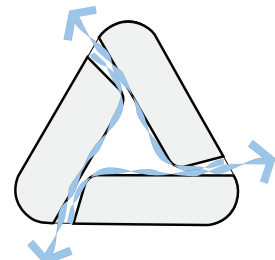
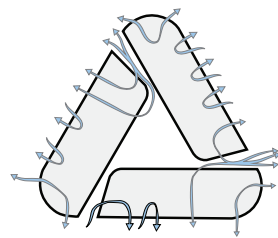


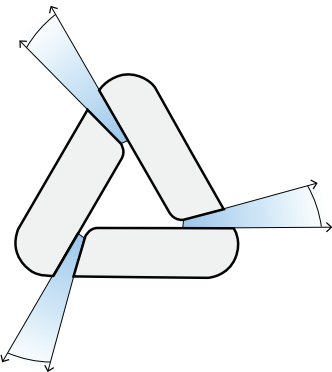
*SEPP65 principle 5 'Resource, Energy and Water Efficiency'. Clause 13 states:  
Good design makes efficient use of natural resources, energy and water throughout its full life cycle, including construction.  
Sustainability is integral to the design process.  
Aspects include demolition of existing structures, recycling of materials, selection of appropriate and sustainable materials, adaptability and reuse of buildings, layouts and built form, passive solar design principles, efficient appliances and mechanical services, soil zones for vegetation and reuse of water.*



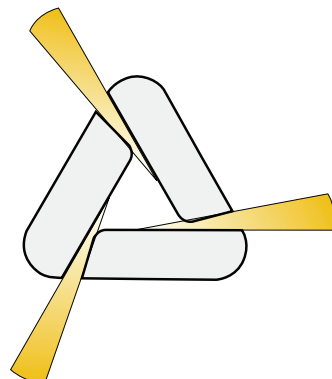
Cross ventilation into each lobby



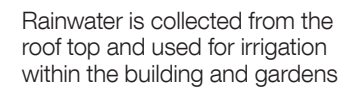
Cross ventilation & stack ventilation for all apartments



