

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

10-14 Lethbridge St, Penrith – DA Lodgement - Issue A - 01.12.2021

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	The built-form considers both neighbouring existing context as well as future context in scale, orientation and form.
3B Orientation	Objective 3B-1 Building types and layouts respond to the street and site while optimizing solar access within the development		Complies	Half the units in the development face north and towards the main street, with the other half oriented to the east and west in order to maximise potential solar access.
	Objective 3B-2 Overshadowing of neighbouring properties is minimized during mid-winter		Complies	The building is setback 6m from the rear and side boundaries at the back of the building, minimising the scale of the built form overshadowing the neighbours.
3C Public Domain Interface	Objective 3C-1 Transition between private and public domain is achieved without compromising safety and security		Complies	Pedestrian entry and entry way is open and exposed, and located at the centre of the building allowing for surveillance from residents and the public. Keyed gates and entry doors secure occupants and provide safe access into the site.
	Objective 3C-2 Amenity of the public domain is retained and enhanced		Complies	Additional planting and trees along the front of the site help add greenery to the area, and the addition of an aesthetically pleasing building helps add character to what is currently an empty lot.
3D Communal and Public Open Space	Objective 3D-1 And adequate area of communal open space is provided to enhance residential amenity and	1. Communal open space has a minimum area equal to 25% of the site	Complies	26% of site area has been supplied as communal open space, providing a range of landscaping and amenity accessible to all residents.

	to provide opportunities for landscaping	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 21 st June (mid-winter)			Complies	The primary roof top communal open receives continual sunlight throughout the day during mid-winter. This area compromises more than 50% of total communal open space.
	Objective 3D-2 Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting				Complies	Communal open spaces have been designed on the Ground, Level 1 and on the roof, allowing for a range of activities, interactions and experiences. Planting and seating help invite people in, and along with BBQ facilities help promote social interaction.
	Objective 3D-3 Communal open space is designed to maximize safety				Complies	Communal open space located on the upper levels, are away from the public domain and will have secure entry protocols. The ground floor communal open space has passive surveillance from units. Areas are open, without hidden corners.
	Objective 3D-4 Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood				N/A	No public open space provided. Planting has been provided along the front boundary next to nature strip.
3E Deep Soil Zone	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	Deep soil zones are to meet the following minimum requirements:			Complies	18% of the site has been provided as 6m wide Deep Soil. 35% of the ground floor has been supplied as landscaping, of which much has potential for additional deep soil under 6m in width.
		Site Area	Min. Dimensions	Deep Soil Zone (% of the site area)		
		Less than 650m ²	-	7%		
		650m ² - 1500m ²	3m	7%		
		Greater than 1500m ²	6m	7%		
Greater than 1500m ² with significant tree cover	6m	7%				

3F Visual Privacy	Objective 3F-1 Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy. <i>Note: Separation distances between buildings on the same site should combine required building separations depending on the type of room.</i>	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:			Complies	Ground to Level 3: 6m side separation on East and West boundary to habitable spaces. 4.5m to screened bedroom walls. 6m separation at rear South boundary. Level 4 and 5: 9m separation at the East and West boundaries to habitable spaces. 7m separation at the South boundary to screened rooms.	
		Building Height	Habitable rooms and balconies	Non-habitable rooms			
		Up to 12m (4 storeys)	6m	3m			
		Up to 25m (5-8 storeys)	9m	4.5m			
		Over to 25m (9+ storeys)	12m	6m			
	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.					Complies	Vertical screening elements have been provided along residential balconies facing adjacent developments to give privacy into units and also towards neighbours, whilst still allowing light air to penetrate. Planting has also been provided to give some separation and screening, whilst also giving amenity to those areas.
3G Pedestrian Access and Entries	Objective 3G-1 Building entries and pedestrian access connects to and addresses the public domain					Complies	The main building entrance is located off the primary road at the centre of the site. An entryway where mailboxes are located extends off the public footpath towards the building, highly visible from the street.
	Objective 3G-2 Access, entries and pathways are accessible and easy to identify					Complies	The main entrance is located in the centre of the building, where the two halves of the development are split off from, creating a clear delineation between the common areas and entry way in the middle and residential units on either side. A wide entry path with a gate, and awning above the entry door also help clearly identify its location.
	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 located to the side of the development away from main entry point. The 6m setback to the building line give substantial sight lines for cars exiting and visibility for pedestrians and drivers passing the building.
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: <ul style="list-style-type: none"> 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.	Complies	The proposal satisfies the car parking requirements under the DCP. All carparking is provided in the basement.
	Objective 3J-2 Parking and facilities are provided for other modes of transport		Complies	Bicycle lockers and storage is provided in the basement. (Parking rate as per DCP parking provision rate)
	Objective 3J-3 Car park design and access is safe and secure		Complies	Secure basement car park with lift access to all levels.
	Objective 3J-4 Visual and environmental impacts of underground car parking are minimised		Complies	Underground carparking is not visible from the street. The vehicle entry is adorned with battening similar to other areas of the building, to give it some visual appeal, and garage doors help shield any view of vehicles in the loading bay.
	Objective 3J-5 Visual and environmental impacts of on-grade car parking are minimised		Complies	No on-grade parking provided. Loading Bay is internally towards the rear of the building, separated from road by a garage door.
	Objective 3J-6 Visual and environmental impacts of above ground enclosed parking are minimised		N/A	No above ground parking provided

