SEPP65 Design Statement

Mayfair on Penrith

160, 162, 172 Lord Sheffield Circuit, North Penrith

Prepared for
Urban Property Group

Issued
November 2022

Gadigal Country
Level 2, 490 Crown Street
Surry Hills NSW 2010

T 61 2 9380 9911
E architects@sjb.com.au
W sjb.com.au

From a moment to a metropolis, design and planning for the built environment.

SJB acknowledge the Traditional Custodians of the land upon which we live, practice, and visit, and pay our respects to Elders past, present, and emerging. We recognise the continuous engagement and caring of the lands, waters, and skies by First Nations peoples for time immemorial.

We support the Uluru Statement from the Heart and accept its invitation to walk with Aboriginal and Torres Strait Islander people in a movement of the Australian people toward a better future.

Gadigal Country
Level 2, 490 Crown Street
Surry Hills NSW 2010

T 61 2 9380 9911
E architects@sjb.com.au
W sjb.com.au

SJB Architecture (NSW) Pty Ltd
ABN 20 310 373 425
ACN 081 094 724

Adam Haddow 7188
John Pradel 7004

Ref: 6626
Version: 01

Prepared by: WG/DC
Checked by: WG/AH

Certified Management Systems

ISO 9001:2015	Quality Management System
ISO 45001:2018	Occupational Health & Safety Management System
ISO 14001:2015	Environmental Management System

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Introduction 1

Prepared to accompany the Development Application submitted to Council

04 November 2022

Project Address
160,162 & 172 Lord Sheffield Circuit, North Penrith

Prepared on behalf:
Urban Property Group

Prepared by:
SJB Architects NSW

Verification of Qualifications

John Pradel and Adam Haddow are registered as Architects in New South Wales and are enrolled in the Division of Chartered Architects in the register of Architects pursuant to the Architect Act 1921.

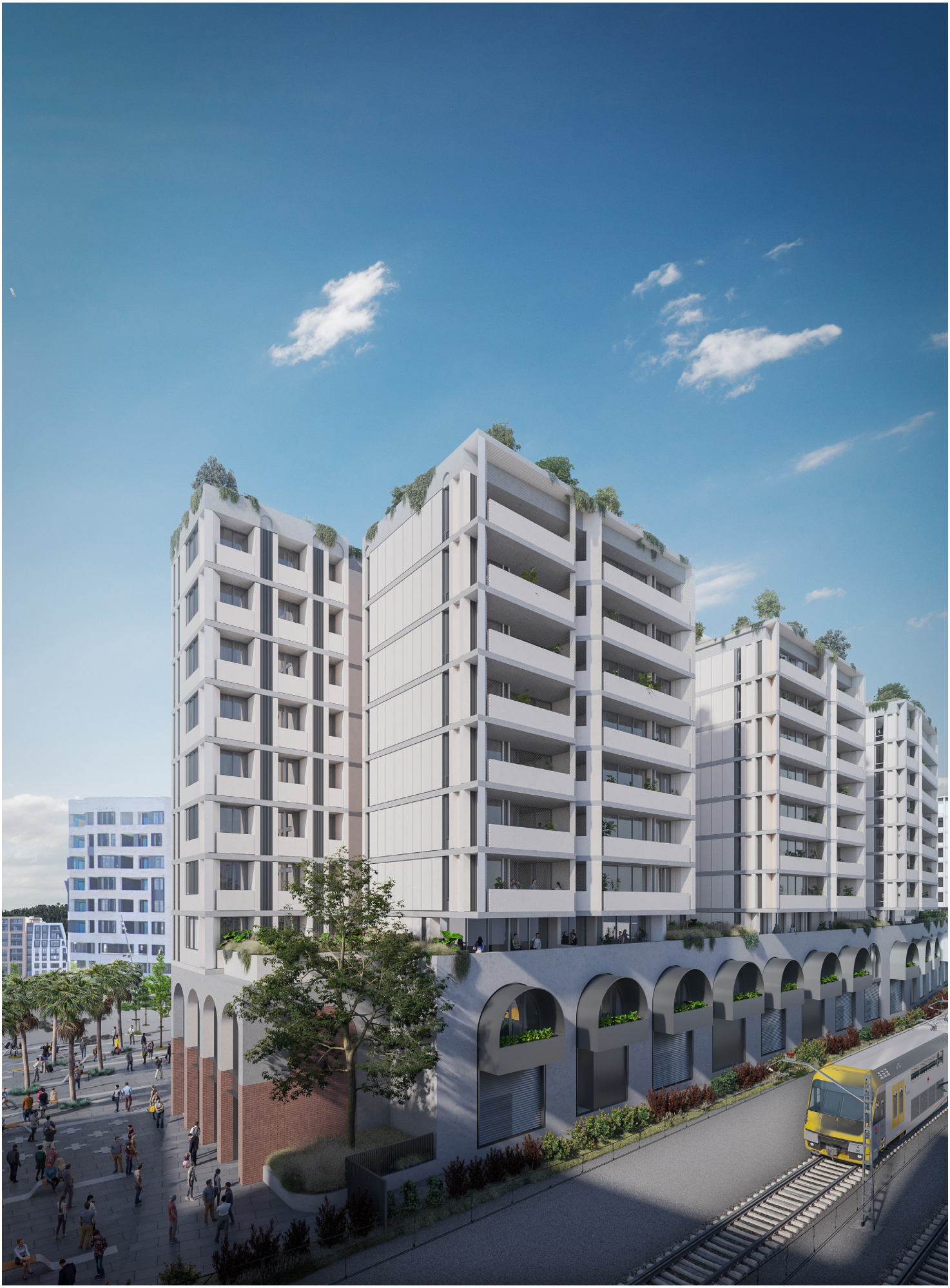
Their registration Numbers are 7004 and 7188.

Statement of Design

SJB have been responsible for the design of the project since its inception and have worked with related professionals and experts in respect of the matter. The project has been designed to provide a development that is respectful of local planning and design controls and responds to the nine design quality principles of SEPP No. 65.

SJB verify that as required by the Clause 50 (1AB) of the Environmental Planning and Assessment Regulation 2000 the design quality principles set out in Schedule 1, design quality principles of the State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development and the objectives in Part 3 and Part 4 of the Apartment Design Guide have been achieved for the proposed development as described in the following document.

Adam Haddow
Director
Registered Architect NSW, No. 7188



Visualisation

SEPP65 Design Quality Principles

2

The following content outlines the architectural scheme against the nine Principles of Design.

2.1 Principle 1: Context and Neighbourhood Character

Good design responds and contributes to its context. Context is the key natural and built features of an area, their relationship and the character they create when combined. It also includes social, economic, health and environmental conditions. Responding to context involves identifying the desirable elements of an area's existing or future character.

Well designed buildings respond to and enhance the qualities and identity of the area including the adjacent sites, streetscape and neighbourhood. Consideration of local context is important for all sites, including sites in established areas, those undergoing change or identified for change.

The site has a unique opportunity to present a key gateway development into the North Penrith Town Centre as a destination site when arriving at Penrith via high frequency transit.

It has the opportunity to provide a true transit orientated development and contribute high amenity offerings to the locality including improved connectivity to the Penrith Railway Station and a highly active ground floor retail offering.

As you move closer to the station the role of the built form is to 'build' the city, to elevate the importance of the station within the fabric of the city. This civic building, the train station, plays a pivotal role in the daily lives of the people of Penrith. It is the building that wakes them up in the morning and sends them home to their families at night.

Our proposal celebrates the scale of the site, taking the opportunity to deliver a truly civic building. Borrowing from the great colonnades of the world, the ground level hugs the street edge, while providing refuge and protection. Much like the base of the Sydney GPO, or the buildings at East Circular Quay, our building delivers a double height colonnade with retail at the ground level and commercial office space to level 1. The colonnade is enlivened by the energy of the activity captured, provides protection for pedestrians from rain and sun, while delivering a physical separation to the residential dwellings above - helping to manage potential acoustic conflicts.

The proposed building form offers a significant public and private amenity benefit. The continuous northern edge to the rail corridor will eliminate existing acoustic impacts to neighbours to the north of the site - by delivering a physical separation.

The proposed building (10 storeys) is a scale of built form that is commensurate with it's context, buildings along Lord Sheffield Circuit range between 8 to 11 storeys.

2.2 Principle 2: Built form and scale

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

Good design also achieves an appropriate built form for a site and the building's purpose in terms of building alignments, proportions, building type, articulation and the manipulation of building elements.

Appropriate built form defines the public domain, contributes to the character of streetscapes and parks, including their views and vistas, and provides internal amenity and outlook.

In addition to responding to its site and environmental context, the proposed built form enhances the public domain and maximises internal amenity.

The proposed building is 10 storeys - a scale and built form that is commensurate with the context of Lord Sheffield Circuit which ranges from 8 to 11 storeys.

A 2 storey podium is proposed ,which delivers a double height colonnade to Lord Sheffield Circuit. This defines the Lord Sheffield Circuit interface and contributes to the public domain by providing protection for pedestrians, while delivering a physical separation to the residential dwellings above – helping to manage potential acoustic and visual privacy conflicts.

The retail activation at ground level, both along Lord Sheffield Circuit and the station forecourt will enliven the public domain of North Penrith.

The residential component sits directly above the podium, responding to and defining Lord Sheffield Circuit. At the inflection point of the site along Lord Sheffield Circuit the residential component opens in order to articulate the built form.

Secondary vertical cuts are included in the East and West residential forms to further articulate the building - establishing a relationship with the articulation along the Northern side of Lord Sheffield Circuit.

2.3 Principle 3: Density

Good design achieves a high level of amenity for residents and each apartment, resulting in a density appropriate to the site and its context. Appropriate densities are consistent with the area's existing or projected population. Appropriate densities can be sustained by existing or proposed infrastructure, public transport, access to jobs, community facilities and the environment.

The proposal has a floor space ratio of approximately 3.9.1:1, responsive to the site location and development controls.

The proposal is exceptionally well served by public transport, as it is located at the entrance to Penrith Station, which is the primary railway connection between the CBD and the Blue Mountains. On the South side of Penrith Station there are a number of bus services connecting the local area.

The proposal is within short walking distance to Penrith Town Centre which includes an extensive retail and commercial precinct, as well as community services such as the council library.

Ron Mulock Oval and Thornton Playground are within 300mm of the site providing open space amenity to residents.

The apartments experience high levels of amenity as a result of the location and design concept - including extensive communal open space, mountain views, generous private open space, cross ventilation and solar access.

The apartments are provided with a car space allowing additional connectivity for residents.

