

Apartment Design Guide Detailed Assessment

(updated 29 August 2017)

Extract from ADG on how to use the document and apply the objectives:

“...a development needs to demonstrate how it meets the objective and design criteria. The design criteria set a clear measurable benchmark for how the objective can be practically achieved. If it is not possible to satisfy the design criteria, applications must demonstrate what other design responses are used to achieve the objective and the design guidance can be used to assist in this.”

The following table summarises the relevant controls.

Objective	Design Criteria	Compliance Assessment	CPSD Conclusion
Part 3 – Siting			
3A-1 - Detail	Plans address all aspects of Site Analysis	Detailed architectural plans have been provided.	Meets Design Criteria
3B-1 – Building types and layouts	Define street frontage, orientate to sun	Buildings have been sited to front onto the north facing street and have provided public domain access to this frontage to achieve maximum solar access and use of site. The Buildings to the west of the site are provided on the boundary to provide a street presence applicable to the site area and topography.	Meets Design Criteria
3B-2- Overshadowing to neighbour minimised	Neighbouring sites should maintain adequate from solar access	The buildings are set off from the neighbouring sites to not impact the solar access.	Meets Design Criteria
3C-1 – private and public domain interface 3C-2 – Amenity of public	Development should transition and blend in with the street and public domain areas, provide surveillance opportunities etc	The proposal provides a unique opportunity to incorporate a significant bulk of the ground level of the development as community uses. The scheme therefore extends the public interface of the ground level uses into the surrounding streets which will link to the commercial uses beyond.	Meets Design Criteria

domain enhanced		All ground level aspects to the road frontages are activated with retail and commercial uses.	
3D-1 - Communal and public open space	25% of the site communal open space 50% of the area achieving a minimum of 50% direct sunlight for 2 hours midwinter	The control aims at creating a consolidated open landscaped space within the site for a typical residential flat building. Alternate options are provided for sites within business / commercial zones. 25% of the site area = 3,038m² Development achieves = 1,462m² The proposed use, zoning and location does not necessitate large areas of communal private open space given the significant community uses, ground level activation and commercial / retail uses of the site which are commensurate with the site's location and the zoning. Removing the ground level hardscape, retail and community areas to achieve this control would be a loss for the development. The development provides for communal open space on terraced locations and within large private open decks. Additional indoor recreation is proposed at 967m². The open space areas for residents on the podiums are generally south facing and do not meet solar access requirements. Balconies of units and ground level plazas are north facing and receive significant access to sunlight.	- Does not meet Design Criteria - Meets objectives - Acceptable Shadow diagrams provided by the applicant identify areas that receive sunlight at mid-winter. Whilst some of the communal open space areas can not achieve direct sunlight access, each resident has access to private balconies, secondary spaces or the ground level public domain for sun access. Whilst midwinter sunlight to all communal areas would be desirable, in this development and context, it is considered that the communal open space areas for residents are well designed, usable and accessible. It is further noted that the size of units and private open space areas are in excess of requirements. Additionally, it is considered that the location of the site – being in close proximity to the commercial centre, the C2C walking trail, beaches and open areas of the public domain created within the development – would create a range of options and opportunities for open space in differing weather types.
3D-2 – Communal open space	Communal open space provides adequate facilities	Significant facilities are provided in the public domain area of the development.	Meets Design Criteria