Distant views of surrounding landscape from each lobby



Slots provide natural light to the lift lobby

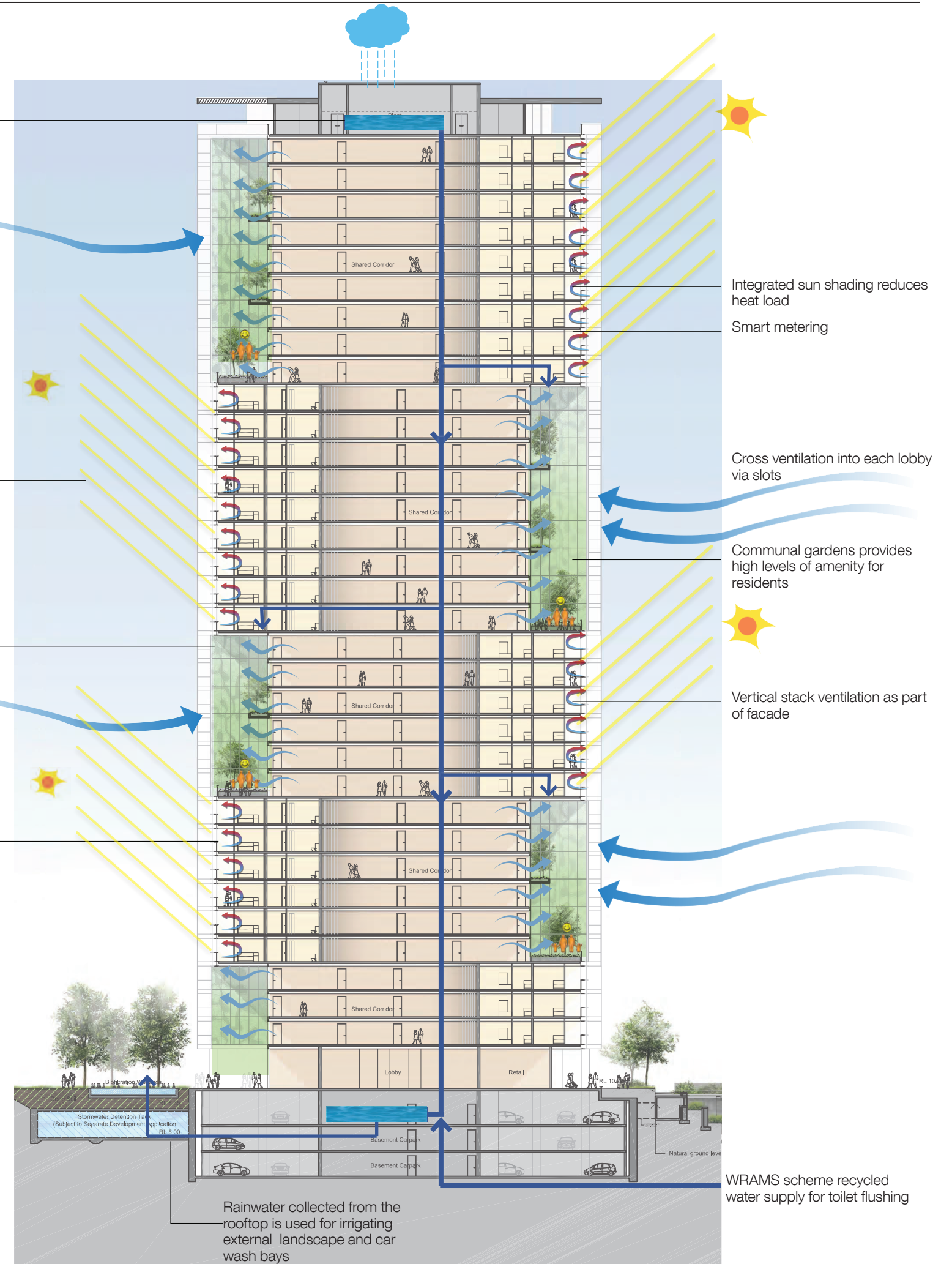


Cross ventilation into each lobby  
via slots

Integrated sun shading reduces heat load

Communal gardens provides high levels of amenity for residents

Vertical stack ventilation as part of facade



WRAMS scheme recycled water supply for toilet flushing

# 9.0

## DENSITY + YIELD

8.1 ESD MEASURES

The design has focused on reducing resource use via the use of simple passive strategies which also offer excellent amenity to future residents. These passive strategies are also supplemented with building systems to further reduce ongoing resource use.

- A summary of the ESD strategies incorporated which are further detailed in the environment report include:
- / The dwellings are provided with a high level of cross ventilation to provide passive cooling and reduce the need for air conditioning
  - / The dwellings have been oriented to provide a good level of solar access in mid winter, providing passive heating and improving daylight penetration in the winter months
  - / The project will connect to the WRAMS recycled water supply system available within the precinct for toilet flushing
  - / Rainwater reuse tanks are to be installed to reduce water consumption
  - / High efficiency appliances will be specified to reduce on-going water and power consumption
  - / Indigenous planting is generally proposed to reduce water consumption in landscape areas
  - / Horizontal shading elements maximise daylight penetration whilst reducing solar gains
  - / Pollution sensors within the carpark ventilation system reduce energy use
  - / Re-use or recycling of 80% of construction and demolition waste
  - / Smart meters provide real time display for energy uses within apartments
  - / Low VOC products
  - / Naturally ventilated common areas reduce energy consumption through eliminating the need for air conditioning.
  - / Large windows to corridor circulation areas reduce artificial lighting use
  - / All common area lighting to be provided with motion sensors
  - / Bike parking for residents and visitors
  - / Reuse of rainwater for the sites irrigation needs
  - / Specification of concrete with reclaimed water and reduced Portland cement mix
  - / All structural and reinforcing steel is to be sourced from a responsible steel maker

- / High levels of cross ventilation facilitated by slots in the plan and an articulated building form
- / Operable winter gardens to provide more flexible outdoor spaces that can be used year round as the climate and wind conditions dictate.

*SEPP65 principle 4 ‘Density’. Clause 12 states: Good design has a density appropriate for a site and its context, in terms of floor space yields (or number of apartments or residents). Appropriate densities are sustainable and consistent with the existing density in an area or, in precincts undergoing a transition, are consistent with the stated desired future density. Sustainable densities respond to the regional context, availability of infrastructure, public transport, community facilities and environmental quality.*

9.1 DENSITY

The overall density of the development was a matter considered during the development of the LEP and SOPA Masterplan 2030. This application is generally consistent with the overall yield permitted by these planning controls. Further detail is provided in the Environmental Impact Statement prepared by Urbis.

9.2 DWELLING SIZE AND MIX

The application proposes the following mix of dwelling types:

Unit Type	No	Mix	Size Range
1 Bed	171	46%	50-65 sqm
2 Bed	162	44%	71-85 sqm
3 Bed	27	7.5%	99-108 sqm
4 Bed	9	2.5%	155 sqm

The mix provides a range of unit sizes and types to meet the needs of a diverse range of future residents. A detailed area schedule is included in the appendices of this report.

