Table 1 – APARTMENT DESIGN GUIDE – DESIGN OBJECTIVE AND DESIGN CRITERIA

50-52 Golf Avenue, Mona Vale - DA SUBMISSION - Issue A 17.04.2020

OBJECTIVE	DESIGN CRITERIA		PROPOSED	COMMENT
Part 3 - Siting the Development				
3A **Site Analysis**	**Objective 3A-1** Site analysis illustrates that design decisions have been based on opportunities and constraints of the site conditions and the relationship to the surrounding context		**Complies**	Built-form considers neighbouring buildings with adequate setbacks and heights to adjacent sites.
3B **Orientation**	**Objective 3B-1** Building types and layouts respond to the street and site while optimizing solar access within the development		**Complies**	The orientation of the built-form maximizes solar access and views wherever possible.
	Objective 3B-2 Overshadowing of neighbouring properties is minimized during mid-winter		**Complies**	Strategic building setbacks and built-form minimises overshadowing impact on neighbouring properties.
3C **Public Domain Interface**	**Objective 3C-1** Transition between private and public domain is achieved without compromising safety and security		**Complies**	Apartments are secure from the street and are accessed through a central lobby.
	Objective 3C-2 Amenity of the public domain is retained and enhanced		**Complies**	Mailboxes and services are located on the ground level.
3D **Communal and Public Open Space**	**Objective 3D-1** And adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping	1. Communal open space has a minimum area equal to 25% of the site 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 9am and 3pm on 21st June (mid-winter)	**N/A** **N/A**	All apartments will have large private open spaces to serve as a place for interaction.
	Objective 3D-2 Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting		**N/A**	
	Objective 3D-3 Communal open space is designed to maximize safety		**N/A**	

<table>
<tr><td></td><td colspan="4">Objective 3D-4
Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood</td><td>N/A</td><td></td></tr>
<tr><td>3E
Deep Soil Zone</td><td>Objective 3E-1
Deep soil zone provides 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 colspan="3">Deep soil zones are to meet the following minimum requirements:
<table><tr><th>Site Area</th><th>Min. Dimensions</th><th>Deep Soil Zone (% of the site area)</th></tr><tr><td>Less than 650m^2</td><td>-</td><td>7%</td></tr><tr><td>650m^2 - 1500m^2</td><td>3m</td><td>7%</td></tr><tr><td>Greater than 1500m^2</td><td>6m</td><td>7%</td></tr><tr><td>Greater than 1500m^2 with significant tree cover</td><td>6m</td><td>7%</td></tr></table></td><td>Complies</td><td>Site Area: 2,548.7 m^2

Required Deep Soil Area 7%: 178.4 m^2

Proposed Deep Soil Area: 390 m^2 (16%)</td></tr>
<tr><td>3F
Visual Privacy</td><td>Objective 3F-1
Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy.

Note: Separation distances between buildings on the same site should combine required building separations depending on the type of room.</td><td colspan="3">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 to 25m (9+ storeys)</td><td>12m</td><td>6m</td></tr></table></td><td>Complies</td><td>Building separation adopted.

Building articulation & form were used to achieve reasonable privacy between adjoining properties.

Vertical batten screens provide additional privacy to balconies and habitable rooms.</td></tr>
<tr><td></td><td colspan="4">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.</td><td>Complies</td><td>Façade articulations, curved blade walls and external screens are multi-purposed in providing separation whilst enhancing living environments.</td></tr>
</table>

3G **Pedestrian Access and Entries**	**Objective 3G-1** Building entries and pedestrian access connects to and addresses the public domain		**Complies**	Pedestrian entry from street frontage for residential units. Some of the apartments are also orientated towards the street.
	Objective 3G-2 Access, entries and pathways are accessible and easy to identify		**Complies**	The street entrance is located off Golf Avenue which can be easily identified and accessed.
	Objective 3G-3 Large sites provide pedestrian links for access to streets and connection to destinations		**N/A**	
3H **Vehicle Access**	**Objective 3H-1** Vehicle access points are designed and located to achieve safety, minimize conflicts between pedestrians and vehicles and create high quality streetscapes.		**Complies**	The vehicle access point has been designed to maximise pedestrian safety.
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	For development in the following locations: • On sites that are within 800m of a railway station or light rail stop in the Sydney Metropolitan Area; or • On land zoned, and sites within 400m of land zoned, B3 Commercial Core, B4 Mixed Use of 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.	**On Merit**	Traffic report will be submitted with Development Application. 33 spaces required and 33 provided = 5 visitor and 28 residential spaces, one of the visitor spaces can be used as a car wash bay, accessible space for visitors is also provided Bicycle storage is also provided
	Objective 3J-2 Parking and facilities are provided for other modes of transport		**Complies**	5 bicycle racks are provided for all residents and visitors.
	Objective 3J-3 Car park design and access is safe and secure		**Complies**	Secure car park access via driveway ramp & lift access to all residential levels.
	Objective 3J-4 Visual and environmental impacts of underground car parking are minimised		**Complies**	
	Objective 3J-5 Visual and environmental impacts of on-grade car parking are minimised		**N/A**	
	Objective 3J-6 Visual and environmental impacts of above ground enclosed parking are minimised		**N/A**	

