



SEPP65 DESIGN STATEMENT

Area 5

13-19 Canberra Avenue
St Leonards South NSW 2065

We create spaces people love.
SJB is passionate about the
possibilities of architecture,
interiors, urban design
and planning.
Let's collaborate.

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Prepared for
HYECORP

Issued
13 October 2021

We create amazing places



At SJB we believe that the future of the city is in generating a rich urban experience through the delivery of density and activity, facilitated by land uses, at various scales, designed for everyone.

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Version: 00
Prepared by: EQ, LL, ML
Checked by: LL

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Adam Haddow 7188 John Pradel 7004

SJB would like to acknowledge the traditional custodians of the land on which we live and practice and pay our respects to elders, past, present and future. In particular, we would like to acknowledge the 60,000+ years of continuous engagement of this land by Aboriginal and Torres Strait culture.

The journey of Aboriginal and Torres Strait Islander people and their knowledge of this land is incredibly rich – its importance to the future of our country should never be underestimated.

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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Design Verification Statement

1

Design Verification Statement

Prepared to accompany the Development Application submitted to Council

13th October 2021

13-19 Canberra Avenue
St Leonards
NSW 2065

Prepared on behalf of:
HYECORP

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



Introduction

2.1 Background

SJB Architects was commissioned by HYECORP Property Group in March 2021 to prepare a design and DA submission for a site within the St Leonard South precinct, located on Canberra Avenue, opposite Newlands Park.

The proponent met with Council and the Design Review Panel through out the design development process, and feedbacks have been incorporated into the DA documentation enclosed in this application.

2.2 Vision

The development is centralised within St Leonards South Precinct, at a prominent gateway site to the St Leonards station, linking various key community aspects of the precinct, including Newlands Park and Green Spine. Apart from fulfilling the needs for accommodation, the project also provides important precinct infrastructures for the community including, the pedestrian link, public lift, retail facility, community hall and childcare.

Our objective is to provide superior public and private amenity in the context of the SEPP 65 guiding principles realised through a development of exceptional design quality.



SEPP 65 Design Quality Principles

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

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.

St Leonards and Crows Nest will play a significant role in achieving the NSW Government's vision for the 'Harbour City', as identified in A Plan for Growing Sydney. The area will support new jobs in close proximity to public transport, homes and will provide a high level of amenity, whilst being connected to nearby centres at Chatswood, North Sydney, Macquarie Park and the Sydney CBD.

The Plan for St Leonards South illustrates a unified and over-arching plan for the area. It combines and details the actions and directions identified in the St Leonards South DCP and Landscape Masterplan 2020.

The plans focus on improving connectivity across and between the area of St Leonards South through a network of green streets, activity areas and public spaces.

The desired future character of the St Leonards South Precinct is for a liveable, walkable, connected, safe, Precinct which builds upon the transit and land use opportunities of St Leonards and Metro Stations and commercial centre.

The subject site is bound by future development sites to the north and west referred to as Areas 3, 4 and 6.

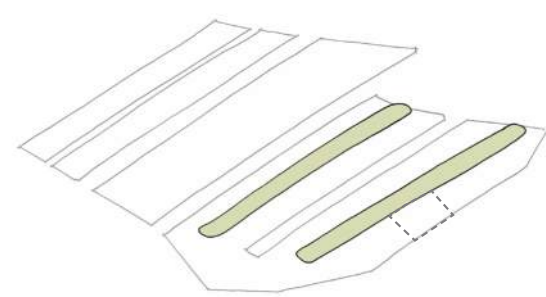
A pedestrian link is proposed at the southern boundary of the subject site, traversing vertically from Canberra Ave. to Green Spine.

Newlands Park (to the southeast) represents a significant opportunity for interaction between the subject site and the broader St Leonards South community.



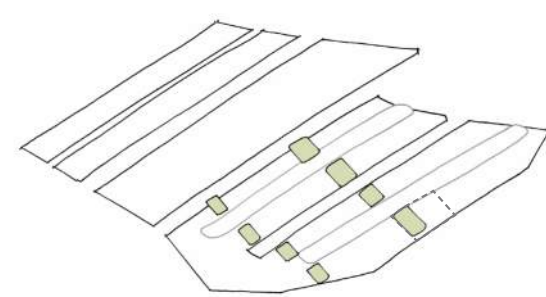
Principle 1: Context and Neighbourhood Character - Precinct

Site specific urban principles are identified at the inception of the project. Including, greensipne to the West of the site; pedestrian link to the south of the site; various public open spaces throughout the precinct; site contours and controls.



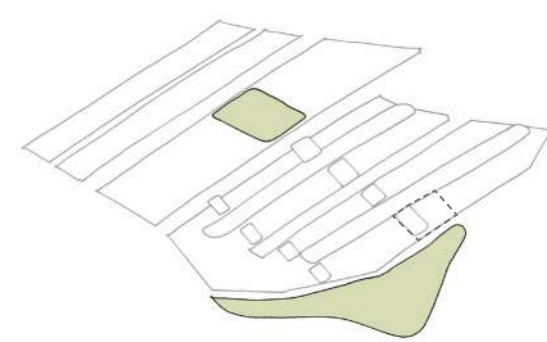
Green spines

The creation of nine continuous north-south communal open spaces (green spines) located to the rear of the current residential lots (on private land and for residents use only).



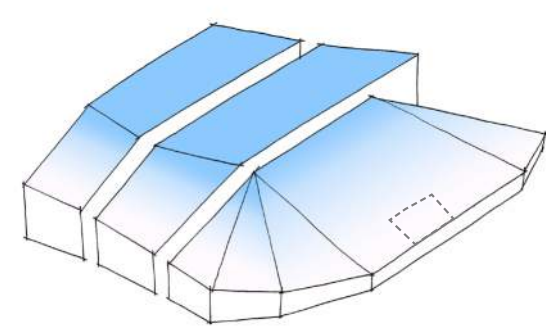
Pedestrian links

The creation of a continuous east-west publicly accessible pedestrian route from Canberra Ave to Park Road (through the proposed local park) with a secondary publicly accessible east-west link between Canberra Ave and Berry Road.



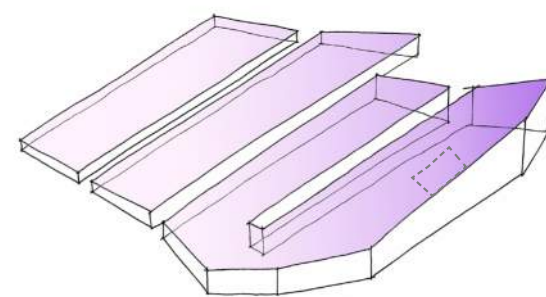
Open space network

Upgrade the existing open space area of Newlands Park to provide improved or additional recreational facilities for the precinct.



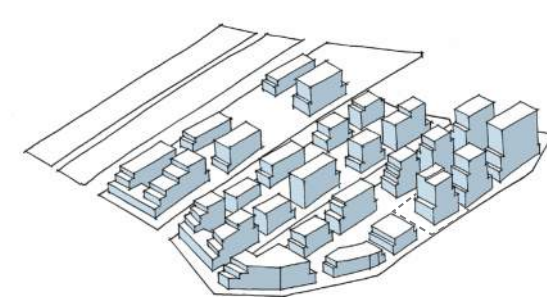
Topography and levels

Work with the levels proposed in the Landscape Masterplan to minimise earthworks and difficult interfaces or level transitions and avoid changes in level between apartments and adjacent open space or streets.



Building heights

To step the heights from tallest adjacent to the Railway Station, reducing with distance to the south and west (River Road and Park Road)



Built form

To encourage a stepped-back building form in order to reduce building bulk and scale to the street. To facilitate street and front setback (deep soil) tree planting to further reduce apparent bulk and scale.

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.

The built form results from careful evaluation of the site context, identifying the constraints including height plane, setbacks and preserving light to key public spaces. Identifying the opportunities to manipulate the massing to achieve feasibility for the site and maximize the benefit for the public domain.

The street wall and stepped back upper levels are an important contribution to the streetscape and urban context of Canberra Avenue. The green spine setback sets a limit to floor plate depth that is consistent with the objectives of the DCP.

Exploration of setbacks to the north and south have been undertaken in keeping with the objectives of ADG and the St Leonards South DCP with regard to amenity and form articulation.

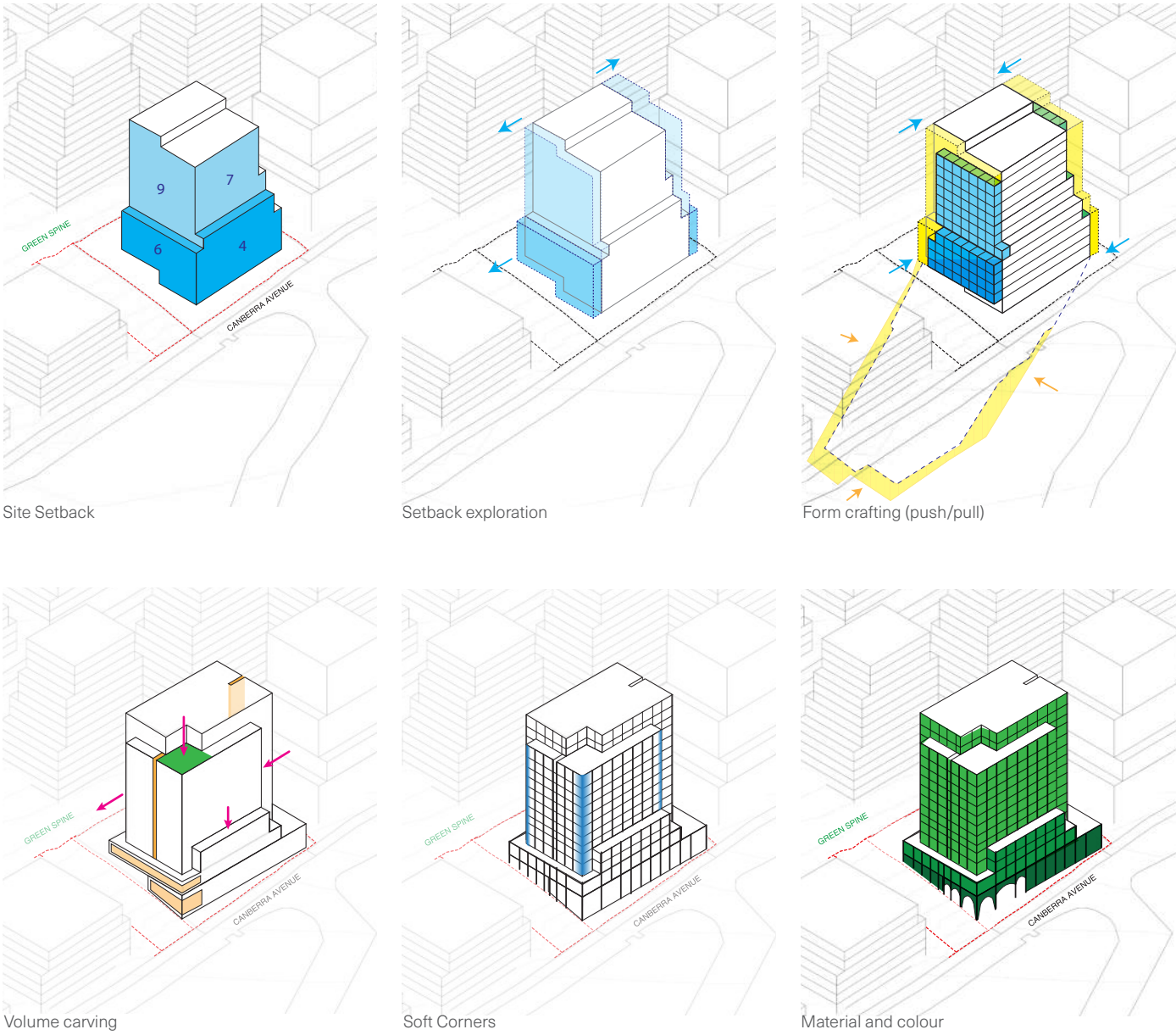
Using the grid, modules are pushed and pulled to maximise floor plate efficiency without departure from the objectives of the DCP envelope.

The deviation of the number of storey is a result of balancing the site feasibility, achieve better density to comply with the prescribed site controls while staying within the compliant height envelope. The first two storey of the building respond to the nature steep slope of the site (6m difference), making the first two storey only part residential and part services/parking.

The resulting mass contributes no additional overshadowing to Newlands Park.

Furthermore, regrouping the volumes provides simpler geometry to the eye, the front tower volume has been shifted away from the Northern edge, to provide more building separation to the neighbouring development. The podium volume to Canberra Avenue has also been reduced to provide better scale to the street.

Other important aspects have been instrumental in carving out the building mass, including the residence's community space on roof, the indent on the Northern and Southern facade to provide light and ventilation to the corridors. And also lighten up the podium base adjacent to the pedestrian link to provide visual surveillance from the retail, community hall and corridor. The terrace houses on the street front reduce the visual scale of the building, and relate to the human scale street experience.



