

# Urban Design Report

13-19 Canberra Avenue

**Prepared for**  
HYECORP

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

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

Note: this report incorporates information and events up to the issued date only. The Consultant, SJB Architects NSW (hereafter SJB), prepared this report on the instructions, and for the benefit only, of the Client for the purpose of the project named on the cover of this report, and not for any other purpose or use. This report has been prepared with appropriate due care, and the assumptions and recommendations contained within are made in good faith, and on the basis of information supplied to SJB at the date of this report. No responsibility is accepted by SJB or any of its employees for any errors in data which is either supplied by the Client, a third party to SJB, or which SJB is required to estimate, provided that this will not absolve SJB from liability arising from an opinion expressed recklessly or in bad faith. This document cannot be copied or reproduced in whole or part for any purpose without the prior written consent of SJB.

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DESIGN PROCESS - APPROVED DA SCHEME

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 delivers important precinct infrastructures for the community including, the pedestrian link, public lift, retail facility, community hall and childcare.

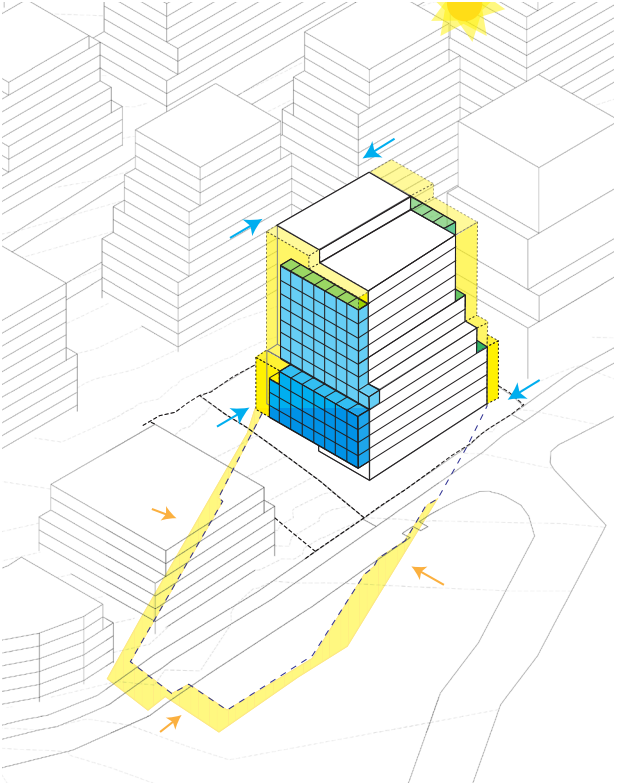
SJB Architects was commissioned by HYECORP Property Group in March 2021 to prepare a design and DA submission.

The concept design was developed prioritizing the community benefits, providing various community spaces to activate the ground plane and green spine. Crafting the built form to minimize shadow impact to the existing public open spaces, and manipulating the volumes to reduce the visual bulk on street.

The proponent met with Council and the Design Review Panel through out the design development process, and the feedback has been incorporated into the DA documentation.

The Council and the Design Review Panel agreed that the project achieves design excellence while providing many crucial community spaces for the precinct.

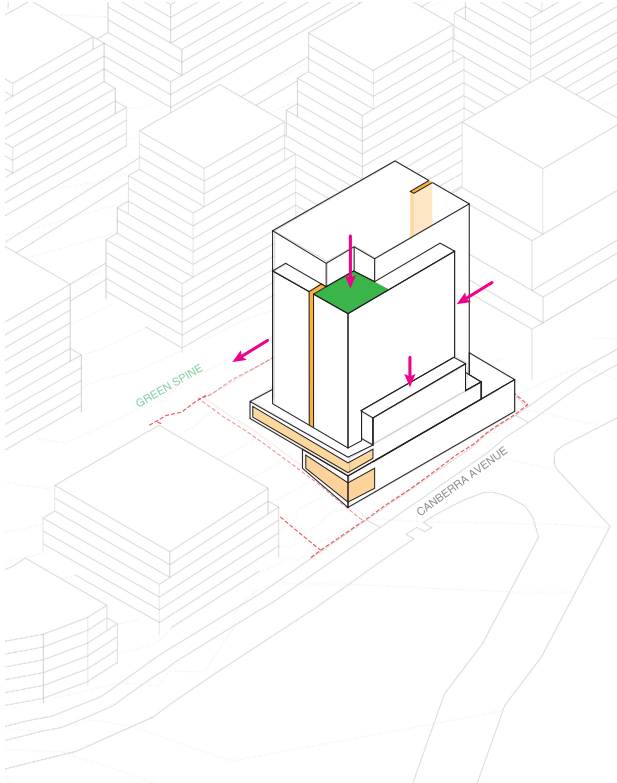
DA was subsequently approved in June 2022.



CRAFTING TO MINIMIZE SHADOW

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

The resulting mass contributes no additional overshadowing to Newlands Park.

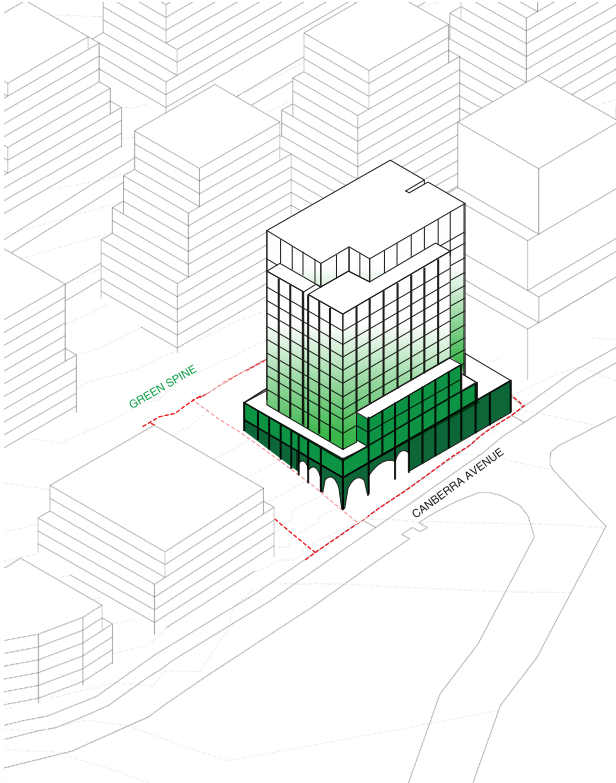


VOLUME CARVING

Volumes are regrouped to provide simpler geometry to the eye, the front tower volume has been shifted away from the Northern edge, to provide more building separation to the neighboring 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.



DA SUBMISSION

Heavier and darker material is used at the base of the building which then transits to the L1 and podium volume facing Canberra Avenue and then simpler and lighter cladding on the tower.

It gradients as it touches the sky and connects with its surroundings with its natural texture and green colour. The building becomes the connection between the park and green spine.

After incorporating Council and DRP feedbacks, this was the massing submitted and approved in the DA application.

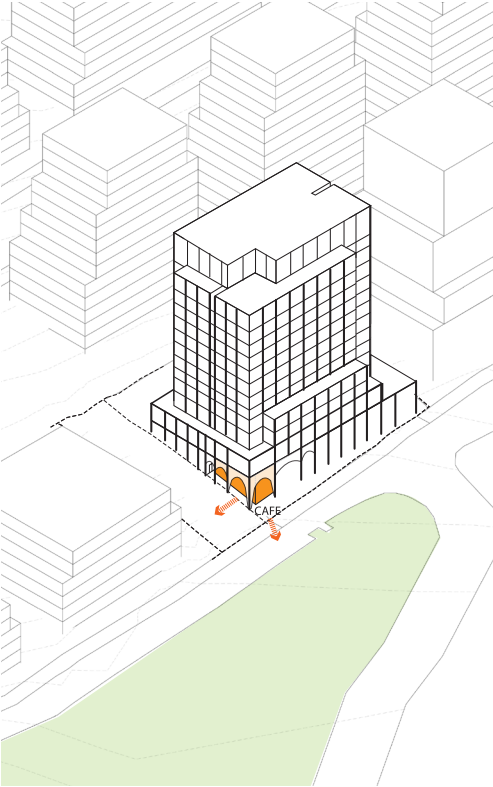
DESIGN PROCESS - APPROVED DA SCHEME - COMMUNITY AMENITIES

The masterplan outlines all the FSR for each of the lot within the precinct to setout the housing target for the area.

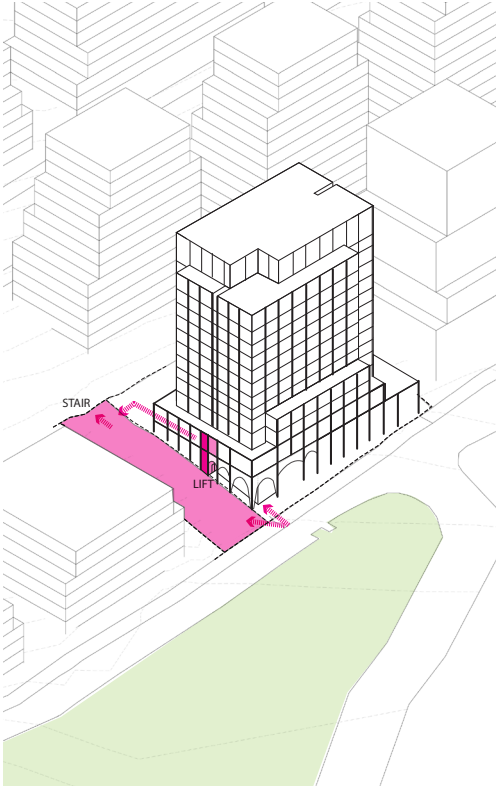
The allowable maximum FSR for the site is 3.7:1, with the mutual understanding that the site needs to deliver the most significant quantifiable community infrastructure and public benefits across the entire St Leonards South Precinct.

Requirements	Approved
Construction and dedication to Council of a 15m wide east west pedestrian link to enable connection between Holdsworth Avenue and Canberra Avenue.	Construction and dedication to Council of a 15m wide east west pedestrian link to enable connection between Holdsworth Avenue and Canberra Avenue.
Provision of a publicly accessible pedestrian lift within the building to connect persons with a disability from Canberra Avenue to the upper parts of the east west link as per the Masterplan and DCP.	Provision of a publicly accessible pedestrian lift within the building to connect persons with a disability from Canberra Avenue to the upper parts of the east west link as per the Masterplan and DCP.
Construction and dedication to Council a minimum 600m <sup>2</sup> of community facility comprising a: <ul style="list-style-type: none"><li>• Childcare centre for 60 children; and</li><li>• Community facility.</li></ul>	Construction and dedication to Council 831.5m <sup>2</sup> (231.5m <sup>2</sup> above minimum requirement) comprising: <ul style="list-style-type: none"><li>• Childcare centre for 60 children; and</li><li>• Community facility.</li></ul>
Construction and dedication to Council of a minimum 450m <sup>2</sup> recreation area to be used as the outdoor play area to the childcare centre.	Construction and dedication to Council 1,138.4m <sup>2</sup> (688.4m <sup>2</sup> above minimum requirement) of recreation area to be used as: <ul style="list-style-type: none"><li>• the outdoor play area to the childcare centre and communal open space as part of the green spine after childcare hour use; and</li><li>• East west pedestrian link comprising new public square and areas for passive and active recreation.</li></ul>
Expected local and state infrastructure contributions to a density equivalent to 3.7:1.	Local and state infrastructure contributions to a density of <b>3.32:1</b> .