The apartment mix is consistent with the ADG:

— 1 Bedroom Apartments 20.2%
— 2 Bedroom Apartments 63.4%
— 3 Bedroom Apartments 16.4%

2.4 Principle 4: Sustainability

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

The proposal incorporates a number of principles of sustainability:

- Extensive landscaping to roofs and over structure, minimising stormwater run-off and reducing the urban heat island effect.
- On-site rainwater detention and re-use
- Natural ventilation to all common residential corridors and lobbies
- Cross ventilation to the majority of apartments (greater than 60%), including a site strategy that allows the majority of living rooms and balconies to face North or East away from the rail corridor.
- Maximising direct sun to apartments while utilising overhangs and shading devices to control summer heat gain (70% of apartments receive a minimum of 2 hours direct sunlight in mid-winter). This includes a site strategy that allows the majority of living rooms and balconies to face North or East (away from the rail corridor).
- Material selection favouring longevity and minimising maintenance.
- Energy-efficient lighting and appliances in accordance with BASIX
- Water-efficient fixtures in accordance with BASIX
- Proximity to public transport and shops reducing the need for car use.

2.5 Principle 5: Landscape

Good design responds and contributes to its context. Context is the key natural and built features of an area, their relationship and the character they create when combined. It also includes social, economic, health and environmental conditions. Responding to context involves identifying the desirable elements of an area's existing or future character.

Well designed buildings respond to and enhance the qualities and identity of the area including the adjacent sites, streetscape and neighbourhood. Consideration of local context is important for all sites, including sites in established areas, those undergoing change or identified for change.

The design of the site and building provides an integrated architectural and landscape solution.

The public domain is enhanced by both hard and soft landscaping. The public domain is effectively widened with the introduction of the proposed colonnade.

At ground level, to the western edge of the site, the proposal creates an active interface with the station forecourt.

Along the eastern boundary, in lot 3011, a community garden and bush tucker walk is proposed. This acts as a landscaped buffer to the Eastern site, as well as a public benefit that provides the potential for residents and the local community to socially interact.

The podium roof along the rail corridor has extensive landscape which provides a visual outlook for the residents and acts as a filter to the railway - a passive space for residents to visually enjoy.

A great benefit in having a series of connected buildings, with a long narrow footprint, is that there is a commensurate roof area – a long, narrow, north facing plateau. This extensive rooftop plateau is used for the communal open space. We see an amazing opportunity to create a remarkable communal rooftop. A variety of places for social interaction at small and large scales. A plateau a top the building to rest, relax, meet, exercise and swim.

The landscape has been designed by Arcadia - plant species and soil depths have been selected to suit the location and climate, maximising the use of native species to ensure they survive the micro climate of Penrith.

2.6 Principle 6: Amenity

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

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

Through the development of the design the following issues were considered:

- A built form strategy that responds to the particular site constraints, with an emphasis on dealing with acoustics (due to the proximity to the railway corridor).
- Addressing Lord Sheffield Circuit to orient the majority of apartments North or East, maximises northern daylight, and minimising apartment depth.
- Maximising cross-ventilation while dealing with the acoustic implications.
- Providing natural ventilation and daylight to the residential lobbies on each level.
- Significant communal landscaped spaces have been provided for the residents
- The development contributes to the general public amenity at ground floor level through the activation of frontages .
- Providing views from both the apartments and communal open space to the Blue Mountains.

2.7 Principle 7: Safety

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

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

Initiatives which have been incorporated into the design are:

- Principle building entrances are clearly identifiable, located along Lord Sheffield Circuit, from the colonnade, allowing for way-finding and passive surveillance.
- Building entrances have secure access points and can have video intercom.
- Commercial, retail and residential entrances are separate and easily distinguished.
- Entries are well lit and visible.
- Passive surveillance is excellent with the retail and commercial areas overlooking the colonnade.
- Residential apartments overlook the station forecourt, Lord Sheffield Circuit, lot 3011 and Penrith Station.
- Increased pedestrian traffic will be a result of this development.
- Car park layouts are designed to minimise opportunities for alcoves. Security access in the form of swipe cards and remote controllers will be provided.

2.8 Principle 8: Housing Diversity and Social Interaction

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

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

There will be a range of apartments within the development offering affordability, with a mix of 1 bedroom, 2 bedroom and 3 bedroom apartments.

Equitable access is provided to all common areas, the community garden and the rooftop facilities.

Along the eastern boundary, in lot 3011, a community garden and bush tucker walk is proposed. This provides the potential for residents and the local community to socially interact.

In a broader context, this project offers an excellent opportunity to provide a high quality, transit oriented development in an established town centre.

It has excellent access to amenity and public transport;

- The site is adjacent Penrith Train Station.
- Bus services from the South side of the train station.
- A short distance to the town centre.
- Bicycle parking for residents and visitors.
- Adaptable housing in accordance with Council's controls.

2.9 Principle 9: Aesthetics

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

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

The proposal is carefully considered, with material choices specific and responsive to its location.

Massing and detailing is designed to respond to both the character of the area and the environment adjacent the station. The following principles have been observed in the design process:

- Detail and texture is focused on the lower floors, associated with the podium, where it is most visible.
- Careful articulation of the building form has been adopted to reduce the perceived bulk of the building and respond to the context.
- The building has an honest tectonic - expressing and celebrating the typology and construction.
- Glazing is recessive, which both protects the apartments from the summer sun, and also allows a play of light and shadow on the solid elements of the facade.
- The use of 'natural' materials require minimal maintenance.
- Selection of robust materials, which are long lasting and weather naturally.
- Proposed colours are those which are found naturally rather than primary colours, ensuring that the building sits comfortably within the urban scape.
- Extensive use of landscaping elements as an architectural overlay to the building. An integrated architectural and landscape response.

ADG Response Table

3

The following content outlines the architectural scheme's response to Part 3 & Part 4 of the Apartment Design Guide.

Caption

ADG Response Table

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
3	**Siting the development**				
3A	**Site Analysis**				
	3A-1	**Site analysis illustrates that design decisions have been based on opportunities and constraints of the site conditions and their relationship to the surrounding context**	•		
		Each element in the Site Analysis Checklist should be addressed (see ADG Appendix 1)			Note
3B	**Orientation**				
	3B - 1	**Building types and layouts respond to the streetscape and site while optimising solar access within the development**			
		Buildings along the street frontage define the street, by facing it and incorporating direct access from the street (see figure 3B.1)	•		
		Where the street frontage is to the east or west, rear buildings should be orientated to the north			N/A
		Where the street frontage is to the north or south, overshadowing to the south should be minimised and buildings behind the street frontage should be orientated to the east and west (see figure 3B.2)	•		The majority of the apartments face North or East. Apartments behind Lord Sheffield Circuit (to the South) are dual aspect and face South-East or South-West.
	3B-2	**Overshadowing of neighbouring properties is minimised during midwinter**			
		Living areas, private open space and communal open space should receive solar access in accordance with sections 3D Communal and public open space and 4A Solar and daylight access	•		No impact on solar access to residential properties.
		Solar access to living rooms, balconies and private open spaces of neighbours should be considered	•		No impact on solar access to residential properties.
		Where an adjoining property does not currently receive the required hours of solar access, the proposed building ensures solar access to neighbouring properties is not reduced by more than 20%			N/A
		If the proposal will significantly reduce the solar access of neighbours, building separation should be increased beyond minimums contained in section 3F Visual privacy			N/A
		Overshadowing should be minimised to the south or downhill by increased upper level setbacks	•		N/A - overshadows the rail corridor to the south.

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
		It is optimal to orientate buildings at 90 degrees to the boundary with neighbouring properties to minimise overshadowing and privacy impacts, particularly where minimum setbacks are used and where buildings are higher than the adjoining development	•		Overshadows the rail corridor.
		A minimum of 4 hours of solar access should be retained to solar collectors on neighbouring buildings			N/A
3C	**Public Domain Interface**				
	3C–1	**Transition between private and public domain is achieved without compromising safety and security**			
		Terraces, balconies and courtyard apartments should have direct street entry, where appropriate	•		No residential proposed at ground level.
		Changes in level between private terraces, front gardens and dwelling entries above the street level provide surveillance and improve visual privacy for ground level dwellings (see figure 3C.1)	•		No residential proposed at ground level.
		Upper level balconies and windows should overlook the public domain	•		Upper level balconies overlook East, West, North and South.
		Front fences and walls along street frontages should use visually permeable materials and treatments. The height of solid fences or walls should be limited to 1m			N/A
		Length of solid walls should be limited along street frontages	•		Lord Sheffield interface is the public colonnade.
		Opportunities should be provided for casual interaction between residents and the public domain. Design solutions may include seating at building entries, near letter boxes and in private courtyards adjacent to streets	•		The residential lobbies are associated with the colonnade providing casual interaction. A community garden is also proposed in Lot3011 providing further interaction.
		In developments with multiple buildings and/or entries, pedestrian entries and spaces associated with individual buildings/entries should be differentiated to improve legibility for residents, using a number of the following design solutions: — architectural detailing — changes in materials — plant species — colours	•		Noted - way-finding and detailing can be incorporated.
		Opportunities for people to be concealed should be minimised	•		
	3C–2	**Amenity of public domain is retained and enhanced**			

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
		Planting softens the edges of any raised terraces to the street, for example above sub-basement car parking	•		Podium will have planted edges.
		Mail boxes should be located in lobbies, perpendicular to the street alignment or integrated into front fences where individual street entries are provided	•		Allowance for mailboxes associated with the lobbies
		The visual prominence of underground car park vents should be minimised and located at a low level where possible	•		Noted
		Substations, pump rooms, garbage storage areas and other service requirements should be located in basement car parks or out of view	•		Services are located in the basement and integrated along the railway corridor facade.
		Ramping for accessibility should be minimised by building entry locations and setting ground floor levels in relation to footpath levels	•		The colonnade is used facilitate ramps and avoid any ramps at building entries.
		Durable, graffiti resistant and easily cleanable materials should be used	•		Noted
		Where development adjoins public parks, open space or bushland, the design positively addresses this interface and uses a number of the following design solutions: — Street access, pedestrian paths and building entries which are clearly defined — Paths, low fences and plating that clearly delineate between communal/private open space and the adjoining public open space — Minimal use of blank walls, fences and ground level parking	•		The retail, commercial and residential components all positively address the public space. Residential and commercial uses overlook the rail corridor and station platforms.
		On sloping sites protrusion of car parking above ground level should be minimised by using split levels to step underground car parking	•		The carpark is not visible.
3D	**Communal and public open space**				
	3D-1	**An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping.**			
		Communal open space has a minimum area equal to 25% of the site	•		The communal open space is well in excess of 25% of the site.
		Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid-winter)	•		Yes - the communal open space is located on the rooftop and is North facing.
		Communal open space should have a minimum dimension of 3m, and larger developments should consider greater dimensions	•		Yes - the communal open space is generous.