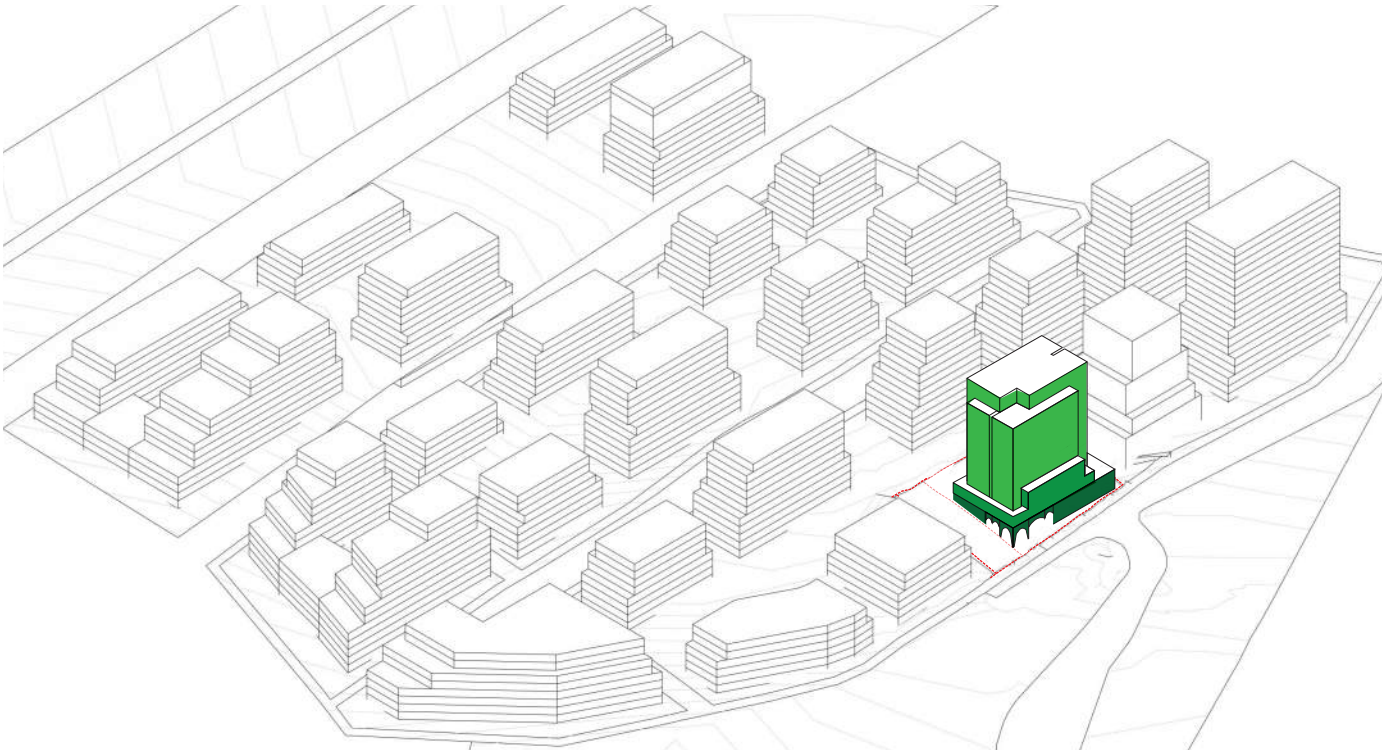
The colour and material of the building is selected carefully to connect with the context, specifically the various public greenery within the precinct. The greenery surrounding the site is "absorbed" into the building fabric and drawn towards the sky. Darker green material firmly anchors the building to the ground and as it progresses up in the tower, it gets lighter and lighter and disappears into the sky.

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 proposed development achieves an appropriate density that is consistent with the objectives of the St Leonards South Precinct DCP, including the following provisions:
- The proposal has a floor space ratio of 3.42 :1, much lower than the prescribed 3.7:1 in the precinct DCP. All apartments in the development enjoy a high level of amenity, with both views and generous private open space;
 - The proposal is well supported by infrastructure, public transport and community facilities within St Leonards and St Leonards South Precinct;
 - The development is sustained by its close proximity to public transport, parks and facilities of St Leonards and St Leonards South.

- The project will contribute in this regard within the wider St Leonards context by providing:
- Housing within walking distance to public amenities and employment
 - Bicycle parking for residents and visitor
 - Adaptable housing in accordance with council's controls
 - Activation of the building edges facing the pedestrian link

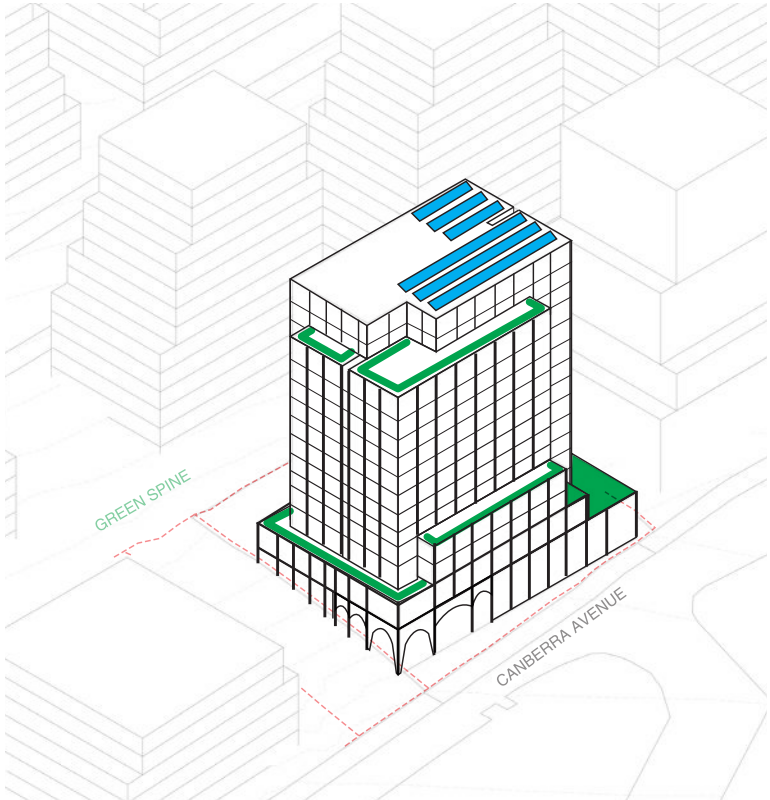


Principle 4: Sustainability

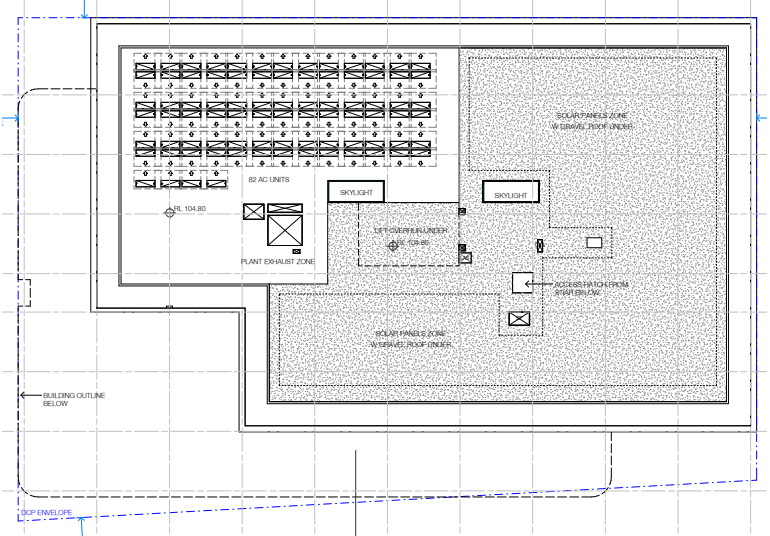
Good design combines positive environmental, social and economic outcomes. Good sustainable design includes use of natural cross ventilation and sunlight for the amenity and liveability of residents and passive thermal design for ventilation, heating and cooling reducing reliance on technology and operation 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:

- 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)
- Natural ventilation to corridors and the majority of apartments (60% of apartments are cross-ventilated)
- Extensive landscaping to building edges and over structure, minimising stormwater run-off
- Provision of car sharing facilities on site
- Provision for electric car and bike charging
- Provision of bicycle parking facilities for visitors and residents
- Predominantly constructed from locally produced, sustainable materials
- Selection of materials that have longevity, low embodied energy and minimise maintenance.
- Materials that will be demolished are to be reused or recycled where possible
- Energy and water efficient fixtures and appliances
- Proximity to public transport and local shops
- Compliance with BASIX requirements
- Extensive amount of Solar panels to cover the roof



Sustainability Diagram



Roof Plan

Principle 5: Landscape

Good design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in attractive developments with good amenity. A positive image and contextual fit of well designed developments is achieved by contributing to the landscape character of the streetscape and neighbourhood.

Good landscape design enhances the development's environmental performance by retaining positive natural features which contribute to the local context, co-ordinating water and soil management, solar access, micro-climate, tree canopy, habitat values, and preserving green networks. Good landscape design optimises usability, privacy and opportunities for social interaction, equitable access, respect for neighbours' amenity, provides for practical establishment and long term management.

The site provides significant landscape opportunities at different levels of the proposal.

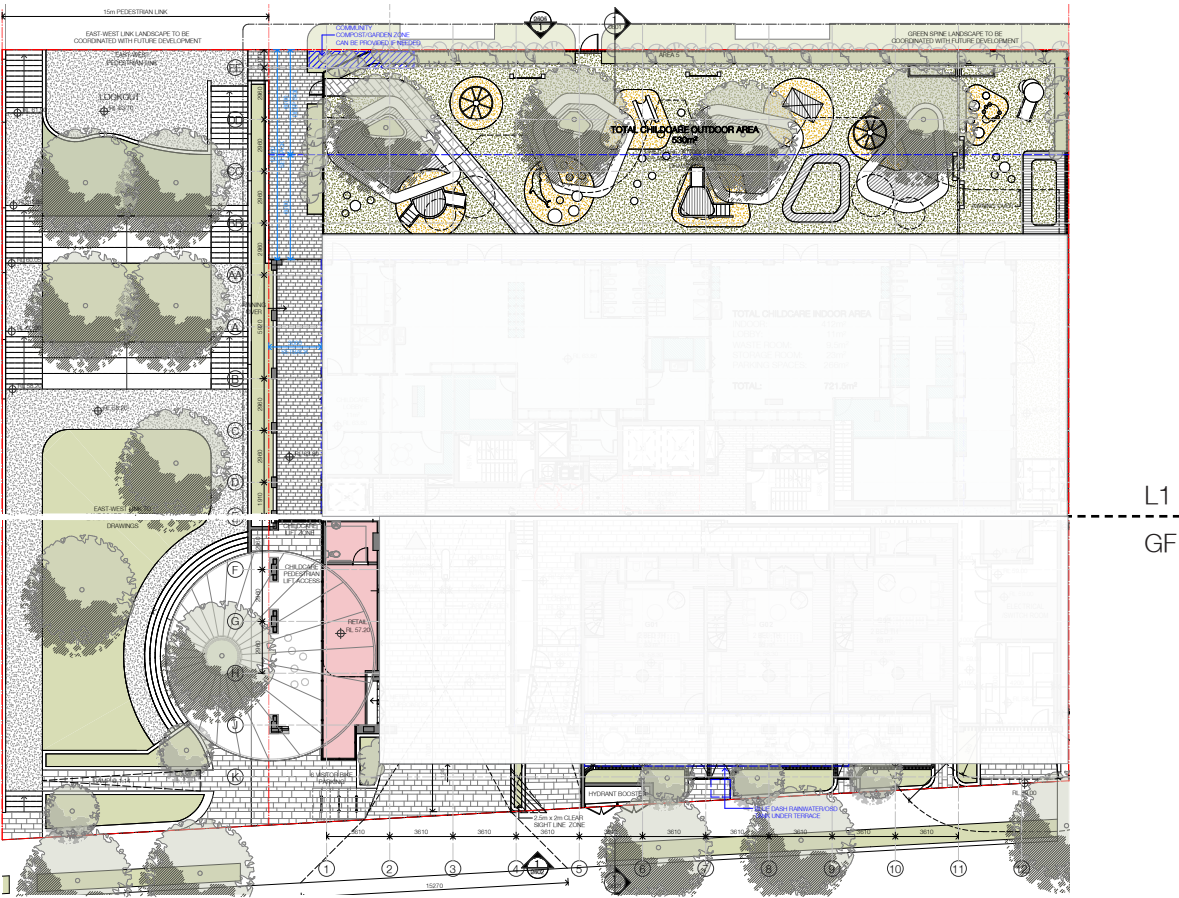
The proposal is surrounded by greenery at its ground plane, wedged between the existing Newlands Park, the newly proposed 15m wide east west link, and the green spine that runs through the precinct.

The east west pedestrian link not only provides connection between Canberra Avenue and the green spine, but is envisaged to be a gathering place for the community. At the foot of the pedestrian link, a circular plaza is designed to link the pedestrian link and the retail/cafe space, blurring the boundary between the building and the greenery and activates the street corner. Right adjacent to it is a landscaped amphitheatre that will bring the community together, to provide somewhere to pause and re-connect.