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.	1. Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours of direct sunlight between 9am and 3pm at mid-winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas	**Complies**	12/14 apartments = **86%** Receives min 2hr direct sunlight to living rooms and private open space.
		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 9am and 3pm at mid-winter	**N/A**	
		3. A maximum of **15%** of apartments in a building receive no direct sunlight between 9am and 3pm mid winter. 4.	**Complies**	0/12 apartments = **0%**
	Objective 4A-2 Daylight access is maximized where sunlight is limited		**Complies**	Full height balcony windows/ doors to maximize daylight access.
	Objective 4A-3 Design incorporates shading and glare control, particularly for warmer months		**Complies**	Awnings/overhangs assist with diffusing glare and providing shade.
4B **Natural Ventilation**	**Objective 4B-1** All habitable rooms are naturally ventilated		**Complies**	
	Objective 4B-2 The layout and design of single aspect apartments maximizes natural ventilation		**Complies**	
	Objective 4B-3 The number of apartments with natural cross ventilation is maximized to create a comfortable indoor environment for residents	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	**Complies**	14/14 Apartments achieve cross ventilation. Deemed to comply at **100%**
		2. Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line	**Complies**	

<table>
<tr>
<td rowspan="3">4C
Ceiling Heights</td>
<td>Objective 4C-1
Ceiling height achieves sufficient natural ventilation and daylight access</td>
<td>Measured from finished floor level to finished ceiling level, minimum ceiling heights are:

Minimum ceiling height for apartment and mixed use buildings
<table>
<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 use areas</td><td>3.3m for ground and first floor to promote future flexibility</td></tr>
</table></td>
<td>Complies</td>
<td>Ceiling heights proposed are consistent with ADG recommendations:
- 2.7 habitable
- 2.4 non-habitable
3100 mm floor to floor provided assuming 200mm thick slab, 25mm for flooring and 175 for ceiling – 2700. Services to be maintained in non-habitable spaces to maximise ceiling heights in habitable areas.</td>
</tr>
<tr>
<td colspan="2">Objective 4C-2
Ceiling height increases the sense of space in apartments and provides for well-proportioned rooms</td>
<td>Complies</td>
<td>Habitable rooms are located directly adjacent openings and private open spaces where ceiling is maximized. Bulkheads are minimised where possible and services occupy ceiling spaces of non-habitable rooms to prevent unnecessary reduced ceiling heights.</td>
</tr>
<tr>
<td colspan="2">Objective 4C-3
Ceiling heights contribute to the flexibility of building use over the life of the building</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>4D
Apartment Size and Layout</td>
<td>Objective 4D-1
The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity</td>
<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>Complies</td>
<td>All apartments comply with minimum internal areas</td>
</tr>
</table>

		A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m^{2}each		
		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	**Complies**	All habitable room have a minimum glass area of 10% of the floor area of the room.
	Objective 4D-2 Environmental performance of the apartment is maximised	1. Habitable room depths are limited to a maximum of 2.5 x the ceiling height 2. In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window	**Complies** **Complies**	All habitable room depths are less than 2.5x the ceiling height Window to kitchen dimension in open plan living ranges between 4m to 6m
	Objective 4D-3 Apartment layouts are designed to accommodate a variety of household activities and needs.	1. Master bedrooms have a minimum area of 10m2 and other bedrooms 9m2 (excluding wardrobe space) 2. Bedrooms have a minimum dimension of 3m (excluding wardrobe space) 3. Living rooms or combined living/dining rooms have a minimum width of: • 3.6m for studio and 1 bedroom apartments • 4m for 2 & 3 bedroom apartments 4. The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts.	**Complies** **Complies** **Complies** **Complies**	Master bedrooms range from 3.7 x 3.3m (12.2 sqm) to 5.5 x 3.6 (19.8 sqm) Other bedrooms range from 3.0 x 3.0m (9 sqm) to 3.8 x 3.4m (12.9 sqm) Living spaces to all apartments have minimum width of 4.0m