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
		Communal open space should be co-located with deep soil areas		•	Not possible due to the site being within the town centre and located adjacent the train station/railway corridor. The communal open space is located on the roof, away from the impacts of the rail corridor. The deep soil zone along the Eastern boundary (Lot 3011) is a community garden and bush tucker walk which is co-located with the deep soil.
		Direct, equitable access should be provided to communal open space areas from common circulation areas, entries and lobbies	•		All communal open space has equitable access.
		Where communal open space cannot be provided at ground level, it should be provided on a podium or roof	•		Communal open space is located on the rooftop.
		Where developments are unable to achieve the design criteria, such as on small lots, sites within business zones, or in a dense urban area, they should: — provide communal spaces elsewhere such as a landscaped roof top terrace or a common room — provide larger balconies or increased private open space for apartments — demonstrate good proximity to public open space and facilities and/or provide contributions to public open space	•		The scheme provides more than 25% of communal open space, which is located on the roof. It is a very high quality outcome for the residents. In addition - there is a community garden proposed along the Eastern boundary (lot 3011) providing additional outdoor space. -there is a planted podium roof to provide a landscaped outlook at lower levels. - the site is located close to Ron Mulock Oval, providing space for active open space.
	3D–2	**Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting**			
		Facilities are provided within communal open spaces and common spaces for a range of age groups (see also 4F Common circulation and spaces), incorporating some of the following elements: — seating for individuals or groups — barbecue areas — play equipment or play areas — swimming pools, gyms, tennis courts or common rooms	•		The rooftop communal open space includes landscape, pools, indoor and outdoor areas.
		The location of facilities responds to microclimate and site conditions with access to sun in winter, shade in summer and shelter from strong winds and down drafts	•		The rooftop communal area includes internal and external areas.

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
		Visual impacts of services should be minimised, including location of ventilation duct outlets from basement car parks, electrical substations and detention tanks	•		Services can be integrated.
	3C–3	**Communal open space is designed to maximise safety**			
		Communal open space and the public domain should be readily visible from habitable rooms and private open space areas while maintaining visual privacy. Design solutions may include: — bay windows — corner windows — balconies	•		The public domain and community garden is visible from habitable rooms and private open space. The communal open space is located on the roof. However the space is visually permeable.
		Communal open space should be well lit	•		
		Where communal open space/facilities are provided for children and young people they are safe and contained	•		
	3D–4	**Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood**			
		The public open space should be well connected with public streets along at least one edge	•		The colonnade is an extension of the public domain.
		The public open space should be connected with nearby parks and other landscape elements	•		The colonnade is connected with the station forecourt.
		Public open space should be linked through view lines, pedestrian desire paths, termination points and the wider street grid	•		The colonnade is visually permeable.
		Solar access should be provided year round along with protection from strong winds	•		
		Opportunities for a range of recreational activities should be provided for people of all ages	•		
		A positive address and active frontages should be provided adjacent to public open space	•		Retail frontages activate the public domain.
		Boundaries should be clearly defined between public open space and private areas	•		
3E	**Deep soil zones**				
	3E–1	**Deep soil zones provide areas on the site that allow for and support healthy plant tree growth. They improve residential amenity and promote management of water and air quality**			

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
		Objective **Design Criteria** Design Guidance			
		Deep soil zones are to meet the following minimum requirements. **Site area** / **Minimum dimensions** / **Deep soil zone (% of site area)** Less than 650m² / – / 7% 650m² - 1,500m² / 3m Greater than 1,500m² / 6m Greater than 1,500m² with significant existing cover / 6m	•		The deep soil provided is minimum 7%. The deep soil is located in Lot 3011 and co-located with the community garden. There is a small portion of the deep soil at the curved geometry that is less then 6m wide resulting in a minor technical non-compliance - however it is compliant with the intent and objectives. The deep soil including areas less than 6m wide is far greater than 7% and includes tree planting along the bush tucker walk on the Eastern boundary. It is noted that the site is located in an urban area and adjacent the railway corridor meaning larger amounts of deep soil at ground floor are not possible. In addition, to ensure there is sufficient landscape and canopy cover the following is proposed; -public domain planting along Lord Sheffield Circuit. -extensive amounts of landscape on the podium roof -extensive amounts of landscape on the rooftop communal area. There is also an unbuilt zone/ easement along the southern boundary that is 3m wide. To ensure that the proposed landscape is successful plant species and soil depths have been selected to suit the location and climate, maximising the use of native species to ensure they survive the micro climate of Penrith. Refer to Arcadia Landscape Architect design report.

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
		On some sites it may be possible to provide larger deep soil zones, depending on the site area and context: 10% of the site as deep soil on sites with an area of 650m² – 1,500m² 15% of the site as deep soil on sites greater than 1,500m²		•	Due to the site being located in an urban area and adjacent the railway corridor larger amounts of deep soil are not feasible. Refer above.
		Deep soil zones should be located to retain existing significant trees and to allow for the development of healthy root systems, providing anchorage and stability for mature trees. Design solutions may include: — basement and sub-basement car park design that is consolidated beneath building footprints — use of increased front and side setbacks — adequate clearance around trees to ensure long term health — co-location with other deep soil areas on adjacent sites to create larger contiguous areas of deep soil	•		Deep soil is located in Lot 3011 and co-located with the community garden which will allow for the development of mature trees.
		Achieving the design criteria may not be possible on some sites including where: — The location and building typology have limited or no space for deep soil at ground level (e.g. central business district, constrained sites, high density areas, or in centres) — There is 100% site coverage or non-residential uses at ground floor level — Where a proposal does not achieve deep soil requirements, acceptable stormwater management should be achieved and alternative forms of planting provided such as on structure	•		It is noted that the site is located in an urban area and adjacent the railway corridor meaning extensive deep soil at ground floor is not possible. To ensure there is sufficient landscape and canopy cover the following is proposed; -public domain planting along Lord Sheffield Circuit. -extensive amounts of landscape on the podium roof -extensive amounts of landscape on the rooftop communal area. The landscape has been designed by Arcadia - plant species and soil depths have been selected to suit the location and climate, maximising the use of native species to ensure they survive the micro climate of Penrith.
	3F–1	**Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy**			

Part No.	Objective No	**Objective** **Design Criteria** Design Guidance	Complies Yes	Complies No	Notes
		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: **Building Height** / **Habitable Room and Balconies** / **Non Habitable** Up to 12 (4 storeys) / 6m / 3m Up to 25m (5-8 storeys) / 9m / 4.5m Over 25m (9+ storeys) / 12m / 6m Note: Separation distances between buildings on the same site should combine required building separations depending on the type of room (see figure 3F.2) Gallery access circulation should be treated as habitable space when measuring privacy separation distances between neighbouring properties	•		Separation distances to site boundaries are compliant. 1.5m to the railway corridor where no development is possible. 0m to Lord Sheffield Circuit, where the road reserve provides the required separation. 0m to the Western boundary, which is the station forecourt, where development is not possible. 12m minimum to the Eastern boundary, and potential future development.
		Generally one step in the built form as the height increases due to building separations is desirable. Additional steps should be careful not to cause a 'ziggurat' appearance	•		The design does not propose a stepping form.
		For residential buildings next to commercial buildings, separation distances should be measured as follows: — for retail, office spaces and commercial balconies use the habitable room distances — for service and plant areas use the non-habitable room distances			N/A
		New development should be located and oriented to maximise visual privacy between buildings on site and for neighbouring buildings. Design solutions include: — site layout and building orientation to minimise privacy impacts (see also section 3B Orientation) — on sloping sites, apartments on different levels have appropriate visual separation distances (see figure 3F.4)	•		No privacy issues to neighbouring development. The planning of the apartments minimises privacy issues to the station platform.
		Apartment buildings should have an increased separation distance of 3m (in addition to the requirements set out in design criteria 1) when adjacent to a different zone that permits lower density residential development to provide for a transition in scale and increased landscaping (figure 3F.5)			Noted
		Direct lines of sight should be avoided for windows and balconies across corners	•		
		No separation is required between blank walls	•		Noted

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
	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**			
		Communal open space, common areas and access paths should be separated from private open space and windows to apartments, particularly habitable room windows. Design solutions may include: — setbacks — solid or partially solid balustrades to balconies at lower levels — fencing and/or trees and vegetation to separate spaces — screening devices — bay windows or pop out windows to provide privacy in one direction and outlook in another — raising apartments/private open space above the public domain or communal open space — planter boxes incorporated into walls and balustrades to increase visual separation — pergolas or shading devices to limit overlooking of lower apartments or private open space — on constrained sites where it can be demonstrated that building layout opportunities are limited, fixed louvres or screen panels to windows and/or balconies	•		There are no residential apartments proposed on the ground floor. Communal open space is proposed on the rooftop. This means there are no visual privacy impacts to residential apartments.
		Bedrooms, living spaces and other habitable rooms should be separated from gallery access and other open circulation space by the apartment's service areas	•		No gallery access proposed.
		Balconies and private terraces should be located in front of living rooms to increase internal privacy	•		
		Windows should be offset from the windows of adjacent buildings	•		
		Recessed balconies and/or vertical fins should be used between adjacent balconies	•		
3G	**Pedestrian Access and Entries**				
	3G–1	**Building entries and pedestrian access connects to and address the public domain**			
		Multiple entries (including communal building entries and individual ground floor entries) are provided to activate the street edge	•		
		Entry locations relate to the street and subdivision pattern and the existing pedestrian network	•		
		Building entries are clearly identifiable. Communal entries are clearly distinguishable from private entries	•		

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
		Where street frontage is limited and multiple buildings are located on the site, a primary street address is provided with clear sight lines and pathways to secondary building entries			N/A
	3G–2	Access, entries and pathways are equitable and easy to identify	•		
		Building access areas including lift lobbies, stairwells and hallways are clearly visible from the public domain and communal spaces	•		
		The design of ground floors and underground car parks minimise level changes along pathways and entries	•		
		Steps and ramps are integrated into the overall building and landscape design	•		
		For large developments 'way finding' maps should be provided to assist visitors and residents (see figure 4T.3)			Noted - As required, subject to future design development
		For large developments electronic access and audio/ video intercom should be provided to manage access			Noted - As required, subject to future design development
	3G–3	**Pedestrian links through developments provide access to streets and connect destinations**			
		Pedestrian links through sites facilitate direct connections to open space, main streets, centres and public transport			N/A. The colonnade is adjacent to Lord Sheffield Circuit.
		Pedestrian links should be direct, have clear sight lines, be overlooked by habitable rooms or private open spaces of dwellings, be well lit and contain active uses, where appropriate			N/A. The colonnade is adjacent to Lord Sheffield Circuit.
3H	**Vehicle Access**				
	3H–1	**Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes**			
		Car park access is integrated with the building's overall facade, design solutions may include: — the materials and colour palette minimise visibility from the street — security doors or gates at entries that minimise voids in the facade — where doors are not provided, the visible interior reflects the facade design and the building services, pipes and ducts are concealed	•		The car park ramp and loading dock are integrated into the building, accessed via Lot3011.