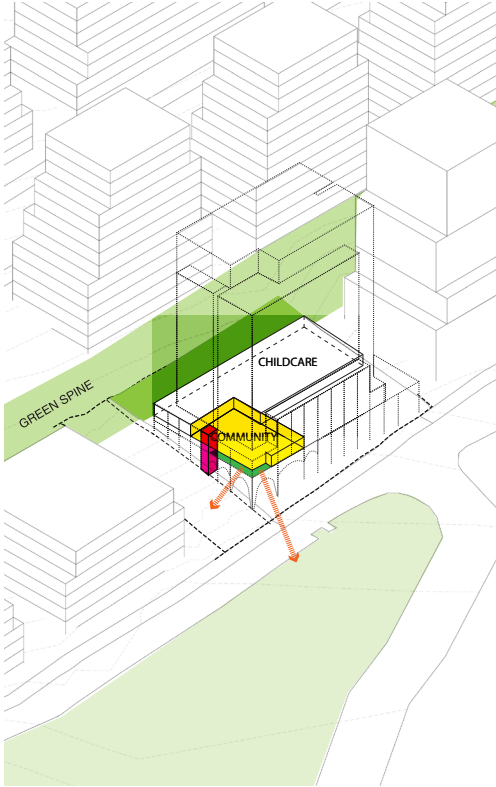
The approved DA scheme provides a FSR of 3.32:1, including 0.21:1 and 0.11:1 in community dedicated infrastructure and subterranean residential amenities facilities. This figure is significantly lower than the FSR identified in the masterplan to deliver the required public benefits.



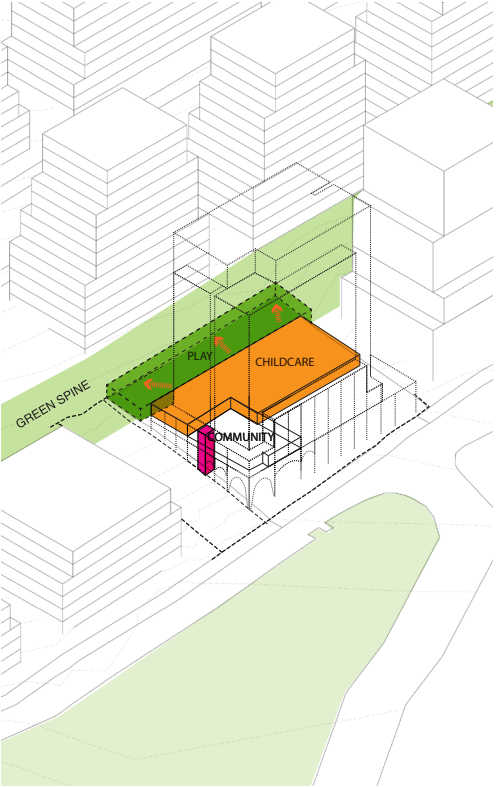
RETAIL ACTIVATION



PEDESTRIAN VERTICAL CIRCULATION



COMMUNITY SPACES



CHILDCARE FACILITIES



Retail Corner on Canberra Avenue



Green Spine and Childcare Facilities



DESIGN PROCESS - CURRENT APPLICATION

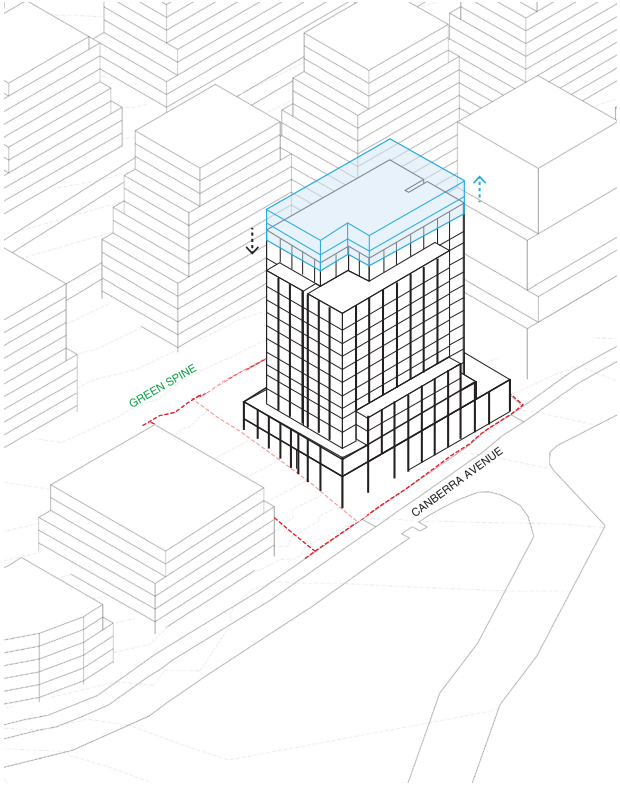
To better match the housing target, the project is seeking additional area while still achieving design excellence as per the DA submission.

The additional area is sensibly designed to ensure minimum shadow impact to Newlands park, minimum view & solar impact to the future surrounding buildings and no view impact from the street level.

This results in the overall FSR of 3.58:1 which is still well below the allowable maximum FSR on site.

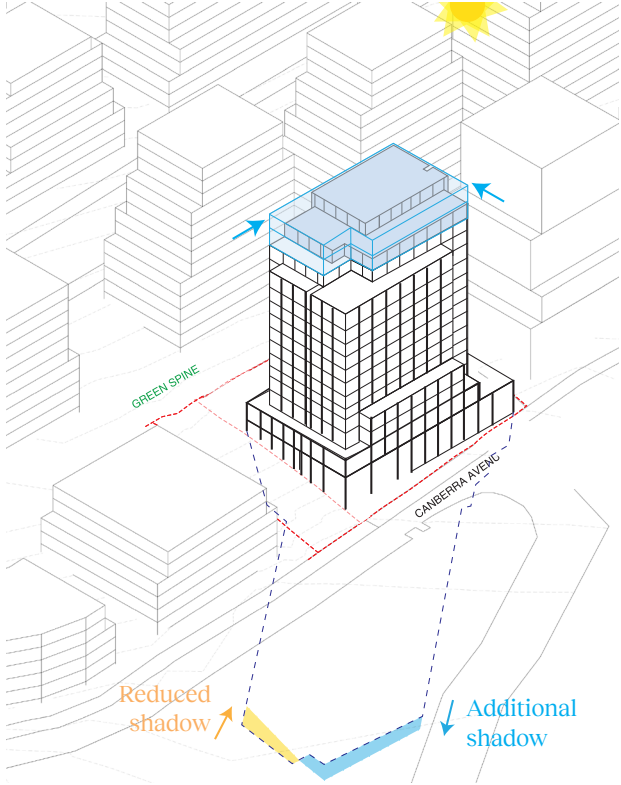
Furthermore, the new roof formation balances the overall building facade, adds more opportunity for edge landscaping that creates a terraced landscape to the rooftop levels.

No changes are proposed for the rest of the building, basement to L12, community facilities or material and colour.



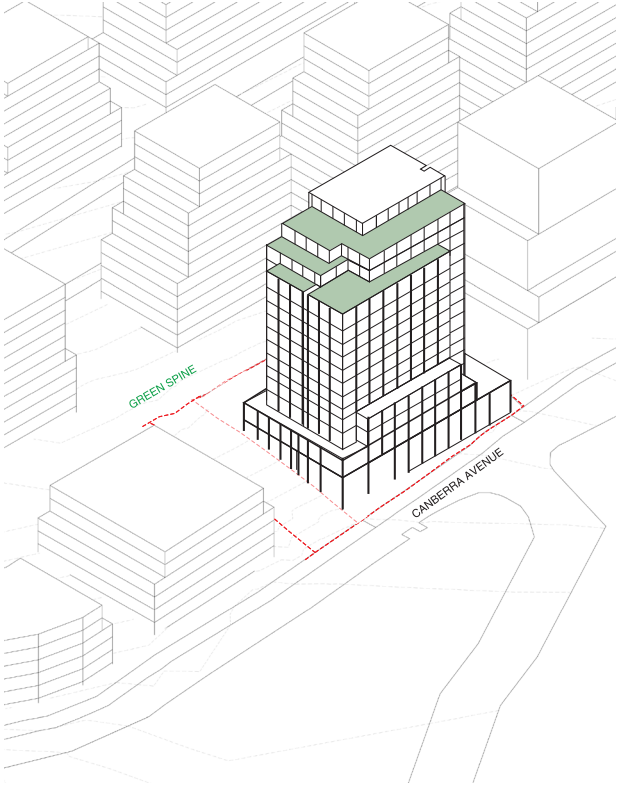
ADDITIONAL LEVELS TO MEET HOUSING TARGET

The top level in the approved DA scheme is reduced from 4.6m to 3.1m, to lessen the height impact of the additional massing.



CARVE OUT TO MINIMIZE SHADOW

The additional massing is then carved to reduce the shadow impact to Newlands park. The additional massing is also pushed back from it's South East corner so it cannot be visible from the streetscape on Canberra avenue, especially the public domain of the East west link and retail corner.



TERRACED ROOF

The carved out spaces provides opportunities for more outdoor amenity spaces, more edge planting to improve the overall building amenity.



# DETAILED ANALYSIS

- VIEW IMPACT ANALYSIS (NO STREET VIEW IMPACT)
- SHADOW ANALYSIS (MIN CHANGE TO SHADOWS TO PUBLIC OPEN SPACE)

STREET VIEW COMPARISON

STREET VIEW - CANBERRA AVENUE

Detailed analysis was undertaken to evaluate the additional massing's impact to the street scape.

The study has found that the additional massing is not visible from Canberra avenue, therefore no visual impact from the ground plane. This is due to the significant massing setback from the South East corner.

The additional massing will only become visible from 6 storey above the floor level of Newlands Park.

APPROVED DA



CANBERRA AVENUE - DA

CURRENT APPLICATION



CANBERRA AVENUE - CURRENT - NO VISIBLE CHANGE



Testing on GF



Only starting to be visible from 6 storey height

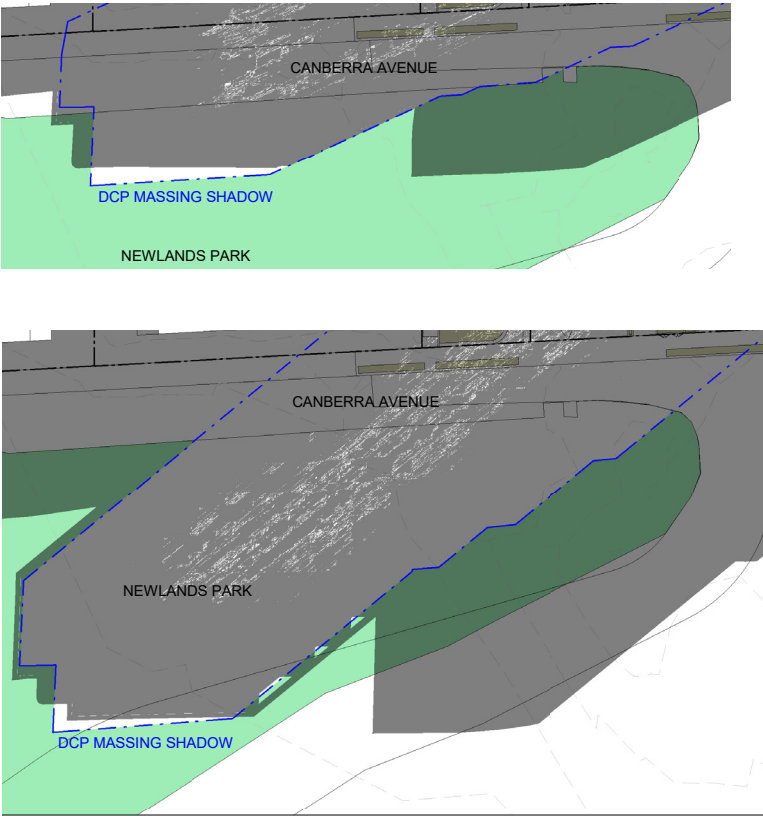
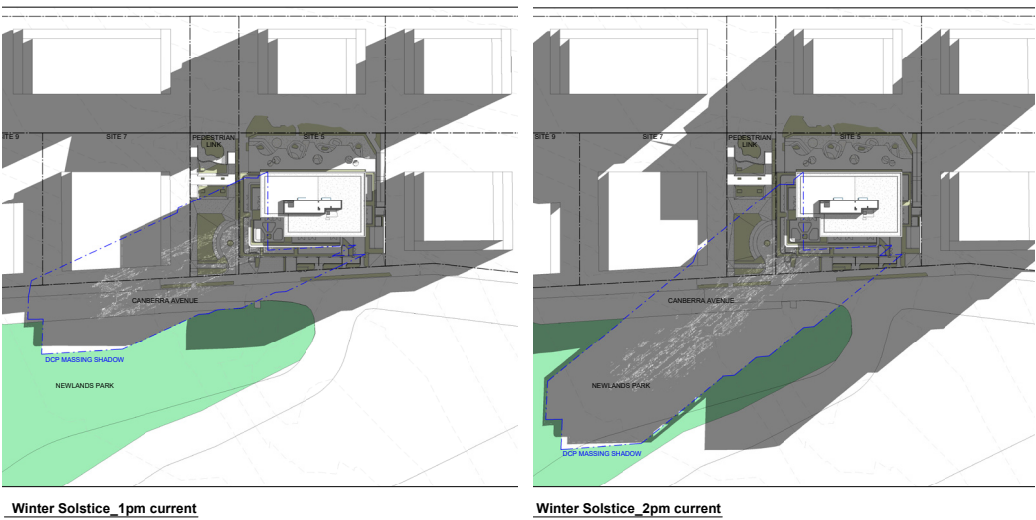