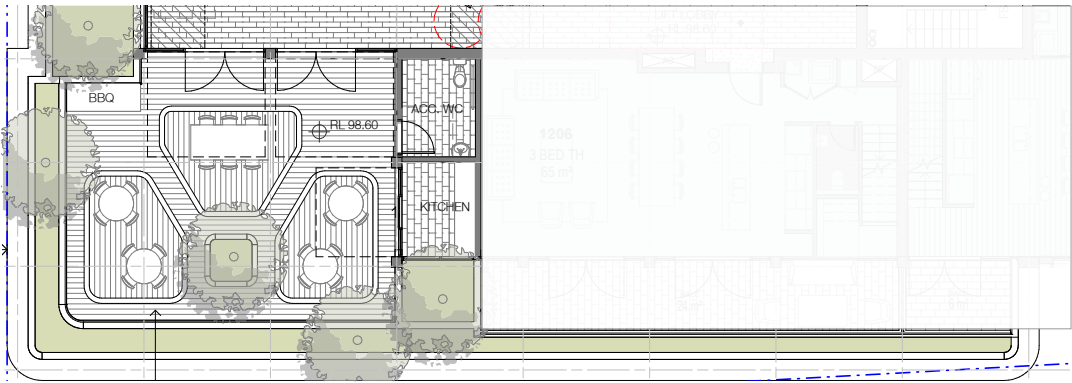
The green spine on top of the pedestrian link runs through the precinct provides various amenities for the residents along with hard and soft landscapes, lawns and playgrounds.

Generous landscaped green edges are present throughout the building, which provides opportunity for the residents to engage with the nature. A rooftop community garden is also provided for the residents with various seating arrangements, amenities and landscaped gardens. The rooftop garden enjoys uninterrupted views out to the city. Please refer to the landscape reports and drawings for further information.

GROUND PLANE LANDSCAPE



ROOFTOP COMMUNITY GARDEN

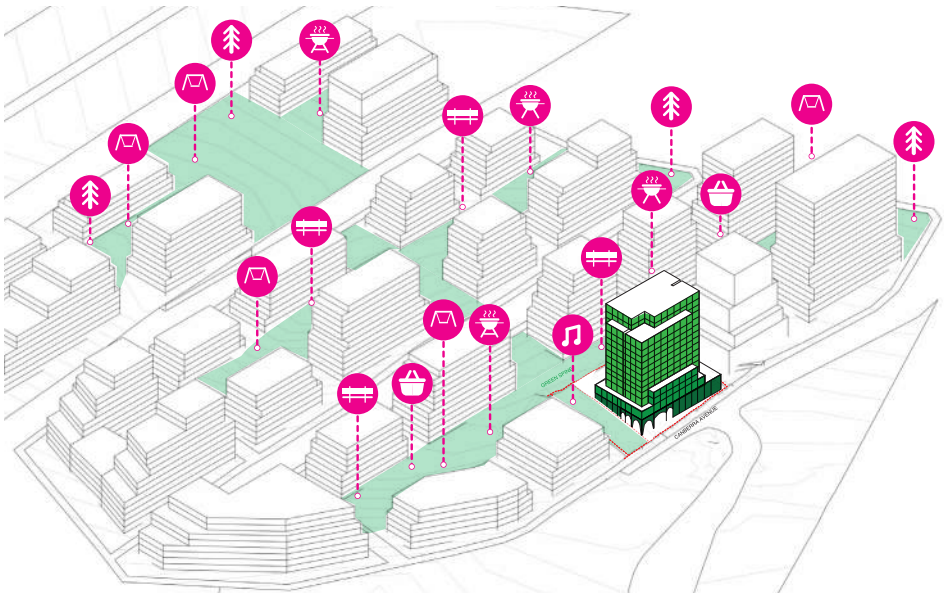


Principle 6: Amenity

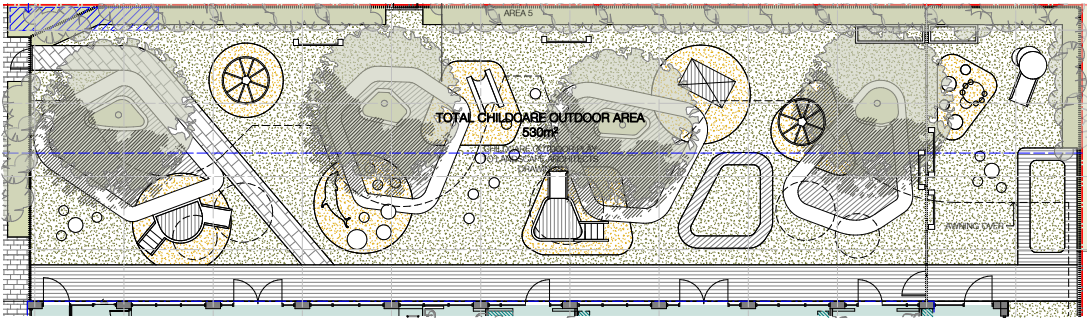
Good design positively influences internal and external amenity for residents and neighbours. Achieving good amenity contributes to positive living environments and resident well being.

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.

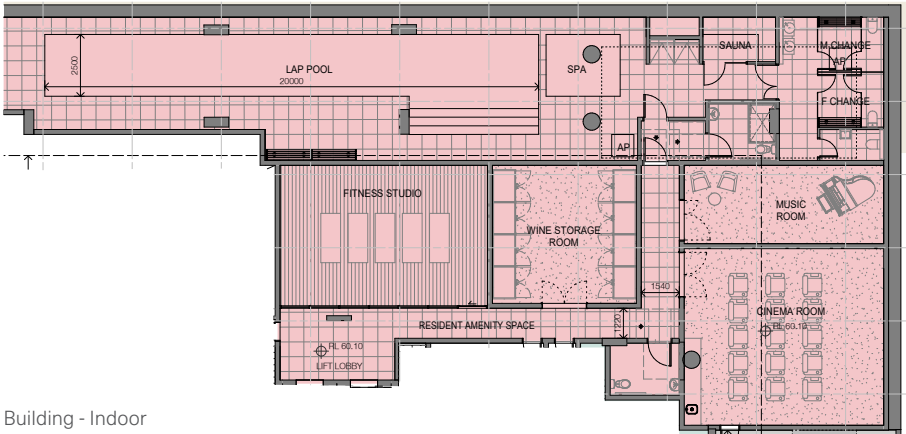
- Our objective is to provide superior public and private amenity in the context of the SEPP 65 guiding principles. The proposed development achieves good quality amenity for residents and neighbours through considerations of the following.
- There are 4 distinct opportunities for resident to engage and enjoy community and communal open space. These include; vast communal open spaces at the precinct level; After hour/weekend use of the expansive childcare outdoor play area; The programmed Upper Ground indoor community facility; and the rooftop communal open space with uninterrupted city views.
 - PRECINCT LEVEL - The site being situated in the heart of the St Leonards South Precinct, has direct access to a number of shared community amenities. Including council operated childcare, indoor community hall, BBQ areas, landscaped areas, child play zones, small parks, bench and picnic spaces. The site offers two key community spaces to the precinct and its residents being the Childcare and community hall which totalling 1050sqm of indoor and outdoor space as well as large civic pedestrian link through the precinct. Residents of the building have direct access to the greenspine and pedestrian link via level one connection.
 - PRECINCT LEVEL - OUTDOOR PLAY - Advised by the council's property section, the child care outdoor space could be used by the precinct residents outside of the childcare hours. This will provide around 530 sqm of engaging outdoor play zone for both the residents and the public.
 - INDOOR UPPER GROUND - The upper ground floor provides functional and exclusive resident facilities including private wine storage room, music room, fitness studio, cinema, swimming pool and spa.
 - ROOFTOP - The rooftop community space provides kitchen, BBQ and accessible toilet. Plus shaded outdoor seating areas which can accommodate multiple groups at a time.
 - The development contributes to the general public amenity at ground floor level through the activation of frontages via inviting pedestrian link, visible retail corner, public lift, lobby spaces, access and balcony orientation
 - Generous two storey entry lobby containing a parcel room.



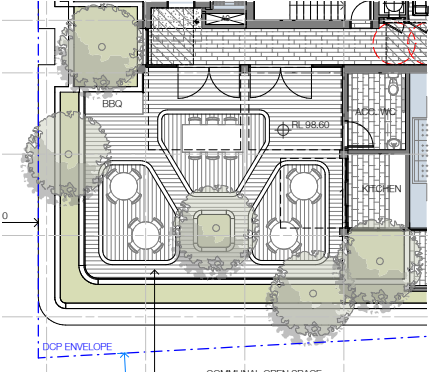
Precinct



Precinct - Community



Building - Indoor



Building - Outdoor

Principle 6: Amenity

SOLAR

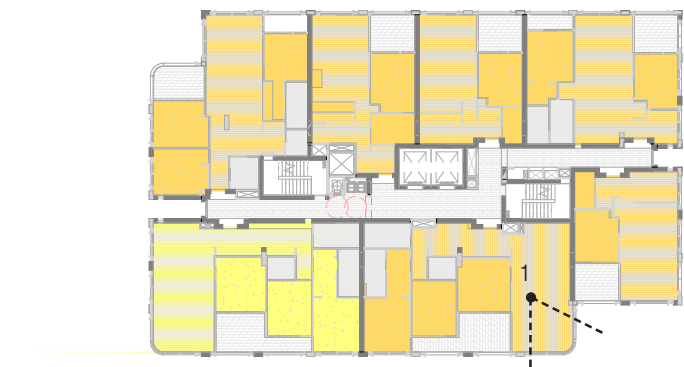
The orientation and design of the apartments maximises daylight access, cross flow ventilation and access to views.

All apartments will have access to daylight, while 70% of apartments achieve min. 2 hours daylight between 9am and 3pm 21st June.

The East facing apartments have been further analysed to ensure adequate daylight can be achieved.

The corridor and lift lobby on each level is naturally lit and ventilated.

2HR Daylight Access



SOLAR - LEVEL 06-07



SOLAR - LEVEL 08-11

21st of June, 9 am, East Facade Solar Study



1

21st of June, 11 am, East Facade Solar Study



1



2



2

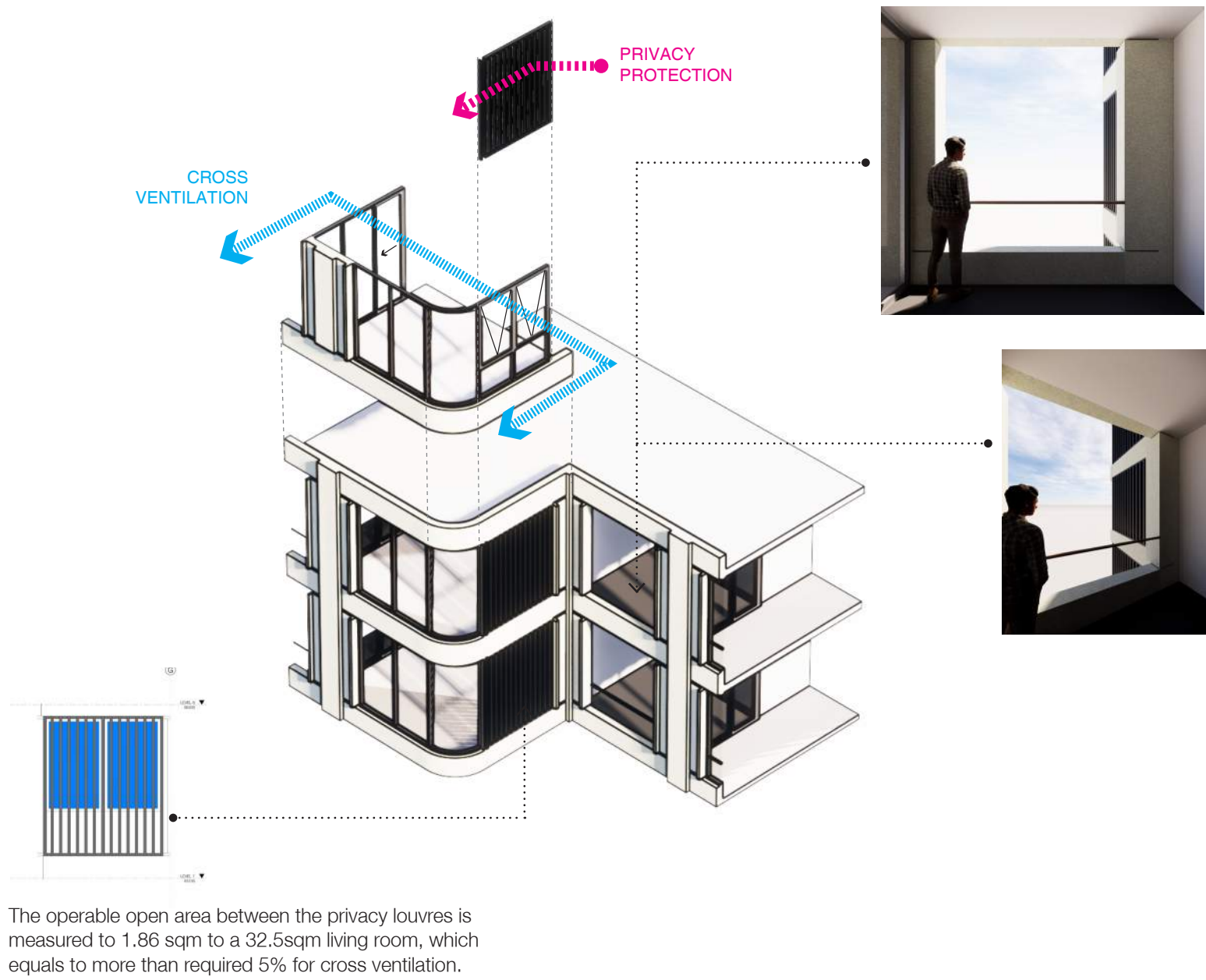
Principle 6: Amenity

CROSS VENTILATION

60% cross ventilation is achieved throughout the building.