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.	<ol style="list-style-type: none"> 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 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 3. A maximum of 15% of apartments in a building receive no direct sunlight between 9am and 3pm mid winter. 	Complies	1. 26/36 apartments = 72% Receive at least min 2hr direct sunlight to living rooms and private open space between 9am and 3pm.
			N/A	2. N/A
			Complies	3. 0/36 apartments = 0% do not receive sunlight.
	Objective 4A-2 Daylight access is maximized where sunlight is limited		Complies	Full height glazing to balcony/terrace areas, stretching between internal walls to maximize daylight access.
	Objective 4A-3 Design incorporates shading and glare control, particularly for warmer months		Complies	Overhanging balconies and vertical screens assist with diffusing glare and providing shading to units.
4B Natural Ventilation	Objective 4B-1 All habitable rooms are naturally ventilated		Complies	All habitable rooms have openable windows/doors to allow for ventilation
	Objective 4B-2 The layout and design of single aspect apartments maximizes natural ventilation		Complies	Stepping between living and bedrooms allows for air circulation.
	Objective 4B-3 The number of apartments with natural cross ventilation is maximized to create a comfortable indoor environment for residents	<ol style="list-style-type: none"> 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 2. Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line 	Complies	22/36 apartments have cross ventilation = 61%
			N/A	N/A
4C Ceiling Heights	Objective 4C-1 Ceiling height achieves sufficient natural ventilation and daylight access	Measured from finished floor level to finished ceiling level, minimum ceiling heights are: Minimum ceiling height for apartment and mixed use buildings	Complies	Ceiling heights proposed are consistent with ADG recommendations: - 2.7 habitable - 2.4 non-habitable

		Habitable Rooms	2.7m		3050 mm floor to floor provided assuming 200mm thick slab, 30mm for flooring and 60mm for ceiling – 2700. Services to be maintained in non-habitable spaces to maximise ceiling heights in habitable areas.
		Non-Habitable	2.4m		
		For 2 Storey Apartments	2.7m for main living area floor 2.4m for second floor, where its area does not exceed 50% of the apartment area		
		Attic Spaces	1.8m at edge of room with a 30 degree minimum ceiling slope		
		If located in mixed use areas	3.3m for ground and first floor to promote future flexibility		
	Objective 4C-2 Ceiling height increases the sense of space in apartments and provides for well-proportioned rooms			Complies	Habitable rooms are located directly adjacent to 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.
	Objective 4C-3 Ceiling heights contribute to the flexibility of building use over the life of the building				

4D Apartment Size and Layout	Objective 4D-1 The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity	1. Apartments are required to have the following minimum internal areas:		Complies	All apartments comply with minimum internal areas
		Apartment Type	Minimum Internal Area		
		Studio	35m ²		
		1 bedroom	50m ²		
		2 bedroom	70m ²		
		3 bedroom	90m ²		
		The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m ² each. A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m ² each		Complies	All habitable room have a minimum glass area of 10% of the floor area of the room or more.
		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				
	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	All habitable room depths are less than 2.5x the ceiling height
	Objective 4D-3 Apartment layouts are designed to accommodate a variety of household activities and needs	1. Master bedrooms have a minimum area of 10m ² and other bedrooms 9m ² (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: <ul style="list-style-type: none"> • 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 N/A	Master bedrooms are all in excess of 10m ² and all other bedrooms are minimum 9m ² All bedrooms have minimum width/length of 3m Living spaces to all 2 & 3 bedroom apartments have minimum width of 4.0m. Living spaces to all 1 bedroom apartments have minimum width of 3.6m No cross-over apartments
4E Private Open Space and Balconies	Objective 4E-1 Apartments provide appropriately sized private open space and balconies to enhance residential amenity	1. All apartments are required to have primary balconies as follows:			Complies	All balconies in this development comply with the minimum depth of 2m or 2.4m as applicable and relevant minimum areas.
		Dwelling Type	Minimum Area	Minimum Depth		
		Studio Apartments	4m ²	-		
		1 Bedroom Apartments	8m ²	2m		
		2 Bedroom Apartments	10m ²	2m		
		3+ Bedroom Apartments	12m ²	2.4m		
		The minimum balcony depth to be counted as contributing to the balcony area is 1m.			Complies	Areas have been calculated with minimum 1m widths.