9.3 PARKING

All resident parking is proposed to be located in the secure base-ment area. Car parking rates have been calculated at the rate of 1 space per 1 bedroom and 2 bedroom, and 2 spaces per 3 and 4 bedroom. The total number of parking spaces provided is within the limits outlined by Sopa Masterplan 2030 maximum controls.

Accessible spaces have been provided at a rate of 10% of the total unit number plus 2 visitor spaces. Visitor spaces have been provided at a rate of 0.14 per residential dwelling. The proposed parking provisions are:

Residential	408
Visitors	52
Childcare	20
Commercial	2
Total Provided:	482

Parking is provided in the following locations:

Basement:	472
Street Level:	10
Total:	482

A detailed breakdown of parking provision by use is contained with the accompanying Traffic Report prepared by Cardno.

# 10.0 SOCIAL DIMENSIONS

*SEPP65 principle 9 ‘Social Dimensions’ clause 17 states:  
Good design responds to the social context and needs of the local community in terms of lifestyles, affordability, and access to social facilities.  
New developments should optimize the provision of housing to suit the social mix and needs in the neighborhood or, in the case of precincts undergoing transition, provide for the desired future community. New developments should address housing affordability by optimising the provision of economic housing choices and providing a mix of housing types to cater for different budgets and housing needs.*

**10.1 APARTMENT MIX AND AFFORDABILITY**

The proposal will provide an increase in the residential housing available in Sydney Olympic Park, consistent with SOPA’s vision for the redevelopment area. The buildings will contain a broad range of apartment types and sizes with the aim being to create a socially diverse neighbourhood. To cater for single occupiers, couples, sharers and families, the apartment mix includes 1, 2, 3 and 4 bedroom units.

The development contributes to housing affordability by providing a range of different apartment sizes and configurations. The different apartment types have been distributed according to affordability, with the larger apartments located at the higher levels whilst the smaller, more affordable apartments are located at the lower levels.

**10.2 CHILDCARE CENTRE**

The proposal seeks envelope and footprint approval for an 80 space childcare centre which will be the subject of a separate future local development application. The childcare centre has been located at the northern portion of the site, fronting the new east/west street and creating a strong community presence for the both Site 68 and the parkview precinct as a whole.

# 11.0 SAFETY + SECURITY

*SEPP65 principle 8 ‘Safety + Security’ clause 16 states:  
Good design optimizes safety and security, both internal to the development and for the public domain.  
This is achieved by maximizing overlooking of public and communal spaces while maintaining internal privacy, avoiding dark and non-visible areas, maximizing activity on streets, providing clear, safe access points, providing quality public spaces that cater for desired recreational uses, providing lighting appropriate to the location and desired activities, and clear definition between public and private spaces.*