Detailed studies have been conducted for the North East corner units to ensure that cross ventilation will work with the required privacy screen. A sashless window behind a vertical screen can produce 1.86sqm of open area for the 32.5sqm of the living space, which is more than the 5% cross vent open area required.

The common corridor has operable windows to provide natural ventilation.

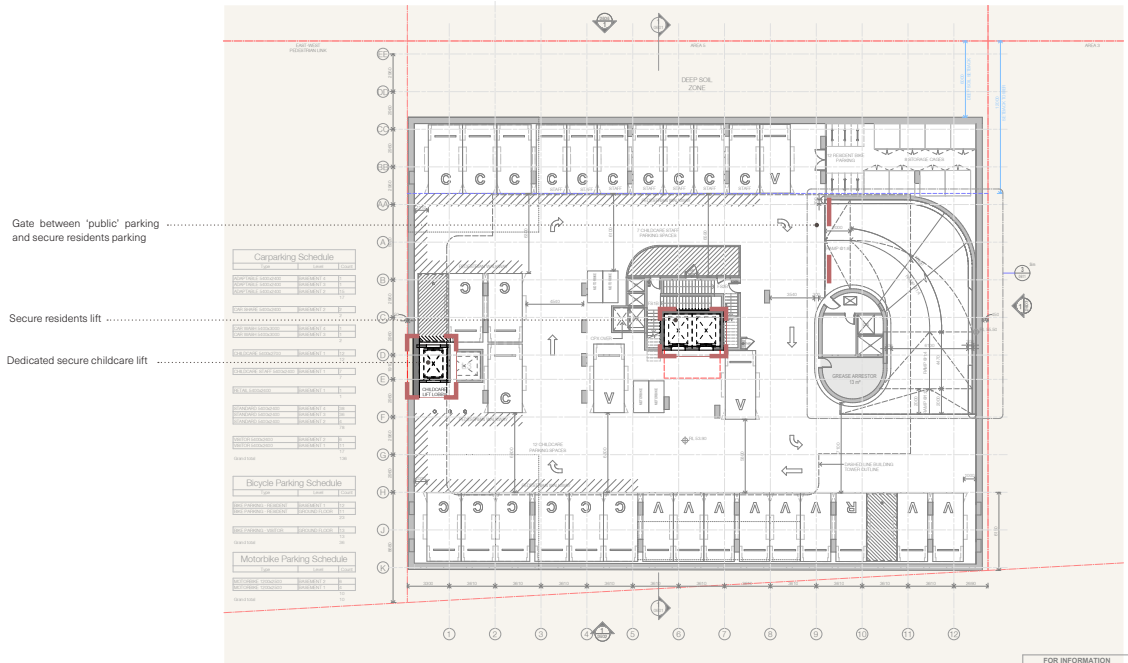
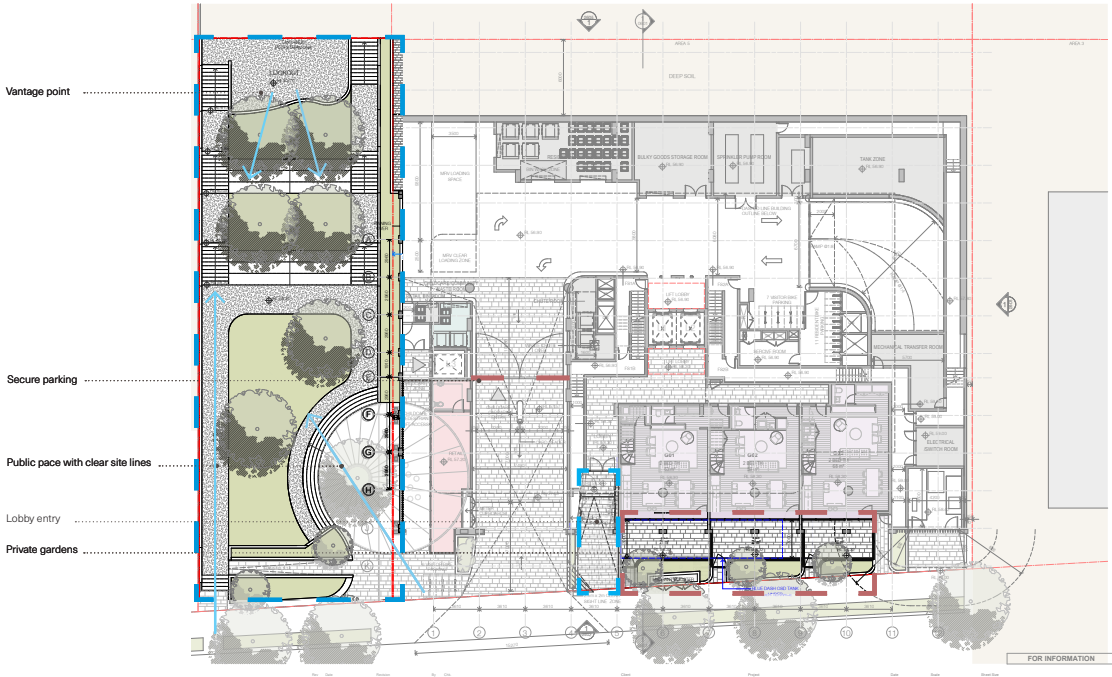


Principle 7: Safety

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.

- Design initiatives to ensure safety and security within the development and public domain include:
- Principle building entrances are clearly identifiable and allow for passive surveillance;
 - Building entrances have secure access points with video intercom
 - The clear architectural facade treatment differentiates the public and private zones along Canberra Avenue. The retail corner together with the circular amphitheatre will provide a point of activation and surveillance.
 - Pedestrian link and public lift has been carefully positioned to ensure no hidden alcoves, and signifies a clear pathway for the precinct users to traverse the site.
 - Car park layouts are designed to minimise opportunities for alcoves. Columns or walls do not obstruct sight lines and the car parks are generally open. Security access in the form of swipe cards and remote controllers will be provided;
 - Entries and public open spaces are well lit;
 - Terrace house on ground floor has appropriate level and landscape to provide privacy to the residents
 - Passive surveillance improved along pedestrian link along Southern boundary with the inclusion of Ground floor retail corner, L1 community rooms and podium apartments above.
 - The increased pedestrian traffic as a result of this development will improve general safety in the area through passive surveillance.
 - Childcare users has clearly signalled parking entrance leading directly down to B1, with designated childcare parking facilities, and lift lobby area leading to the separated lift.

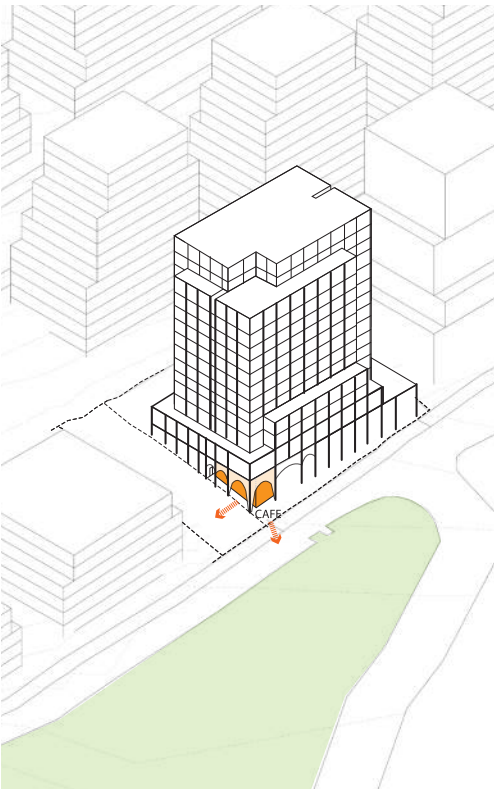


Principle 8: Housing Diversity and Social Interaction

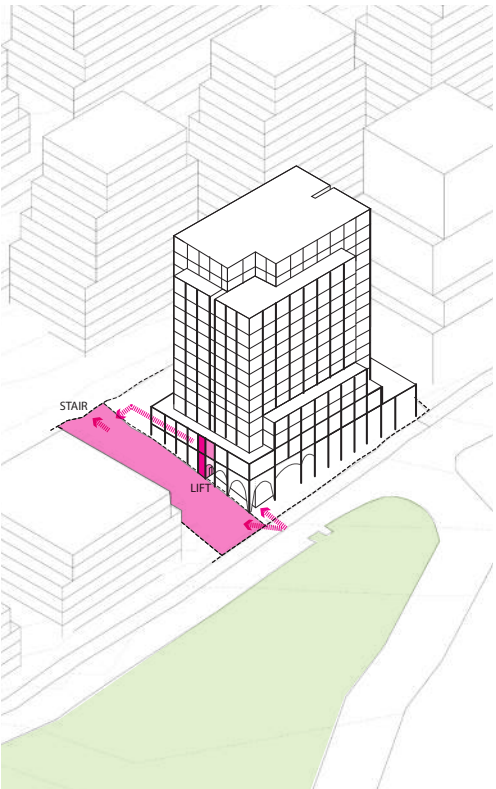
Good design achieves a mix of apartment sizes, providing housing choice for different demographics, living needs and household budgets.

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.

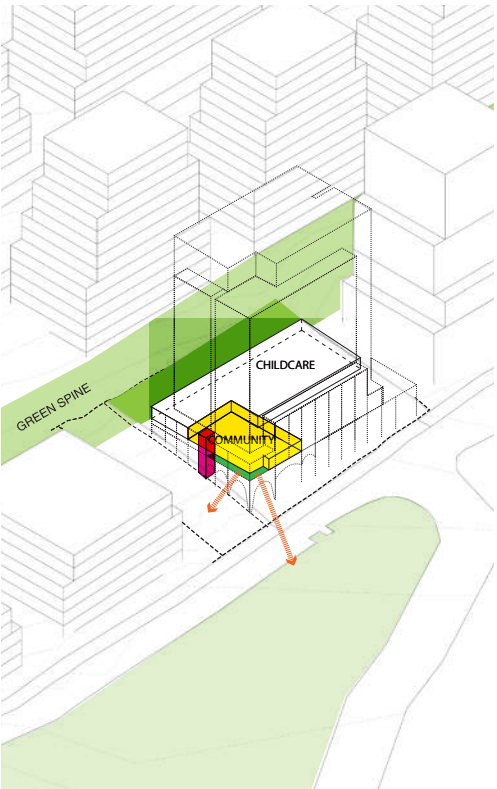
The site is advantaged to bring together a collection of varied public uses incorporating community gathering, retail and childcare. The uses are gathered around the primary precinct pedestrian link which is anchored by Newlands park to the east.



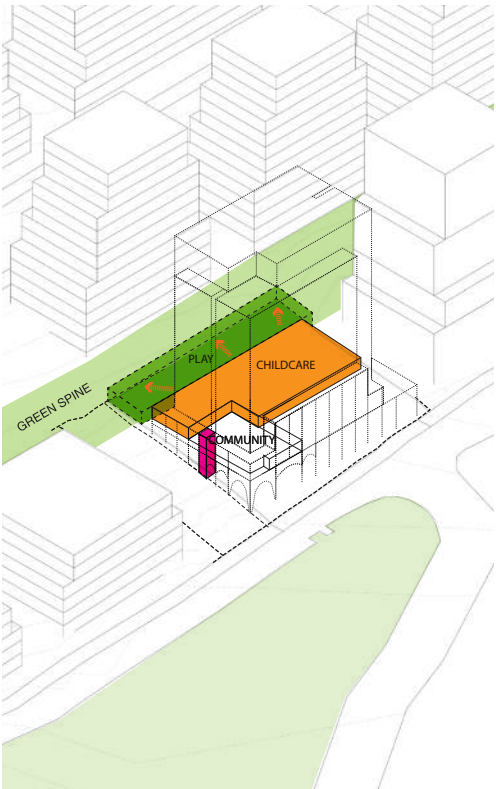
Retail activation
The pedestrian link and interface with Newlands park offer a unique opportunity for retail activation at the ground floor. Which will further define the public corner of the building. The potentially of the space being tenanted by a cafe allows for outdoor dining to take place in the forecourt of the lift area.



Pedestrian vertical circulation
Due to the verticality of the pedestrian link a lift is provided to facilitate equitable access from Canberra Avenue. The walkway required from the lift provides a landscaping opportunity and relief to the childcare and community space located on level one.



Community interaction
A community space of 151 sqm is provided at the southern boundary of the development site and is accessible from Canberra Avenue via the link stairs and lift. This space located adjacent to the pedestrian link further activates the southern boundary of the site and provides visual interest to the lift and walkway.



Childcare interaction
A childcare space and it's own outdoor play area totalling of 1251sqm is provided to serve the new precinct. The childcare space accommodates approximately 60 children. Outdoor play is integrated into the green spine landscaped zone. The childcare is accessed from Canberra Avenue via the pedestrian link lift with vehicle drop off incorporated into the development site parking area.

The 12m green spine setback zone at the rear of the site makes up the childcare' outdoor play area.