3D-3 – communal space is safe	Communal Open space well-lit and overlooked	A Crime Prevention Through Environmental Design report was prepared. The proposal was reviewed by the Local Police. The scheme is acceptable.	Meets Design Criteria
3D-4 - Public open space	Well connected	Significant design has been undertaken to ensure the public open space areas are well designed and integrated into the surrounding areas.	Meets Design Criteria
3E-1 - Deep soil zones	7% of site area for DSZ Acknowledging the site's location in Forster Town Centre and the significant ground level coverage of non-residential uses, it is not practicable to require such a high DSZ.	The proposal provides deep soil areas of 5% of the site area. With non-residential uses at ground level, basement parking, significant public domain works, the proposal provides suitable DSZ planting in the context.	Meets Design Criteria Significant trees within the site will be retained, including the small stand of rainforest trees along the southern boundary. Significant areas of hardstand are considered appropriate and functional for the community plazas. Appropriate stormwater management measures are proposed.
3F-1 - Visual privacy	Adequate separation distances shared equitably between neighbouring sites. For habitable rooms and balconies, 6m for 4 storeys, 9m for 5-8 storeys and 12m for 9+ storeys. For non-habitable rooms, 3m for 4 storeys, 4.5m for 5-8 storeys and 6m for 9+ storeys. Separation distances for buildings on the same site should combine required building separations depending on the type of room.	The four towers maintain a strict separation distance of at least 3m from each other. Building A – B – 4.2m Building B – C – 3.7m Building C – D – 4.28m Original plans identified the setbacks being inconsistent, providing interlooking issues with living rooms and bedrooms facing onto each other. In reviewing Attachment 1 from TVS Architects (reviewing level 6 as a basis for other levels), the building separation distances in relation to the following units and serviced apartments were of particular concern: - A.601 - B.607: Living rooms interlook (6.5m separation where 18m is required) - B.601 - C.605: Interlooking living to bedroom and bedroom to bedroom - D.618 - C.603: interlooking and acoustic privacy	- Does not meet Design Criteria - Meets objectives - Acceptable Additional information provided by TVS Architects demonstrated that the orientation of the units in relation to one-another has been designed to take advantage of the location and avoid potential overlooking and interlooking. In addition, where setback distances are not met, visual privacy is further achieved by offsetting windows with appropriate design screening, full height blank walls, full height vertical screens on the balconies and additional screening or frosting of some windows. In relation to the most seriously conflicting units, it is noted that TVS Architects has not shown the internal layout of these units on the floor plan, as requested. CPSD is satisfied that TVS Architects has adequately addressed the aims of this control with regard to amenity for most of the non-compliant units and that the proposed solutions are now acceptable.

		- D.601 - C.602: interlooking and acoustic privacy Amendments to the scheme resulted in re-orientation of unit windows and flank walls to ensure the setbacks are complied with. Based on the amended drawings, the setbacks are now considered to comply.	
3F-2 – privacy whilst maintaining views and light		Privacy solutions include a detailed orientation of the units and balconies in relation to one another and do not interfere with the other's privacy, light or views.	Meets Design Criteria
3G-1, 3G-2 – Building entries	Connect to public domain Easy to identify Accessible	All building entries are adequately located. Residential apartments lobby are between retail units to blend in within the street, but are set back to not promote security issues or street dominance.	Meets Design Criteria
3G-3 – Pedestrian links to streets		The proposal provides active and suitable ground level interfaces and public domain areas. The development links to neighbouring areas and commercial centres, and links logically to the adjoining bus stop and C2C path link.	Meets Design Criteria
3H-1 – Vehicle access	Designed and located to achieve safety, minimise conflicts, high quality streetscapes	Access points are located logically, minimise pedestrian conflict and provide adequate access. Internal conflict issues are apparent. Council's engineers are satisfied that the design is suitable. The scheme requires some internal traffic management devices.	- Does not meet Design Criteria - Meets objectives - Acceptable
3J – 1, 3J -2, 3J-3, 3J-4 - parking	Provide minimal convenient, secure and hidden parking, provide off street parking	Adequate off street parking is provided with calculation for mixed uses.	Meets Design Criteria
Part 4 –Building			