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
		Car park entries are located behind the building line	•		The car park ramp and loading dock are integrated into the building, accessed via Lot3011 - not on the main facade facing Lord Sheffield Circuit.
		Vehicle entries are located at the lowest point of the site minimising ramp lengths, excavation and impacts on the building form and layout	•		The vehicle entry is located from lot 3011. The site is generally flat with consideration to the length of the site.
		Car park entry and access is located on secondary streets or lanes where available	•		The vehicle entry is located from lot 3011.
		Vehicle standing areas that increase driveway width and encroach into setbacks should be avoided	•		There is a standard 2 way driveway proposed.
		Access point locations avoid headlight glare to habitable rooms	•		There will be no conflict due to the proposed location.
		Adequate separation distances are provided between vehicular entries and street intersections			Refer Traffic Engineer
		The width and number of vehicle access points is limited to the minimum	•		One vehicle access is proposed.
		Visual impact of long driveways is minimised through changing alignments and screen planting	•		A buffer zone of landscape provides a visual buffer along the Eastern boundary.
		The requirement for large vehicles to enter or turnaround within the site is avoided		•	Due to the scale of the development a loading dock is provided and is unavoidable.
		Garbage collection, loading and servicing areas are screened	•		Garbage collection occurs within the loading dock. The holding area is within the building.
		Clear sight lines should be provided at pedestrian and vehicle crossings	•		
		Traffic calming devices such as changes in paving material or textures should be used where appropriate	•		The driveway will be paved. Refer Arcadia Landscape drawings.
		Pedestrian and vehicle access should be separated and distinguishable. Design solutions may include: changes in surface materials level changes the use of landscaping for separation	•		They are separate.
3J	**Bicycle and Car Parking**				
	3J-1	**Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas**			

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
		For development in the following locations: — on sites that are within 800 metres of a railway station or light rail stop in the Sydney Metropolitan Area; or — on land zoned, and sites within 400 metres of land zoned, B3 Commercial Core, B4 Mixed Use or equivalent in a nominated regional centre The minimum car parking requirement for residents and visitors is set out in the Guide to Traffic Generating Developments, or the car parking requirement prescribed by the relevant council, whichever is less The car parking needs for a development must be provided off street	•		Refer to Planning and Traffic Engineers report for rates.
		Where a car share scheme operates locally, provide car share parking spaces within the development. Car share spaces, when provided, should be on site			N/A - not provided.
		Where less car parking is provided in a development, council should not provide on street resident parking permits			Noted
	3J-2	**Parking and facilities are provided for other modes of transport**			
		Conveniently located and sufficient numbers of parking spaces should be provided for motorbikes and scooters	•		Refer to Planning and Traffic Engineers report for provision.
		Secure undercover bicycle parking should be provided that is easily accessible from both the public domain and common areas	•		Refer to Planning and Traffic Engineers report for provision.
		Conveniently located charging stations are provided for electric vehicles, where desirable	•		Noted - design development.
	3J-3	**Car park design and access is safe and secure**			
		Supporting facilities within car parks, including garbage, plant and switch rooms, storage areas and car wash bays can be accessed without crossing car parking spaces	•		Garbage / plant /storage and switch rooms are located to be positioned in locations to minimise conflicts.
		Direct, clearly visible and well lit access should be provided into common circulation areas	•		Noted.
		A clearly defined and visible lobby or waiting area should be provided to lifts and stairs	•		
		For larger car parks, safe pedestrian access should be clearly defined and circulation areas have good lighting, colour, line marking and/or bollards	•		Noted.
	3J-4	**Visual and environmental impacts of underground car parking are minimised**			

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
		Excavation should be minimised through efficient car park layouts and ramp design	•		
		Car parking layout should be well organised, using a logical, efficient structural grid and double loaded aisles	•		
		Protrusion of car parks should not exceed 1m above ground level. Design solutions may include stepping car park levels or using split levels on sloping sites	•		The basement is not visible.
		Natural ventilation should be provided to basement and sub-basement car parking areas		•	The basement is below ground meaning natural ventilation is not possible.
		Ventilation grills or screening devices for car parking openings should be integrated into the facade and landscape design	•		Louvres are integrated into the Southern facade.
	3J-5	**Visual and environmental impacts of on-grade car parking are minimised**			
		On-grade car parking should be avoided	•		Not proposed.
		Where on-grade car parking is unavoidable, the following design solutions are used: — parking is located on the side or rear of the lot away from the primary street frontage — cars are screened from view of streets, buildings, communal and private open space areas — safe and direct access to building entry points is provided — parking is incorporated into the landscape design of the site, by extending planting and materials into the car park space — stormwater run-off is managed appropriately from car parking surfaces — bio-swales, rain gardens or on site detention tanks are provided, where appropriate — light coloured paving materials or permeable paving systems are used and shade trees are planted between every 4-5 parking spaces to reduce increased surface temperatures from large areas of paving			N/A - Not proposed.
	3J-6	**Visual and environmental impacts of above ground enclosed car parking are minimised**			
		Exposed parking should not be located along primary street frontages			N/A - Not proposed.

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
		Screening, landscaping and other design elements including public art should be used to integrate the above ground car parking with the facade. Design solutions may include: — car parking that is concealed behind the facade, with windows integrated into the overall facade design (approach should be limited to developments where a larger floor plate podium is suitable at lower levels) — car parking that is 'wrapped' with other uses, such as retail, commercial or two storey Small Office/ Home Office (SOHO) units along the street frontage (see figure 3J.9)			N/A - Not proposed.
		Positive street address and active frontages should be provided at ground level	•		
4	**Designing the Building**				
4A	**Solar and daylight access**				
	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 direct sunlight between 9 am and 3 pm at mid-winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas	•		Minimum of 70% apartments achieve solar access. The majority are North and/or East facing.
		2. In all other areas, living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 3 hours direct sunlight between 9 am and 3 pm at mid-winter			N/A

Part No.	Objective No	**Objective** **Design Criteria** Design Guidance	Complies Yes	Complies No	Notes
		3. A maximum of 15% of apartments in a building receive no direct sunlight between 9am and 3pm at mid winter		•	More than 15% of apartments don't receive direct sunlight between 9am - 3pm. This is a result of the design strategy that uses the built form as an acoustic shield, as outlined in the design excellence competition. The proposed building form offers a significant public and private amenity benefit. The continuous northern edge to the rail corridor will eliminate existing acoustic impacts to neighbours to the north of the site – by delivering a physical separation. The apartments that don't receive the minimum light in midwinter are dual aspect - either facing South-West or South-East. This allows both secondary light in midwinter, and solar access at other times of the year. There are no South facing single orientation apartments. This is consistent with the scheme that was awarded the winner for the design excellence competition.
		The design maximises north aspect and the number of single aspect south facing apartments is minimised	•		The majority are North and/or East facing. There are no South facing single orientation apartments.
		Single aspect, single storey apartments should have a northerly or easterly aspect	•		Single aspect apartments face North and East.
		Living areas are best located to the north and service areas to the south and west of apartment	•		Typically.
		To optimise the direct sunlight to habitable rooms and balconies a number of the following design features are used: — dual aspect apartments — shallow apartment layouts — two storey and mezzanine level apartments — bay windows	•		Typically dual aspect apartments are provided.

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
		To maximise the benefit to residents of direct sunlight within living rooms and private open spaces, a minimum of 1m² of direct sunlight, measured at 1m above floor level, is achieved for at least 15 minutes	•		This can be achieved to the majority of apartments.
		Achieving the design criteria may not be possible on some sites. This includes: — where greater residential amenity can be achieved along a busy road or rail line by orientating the living rooms away from the noise source — on south facing sloping sites — where significant views are oriented away from the desired aspect for direct sunlight — Design drawings need to demonstrate how site constraints and orientation preclude meeting the design criteria and how the development meets the objective			Noted
	4A-2	**Daylight access is maximised where sunlight is limited**			
		Courtyards, skylights and high level windows (with sills of 1,500mm or greater) are used only as a secondary light source in habitable rooms	•		Noted
		Where courtyards are used: — use is restricted to kitchens, bathrooms and service areas — building services are concealed with appropriate detailing and materials to visible walls — courtyards are fully open to the sky — access is provided to the light well from a communal area for cleaning and maintenance — acoustic privacy, fire safety and minimum privacy separation distances (see section 3F Visual privacy) are achieved			N/A
		Opportunities for reflected light into apartments are optimised through: — reflective exterior surfaces on buildings opposite south facing windows — positioning windows to face other buildings or surfaces (on neighbouring sites or within the site) that will reflect light — integrating light shelves into the design — light coloured internal finishes	•		Internal finishes on balconies are a light.
	4A-3	**Design incorporates shading and glare control, particularly for warmer months**			

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
		A number of the following design features are used: — balconies or sun shading that extend far enough to shade summer sun, but allow winter sun to penetrate living areas — shading devices such as eaves, awnings, balconies, pergolas, external louvres and planting — horizontal shading to north facing windows — vertical shading to east and particularly west facing windows — operable shading to allow adjustment and choice — high performance glass that minimises external glare off windows, with consideration given to reduced tint glass or glass with a reflectance level below 20% (reflective films are avoided)	•		Windows and glazing are setback and the Northern facade is used as a brise soleil.
4B	**Natural Ventilation**				
	4B-1	**All habitable rooms are naturally ventilated**			
		The building's orientation maximises capture and use of prevailing breezes for natural ventilation in habitable rooms	•		
		Depths of habitable rooms support natural ventilation	•		
		The area of unobstructed window openings should be equal to at least 5% of the floor area served	•		
		Light wells are not the primary air source for habitable rooms			N/A - not proposed
		Doors and openable windows maximise natural ventilation opportunities by using the following design solutions: — adjustable windows with large effective openable areas — a variety of window types that provide safety and flexibility such as awnings and louvres — windows which the occupants can reconfigure to funnel breezes into the apartment such as vertical louvres, casement windows and externally opening doors	•		
	4B-2	**The layout and design of single aspect apartments maximises natural ventilation**			
		Apartment depths are limited to maximise ventilation and airflow (see also figure 4D.3)	•		