SHADOW TO NEWLANDS PARK

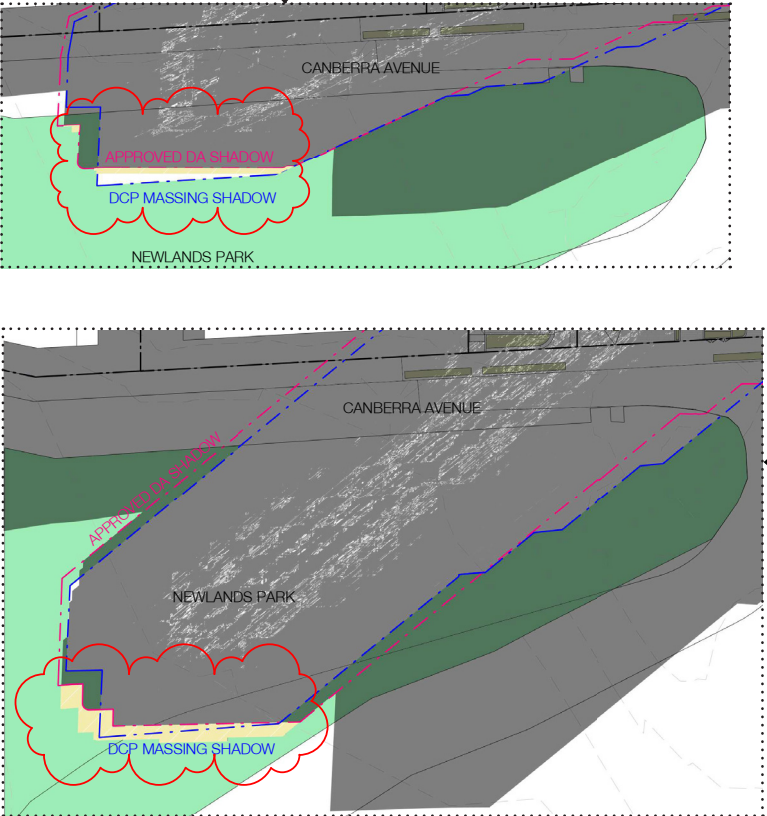
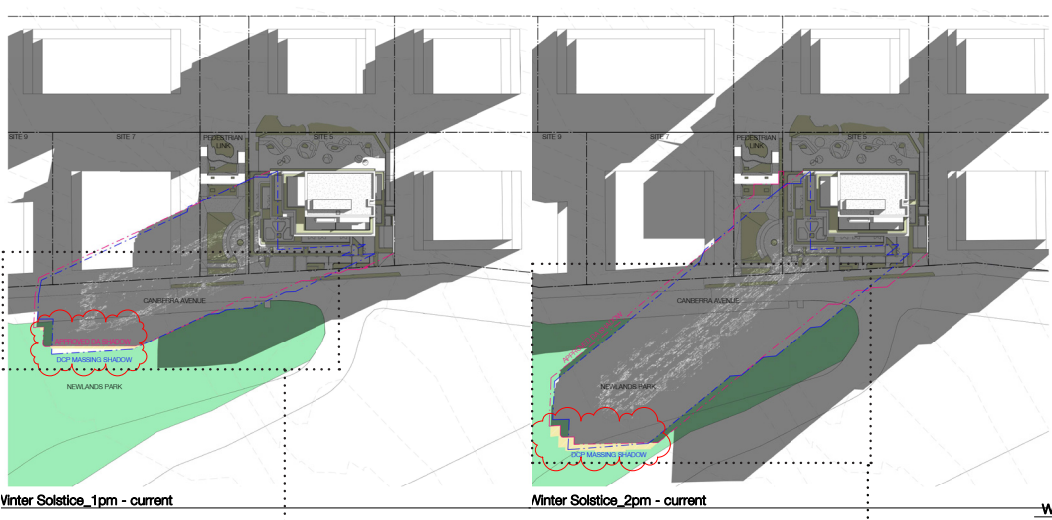
The building only casts shadow to Newlands park between 1-3pm on the 21st of June.

The current proposal manipulates the rooftop massing to reduce the overall height of L12 (4.6 to 3.1m) and steps back the proposed additional height significantly, which results in reducing shadows to the park on the southern park and slightly increasing the shadow to the Eastern park. This impact by the additional area is only apparent at 1pm and 2pm.

APPROVED DA



CURRENT APPLICATION



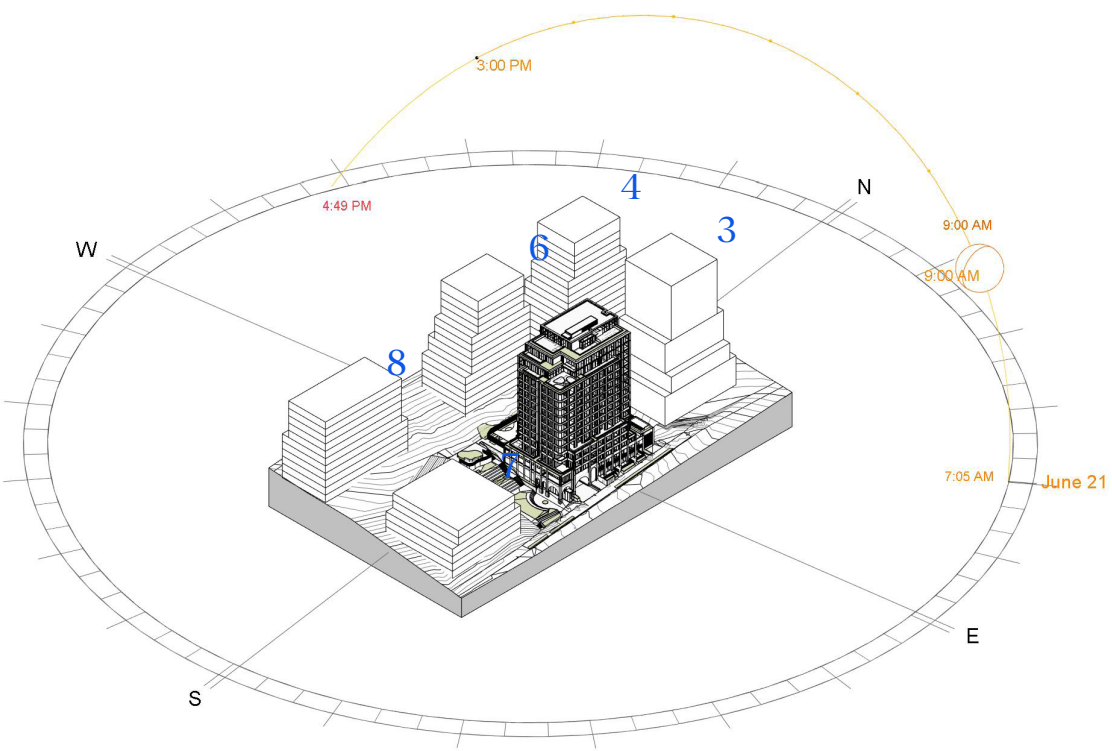
Solar Impact

The building does not cast any significant additional shadows onto area 3, 4, 6's developments due to the orientation & location of the site.

Detailed Analysis was undertaken to evaluate impact onto area 7 & 8.

The additional area in this application does not cast any significant additional shadows onto area 7 's northern facade. (when compared to the approved DA application).

For Area 8, the additional area has minor impact to the Northern facade at 9am and 10am.



9am

10am

11am

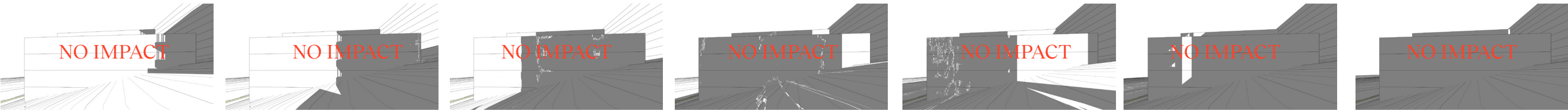
12pm

1pm

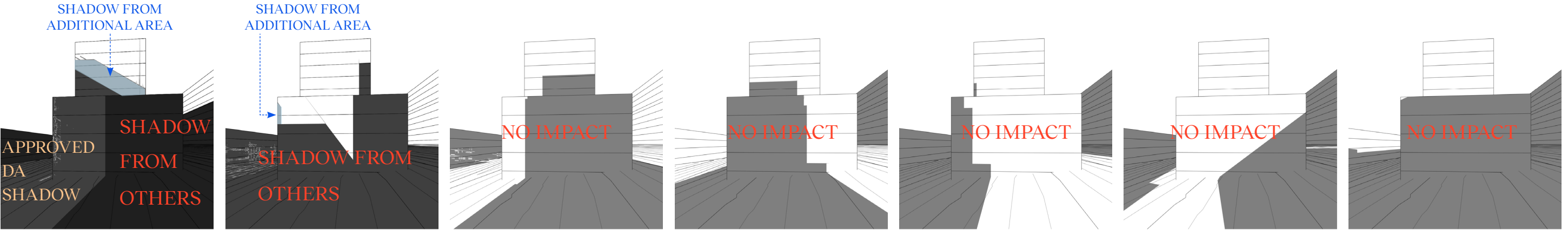
2pm

3pm

Area 7



Area 8





VIEW ANALYSIS

From Area 3

APPROVED DA

CURRENT APPLICATION

MAX FSR 3.7:1



View impact analysis diagrams are generated from 3 points around the site, Area 3, Area 4 and Area 6.

The height of the camera of each was chosen to reflect a close equivalent level in those surrounding buildings, to our site's approved DA's top level, Level 12.

Assumptions were made as to the massing of those future developments, these are generated by the masterplan's allowable FSR and various known legal framework, i.e. height plane, setbacks etc only.

The camera position is set generally 1m back from the massing edge, to reflect a perspective from a possible future balcony / living area position, however, no abstractions around the balcony is modeled, i.e. ceilings, walls, balustrades ,windows etc.

The background photos are taken by drone specialists in consultation with the surveyor to ensure the correct level of the view.

Based on all the above assumptions, these diagrams are to be used to compare possible massing impacts.