SEPP 65 Design Quality Principles

Principle 8: Housing Diversity and Social Interaction

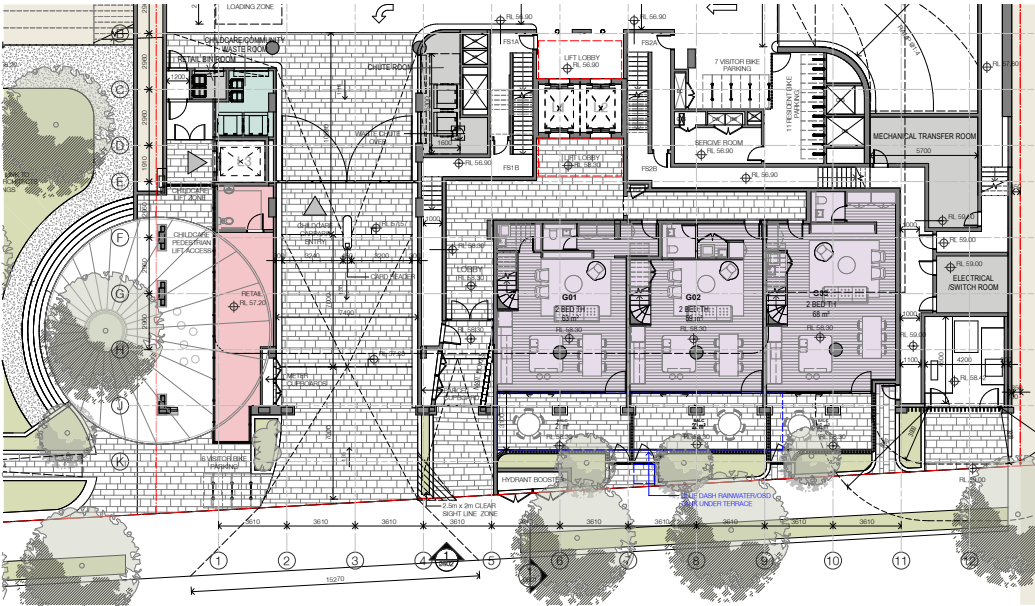
There will be a diverse range of housing product within the project, as well as facilities to catalyse social interaction and a sense of community. These include:

- A range of landscaped communal open spaces
- A mix of apartment sizes and types:

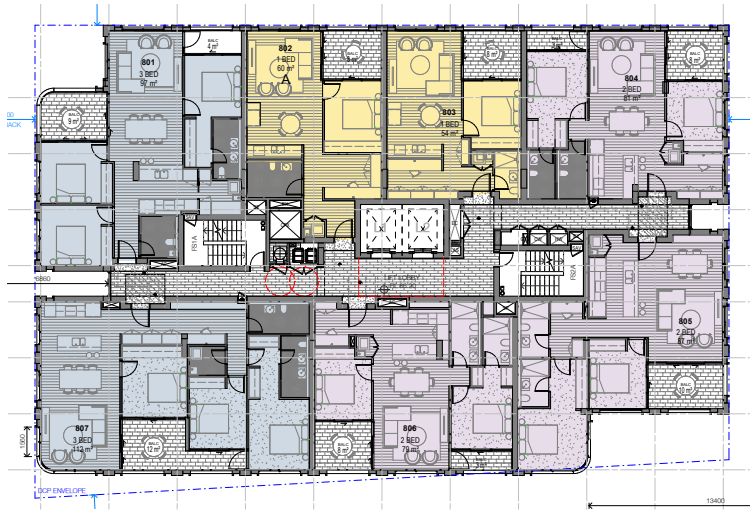
Studio	1%
1 bedroom	24%
1 bedroom + media	7%
2 bedroom	25%
2 bedroom + media	2%
2 bedroom terrace	6%
3 bedroom	30%
3 bedroom terrace	5%

The project will contribute in this regard within the wider St Leonards context by providing:

- Housing within walking distance to public amenities and employment
- Bicycle parking for residents and visitor
- Adaptable housing in accordance with council’s controls
- Activation of the building edges facing the pedestrian link



Ground Plane Activation & Terrace Houses



Typical Apartment Mix



Canberra Avenue Activation

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.

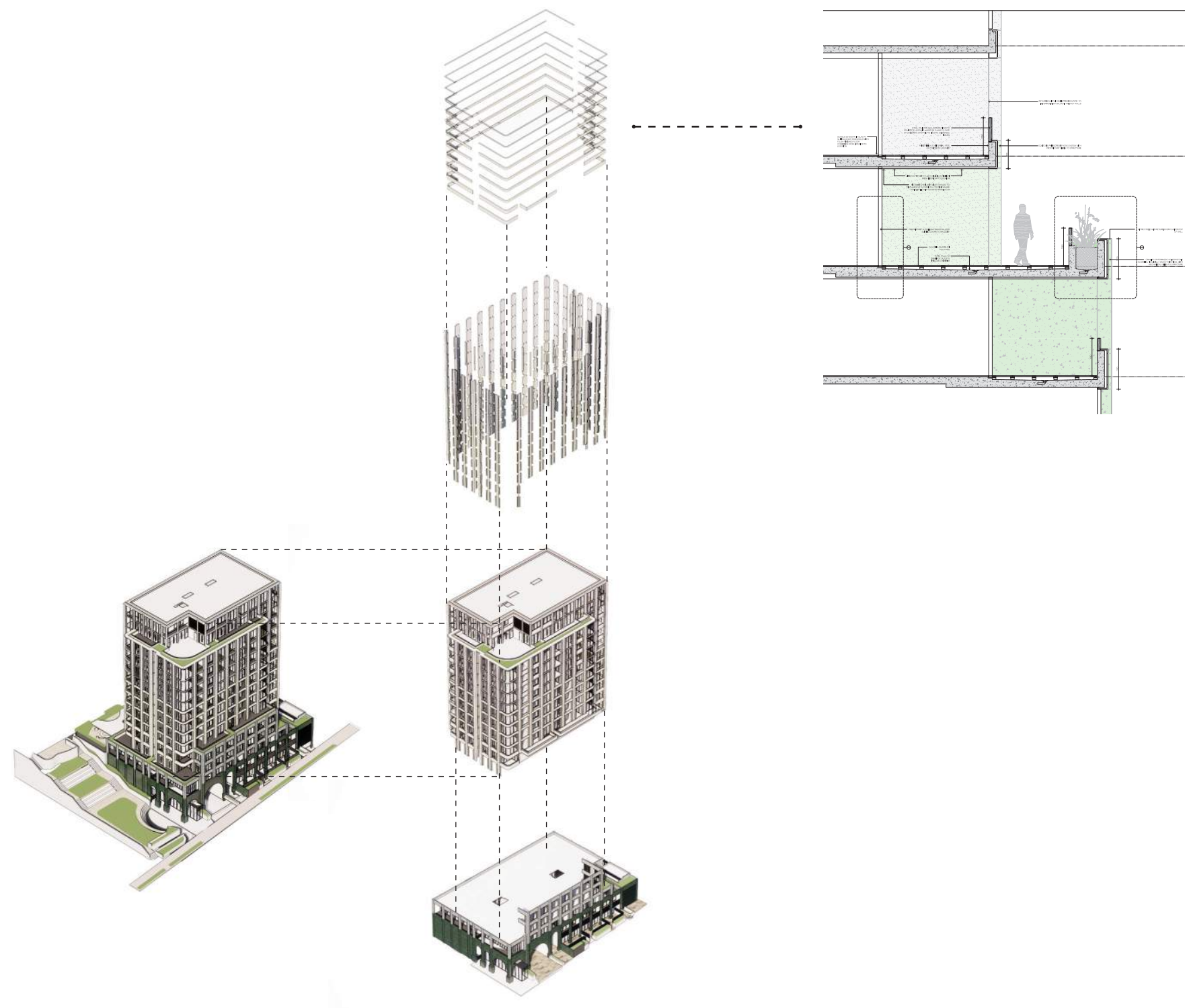
- The proposal is carefully considered, with material choices specific and responsive to its location.
- Massing and detailing is designed to respond to both the emerging character of the area and the existing surrounding building fabric. The following principles have been observed in the design process:
- Careful articulation of the building form has been adopted to reduce the perceived bulk of the building, especially along Canberra Avenue
 - Proposed colours are those which are found naturally rather than primary colours, ensuring that the building sits comfortably within the urban scape.
 - The use of 'natural' materials which do require minimal maintenance
 - Robust materials which are long lasting and weather naturally,
 - Extensive use of landscaping elements and screening devices



Principle 9: Aesthetics

The building facade has the following key features:

- 1. On all levels of the building, consistent, intricate and solid 1400mm wide columns have been applied to the facade.
- 2. Horizontal bands vary in height from 1300mm at the base to 300mm on penthouse levels. On lower levels, the deep upstand provides privacy and protection from the street. Upper levels do not required the same depth.
- 3. The verticals and horizontals together provide significant solidity to the building, while the graded horizontal bands create another layer of visual interest.
- 4. The solidity of the building is further emphasised by the use of stone and terrazzo which firmly anchors the tower down to the ground.



SEPP 65 Design Quality Principles

The texture and colour of the GRC/EQUITONE (or similar) cladding will tie the building together, gradients from a darker colour towards the base to a lighter colour as it touches the sky. The material itself provides multiple construction, maintenance and sustainability



Terrazzo will clad around the podium level around the building, reflecting the different use of the Childcare and Community Hall within and highlighting the front volume facing Canberra Avenue to form a second tier of base for the tower to stand on.

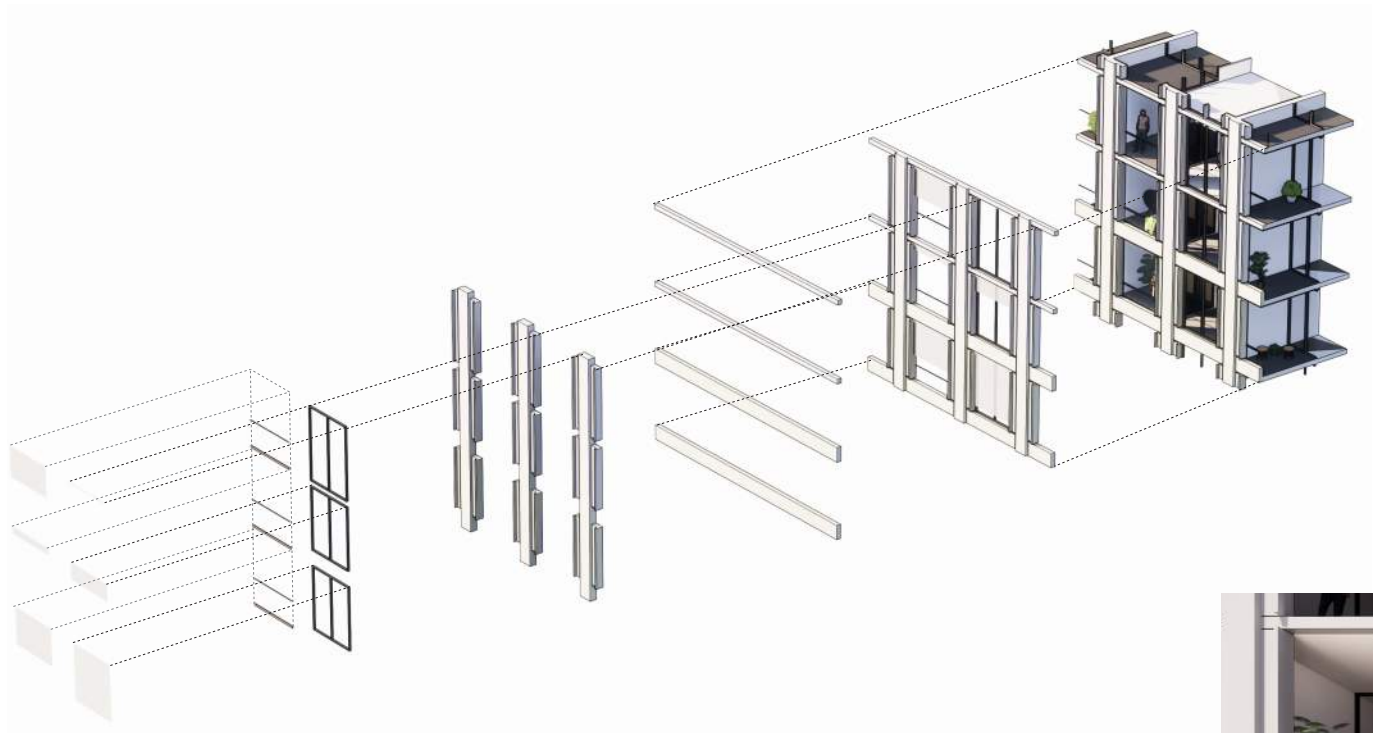


Marble will form the base of the building, where residents can see, touch, and feel the material that's closet to them. It creates a grand civic edge to the building, signalling the public plaza and retail that sits around it.
It also provides a heavy base for the tower to stand on. The natural aesthetics and green colour will connect the park and the green spine effortlessly.



Principle 9: Aesthetics

- The West elevation has been further articulated with the following features:
- 1. The west facade has been designed with intricate layering approach. Four layers of elements articulating the facade, using three layers of materials in two distinct colours. When assembled these layers provide various beautiful textures and shadows when viewed closely by the residents.
 - 2. The four layers of facade elements include: diminishing horizontal bands, the tower becomes lighter in colour as it touches the sky. Detailed solid verticals articulating the grid. Window and balustrade and retractable awnings.
 - 3. The proposed awnings provide sun-shading and privacy protection. Design for external use with minimum maintenance the awnings are mounted onto vertical guide rails. The operator has the option to tilt the bottom panel at various angles to suit the amount of shading required. There is also opportunity for colour to be added to the awnings to provide added delight for those looking in or at the facade.
 - 4. The three layers of tower materials include a stone base, terrazzo podium and Egitone or GRC cladding (or similar) for the tower. Together with the aluminium window framing, glass balustrades and soft fabric awnings, they provide a detailed facade suite.
 - 5. The colour of the tower gradients from a darker green base to a lighter white hue towards the sky, connecting the proposed building to it's surrounding context.