<table>
<tr><td></td><td></td><td></td><td></td></tr>
<tr><td>4E
Private Open Space and Balconies</td><td>Objective 4E-1
Apartments provide appropriately sized private open space and balconies to enhance residential amenity</td><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></td><td>Complies</td><td>All balconies in this development comply with the minimum depth of 2.4m and relevant minimum areas.</td></tr>
<tr><td rowspan="4"></td><td></td><td>The minimum balcony depth to be counted as contributing to the balcony area is 1m
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 15m2 and a minimum depth of 3m</td><td>Complies</td><td></td></tr>
<tr><td colspan="2">Objective 4E-2
Primary private open space and balconies are appropriately located to enhance liveability for residents</td><td>Complies</td><td>Private open space is directly to a living space, orientated to allow for maximized solar access and ventilation.</td></tr>
<tr><td colspan="2">Objective 4E-3
Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building</td><td>Complies</td><td>Balconies and private open spaces are integrated with the building form and façade.</td></tr>
<tr><td colspan="2">Objective 4E-4
Private open space and balcony design maximises safety</td><td>Complies</td><td>Balconies have been designed with details that avoid opportunities for climbing and falls, including solid and glass balustrades to provide additional protection.</td></tr>
<tr><td>4F
Common Circulation and Spaces</td><td>Objective 4F-1
Common circulation spaces achieve good amenity and properly service the number of apartments</td><td>1. The maximum number of apartments off a circulation core on a single level is eight
2. For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40</td><td>Complies

N/A</td><td>3 different lift cores serving all apartments within the development</td></tr>
</table>

<table>
<tr><td></td><td colspan="2">Objective 4F-2
Common circulation spaces promote safety and provide for social interaction between residents</td><td>Complies</td><td>Centralized lift lobbies encourages social interaction and provides amenity for doing so.</td></tr>
<tr><td rowspan="2">4G
Storage</td><td>Objective 4G-1
Adequate, well designed storage is provided in each apartment</td><td>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^2</td></tr><tr><td>1 bedroom apartments</td><td>6m^2</td></tr><tr><td>2 bedroom apartments</td><td>8m^2</td></tr><tr><td>3+ bedroom apartments</td><td>10m^2</td></tr></table>At least 50% of the required storage is to be located within the apartment</td><td>Complies</td><td>All apartments have the storage requirement for each apartment.
Refer to storage diagram and unit schedule on architectural drawings.</td></tr>
<tr><td colspan="2">Objective 4G-2
Additional storage is conveniently located, accessible and nominated for individual apartments</td><td>Complies</td><td>Additional secured storage is provided and easily accessible on basement levels with individual cages for each apartment.</td></tr>
<tr><td rowspan="2">4H
Acoustic Privacy</td><td colspan="2">Objective 4H-1
Noise transfer is minimised through the siting of buildings and building layout</td><td>Complies</td><td>Where possible planting, circulation and non-habitable rooms are located to buffer external noise sources.</td></tr>
<tr><td colspan="2">Objective 4H-2
Noise impacts are mitigated within apartments through layout and acoustic treatments</td><td>Complies</td><td>Appropriate acoustic measure will be undertaken at CC stage. Provisions have been made for wall thicknesses and floor to floor heights for construction methodology.</td></tr>
<tr><td rowspan="2">4J
Noise and Pollution</td><td colspan="2">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</td><td>Complies</td><td>Habitable rooms are generally setback from external noise of Golf Avenue through balconies and landscaping.</td></tr>
<tr><td colspan="2">Objective 4J-2
Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission</td><td>Complies</td><td>Where possible, building articulation and landscaping are provided to assist in diffusing noise transmission.</td></tr>
</table>