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
		Natural ventilation to single aspect apartments is achieved with the following design solutions: — primary windows are augmented with plenums and light wells (generally not suitable for cross ventilation) — stack effect ventilation / solar chimneys or similar to naturally ventilate internal building areas or rooms such as bathrooms and laundries — courtyards or building indentations have a width to depth ratio of 2:1 or 3:1 to ensure effective air circulation and avoid trapped smells	•		Single orientation apartments don't propose light wells as they face North, and don't require plenums as they are protected from the railway corridor.
	4B–3	**The number of apartments with natural cross ventilation is maximised 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	•		At least 60% of apartments achieve cross ventilation.
		2. Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line	•		
		The building should include dual aspect apartments, cross through apartments and corner apartments and limit apartment depths	•		
		In cross-through apartments external window and door opening sizes/areas on one side of an apartment (inlet side) are approximately equal to the external window and door opening sizes/areas on the other side of the apartment (outlet side) (see figure 4B.4)	•		North facing and South facing openings are provided in cross through apartments. Additional plenums are provided on the South (railway side) to provide additional area for ventilation.
		Apartments are designed to minimise the number of corners, doors and rooms that might obstruct airflow	•		Apartment design is rational and simple to minimise corners and dead zones.
		Apartment depths, combined with appropriate ceiling heights, maximise cross ventilation and airflow	•		
4C	**Ceiling heights**				
	4C–1	**Ceiling height achieves sufficient natural ventilation and daylight access**			

<table>
<tr><td></td><td></td><td>Objective</td><td colspan="2">Complies</td><td></td></tr>
<tr><td>Part
No.</td><td>Objective
No</td><td>Design Criteria
Design Guidance</td><td>Yes</td><td>No</td><td>Notes</td></tr>
<tr><td></td><td></td><td>Measured from finished floor level to finished ceiling level, minimum ceiling heights are:
<table><tr><td colspan="2">Minimum ceiling height for apartment and mixed use buildings</td></tr><tr><td>Habitable rooms</td><td>2.7m</td></tr><tr><td>Non-habitable rooms</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 apartment 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 people 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 of use</td></tr></table>These minimums do not preclude higher ceilings if desired</td><td>•</td><td></td><td>Habitable rooms are 2.7m ceiling height and non-habitable are 2.4m</td></tr>
<tr><td></td><td></td><td>Ceiling height can accommodate use of ceiling fans for cooling and heat distribution</td><td>•</td><td></td><td></td></tr>
<tr><td></td><td>4C–2</td><td>Ceiling height increases the sense of space in apartments and provides for well-proportioned rooms</td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td>A number of the following design solutions can be used:
— The hierarchy of rooms in an apartment is defined using changes in ceiling heights and alternatives such as raked or curved ceilings, or double height spaces
— Well-proportioned rooms are provided, for example, smaller rooms feel larger and more spacious with higher ceilings
— Ceiling heights are maximised in habitable rooms by ensuring that bulkheads do not intrude. The stacking of service rooms from floor to floor and coordination of bulkhead location above non-habitable areas, such as robes or storage, can assist</td><td>•</td><td></td><td>The vertical planning is stacked meaning that ceiling height can be maximised.</td></tr>
<tr><td></td><td>4C–3</td><td>Ceiling heights contribute to the flexibility of building use over the life of the building</td><td></td><td></td><td>N/A</td></tr>
<tr><td></td><td></td><td>Ceiling heights of lower level apartments in centres should be greater than the minimum required by the design criteria allowing flexibility and conversion to non-residential uses (see figure 4C.1)</td><td>•</td><td></td><td>No residential apartments proposed on Ground or Level 1.</td></tr>
</table>

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
4D	**Apartment size and layout**				
	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: **Apartment Type** / **Minimum Internal Area** Studio / 35m² 1 bedroom / 50m² 2 bedroom / 70m² 3 bedroom / 90m² The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m² each A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m² each	•		The apartments comply with the minimum area/size requirements - refer to apartment plans.
		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	•		
		Kitchens should not be located as part of the main circulation space in larger apartments (such as hallway or entry space)	•		
		A window should be visible from any point in a habitable room	•		
		Where minimum areas or room dimensions are not met apartments need to demonstrate that they are well designed and demonstrate the usability and functionality of the space with realistically scaled furniture layouts and circulation areas. These circumstances would be assessed on their merits			N/A
	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	•		Refer to apartment plans for layouts and dimensions.

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
		2. In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window	•		Some apartment depths are greater than 8m to allow for a minimum 6m deep living/dining area plus an adequate kitchen. These are typically cross-through apartments with secondary light and ventilation reducing effective depth. These apartments typically face North or East and have sufficient solar access to accommodate the depth. In single orientation apartments return glazing reduces the effective depth (relative to facade) below 8m.
		Greater than minimum ceiling heights can allow for proportional increases in room depth up to the permitted maxi-mum depths	•		Subject to design development - but a minimum 2.7m ceiling height can be achieved, with the potential for greater heights in the living/dining areas due to the stacked plans.
		All living areas and bedrooms should be located on the external face of the building	•		Refer apartment plans.
		Where possible: — bathrooms and laundries should have an external openable window — main living spaces should be oriented toward the primary outlook and aspect and away from noise sources	•		Some apartments are provided with external windows. Typically apartments plans face North away from the noise source.
	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)	•		Refer apartment plans.
		2. Bedrooms have a minimum dimension of 3m (excluding wardrobe space)	•		Refer apartment plans.
		3. Living rooms or combined living/dining rooms have a minimum width of: — 3.6m for studio and 1 bedroom apartments — 4m for 2 and 3 bedroom apartments	•		Refer apartment plans.
		4. The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts	•		Refer apartment plans.

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
		Access to bedrooms, bathrooms and laundries is separated from living areas minimising direct openings between living and service areas	•		Refer apartment plans.
		All bedrooms allow a minimum length of 1.5m for robes	•		Refer apartment plans.
		The main bedroom of an apartment or a studio apartment should be provided with a wardrobe of a minimum 1.8m long, 0.6m deep and 2.1m high	•		Refer apartment plans.
		Apartment layouts allow flexibility over time, design solutions may include: — dimensions that facilitate a variety of furniture arrangements and removal — spaces for a range of activities and privacy levels between different spaces within the apartment — dual master apartments — dual key apartments — Note: dual key apartments which are separate but on the same title are regarded as two sole occupancy units for the purposes of the Building Code of Australia and for calculating the mix of apartments — room sizes and proportions or open plans (rectangular spaces (2:3) are more easily furnished than square spaces (1:1)) — efficient planning of circulation by stairs, corridors and through rooms to maximise the amount of usable floor space in rooms	•		Internal layouts, with split plans, allow for different occupancy - such as renters or families. Refer apartment plans.
4E	**Private Open Space and Balconies**				
	4E-1	**Apartments provide appropriately sized private open space and balconies to enhance residential amenity**			
		All apartments are required to have primary balconies as follows: **Dwelling Type** / **Minimum Area** / **Minimum Depth** Studio Apartments / 4m² / - 1 bedroom apartments / 8m² / 2m 2 bedroom apartments / 10m² / 2m 3+ bedroom apartments / 12m² / 2.4m The minimum balcony depth to be counted as contributing to the balcony area is 1m	•		Apartments are provided with minimum balcony sizes.

Part No.	Objective No	**Objective** **Design Criteria** Design Guidance	Complies Yes	Complies No	Notes
		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	•		Podium apartments are provided with increased balcony sizes.
		Increased communal open space should be provided where the number or size of balconies are reduced			N/A - not proposed
		Storage areas on balconies is additional to the minimum balcony size			N/A - not proposed
		Balcony use may be limited in some proposals by: — consistently high wind speeds at 10 storeys and above — close proximity to road, rail or other noise sources — exposure to significant levels of aircraft noise — heritage and adaptive reuse of existing buildings — In these situations, Juliet balconies, operable walls, enclosed wintergardens or bay windows may be appropriate, and other amenity benefits for occupants should also be provided in the apartments or in the development or both. Natural ventilation also needs to be demonstrated	•		Balconies are proposed along the South, facing the noise source, as they are being used as a noise control device for internal spaces and an element to protect the facade. In addition a large communal open space is provided on the roof away from the noise source.
	4E-2	**Primary private open space and balconies are appropriately located to enhance liveability for residents**			
		Primary open space and balconies should be located adjacent to the living room, dining room or kitchen to extend the living space	•		
		Private open spaces and balconies predominantly face north, east or west	•		
		Primary open space and balconies should be orientated with the longer side facing outwards or be open to the sky to optimise daylight access into adjacent rooms	•		
	4E-3	**Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building**			
		Solid, partially solid or transparent fences and balustrades are selected to respond to the location. They are de-signed to allow views and passive surveillance of the street while maintaining visual privacy and allowing for a range of uses on the balcony. Solid and partially solid balustrades are preferred	•		Solid balustrades proposed for privacy and acoustic reasons.
		Full width full height glass balustrades alone are generally not desirable	•		No glass balustrades have been proposed.
		Projecting balconies should be integrated into the building design and the design of soffits considered	•		The balconies are completely integrated.

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
		Operable screens, shutters, hoods and pergolas are used to control sunlight and wind	•		Balconies and ledges are used to protect the glazing.
		Balustrades are set back from the building or balcony edge where overlooking or safety is an issue	•		Not required. Additional screens are provided along the Southern facade facing the railway.
		Downpipes and balcony drainage are integrated with the overall facade and building design	•		Yes - proposed to be integrated.
		Air-conditioning units should be located on roofs, in basements, or fully integrated into the building design		•	Air-conditioning units will be located on the balconies behind balustrades. The will not be visible and are more efficient this way.
		Where clothes drying, storage or air conditioning units are located on balconies, they should be screened and inte-grated in the building design	•		Solid balustrades will provide visual screening.
		Ceilings of apartments below terraces should be insulated to avoid heat loss	•		In accordance with BASIX.
		Water and gas outlets should be provided for primary balconies and private open space			Noted - TBC in design development.
	4E–4	**Private open space and balcony design maximises safety**			
		Changes in ground levels or landscaping are minimised	•		
		Design and detailing of balconies avoids opportunities for climbing and falls	•		
4F	**Common Circulation and Spaces**				
	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	•		All cores have 2-3 lifts and multiple stairs (some scissor stairs) meaning there is not more than 8 apartments to a lift core on a floor.
		2. For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40	•		Lift cores with 2 lift service 48 apartments. The Eastern lift core with 3 lifts services 104 apartments.
		Greater than minimum requirements for corridor widths and/ or ceiling heights allow comfortable movement and ac-cess particularly in entry lobbies, outside lifts and at apartment entry doors			The entry corridors are 1.55m wide with additional width at apartment entry doors with the introduction of niches.
		Daylight and natural ventilation should be provided to all common circulation spaces that are above ground	•		All common circulation spaces have natural ventilation and daylight.