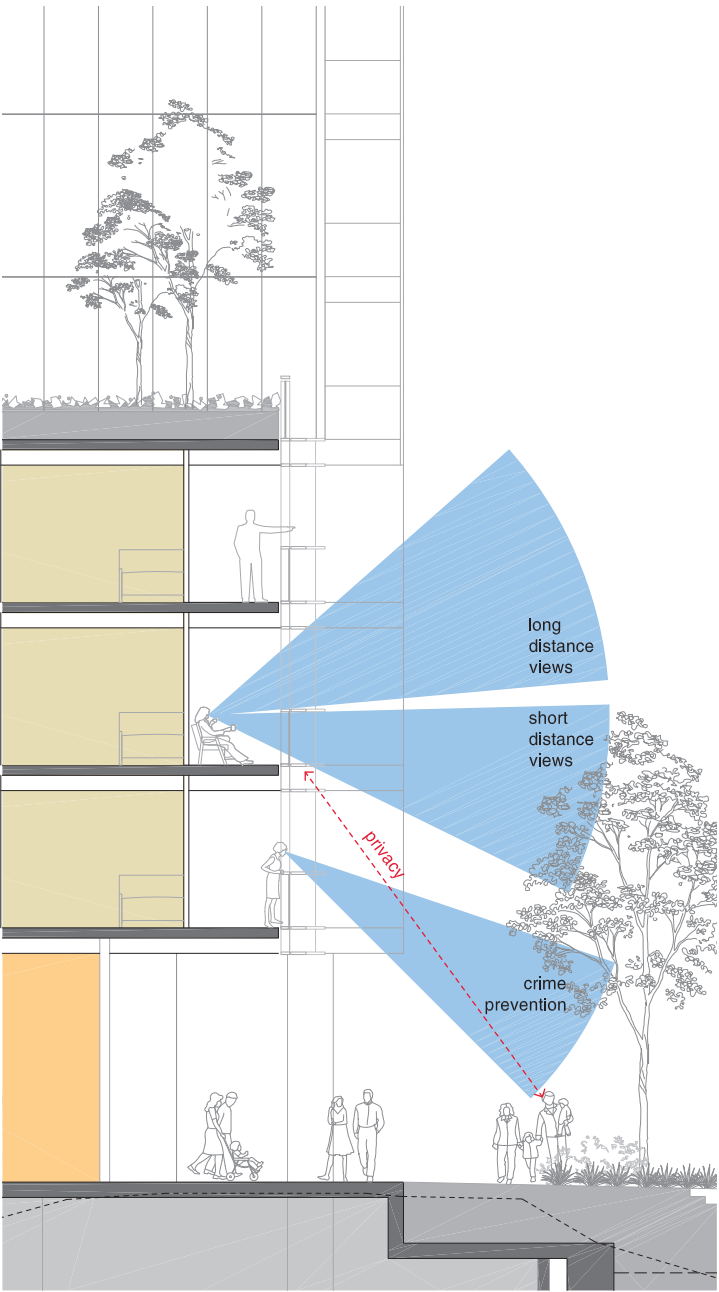
**11.1 SURVEILLANCE OF PUBLIC DOMAIN**

In addition to providing high levels of amenity, daylight, and outlook to views, the design of the residential units and facade have been conceived to achieve high levels of visual surveillance over the proposed area of public domain as well as to incorporate privacy provisions.

Living areas are located against the facade with full width frontage. Bedrooms are set back from the facade by generous balconies of 2.1 to 3.0 metres in typical depth to provide visual privacy from pedestrians at ground level. Horizontal fins varying between 600 and 150mm in depth incorporated into the spandrel, balcony handrail and living room facades permit direct views out while also providing privacy when viewed from below.



/ Horizontal fins minimise obstruction to views however provide privacy when viewed from street level.