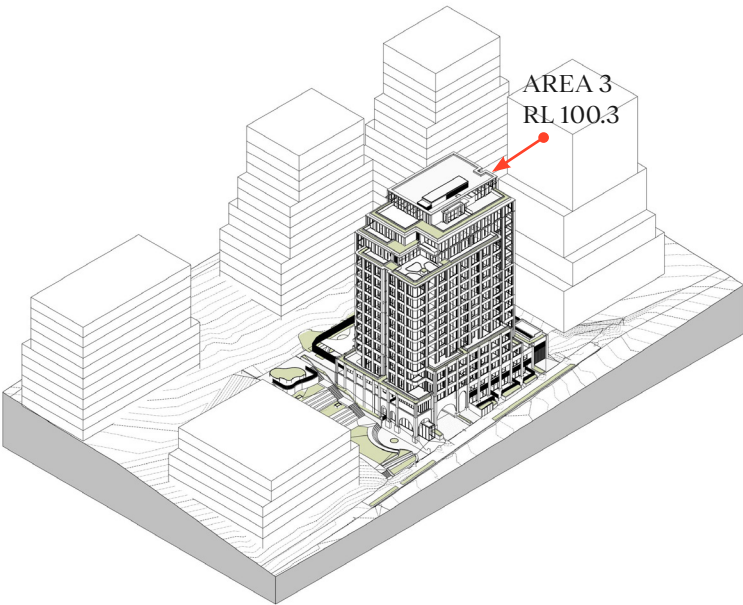
The proposed additions will not result in any further loss of distant partial views of the Sydney CBD skyline when viewed from neighbouring sites, beyond those that have been found to be acceptable with the approved development.

The remaining views are limited to distant suburban or sky views which are neither significant or iconic. Importantly, the proposal's thoughtful design has stepped the additional massing to minimise view loss from adjacent properties.

*The amendments do not contribute to any loss of these distant partial views of the Sydney CBD skylines.*

\* future developments as per the masterplan are greyed out

\* Max FSR massing is generated from setting the FSR at 3.7:1, adding area to L12, 13 and 14 and not carving out any massing to reduce overshadowing.





VIEW ANALYSIS

From Area 4

APPROVED DA

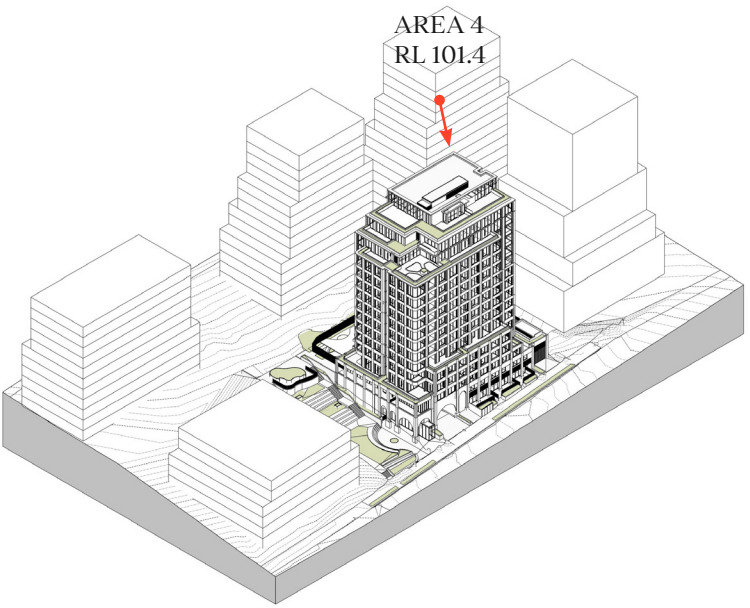
CURRENT APPLICATION

MAX FSR 3.7:1



The amendments do not contribute to any loss of these distant partial views of the Sydney CBD skylines.

The remaining views are limited to distant suburban or sky views which are neither significant or iconic. Importantly, the proposal's thoughtful design has stepped the additional massing to minimise view loss from adjacent properties.



VIEW ANALYSIS

From Area 6

APPROVED DA

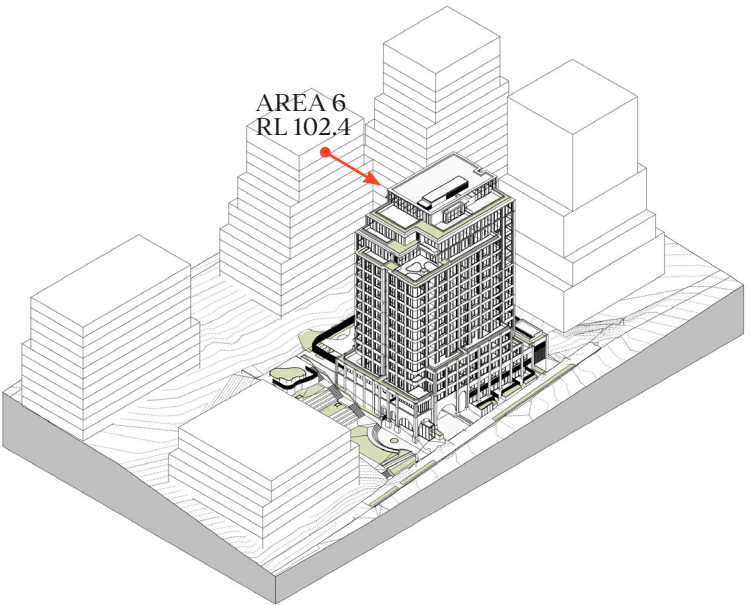
CURRENT APPLICATION

MAX FSR 3.7:1



*The amendments do not contribute to any loss of these distant partial views of the Sydney CBD skylines.*

*The remaining views are limited to distant suburban or sky views which are neither significant or iconic. Importantly, the proposal's thoughtful design has stepped the additional massing to minimise view loss from adjacent properties.*



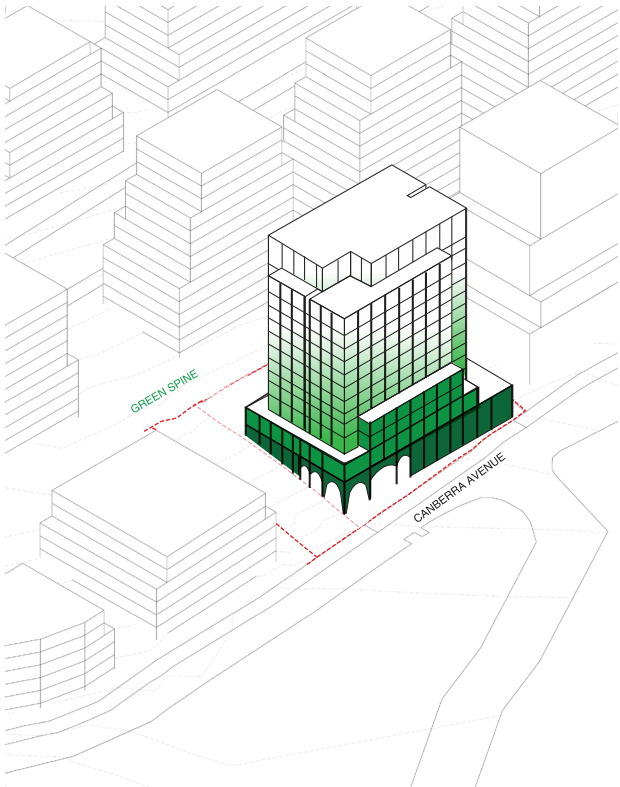


4.2.6.1 Clause 7.6 Design Excellence

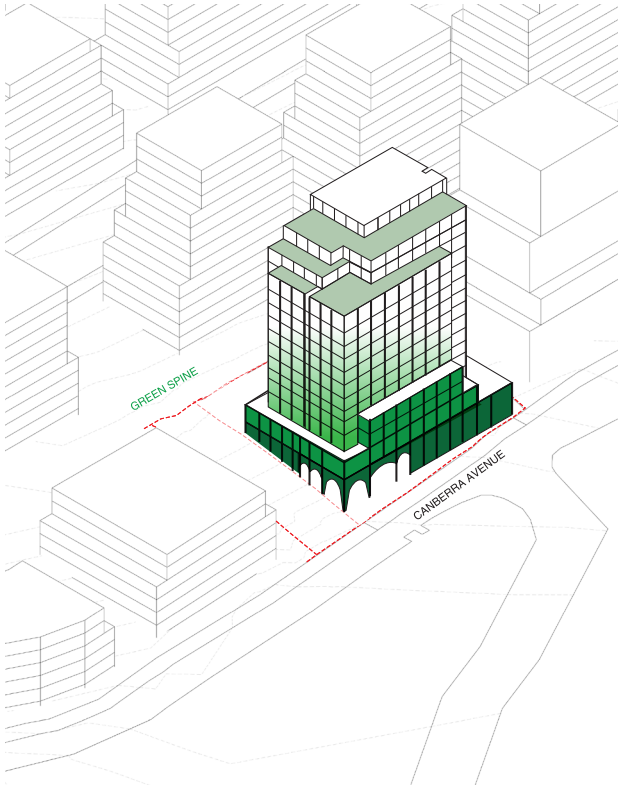
This clause requires development to deliver the highest standard of architectural, urban and landscape design. The approved development was subject to an extensive design review process that culminated with the Design Review and Excellence Panel, Council and Sydney North Planning Panel concluding that the design satisfied all of the applicable assessment criteria provided in clause 7.6 of Lane Cove LEP 2009 and found that design excellence was exhibited.

The proposed alterations and additions to the approved design (as subsequently modified) maintain the same standard of design excellence exhibited by the approved development. The amended design does not have any additional material impacts in terms of views and solar access.

The proposal continues to achieve the same level of Design Excellence as approved for reasons detailed in this report.



APPROVED DA APPLICATION



CURRENT APPLICATION  
- more balanced roof top, no change to podium and tower



Canberra Avenue - Current - no visible impact from the street

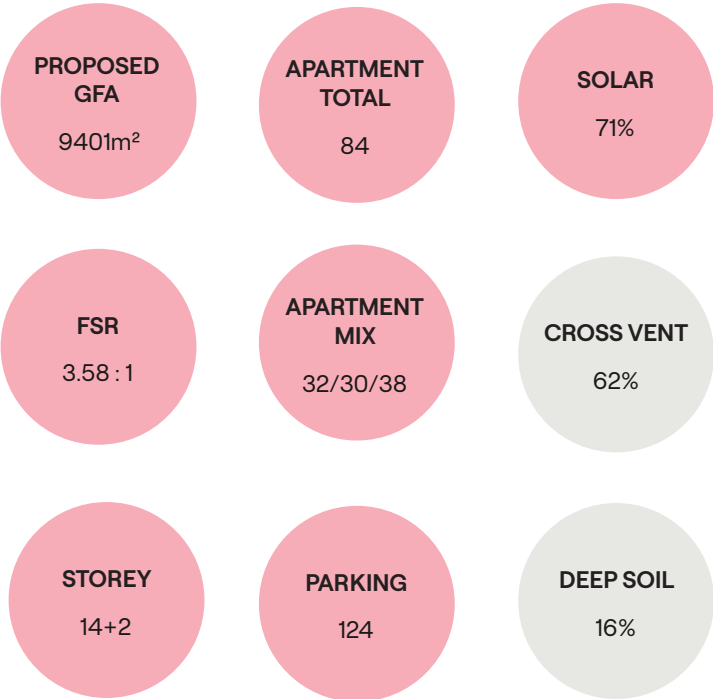
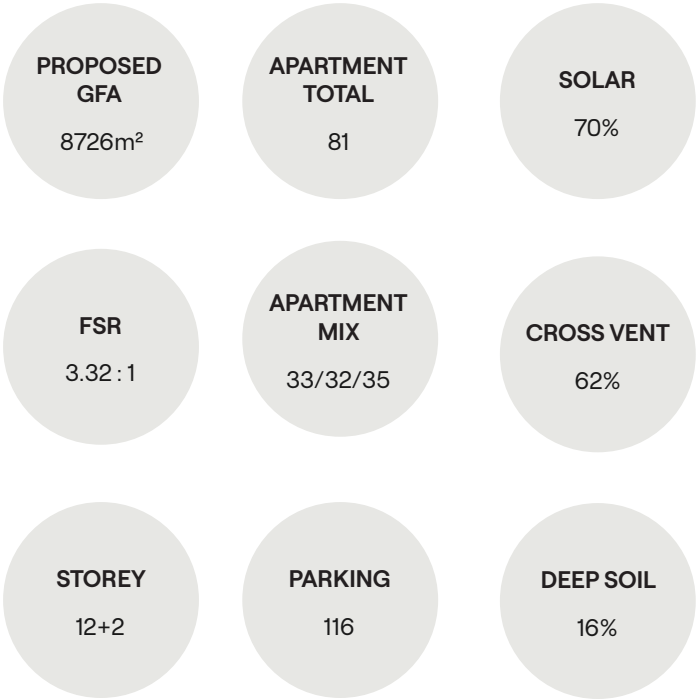
# DETAILED PROPOSAL

SCHEDULES AND DRAWINGS THAT OUTLINES THE CHANGE TO  
APPROVED DA APPLICATION

APPROVED DA

CURRENT APPLICATION

Key aspects of the project compared to the DA submission, changes are highlighted with pink backing.