Part No.	Objective No	**Objective** **Design Criteria** Design Guidance	Complies Yes	No	Notes
		Windows should be provided in common circulation spaces and should be adjacent to the stair or lift core or at the ends of corridors	•		Windows are provided.
		Longer corridors greater than 12m in length from the lift core should be articulated. Design solutions may include: a series of foyer areas with windows and spaces for seating wider areas at apartment entry doors and varied ceiling heights	•		The Eastern common corridors are 1.6m wide with additional width at apartment entry doors with the introduction of niches.
		Design common circulation spaces to maximise opportunities for dual aspect apartments, including multiple core apartment buildings and cross over apartments	•		The typical building module has 6 apartments per core, which allow for dual aspect apartments.
		Achieving the design criteria for the number of apartments off a circulation core may not be possible. Where a development is unable to achieve the design criteria, a high level of amenity for common lobbies, corridors and apartments should be demonstrated, including: — sunlight and natural cross ventilation in apartments — access to ample daylight and natural ventilation in common circulation spaces — common areas for seating and gathering — generous corridors with greater than minimum ceiling heights — other innovative design solutions that provide high levels of amenity			N/A - Design criteria is met.
		Where design criteria 1 is not achieved, no more than 12 apartments should be provided off a circulation core on a single level			N/A - Design criteria is met.
		Primary living room or bedroom windows should not open directly onto common circulation spaces, whether open or enclosed. Visual and acoustic privacy from common circulation spaces to any other rooms should be carefully con-trolled	•		
	4F–2	**Common circulation spaces promote safety and provide for social interaction between residents**			
		Direct and legible access should be provided between vertical circulation points and apartment entries by minimising corridor or gallery length to give short, straight, clear sight lines	•		
		Tight corners and spaces are avoided	•		
		Circulation spaces should be well lit at night			Noted

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
		Legible signage should be provided for apartment numbers, common areas and general wayfinding			Noted
		Incidental spaces, for example space for seating in a corridor, at a stair landing, or near a window are provided			Noted - Residential lobbies can have seating.
		In larger developments, community rooms for activities such as owners corporation meetings or resident use should be provided and are ideally co-located with communal open space	•		Covered areas, which are semi-enclosed, are provided on the rooftop communal area which can act like a community room.
		Where external galleries are provided, they are more open than closed above the balustrade along their length			N/A - No external galleries are proposed.
4G	**Storage**				
	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: **Dwelling type** / **Storage size** Studio apartments / 4m3 1 bedroom apart-ments / 6m3 2 bedroom apart-ments / 8m3 3 bedroom apart-ments / 10m3 At least 50% of the required storage is to be located within the apartment	•		Storage requirements are provided in accordance with minimum requirements. Refer to apartment drawings.
		Storage is accessible from either circulation or living areas	•		
		Storage provided on balconies (in addition to the minimum balcony size) is integrated into the balcony design, weather proof and screened from view from the street			N/A - balcony storage not proposed.
		Left over space such as under stairs is used for storage			N/A
	4G–2	**Additional storage is conveniently located, accessible and nominated for individual apartments**			
		Storage not located in apartments is secure and clearly allocated	•		
		Storage is provided for larger and less frequently accessed items, where practical	•		Storage areas are located in the basement.
		Storage space in internal or basement car parks is provided at the rear or side of car spaces or in cages so that allocated car parking remains accessible	•		Storage will not be designed to impede the car parking spaces.

Part No.	Objective No	Objective **Design Criteria** Design Guidance	Complies Yes	Complies No	Notes
		If communal storage rooms are provided they should be accessible from common circulation areas of the building			Noted
		Storage not located in an apartment is integrated into the overall building design and not visible from the public domain	•		No externally visible storage is proposed.
4H	**Acoustic Privacy**				
	4H-1	**Noise transfer is minimised through the siting of buildings and building layout**			
		Adequate building separation is provided within the development and from neighbouring buildings / adjacent uses (also see section 2F Building separation and section 3F Visual Privacy)	•		
		Window and door openings are generally orientated away from noise sources	•		The majority of windows - in particular living rooms - are orientated to the North and East away from railway corridor.
		Noisy areas within buildings including building entries and corridors are located next to or above each other and quieter areas next to or above quieter areas	•		The residential floor plans are replicated vertically.
		Storage, circulation areas and non-habitable rooms are located to buffer noise from external sources	•		The majority of the apartments have North and East facing living rooms and bedrooms. Where bedrooms and living rooms face the noise source plenums are used for acoustic attenuation.
		The number of party walls (walls shared with other apartments) are limited and are appropriately insulated	•		
		Noise sources such as garage doors, driveways, service areas, plant rooms, building services, mechanical equipment, active communal open spaces and circulation areas are located at least 3m away from bedrooms	•		Plant rooms and services are generally located in the basement, or on the ground floor facing the railway corridor. The loading dock and basement entry is located below the commercial floor.
	4H-2	**Noise impacts are mitigated through internal apartment layout and acoustic treatments**			
		Internal apartment layout separates noisy spaces from quiet spaces, using a number of the following design solutions: rooms with similar noise requirements are grouped together doors separate different use zones wardrobes in bedrooms are co-located to act as sound buffers	•		Refer apartment plans.

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
		Where physical separation cannot be achieved noise conflicts are resolved using the following design solutions: double or acoustic glazing acoustic seals use of materials with low noise penetration properties continuous walls to ground level courtyards where they do not conflict with streetscape or other amenity requirements	•		Noted
4J	**Noise and Pollution**				
	4J-1	**In noisy or hostile environments the impacts of external noise and pollution are minimised through the careful siting and layout of buildings**			
		To minimise impacts the following design solutions may be used: — physical separation between buildings and the noise or pollution source — residential uses are located perpendicular to the noise source and where possible buffered by other uses — non-residential buildings are sited to be parallel with the noise source to provide a continuous building that shields residential uses and communal open spaces — Non-residential uses are located at lower levels vertically separating the residential component from the noise or pollution source. Setbacks to the underside of residential floor levels should increase relative to traffic volumes and other noise sources — Buildings should respond to both solar access and noise. Where solar access is away from the noise source, nonhabitable rooms can provide a buffer — Where solar access is in the same direction as the noise source, dual aspect apartments with shallow building depths are preferable (see figure 4J.4) — Landscape design reduces the perception of noise and acts as a filter for air pollution generated by traffic and industry	•		The design responds to the noise generated from the railway corridor by orientating the majority of the apartments towards Lord Sheffield Circuit. The majority of the apartments have North and East facing living rooms and bedrooms. Where bedrooms and living rooms face the noise source plenums are used for acoustic attenuation. On ground floor, areas facing the railway corridor are service and back of house spaces. Landscape is used on the commercial podium to reduce the perception of noise.
		Achieving the design criteria in this Apartment Design Guide may not be possible in some situations due to noise and pollution. Where developments are unable to achieve the design criteria, alternatives may be considered in the following areas: — solar and daylight access — private open space and balconies — natural cross ventilation	•		70% of apartments achieve the minimum 2 hours of solar access with low levels of noise from the railway corridor - this is due to the noise shield created by the building form. This results in a increase in apartments that don't receive 15 mins (i.e. more than 15%).

Part No.	Objective No	Objective **Design Criteria** Design Guidance	Complies Yes	Complies No	Notes
	4J-2	Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission			
		Design solutions to mitigate noise include: — limiting the number and size of openings facing noise sources — providing seals to prevent noise transfer through gaps — using double or acoustic glazing, acoustic louvres or enclosed balconies (wintergardens) — using materials with mass and/or sound insulation or absorption properties e.g. solid balcony balustrades, external screens and soffits	•		Where bedrooms and living rooms face the noise source plenums are used for acoustic attenuation. Solid balustrades are used along the railway corridor to act as a noise shield for apartments.
4K	**Apartment Mix**				
	4K-1	**A range of apartment types and sizes is provided to cater for different household types now and into the future**			
		A variety of apartment types is provided	•		1Bed / 2 Bed / 3 Bed apartments
		The apartment mix is appropriate, taking into consideration: — the distance to public transport, employment and education centres — the current market demands and projected future demographic trends — the demand for social and affordable housing — different cultural and socioeconomic group	•		1 Bed + Study = 20.2% 2 Bed + Study = 63.4% 3 Bed + Study = 16.4%
		Flexible apartment configurations, such as dual key apartments, are provided to support diverse household types and stages of life including single person households, families, multi-generational families and group households	•		Flexible apartment plans have been designed allowing for diverse households - with an emphasis on split style plans.
	4K-2	**The apartment mix is distributed to suitable locations within the building**			
		Different apartment types are located to achieve successful facade composition and to optimise solar access. See figure 4A.3			
		Larger apartment types are located on the ground or roof level where there is potential for more open space and on corners where more building frontage is available	•		Larger 3 Bedroom apartments are provided on the corners of the building on each floor.
4L	**Ground Floor Apartments**				
	4L-1	**Street frontage activity is maximised where ground floor apartments are located**			
		Direct street access should be provided to ground floor apartments			N/A - no residential apartments proposed on ground floor.