Layered Facade



Facade Activation



Schedule

Location		Apartment Numbers											GFA	
		Studio	1 Bed	1 Bed+Media	2 Bed	2 Bed+Media	2 Bed+TH	3 Bed	3 Bed+TH	Totals	Solar >2hrs	Solar <15min		Cross Vent
Basement 4														
Basement 3														
Basement 2														
Basement 1														
Ground Floor		3							3	0	0	0	293	
Upper Ground													338	
Level 01	1			1				1	3	1	0	1	887	
Level 02		2	1	2	1			2	8	2	0	5	726	
Level 03		2	1	2	1			2	8	2	0	5	718	
Level 04		2	1	1				3	7	3	0	5	650	
Level 05		2	1	1				3	7	3	0	5	650	
Level 06		2	1	1				3	7	7	0	5	650	
Level 07		2	1	1				3	7	7	0	5	650	
Level 08		2		3				2	7	7	0		650	
Level 09		2		3				2	7	7	0		650	
Level 10		2		3				2	7	7	0		650	
Level 11		2		3				2	7	7	0		650	
Level 12						2		4	6	7	0		481	
Level 13													442	
Roof														
Total Height														
										RISER PROVISION			-93*	
Sub Total		1	20	6	21	2	5	25	4	84	60	0	31	8985
Total		84												
Mix		1%	24%	7%	25%	2%	6%	30%	5%		71%	0%	62%	
		32%			33%			35%						

NOTE:
*Riser provision includes 1 sqm per unit on each level for services riser.

ADG Response Table

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

ADG Response Table

Part No.	Objective No.	Objective Design criteria Design guidance	Complies		
			Yes	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)			
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		•	East facing Apartments have Canberra Avenue Street frontage, while on the west, they have the secondary Green Spine frontage. Because of the dual frontage, and the neighbouring boundary being the short boundary to the North, it's not appropriate to have the building orientated to the north.
		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)	•		
	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	•		
		Solar access to living rooms, balconies and private open spaces of neighbours should be considered	•		Due to the orientation of the site, there is no significant impact on the neighbouring developments. And the overshadowing in Newlands Park is consistent with the envisaged under the LMP.
		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	•		Massing has been carefully considered and crafted to minimize the overshadowing to the park down South.
		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	•		No privacy and overshadowing to the West, South and East due to the significant setback at green spine, pedestrian link and Canberra Avenue. To the North, all the apartments have been designed to have dual aspect, to the West or East. And privacy screens will be implemented to the North.
		A minimum of 4 hours of solar access should be retained to solar collectors on neighbouring buildings			New precinct with no development on site at the time of the application.
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	•		Direct access to the street is available to all ground floor terraces.
		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)	•		Levels have been carefully considered and a landscape buffer zone is implemented to provide a level of privacy.
		Upper level balconies and windows should overlook the public domain	•		Apartments are overlooking the pedestrian link, green spine and Newlands park to provide a level of surveillance.
		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	•		

ADG Response Table

Part No.	Objective No.	Objective Design criteria Design guidance	Complies		
			Yes	No	Notes
3C-2	3C-2	Length of solid walls should be limited along street frontages	•		
		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	•		There is a strong focus on the civic corner of the building, a retail space and integrated amphitheatre within the pedestrian link will be provided to facilitate the 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: <ul style="list-style-type: none">· architectural detailing· changes in materials· plant species· colours	•		Architectural detailing of the Canberra avenue frontage differentiates the private entrances and the public lift/ pedestrian site link.
		Opportunities for people to be concealed should be minimised	•		
		Amenity of public domain is retained and enhanced			
		Planting softens the edges of any raised terraces to the street, for example above sub-basement car parking	•		
		Mail boxes should be located in lobbies, perpendicular to the street alignment or integrated into front fences where individual street entries are provided	•		Mail boxes and parcel room has been provided at the main entrance of the lobby located on Canberra Ave.
		The visual prominence of underground car park vents should be minimised and located at a low level where possible	•		
		Substations, pump rooms, garbage storage areas and other service requirements should be located in basement car parks or out of view	•		Due to the restricted GF frontage and specific substation requirements, the substation is located on the Northern Eastern corner of the site, the facade treatment is carefully considered and together with landscaped planters, the visual disruption is minimized.
		Ramping for accessibility should be minimised by building entry locations and setting ground floor levels in relation to footpath levels	•		
		Durable, graffiti resistant and easily cleanable materials should be used	•		
		Where development adjoins public parks, open space or bushland, the design positively addresses this interface and uses a number of the following design solutions: <ul style="list-style-type: none">· 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 development contributes greatly to the surrounding environment and precinct by providing all of the mentioned treatments.
3D	3D-1	On sloping sites protrusion of car parking above ground level should be minimised by using split levels to step underground car parking	•		
		Communal and public open space			
		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	•		
		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)	•		
		Communal open space should have a minimum dimension of 3m, and larger developments should consider greater dimensions	•		

ADG Response Table

Part No.	Objective No.	Objective Design criteria Design guidance	Complies		
			Yes	No	Notes
3D-2	3D-2	Communal open space should be co-located with deep soil areas		<ul style="list-style-type: none">•	Multiple communal open spaces exist on site, the open space within green spine to be shared with the precinct residents is adjacent to the deep soil. However, the majority of the deep soil on site is allocated within the childcare outdoor play area, which cannot be shared with the resident community area.
		Direct, equitable access should be provided to communal open space areas from common circulation areas, entries and lobbies	<ul style="list-style-type: none">•		All communal open space can be access from the main circulation areas.
		Where communal open space cannot be provided at ground level, it should be provided on a podium or roof	<ul style="list-style-type: none">•		Communal open space has been provided on level 12. Residents also have access to the St Leonard precinct communal spaces
		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: <ul style="list-style-type: none">• 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			N/A
		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: <ul style="list-style-type: none">• seating for individuals or groups• barbecue areas• play equipment or play areas• swimming pools, gyms, tennis courts or common rooms	<ul style="list-style-type: none">•		Large amenity areas for fitness and common rooms have been provided in addition to the communal open space with the BBQ and seating facilities.
		The location of facilities responds to micro-climate and site conditions with access to sun in winter, shade in summer and shelter from strong winds and down drafts	<ul style="list-style-type: none">•		
		Visual impacts of services should be minimised, including location of ventilation duct outlets from basement car parks, electrical substations and detention tanks	<ul style="list-style-type: none">•		
		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: <ul style="list-style-type: none">• bay windows• corner windows• balconies	<ul style="list-style-type: none">•		
3D-4	3D-4	Communal open space should be well lit	<ul style="list-style-type: none">•		
		Where communal open space/facilities are provided for children and young people they are safe and contained	<ul style="list-style-type: none">•		
		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	<ul style="list-style-type: none">•		Strong presence at the corner of the main street and pedestrian link.
		The public open space should be connected with nearby parks and other landscape elements	<ul style="list-style-type: none">•		Public open space is the heart of the public domain, linking the pedestrian link, Newlands park, retail and green spine.
		Public open space should be linked through view lines, pedestrian desire paths, termination points and the wider street grid	<ul style="list-style-type: none">•		
		Solar access should be provided year round along with protection from strong winds	<ul style="list-style-type: none">•		

ADG Response Table

Part No.	Objective No.	Objective	Complies													
		Design criteria Design guidance	Yes	No	Notes											
3E		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	•													
		Boundaries should be clearly defined between public open space and private areas	•													
	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														
		Deep soil zones are to meet the following minimum requirements.	•		Deep soil zone provided mainly in the green spine childcare area and pedestrian link zone, strategically places to provide soil for healthy tree growth within the landscaped green spine area.											
		<table><tr><th>Site area</th><th>Minimum dimensions</th><th>Deep soil zone (% of site area)</th></tr><tr><td>Less than 650m²</td><td>–</td><td rowspan="4">7%</td></tr><tr><td>650m² – 1,500m²</td><td>3m</td></tr><tr><td>Greater than 1,500m²</td><td>6m</td></tr><tr><td>Greater than 1,500m² with significant existing cover</td><td>6m</td></tr></table>	Site area	Minimum dimensions	Deep soil zone (% of site area)	Less than 650m ²	–	7%	650m ² – 1,500m ²	3m	Greater than 1,500m ²	6m	Greater than 1,500m ² with significant existing cover	6m		
Site area	Minimum dimensions	Deep soil zone (% of site area)														
Less than 650m ²	–	7%														
650m ² – 1,500m ²	3m															
Greater than 1,500m ²	6m															
Greater than 1,500m ² with significant existing cover	6m															
	On some sites it may be possible to provide larger deep soil zones, depending on the site area and context: <ul style="list-style-type: none">• 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	•														
	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: <ul style="list-style-type: none">• 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	•		Large deep soil zones have been provided by restraining the basement footprint to the 6m rear setback from green spine.												
	Achieving the design criteria may not be possible on some sites including where: <ul style="list-style-type: none">• 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			N/A												
3F-1	Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy															

ADG Response Table

Part No.	Objective No.	Objective	Complies														
		Design criteria Design guidance	Yes	No	Notes												
3F-2		<p>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:</p> <table><tr><th>Building Height</th><th>Habitable Room and Balconies</th><th>Non Habitable</th></tr><tr><td>Up to 12 (4 storeys)</td><td>6m</td><td>3m</td></tr><tr><td>Up to 25m (5-8 storeys)</td><td>9m</td><td>4.5m</td></tr><tr><td>Over 25m (9+ storeys)</td><td>12m</td><td>6m</td></tr></table> <p>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</p>	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	•		No adjacent development at the time of the application. Full 12m setback to the rear boundary is achieved. Various setbacks to the North to ensure a minimum of 6m (6 to 13m) to the boundary is achieved.
	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														
		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	•		A step back in form has been achieved by carving out the North East corner throughout, which provides greater separation to the Northern boundary. (13m)												
		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)	•		Building has been situated on the site with adequate setbacks. A ‘defensive’ approach to apartment layout where primary orientation for main living spaces are orientated to the east/west. Privacy screen will also be implemented where necessary.												
		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)			N/A												
		Direct lines of sight should be avoided for windows and balconies across corners	•		Privacy screens will be implemented.												
	No separation is required between blank walls	•															
	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	•															
	Bedrooms, living spaces and other habitable rooms should be separated from gallery access and other open circulation space by the apartment’s service areas	•															

ADG Response Table

Part No.	Objective No.	Objective Design criteria Design guidance	Complies		
			Yes	No	Notes
3G		Balconies and private terraces should be located in front of living rooms to increase internal privacy		•	Living spaces have been brought forward to allow for greater solar access
		Windows should be offset from the windows of adjacent buildings	•		
		Recessed balconies and/or vertical fins should be used between adjacent balconies	•		
	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	•		
		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)			As required, subject to future design development
		For large developments electronic access and audio/video intercom should be provided to manage access			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	•		A pedestrian site through link will be designed by the landscape architect.
		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	•		The pedestrian site through link is over looked by the habitable rooms of the Southern apartment and will be well lit. It's directly connected with the piazza at the base where a retail zone is present.
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: <ul style="list-style-type: none">the materials and colour palette minimise visibility from the streetsecurity doors or gates at entries that minimise voids in the facadewhere doors are not provided, the visible interior reflects the facade design and the building services, pipes and ducts are concealed	•		The car park entry is integrated into overall facade of Canberra avenue frontage.
		Car park entries are located behind the building line	•		
		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 at the lowest entry point possible/appropriate along Canberra Avenue.
		Car park entry and access is located on secondary streets or lanes where available			N/A
		Vehicle standing areas that increase driveway width and encroach into setbacks should be avoided	•		

ADG Response Table

Part No.	Objective No.	Objective Design criteria Design guidance	Complies		
			Yes	No	Notes
		Access point locations avoid headlight glare to habitable rooms	•		
		Adequate separation distances are provided between vehicular entries and street intersections	•		
		The width and number of vehicle access points is limited to the minimum	•		One vehicle access point.
		Visual impact of long driveways is minimised through changing alignments and screen planting	•		
		The requirement for large vehicles to enter or turnaround within the site is avoided		•	Designated truck turnaround zone is included with sufficient head height. Park and narrow street at the building entrance, it is to the benefit of the site to have the vehicles enter into the parking and turnaround within.
		Garbage collection, loading and servicing areas are screened	•		Garbage collection happens within the BOH area on ground floor. Well setback from the street.
		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	•		
		Pedestrian and vehicle access should be separated and distinguishable. Design solutions may include: <ul style="list-style-type: none">• changes in surface materials• level changes• the use of landscaping for separation	•		Landscape is used to separate the pedestrian paths and the vehicle entry points
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				
	For development in the following locations: <ul style="list-style-type: none">– 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				
	Where a car share scheme operates locally, provide car share parking spaces within the development. Car share spaces, when provided, should be on site		•		Two car share spaces have been allocated within the proposed development.
	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		•		
	Secure undercover bicycle parking should be provided that is easily accessible from both the public domain and common areas		•		Secure undercover bicycle parking has been provided.
	Conveniently located charging stations are provided for electric vehicles, where desirable		•		Charging stations have been provided in the basement.
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		•		
	Direct, clearly visible and well lit access should be provided into common circulation areas		•		

ADG Response Table

Part No.	Objective No.	Objective Design criteria Design guidance	Complies		
			Yes	No	Notes
4	3J-4	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	•		
		Visual and environmental impacts of underground car parking are minimised			
		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	•		
		Natural ventilation should be provided to basement and sub-basement car parking areas		•	Mechanical ventilation will be required for basement carpark levels
	3J-5	Ventilation grills or screening devices for car parking openings should be integrated into the facade and landscape design	•		
		Visual and environmental impacts of on-grade car parking are minimised			
		On-grade car parking should be avoided	•		
	3J-6	Where on-grade car parking is unavoidable, the following design solutions are used: <ul style="list-style-type: none">• 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
		Visual and environmental impacts of above ground enclosed car parking are minimised			
		Exposed parking should not be located along primary street frontages			N/A
		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: <ul style="list-style-type: none">• 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
		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	•		100% apartments achieve direct sunlight to living rooms and private open space 72% achieves 2hr minimum direct sunlight in mid-winter.	