St Leonards											
Location	Height (M)	AHD	Apartment Numbers								GFA
			Studio	1 Bed	1 Bed+Media	2 Bed	2 Bed+Media	2 Bed+TH	3 Bed	3 Bed+TH	Totals
Basement 4	3	44.90									
Basement 3	3	47.90									
Basement 2	3	50.90									
Basement 1	4.4	53.90									
Ground Floor	3.1	58.30						3			3
Upper Ground	3.1	61.40									488
Level 01	3.1	64.50	1			1			1		3
Level 02	3.1	67.60		2	1	2	1		2		8
Level 03	3.1	70.70		2	1	2	1		2		8
Level 04	3.1	73.80		2	1	1			3		7
Level 05	3.1	76.90		2	1	1			3		7
Level 06	3.1	80.00		2	1	1			3		7
Level 07	3.1	83.10		2	1	1			3		7
Level 08	3.1	86.20		2		3			2		7
Level 09	3.1	89.30		2		3			2		7
Level 10	3.1	92.40		2		3			2		7
Level 11	3.1	95.50		2		3			2		7
Level 12	4.6	98.60							3		3
Roof		103.20									
Total Height		58.30									
Sub Total			1	20	6	21	2	3	28	0	81
Total						81					8807
Mix			1%	25%	7%	26%	2%	4%	35%	0%	
				33%			32%		35%		
Floor Space Ratio Calculations			Riser Provision								81
			Total GFA								8726
			Site Area (sqm)								2629.2
			FSR								3.32

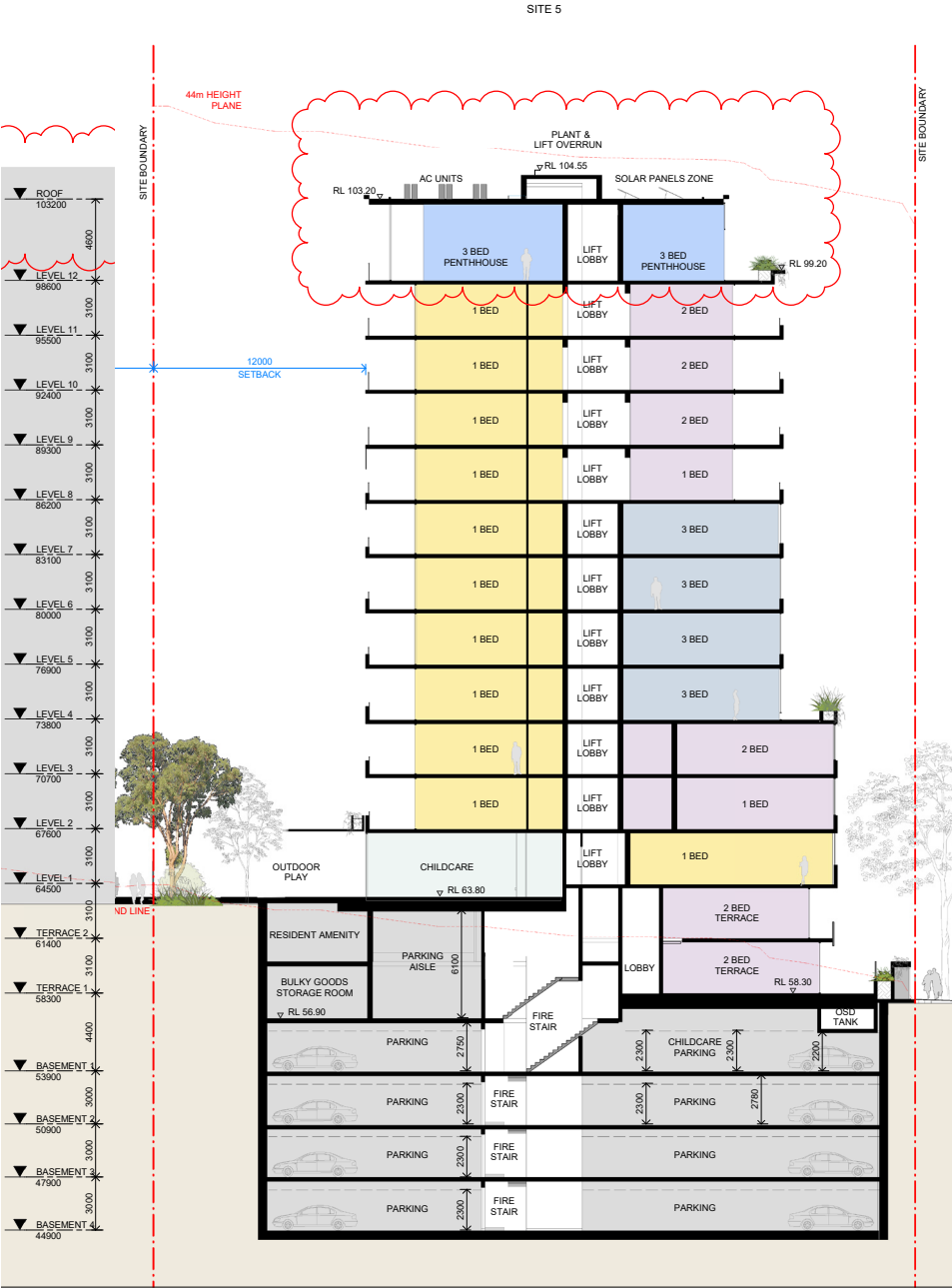
13-19 CANBERRA AVENUE (TOTAL) - PROPOSED											
Location	Height (M)	AHD	Apartment Numbers								GFA
			Studio	1 Bed	1 Bed+Media	2 Bed	2 Bed+Media	2 Bed+TH	3 Bed	3 Bed+TH	Totals
Basement 4	3	44.9									
Basement 3	3	47.9									
Basement 2	3	50.9									
Basement 1	4.4	53.9									
Ground Floor	3.1	58.3						3			3
Upper Ground	3.1	61.4									0
Level 01	3.1	64.5	1			1			1		3
Level 02	3.1	67.6		2	1	2	1		2		8
Level 03	3.1	70.7		2	1	2	1		2		8
Level 04	3.1	73.8		2	1	1			3		7
Level 05	3.1	76.9		2	1	1			3		7
Level 06	3.1	80		2	1	1			3		7
Level 07	3.1	83.1		2	1	1			3		7
Level 08	3.1	86.2		2		3			2		7
Level 09	3.1	89.3		2		3			2		7
Level 10	3.1	92.4		2		3			2		7
Level 11	3.1	95.5		2		2			2		6
Level 12	3.1	98.6							3		3
Level 13	3.1	98.6							3		3
Level 14	3.1	101.7							1		1
Roof		101.7									
Total Height	43.4										
Sub Total			1	20	6	20	2	3	32	0	84
Total						84					9488
Mix			1%	24%	7%	24%	2%	4%	38%	0%	
				32%			30%		38%		
Floor Space Ratio Calculations			Riser Provision								87
			Total GFA								9401
			Site Area (sqm)								2629.2
			FSR								3.58



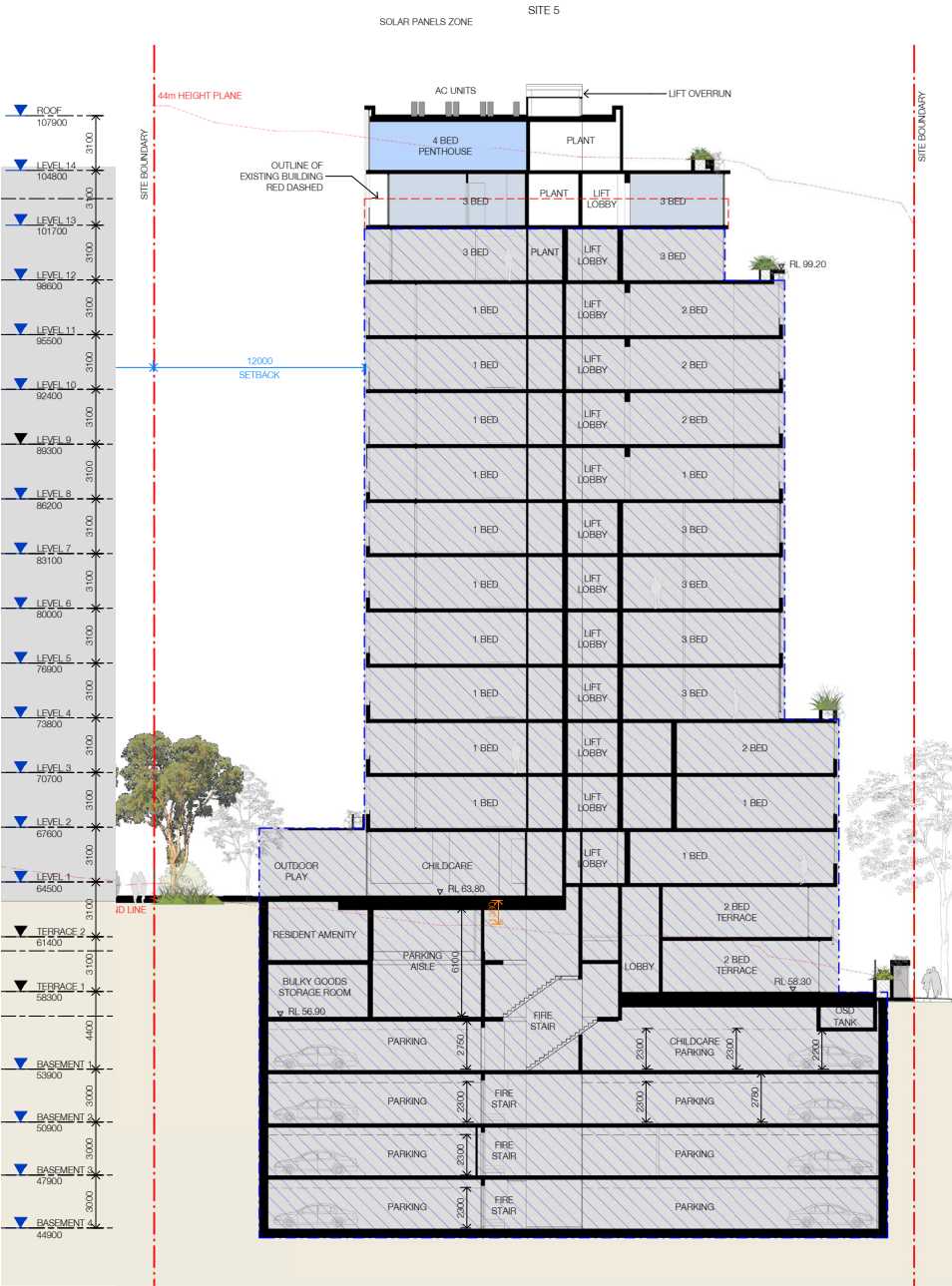
APPROVED DA

Key section of the project compared to the DA submission, L12 is reduced from 4.6m to 3.1m. L13 and L14 are added, effectively 1.5 storey.

