SEPP 65 - RESIDENTIAL FLAT DESIGN CODE COMPLIANCE TABLE

Note: the following guidelines must be read in conjunction with detailed text continued in Residential Flat Design Code (the Code).

PART 1 PRIMARY DEVELOPMENT CONTROLS

HEIGHT	COMMENTS
Objectives • To ensure future development responds to the desired scale and character of the street and local area. • To allow reasonable daylight access to all developments and the public domain.	**Compliance:** Partial Compliance The proposal has been designed to ensure appropriate development for the site, taking into account the existing form and design of the surrounding development. The setback, form and axis orientation of the buildings are varied as a result. The two and three storey buildings have been concentrated along the Yamba Road and Clarence River frontages, with the proposed taller buildings being located in the centre of the site, thereby helping to ensure the frontage buildings are appropriate to the character of the adjacent frontage buildings. Building materials are reflective of place which ensures that the proposal respects the character of the surrounding locality. The facades of the buildings have been designed to integrate the buildings into the local context with a considered balance of bulk and scale. Careful landscaping will ensure the buildings are integrated into the area and building heights have been designed to be in keeping with the existing tree heights on and adjacent to the site. This proposal facilitates reasonable solar access to all on-site development and the public domain. Shadow Diagrams produced by Woodhead Architects (Drawing Ref. CP008 and CP 009) indicate that the proposal meets the daylight access required within the Residential Flat Design Code (the Code) to SEPP 65. Building orientation is considered in conjunction with amended building heights and unit layout to achieve adequate daylight access to residents within the development and communal open spaces.
BUILDING DEPTH	**COMMENTS**
Objectives • To ensure that the bulk of the development is in scale with the existing or desired future context. • To provide adequate amenity for building occupants in terms of sun access and natural ventilation. • To provide for dual aspect apartments. **Rule of Thumb** In general, an apartment building depth of 10 to 18 metres is appropriate. Freestanding buildings may have a depth greater than 18 metres only if they achieve satisfactory daylight and natural ventilation.	**Compliance:** Proposal meets the objectives *Partial non-compliance in relation to building depths* The bulk and scale of the proposal is appropriate and responds to the site and surroundings. The buildings have been broken into smaller elements and a variety of heights to reduce the perception of mass, whilst the staggering of buildings will avoid the creation of 'a wall of buildings' effect. Although the proposed Stage 1 buildings range from 8.8 metres to 25.6 metres and thus in some cases exceed the recommended building depth of eighteen (18) metres, the development has been designed to ensure satisfactory amenity with over 84% of the units in buildings 1 and 2 having either dual or triple aspect, whilst over 84% of the apartments are naturally cross ventilated. Shadow Diagrams produced by Woodhead Architects indicates that 86% of apartments in Stage 3 meet the Code's suggested minimum of 3 hours direct daylight between 9am and 3pm in mid winter. 100% of the units in Building 1 will receive in excess of 3 hours daylight, whilst approximately 76% of the units will receive in excess of 3 hours daylight in Building 2 in midwinter.
BUILDING SEPARATION	**COMMENTS**
Objectives • To ensure that new development is scaled to support the desired area character with appropriate massing and spaces between buildings. • To provide visual and acoustic privacy for existing and new residents. • To control overshadowing of adjacent properties and private or shared open space. • To allow for the provision of open space with appropriate size and proportion for recreational activities for building occupants. • To provide deep soil zones for stormwater management and tree planting, where contextual and side conditions allow. Suggested dimensions within a development, for internal courtyards and between	**Compliance:** Proposal meets objectives The proposed development has been designed to provide appropriate massing and spaces between buildings. Visual privacy has been maximised by providing adequate separation distances between the habitable rooms of the development and the adjacent site and public spaces, particularly through the increased boundary setbacks provided. Living [active] and sleeping [quiet] spaces within floorplates have been arranged in consideration of acoustic privacy. Amendments to the scheme originally submitted to the Minister have resulted in reducing building height on certain frontages, reducing overshadowing impacts and improving opportunities for solar access. Ample private open space has been provided to each apartment within the development, with each apartment having a balcony, which range in size from 14 to 88 square metres in area. Communal open space is designed to be useable and attractive, with

adjoining sites are:
• Up to four storeys/12metres
  ○ 12 metres between habitable rooms/balconies
  ○ 9 metres between habitable/balconies and non-habitable rooms
  ○ 6 metres between non habitable rooms.
	the proposal incorporating both passive and active recreational activities, including at grade and common roof terraces, outdoor play areas and swimming pools.
	
	The **Landscape Plan** prepared achieves the Deep Soil Zone requirements as discussed in the Section on **Deep Soil Zones** within this Table. The landscaping of the proposal has been carefully considered in order to ensure privacy between adjacent properties and private and shared open space.
	