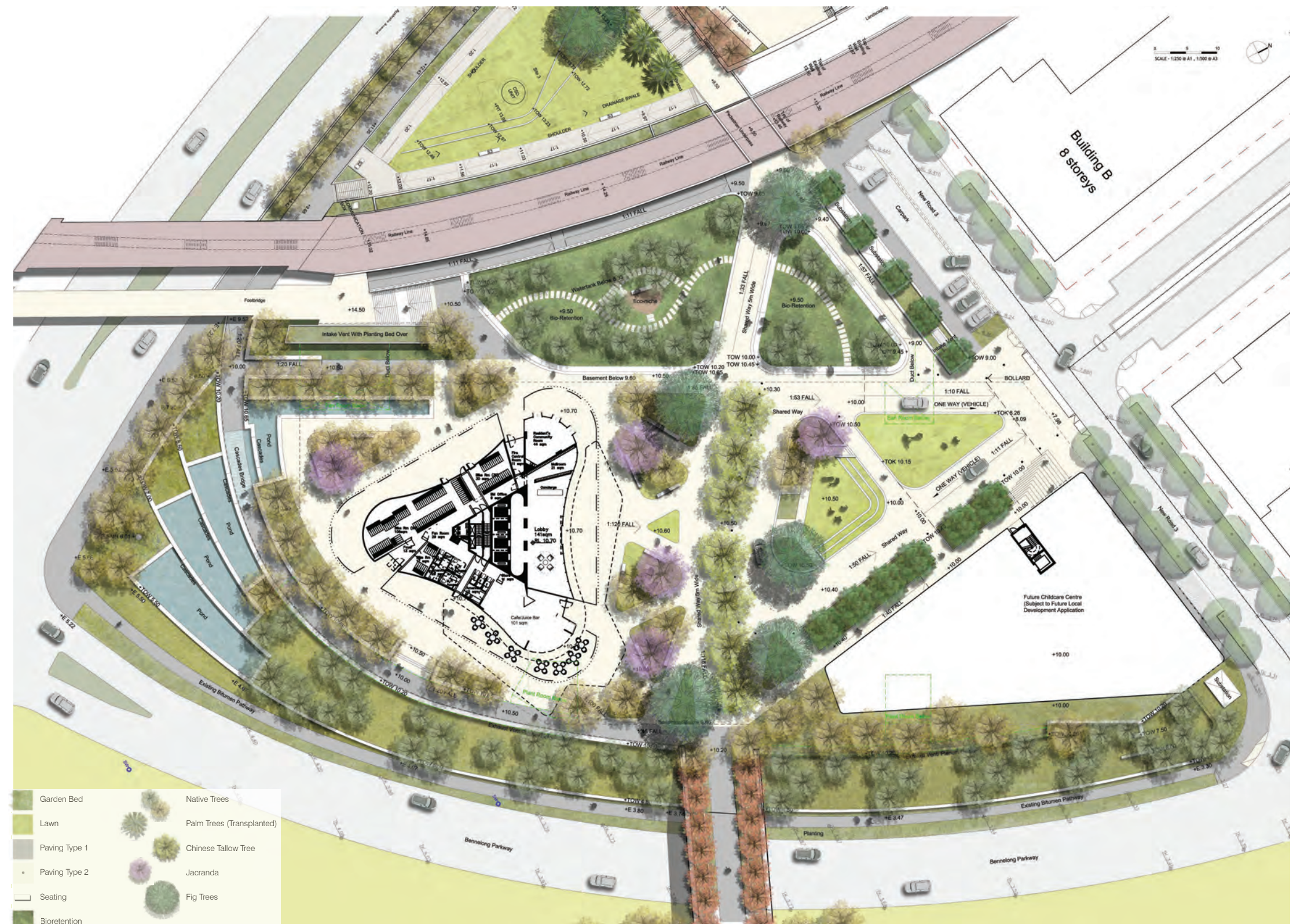


# 12.0 LANDSCAPE + PUBLIC REALM

*SEPP65 principle 6 'Landscape'. Clause 14 states: Good design recognizes that together landscape and buildings operate as an integrated and sustainable system, resulting in greater aesthetic quality and amenity for both occupants and the adjoining public domain.*

*Landscape design builds on the existing site's natural and cultural features in responsible and creative ways. It enhances the development's natural environmental performance by coordinating water and soil management, solar access, micro-climate, tree canopy and habitat values. It contributes to the positive image and contextual fit of development through respect for streetscape and neighborhood character, or desired future character.*

*Landscape design should optimize usability, privacy and social opportunity, equitable access and respect for neighbors' amenity, and provide for practical establishment and long term management.*





SITE 68 PUBLIC DOMAIN INITIATIVES

Our masterplan approach seeks to build an intimate and vibrant community park with a strong community, environmental and landscape focus.

The public domain and landscape solution proposes:

/The proposed underpass link (separate DA) between Australia Avenue and Site 68 development (via the Site 3 Pocket park) provides a new and direct equitable access from Sydney Olympic Park railway station and town centre through to Bicentennial Park and the future Parkview Precinct.

/ A direct pedestrian and cycle connection is created to link the proposed underpass with the existing bridge crossing Australia Avenue, fully conforming to Ausroads cycle guidelines.

/Existing cycleway connectivity is retained linking the site to the existing Bennelong Parkway cycle route to the North and beneath the Australia Avenue railway bridge.

/ The relocation of the existing stormwater basin on Site 68 to a new below grade detention tank which sits beneath the proposed landscaping on Site 68. This approach is further described in the Alluvium report.

/ Water collected by the detention tank is pumped through biofiltration wetlands (1200m2) integrated into the landscape design and visible to the public. Water from the wetlands is then stored on-site for re-use via irrigation and non-potable water supply.

/ The wetlands offer an exploration walk for public interaction and educational interpretation; describing the environmental process taking place and the sustainability outcomes being achieved.

/ New on-street parking on the southern side of the new street creates opportunities for short-term parking for the child care, as well as access to the neighbourhood park and wetland interpretation.