No change from basements to L12, including all community spaces.



CURRENT APPLICATION

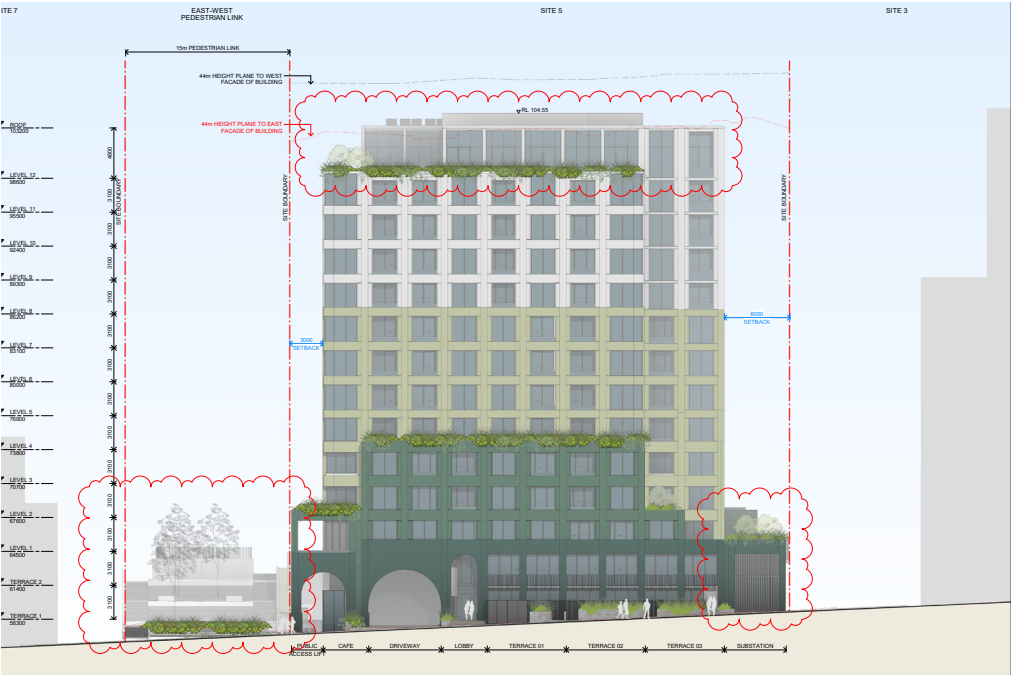


APPROVED DA

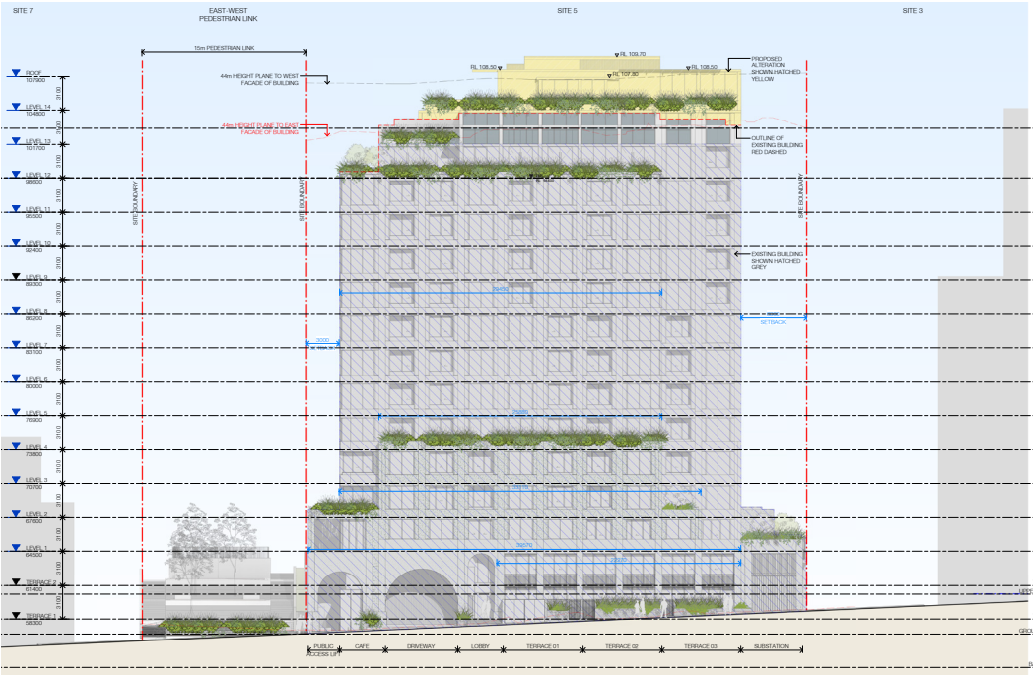
East elevation, Canberra Avenue, compared to the DA submission.

The added massing is setback significantly from the South East corner, creating a terraced effect. Balancing out the tower facade while adding opportunities for more greenery.

No change from basements to L12, including materials and colour.



CURRENT APPLICATION



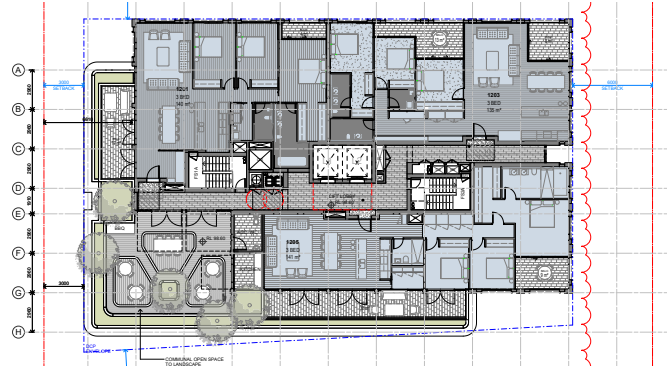
APPROVED DA

CURRENT APPLICATION

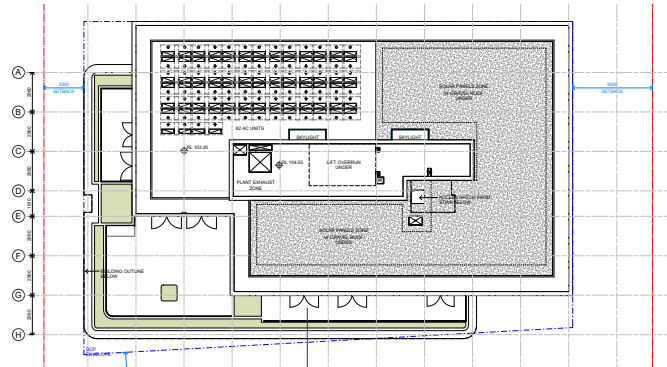
Updated plans compared to the DA submission.

No changes from Basements to L12.

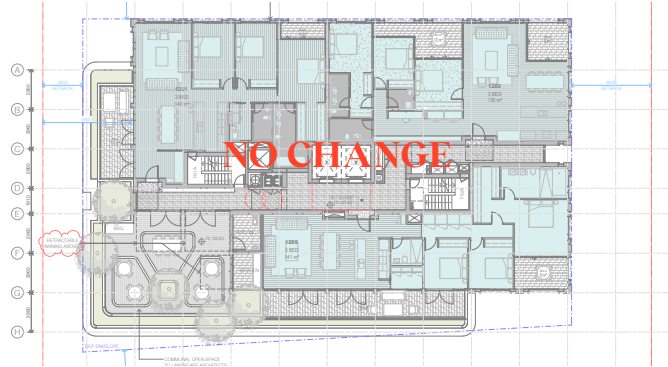
L13 and 14 are setback from the South East corner, to eliminate visual impact from street level. More areas are provided for edge planting.



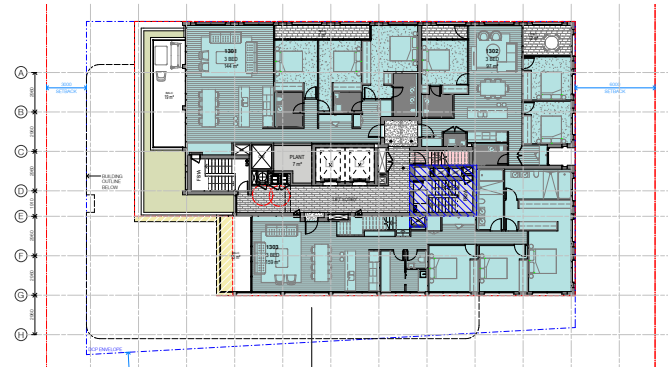
Level 12



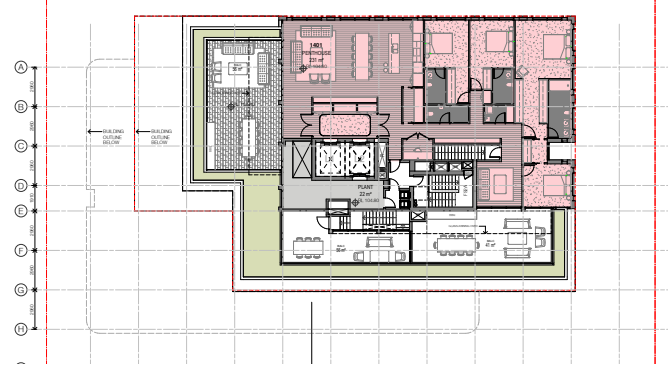
ROOF



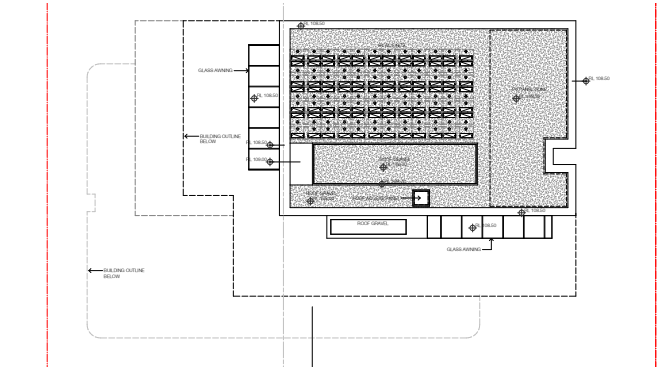
Level 12



Level 13



Level 14



ROOF



# ADG Response Table

ADG table greys out the approved DA items, and only highlights the responses relating to the current application

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	●		No additional impact to Area 3,4,6 and 8, minor impact to area 7 at 9am, please refer to analysis above.
		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. The massing on top is further stepped back on South and East.
		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.