	The distance between the balcony/habitable rooms between Buildings 1 and 2 ranges between 11 metres and 32 metres. Although the separation distance between unit 1.G09 (Ground floor) and unit 2.G09 (Ground floor), Unit 1.106 (level 1) and unit 2.107 (level 1) and unit 1.206 (level 2) and unit 2.208 (level 2) is marginally less than the recommended 12 metres, this distance is measured between the balcony and the nearest habitable room. As these rooms are bedrooms they does not involve a conflict between two highly trafficked areas of the units. This minor variation is therefore considered supportable.
	
	Similar separation distances will be adopted in the Stage 3 buildings.

STREET SETBACKS	**COMMENTS**
Objectives To establish the desired spatial proportions of the street and define the street edge. To create a clear threshold by providing a transition between public and private space. To assist in achieving visual privacy to apartments from the street. To create good quality entry space to lobbies, foyers or individual dwelling entrances. To allow an outlook to and surveillance of the street. To allow for street landscape character.	**Compliance:** Yes Changes between public (road areas) and private land have been clearly defined. Formal entry nodes will denote the respective entries including signage wall elements, landscape lighting, paved thresholds and specimen tree/palm plantings. The proposed development has a frontage to Yamba Road. A minimum setback of 6 metres applies for buildings to Yamba Road. Building 2 has a variable setback between 15 and 15.2 metres from Yamba Road. Buildings in Stage 3 are setback between 9 and 15 metres and staggered. This has ensured the provision of space to allow the incorporation of generous landscaping between the buildings and the street frontage. This also will ensure visual privacy to the apartments from Yamba Road. Landscaping will be provided between the buildings located on the Yamba Road frontage and Yamba Road in order to ensure the privacy of the residents, but will be such that it will allow outlook to and surveillance of the street.
SIDE + REAR SETBACKS	**COMMENTS**
Objectives Side setbacks: To minimise the impact of development on light, air, sun, privacy, views and outlook for neighbouring properties, including future buildings. To retain or create a rhythm or pattern of development that positively defines the streetscape so that space is not just what is left over around the building form.	**Compliance:** Yes The proposed side boundary setbacks have been chosen to relate to the adjoining Moby Dick Motel with the setback being 4 metres. This will allow space for additional landscaping which will thereby ensure the privacy of the existing and future residents. In addition, the height and orientation of the Stage 1 buildings will minimise the impact of development on light, air, sun, privacy, views and outlook for the neighbouring property. The buildings are set back 30 metres from the boundary of the Clarence Estuary Nature Reserve. In terms of rear setbacks, Building 1 (of Stage 1) is setback between 3.6 and 17.8 metres from the boundary with the river front reserve, whilst the remainder of the buildings (in Stage 3) are set back over three metres from the site boundary. The landscape spaces surrounding both the residential and tourist accommodation have been designed to integrate with the built form and contribute positively the overall environment. Consistent landscape layout and use of plant material will ensure a sense of place and rhythm is created throughout the site.
FLOOR SPACE RATIO	**COMMENTS**
Objectives • To ensure that development is in keeping with the optimum capacity of the site and the local area.	**Compliance:** N/A There is no applicable Floor Space Ratio (FSR) under the **Maclean LEP 2001.**

• To allow definable development density for generic building types. • To provide opportunities for modulation and depth of external walls within the allowable FSR. • To promote thin cross-section buildings, which maximise daylight access and natural ventilation. • To allow generous habitable balconies.	The proposed development provides an optimum yield of dwellings for the site in keeping with the objective of the zone to provide *"high density residential accommodation and associated facilities*". Articulation and modulation is provided to both the residential and tourist accommodation blocks. The concept plan envelopes for Stage 3 and beyond provide an 'articulation zone' as illustrated in drawing CP004 to ensure consideration of articulation in subsequent project approval applications. The buildings have been designed to maximise daylight access and cross ventilation. Over 88% of the Stage 1 buildings achieve 3 or more hours of daylight between 9am and 3pm in mid winter. Dual and triple aspect apartments are maximised within the development to encourage cross ventilation, with over 84% of apartments benefiting from dual or triple aspects in Buildings 1 and 2. This development recognises the trend towards "outdoor living spaces" and provides a large balcony/outdoor space to each apartment as well as common outdoor living spaces.