		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	Complies	All ground floor units have private open spaces larger than 15m2 and deeper than 3m.	
	Objective 4E-2 Primary private open space and balconies are appropriately located to enhance liveability for residents		Complies	Private open spaces are directly adjacent to living spaces, orientated to allow for maximized solar access and ventilation	
	Objective 4E-3 Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building		Complies	Balconies and private open spaces are integrated with the building form and facades. Balconies stretch across the width of each unit and dominate the façade presentation.	
	Objective 4E-4 Private open space and balcony design maximises safety		Complies	Fencing and landscaping along private open space on ground floor help secure areas from the public.	
4F Common Circulation and Spaces	Objective 4F-1 Common circulation spaces achieve good amenity and properly service the number of apartments	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	Complies	Maximum of 8 Apartments on a single level.	
			N/A		
	Objective 4F-2 Common circulation spaces promote safety and provide for social interaction between residents		Complies	There is a single lobby on each level, located at the centre of the building. Corridors are wide and are greatest distance from entry of SOU to lift is 9m. This creates a safe common circulation spaces where there are no long hidden corridors or isolated areas.	
4G Storage	Objective 4G-1 Adequate, well designed storage is provided in each apartment	In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided:		Complies	All apartments provide the storage required, with at least 50% located within each apartment.
		Dwelling Type	Storage Size Volume		
		Studio apartments	4m²		
		1 bedroom apartments	6m²		
		2 bedroom apartments	8m²		
		3+ bedroom apartments	10m²		

		At least 50% of the required storage is to be located within the apartment	Complies	
	Objective 4G-2 Additional storage is conveniently located, accessible and nominated for individual apartments		Complies	Additional storage where provided is accessible on the carpark levels.
4H Acoustic Privacy	Objective 4H-1 Noise transfer is minimised through the siting of buildings and building layout		Complies	Where possible planting, circulation and non-habitable rooms are located to buffer external noise sources.
	Objective 4H-2 Noise impacts are mitigated within apartments through layout and acoustic treatments		Complies	Appropriate acoustic measures will be undertaken at CC stage, with the advice of the acoustic engineer. Provisions have been made for wall thicknesses and floor to floor heights for construction methodology, in line with the acoustic engineer's requirements.
4J Noise and Pollution	Objective 4J-1 In noisy or hostile environments the impacts of external noise and pollution are minimised through the careful siting and layout of buildings		Complies	The main road is fairly quiet suburban street, however the building has been setback 6m from the boundary with balconies facing the main road, creating separation from habitable spaces and the street.
	Objective 4J-2 Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission		Complies	Screens and landscaping are provided to assist in diffusing noise transmission.
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	A mix of 1, 2 and 3 bedroom apartments have been provided, spread over the residential floors
	Objective 4K-2 The apartment mix is distributed to suitable locations within the building		Complies	1 and 2 bedroom units are located on the lower Ground Floor to Level 3 to maximise available footprint. Larger 3 Bedroom units located on Upper levels, where there are opportunities for views and greater privacy.
4L Ground Floor Apartments	Objective 4L-1 Street frontage activity is maximised where ground floor apartments are located		Complies	Street facing ground floor units each have landscaped courtyards within the setback zone adjacent to the street. Each of these units have an additional

			entrance coming off the public footpath into these courtyards, where corresponding living spaces are also located, promoting activity along streetscape.
	Objective 4L-2 Design of ground floor apartments delivers amenity and safety for residents	Complies	Ground floor units have generous private open space with landscaping and opportunity for sun. Vegetation and a secure metal fence along the street provide a buffer and security to units beyond.
4M Facades	Objective 4M-1 Building facades provide visual interest along the street while respecting the character of the local area	Complies	The building façade adds character to the street, providing a considered and proportional design that uses strong and robust raw materials and strong identifiable forms such as concrete blade walls, fluted balustrades and timber battens and screens. The facade provides a strong presence along the street, whilst maintaining a human scale, that does not detract from the neighbourhood, often itself characterised with raw materiality such as brick and timber homes and also newer development with strong concrete forms. This is strengthened with use of greenery throughout, which along with the varied curved forms, provide a visually interesting building that has a contemporary language with elements of the past.
	Objective 4M-2 Building functions are expressed by the facade	Complies	The façade clearly delineates between the private residential units with fluted balustrades on the terraces that stretch along the façade, and the common areas such as the central common lobby and garage entry to the west, which are set back and lined with vertical battens and screening.
4N Roof Design	Objective 4N-1	Complies	The upper levels that make part of the roof structure, follow the same