ADG Response Table

Part No.	Objective No.	Objective Design criteria Design guidance	Complies		
			Yes	No	Notes
4A-2		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	•		
		3. A maximum of 15% of apartments in a building receive no direct sunlight between 9am and 3pm at mid winter			N/A
		The design maximises north aspect and the number of single aspect south facing apartments is minimised	•		
		Single aspect, single storey apartments should have a northerly or easterly aspect	•		
		Living areas are best located to the north and service areas to the south and west of apartment		•	Living spaces have been orientated to ensure that solar access is maximised. Apartment 'services' have been located to the rear of the apartment.
		To optimise the direct sunlight to habitable rooms and balconies a number of the following design features are used: <ul style="list-style-type: none">• dual aspect apartments• shallow apartment layouts• two storey and mezzanine level apartments• bay windows	•		Dual aspect apartments are the majority of apartments in this design
		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 is achieved to the majority of apartments.
		Achieving the design criteria may not be possible on some sites. This includes: <ul style="list-style-type: none">• 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			N/A
		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			
4A-3		Where courtyards are used: <ul style="list-style-type: none">• 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: <ul style="list-style-type: none">• 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 lighter colouring

ADG Response Table

Part No.	Objective No.	Objective Design criteria Design guidance	Complies		
			Yes	No	Notes
4B	Natural Ventilation	A number of the following design features are used: <ul style="list-style-type: none">• 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)	•		Operable shading device will be implemented on the west facade.
		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	•		
		Doors and openable windows maximise natural ventilation opportunities by using the following design solutions: <ul style="list-style-type: none">• 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)	•		
		Natural ventilation to single aspect apartments is achieved with the following design solutions: <ul style="list-style-type: none">• 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	•		
		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	•		
		2. Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line			NA
		The building should include dual aspect apartments, cross through apartments and corner apartments and limit apartment depths	•		

ADG Response Table

Part No.	Objective No.	Objective	Complies														
		Design criteria Design guidance	Yes	No	Notes												
4C		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)			N/A												
		Apartments are designed to minimise the number of corners, doors and rooms that might obstruct airflow	•														
		Apartment depths, combined with appropriate ceiling heights, maximise cross ventilation and airflow	•														
	Ceiling heights																
4C–1	Ceiling height achieves sufficient natural ventilation and daylight access																
	Measured from finished floor level to finished ceiling level, minimum ceiling heights are:		•		Habitable rooms are 2.7m ceiling height and non-habitable are 2.4m												
	<table><tr><th colspan="2">Minimum ceiling height for apartment and mixed use buildings</th></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>					Minimum ceiling height for apartment and mixed use buildings		Habitable rooms	2.7m	Non-habitable rooms	2.4m	For 2 storey apartments	2.7m for main living area floor 2.4m for second floor, where its apartment area does not exceed 50% of the apartment area	Attic spaces	1.8m at edge of room with a 30 people degree minimum ceiling slope	If located in mixed use areas	3.3m for ground and first floor to promote future flexibility of use
Minimum ceiling height for apartment and mixed use buildings																	
Habitable rooms	2.7m																
Non-habitable rooms	2.4m																
For 2 storey apartments	2.7m for main living area floor 2.4m for second floor, where its apartment area does not exceed 50% of the apartment area																
Attic spaces	1.8m at edge of room with a 30 people degree minimum ceiling slope																
If located in mixed use areas	3.3m for ground and first floor to promote future flexibility of use																
	These minimums do not preclude higher ceilings if desired																
	Ceiling height can accommodate use of ceiling fans for cooling and heat distribution																
4C–2	Ceiling height increases the sense of space in apartments and provides for well-proportioned rooms																
	A number of the following design solutions can be used: <ul style="list-style-type: none">• 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		•														
4C–3	Ceiling heights contribute to the flexibility of building use over the life of the building																
	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)			•	Restrictive building height. However the bottom 2 levels are double height terrace houses which offers flexibility for the future program.												
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																

ADG Response Table

Part No.	Objective No.	Objective	Complies												
		Design criteria Design guidance	Yes	No	Notes										
4D-2		1. Apartments are required to have the following minimum internal areas:	•		The apartments have been designed with generous internal areas:										
		<table><tr><th>Apartment Type</th><th>Minimum Internal Area</th></tr><tr><td>Studio</td><td>35m²</td></tr><tr><td>1 bedroom</td><td>50m²</td></tr><tr><td>2 bedroom</td><td>70m²</td></tr><tr><td>3 bedroom</td><td>90m²</td></tr></table>	Apartment Type	Minimum Internal Area	Studio	35m ²	1 bedroom	50m ²	2 bedroom	70m ²	3 bedroom	90m ²			
		Apartment Type	Minimum Internal Area												
		Studio	35m ²												
		1 bedroom	50m ²												
		2 bedroom	70m ²												
		3 bedroom	90m ²												
		The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m ² each													
		A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m ² each													
		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-3		Environmental performance of the apartment is maximised													
		1. Habitable room depths are limited to a maximum of 2.5 x the ceiling height	•												
		2. In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window		•	Flexible multi-use rooms have been provided in additional space behind kitchen/living/dining.										
		Greater than minimum ceiling heights can allow for proportional increases in room depth up to the permitted maxi-mum depths		•	NA										
		All living areas and bedrooms should be located on the external face of the building	•												
		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	•												
		Apartment layouts are designed to accommodate a variety of household activities and needs													
		1. Master bedrooms have a minimum area of 10m ² and other bedrooms 9m ² (excluding wardrobe space)	•												
		2. Bedrooms have a minimum dimension of 3m (excluding wardrobe space)	•												
		3. Living rooms or combined living/dining rooms have a minimum width of: 3.6m for studio and 1 bedroom apartments 4m for 2 and 3 bedroom apartments	•												
4. The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts	•														

ADG Response Table

Part No.	Objective No.	Objective	Complies																	
		Design criteria Design guidance	Yes	No	Notes															
		Access to bedrooms, bathrooms and laundries is separated from living areas minimising direct openings between living and service areas		<ul style="list-style-type: none">	Where achievable this approach has been adopted															
		All bedrooms allow a minimum length of 1.5m for robes	<ul style="list-style-type: none">																	
		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	<ul style="list-style-type: none">																	
		Apartment layouts allow flexibility over time, design solutions may include: <ul style="list-style-type: none">· 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	<ul style="list-style-type: none">																	
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: <table><tr><th>Dwelling Type</th><th>Minimum Area</th><th>Minimum Depth</th></tr><tr><td>Studio Apartments</td><td>4m²</td><td>-</td></tr><tr><td>1 bedroom apartments</td><td>8m²</td><td>2m</td></tr><tr><td>2 bedroom apartments</td><td>10m²</td><td>2m</td></tr><tr><td>3+ bedroom apartments</td><td>12m²</td><td>2.4m</td></tr></table>	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	<ul style="list-style-type: none">		
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																		
		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	<ul style="list-style-type: none">																	
		Increased communal open space should be provided where the number or size of balconies are reduced			N/A															
		Storage areas on balconies is additional to the minimum balcony size	<ul style="list-style-type: none">																	
		Balcony use may be limited in some proposals by: <ul style="list-style-type: none">· 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			N/A															
4E–2	Primary private open space and balconies are appropriately located to enhance liveability for residents																			

ADG Response Table

Part No.	Objective No.	Objective Design criteria Design guidance	Complies		
			Yes	No	Notes
4F	4E-3	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	•		
		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 designed 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	•		
		Full width full height glass balustrades alone are generally not desirable	•		Combination of solid and 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 and form part of the façade design
		Operable screens, shutters, hoods and pergolas are used to control sunlight and wind	•		
		Balustrades are set back from the building or balcony edge where overlooking or safety is an issue	•		
		Downpipes and balcony drainage are integrated with the overall facade and building design	•		
		Air-conditioning units should be located on roofs, in basements, or fully integrated into the building design	•		
		Where clothes drying, storage or air conditioning units are located on balconies, they should be screened and integrated in the building design			N/A
		Ceilings of apartments below terraces should be insulated to avoid heat loss	•		
	4E-4	Water and gas outlets should be provided for primary balconies and private open space	•		Noted
		Private open space and balcony design maximises safety			
		Changes in ground levels or landscaping are minimised	•		
	4F-1	Design and detailing of balconies avoids opportunities for climbing and falls	•		
		Common Circulation and Spaces			
		Common circulation spaces achieve good amenity and properly service the number of apartments			
		1. The maximum number of apartments off a circulation core on a single level is eight	•		
		2. For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40	•		
		Greater than minimum requirements for corridor widths and/ or ceiling heights allow comfortable movement and access particularly in entry lobbies, outside lifts and at apartment entry doors	•		
		Daylight and natural ventilation should be provided to all common circulation spaces that are above ground	•		Corridor spaces are naturally cross ventilated to provide access to daylight and ventilation
		Windows should be provided in common circulation spaces and should be adjacent to the stair or lift core or at the ends of corridors	•		Glass louvres are provided for light and ventilation.
		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	•		Corridors are dog-legged for articulation

ADG Response Table

Part No.	Objective No.	Objective	Complies												
		Design criteria	Yes	No	Notes										
4F	4F-2	Design guidance													
		Design common circulation spaces to maximise opportunities for dual aspect apartments, including multiple core apartment buildings and cross over 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										
		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										
		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	•												
		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										
		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	•												
		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	•		Community hall has been provided on level 1.										
		Where external galleries are provided, they are more open than closed above the balustrade along their length	•												
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:														
	<table><tr><th>Dwelling type</th><th>Storage size</th></tr><tr><td>Studio apartments</td><td>4m3</td></tr><tr><td>1 bedroom apartments</td><td>6m3</td></tr><tr><td>2 bedroom apartments</td><td>8m3</td></tr><tr><td>3 bedroom apartments</td><td>10m3</td></tr></table>					Dwelling type	Storage size	Studio apartments	4m3	1 bedroom apartments	6m3	2 bedroom apartments	8m3	3 bedroom apartments	10m3
Dwelling type	Storage size														
Studio apartments	4m3														
1 bedroom apartments	6m3														
2 bedroom apartments	8m3														
3 bedroom apartments	10m3														
	At least 50% of the required storage is to be located within the apartment														
	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														
	Left over space such as under stairs is used for storage														

ADG Response Table

Part No.	Objective No.	Objective Design criteria Design guidance	Complies		
			Yes	No	Notes
4H	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 rooms are located in the basement for larger storage items
		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.
		If communal storage rooms are provided they should be accessible from common circulation areas of the building			N/A
		Storage not located in an apartment is integrated into the overall building design and not visible from the public domain	•		Additional storage is located in the basement
	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	•		
		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	•		
		Storage, circulation areas and non-habitable rooms are located to buffer noise from external sources	•		Service cupboards and circulation areas are centrally located, with bedrooms sitting on the outside of the apartments and non- habitable spaces on the inside of the apartments.
		The number of party walls (walls shared with other apartments) are limited and are appropriately insulated	•		
4J	4H-2	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	•		
		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	•		
		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	•		
	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			

ADG Response Table

Part No.	Objective No.	Objective Design criteria Design guidance	Complies		
			Yes	No	Notes
4J	4J-2	To minimise impacts the following design solutions may be used: <ul style="list-style-type: none">physical separation between buildings and the noise or pollution sourceresidential uses are located perpendicular to the noise source and where possible buffered by other usesnon-residential buildings are sited to be parallel with the noise source to provide a continuous building that shields residential uses and communal open spacesNon-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 sourcesBuildings should respond to both solar access and noise. Where solar access is away from the noise source, nonhabitable rooms can provide a bufferWhere 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	•		
		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: <ul style="list-style-type: none">solar and daylight accessprivate open space and balconiesnatural cross ventilation	•		
		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: <ul style="list-style-type: none">limiting the number and size of openings facing noise sourcesproviding seals to prevent noise transfer through gapsusing 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	•		
4K	Apartment Mix				
4K	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	•		Terrace House /Studio / 1Bed + Study / 2 Bed + Study / 3 Bed + Study / Two-Storey Penthouse
		The apartment mix is appropriate, taking into consideration: <ul style="list-style-type: none">the distance to public transport, employment and education centresthe current market demands and projected future demographic trendsthe demand for social and affordable housingdifferent cultural and socioeconomic group	•		
		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	•		
	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	•		

ADG Response Table

Part No.	Objective No.	Objective Design criteria Design guidance	Complies		
			Yes	No	Notes
4L		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	•		
	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	•		
		Activity is achieved through front gardens, terraces and the facade of the building. Design solutions may include: <ul style="list-style-type: none">• both street and foyer entrances to ground floor apartments• private open space is next to the street• doors and windows face the street	•		Terraces face the street and provide a element of activity around the streets.
		Retail or home office spaces are located along street frontages	•		Retail space is located along the main street and pedestrian link.
		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	•		
	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: <ul style="list-style-type: none">• 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	•		Ground floor terraces are generally elevated above street level with landscaping provided to help screen the private terraces. The landscaping is integrated with the balustrading
		Solar access is maximised through: <ul style="list-style-type: none">• high ceilings and tall windows• trees and shrubs that allow solar access in winter and shade in summer	•		
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: <ul style="list-style-type: none">• 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	•		
		Building services should be integrated within the overall façade	•		
		Building facades should be well resolved with an appropriate scale and proportion to the streetscape and human scale. Design solutions may include: <ul style="list-style-type: none">• 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 building has a rigid and heavy vertical grid composition with horizontal “fading” towards the sky. Massing are stepped to create visual interest and minimise visual bulk from the street.
		Building façades relate to key datum lines of adjacent buildings through upper level setbacks, parapets, cornices, awnings or colonnade heights	•		No existing development around the building at the time of the application. However we have carefully considered possible future development datums.