PART 2
SITE DESIGN

SITE ANALYSIS	**COMMENTS**
	A revised Site Analysis and Concept Diagram (Ref. CP 002 and CP 003) is provided, prepared by Woodhead Architects submitted with the application. It is considered that this analysis of the existing situation provides the contextual analysis to determine the appropriate built form on the site. It is considered that the amended proposal appropriately responds to the features of the site, improving the amenity and character of the development; bulk and scale; solar access and privacy.
SITE CONFIGURATION	
DEEP SOIL ZONES	**COMMENTS**
Objectives • To assist with management of the water table. • To assist with the management of water quality. • To improve the amenity of developments through the retention and/or planting of large and medium size trees. **Rule Of Thumb** Minimum of 25% of the open space area of the site should be a deep soil zone. More is desirable	**Compliance:** Yes The development will involve excavation and in order to manage the existing water table, a Dewatering Management Statement has been prepared detailing how the impact can be minimised (see appendix 20). The areas of landscaping will contribute to minimising stormwater run-off and erosion. The provision of a stormwater management system to effectively treat onsite, and minimise stormwater disposal will minimise stormwater run-off. An effort will be made to retain the trees as much as possible on the site however some will be lost due to the proposed building footprints and the dewatering that will occur during construction. Despite this however significant landscaping has been incorporated into the proposal which will include the planting of a variety of tree types. Refer to **Landscape Plan** provided with the application. Deep soil zones have been provided. Overall the Stage 1 contains an area of 1,830m^2 of deep soil zones (31.7% of the Stage 1 site), which allows a suitable amount of deep soil (Refer to Landscape Plan submitted with the application).
FENCES + WALLS	**COMMENTS**
Objectives • To define the edges between public and private land. • To define the boundaries between areas within the development having different functions or owners. • To provide privacy and security.	**Compliance:** Yes Changes between public (road areas) and private land have been clearly defined. Formal entry nodes will denote the respective entries including signage wall elements, landscape lighting, paved thresholds and specimen tree/palm plantings. Path treatments will include concrete and modular unit concrete pavements and timber deck boardwalks. (See **Architectural Plans** and **Landscape Plan**). Private open space is defined by landscape edges, barriers and planting.

• To contribute positively to the public domain.	Street planting is in accordance with the Landscape Plan provided, enhancing the public domain by: • Creating attractively, densely planted streetscapes. • Enhancing and defining entries • Utilising trees species capable of matching height of buildings. • Planting mix, which offers diversity.
LANDSCAPE DESIGN	**COMMENTS**
Objectives • To add value to residents' quality of life within the development in the forms of privacy, outlook and views. • To provide habitat for native indigenous plants and animals. • To improve stormwater quality and reduce quantity. • To improve the microclimate and solar performance within the development. • To improve urban air quality. • To contribute to biodiversity.	**Compliance:** Yes The Landscape Design will help to add value to residents' quality of life by carefully balancing the provision of privacy while maintaining outlook and views through the careful selection of plant species. Indigenous and native species are incorporated into the landscape design and have been carefully selected to help to improve the microclimate and solar performance within the development. Provision will be made for the harvesting of roof water for reuse as the primary water supply for landscape water elements and the low drip irrigation system. Stormwater quality and quantity management will be assisted, with the areas of landscaping contributing to minimising stormwater run-off and erosion. In addition, a stormwater management system to effectively treat onsite, and minimise stormwater disposal has been incorporated into the design of the proposal. Deciduous trees are also used for improve solar access.
OPEN SPACE	**COMMENTS**
Objectives • To provide residents with passive and active recreational opportunities. • To provide an area on site that enables soft landscaping and deep soil planting. • To ensure that communal open space is consolidated, configured and designed to be useable and attractive. • To provide a pleasant outlook. **Rule Of Thumb** ▪ The area of communal open space required should generally be at least between 25 and 30 percent of the site area. Larger sites and brownfield sites may have potential for more than 30 percent. ▪ Where developments are unable to achieve the recommended communal open space, such as those in dense urban areas, they must demonstrate that residential amenity is provided in the form of increased private open space and/or in a contribution to public open space. ▪ The minimum recommended area of private open space for each apartment at ground level or similar space on a structure, such as on a podium or car park, is 25m²: the minimum preferred dimension in one direction is 4 metres. (See Balconies for other private open space requirements).	**Compliance:** Yes The proposed development provides residents and patrons with substantial opportunities for active and passive recreation in the proposed development. In addition, the development will result in access to the waterfront being provided to the public. It is currently landlocked and only available to the patrons of the current tourist facility. Soft landscaping and deep soil zones are incorporated throughout the site (see Landscape Plan at appendix 3). Communal open space is a major feature of the development, designed to be useable and attractive, with the proposal incorporating both passive and active recreational activities, including outdoor play areas and swimming pools. The **Landscape Plan** submitted with the application demonstrates compliance with this objective and that the open space is useable and attractive. Communal Open Space areas within the development consists of the Pool and landscape area, 2580 m^2 of a total land area of 5750 m^2 in Stage 1. This accounts for over 44% of the site area of Stage 1 (i.e. Development Lot 2). Nearly 48% communal open space is being provided in Stage 1 and 3 combined. This is over and above the minimum requirement of 25% - 30%. In addition • The proposal includes providing public access to the currently landlocked waterfront reserve which will increase the amount of communal open space provided as a result of the development. • The proposal exceeds the size requirement for balconies in all apartments. In this regard, useable and ample private open space is available to residents, complemented by the active and passive communal recreational opportunities. • The proposal provides adequate and useable open space, with a range of active and passive recreational facilities available, including pools, open play and lawn areas.
ORIENTATION	**COMMENTS**