Part No.	Objective No	**Objective** **Design Criteria** Design Guidance	Complies Yes	No	Notes
		Activity is achieved through front gardens, terraces and the facade of the building. Design solutions may include: both street and foyer entrances to ground floor apartments private open space is next to the street doors and windows face the street			N/A - retail proposed on ground floor.
		Retail or home office spaces are located along street frontages	•		Retail is proposed along Lord Sheffield Circuit.
		Ground floor apartment layouts support small office home office (SOHO) use to provide future opportunities for con-version into commercial or retail areas. In these cases provide higher floor to ceiling heights and ground floor ameni-ties for easy conversion			N/A - retail proposed on ground floor.
	4L-2	**Design of ground floor apartments delivers amenity and safety for residents**			
		Privacy and safety is provided without obstructing causal surveillance. Design solutions may include: — elevation of private gardens and terraces above the street level by 1m - 1.5m (see Figure 4L.4) — landscaping and private courtyards — window sill heights that minimise sight lines into apartments — integrating balustrades, safety bars or screens with the exterior design			N/A - retail proposed on ground floor.
		Solar access is maximised through: — high ceilings and tall windows — trees and shrubs that allow solar access in winter and shade in summer			N/A - retail proposed on ground floor.
4M	**Facades**				
	4M-1	**Building facades provide visual interest along the street respecting the character of the local area**			
		Design solutions for front building facades may include: — A composition of varied building elements — A defined base, middle and top of the buildings — Revealing and concealing certain elements — Changes in texture, material, detail and colour to modify the prominence of elements	•		The composition includes; - a base (2 storey colonnade) - middle (residential component) - roof feature (arched roof)
		Building services should be integrated within the overall façade	•		Services will be integrated.

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
		Building facades should be well resolved with an appropriate scale and proportion to the streetscape and human scale. Design solutions may include: — Well composed horizontal and vertical elements — Variation in floor heights to enhance the human scale — Elements that are proportional and arranged in patterns — Public artwork or treatments to exterior blank walls — Grouping of floors or elements such as balconies and windows on taller buildings	•		The facade includes a 2 storey (street scaled) arched colonnade, with a patterned brise soleil above.
		Building facades relate to key datum lines of adjacent buildings through upper level setbacks, parapets, cornices, awnings or colonnade heights	•		The overall scale of the proposal is commensurate with the adjacent development (8-11 storeys).
		Shadow is created on the façade throughout the day with building articulation, balconies and deeper window re-veals	•		A play of shadows is created with the brise soleil along the northern facade. All glazing is recessive.
	4M-2	**Building functions are expressed by the façade**			
		Building entries should be clearly defined	•		Entries are marked within the colonnade with a scooped form and awning.
		Important corners are given visual prominence through a change in articulation, materials or colour, roof expression or changes in height	•		The corners of the colonnade are expressed at the East and West.
		The apartment layout should be expressed externally through façade features as party walls and floor slabs	•		The repeated apartment plans are reflected in the direct and honest facade tectonic.
4N	**Roof Design**				
	4N-1	**Roof treatments are integrated into the building design and positively respond to the street**			
		Roof design relates to the street. Design solutions may include: — Special roof features and strong corners — Use of skillion or very low pitch hipped roofs — Breaking down the massing of the roof by using smaller elements to avoid bulk — Using materials or a pitched form complementary to adjacent buildings	•		The roof is proposed as a communal rooftop plateau with an arched rooftop feature that acts as a crown to the building and creates a visual relationship with the arched colonnade at ground level.
		Roof treatments should be integrated with the building design. Design solutions may include: Roof design proportionate to the overall building size, scale and form Roof materials complement the building Service elements are integrated	•		Lift over runs are integrated into the arched roof form.

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
	4N–2	**Opportunities to use roof space for residential accommodation and open space are maximised**			
		Habitable roof space should be provided with good levels of amenity. Design solutions may include: — Penthouse apartments — Dormer or clerestory windows — Openable skylights	•		The rooftop is proposed as communal open space.
		Open space is provided on roof tops subject to acceptable visual and acoustic privacy, comfort levels, safety and security considerations	•		The rooftop is proposed as communal open space.
	4N–3	**Roof design incorporates sustainability features**			
		Roof design maximises solar access to apartments during winter and provides shade during summer. Design solutions may include: — The roof lifts to the north — Eaves and overhangs shade walls and windows from summer sun	•		Overhangs and deep balconies shade the walls in the summer
		Skylights and ventilation systems should be integrated into the roof design	•		
4O	**Landscape Design**				
	4O–1	**Landscape design is viable and sustainable**			
		Landscape design should be environmentally sustainable and can enhance environmental performance by incorporating: — Diverse and appropriate planting — Bio-filtration gardens — Appropriately planted shading trees — Areas for residents to plant vegetables and herbs — Composting — Green roofs or walls	•		Refer Arcadia Landscape Design Report
		Ongoing maintenance plans should be prepared	•		Refer Arcadia Landscape Design Report
		Microclimate in enhanced by: — Appropriately scaled trees near the eastern and western elevations for shade — A balance of evergreen and deciduous trees to provide shading in summer and sunlight access in winter — Shade structures such as pergolas for balconies and courtyards	•		Refer Arcadia Landscape Design Report
		Tree and shrub selection considers size at maturity and the potential for roots to complete (see table 4)	•		Refer Arcadia Landscape Design Report
	4O–2	**Landscape design contributes to the streetscape and amenity**			

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
		Landscape design responds to the existing site conditions including: Changes of levels — Views — Significant landscape features including trees and rock outcrops	•		Refer Arcadia Landscape Design Report
		Significant landscape features should be protected by: — Tree protection zones (see figure 40.5) — Appropriate signage and fencing during construction	•		Refer Arcadia Landscape Design Report
		Plants selected should be endemic to the region and reflect the local ecology	•		Refer Arcadia Landscape Design Report
4P	**Planting on Structures**				
	4P-1	**Appropriate soil profiles are provided**			
		Structures are reinforced for additional saturated soil weight	•		
		Soil volume is appropriate for plant growth, considerations include: — Modifying depths and widths according to the planting mix and irrigation frequency — Free draining and long soil life span — Tree anchorage	•		Refer Arcadia Landscape Design Report
		Minimum soil standards for plant sizes should be provided in accordance with Table 5	•		Refer Arcadia Landscape Design Report
	4P-2	**Plant growth is optimised with appropriate selection and maintenance**			
		Plants are suited to site conditions, considerations include: — Drought and wind tolerance — Seasonal changes in solar access — Modified substrate depths for diverse range of plants — Plant longevity	•		Refer Arcadia Landscape Design Report
		A landscape maintenance plan is prepared	•		Refer Arcadia Landscape Design Report
		Irrigation and drainage systems respond to: — Changing site conditions — Soil profile and the planting regime — Whether rainwater, stormwater r recycled grey water is used	•		Refer Arcadia Landscape Design Report
	4P-3	**Planting on structure contributes to the quality and amenity of communal and public open spaces**			

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
		Building design incorporates opportunities for planting on structures. Design solutions may include: — Green walls with specialised lighting for indoor green walls — All design that incorporates planting — Green roofs, particularly where roofs are visible form public domain — Planter boxes — Note: structures designed to accommodate green walls should be integrated into the building façade and consider the ability of the façade to change over time	•		Refer Arcadia Landscape Design Report
4Q	**Universal Design**				
	4Q-1	**Universal design features are included in apartment design to promote flexible housing for all community members**			
		Developments achieve a benchmark of 20% of the total apartment incorporating the Liveable Housing Guideline's silver level universal design features	•		In accordance with the control - refer access report.
	4Q-2	**A variety of apartments with adaptable designs are provided**			
		Adaptable housing should be provided in accordance with the relevant council policy	•		In accordance with the control - refer access report.
		Design solutions for adaptable apartments include: — Convenient access to communal and public areas — High level of solar access — Minimal structural change and residential amenity loss when adapted — Larger car parking spaces for accessibility — Parking titled separately from apartments or shared car parking arrangements			In accordance with the control - refer access report.
	4Q-3	**Apartment layouts are flexible and accommodate a range of lifestyle needs**			
		Apartments design incorporates flexible design solutions which may include: — Rooms with multiple functions — Dual master bedroom apartments with separate bathrooms — Larger apartments with various living space options — Open plan 'loft' style apartments with only a fixed kitchen, laundry and bathroom	•		The area of the apartments are generally larger than the minimums suggested in the ADG.
4R	**Adaptive Reuse**				
	4R-1	**New additional to existing buildings are contemporary and complementary and enhance an area's identity and sense of place**			

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
		Design solutions may include: — New elements to align with the existing building — Additions that complement the existing character, siting, scale, proportion, pattern form and detailing — Use of contemporary and complementary materials, finishes, textures and colours			N/A
	4R-2	**Adapted buildings provide residential amenity while not precluding future adaptive reuse**			
		Design features should be incorporated sensitively into adapted buildings to make up for any physical limitations, to ensure residential amenity is achieved. Design solutions may include: — Generously sized voids in deeper buildings — Alternative apartment types when orientation is poor — Using additions to expand the existing building envelope			N/A
		Some proposals that adapt existing buildings may not be able to achieve all of the design criteria in this Apartment Design Guide. Where developments are unable to achieve the design criteria, alternatives could be considered in the following areas: — Where there are existing higher ceilings, depths of habitable rooms could increase subject to demonstrating access to natural ventilation, cross ventilation (when applicable) and solar an daylight access (see also sections 4A Solar and daylight access and 4B Natural ventilation) — Alternatives to providing deep soil where less than the minimum requirement is currently available on the site — Building and visual separation - subject to demonstrating alternative design approaches to achieving privacy — Common circulation — Car parking — Alternative approaches to private open space and balconies			N/A
4S	**Mixed Use**				
	4S-1	**Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement**			
		Mixed use development should be concentrated around public transport and centres	•		The site is directly adjacent Penrith Station.
	4S-2	**Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents**			

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
		Residential circulation areas should be clearly defined. Design solutions may include: — Residential entries are separated from commercial entries and directly accessible from the street — Commercial service areas are separated from residential components — Residential car parking and communal facilities are separated or secured — Concealment opportunities are avoided	•		Residential, commercial and retail entries are separate.
		Landscape communal open space should be provided at podium or roof levels	•		Communal open space is proposed on the roof.
4T	**Awnings and Signage**				
	4T-1	**Awnings are well located and complement and integrate with the building design**			
		Awnings should be located along streets with high pedestrian activity and active frontages	•		A colonnade is proposed.
		A number of the following design solutions are used: — Continuous awnings are maintained and provided in areas with existing pattern — Height, depth, material and form complements the existing street character — Protection from the sun and rain is provided — Awnings are wrapped around the secondary frontages of corner sites — Awnings are retractable in areas without an established pattern	•		A colonnade is proposed which is integrated into the building design.
		Awnings should be located over building entries for building address and public domain amenity	•		There is a continuous colonnade proposed.
		Awnings relate to residential windows, balconies, street tree planting, power poles and street infrastructure	•		The colonnade is recessive and within the site boundary unaffected by street infrastructure.
		Gutters and down pipes should be integrated and concealed	•		Noted
		Lighting under awnings should be provided for pedestrian safety	•		Noted
	4T-2	**Signage responds to the context and desired streetscape character**			
		Signage should be integrated into the building design and respond to the scale, proportion and detailing of the development	•		Noted
		Legible and discrete way finding should be provided for larger developments	•		Noted