ADG Response Table

Part No.	Objective No.	Objective Design criteria Design guidance	Complies		
			Yes	No	Notes
4N	4M-2	Shadow is created on the façade throughout the day with building articulation, balconies and deeper window reveals	•		A play of shadows can be seen through the highly articulated vertical elements. and "fading" horizontal bands.
		Building functions are expressed by the façade			
		Building entries should be clearly defined	•		Breaks in the façade highlight where the building entries exist
		Important corners are given visual prominence through a change in articulation, materials or colour, roof expression or changes in height	•		The Civic corner on ground floor has a distinct facade geometry to indicate the prominence of the corner. For upper levels of the tower, the corners are curved to provide panorama view out.
		The apartment layout should be expressed externally through façade features as party walls and floor slabs	•		
	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: <ul style="list-style-type: none">• 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	•		Stepped massing to minimise roof appearance from the street.
	4N-2	Roof treatments should be integrated with the building design. Design solutions may include: <ul style="list-style-type: none">• Roof design proportionate to the overall building size, scale and form• Roof materials complement the building• Service elements are integrated	•		
		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: <ul style="list-style-type: none">• Penthouse apartments• Dormer or clerestory windows• Openable skylights	•		Penthouse apartments have roof lights incorporated into the apartment design.
		Open space is provided on roof tops subject to acceptable visual and acoustic privacy, comfort levels, safety and security considerations	•		Communal open space at level 12 has planted edge and awnings to help with visual and acoustic privacy.
	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: <ul style="list-style-type: none">• The roof lifts to the north• Eaves and overhangs shade walls and windows from summer sun	•		
4O	4O-1	Skylights and ventilation systems should be integrated into the roof design	•		
		Landscape Design			
	Landscape design is viable and sustainable				

ADG Response Table

Part No.	Objective No.	Objective	Complies			
		Design criteria Design guidance	Yes	No	Notes	
4P	4O-2	Landscape design should be environmentally sustainable and can enhance environmental performance by incorporating: <ul style="list-style-type: none">· 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 to Landscape Architect's documentations.	
		Ongoing maintenance plans should be prepared	•		Noted.	
		Microclimate in enhanced by: <ul style="list-style-type: none">· 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 to Landscape Architect's documentations.	
		Tree and shrub selection considers size at maturity and the potential for roots to complete (see table 4)	•		Refer to Landscape Architect's documentations.	
		Landscape design contributes to the streetscape and amenity				
		Landscape design responds to the existing site conditions including: <ul style="list-style-type: none">· Changes of levels· Views· Significant landscape features including trees and rock outcrops	•			
		Significant landscape features should be protected by: <ul style="list-style-type: none">· Tree protection zones (see figure 40.5)· Appropriate signage and fencing during construction	•		Noted.	
		Plants selected should be endemic to the region and reflect the local ecology	•			
	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: <ul style="list-style-type: none">· Modifying depths and widths according to the planting mix and irrigation frequency· Free draining and long soil life span· Tree anchorage	•			
Minimum soil standards for plant sizes should be provided in accordance with Table 5		•				
4P-2	Plant growth is optimised with appropriate selection and maintenance					
	Plants are suited to site conditions, considerations include: <ul style="list-style-type: none">· Drought and wind tolerance· Seasonal changes in solar access· Modified substrate depths for diverse range of plants· Plant longevity	•				
	A landscape maintenance plan is prepared	•				

ADG Response Table

Part No.	Objective No.	Objective Design criteria Design guidance	Complies		
			Yes	No	Notes
4Q	4P-3	Irrigation and drainage systems respond to : <ul style="list-style-type: none">· Changing site conditions· Soil profile and the planting regime· Whether rainwater, stormwater r recycled grey water is used	•		
		Planting on structure contributes to the quality and amenity of communal and public open spaces			
		Building design incorporates opportunities for planting on structures. Design solutions may include: <ul style="list-style-type: none">· 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	•		
	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	•		All apartments incorporate the Liveable Housing Guideline's silver level universal design features
	4Q-2	A variety of apartments with adaptable designs are provided			
		Adaptable housing should be provided in accordance with the relevant council policy	•		
		Design solutions for adaptable apartments include: <ul style="list-style-type: none">· 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	•		
4R	4Q-3	Apartment layouts are flexible and accommodate a range of lifestyle needs			
		Apartments design incorporates flexible design solutions which may include: <ul style="list-style-type: none">· 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	•		
	Adaptive Reuse				
	4R-1	New additional to existing buildings are contemporary and complementary and enhance an area's identity and sense of place			
		Design solutions may include: <ul style="list-style-type: none">· 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			

ADG Response Table

Part No.	Objective No.	Objective Design criteria Design guidance	Complies		
			Yes	No	Notes
4S		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: <ul style="list-style-type: none">· 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: <ul style="list-style-type: none">· 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
	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			N/A
	4S-2 Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents				
		Residential circulation areas should be clearly defined. Design solutions may include: <ul style="list-style-type: none">· 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			N/A
		Landscape communal open space should be provided at podium or roof levels	•		
	Awnings and Signage				
	4T-1 Awnings are well located and complement and integrate with the building design				
4T		Awnings should be located along streets with high pedestrian activity and active frontages			N/A (Pedestrian activity will be low in this development)
		A number of the following design solutions are used: <ul style="list-style-type: none">· 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			N/A
		Awnings should be located over building entries for building address and public domain amenity		•	Instead of projections for a sense of address, the building offers scoops between the forms where the lobby entries are located
		Awnings relate to residential windows, balconies, street tree planting, power poles and street infrastructure			N/A
		Gutters and down pipes should be integrated and concealed	•		

ADG Response Table

Part No.	Objective No.	Objective Design criteria Design guidance	Complies		
			Yes	No	Notes
4U	4T-2	Lighting under awnings should be provided for pedestrian safety			N/A
		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
		Signage is limited to being on and below awnings and in single façade sign on the primary street frontage	•		Noted
	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 up stands 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: <ul style="list-style-type: none">• The use of smart glass or other technologies on north and west elevations• Thermal mass in the floors and walls of north facing rooms is 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	•		Retractable awning are used particularly on western windows. Deep balconies maximise shading to sliding doors.
		Provision of consolidated heating and cooling infrastructure should be located in a centralised location (e.g. the basement)	•		
	4U-3	Adequate natural ventilation minimises the need for mechanical ventilation			
		A number of the following design solution are used: <ul style="list-style-type: none">• 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
		Drought tolerant, low water use plants should be used within landscaped areas	•		Refer landscape design
	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			

ADG Response Table

Part No.	Objective No.	Objective Design criteria Design guidance	Complies		
			Yes	No	Notes
4W	4V-3	A number of the following design solutions are used: <ul style="list-style-type: none">Runoff is collected from roofs and balconies in water tanks and plumbed into toilets, laundry and irrigationPorous and open paving materials is maximisedOn site stormwater and infiltration, including bio-retention systems such as rain gardens or street tree pits			
		Flood management systems are integrated into site design			
		Detention tanks should be located under paved areas, driveways or in basement car parks	•		Detention tank is located under paved area.
		On large sites parks or open spaces are designed to provide temporary on site detention basins			N/A
	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	•		Storage of rubbish bins is set far behind the parking entrance and not visible from the street.
		Waste and recycling storage areas should be well ventilated	•		
		Circulation design allows bins to be easily manoeuvred between storage and collection points	•		
		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.
		A waste management plan should be prepared	•		
	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.
		Communal waste and recycling rooms are in convenient and accessible locations related to each vertical core	•		One chute and two bins are provided on each level next to the lift.
		For mixed use developments, residential waste and recycling storage areas and access should be separate and secure from other uses			N/A
		Alternative waste disposal methods such as composting should be provided	•		
4X	Building Maintenance				
	4X-1	Building design detail provides protection from weathering			
		A number of the following design solutions are used: <ul style="list-style-type: none">Roof overhangs to protect wallsHoods over windows and doors to protect openingsDetailing horizontal edges with drip lines to avoid staining of surfacesMethods to eliminate or reduce planter box leachingAppropriate design and material selection for hostile locations	•		Noted.
	4X-2	Systems and access enable ease of maintenance			
		Window design enables cleaning from the inside of the building	•		
		Building maintenance systems should in incorporated and integrated into the design of the building form, roof and façade	•		A roof hatch has been allowed for in order to gain access to the roof where condensers are located.
		Design solutions do not require external scaffolding for maintenance access	•		

ADG Response Table

Part No.	Objective No.	Objective Design criteria Design guidance	Complies		
			Yes	No	Notes
4X-3		Manually operated systems such as blinds, sunshades and curtains are used in preference to mechanical systems	•		
		Centralised maintenance, services and storage should be provided for communal open space areas within the building	•		
		Material selection reduces ongoing maintenance costs			
		A number of the following design solutions are used: <ul style="list-style-type: none">• 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	•		Natural, robust, durable and low maintenance materials are used for the facade of the building.

Site Analysis Checklist

6

Documentation	Required information	Provided	
		Yes	No
Site location	Broad map or aerial photo showing site location in relation to surrounding centres, shops, civic/community facilities and transport	•	
Aerial photograph	Colour aerial photographs of site in its context	•	
Local context plan	Plan(s) of the existing features of the wider context including adjoining properties and the other side of the street, that show:	•	
	• pattern of buildings, proposed building envelopes, setbacks and subdivision pattern		
	• land use and building typologies of adjacent and opposite buildings in the street		
	• movement and access for vehicles, servicing, pedestrians and cyclists		
	• topography, landscape, open spaces and vegetation		
	• significant views to and from the site		
	• significant noise sources in the vicinity of the site, particularly vehicular traffic, train, aircraft and industrial noise		
Site context and survey plan	Plan(s) of the existing site based on a survey drawing showing the features of the immediate site including:	•	
	• boundaries, site dimensions, site area, north point		
	• topography, showing relative levels and contours at 0.5 metre intervals for the site and across site boundaries where level changes exist, any unique natural features such as rock outcrops, watercourses, existing cut or fill, adjacent streets and sites		
	• location and size of major trees on site and relative levels where relevant, on adjacent properties and street trees		
	• location and use of existing buildings or built features on the site		
	• location and important characteristics of adjacent public, communal and private open spaces		
	• location and height of existing windows, balconies, walls and fences on adjacent properties facing the site, as well as parapet and ridge lines		
	• pedestrian and vehicular access points, driveways and features such as service poles, bus stops, fire hydrants etc.		
	• location of utility services, including easements and drainage		
	• location of any other relevant features		
	Streetscape elevations and sections	•	
	• overall height (storeys, metres) and important parapet/datum lines of adjacent buildings		
	• patterns of building frontage, street setbacks and side setbacks		
	• planned heights		

Documentation	Required information	Provided	
		Yes	No
Analysis	Plan that synthesises and interprets the context, streetscape and site documentation into opportunities and constraints that generate design parameters, including the following information:	•	
	• orientation and any overshadowing of the site and adjoining properties by neighbouring structures (excludes vegetation). The winter sun path should also be shown between 9 am and 3 pm on 21 June		
	• identification of prevailing wind		
	• the geotechnical characteristics of the site and suitability of the proposed development		
	• the public domain interface and street setback		
	• relationship to and interface with adjacent properties, including side and rear setbacks		
	• ventilation for the subject site and immediate neighbours		
	• proposed building footprint location		
	• retained and proposed significant trees and deep soil zones		
	• proposed communal open space		
	• proposed car park footprint and depth		
	• proposed building entries		
	• supporting written material - this should include technical advice from specialists involved in the development process including landscape architects, arborists, geotechnical engineers and/or contamination specialists where applicable		

Development Application Checklist

7

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		
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		

Documentation	Required information	Provided	
		Yes	No
	• 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		
Elevations	• storage areas		
	• 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	•	
Sections	A scale drawing showing:	•	
	• proposed building height and RL lines		

Development Application Checklist

Documentation	Required information	Provided	
		Yes	No
	· 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 Architects

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We create spaces people love.
SJB is passionate about the possibilities
of architecture, interiors, urban design
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