	Roof treatments are integrated into the building design and positively respond to the street		language of the lower floors, but include smaller repeated elements throughout and a darker material, to help reduce the bulk and mass of the building. The curved forms help draw people into the building and guide them to the entry, providing further visual interest towards the development.
	Objective 4N-2 Opportunities to use roof space for residential accommodation and open space are maximised	Complies	Communal open space has been located on the roof, setback from the outer edge of the roof to not impose on the street and maintain privacy to residents using the space and to the neighbours beyond. Landscaped planters around the open space helps add to that privacy and provide comfort and relief to the occupants.
	Objective 4N-3 Roof design incorporates sustainability features	Complies	Roof slab overhangs help provide shading to units in the summer months, whilst allowing for winter sun. Skylights help ensure rear top units are able to receive sunlight throughout the year
4O Landscape Design	Objective 4O-1 Landscape design is viable and sustainable	Complies	Landscaping and native plant selection provides shading and relief around the development. 6m deep soil zones provided at south and east allowing for larger trees, with opportunities for larger vegetation also available on the north and east. Lawns and gardens on the ground floor are populated with diverse planting including native plants and open lawns, where additional planters, composters and features can be included.
	Objective 4O-2 Landscape design contributes to the streetscape and amenity	Complies	Planting has been located along the boundary towards the street to add to the greenery of the area and provide more natural relief on the public domain.
4P	Objective 4P-1	Complies	Refer to Landscape Consultant details

Planting on Structures	Appropriate soil profiles are provided		
	Objective 4P-2 Plant growth is optimised with appropriate selection and maintenance	Complies	Refer to Landscape Consultant details
	Objective 4P-3 Planting on structures contributes to the quality and amenity of communal and public open spaces	Complies	Communal open spaces incorporate a variety of planting, providing quality areas for socialising or retreat. Landscaping along boundaries add character to the streetscape.
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	4 of the 36 apartments are adaptable units to meet the DCP requirement. 8 of the 36 apartments are liveable (complying to silver level universal design features) to meet Accessible and Liveable Housing requirements.
	Objective 4Q-3 Apartment layouts are flexible and accommodate a range of lifestyle needs	Complies	All apartments have open plan living allowing flexibility in 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	New development
	Objective 4R-2 Adapted buildings provide residential amenity while not precluding future adaptive reuse	N/A	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	Residential Flat Building. No commercial or other component.
	Objective 4S-2 Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents	Complies	Residential pedestrian entry clearly defined and separate from vehicular entry. Entry into development will require a key, fob or allowed through an intercom system.
4T Awnings and Signage	Objective 4T-1 Awnings are well located and complement and integrate with the building design	N/A	No Awning. Residential/suburban area.

	Objective 4T-2 Signage responds to the context and desired streetscape character	Complies	Street number is visible on the ground floor near to the entry.
4U Energy Efficiency	Objective 4U-1 Development incorporates passive environmental design	Complies	Trees providing shading incorporated throughout development. Adequate light and ventilation to all habitable rooms. Vertical elements on balconies allow for screened outdoor areas for clothes drying.
	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. OSD located under driveway.
4W Waste Management	Objective 4W-1 Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents	Complies	Waste storage is located in the basement, with garbage chutes located on each level connecting to basement garbage room. Bulky Store Area is located at the centre of the building on ground floor. Garbage collection will happen internally, with the bin storage area on ground floor near the garbage loading bay. No waste facilities are visible from the street.
	Objective 4W-2 Domestic waste is minimised by providing safe and convenient source separation and recycling	Complies	Waste management document will be submitted with Development Application.

4X Building Maintenance	Objective 4X-1 Building design detail provides protection from weathering	Complies	Materials proposed are robust and hard wearing to minimise maintenance. Building detailing will provide protections to openings.
	Objective 4X-2 Systems and access enable ease of maintenance	Complies	Generally, maintenance of the building can be directly accessed via individual units or internal lobbies. Maintenance measure to be detailed during CC stage.
	Objective 4X-3 Material selection reduces on-going maintenance costs	Complies	Natural and resilient material selection of concrete, glazing and powder coated metal extrusions reduces on-going maintenance.