Objectives • To optimise solar access to residential apartments within the development and adjacent development. • To contribute positively to desired streetscape character. • To support landscape design of consolidated open space areas. • To protect the amenity of existing development. • To improve the thermal efficiency of new buildings.	**Compliance:** Yes The Residential Flat Design Code requires that living rooms and private open spaces for at least 70% of apartments in a development receive a minimum of three hours direct sunlight between 9am and 3pm in mid winter. Shadowing Diagrams produced by Woodhead Architects indicates that over 86% of apartments in Stage 1 would receive a minimum of three hours direct sunlight between 9am and 3pm in mid winter. It is likely that over 86% of units in Stage 3 would meet this requirement. Buildings around the perimeter of the site are orientated to relate to the streetscape character of Yamba Road (without creating a wall of building effect and as such contribute positively to the desired streetscape character. The landscaped areas are of substantial size and high utility whilst maintaining quiet and intimate spaces as well. Larger setbacks are provided to buildings facing the southern and eastern boundary, preserving the amenity of adjoining development and the Clarence River. Solar access received by residential apartments maximises thermal efficiency through careful siting and fenestration.
Position and orientate buildings to maximise north facing walls (within 30 degrees east and 20 degrees west of north) where possible.	North facing living areas are maximised within the development, whilst the location of living spaces and the design of the buildings improves solar access.
PLANTING ON STRUCTURES	**COMMENTS**
Objectives • To contribute to the quality and amenity of communal open space on roof tops, podiums and internal courtyards. • To encourage the establishment and healthy growth of trees in urban areas.	**Compliance:** Yes The proposed communal open space includes adequate and useable open space, with a range of active and passive recreational facilities available, including pools, open play and lawn areas (further details are provided in the Landscape Plan at appendix 3). The Landscape Plan includes the provision of a mix of trees suitable to the area. In addition, a number of high priority trees will be retained as part of the proposal.
STORMWATER MANAGEMENT	**COMMENTS**
Objectives • To minimise the impact of residential flat development and associated infrastructure on the health and amenity of natural waterways. • To preserve existing soil and natural features, including watercourses and wetlands. • To minimise the discharge of sediment and other pollutants to the urban stormwater drainage system during construction activity.	There are no natural waterways existing on the site. Stormwater quality and quantity management will be assisted, with the areas of landscaping contributing to minimising stormwater run-off and erosion. In addition, a stormwater management system to effectively treat onsite, and minimise stormwater disposal has been incorporated into the design of the proposal. Refer to the **Sustainable Water Management** report prepared at **Appendix 18** to this statement

SITE AMENITY

SAFETY	**COMMENTS**
Objectives • To ensure residential flat developments are safe and secure for residents and visitors. • To contribute to the safety of the public domain.	**Compliance:** Yes Buildings have been designed and orientated to maximise visual privacy between buildings on adjacent sites while enabling the passive surveillance of spaces within and surrounding the site. In addition, casual overlooking and surveillance is afforded by the balcony design. Simple and clear circulation is provided in a safe environment, which will be further enhanced by the provision of way finding systems. Adequate lighting will be provided throughout the site as part of the landscape plan, which will help to maintain safety on the site. The entrances to Building 1 and 2 will have secure access and perimeter surveillance of access. The entrances to the residential dwellings and the car parks will be well lit for safety and surveillance. Security devices will be installed to the pedestrian entrances to the dwellings and car parks entry, to control access to private spaces.

VISUAL PRIVACY	COMMENTS
Objectives • To provide reasonable levels of visual privacy externally and internally, during the day and at night. • To maximise outlook and views from principal rooms and private open space without compromising visual privacy.	**Compliance:** Yes The amended proposal has been specifically designed to improve privacy within the development whilst maximising outlook from private open spaces. Measures to ensure privacy include careful landscaping, adequate separation distances between habitable rooms between buildings and the provision of louvres. Certain design features have been incorporated to ensure that the privacy of the residents located across Yamba Road and the Moby Dick Motel is not compromised. This includes: • Windows on the eastern boundary of the development have louvres to ensure views both into the residential units and the Moby Dick Motel are protected. • The proposed landscaping along the eastern boundary will provide additional screening between the proposed buildings and the motel. • Residents across Yamba Road will be provided with adequate privacy due to increased setback lines and dense landscaping within the building line • Appropriate building location and design and landscaping to ensure privacy of residents and the public in the northern sector involving the foreshore area.
SITE ACCESS	
BUILDING ENTRY	**COMMENTS**
Objectives • To create entrances which provide a desirable residential identity for the development. • To orient the visitor. • To contribute positively to the streetscape and building facade design.	**Compliance:** Yes The entrances to the proposed buildings have been designed to create a desirable residential identity for the development. This has been achieved through the careful use of materials and landscaping. Formal entry nodes will denote the respective entries into the site including signage wall elements, landscape lighting, paved thresholds and specimen tree/palm plantings. In addition, pavement materials, colours and way finding systems will help to orient visitors. The proposed materials are 'reflective of space' and as such contribute positively to the streetscape and building façade design. This is further reinforced through building articulation and fenestration.
PARKING	**COMMENTS**
Objectives • To minimise car dependency for commuting and recreational transport use and to promote alternative means of transport- public transport, bicycling, and walking. • To provide adequate car parking for the building's users and visitors, depending on building type and proximity to public transport. • To integrate the location and design of car parking with the design of the site and the building.	**Compliance:** Yes A Green Travel Plan has been devised in order to help to increase the use of sustainable modes of transport by visitors and staff using the site (Appendix x of the Traffic Report) At total of 638 car parking spaces are proposed for the residential and tourist accommodation. Parking will provided at basement level for residents and those utilising the tourist accommodation, while visitor parking will be provided at grade level. Further details concerning provision of parking have been provided in the Traffic and Parking Assessment report at **Appendix 14** to this statement. Basement parking has been used to minimise visual impact, with some extension of parking above natural ground to ensure natural ventilation can occur.
PEDESTRIAN ACCESS	**COMMENTS**
Objectives • To promote residential flat development which is well connected to the street and	**Compliance**: Yes