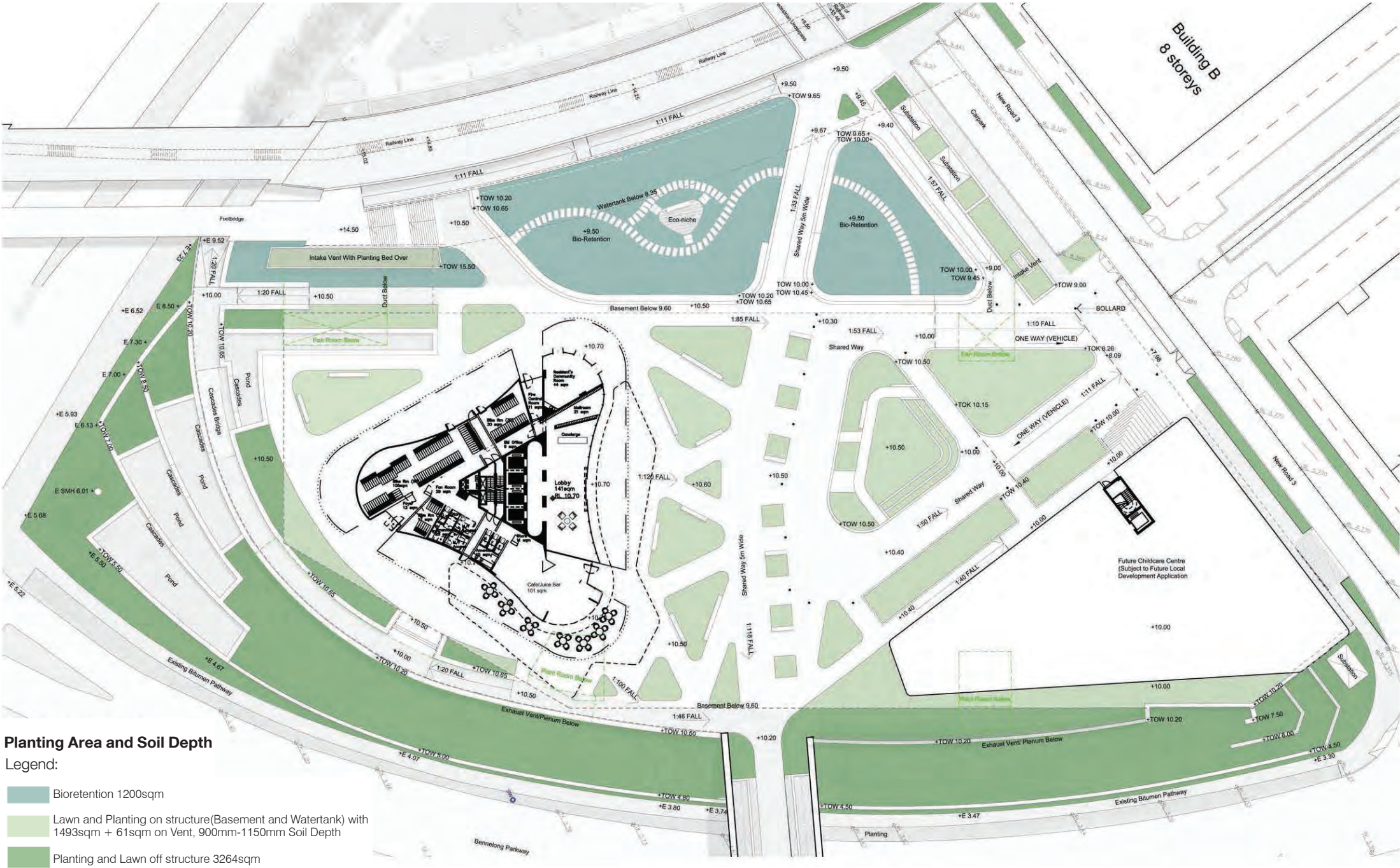
/ A vehicular drop-off to both the residential building and child care is integrated into the landscape as a ‘shared way’

/ The existing palm trees currently located on the corner of Australia Avenue and Bennelong Parkway are relocated to the new neighbourhood park, lining the new street and child care.

/ The new pedestrian land bridge over Bennelong Parkway provides a new, wider landscaped bridge offering increased amenity as well as strengthening the landscaped connection to Bicentennial Park (separate DA).

/ The expression of the wetlands via a series of cascading and terracing wetland ponds on the southern corner of the site creates a strong visual identity for the precinct and references the existing stormwater function of the site. Through the inclusion of a cascading waterfall which terraces down to street level on the corner, our intention is to create a powerful new identity for both the Parkview Precinct and entrance to Sydney Olympic Park showcasing the ecological process taking place in the precinct.

Further detail is provided in the landscape report.