Part No.	Objective No.	Objective Design criteria Design guidance	Complies		
			Yes	No	Notes
3D	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: · 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	●		
		<b>Amenity of public domain is retained and enhanced</b>			
		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: · 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.
		On sloping sites protrusion of car parking above ground level should be minimised by using split levels to step underground car parking	●		
		<b>Communal and public open space</b>			
		<b>3D-1 An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping.</b>			
		<b>Communal open space has a minimum area equal to 25% of the site</b>	●		
		<b>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)</b>	●		
		Communal open space should have a minimum dimension of 3m, and larger developments should consider greater dimensions	●		

Part No.	Objective No.	Objective Design criteria Design guidance	Complies		
			Yes	No	Notes
3D-2		Communal open space should be co-located with deep soil areas		●	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	●		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	●		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: · 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
		<b>Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting</b>			
		Facilities are provided within communal open spaces and common spaces for a range of age groups (see also 4F Common circulation and spaces), incorporating some of the following elements: · seating for individuals or groups · barbecue areas · play equipment or play areas · swimming pools, gyms, tennis courts or common rooms	●		Large amenity areas for fitness and common rooms have been provided in addition to the communal open space with the BBQ and seating facilities.
3C-3		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	●		
		Visual impacts of services should be minimised, including location of ventilation duct outlets from basement car parks, electrical substations and detention tanks	●		
		<b>Communal open space is designed to maximise safety</b>			
		Communal open space and the public domain should be readily visible from habitable rooms and private open space areas while maintaining visual privacy. Design solutions may include: · bay windows · corner windows · balconies	●		
3D-4		Communal open space should be well lit	●		
		Where communal open space/facilities are provided for children and young people they are safe and contained	●		
		<b>Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood</b>			
		The public open space should be well connected with public streets along at least one edge	●		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	●		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	●		
		Solar access should be provided year round along with protection from strong winds	●		

Part No.	Objective No.	Objective	Complies													
		Design criteria Design guidance	Yes	No	Notes											
		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	●													
3E	Deep soil zones															
3E–1	Deep soil zones provide areas on the site that allow for and support healthy plant tree growth. They improve residential amenity and promote management of water and air quality															
	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 650m<sup>2</sup></td><td>–</td><td rowspan="4">7%</td></tr><tr><td>650m<sup>2</sup> – 1,500m<sup>2</sup></td><td>3m</td></tr><tr><td>Greater than 1,500m<sup>2</sup></td><td>6m</td></tr><tr><td>Greater than 1,500m<sup>2</sup> with significant existing cover</td><td>6m</td></tr></table>		Site area	Minimum dimensions	Deep soil zone (% of site area)	Less than 650m <sup>2</sup>	–	7%	650m <sup>2</sup> – 1,500m <sup>2</sup>	3m	Greater than 1,500m <sup>2</sup>	6m	Greater than 1,500m <sup>2</sup> with significant existing cover	6m		
Site area	Minimum dimensions	Deep soil zone (% of site area)														
Less than 650m <sup>2</sup>	–	7%														
650m <sup>2</sup> – 1,500m <sup>2</sup>	3m															
Greater than 1,500m <sup>2</sup>	6m															
Greater than 1,500m <sup>2</sup> 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: · 10% of the site as deep soil on sites with an area of 650m <sup>2</sup> – 1,500m <sup>2</sup> · 15% of the site as deep soil on sites greater than 1,500m <sup>2</sup>		●													
	Deep soil zones should be located to retain existing significant trees and to allow for the development of healthy root systems, providing anchorage and stability for mature trees. Design solutions may include: · basement and sub-basement car park design that is consolidated beneath building footprints · use of increased front and side setbacks · adequate clearance around trees to ensure long term health · co-location with other deep soil areas on adjacent sites to create larger contiguous areas of deep soil		●		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: · 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															

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) The additional massing in this application has been further carved to step back on the South East and Eastern Elevation to further reduce the shadow to the park.												
		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	●															

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			
3H		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.
	Vehicle Access				
	3H-1	Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes			
		Car park access is integrated with the building's overall facade, design solutions may include: · the materials and colour palette minimise visibility from the street · security doors or gates at entries that minimise voids in the facade · where doors are not provided, the visible interior reflects the facade design and the building services, pipes and ducts are concealed	●		The car park 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

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: · 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: – 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	●		



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"><li>· parking is located on the side or rear of the lot away from the primary street frontage</li><li>· cars are screened from view of streets, buildings, communal and private open space areas</li><li>· safe and direct access to building entry points is provided</li><li>· parking is incorporated into the landscape design of the site, by extending planting and materials into the car park space</li><li>· stormwater run-off is managed appropriately from car parking surfaces</li><li>· bio-swales, rain gardens or on site detention tanks are provided, where appropriate</li><li>· 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</li></ul>			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"><li>· 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)</li><li>· 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)</li></ul>			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			

Part No.	Objective No.	Objective Design criteria Design guidance	Complies		
			Yes	No	Notes
4A-2		<b>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</b>	●		Detailed analysis was updated with the current proposal.
		<b>3. A maximum of 15% of apartments in a building receive no direct sunlight between 9am and 3pm at mid winter</b>			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: · dual aspect apartments · shallow apartment layouts · two storey and mezzanine level apartments · bay windows	●		The additional apartments in this application all have multiple aspect.
		To maximise the benefit to residents of direct sunlight within living rooms and private open spaces, a minimum of 1m <sup>2</sup> 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: · 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
		<b>Daylight access is maximised where sunlight is limited</b>			
		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: · use is restricted to kitchens, bathrooms and service areas · building services are concealed with appropriate detailing and materials to visible walls · courtyards are fully open to the sky · access is provided to the light well from a communal area for cleaning and maintenance · acoustic privacy, fire safety and minimum privacy separation distances (see section 3F Visual privacy) are achieved			N/A
		Opportunities for reflected light into apartments are optimised through: · reflective exterior surfaces on buildings opposite south facing windows · positioning windows to face other buildings or surfaces (on neighbouring sites or within the site) that will reflect light · integrating light shelves into the design · light coloured internal finishes	●		Internal finishes on balconies are a lighter colouring

Part No.	Objective No.	Objective Design criteria Design guidance	Complies		
			Yes	No	Notes
4B		A number of the following design features are used: <ul style="list-style-type: none"> <li>· balconies or sun shading that extend far enough to shade summer sun, but allow winter sun to penetrate living areas</li> <li>· shading devices such as eaves, awnings, balconies, pergolas, external louvres and planting</li> <li>· horizontal shading to north facing windows</li> <li>· vertical shading to east and particularly west facing windows</li> <li>· operable shading to allow adjustment and choice</li> <li>· 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)</li> </ul>	●		Operable shading device will be implemented on the west facade.
	Natural Ventilation				
	4B-1	<b>All habitable rooms are naturally ventilated</b>			
		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"> <li>· adjustable windows with large effective openable areas</li> <li>· a variety of window types that provide safety and flexibility such as awnings and louvres</li> <li>· windows which the occupants can reconfigure to funnel breezes into the apartment such as vertical louvres, casement windows and externally opening doors</li> </ul>	●		
	4B-2	<b>The layout and design of single aspect apartments maximises natural ventilation</b>			
		Apartment depths are limited to maximise ventilation and airflow (see also figure 4D.3)	●		
4B-3		Natural ventilation to single aspect apartments is achieved with the following design solutions: <ul style="list-style-type: none"> <li>· primary windows are augmented with plenums and light wells (generally not suitable for cross ventilation)</li> <li>· stack effect ventilation / solar chimneys or similar to naturally ventilate internal building areas or rooms such as bathrooms and laundries</li> <li>· 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</li> </ul>	●		
		<b>The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents</b>			
		<b>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</b>	●		
		<b>2. Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line</b>			NA
		The building should include dual aspect apartments, cross through apartments and corner apartments and limit apartment depths	●		

Part No.	Objective No.	Objective Design criteria Design guidance	Complies														
			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: <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	●		Habitable rooms are 2.7m ceiling height and non-habitable are 2.4m
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"><li>· 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</li><li>· Well-proportioned rooms are provided, for example, smaller rooms feel larger and more spacious with higher ceilings</li><li>· 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</li></ul>	●														
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																

Part No.	Objective No.	Objective	Complies												
		Design criteria	Yes	No	Notes										
4D-2		Design guidance													
	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>35m<sup>2</sup></td></tr><tr><td>1 bedroom</td><td>50m<sup>2</sup></td></tr><tr><td>2 bedroom</td><td>70m<sup>2</sup></td></tr><tr><td>3 bedroom</td><td>90m<sup>2</sup></td></tr></table>		Apartment Type	Minimum Internal Area		Studio	35m <sup>2</sup>	1 bedroom	50m <sup>2</sup>	2 bedroom	70m <sup>2</sup>	3 bedroom	90m <sup>2</sup>		
	Apartment Type	Minimum Internal Area													
	Studio	35m <sup>2</sup>													
	1 bedroom	50m <sup>2</sup>													
	2 bedroom	70m <sup>2</sup>													
	3 bedroom	90m <sup>2</sup>													
	The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m <sup>2</sup> each														
	A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m <sup>2</sup> 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 maximum 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 <sup>2</sup> and other bedrooms 9m <sup>2</sup> (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		●													

Part No.	Objective No.	Objective	Complies																	
		Design criteria	Yes	No	Notes															
		Design guidance																		
		Access to bedrooms, bathrooms and laundries is separated from living areas minimising direct openings between living and service areas		●	Where achievable this approach has been adopted															
		All bedrooms allow a minimum length of 1.5m for robes	●																	
		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	●																	
		Apartment layouts allow flexibility over time, design solutions may include: <ul style="list-style-type: none"><li>· dimensions that facilitate a variety of furniture arrangements and removal</li><li>· spaces for a range of activities and privacy levels between different spaces within the apartment</li><li>· dual master apartments</li><li>· dual key apartments</li><li>· 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</li><li>· room sizes and proportions or open plans (rectangular spaces (2:3) are more easily furnished than square spaces (1:1))</li><li>· efficient planning of circulation by stairs, corridors and through rooms to maximise the amount of usable floor space in rooms</li></ul>	●																	
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>4m<sup>2</sup></td><td>-</td></tr><tr><td>1 bedroom apartments</td><td>8m<sup>2</sup></td><td>2m</td></tr><tr><td>2 bedroom apartments</td><td>10m<sup>2</sup></td><td>2m</td></tr><tr><td>3+ bedroom apartments</td><td>12m<sup>2</sup></td><td>2.4m</td></tr></table>	Dwelling Type	Minimum Area	Minimum Depth	Studio Apartments	4m <sup>2</sup>	-	1 bedroom apartments	8m <sup>2</sup>	2m	2 bedroom apartments	10m <sup>2</sup>	2m	3+ bedroom apartments	12m <sup>2</sup>	2.4m			
Dwelling Type	Minimum Area	Minimum Depth																		
Studio Apartments	4m <sup>2</sup>	-																		
1 bedroom apartments	8m <sup>2</sup>	2m																		
2 bedroom apartments	10m <sup>2</sup>	2m																		
3+ bedroom apartments	12m <sup>2</sup>	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 15m <sup>2</sup> and a minimum depth of 3m	●																	
		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	●																	
		Balcony use may be limited in some proposals by: <ul style="list-style-type: none"><li>· consistently high wind speeds at 10 storeys and above</li><li>· close proximity to road, rail or other noise sources</li><li>· exposure to significant levels of aircraft noise</li><li>· heritage and adaptive reuse of existing buildings</li></ul> 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																			

Part No.	Objective No.	Objective Design criteria Design guidance	Complies		
			Yes	No	Notes
4E	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	●		
		<b>Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building</b>			
		Solid, partially solid or transparent fences and balustrades are selected to respond to the location. They are de-signed to allow views and passive surveillance of the street while maintaining visual privacy and allowing for a range of uses on the balcony. Solid and partially solid balustrades are preferred	●		
		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
	4E-4	Ceilings of apartments below terraces should be insulated to avoid heat loss	●		
		Water and gas outlets should be provided for primary balconies and private open space	●		Noted
		<b>Private open space and balcony design maximises safety</b>			
4F	4E-4	Changes in ground levels or landscaping are minimised	●		
		Design and detailing of balconies avoids opportunities for climbing and falls	●		
	Common Circulation and Spaces				
	4F-1	<b>Common circulation spaces achieve good amenity and properly service the number of apartments</b>			
		<b>1. The maximum number of apartments off a circulation core on a single level is eight</b>	●		
		<b>2. For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40</b>	●		
		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.