contributes to the accessibility of the public domain. • To ensure that residents, including users of strollers and wheelchairs and people with bicycles, are able to reach and enter their apartment and use communal areas via minimum grade ramps, paths, access ways or lifts. **Rule Of Thumb** ▪ Identify the access requirements from the street or car parking area to the apartment entrance. ▪ Follow the accessibility standard set out in Australian Standard (AS 1418 (Parts 1 & 2) as a minimum. ▪ Provide barrier free access to at least 20% of dwellings in the development.	Accessibility to the site has been optimised. Two vehicular entrance points are proposed. This decreases the amount of traffic using the entrance/exit and thereby increases safety. The number of both pedestrian and cycle pathways have been increased, connecting the site to Yamba Road and the Clarence River nature reserve allowing public access through the site using formal paths and shared road access connecting Yamba Road to the river foreshore. A continuous formal path and nodal point network will be established along the foreshore. At grade pathways and ramps will provide access to the recreational areas and a continuous path of travel along the south side of Buildings 1 and 2 will be provided through at grade pathways and ramps. Accommodation will be accessible from ground floor level and the basement car park level by the use of stairs or lifts. Five adaptable units (9% of the total apartments in Stage 1) have been provided comprising one 2 bed unit and three 1 bed units on the ground floor and one 1 bed unit on the first floor level of Building 2. Although, the provision of accessible units is below the 20% requirement, the size and layouts of the proposed apartments are such that conversion would be possible to make the apartments more accessible. Additional details are provided in the Access Report prepared by Woodhead architects (Appendix 27).
VEHICLE ACCESS	**COMMENTS**
Objectives • To integrate adequate car parking and services access without compromising street character, landscape or pedestrian amenity and safety. • To encourage the active use of street frontages. **Rule Of Thumb** ▪ Generally limit the width of driveways to a maximum of 6 metres ▪ Locate vehicle entries away from main pedestrian entries and other secondary frontages.	**Compliance:** Partial Compliance Details concerning vehicular access have been provided in the revised Traffic and Parking Assessment report at **Appendix 14** to this statement. Provision of car parking and access has been integrated as part of the overall design of the proposed development and is located at basement and ground level. Vehicular access to the development is via two (2) separate driveways, with all driveways being less than the maximum six (6) metre width. It is proposed that one driveway be used for the residential accommodation and the other to access the tourist accommodation. These access points are located on Yamba Road. The vehicular entrances will be shared with pedestrians. The internal pedestrian network will however be separate to the road network thereby maintaining pedestrian safety.

PART 3 – BUILDING DESIGN

BUILDING CONFIGURATION	
APARTMENT LAYOUT	**COMMENTS**
Objectives • To ensure the spatial arrangement of apartments is functional and well organised. • To ensure that apartment layouts provide high standards of residential amenity. • To maximise the environmental performance of apartments. • To accommodate a variety of household activities and occupants' needs. **Rule Of Thumb** ▪ Single-aspect apartments should be limited in depth to 8 metres from a window. ▪ The back of a kitchen should be no more than 8 metres from a window. ▪ The width of cross-over or cross-through apartments over 15 metres deep should be 4 metres or greater to avoid deep narrow apartment layouts. ▪ Buildings not meeting the minimum standards listed above must demonstrate how	**Compliance:** Yes Apartments are highly functional with unusable circulation space minimised. The dimensions and orientation of the apartments have been planned to maximise solar access and ventilation, providing a high standard of residential amenity. Apartments are generously sized and dimensioned to provide a flexible layout and allow for a range of activities and uses, additional household functions, such as homes offices. The proposed development has therefore been designed to accommodate a variety of household activities and occupants needs. Over 84% of units in Building 1 and 2 (Stage 1) have either dual or triple aspect, although a number of single aspect apartments do not strictly meet the recommended depth of 8 metres from a window. Habitable rooms are concentrated on the north eastern side of the site in order to maximise solar gain and views. Five units are adaptable in the Stage 1 development and consist of 1 two bed in building 2 at ground level, three one bed units at ground level and one 1 bed on the first floor in Building 2.