Planting Area and Soil Depth

Legend:

- Bioretention 1200sqm
- Lawn and Planting on structure(Basement and Watertank) with 1493sqm + 61sqm on Vent, 900mm-1150mm Soil Depth
- Planting and Lawn off structure 3264sqm







# **APPENDIX A SEPP65 & RFDC COMPLIANCE CHECKLIST**



APPENDIX A: RFDC COMPLIANCE CHECKLIST

RFDC Ref.	Item description	Rule of Thumb	Better Design Practice	Notes	Proposal Complies
SITE CONFIGURATION					
s2 p44	Deep soil zones				
	A minimum of 25 percent of the open space area of a site should be a deep soil zone; more is desirable.	•		The site currently operates as a regional stormwater detention basin. The replacement stormwater infrastructure requires a 1800 sqm below grade tank in addition to 1200 sqm of biofiltration wetlands at ground level. Although the proposed scheme consists of 85% landscaped area, the replacement stormwater infrastructure restricts achievable deep soil planting to 23.3% of site area. (3264 sqm).	-
s2 p45	Fences & walls				
s2 p46	Landscape design				
s2 p48	Open space				
	Communal open space. Area provided at least 25-30% site area.	•		Complies. Refer further discussion in design report.	✓
	Where recommended area is unachievable, demonstrate that residential amenity is provided in the form of increased private open space &/or contribution to public open space.	•			N/A
	Min. area for private open space at ground or structure is 25m2. Min dim in one direction 4m.	•		No apartments proposed at ground level.	N/A
s2 p50	Orientation				
s2 p52	Planting on structures				
	Min. soil depth for planting	•		Complies.	✓
s2 p54	Storm water management				
SITE AMENITY					
s2 p56	Safety / Security				
	Separate residential parking from other building use and control access from public and common areas		•	Complies. Residential parking is separated from childcare centre parking and controlled via boomgate.	✓
	Provide direct access from car parks to apartment lobbies for residents		•		✓
	Provide separate access for residents in mixed-use buildings		•		N/A
	Provide audio or video intercom for visitor entry		•	Provided.	✓
	Provide key card access for residents		•	Provided.	✓
s2 p58	Visual privacy				
SITE ACCESS					
s2 p60	Building entry				
	Provide as direct a physical and visual connection as possible between street and entry		•	Further discussion in report.	✓
s2 p62	Parking				

RFDC Ref.	Item description	Rule of Thumb	Better Design Practice	Notes	Proposal Complies
	Provide bicycle parking which is easily accessible from ground level and from apartments.		•	Bicycle parking provided on ground level and levels B1, B2 and B3.	✓
s2 p64	Pedestrian access				
	Follow accessibility standard AS 1428 (Pt 1 & 2) as a minimum.	•			✓
	Provide barrier free access to at least 20 percent of dwellings in the development.	•			✓
s2 p65	Vehicle Access				
	Generally limit the width of driveways to a max of 6m.	•			✓
	Locate vehicle entries away from main pedestrian entries and on secondary frontages.	•			✓
BUILDING CONFIGURATION					
s3 p67	Apartment layout				
	Determine appropriate apartment sizes in relation to:				
	Geographic location and market demands.		•	Proposal consistent with DCP controls.	✓
	The spatial configuration of an apartment, not just plan e.g. Maisonette apartments are often small in sqm but have double-height living spaces.		•		✓
	Affordability; a range of apartment sizes provides more choice for more people.		•		✓
	Ensure apartment layouts are resilient over time. Design issues to address may include:				
	/ Accommodating a variety of furniture arrangements.		•		✓
	/ Providing for a range of activities and privacy levels between different spaces within the apartment.		•		✓
	/ Utilising flexible room sizes and proportions or open plans.		•		✓
	/ Ensuring circulation by stairs, corridors and through rooms is planned as efficiently as possible thereby increasing the amount of floor space in rooms.		•		✓
	Design apartment layouts, which respond to the natural and built environments and optimise site opportunities by:				
	Providing private open space in the form of a balcony, a terrace, a courtyard or a garden for every apartment.		•		✓
	Orientating main living spaces toward the primary outlook and aspect and away from neighbouring noise sources or windows.		•		✓
	Locating main living spaces adjacent to main private open space.		•		✓
	Locating habitable rooms, and where possible kitchens and bathrooms, on the external face of the buildings thereby maximises the number of rooms with windows.		•		✓
	Maximising opportunities to facilitate natural ventilation and to capitalise on natural daylight.		•		✓
	Avoid locating kitchen as part of main circulation spaces, such as a hallway or entry space.		•		✓