4A - Solar and daylight access	Living and private open spaces of at least 70% of apartments are to receive a minimum of 3 hours direct sunlight between 9am and 3pm midwinter. A maximum of 15% of apartments receive no direct sunlight between 9am and 3pm midwinter.	The SEE states that 70-71% of the proposed units (seniors and penthouse) receive the required 3 hours of sunlight in mid-winter. Additional information was requested of the architect to detail solar access calculations as many of the units within Buildings A, B and C are orientated to the southern side of the site and with the tower B blocking the northern aspect to tower C, there appeared to result in many of the units not being able to meet the minimum solar and daylight access requirements. Additional information provided indicated that 72% of the units comply.	Meets design criteria Marked up plans and tables provided by TVS Architects indicate that 72% of the units achieve solar access requirements under the ADG and only 9% do not achieve direct sunlight in mid-winter.
4B - Natural ventilation	At least 60% of units are to be naturally cross ventilated in the first 9 storeys of a building. For buildings at 10 storeys or greater, the building is only deemed to be cross ventilated if the balconies cannot be fully enclosed. Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line.	The SEE states that 93% of units achieve ventilation compliance. However, the standard layout of the 'typical unit' do not confirm to this conclusion, based on many of the units having a single aspect (77 of 143) or a smaller second aspect being a bedroom. Ventilation for many of the units appears to rely on the units receiving cross ventilation through 'breezeway entrances' through the main unit entry door, through open fire escape doors and access corridors. TVS Architects advised that the use of the breezeway is achieved through secure louvre screens and fire doors on magnetic latches. For reasons of acoustic and odour amenity and also for practical reasons, the use of breezeway entrances was considered unacceptable as achieving adequate ventilation for all units relied on a shared area that would be out of the control of an individual occupier, and should a resident seek to achieve privacy, it would be at the sacrifice of ventilation. TVS Architects provided a final set of amended plans on 28 August 2017. The revised design	- Meets Design Criteria with alternate options - Meets objectives - Acceptable

		amended many of the unit's designs to achieve this control. CPSP's detailed assessment of these units confirms that: - 61 of the 139 units (44%) would strictly comply with achieving cross ventilation. - The 4 penthouse units are on level 9 and are deemed to comply. - 24 of the 139 units would now comply with alternate solutions which are justifiable options given the limited orientations and lack of corner locations. It is additionally noted that the inclusion of roof vents into the top level of the single aspect apartments in Building A should be considered an acceptable solution and adds the 7 additional units required to meet the 60%. The final amendments result in 61% of the units meeting the cross-ventilation requirements. Whilst a number of these offer some alternate options, importantly, these would all be in the independent control of the resident and would not rely on external impacts or management.	
4C - Ceiling heights	For habitable rooms – 2.7m. For non-habitable rooms – 2.4m. If located in a mixed use areas – 3.3m for ground and first floor to promote future flexible use.	Proposed ceiling heights range between 2.9-3m. No units are proposed on the ground or first floors.	Meets Design Criteria
4D - Apartment size and layout	Apartments are required to have the following internal size: - 1 bedroom – 50m² - 2 bedroom – 70m² - 3 bedroom – 90m² The minimum internal areas include only one bathroom. Additional bathrooms	The units have the following internal areas: - 1 bed/2 bath: 77m² - 2 bed/1 bath: 107m² - 2 bed/2 bath: 107-112m² - 3 bed/2 bath: 123-131m²	Meets Design Criteria