satisfactory daylighting and natural ventilation can be achieve, particularly in relation to habitable rooms (see Daylight Access and Natural Ventilation). ▪ If Council chooses to standardise apartment sizes, a range of sizes that do not exclude affordable housing should be used. As a guide, the Affordable Housing Service suggest the following minimum apartment sizes which can contribute to housing affordability: (apartment assize is only on e factor influencing affordability) 1 Bedroom apartment 50m² 2 Bedroom apartment 70m² 3 Bedroom apartment 95m²	A number of single aspect apartments do not strictly meet the recommended depth of 8 metres from a window, with Units in Building 1 and 2 varying in depths from between 8.8 metres and 10.4 metres. Despite this, over 80% of the units in Buildings 1 and 2 will receive over 3 hours sunlight between 9am and 3pm in mid winter. As indicated above over, 84% of units within the development have access to natural ventilation. All apartments with a depth of fifteen (15) metres or greater, have a width greater than four (4) metres to avoid deep narrow apartment layouts. The size of one bedroom units within the Stage 1 development are 68m^2. The size of two bedroom units within the development vary between 118m^2 and 182m^2 The size of the three bedroom units within the development vary between 135m^2 and 202m^2 Details for the internal layouts of the Stage 3 buildings are not available; however, the principles adopted in the Stage 1 development will be adopted in these buildings.
APARTMENT MIX	**COMMENTS**
Objectives • To provide a diversity of apartment types, which cater for different household requirements now and in the future. • To maintain equitable access to new housing by cultural and socio-economic groups.	**Compliance:** Yes A suitable mix of units in the Stage 1 residential buildings is provided with 4 one beds; 35 two beds; 11 three beds and 5 penthouse suites, thereby providing a good mix to residents. This includes the provision of two bed maisonettes and three bed penthouse apartments. Stage 3 will provide 24 one bed units, 99 two bed units, 20 three bed units and 26 penthouse apartments. The use of one-bed and two-bed apartments recognises the needs of more active, mobile inhabitants. Their focus internally is on an active social life with larger living-entertaining spaces that connect from inside to outside. Entries are of a more communal atmosphere with a village like nature representative of an urban, transient occupant. There is no reason why housing for different cultural and socio-economic groups should not be achievable in this development.
BALCONIES	**COMMENTS**
Objectives • To provide all apartments with private open space. • To ensure balconies are functional and responsive to the environment thereby promoting the enjoyment of outdoor living for apartment residents. • To ensure that balconies are integrated into the overall architectural form and detail of residential flat buildings. • To contribute to the safety and liveliness of the street by allowing for casual overlooking and address. **Rule Of Thumb** Minimum depth of private balconies 2 metres	**Compliance:** Yes All apartment balconies have been designed to provide sufficient private open space. All units have a minimum depth of at least 2 metres to ensure enjoyment, functionality and usability. Balconies generally provide for generous entertaining areas. Balconies are an integral part of the design of both unit design and facade design. Casual overlooking and surveillance of public or communal space is afforded by the balcony design.
CEILING HEIGHTS	**COMMENTS**
Objectives • To increase the sense of space in apartments and provide well proportioned rooms. • To promote the penetration of daylight into the depths of the apartment. • To contribute to flexibility of use.	**Compliance:** Yes Proposed ceiling heights are 2.7 metres above finished floor levels, and have been lowered to 2.4 metres in bathrooms and where required for Mechanical Services to kitchens and hallway spaces. Triple and dual aspect apartments and northern exposure is maximised as much as possible within the development. In addition, the proposal complies with the Residential Flat Design Codes solar access requirements.

• To achieve quality interior spaces while considering the external building form requirements. **Rule Of Thumb** Minimum 2.7m for all habitable rooms. In Mixed Use buildings: 3.3m minimum for ground floor retail or commercial and for first floor retail, residential or commercial.	The units are generously sized and dimensioned to provide a flexible layout and allow for a range of activities and uses, additional household functions, such as home offices. Quality unit layouts have been accommodated whilst also ensuring a good quality external building form is maintained.
FLEXIBILITY	**COMMENTS**
Objectives • To encourage housing designs which meet the broadest range of the occupants' needs possible. • To promote 'long life loose fit' buildings, which can accommodate whole or partial changes of use. • To encourage adaptive re-use. • To save the embodied energy expended in building demolition.	**Compliance:** Generally Consistent Apartments have been designed having regard to their intended occupants. Apartments are spacious and contain a mix of traditional one, two and three bed apartments and penthouse suites in the residential component and two and three bed apartments and penthouse suites in the tourist accommodation. The dwellings are generously sized and dimensioned to provide a flexible layout and allow for a range of activities and uses, additional household functions, such as home offices. Given the quality and scale of redevelopment this will require the removal of all buildings on site. However, many of the structures on the site are non-permanent.
GROUND FLOOR APARTMENTS	**COMMENTS**
Objectives • To contribute to the desired streetscape of an area and to create active safe streets. • To increase the housing and lifestyle choices available in apartment buildings. **Rule Of Thumb** ▪ Optimise the number of ground floor apartments with separate entry and corridor requiring an appropriate percentage of accessible units. This relates to the desired streetscape and topography of the site. ▪ Provide ground floor apartments with access to private open space preferably as a terrace or a garden.	**Compliance**: Yes Buildings have been designed to respond to the Yamba and site streetscape, whilst maintaining safety and security needs of residents. Planting proposed on the ground floor will promote an attractive development, whilst being of a height to ensure active streets with easy surveillance. The provision of ground floor apartments with level access and provision of ground level private open space will increase the housing choice of residents, in particular older citizens and those with children. The provision of two (2) separate apartment blocks within the Stage 1 development maximizes the provision of ground floor apartments to meet the housing and lifestyle choices within the development.
INTERNAL CIRCULATION	**COMMENTS**
Objectives • To create safe and pleasant spaces for the circulation of people and their personal possessions. • To facilitate quality apartment layouts, such as dual aspect apartments. • To contribute positively to the form and articulation of the building facade and its relationship to the urban environment. • To encourage interaction and recognition between residents to contribute to a sense of community and improve perceptions of safety.	**Compliance:** Yes Simple and clear circulation is provided in a safe environment. This will be further enhanced by the provision of way finding systems. Units and blocks will have secure access and perimeter surveillance of access to unit blocks is achieved. Passive surveillance will occur as a result of the fenestration of the buildings and the provision of communal open space. Triple and dual aspect apartments have been provided wherever possible. Less than 16% of apartments have a single aspect. A high quality design is provided (Refer to **Architectural Design Statement**, prepared by Woodhead Architects at Appendix 15). Buildings have been designed in a way to encourage interaction between residents, which is promoted by internal pathways,