Part No.	Objective No.	Objective	Complies												
		Design criteria Design guidance	Yes	No	Notes										
4F-2		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 controlled	●												
		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				N/A										



Part No.	Objective No.	Objective Design criteria Design guidance	Complies		
			Yes	No	Notes
4H	4G-2	<b>Additional storage is conveniently located, accessible and nominated for individual apartments</b>			
		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	<b>Noise transfer is minimised through the siting of buildings and building layout</b>			
		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	●		
	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	●		
		<b>Noise impacts are mitigated through internal apartment layout and acoustic treatments</b>			
		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	●		
4J	Noise and Pollution				
	4J-1	In noisy or hostile environments the impacts of external noise and pollution are minimised through the careful siting and layout of buildings			

Part No.	Objective No.	Objective Design criteria Design guidance	Complies		
			Yes	No	Notes
	4J-2	<p>To minimise impacts the following design solutions may be used:</p> <ul style="list-style-type: none"> <li>physical separation between buildings and the noise or pollution source</li> <li>residential uses are located perpendicular to the noise source and where possible buffered by other uses</li> <li>non-residential buildings are sited to be parallel with the noise source to provide a continuous building that shields residential uses and communal open spaces</li> <li>Non-residential uses are located at lower levels vertically separating the residential component from the noise or pollution source. Setbacks to the underside of residential floor levels should increase relative to traffic volumes and other noise sources</li> <li>Buildings should respond to both solar access and noise. Where solar access is away from the noise source, nonhabitable rooms can provide a buffer</li> <li>Where solar access is in the same direction as the noise source, dual aspect apartments with shallow building depths are preferable (see figure 4J.4)</li> <li>Landscape design reduces the perception of noise and acts as a filter for air pollution generated by traffic and industry</li> </ul>	●		
		<p>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:</p> <ul style="list-style-type: none"> <li>solar and daylight access</li> <li>private open space and balconies</li> <li>natural cross ventilation</li> </ul>	●		
		<b>Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission</b>			
		<p>Design solutions to mitigate noise include:</p> <ul style="list-style-type: none"> <li>limiting the number and size of openings facing noise sources</li> <li>providing seals to prevent noise transfer through gaps</li> <li>using double or acoustic glazing, acoustic louvres or enclosed balconies (wintergardens)</li> <li>using materials with mass and/or sound insulation or absorption properties e.g. solid balcony balustrades, external screens and soffits</li> </ul>	●		
4K	Apartment Mix				
	4K-1	<b>A range of apartment types and sizes is provided to cater for different household types now and into the future</b>			
		A variety of apartment types is provided	●		Terrace House /Studio / 1Bed + Study / 2 Bed + Study / 3 Bed + Study / Two-Storey Penthouse
	4K-2	<p>The apartment mix is appropriate, taking into consideration:</p> <ul style="list-style-type: none"> <li>the distance to public transport, employment and education centres</li> <li>the current market demands and projected future demographic trends</li> <li>the demand for social and affordable housing</li> <li>different cultural and socioeconomic group</li> </ul>	●		
		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	●		
		<b>The apartment mix is distributed to suitable locations within the building</b>			
		Different apartment types are located to achieve successful facade composition and to optimise solar access. See figure 4A.3	●		

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"> <li>• both street and foyer entrances to ground floor apartments</li> <li>• private open space is next to the street</li> <li>• doors and windows face the street</li> </ul>	●		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"> <li>• elevation of private gardens and terraces above the street level by 1m – 1.5m (see Figure 4L.4)</li> <li>• landscaping and private courtyards</li> <li>• window sill heights that minimise sight lines into apartments</li> <li>• integrating balustrades, safety bars or screens with the exterior design</li> </ul>	●		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"> <li>• high ceilings and tall windows</li> <li>• trees and shrubs that allow solar access in winter and shade in summer</li> </ul>	●		
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"> <li>• A composition of varied building elements</li> <li>• A defined base, middle and top of the buildings</li> <li>• Revealing and concealing certain elements</li> <li>• Changes in texture, material, detail and colour to modify the prominence of elements</li> </ul>	●		
		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"> <li>• Well composed horizontal and vertical elements</li> <li>• Variation in floor heights to enhance the human scale</li> <li>• Elements that are proportional and arranged in patterns</li> <li>• Public artwork or treatments to exterior blank walls</li> <li>• Grouping of floors or elements such as balconies and windows on taller buildings</li> </ul>	●		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.

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"><li>· Special roof features and strong corners</li><li>· Use of skillion or very low pitch hipped roofs</li><li>· Breaking down the massing of the roof by using smaller elements to avoid bulk</li><li>· Using materials or a pitched form complementary to adjacent buildings</li></ul>	●		Stepped massing to minimise roof appearance from the street.
		Roof treatments should be integrated with the building design. Design solutions may include: <ul style="list-style-type: none"><li>· Roof design proportionate to the overall building size, scale and form</li><li>· Roof materials complement the building</li><li>· Service elements are integrated</li></ul>	●		
	4N-2	Opportunities to use roof space for residential accommodation and open space are maximised			
		Habitable roof space should be provided with good levels of amenity. Design solutions may include: <ul style="list-style-type: none"><li>· Penthouse apartments</li><li>· Dormer or clerestory windows</li><li>· Openable skylights</li></ul>	●		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"><li>· The roof lifts to the north</li><li>· Eaves and overhangs shade walls and windows from summer sun</li></ul>	●			
	Skylights and ventilation systems should be integrated into the roof design	●			
4O	Landscape Design				
4O-1	Landscape design is viable and sustainable				

Part No.	Objective No.	Objective Design criteria Design guidance	Complies		
			Yes	No	Notes
4P	4O-2	Landscape design should be environmentally sustainable and can enhance environmental performance by incorporating: · Diverse and appropriate planting · Bio-filtration gardens · Appropriately planted shading trees · Areas for residents to plant vegetables and herbs · Composting · Green roofs or walls	●		Refer to Landscape Architect's documentations.
		Ongoing maintenance plans should be prepared	●		Noted.
		Microclimate in enhanced by: · Appropriately scaled trees near the eastern and western elevations for shade · A balance of evergreen and deciduous trees to provide shading in summer and sunlight access in winter · Shade structures such as pergolas for balconies and courtyards	●		Refer 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.
		<b>Landscape design contributes to the streetscape and amenity</b>			
		Landscape design responds to the existing site conditions including: · Changes of levels · Views · Significant landscape features including trees and rock outcrops	●		
		Significant landscape features should be protected by: · 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	●		
	<b>Planting on Structures</b>				
	4P-1	<b>Appropriate soil profiles are provided</b>			
	4P-1	Structures are reinforced for additional saturated soil weight	●		
		Soil volume is appropriate for plant growth, considerations include: · Modifying depths and widths according to the planting mix and irrigation frequency · Free draining and long soil life span · Tree anchorage	●		
		Minimum soil standards for plant sizes should be provided in accordance with Table 5	●		
		<b>Plant growth is optimised with appropriate selection and maintenance</b>			
	4P-2	Plants are suited to site conditions, considerations include: · Drought and wind tolerance · Seasonal changes in solar access · Modified substrate depths for diverse range of plants · Plant longevity	●		
		A landscape maintenance plan is prepared	●		

Part No.	Objective No.	Objective	Complies		
		Design criteria	Yes	No	Notes
4Q	4P-3	Design guidance			
		Irrigation and drainage systems respond to : · 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: · 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		
	4Q-2	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
		A variety of apartments with adaptable designs are provided			
		Adaptable housing should be provided in accordance with the relevant council policy	●		
	4Q-3	Design solutions for adaptable apartments include: · Convenient access to communal and public areas · High level of solar access · Minimal structural change and residential amenity loss when adapted · Larger car parking spaces for accessibility · Parking titled separately from apartments or shared car parking arrangements	●		
		Apartment layouts are flexible and accommodate a range of lifestyle needs			
		Apartments design incorporates flexible design solutions which may include: · Rooms with multiple functions · Dual master bedroom apartments with separate bathrooms · Larger apartments with various living space options · Open plan ‘loft’ style apartments with only a fixed kitchen, laundry and bathroom	●		
	4R	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: · 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				

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"><li>· Generously sized voids in deeper buildings</li><li>· Alternative apartment types when orientation is poor</li><li>· Using additions to expand the existing building envelope</li></ul>			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"><li>· 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)</li><li>· Alternatives to providing deep soil where less than the minimum requirement is currently available on the site</li><li>· Building and visual separation – subject to demonstrating alternative design approaches to achieving privacy</li><li>· Common circulation</li><li>· Car parking</li><li>· Alternative approaches to private open space and balconies</li></ul>			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"><li>· Residential entries are separated from commercial entries and directly accessible from the street</li><li>· Commercial service areas are separated from residential components</li><li>· Residential car parking and communal facilities are separated or secured</li><li>· Concealment opportunities are avoided</li></ul>			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			
		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"><li>· Continuous awnings are maintained and provided in areas with existing pattern</li><li>· Height, depth, material and form complements the existing street character</li><li>· Protection from the sun and rain is provided</li><li>· Awnings are wrapped around the secondary frontages of corner sites</li><li>· Awnings are retractable in areas without an established pattern</li></ul>			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

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
		<b>Signage responds to the context and desired streetscape character</b>			
		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	<b>Development incorporates passive environmental design</b>			
		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	<b>Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer</b>			
		A number of the following design solutions are used: · The use of smart glass or other technologies on north and west elevations · Thermal mass in the floors and walls of north facing rooms in maximised · Polished concrete floor, tiles, or timber rather than carpet · Insulated roofs, walls and floors and seals on window and door openings · Overhangs and shading devices such as awnings, blinds and screens	●		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	<b>Adequate natural ventilation minimises the need for mechanical ventilation</b>			
		A number of the following design solution are used: · Rooms with similar usage are grouped together · Natural cross ventilation for apartments is optimised · Natural ventilation is provided to all inhabitable rooms and as many non-habitable rooms, common areas and circulation spaces as possible	●		
4V	Water Management and Conservation				
	4V-1	<b>Potable water use is minimised</b>			
		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	<b>Urban stormwater is treated on site before being discharged to receiving waters</b>			
		Water sensitive urban design systems are designed by a suitably qualified professional			



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: · Runoff is collected from roofs and balconies in water tanks and plumbed into toilets, laundry and irrigation · Porous and open paving materials is maximised · On site stormwater and infiltration, including bio-retention systems such as rain gardens or street tree pits			
		<b>Flood management systems are integrated into site design</b>			
		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
	<b>Waste Management</b>				
	4W-1	<b>Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents</b>			
		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	<b>Domestic waste is minimised by providing safe and convenient source separation and recycling</b>			
		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	<b>Building Maintenance</b>				
	4X-1	<b>Building design detail provides protection from weathering</b>			
		A number of the following design solutions are used: · Roof overhangs to protect walls · Hoods over windows and doors to protect openings · Detailing horizontal edges with drip lines to avoid staining of surfaces · Methods to eliminate or reduce planter box leaching · Appropriate design and material selection for hostile locations	●		Noted.
	4X-2	<b>Systems and access enable ease of maintenance</b>			
		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.

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	●		
		<b>Material selection reduces ongoing maintenance costs</b>			
		A number of the following design solutions are used: <ul style="list-style-type: none"> <li>· Sensors to control artificial lighting in common circulation and spaces</li> <li>· Natural materials that weather well and improve with time such as face brickwork</li> <li>· Easily cleaned surfaces that are graffiti resistant</li> <li>· Robust and durable materials and finished are used in locations which receive heavy wear and tear, such as common circulation areas and lift interiors</li> </ul>	●		Natural, robust, durable and low maintenance materials are used for the facade of the building.

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



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