	increase the minimum internal areas by 5m ² each.		
	Every habitable room must have an external window with a minimum glass area of not less than 10% of the floor area of the room	Additional information provided by TVS Architects confirmed that all units exceed the 10% window glass to floor area ratio requirement.	Meets Design Criteria
	Where the kitchen, living and dining are combined in an open plan layout, the maximum habitable room depth is 8m from a window	Approximate maximum habitable room depths for the 'typical units' are as follows: - Units 1A.1, 3A.1, 3A.2, 3B.1, 3C.1: 9m - Units 2A.1, 2A.2: 10m - Unit 3B.2: 11m - Unit 3D.1: 12m - Unit 2F.1: 14m Amended designs provided additional window openings and only typical units 3B.2 and 2F.1 remain non-compliant. Additional windows have been provided and TVS Architects advised these represent 7% of the overall units.	- Does not meet Design Criteria - Meets objectives - Acceptable Additional information provided by TVS Architects demonstrated that the majority of units provide an 8m <i>minimum</i> habitable room depth. CPSD is satisfied that most of the typical units are capable of meeting ADG objectives in terms of natural ventilation and solar access. However, typical Units 3B.2 and 2F.1 remain of concern. TVS Architects notes that the 'kitchen zone' of typical Unit 3B.2 is within 8m of a balcony. The updated plans indicate the inclusion of a frosted glass window in the layout of typical unit 2F.1 which is approximately 6m from the 'kitchen zone'. These units comprise approximately 7% of the seniors living development.
	Master bedrooms have a minimum area of 10m ² and other bedrooms 9m ² (excluding wardrobe space)	Bedrooms in the proposed units range between 10m ² and 20m ² .	Meets Design Criteria
	Bedrooms have a minimum dimension of 3m (excluding wardrobe space)	The units generally comply, except for irregular shaped bedrooms in typical Units 3A.1, 3A.2, 3C.1, 3D.1 and 2F.1.	Meets Design Criteria
	Living rooms or combined living/dining rooms have a minimum width of: - 3.6m for 1 bedroom apartments	Combined living/dining rooms in the units exceed 4m in width.	Meets Design Criteria

	- 4m for 2 and 3 bedroom apartments		
	The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts	Each unit has a minimum width of approximately 7.5m.	Meets Design Criteria
4E - Balcony area	The primary balcony is to be: - 1 bedroom – 8m² with a minimum depth of 2m - 2 bedroom – 10m² with a minimum depth of 2m - 3 bedroom – 12m² with a minimum depth of 2.4m For units at ground or podium levels, a private open space area of 15m² with a minimum depth of 3m is required.	Each unit contains a balcony over 16m ² in area with most of the areas in excess of 2m in width and only small areas less than 2m at the end of the angled balconies.	Meets Design Criteria
4F - Common circulation and spaces	Maximum of 8 apartments off a circulation core on a single level For building of 10+ storeys, maximum of 40 apartments sharing a single lift	A maximum of 8 units are located off a single circulation core on each level of the proposed buildings. Double lifts have been provided in Buildings B and C (both of which contain 10 stories), ensuring the maximum number of units/apartments sharing a lift is 30.	Meets Design Criteria
4G - Storage	Storage is to be provided as follows: - 1 bedroom – 6m³ - 2 bedrooms – 8m³ - 3+ bedrooms – 10m³ At least 50% of the required storage is to be located within the apartment.	Additional information provided by TVS Architects indicates that storage is provided in the units as follows: - Unit Type 1A.1 (1 Bed) – 4.28m³ (unit) + 4.88m³ (car park) = 9.16m³ - Unit Type 2A.1 (2 Bed) – 4.03m³ (unit) + 4.88m³ (car park) = 8.91m³ - Unit Type 2A.2 (2 Bed) – 4.98m³ (unit) + 4.88m³ (car park) = 9.86m³ - Unit Type 2A.3 (2 Bed) – 4.03m³ (unit) + 4.88m³ (car park) = 8.91m³	Acceptable While Unit Type 2F.1 provides storage in excess of 8m³, less than 50% of the storage is located within the unit. Nevertheless, this non-compliance is considered to be extremely minor.

		- Unit Type 3A.1 (3 Bed) – 5.66m^3 (unit) + 4.88m^3 (car park) = 10.54m^3 - Unit Type 3A.2 (3 Bed) – 5.33m^3 (unit) + 4.88m^3 (car park) = 10.21m^3 - Unit Type 3B.1 (3 Bed) – 14.07m^3 (unit) - Unit Type 3B.2 (3 Bed) – 5.45m^3 (unit) + 4.88m^3 (car park) = 10.33m^3 - Unit Type 3C.1 (3 Bed) – 6.22m^3 (unit) + 4.88m^3 (car park) = 11.10m^3 - Unit Type 3D.1 (3 Bed) – 8.2m^3 (unit) + 4.88m^3 (car park) = 13.08m^3 - Unit Type 2F.1 (2 Bed) – 3.18m^3 (unit) + 4.88m^3 (car park) = 8.06m^3	
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