APPENDIX A: RFDC COMPLIANCE CHECKLIST

RFDC Ref.	Item description	Rule of Thumb	Better Design Practice	Notes	Proposal Complies
	In addition to kitchen cupboards and bedroom wardrobes, provide accessible storage facilities at the following rates: studio apartments 6m3 ; one-bedroom apartments 6m3 ; two-bedroom apartments 8m3 ; three plus bedroom apartments 10m3	•			✓
	Ensure apartment layouts and dimensions facilitate furniture removal and placement.		•		✓
	Single aspect apartments should be limited in depth to 8m from a window	•		Residential apartments are 10 and 11 metres deep, however rooms planned beyond 8 metres depth are non habitable rooms such as bathrooms and storage areas which do not require natural light.	✗
	The back of kitchen should be no more than 8m from a window	•			✓
	The width of cross-over or cross-through apartments over 15m deep should be 4m or greater to avoid deep narrow apartment layouts	•			N/A
	Buildings not meeting minimum standards listed above must demonstrate how satisfactory daylight and ventilation can be achieved.	•			N/A
	As a guide, the Affordable Housing Service suggest the following minimum apartment sizes: 1- bedroom apartment 50m2; 2- bedroom apartment 70m2; 3-bedroom apartment 95m2	•			✓
s3 p70	Apartment mix				
	Provide a variety of apartment types.		•		✓
	<b>Refine the appropriate apartment mix for a location by:</b>				
	Considering population trends in the future as well as present market demands.		•		✓
	Noting the apartment's location in relation to public transport, public facilities, employment areas, schools and universities and retail centres.		•		✓
	Locate mix of one and three bedroom apartments on the ground level where accessibility is more easily achieved for disabled, elderly people or families with children.		•	No apartments are located on the ground floor.	N/A
	Optimise the number of accessible and adaptable apartments to cater for a wider range of occupants. Australian Standards are only a minimum.		•	Refer to accessibility report.	✓
	Investigate the possibility of flexible apartment configurations, which support change in the future.		•	The consistent building grid has been designed to allow for building mix changes in the future. (1 bed = 1 bay / grid, 2 bed = 1.5 bay/grid, 3 bed = 2 bay / grid).	✓
s3 p71	Balconies				
	Where other private open space is not provided, provide at least one primary balcony.		•		✓
	<b>Primary balconies should be:</b>				
	Located adjacent to the main living areas to extend the dwelling living space.		•		✓

RFDC Ref.	Item description	Rule of Thumb	Better Design Practice	Notes	Proposal Complies
	Sufficiently large and well proportioned to be functional and promote outdoor/indoor living. A dining table and two chairs (small apartment) and four chairs (larger apartment) should fit on the majority of balconies of any development.		•		✓
	<b>Consider secondary balconies, including Juliet balconies or operable walls with balustrades, for additional amenity and choice:</b>				
	In larger apartments		•		✓
	Adjacent to bathrooms		•	Balconies are considered of appropriate size and location.	✗
	For clothes drying; site balconies off laundries or bathrooms; they should be screened from public view.		•		N/A
	<b>Design and detail balconies in response to the local climate and context thereby increasing the usefulness of balconies. This may be achieved by:</b>				
	Locating balconies facing predominantly north, east or west.		•	75% of balconies face north, east or west.	✓
	Utilising sun screens, pergolas, shutters and operable walls to control sunlight and wind.		•	Wintergardens are proposed to corner and higher level apartments to mitigate wind effects. Refer to facade details within the design report.	✓
	Provide balconies with operable screens, Juliet balconies or operable walls/sliding doors with a balustrade in special locations where noise or high winds prohibit other solutions.		•	Refer to facade details within the design report.	✓
	Choose cantilevered balconies, partially cantilevered balconies and/or recessed balconies in response to daylight, wind, acoustic privacy and visual privacy.		•	Recessed balconies and wintergardens are provided in response to wind conditions.	✓
	Ensuring balconies are not so deep that they prevent sunlight entering the apartment below.		•		✓
	Design balustrades to allow views and casual surveillance of the street while providing for safety and visual privacy.		•	Glazed balustrades are provided to achieve maximum surveillance of the park below. Deep horizontal fins help to restrict visibility into lower level apartments. Refer to facade details within design report.	✓
	Coordinate and integrate building services, such as drainage pipes, with overall façade and balcony design.		•		✓
	Consider supplying a tap and gas point on primary balconies		•		✓
	Provide primary balconies for all apartments with a minimum depth of 2m.	•			✓
	Require scale plans of balcony with furniture layout to confirm adequate, useable space when an alternate balcony depth is proposed.	•			N/A
s3 p73	Ceiling heights				
	<b>Design better quality spaces in apartments by using ceilings to :</b>				
	Define a spatial hierarchy between areas of an apartment using double height spaces, raked ceilings, changes in ceiling heights and/or the location of bulkheads.		•		✓
	Enable better proportioned rooms.		•		✓