Rule Of Thumb In general where units are arranged off a double-loaded corridor, the number of units accessible from a single core corridor should be limited to eight. Exceptions may be allowed for adaptive re-use. ▪ where developments can demonstrate the achievement of the desired streetscape character and entry response. ▪ where developments can demonstrate a high level of amenity for common lobbies , corridors and units (cross over, dual aspect apartments).	and the provision of retail and commercial and recreational facilities as a focal point, providing services and a meeting point for residents to utilise.
MIXED USE	**COMMENTS**
Objectives • To support the integration of appropriate retail and commercial uses with housing. • To create more active lively streets and urban areas, which encourage pedestrian movement, service the needs of the residents and increase the area's employment base. • To ensure that the design of mixed use developments maintains residential amenities and preserves compatibility between uses**.**	**Compliance:** Yes No retail or commercial facilities are proposed in Stage 1 or Stage 3. The pathways, recreational are communal open space areas will encourage social interaction on the site.
STORAGE	**COMMENTS**
Objectives • To provide adequate storage for everyday household items within easy access of the apartment. • To provide storage for sporting, leisure, fitness and hobby equipment. **Rule Of Thumb** In addition to kitchen cupboards and bedroom wardrobes, provide associated storage facilities at the following rates: ▪ Studio apartments 6m³ ▪ One bedroom apartments 5m³ ▪ Two bedroom apartments 6m³ ▪ Three plus bedroom apartments 8m³	**Compliance:** Yes The units within the development are generally larger than the minimum size specified in the Code, and are therefore able to provide sufficient storage areas within the unit. The majority of storage is located in the basement area with smaller areas adjacent to the unit entries. 60 separate stores are being provided in the basement with a total floor area of 310m^2 at 2 metres high. Storage in Stage 1 comprises the following: 4x1 bed @ 6m^2 = 24m^3 33x2 bed @ 8m^3 = 264m^3 18x3 bed @10m^3 = 180m^3
BUILDING AMENITY	
ACOUSTIC PRIVACY	**COMMENTS**
Objectives • To ensure a high level of amenity by protecting the privacy of residents within residential flat buildings both within the apartments and in private open spaces.	**Compliance:** Yes Building separations, the organisation of living space, locations and adjacencies of landscaped open space have been designed to ensure privacy both visual and acoustic. Living [active] and sleeping [quiet] spaces within floorplates have been arranged in consideration of acoustic privacy. A Noise Assessment has been prepared by Norman Disney Young which further details the acoustic privacy provided to residents and is attached at appendix 23.
DAYLIGHT ACCESS	**COMMENTS**
Objectives • To ensure that daylight access is provided to all habitable rooms and encouraged in all other areas of residential flat development.	**Compliance:** Yes Buildings have been designed and orientated to ensure that adequate daylight access is provided to habitable rooms within dwellings. The amended proposal has resulted in rearranging building heights, reducing overshadowing impacts and improving opportunities for solar access.