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	**Complies**	Unit type cater to the household types in the area with 3-bed, some of the 3-bedroom apartments have the flexibility to turn the some of the bedrooms into family rooms/ study.
	Objective 4K-2 The apartment mix is distributed to suitable locations within the building	**On merit**	
4L **Ground Floor Apartments**	**Objective 4L-1** Street frontage activity is maximised where ground floor apartments are located	**Complies**	Street frontage is activated through private courtyards.
	Objective 4L-2 Design of ground floor apartments delivers amenity and safety for residents	**Complies**	Ground floor apartments are orientated so as to provide amenity for residents and passive surveillance.
4M **Facades**	**Objective 4M-1** Building facades provide visual interest along the street while respecting the character of the local area	**Complies**	The facades have been carefully designed with a mix of material palette. Rendered walls, off-form concrete blade walls, sandstone cladded walls and metal cladding to create a visually interacting façade whilst responding to the character of the local area.
	Objective 4M-2 Building functions are expressed by the facade	**Complies**	Residential entry clearly identified via different treatment in the façade (i.e. entry canopy and visual breaks).
4N **Roof Design**	**Objective 4N-1** Roof treatments are integrated into the building design and positively respond to the street	**Complies**	Top level is further setback from levels below to minimize the impact of built form to the street and neighbours.
	Objective 4N-2 Opportunities to use roof space for residential accommodation and open space are maximised	**Complies**	Top floor unit will be provided with a large terrace given the increased setback from the units below.
	Objective 4N-3 Roof design incorporates sustainability features	**Complies**	Roof extends awning over windows and doors to habitable spaces to control sunlight during summer.

4O **Landscape Design**	**Objective 4O-1** Landscape design is viable and sustainable	**Complies**	Landscaping and native plant selection provides shading and privacy, and contributes to the local climate. Selection of native and low water usage trees reduce water usage and maintenance.
	Objective 4O-2 Landscape design contributes to the streetscape and amenity	**Complies**	Where possible, landscaping has been included to provide amenity and streetscape.
4P **Planting on Structures**	**Objective 4P-1** Appropriate soil profiles are provided	**Complies**	Refer to Landscape Consultant detail
	Objective 4P-2 Plant growth is optimised with appropriate selection and maintenance	**Complies**	Refer to Landscape Consultant detail
	Objective 4P-3 Planting on structures contributes to the quality and amenity of communal and public open spaces	**Complies**	Refer to Landscape Consultant detail
4Q **Universal Design**	**Objective 4Q-1** Universal design features are included in apartment design to promote flexible housing for all community members	**Complies**	Apartments are open plan in design providing a free-flowing living quality with generous open space for occupant flexibility.
	Objective 4Q-2 A variety of apartments with adaptable designs are provided	**Complies**	There are three adaptable units proposed in accordance to council's DCP requirement for 20% of total units.
	Objective 4Q-3 Apartment layouts are flexible and accommodate a range of lifestyle needs	**Complies**	All apartments have open plan living allowing flexibility on the use.
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	**N/A**	Brand new development
	Objective 4R-2 Adapted buildings provide residential amenity while not precluding future adaptive reuse	**N/A**	Brand new development
4S **Mixed Use**	**Objective 4S-1** Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement	**N/A**	

	Objective 4S-2 Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents	**N/A**	
4T **Awnings and Signage**	**Objective 4T-1** Awnings are well located and complement and integrate with the building design	**Complies**	Entry awning is provided to give cover to the residents.
	Objective 4T-2 Signage responds to the context and desired streetscape character	**Complies**	Signage to future detail to be integrated to entries, façade and lobby design.
4U **Energy Efficiency**	**Objective 4U-1** Development incorporates passive environmental design	**Complies**	Adequate light and ventilation to all habitable rooms
	Objective 4U-2 Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer	**Complies**	BASIX assessment submitted with the development application
	Objective 4U-3 Adequate natural ventilation minimises the need for mechanical ventilation	**Complies**	Apartments designed with appropriate depths, ceiling heights and planning to promote airflow and natural ventilation.
4V **Water Management and Conservation**	**Objective 4V-1** Potable water use is minimised	**Complies**	Water reducing fixtures and low water usage landscaping implemented
	Objective 4V-2 Urban storm-water is treated on site before being discharged to receiving waters	**Complies**	Refer to hydraulic engineer's reports and drawings
	Objective 4V-3 Flood management systems are integrated into site design	**Complies**	Refer to hydraulic engineer's reports and drawings
4W **Waste Management**	**Objective 4W-1** Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents	**Complies**	Garbage bin holding area located on ground floor capable to fit required number of bins for collection day.
	Objective 4W-2 Domestic waste is minimised by providing safe and convenient source separation and recycling	**Complies**	Waste management plan will be submitted with Development Application.

4X Building Maintenance	**Objective 4X-1** Building design detail provides protection from weathering	**Complies**	Material proposed are robust and hard weathering minimizing maintenance. Building detailing will provide protections to opening and control leaching etc.
	Objective 4X-2 Systems and access enable ease of maintenance	**Complies**	Generally, maintenance of the building can be directly accessed via individual unit or internal lobbies.
	Objective 4X-3 Material selection reduces on-going maintenance costs	**Complies**	Natural and resilient material selection of rendered wall, powder coated aluminium cladding and stone cladding reduces on-going maintenance.