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
		Signage is limited to being on and below awnings and in single façade sign on the primary street frontage	•		Noted
4U	**Energy Efficiency**				
	4U-1	**Development incorporates passive environmental design**			
		Adequate natural light is provided to habitable rooms (see 4A Solar and daylight access)	•		
		Well located, screened outdoor areas should be provided for clothes drying	•		Where possible solid balcony upstands have been provided to allow balcony drying facilities to be screened from the public domain
	4U-2	**Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer**			
		A number of the following design solutions are used: — The use of smart glass or other technologies on north and west elevations — Thermal mass in the floors and walls of north facing rooms in maximised — Polished concrete floor, tiles, or timber rather than carpet — Insulated roofs, walls and floors and seals on window and door openings — Overhangs and shading devices such as awnings, blinds and screens	•		Deep balconies and recessive glazing maximise shading and protection.
		Provision of consolidated heating and cooling infrastructure should be located in a centralised location (e.g. the basement)	•		Noted
	4U-3	**Adequate natural ventilation minimises the need for mechanical ventilation**			
		A number of the following design solution are used: — Rooms with similar usage are grouped together — Natural cross ventilation for apartments is optimised — Natural ventilation is provided to all inhabitable rooms and as many non-habitable rooms, common areas and circulation spaces as possible	•		
4V	**Water Management and Conservation**				
	4V-1	**Potable water use is minimised**			
		Water efficient fittings, appliances and wastewater reuse should be incorporated	•		Refer BASIX certificate
		Apartments should be individually metered	•		
		Rainwater should be collected, stored and reused on site	•		Refer BASIX certificate

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
		Drought tolerant, low water use plants should be used within landscaped areas	•		Refer Arcadia landscape design report.
	4V-2	**Urban stormwater is treated on site before being discharged to receiving waters**			
		Water sensitive urban design systems are designed by a suitably qualified professional	•		Refer engineers documentation.
		A number of the following design solutions are used: — Runoff is collected from roofs and balconies in water tanks and plumbed into toilets, laundry and irrigation — Porous and open paving materials is maximised — On site stormwater and infiltration, including bio-retention systems such as rain gardens or street tree pits	•		Refer engineers documentation.
	4V-3	**Flood management systems are integrated into site design**			
		Detention tanks should be located under paved areas, driveways or in basement car parks	•		Refer engineers documentation.
		On large sites parks or open spaces are designed to provide temporary on site detention basins			N/A
4W	**Waste Management**				
	4W-1	**Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents**			
		Adequately sized storage areas for rubbish bins should be located discreetly away from the front of the development or in the basement car park	•		Waste storage is within the basement levels. Refer waste consultants report
		Waste and recycling storage areas should be well ventilated	•		Adequate mechanical ventilation will be provided.
		Circulation design allows bins to be easily manoeuvred between storage and collection points	•		Refer waste consultants report
		Temporary storage should be provided for large bulk items such as mattresses	•		A bulky items storage room, that is separate from the waste rooms, has been provided in each basement. Refer waste consultants report.
		A waste management plan should be prepared	•		Refer waste consultants report.
	4W-2	**Domestic waste is minimised by providing safe and convenient source separation and recycling**			
		All dwellings should have a waste and recycling cupboard or temporary storage area of sufficient size to hold two days' worth of waste and recycling	•		Kitchens will incorporate waste storage in the layout which will then be taken to the waste chutes in the shared lobbies.

Subheading

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
		Communal waste and recycling rooms are in convenient and accessible locations related to each vertical core	•		There are chutes in each lift core.
		For mixed use developments, residential waste and recycling storage areas and access should be separate and secure from other uses	•		Waste areas are separate.
		Alternative waste disposal methods such as composting should be provided			Noted - body corporate to manage.
4X	**Building Maintenance**				
	4X-1	**Building design detail provides protection from weathering**			
		A number of the following design solutions are used: — Roof overhangs to protect walls — Hoods over windows and doors to protect openings — Detailing horizontal edges with drip lines to avoid staining of surfaces — Methods to eliminate or reduce planter box leaching — Appropriate design and material selection for hostile locations	•		Glazing is recessive and protected behind the main facade with ledges and balconies.
	4X-2	**Systems and access enable ease of maintenance**			
		Window design enables cleaning from the inside of the building	•		Most glazing is accessed from balconies. Glazing that is not accessed from a balcony will be cleaned by the building management.
		Building maintenance systems should in incorporated and integrated into the design of the building form, roof and façade	•		To be confirmed with building maintenance plan.
		Design solutions do not require external scaffolding for maintenance access	•		Noted
		Manually operated systems such as blinds, sunshades and curtains are used in preference to mechanical systems	•		Noted
		Centralised maintenance, services and storage should be provided for communal open space areas within the building	•		Noted

Subheading

Part No.	Objective No	Objective / Design Criteria / Design Guidance	Complies Yes	Complies No	Notes
	4X-3	**Material selection reduces ongoing maintenance costs**			
		A number of the following design solutions are used: — Sensors to control artificial lighting in common circulation and spaces — Natural materials that weather well and improve with time such as face brickwork — Easily cleaned surfaces that are graffiti resistant — Robust and durable materials and finished are used in locations which receive heavy wear and tear, such as common circulation areas and lift interiors	•		Noted

Document Application Checklist

4

Documentation	Required information	Provided	
		Yes	No
Development details	A summary document that provides the key details of the development proposal. It contains information such as the:	•	
	— floor space ratio of the development		
	— number, mix, size and accessibility of apartments		
	— number of car parking spaces for use (residential, retail, accessible, visitor etc.)		
	— percentage of cross ventilation and daylight compliance		
Statement of Environmental Effects	In addition to the consent authorities requirements:	•	
	— An explanation of the design in terms of the design quality principles set out in Schedule 1 of State Environmental Planning Policy No 65 - Design Quality of Residential Apartment Development		
	— If the proposed development is within an area where the built form and density is changing, statements about how the proposed development responds to the existing context and contributes to desired future character of the area		
	— Description of how the proposed development achieves the relevant objectives and design criteria of the Apartment Design Guide		
Site analysis	Prepared consistent with Appendix 1 of the Apartment Design Guide	•	
Site plan	A scale drawing showing:	•	
	— any proposed site amalgamation or subdivision		
	— location of any proposed buildings or works in relation to setbacks, building envelope controls and building separation dimensions		
	— proposed finished levels of land in relation to existing and		
	— proposed buildings and roads		
	— pedestrian and vehicular site entries and access		
	— interface of the ground floor plan with the public domain and		
	— with open spaces within the site		
	— areas of communal open space and private open space		
	— indicative locations of planting and deep soil zones including retained or proposed significant trees		

Document Application Checklist

Documentation	Required information	Provided	
		Yes	No
Landscape plan	A scale drawing showing:	•	
	— the building footprint of the proposal including pedestrian, vehicle and service access		
	— trees to be removed shown dotted		
	— trees to remain with their tree protection zones (relative to the proposed development)		
	— deep soil zones and associated tree planting		
	— areas of planting on structure and soil depth		
	— proposed planting including species and size		
	— details of public space, communal open space and private open space		
	— external ramps, stairs and retaining wall levels		
	— security features and access points		
	— built landscape elements (fences, pergolas, walls, planters and water features)		
	— ground surface treatment with indicative materials and finishes		
	— site lighting		
	— water management and irrigation concept design		
	— external ramps, stairs and retaining wall levels		
Floor plans	A scale drawing showing:	•	
	— all levels of the building including roof plan		
	— layout of entries, circulation areas, lifts and stairs, communal spaces, and service rooms with key dimensions and RLs shown		
	— apartment plans with apartment numbers and areas, all fenestration, typical furniture layouts for each apartment type, room dimensions and intended use and private open space dimensions		
	— accessibility clearance templates for accessible units and common spaces		
	— visual privacy separation shown and dimensions where necessary		
	— vehicle and service access, circulation and parking		
	— storage areas		
Elevations	A scale drawing showing:	•	
	— proposed building height and RL lines		
	— building height control		
	— setbacks or envelope outline		
	— building length and articulation		
	— the detail and features of the facade and roof design		
	— any existing buildings on the site		
	— building entries (pedestrian, vehicular and service)		
	— profile of buildings on adjacent properties or for 50m in each direction, whichever is most appropriate		

Document Application Checklist

Documentation	Required information	Provided	
		Yes	No
Sections	A scale drawing showing:	•	
	— proposed building height and RL lines		
	— building height control		
	— setbacks or envelope outline		
	— adjacent buildings		
	— building circulation		
	— the relationship of the proposal to the ground plane, the street and open spaces particularly at thresholds		
	— the location and treatment of car parking		
	— the location of deep soil and soil depth allowance for planting on structure (where applicable)		
	— building separation within the development and between neighbouring buildings		
	— ceiling heights throughout the development		
	— detailed sections of the proposed facades		
	— the location and treatment of car parking		
Solar access study	Where required, graphic documentation at winter solstice (21 June) at a minimum of hourly intervals showing:	•	
	— number of hours of solar access to the principal communal open space	•	
	— number of hours of solar access to units within the proposal and tabulation of results	•	
	— overshadowing of existing adjacent properties and overshadowing of future potential development where neighbouring sites are planned for higher density	•	
	— elevation shadows if shadow is likely to fall on neighbouring windows, openings or solar panels		•
Cross ventilation study	Where required, graphic documentation of unobstructed path of air movement through dual aspect apartments and tabulation of results	•	
Material and finishes board	A sample board of the proposed external materials, finishes and colours of the proposal, keyed to elevations	•	
Illustrative views	Photomontages or similar rendering or perspective drawings illustrating the proposal in the context of surrounding development. Note: Illustrative views need to be prepared using a perspective that relates to the human eye. Where a photomontage is prepared, it should use a photo taken by a full frame camera with a 50mm lens and 46 degree angle of view	•	
Models	A three dimensional computer generated model showing views of the development from adjacent streets and buildings	•	
	A physical model that shows the massing of the proposal that includes relevant context (particularly for developments of 20 apartments or more, or on contentious sites) if required by the consent authority		•

SJB is passionate about the possibilities of architecture, interiors, urban design and planning. Let's collaborate.

Gadigal Country
Level 2, 490 Crown Street
Surry Hills NSW 2010

T 61 2 9380 9911
E architects@sjb.com.au
W sjb.com.au