such as rain gardens or street tree pits	As discussed above, a BASIX certificate has been prepared and forms part of this submission. The certificate nominates storm water reuse.

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	As discussed above, a storm water management plan has been prepared by a qualified and experienced engineer and forms part of this submission. It nominates the storm water detention proposed to comply with Council's requirements.
On large sites parks or open spaces are designed to provide temporary on site detention basins	The development is not a large site that incorporates large parks or open spaces.
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	
Adequately sized storage areas for rubbish bins should be located discreetly away from the front of the development or in the basement car park	A Waste Management Plan has been prepared and forms part of the submission. The individual buildings are provided with rubbish chutes servicing all floors which terminate in Garbage Rooms in the Basement. Individual recyclable storage cupboards are provided on each floor of each building.
Waste and recycling storage areas should be well ventilated	The Garbage Rooms and the recyclable storage cupboards will be mechanically exhausted to the roof level and duct space allocation has been provided.
Circulation design allows bins to be easily manoeuvred between storage and collection points	The Garbage Rooms have been designed to allow for the bins to be easily manoeuvred. Circulation diagrams of rubbish removal and storage are shown on drawing DA46.

Temporary storage should be provided for large bulk items such as mattresses	Sufficient space is provided in the main Garbage Room in Basement B1 for the temporary storage of large bulk items.
A waste management plan should be prepared	A Waste Management Plan has been prepared and forms part of the submission.
Objective 4W-2 Domestic waste is minimised by providing safe and convenient source separation and recycling	
Design guidance	
All dwellings should have a waste and recycling cupboard or temporary storage area of sufficient size to hold two days' worth of waste and recycling	The kitchens of the individual apartments are generously sized and sufficient space is available to provide temporary storage area of sufficient size to hold two days' worth of waste and recycling.
Communal waste and recycling rooms are in convenient and accessible locations related to each vertical core	The Garbage Rooms are located in the Basement adjacent to the lifts servicing the apartments.
For mixed use developments, residential waste and recycling storage areas and access should be separate and secure from other uses	The residential and commercial Garbage Rooms will be separate and are shown on drawing DA46.
Alternative waste disposal methods such as composting should be provided	It is not proposed that any composting will be provided on site.

4X Building maintenance	
Objective 4X-1 Building design detail provides protection from weathering	
Design guidance	
A number of the following design solutions are used: • roof overhangs to protect walls • hoods over windows and doors to protect openings • detailing horizontal edges with drip lines to avoid staining of surfaces • methods to eliminate or reduce planter box leaching • appropriate design and material selection for hostile locations	The buildings have been designed to minimise maintenance where possible. • The majority of windows are either protected by projecting surrounds or by overhead balconies or canopies. • All horizontal edges will be provided with drip moulding in accordance with good building practice. • The planter boxes will be fully tanked to prevent leaching. • The buildings, whilst adjacent to the lake are not in an overly hostile location. Nevertheless, it is not proposed that any mild steel handrails or the like will be installed.
Objective 4X-2 Systems and access enable ease of maintenance	
Design guidance	
Window design enables cleaning from the inside of the building	The windows that are not accessible off balconies will be double action awning windows to facilitate cleaning from the inside. The limited areas of curtain walling will be provided with abseiling and water points at roof level to facilitate cleaning.
Building maintenance systems should be incorporated and integrated into the design of the building form, roof and facade	It is not proposed to provide any building maintenance units. As discussed above, the limited areas of curtain walling will be provided with abseiling and water points at roof level to facilitate cleaning.

Design solutions do not require external scaffolding for maintenance access	The design does not require the installation of scaffolding for on-going maintenance access.
Manually operated systems such as blinds, sunshades and curtains are used in preference to mechanical systems	The screens proposed are either fixed screens or horizontal manually sliding screens accessible off balconies or manually adjustable louvers.
Centralised maintenance, services and storage should be provided for communal open space areas within the building	Centralised maintenance, services and storage has been provided at both the Ground Floor and the Basement levels.
Objective 4X-3 Material selection reduces ongoing maintenance costs	
Design guidance	
A number of the following design solutions are used: • sensors to control artificial lighting in common circulation and spaces • natural materials that weather well and improve with time such as face brickwork • easily cleaned surfaces that are graffiti resistant • robust and durable materials and finishes are used in locations which receive heavy wear and tear, such as common circulation areas and lift interiors	It is proposed that the following items will be incorporated into the final design at detailed design stage: • sensors to control artificial lighting in common circulation and spaces • a limited amount of face brickwork as shown on the drawings • a limited amount of zinc cladding as shown on the drawings • a graffiti resistant finish to the podium level and planter boxes between the natural ground level and the Ground Floor • robust and durable materials and finishes will be used in locations which receive heavy wear and tear, including common circulation areas and lift interiors