• To provide adequate ambient lighting and minimise the need for artificial lighting within daylight hours. • To provide residents with the ability to adjust the quantity of daylight to suit their needs. **Rule Of Thumb** • Living rooms and private open spaces for at least 70 percent of apartments in a development should receive a minimum of three hours direct sunlight between 9 am and 3 pm in mid winter. In dense urban areas a minimum of two hours may be acceptable. • Limit the number of single-aspect apartments with a southerly aspect (SW-SE) to a maximum of 10 percent of the total units proposed. Developments which seek to vary from the minimum standards must demonstrate how site constraints and orientation prohibit the achievement of these standards and how energy efficiency is addressed (see Orientation and Energy Efficiency).	The layout, orientation and design of dwellings ensures that the majority of the dwellings (more than 80%) will receive in excess of 3 hours of direct sunlight to internal living areas and balconies between 9am and 3pm midwinter in all buildings in the 3 development stages. There are no single aspect dwellings that have a southerly aspect in the Stage 1 development, nor will there be in Stages 3.
NATURAL VENTILATION	**COMMENTS**
Objectives • To ensure that apartments are designed to provide all habitable rooms with direct access to fresh air and to assist in promoting thermal comfort for occupants. • To provide natural ventilation in non-habitable rooms, where possible. • To reduce energy consumption by minimising the use of mechanical ventilation, particularly air conditioning. **Rules Of Thumb** • Building depths which support natural ventilation typically range from 8 to 15 metres. • Sixty percent (60%) of residential units should be naturally cross-ventilated. • Twenty five percent (25%) of kitchens within a development should have access to natural ventilation. • Developments which seek to vary from the minimum standards must demonstrate how natural ventilation can be satisfactorily achieved, particularly in relation to habitable rooms.	**Compliance:** Yes This proposed unit designs meet these objectives, with natural ventilation provided throughout the development where possible. All units have a depth of between 8.8 to 25.6m, with the development exceeding the requirement for natural ventilation and ventilation of kitchen (see below) 84% of units are cross-ventilated in the Stage 1 buildings. 94.5% (52) of kitchens within the Stage 1 development have access to natural ventilation.
BUILDING FORM	
FACADES	**COMMENTS**
Objectives • To promote high architectural quality in residential flat buildings. • To ensure that new developments have facades which define and enhance the public domain and desired street character. • To ensure that building elements are integrated into the overall building form and facade design.	**Compliance:** Yes Architectural design quality is of the highest order. The original proposal has been amended to improve the bulk and scale, solar access, privacy and internal circulation of the apartments. Refer to the amended **Architectural Design Statement** within the body of the **Environmental Assessment**. All elements have been integrated into an overall design. Refer to **Architectural Design Statement**
ROOF DESIGN	**COMMENTS**

Objectives • To provide quality roof designs which contribute to the overall design and performance of residential flat buildings. • To integrate the design of the roof into the overall façade, building composition and desired contextual response. • To increase the longevity of the building through weather protection.	**Compliance**: Yes Roof set-outs and 'silhouette' design is informed largely by existing roof types in and around Yamba, with an emphasis on larger roof overhangs, lightweight materials and 'coastal' roof forms. All materials will be consistent with the natural palette of the site. Reflective or bright materials will not be used. Good weather protection will be achieved, together with materials with high longevity.
BUILDING PERFORMANCE	
ENERGY EFFICIENCY	**COMMENTS**
Objectives • To reduce the necessity for mechanical heating and cooling. • To reduce reliance on fossil fuels. • To minimise greenhouse gas emissions. • To support and promote renewable energy initiatives.	**Compliance**: Yes The development effectively incorporates passive solar design elements to minimise energy use. The design and layout of apartments maximises north facing living areas. The development will incorporate energy efficient appliances and hot water systems to minimise water consumption and maximise energy efficiency. The use of solar panels has been explored and if feasible may be incorporated into Stage 3.
MAINTENANCE	
Objectives • To ensure long life and ease of maintenance for the development.	**Compliance**: Yes Durable materials will be incorporated, minimising opportunities for graffiti. Appropriate landscape species, including indigenous species have been chosen to minimise maintenance. The development will incorporate managed irrigation regimes.
WASTE MANAGEMENT	
Objectives ▪ To avoid the generation of waste through design, material selection and building practices ▪ To plan for the types, amount and disposal of waste to be generated during demolition, excavation and construction of development. ▪ To encourage waste minimisation, including source separation, re-use and recycling. ▪ To ensure effective storage and collection of waste and quality design of facilities. **Rule Of Thumb** ▪ Supply water management plans as part of the development application submission as per the NSW Waterboard	**Compliance**: Yes A **Waste Management Plan** has been prepared and seeks to control the management of wastes and reusable/recyclable resources throughout the demolition, construction and operational stages of this development. In addition, it will ensure effective storage and collection of waste throughout the construction and operation of the development, with wastes being collected by a private contractor. A garbage shoot has been provided at each core at each level of Building 1 and 2, while on ground level a common garbage storage area has been provided near the road entry. Facilities for recycling will be provided in the garbage rooms located in the basement of each building (see Basement Car Park Plan, Ref. CP 102 and Ground Floor Plan, Drawing Ref. CP 103, prepared by Woodhead Architects).
WATER CONSERVATION	
Objectives ▪ To reduce main consumption of potential water. ▪ To reduce the quantity of urban stormwater runoff.	**Compliance**: Yes As stated, the areas of landscaping contribute to minimise stormwater run-off and erosion. Use of indigenous plant material suitable for the local climate and managed irrigation regimes will also limit the demand on water consumption. The development will incorporate energy efficient appliances and hot water systems to minimise water consumption and maximise energy efficiency. The inclusion of an integrated stormwater system to effectively treat onsite, and minimise stormwater disposal.